SK Advanced Co., Ltd.

Financial statements
for each of the two years in the period 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
SK Advanced Co., Ltd.

Opinion

We have audited the financial statements of SK Advanced Co., Ltd. (the "Company"), which comprise the statements of financial position as of December 31, 2024 and 2023, and the statements of comprehensive loss, statements of changes in equity and statements of cash flows for each of the two years in the period ended December 31, 2024, and the notes to the financial statements, including material accounting policy information.

In our opinion, the accompanying financial statements present fairly, in all material respects, the financial position of the Company as of December 31, 2024 and 2023, and its financial performance and its cash flows for each of the two years in the period ended December 31, 2024 in accordance with International Financial Reporting Standards as adopted by the Republic of Korea ("KIFRS").

Basis for opinion

We conducted our audit in accordance with Korean Standards on Auditing ("KSA"). Our responsibilities under those standards are further described in the Auditor's responsibilities for the audit of the financial statements section of our report. We are independent of the Company in accordance with the ethical requirements that are relevant to our audit of the 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.

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

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

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

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

Auditor's responsibilities for the audit of the financial statements

Our objectives are to obtain reasonable assurance about whether the 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 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 financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.
- Conclude on the appropriateness of management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Company's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the 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 Company to cease to continue as a going concern.
- Evaluate the overall presentation, structure and content of the financial statements, including the disclosures, and whether the financial statements represent the underlying transactions and events in a manner that achieves fair presentation.

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

Ernst & Young Han Young

March 11, 2025

This audit report is effective as of March 11, 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 financial statements and may result in modifications to this report.

SK Advanced Co., Ltd.

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

"The accompanying financial statements, including all footnotes and disclosures, have been prepared by, and are the responsibility of, the Company."

Chul Jin Kim
Chief Executive Officer
SK Advanced Co., Ltd.

SK Advanced Co., Ltd.
Statements of financial position
as of December 31, 2024 and 2023
(In Korean won)

	Notes	2024	2023
Assets			
Current assets:			
Cash and cash equivalents	3, 25	₩ 163,447,902,547	₩ 69,872,343,903
Short-term financial instruments	3, 25	-	14,677,481,645
Trade and other receivables	3, 4, 25	102,420,361,676	58,482,708,457
Short-term derivatives	3, 14, 25	-	2,346,889,178
Current tax assets	21	624,964,740	374,962,741
Inventories	5	10,150,109,619	15,834,761,631
Other current assets	6	3,007,870,871	7,438,543,024
Total current assets		279,651,209,453	169,027,690,579
Non-current assets:			
Long-term financial instruments	3, 25	2,000,000	2,000,000
Long-term trade and other receivables	3, 4, 25	2,483,161,705	2,591,548,218
Long-term derivatives	3, 14, 25	1,147,075,849	-
Investments in joint venture	7, 16	68,109,272,826	77,264,069,037
Property, plant and equipment, net	8	679,430,233,446	703,806,853,012
Right-of-use assets	9	495,318,832	186,634,830
Intangible assets	10	1,208,782,847	1,645,355,664
Long-term deposits	3, 25	129,071,000	123,007,500
Other non-current assets	6	978,746,365	806,762,749
Defined benefit assets	13	1,708,419,114	610,220,061
Deferred income tax assets	21	13,438,184,077	16,925,487,178
Total non-current assets		769,130,266,061	803,961,938,249
Total assets		**₩ 1,048,781,475,514**	**₩ 972,989,628,828**
Liabilities and equity			
Current liabilities:			
Trade and other payables	3, 11, 24, 25	₩ 183,270,092,165	₩ 121,517,179,500
Derivative financial liabilities	3, 14, 25	625,534,232	6,240,150
Short-term borrowings	3, 12, 24, 25	50,000,000,000	60,000,000,000
Current portion of long-term liabilities	3, 12, 24, 25	255,871,892,847	113,568,430,203
Current portion of lease liabilities	3, 9, 24, 25	210,660,855	165,941,527
Other current liabilities		189,230,108	182,608,161
Total current liabilities		490,167,410,207	295,440,399,541
Non-current liabilities:			
Bonds payable	3, 12, 24, 25	324,827,657,166	199,652,203,266
Long-term borrowings		-	80,000,000,000
Long-term derivative financial liabilities	3, 14, 25	325,427,751	215,549,908
Other long-term employee benefit liabilities		659,688,195	438,974,942
Lease liabilities	3, 9, 24, 25	295,088,083	32,547,286
Other non-current liabilities	3, 24, 25	335,794,680	282,355,940
Total non-current liabilities		326,443,655,875	280,621,631,342
Total liabilities		**816,611,066,082**	**576,062,030,883**
Equity:			
Issued capital	17	34,006,600,000	34,006,600,000
Capital surplus	17	353,695,008,542	353,695,008,542
Accumulated other comprehensive losses	17	(22,975,651)	(19,939,155)
Retained earnings (deficits)	17	(155,508,223,459)	9,245,928,558
Total equity		**232,170,409,432**	**396,927,597,945**
Total liabilities and equity		**₩ 1,048,781,475,514**	**₩ 972,989,628,828**

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

SK Advanced Co., Ltd.
Statements of comprehensive loss
for each of the two years in the period ended December 31, 2024
(In Korean won)

	Notes		2024		2023
Sales	16, 18	₩	688,077,721,725	₩	599,093,459,988
Cost of sales	19		(795,690,723,165)		(673,626,163,198)
Gross loss			**(107,613,001,440)**		**(74,532,703,210)**
Selling and administrative expenses	19		(8,519,946,255)		(7,992,646,283)
Operating loss			**(116,132,947,695)**		**(82,525,349,493)**
Finance income	3, 20		14,460,053,393		9,987,215,329
Finance costs	3, 20		(40,724,819,219)		(28,448,252,033)
Other non-operating income	20		1,442,724,469		1,216,162,562
Other non-operating expenses	20		(4,266,448,441)		(165,573,969)
Loss on valuation of equity method	7		(19,071,802,106)		(32,054,522,327)
Loss before income tax expense			**(164,293,239,599)**		**(131,990,319,931)**
Income tax benefit (expense)	21		(1,418,958,719)		19,631,243,256
Net loss for the year		₩	**(165,712,198,318)**	₩	**(112,359,076,675)**
Other comprehensive income(loss)			955,009,805		(1,081,792,865)
Items that will not be reclassified to profit or loss:					
- Re-measurement of defined benefit liabilities	13, 17		1,038,003,910		(1,342,952,686)
- Changes in equity from equity method investee	17		(82,994,105)		261,159,821
Total comprehensive loss		₩	**(164,757,188,513)**	₩	**(113,440,869,540)**
Losses per share					
Basic and diluted	22	₩	(48,729)	₩	(33,040)

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

SK Advanced Co., Ltd.
Statements of changes in equity
for each of the two years in the period ended December 31, 2024

(In Korean won)

	Issued capital	Capital surplus	Accumulated other comprehensive loss	Retained earnings	Total equity
As of January 1, 2023	**₩ 34,006,600,000**	**₩ 353,695,008,542**	**₩ (13,365,663)**	**₩ 122,680,224,606**	**₩ 510,368,467,485**
Loss for the year	-	-	-	(112,359,076,675)	(112,359,076,675)
Other comprehensive loss:					-
Re-measurement on defined benefit liabilities	-	-	-	(1,342,952,686)	(1,342,952,686)
Changes in equity from equity method investee	-	-	(6,573,492)	-	(6,573,492)
Changes in retained earnings from equity method investee	-	-	-	267,733,313	267,733,313
Total comprehensive loss	**-**	**-**	**(6,573,492)**	**(113,434,296,048)**	**(113,440,869,540)**
As of December 31, 2023	**₩ 34,006,600,000**	**₩ 353,695,008,542**	**₩ (19,939,155)**	**₩ 9,245,928,558**	**₩ 396,927,597,945**
As of January 1, 2024	**₩ 34,006,600,000**	**₩ 353,695,008,542**	**₩ (19,939,155)**	**₩ 9,245,928,558**	**₩ 396,927,597,945**
Loss for the year	-	-	-	(165,712,198,318)	(165,712,198,318)
Other comprehensive loss:					
Re-measurement on defined benefit liabilities	-	-	-	1,038,003,910	1,038,003,910
Changes in equity from equity method investee			(3,036,496)	-	(3,036,496)
Changes in retained earnings from equity method investee	-	-	-	(79,957,609)	(79,957,609)
Total comprehensive loss	**-**	**-**	**(3,036,496)**	**(164,754,152,017)**	**(164,757,188,513)**
As of December 31, 2024	**₩ 34,006,600,000**	**₩ 353,695,008,542**	**₩ (22,975,651)**	**₩ (155,508,223,459)**	**₩ 232,170,409,432**

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

SK Advanced Co., Ltd.
Statements of cash flows
for each of the two years in the period ended December 31, 2024
(In Korean won)

		2024		2023
Operating activities				
Loss for the year	₩	(165,712,198,318)	₩	(112,359,076,675)
Adjustments to reconcile profit (loss) for the year to net cash flows:				
Provision for pension benefits		1,120,709,850		794,521,072
Depreciation and impairment of property, plant and equipments		54,917,001,305		50,647,185,594
Depreciation of right-of-use		202,318,463		160,659,991
Amortization of intangible assets		679,457,817		1,136,266,189
Interest income		(4,190,633,614)		(1,563,770,867)
Gain on transaction of financial assets at at FVPL		(385,938,374)		(2,654,774,370)
Interest expense		28,810,473,286		18,766,522,670
Income tax expense (benefit)		1,418,958,719		(19,631,243,256)
(Reversal of) Loss on valuation of inventories		(1,501,875,356)		1,466,134,671
Gain on valuation of derivative instruments		(1,147,075,849)		(1,111,601,004)
Loss on valuation of derivative instruments		735,412,075		221,790,058
Gain on transaction of derivative instruments		(5,102,899,266)		(1,107,774,917)
Loss on transaction of derivative instruments		3,571,825,311		2,313,615,285
Gain on foreign currency translation		(469,959,159)		(133,000,245)
Loss on foreign currency translation		2,356,698,578		787,125,453
Loss on valuation of equity method		19,071,802,106		32,054,522,327
Gain on disposal of intangible assets		-		(78,666,564)
Loss on disposal of property, plant and equipment		4,254,178,538		-
Gain on disposal of right-of-use assets		(7,850,144)		(731,637)
Loss on disposal of trade receivable		-		163,669,635
Loss on valuation of financial assets at FVPL		-		4,026,033,781
		104,332,604,286		86,256,483,866
Working capital adjustments:				
Trade receivables		(46,092,721,554)		29,489,801,100
Other receivables		2,472,462,249		7,468,520,721
Inventories		7,432,107,285		(7,576,413,186)
Other current assets		6,408,946,124		(4,030,780,009)
Other non-current assets		(1,707,690,235)		133,557,904
Trade payables		56,272,922,612		(30,359,065,461)
Other payables		8,794,891,205		(12,205,781,075)
Other current liabilities		6,621,947		6,193,787
Other non-current liabilities		53,438,740		11,007,860
Contribution to plan assets		(650,000,000)		(530,000,000)
Transfer to affiliate		-		72,773,375
Pension benefits paid		(35,927,748)		(19,220,016)
		32,955,050,625		(17,539,405,000)
Interest received		4,058,920,127		1,426,663,914
Income tax refund		1,544,078,391		1,655,291,250
Net cash flows used in operating activities		**(22,821,544,889)**		**(40,560,042,645)**
Investing activities				
Net increase in short-term financial instruments		15,063,420,019		43,246,248,440
Decrease in short-term deposits		-		3,361,209
Increase in other non-current assets		-		(126,896,000)
Increase in long-term deposits		(6,063,500)		-
Acquisition of equity investments		(10,000,000,000)		(20,000,000,000)
Acquisition of property, plant and equipment		(39,098,511,031)		(19,621,142,622)
Proceeds from disposal of property, plant and equipment		38,088,000		-
Acquisition of intangible assets		(29,210,000)		(263,061,780)
Proceeds from disposal of intangible assets		-		263,636,364
Decrease in finance lease receivables		245,466,667		250,833,332
Proceeds from disposal of derivative instruments		3,871,722,983		(1,064,294,562)
Net cash flows provided by (used in) investing activities		**(29,915,086,862)**		**2,688,684,381**
Financing activities				
Interest paid		(26,168,458,797)		(17,517,500,165)
Preceeds from short-term borrowings		170,000,000,000		101,990,000,000
Redemption of short-term borrowings		(180,000,000,000)		(131,000,000,000)
Proceeds from current potion of long-term borrowings		28,021,726,029		40,000,000,000
Issuance of corporate bonds		268,482,472,718		104,771,080,000
Redemption of corporate bonds		(113,802,500,000)		-
Redemption of of lease liabilities		(221,049,555)		(180,041,186)
Net cash flows provided by financing activities		**146,312,190,395**		**98,063,538,649**
Net increase in cash and cash equivalents		93,575,558,644		60,192,180,385
Cash and cash equivalents at the beginning of the year		69,872,343,903		9,680,163,518
Cash and cash equivalents at the end of the year	₩	**163,447,902,547**	₩	**69,872,343,903**

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

1. Corporate information

SK Advanced Co., Ltd. (the "Company") was incorporated on September 12, 2014 in accordance with *the Commercial Act* of the Republic of Korea through a spin-off from SK Gas Co., Ltd. The Company is engaged in the production and sales of propylene. The Company is headquartered in Yongyeon-ro, Nam-gu, Ulsan, Korea.

Details of the Company's shareholders as of December 31, 2024 are as follows:

	Shares held	Equity ownership (%)
SK Gas Co., Ltd.	1,530,297	45.00
Advanced Global Investment Company	1,020,198	30.00
Petrochemical Industries Company K.S.C	850,165	25.00
	3,400,660	100.00

The issuance of the accompanying financial statements of the Company for the year ended December 31, 2024 was approved at the Board of Directors' meeting held on February 13, 2024. The final approval of the accompanying financial statements is scheduled to be obtained at the annual shareholders' meeting to be held on March 27, 2025.

2. Basis of preparation and material accounting policies

The accompanying financial statements have been translated into English from the Korean language financial statements. In the event of any differences in interpreting the financial statements or the independent auditor's report thereon, the Korean version, which is used for regulatory reporting purposes, shall prevail.

2.1 Basis of preparation

The financial statements have been prepared on a historical cost basis, except for financial instruments and when otherwise indicated, and are presented in Korean won (presented as "Korean won," "KRW" or "₩") with all values rounded to the nearest thousand, unless otherwise indicated.

2.2 Reference accounting standards

The financial statements of the Company have been prepared in accordance with International Financial Reporting Standards as adopted by the Republic of Korea ("KIFRS") enacted based on *the Act on External Audit of Stock Companies*.

2.3.1 Current versus non-current classification

The Company presents assets and liabilities in the statement of financial position based on current/non-current classification.

An asset is current when it is:
- expected to be realized or intended to be sold or consumed in the normal operating cycle;
- held primarily for the purpose of trading;
- expected to be realized within twelve months after the reporting period; or
- cash or cash equivalents unless restricted from being exchanged or used to settle a liability for at least twelve months after the reporting period.

All other assets are classified as non-current.

2.3.1 Current versus non-current classification (cont'd)

A liability is current when:
- it is expected to be settled in the normal operating cycle;
- it is held primarily for the purpose of trading;
- it is due to be settled within twelve months after the reporting period; or
- there is no unconditional right to defer the settlement of the liability for at least twelve months after the reporting period.

The Company classifies all other liabilities as non-current.

Deferred tax assets and liabilities are classified as non-current assets and liabilities.

2.3.2 Fair value measurement

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 Company.

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 Company 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 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 as a whole:

- 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 financial statements at fair value on a recurring basis, the Company 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 as a whole at the end of each reporting period.

For the purpose of fair value disclosures, the Company 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, as explained above.

2.3.3 Foreign currencies

The Company's financial statements are presented in Korean won, which is also the Company's functional currency. Transactions in foreign currencies are initially recorded at their respective functional currency spot rates at the date the transaction. Monetary assets and liabilities denominated in foreign currencies are translated at the functional currency spot rates of exchange at the reporting date. Differences arising on translation of monetary items are recognized in profit or loss.

Non-monetary items that are measured in terms of historical cost in a foreign currency are translated using the exchange rates at the dates of the initial transactions. Non-monetary items measured at fair value in a foreign currency are translated using the exchange rates at the date when the fair value is determined. The gain or loss arising on translation of non-monetary items measured at fair value is treated in line with the recognition of the gain or loss on the change in fair value of the item (i.e., translation differences on items whose fair value gain or loss is recognized in other comprehensive income ("OCI") or profit or loss is also recognized in OCI or profit or loss, respectively).

In determining the spot exchange rate to use on initial recognition of the related asset, expense or income (or part of it) on the recognition of a non-monetary asset or non-monetary liability relating to advance consideration, the date of the transaction is the date on which the Company initially recognizes the non-monetary asset or non-monetary liability arising from the advance consideration. If there are multiple payments or receipts in advance, the Company determines the transaction date for each payment or receipt of advance consideration.

2.3.4 Revenue from contracts with customers

The Company is engaged in the production and sale of propylene for the main business. 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 Company expects to be entitled in exchange for those goods or services. The Company has generally concluded that it is the principal in its revenue arrangements because it typically controls the goods or services before transferring them to the customer.

Sales of propylene
Revenue from sale of propylene is recognized at the point in time when control of the asset is transferred to the customer, generally on delivery of the propylene. The normal credit term is 30 to 90 days upon delivery.
The Company considers whether there are other promises in the contract that are separate performance obligations to which a portion of the transaction price needs to be allocated (e.g., warranties, customer loyalty points). In determining the transaction price for the sale of propylene, the Company considers the effects of variable consideration, the existence of significant financing components, noncash consideration, and consideration payable to the customer (if any).

(1) Variable consideration

If the consideration in a contract includes a variable amount, the Company 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 constrained until it is highly probable that a significant revenue reversal in the amount of cumulative revenue recognized will not occur when the associated uncertainty with the variable consideration is subsequently resolved.

(2) Significant financing component

Using the practical expedient in KIFRS 1115, the Company 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.

2.3.4 Revenue from contracts with customers (cont'd)

Technical services
The Company is engaged in providing the technical service based on the Company's know-how and technical knowledge. The Company recognizes revenue from providing technical services over time. This is because customers obtain and consume the benefits of the service as the Company performs its obligation. As the Company has the right to receive a consideration for the service provided to the customer, the Company applies a practical expedient method that recognizes revenue in the amount to which the Company is entitled.

(3) Contract balances

Contract assets
Contract assets are the right to the consideration for the goods or services transferred to the customers. If the receipt of consideration for transferring any goods or services to a customer before the customer pays the price or before the due date is conditional other than the elapse of time, the Company's right to the consideration is a contract asset.

Trade receivables
A receivable represents the Company's right to an amount of consideration that is unconditional (i.e., only the passage of time is required before payment of the consideration is due). Refer to accounting policies of financial assets in the Note 2-3-7.

Contract liabilities
A contract liability is the obligation to transfer goods or services to a customer for which the Company has received consideration (or an amount of consideration is due) from the customer. If a customer pays consideration before the Company transfers goods or services to the customer, a contract liability is recognized when the payment is made or the payment is due (whichever is earlier). Contract liabilities are recognized as revenue when the Company performs its obligations under the contract.

2.3.5 Taxes

(1) Current income tax

Current income tax assets and liabilities are measured at the amount expected to be recovered from or paid to the taxation authorities. The tax rates and tax laws used to compute the amount are those that are enacted or substantively enacted at the reporting date in the countries where the Company operates and generates taxable income.

Current income tax relating to items recognized directly in equity is recognized in equity and not in the statement of comprehensive income. Management periodically evaluates positions taken in the tax returns with respect to situations in which applicable tax regulations are subject to interpretation and establishes provisions where appropriate.

(2) Deferred tax

Deferred tax is provided using the liability method on temporary differences between the tax bases of assets and liabilities and their carrying amounts for financial reporting purposes at the reporting date.
Deferred tax liabilities are recognized for all taxable temporary differences, except:

- when the deferred tax liability arises from the initial recognition of goodwill or an asset or liability in a transaction that is not a business combination and, at the time of the transaction, affects neither the accounting profit nor taxable profit or loss; or
- in respect of taxable temporary differences associated with investments in subsidiaries, associates and interests in joint arrangements, when the timing of the reversal of the temporary differences can be controlled and it is probable that the temporary differences will not reverse in the foreseeable future.

2.3.5 Taxes (cont'd)

Deferred tax assets are recognized to the extent that it is probable that taxable profit will be available against which the deductible temporary differences, and the carry forward of unused tax credits and unused tax losses can be utilized, except:

- when the deferred tax asset relating to the deductible temporary difference arises from the initial recognition of an asset or liability in a transaction that is not a business combination and, at the time of the transaction, affects neither the accounting profit nor taxable profit or loss; or
- in respect of deductible temporary differences associated with investments in subsidiaries, associates and interests in joint arrangements, deferred tax assets are recognized only to the extent that it is probable that the temporary differences will reverse in the foreseeable future and taxable profit will be available against which the temporary differences can be utilized.

The carrying amount of deferred tax assets is reviewed at each reporting date and reduced to the extent that it is no longer probable that sufficient taxable profit will be available to allow all or part of the deferred tax asset to be utilized. Unrecognized deferred tax assets are re-assessed at each reporting date and are recognized to the extent that it has become probable that future taxable profits will allow the deferred tax asset to be recovered.

Deferred tax assets and liabilities are measured at the tax rates that are expected to apply in the year when the asset is realized or the liability is settled, based on tax rates (and tax laws) that have been enacted or substantively enacted at the reporting date.

Deferred tax relating to items recognized outside profit or loss is recognized outside profit or loss. Deferred tax items are recognized in correlation to the underlying transaction either in OCI or directly in equity.

The Company offsets deferred tax assets and deferred tax liabilities if and only if it has a legally enforceable right to set off current tax assets and current tax liabilities and the deferred tax assets and deferred tax liabilities relate to income taxes levied by the same taxation authority on either the same taxable entity or different taxable entities.

2.3.6 Retirement benefits

The Company operates the defined benefit plan as its retirement benefit plan. The cost of providing benefits under the defined benefit plan is determined using the projected unit credit method. Remeasurements, comprising actuarial gains and losses, the effect of the asset ceiling, excluding amounts included in net interest on the net defined benefit liability and the return on plan assets (excluding amounts included in net interest on the net defined benefit liability), are recognized immediately in the statement of financial position with a corresponding debit or credit to retained earnings through OCI in the period in which they occur. Remeasurements are not reclassified to profit or loss in subsequent periods.

Past service costs are recognized in profit or loss on the earlier of:
- ➢ the date of the plan amendment or curtailment, and
- ➢ the date that the Company recognizes related restructuring costs

Net interest is calculated by applying the discount rate to the net defined benefit liability or asset. The Company recognizes service costs and net interest expense or income of net defined benefit liability under 'cost of sales' and 'selling and administrative expenses' in the statement of comprehensive income.

Meanwhile, the Company operated the defined contribution plan for some employees under which the amount contributed by the Company is expensed when the employee provides services.

2.3.7 Financial instruments – initial recognition and subsequent measurement

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.

(1) Financial assets

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 (FVPL).

The classification of financial assets at initial recognition depends on the financial asset's contractual cash flow characteristics and the Company's business model for managing them. With the exception of trade receivables that do not contain a significant financing component or for which the Company has applied the practical expedient, the Company 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 Company has applied the practical expedient are measured at the transaction price determined under KIFRS 1115.

In order for a financial asset to be classified and measured at amortized cost or fair value through OCI, it needs to give rise to cash flows that are 'solely payments of principal and interest' (SPPI) on the principal amount outstanding. This assessment is referred to as the SPPI test and is performed at an instrument level.

The Company's business model for managing financial assets refers to how it manages its financial assets in order to generate cash flows. The business model determines whether cash flows will result from collecting contractual cash flows, selling the financial assets, or both.

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 Company commits to purchase or sell the asset.

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)
The Company measures financial assets at amortized cost if both of the following conditions are met:
- the financial asset is held within a business model with the objective to hold financial assets in order to collect contractual cash flows; and
- the contractual terms of the financial asset give rise on specified dates to cash flows that are solely payments of principal and interest on the principal amount outstanding.

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.

2.3.7 Financial instruments – initial recognition and subsequent measurement (cont'd)

Financial assets at fair value through OCI (debt instruments)
The Company measures debt instruments at fair value through OCI if both of the following conditions are met:

- the financial asset is held within a business model with the objective of both holding to collect contractual cash flows and selling; and
- the contractual terms of the financial asset give rise on specified dates to cash flows that are solely payments of principal and interest on the principal amount outstanding.

For debt instruments at fair value through OCI, interest income, foreign exchange revaluation and impairment losses or reversals are recognized in the statement of profit or loss and computed in the same manner as for financial assets measured at amortized cost. The remaining fair value changes are recognized in OCI. Upon derecognition, the cumulative fair value change recognized in OCI is recycled to profit or loss.
The Company's debt instruments at fair value through OCI are included under non-current financial assets.

Financial assets designated at fair value through OCI (equity instruments)
Upon initial recognition, the Company 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. The classification is determined on an instrument-by-instrument basis.

Gains and losses on these financial assets are never recycled to profit or loss. Dividends are recognized as other non-operating income in the statement of comprehensive income when the right of payment has been established, except when the Company 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 Company may elect 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 designated upon initial recognition at fair value through profit or loss. 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 statement of financial position at fair value with net changes in fair value recognized in profit or loss.

Financial assets at fair value through profit or loss includes listed equity instruments with the irrevocable election to reflect the changes in derivatives and fair value of financial assets into OCI. Dividends on the listed equity instruments are recognized in profit or loss at the time the right of dividend is fixed and determinable.

A derivative embedded in a hybrid contract, with a financial liability or non-financial host, 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 that would otherwise be required 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.

2.3.7 Financial instruments – initial recognition and subsequent measurement (cont'd)

Derecognition
A financial asset (or, where applicable, a part of a financial asset or part of a company of similar financial assets) is primarily derecognized (i.e., removed from the Company's statement of financial position) when:
- the rights to receive cash flows from the asset have expired; or
- the Company 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 Company has transferred substantially most of the risks and rewards of the asset, or (b) the Company has neither transferred nor retained substantially most of the risks and rewards of the asset, but has transferred control of the asset.

When the Company 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, nor transferred control of the asset, the Company continues to recognize the transferred asset to the extent of its continuing involvement. In that case, the Company 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 Company 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 Company could be required to repay.

Impairment of financial assets
Further disclosures relating to impairment of financial assets are also provided in the following notes:
- Disclosures for significant assumptions;
- Debt instruments at fair value through OCI; and
- Trade receivables, including contract assets.

The Company recognizes an allowance for expected credit losses (ECLs) for all debt instruments not held at fair value through profit or loss. ECLs are based on the difference between the contractual cash flows due in accordance with the contract and all the cash flows that the Company expects to receive, discounted at an approximation of the original effective interest rate. The expected cash flows will include cash flows from the sale of collateral held or other credit enhancements that are integral to the contractual terms.

ECLs are recognized in two stages. For credit exposures for which there has not been a significant increase in credit risk since initial recognition, ECLs are provided for credit losses that result from default events that are possible within the next 12-months (a 12-month ECL). For those credit exposures for which there has been a significant increase in credit risk since initial recognition, a loss allowance is required for credit losses expected over the remaining life of the exposure, irrespective of the timing of the default (a lifetime ECL).

For trade receivables and contract assets, the Company applies a simplified approach in calculating ECLs. Therefore, the Company does not track changes in credit risk, but instead recognizes a loss allowance based on lifetime ECLs at each reporting date. The Company 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 Company applies the low credit risk simplification. At every reporting date, the Company 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 Company 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.

2.3.7 Financial instruments – initial recognition and subsequent measurement (cont'd)

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

(2) Financial liabilities

Initial recognition and measurement
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 Company's financial liabilities include trade and other payables, bonds payable, loans and borrowings including bank overdrafts, and derivative financial instruments.

Subsequent measurement
The measurement of financial liabilities depends on their classification, as described below:

Financial liabilities at fair value through profit or loss
Financial liabilities at fair value through profit or loss include financial liabilities held for trading and financial liabilities designated upon initial recognition as of fair value through profit or loss.

Financial liabilities are classified as held for trading if they are incurred for the purpose of repurchasing in the near term. This category also includes derivative financial instruments entered into by the Company that are not designated as hedging instruments in hedge relationships as defined by KIFRS 1109. Separated embedded derivatives are also classified as held for trading unless they are designated as effective hedging instruments.

Gains or losses on liabilities held for trading are recognized in profit or loss.

Financial liabilities designated upon initial recognition at fair value through profit or loss are designated at the initial date of recognition, and only if the criteria in KIFRS 1109 are satisfied. The Company has not designated any financial liability as of fair value through profit or loss.

Loans and borrowings
This is the category most relevant to the Company. After initial recognition, interest-bearing loans and borrowings are subsequently measured at amortized cost using the EIR method. Gains and losses are recognized in profit or loss when the liabilities are derecognized as well as through the EIR amortization process.

Amortized cost is calculated by taking into account any discount or premium on acquisition and fees or costs that are an integral part of the EIR.

This category generally applies to interest-bearing loans and borrowings. For more information, refer to Note 3.

2.3.7 Financial instruments – initial recognition and subsequent measurement (cont'd)

Derecognition
A financial liability is derecognized when the obligation under the liability is discharged or cancelled or expires. When an existing financial liability is replaced by another from the same lender on substantially different terms, or the terms of an existing liability are substantially modified, such an exchange or modification is treated as the derecognition of the original liability and the recognition of a new liability. The difference in the respective carrying amounts is recognized in profit or loss.

Offsetting of financial instruments
Financial assets and financial liabilities are offset and the net amount is reported in the 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.

2.3.8 Derivative financial instruments

The Company uses derivative financial instruments, such as forward currency contracts and interest rate swaps, to hedge its foreign currency risks and interest rate 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.

2.3.9 Cash and cash equivalents

Cash and equivalents in the statement of financial position comprise cash at banks and on hand and short-term deposits with a maturity of three months or less, which are subject to an insignificant risk of changes in value.

2.3.10 Inventories

Inventories are valued at the lower of cost and net realizable value.
Costs incurred in bringing each product to its present location and condition are accounted for, as follows:
- raw materials: purchase cost on a first-in, first-out basis; and
- finished goods and work in progress: cost of direct materials and labor and a proportion of manufacturing overheads based on the normal operating capacity, but excluding borrowing costs.

The unit cost of inventories is determined by the weighted-average method. Net realizable value is the estimated selling price in the ordinary course of business, less estimated costs of completion and the estimated costs necessary to make the sale.

2.3.11 Property, plant and equipment

Property, plant and equipment is stated at cost, net of accumulated depreciation and accumulated impairment losses, if any. Such cost includes the cost of replacing part of the plant and equipment and borrowing costs for long-term construction projects if the recognition criteria are met. Likewise, when a major inspection is performed, its cost is recognized in the carrying amount of the plant and equipment as a replacement if the recognition criteria are satisfied. All other repair and maintenance costs are recognized in profit or loss as incurred.

Depreciation of property, plant and equipment is provided using the straight-line method (except for other properties) over the estimated useful life of the assets as follows:

	Useful lives (Years)
Buildings	30
Structures	30
Storage tanks	30
Machinery	20 - 30
Vehicles	4
Tools, furniture and fixtures	4
Other properties (catalyst)	Unit of production method,12

2.3.11 Property, plant and equipment (cont'd)

An item of property, plant and equipment and any significant part initially recognized is derecognized upon disposal or when no future economic benefits are expected from its use or disposal. Any gain or loss arising on derecognition of the asset (calculated as the difference between the net disposal proceeds and the carrying amount of the asset) is included in profit or loss when the asset is derecognized.

The Company reviews the estimated residual values and expected useful lives of assets at lease annually. In particular, the Company considers the impact of health, safety and environmental legislation in its assessment of expected useful lives and estimated residual values. In addition, the Company considers climate-related risks, including physical and transition risks. Specifically, the Company determines whether climate-related laws and regulations may affect useful life or residual value in ways such as prohibiting or restricting the use of fossil fuel-based machinery and equipment of the Company, or imposing additional energy efficiency requirements on buildings and facilities of the Company.

The residual values, useful lives and methods of depreciation of property, plant and equipment are reviewed at the end of each financial year, and adjusted prospectively, if appropriate.

2.3.12 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 asset. All other borrowing costs are expensed in the period in which they incur.

2.3.13 Leases

The Company assesses at contract inception whether a contract is, or contains, a lease. That is, if the contract conveys the right to control the use of an identified asset for a period of time in exchange for consideration.

Company as a lessee
The Company applies a single recognition and measurement approach for all leases, except for short-term leases and leases of low-value assets. The Company recognizes lease liabilities to make lease payments and right-of-use assets representing the right to use the underlying assets.

i) Right-of-use assets
The Company recognizes right-of-use assets at the commencement date of the lease (i.e., the date the underlying asset is available for use). Right-of-use assets are measured at cost, less any accumulated depreciation and impairment losses, and adjusted for any remeasurement of lease liabilities. The cost of right-of-use assets includes the amount of lease liabilities recognized, initial direct costs incurred, and lease payments made at or before the commencement date less any lease incentives received. Right-of-use assets are depreciated on a straight-line basis over the shorter of the lease term and the estimated useful lives of the assets, as follows:
- buildings – 10 years; and
- vehicles – 2 to 3 years.

If ownership of the leased asset transfers to the Company 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.
The right-of-use assets are also subject to impairment. Refer to the accounting policies in Note 2-3-15 *Impairment of non-financial assets*.

ii) Lease liabilities
At the commencement date of the lease, the Company 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 Company and payments of penalties for terminating the lease, if the lease term reflects the Company exercising the option to terminate. Variable lease payments that do not depend on an index or a rate are recognized as expenses (unless they are incurred to produce inventories) in the period in which the event or condition that triggers the payment occurs.

2.3.13 Leases (cont'd)

In calculating the present value of lease payments, the Company uses its incremental borrowing rate at the lease commencement date because the interest rate implicit in the lease is not readily determinable. After the commencement date, the amount of lease liabilities is increased to reflect the accretion of interest and reduced for the lease payments made. In addition, the carrying amount of lease liabilities is remeasured if there is a modification, a change in the lease term, a change in the lease payments (e.g., changes to future payments resulting from a change in an index or rate used to determine such lease payments) or a change in the assessment of an option to purchase the underlying asset.

iii) Short-term leases and leases of low-value assets
The Company applies the short-term lease recognition exemption to its short-term leases of buildings and equipment (i.e., those leases that have a lease term of 12 months or less from the commencement date and do not contain a purchase option). It also applies the lease of low-value assets recognition exemption to leases of office equipment (e.g., lease of assets valued under US$5,000) that are considered to be low value. Lease payments on short-term leases and leases of low-value assets are recognized as expense on a straight-line basis over the lease term.

Determining the lease term of contracts with renewal options
The Company 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 Company has several lease contracts that include extension and termination options. The Company applies judgement in evaluating whether it is reasonably certain whether or not to exercise the option to renew or terminate the lease.
That is, it considers all relevant factors that create an economic incentive for it to exercise either the renewal or termination. After the commencement date, the Company 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.
The renewal options for leases of motor vehicles are not included as part of the lease term because the Company typically leases motor vehicles for not more than five years and, hence, is not exercising any renewal options.

Company as a lessor
Leases in which the Company does not transfer substantially all the risks and rewards incidental to ownership of an asset are classified as operating leases. Rental income arising is accounted for on a straight-line basis over the lease terms and is included in sales in the statement of comprehensive income 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 sales in the period in which they are earned.

2.3.14 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 intangibles, excluding capitalized development costs, are not capitalized and related expenditure is reflected in the statements of in profit or loss in the period in which the expenditure is incurred.

The useful life of intangible assets is assessed as either finite or indefinite. Intangible assets with finite lives are amortized over the useful economic life and assessed for impairment whenever there is an indication that the intangible asset may be impaired. The amortization period and the amortization method for an intangible asset with a finite useful life is reviewed at least at the end of each reporting period. Changes in the expected useful life or the expected pattern of consumption of future economic benefits embodied in the asset are considered to the amortization period or method, as appropriate, and are treated as changes in accounting estimates. Amortization of intangible assets is recognized in profit or loss as an expense item consistent with the function of the intangible asset.

2.3.14 Intangible assets (cont'd)

Intangible assets with indefinite useful lives are not amortized, but are tested for impairment annually, either individually or at the CGU level. The assessment of indefinite life is reviewed annually to determine whether the indefinite life continues to be supportable. If not, the change in useful life from indefinite to finite is made on a prospective basis.

An intangible asset is derecognized upon disposal (i.e., at the date the recipient obtains control) or when no future economic benefits are expected from its use or disposal. Any gain or loss arising upon derecognition of the asset (calculated as the difference between the net disposal proceeds and the carrying amount of the asset) is included in the statement of profit or loss.

2.3.15 Impairment of non-financial assets

The Company assesses at each reporting date, whether there is an indication that an asset may be impaired. If any indication exists, or when annual impairment testing for an asset is required, the Company estimates the asset's recoverable amount. An asset's recoverable amount is the higher of an asset's or cash-generating unit's (CGU) fair value less costs of disposal and its value in use. Recoverable amount is determined for an individual asset, unless the asset does not generate cash inflows that are largely independent of those from other assets or a group of assets. When the carrying amount of an asset or CGU exceeds its recoverable amount, the asset is considered impaired and is written down to its recoverable amount.

In assessing value in use, the estimated future cash flows are discounted to their present value using a pre-tax discount rate that reflects current market assessments of the time value of money and the risks specific to the asset. Fair value is determined using an appropriate valuation model using stock prices of subsidiaries traded in the open market or other available fair value measurement indicators.

The Company bases its impairment calculation on detailed budgets and forecast calculations, which are prepared separately for each of the Company's CGUs to which the individual assets are allocated. These budgets and forecast calculations generally cover a period of five years. A long-term growth rate is calculated and applied to project future cash flows after the fifth year.

Impairment losses are recognized in profit or loss in expense categories consistent with the function of the impaired asset, except for properties previously revalued with the revaluation taken to other comprehensive income.

For assets excluding goodwill, an assessment is made at each reporting date to determine whether there is an indication that previously recognized impairment losses no longer exist or have decreased. If such indication exists, the Company estimates the asset's or CGU's recoverable amount. A previously recognized impairment loss is reversed only if there has been a change in the assumptions used to determine the asset's recoverable amount since the last impairment loss was recognized. The reversal is limited so that the carrying amount of the asset does not exceed its recoverable amount, nor exceed the carrying amount that would have been determined, net of depreciation, had no impairment loss been recognized for the asset in prior years.

The Company assess whether climate risks, including physical and transition risks, can have a significant impact, and includes these risks in the forecast of cash flows when assessing value in use.

2.3.16 Provisions

As a result of past events, the Company recognizes the provision when there is a current obligation (a legal obligation or an agenda obligation), resources with economic benefits are likely to be leaked to fulfill the obligation, and the amount required to perform the obligation can be reliably estimated. If a third party is expected to reimburse part or all of the expenditure required to settle the provision, the amount of reimbursement is recognized and accounted for as a separate asset only when it is almost certain that the company will receive reimbursement if it fulfills its obligations. Expenses recognized in the statement of comprehensive income in relation to provisions are expressed offset against the amount recognized in relation to reimbursement by third parties.
If the time value effect of money is important, the provision is discounted at the current pre-tax interest rate that reflects the debt's unique risk. If the provision is valued at present value, the increase in book value over time is recognized as a financial cost.

2.3.17 Investments in joint venture

A joint venture is a type of joint arrangement whereby the parties that have joint control of the arrangement have rights to the net assets of the joint venture. Joint control is the contractually agreed sharing of control of an arrangement, which exists only when decisions about the relevant activities require the unanimous consent of the parties sharing control.

The Company's investments in its joint venture are accounted for using the equity method. Under the equity method, the investment in a joint venture is initially recognized at cost. The carrying amount of the investment is adjusted to recognize changes in the Company's share of net assets of the joint venture since the acquisition date. Goodwill relating to the joint venture is included in the carrying amount of the investment and is not tested for impairment separately.

The statement of comprehensive income reflects the Company's share of the results of operations of the joint venture. Any change in OCI of those investees is presented as part of the Company's OCI. In addition, when there has been a change recognized directly in the equity of the joint venture, the Company recognizes its share of any changes, when applicable, in the statement of changes in equity. Unrealized gains and losses resulting from transactions between the Company and the joint venture are eliminated to the extent of the interest in the joint venture.

The aggregate of the Company's share of profit or loss of a joint venture is shown on the face of the statement of comprehensive income outside operating profit and represents profit or loss after tax and non-controlling interests in the subsidiaries of the joint venture.

The financial statements of the joint venture are prepared for the same reporting period as the Company. When necessary, adjustments are made to bring the accounting policies in line with those of the Company.

After application of the equity method, the Company determines whether it is necessary to recognize an impairment loss on its investment in its joint venture. At each reporting date, the Company determines whether there is objective evidence that the investment in the joint venture is impaired. If there is such evidence, the Company calculates the amount of impairment as the difference between the recoverable amount of the joint venture and its carrying value, and then recognizes the loss as 'gain or loss on valuation of equity method' in the statement of comprehensive income.

Upon loss of significant influence over the joint venture, the Company measures and recognizes any retained investment at its fair value. Any difference between the carrying amount of the joint venture upon loss of significant influence or joint control and the fair value of the retained investment and proceeds from disposal is recognized in profit or loss.

2.3.18 Cash dividend

The Company recognizes a liability to pay a dividend when the distribution is authorized and the distribution is no longer at the discretion of the Company. A distribution is authorized when it is approved by the shareholders. A corresponding amount is recognized directly in equity.

2.3.19 Greenhous gas emissions

The Company receives free emission rights as a result of emission trading schemes. The rights are received on an annual basis and, in return, the Company is required to remit rights equal to its actual emissions. The Company has adopted the net liability approach to the emission rights granted. The Company recognizes the received emission rights at the nominal amount (i.e., nil), and recognizes a provision as emissions are made. As the Company intends to keep the emission rights received to settle its emission liability, the Company takes into consideration the value of received emission rights when measuring a provision. Therefore, until the emission limit is exceeded, there is no impact on the statement of financial position and the statement of comprehensive income. The emission costs are recognized as other operating expenses. Where emission rights are purchased from other parties, the cost of obtaining the allowances determine the measurement of the provision.

2.4 New and amended standards and interpretations

The Company applied for the first time certain standards and amendments, which are effective for annual periods beginning on or after January 1, 2024. The Company has not early adopted any other standard, interpretation or amendment that has been issued but is not yet effective.

2.4.1 Amendments to KIFRS 1116: *Leases – Lease Liabilities arising from Sales-type Leases*

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 have no material impact on the Company's financial statements.

2.4.2 Amendments to KIFRS 1001: *Presentation of Financial Statements - Classification of Liabilities as Current or Non-current*

The amendments to paragraphs 69 to 76 of KIFRS 1001 specify the requirements for classifying liabilities as current or non-current. The amendments clarify:
• what is meant by a right to defer settlement;
• that a right to defer must exist at the end of the reporting period;
• that classification is unaffected by the likelihood that an entity will exercise its deferral right; and
• that only if an embedded derivative in a convertible liability is itself an equity instrument would the terms of a liability not impact its classification.

In addition, a requirement has been introduced to require disclosure 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 have no material impact on the Company's financial statements.

2.4.3 Amendments to KIFRS 1007: *Statement of Cash Flows* & KIFRS 1107*: Financial instruments: Disclosures - 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.
The amendments have no material impact on the Company's financial statements.

2.5 Standards issued but not yet effective

The new and amended standards and interpretations that are issued, but not yet effective, up to the date of issuance of the Company's financial statements are disclosed below.

2.5.1 Amendment to KIFRS 1021: *Effects of Changes in Foreign Exchange Rates – 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 cannot restate comparative information.

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

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

The amendments to KIFRS *1109 Financial Instruments and* KIFRS 1107 *Financial Instruments: Disclosures* 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. Earlier adoption is permitted, but only for the amendments for the classification of financial assets and related disclosures. The Group does not plan to early apply the amendments.
The Company is currently assessing the impact of the amendments on its 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 Company's financial statements.

2.6 Material accounting judgments, estimates and assumptions

The preparation of the Company's financial statement requires management to make judgments, estimates and assumptions that affect the reported amounts of revenues, expenses, assets and liabilities, and the accompanying disclosures, and the disclosure of contingent liabilities. Uncertainty about these assumptions and estimates could result in outcomes that require a material adjustment to the carrying amount of assets or liabilities affected in future periods.

Meanwhile, the Company considers climate-related risks associated with climate change and the establishment of a future global greenhouse gas reduction regime in its estimation and assumption. Climate-related risks increase the uncertainty of estimates and assumptions in various items of the financial statements, and although they may not have a material impact on the current measurement, the Company is closely monitoring climate-related changes and developments, such as new climate-related laws.

The key assumptions concerning the future and other key sources of estimation uncertainty at the reporting date, that have a significant risk of causing a material adjustment to the carrying amounts of assets and liabilities within the next financial year, are described below.

2.6.1 Impairment of non-financial assets

The Company assesses, at each reporting date, whether there is an indication that all non-financial assets may be impaired. Goodwill and other intangible assets with indefinite useful life are tested for impairment annually or when any indication exists. Other non-financial assets are tested for impairment if there is any indication that the carrying value may not be recoverable. In assessing value in use, the management is required to estimate the future cash flows from an asset or CGU and determine an appropriate discount rate to calculate the present value of such estimated future cash flows.

2.6.2 Retirement benefits

The present value of the pension obligation is determined using actuarial valuations. An actuarial valuation involves making various assumptions that may differ from actual developments in the future. These include the determination of the discount rate, future salary increases, mortality rates and future pension increases. Due to the complexities involved in the valuation 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.

2.6.3 Provision for expected credit losses of trade receivables

The Company uses a provision matrix to calculate ECLs for trade receivables. The provision rates are based on days past due for groupings of various customer segments that have similar loss patterns (i.e., by geography, product type, customer type and rating, and coverage by letters of credit and other forms of credit insurance).

The provision matrix is initially based on the Company's historical observed default rates. The Company 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 over the next year 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 Company's historical credit loss experience and forecast of economic conditions may also not be representative of customer's actual default in the future.

2.6.4 Leases - Estimating the incremental borrowing rate

The Company cannot readily determine the interest rate implicit in the lease, therefore, it uses its incremental borrowing rate (IBR) to measure lease liabilities. The IBR is the rate of interest that the Company would have to pay to borrow over a similar term, and with a similar security, the funds necessary to obtain an asset of a similar value to the right-of-use asset in a similar economic environment. The IBR therefore reflects what the Company 'would have to pay', which requires estimation when no observable rates are available or when they need to be adjusted to reflect the terms and conditions of the lease. The Company estimates the IBR using observable inputs (such as market interest rates) when available.

2.6.5 Deferred tax

Deferred tax assets and liabilities are recognized and measured on the basis of management's judgment. In particular, deferred tax assets are recognized to the extent estimated by assumptions on future circumstances and management's judgment. The Company's management determines the amount of deferred tax assets to be recognized considering whether applicable tax regulations may affect its tax position in the future and when and to which extent a taxable income may incur.

3. Financial assets and liabilities

Financial assets

Financial assets as of December 31, 2024 and 2023 are as follows (Korean won in thousands):

	December 31, 2024		
	Financial assets at fair value through profit or loss	Financial assets at amortized cost	Total
Current assets:			
Cash and cash equivalents	₩ -	163,447,903	163,447,903
Short-term financial instruments	-	-	-
Trade and other receivables	-	102,420,362	102,420,362
Short-term derivatives	-	-	-
Sub-total	-	265,868,265	265,868,265
Non-current assets:			
Long-term financial instruments	-	2,000	2,000
Long-term trade and other receivables	-	2,483,162	2,483,162
Long-term derivative financial assets	1,147,076	-	1,147,076
Long-term deposits	-	129,071	129,071
Sub-total	1,147,076	2,614,233	3,761,309
Total	₩ 1,147,076	268,482,498	269,629,574

	December 31, 2023		
	Financial assets at fair value through profit or loss	Financial assets at amortized cost	Total
Current assets:			
Cash and cash equivalents	₩ -	69,872,344	69,872,344
Short-term financial instruments	14,677,482	-	14,677,482
Trade and other receivables	-	58,482,708	58,482,708
Short-term derivatives	2,346,889	-	2,346,889
Sub-total	17,024,371	128,355,052	145,379,423
Non-current assets:			
Long-term financial instruments	-	2,000	2,000
Long-term trade and other receivables	-	2,591,548	2,591,548
Long-term derivative financial assets	-	-	-
Long-term deposits	-	123,008	123,008
Sub-total	-	2,716,556	2,716,556
Total	₩ 17,024,371	131,071,608	148,095,979

3. Financial assets and liabilities (cont'd)

Financial liabilities
Financial liabilities as of December 31, 2024 and 2023 are as follows (Korean won in thousands):

	December 31, 2024		
	Financial liabilities at fair value through profit or loss	Financial liabilities at amortized cost	Total
Current liabilities:			
Trade and other payables	₩ -	181,250,995	181,250,995
Derivatives financial liabilities	625,534	-	625,534
Short-term borrowings	-	50,000,000	50,000,000
Current portion of long-term liabilities	-	255,871,893	255,871,893
Current portion of lease liabilities	-	210,661	210,661
Sub-total	625,534	487,333,549	487,959,083
Non-current liabilities:			
Bonds payable	-	324,827,657	324,827,657
Long-term borrowings	-	-	-
Derivative financial liabilities	325,428	-	325,428
Lease liabilities	-	295,088	295,088
Other non-current liabilities	-	167,708	167,708
Sub-total	325,428	325,290,453	325,615,881
Total	₩ 950,962	812,624,002	813,574,964

	December 31, 2023		
	Financial liabilities at fair value through profit or loss	Financial liabilities at amortized cost	Total
Current liabilities:			
Trade and other payables	₩ -	120,513,381	120,513,381
Derivative financial liabilities	6,240	-	6,240
Short-term borrowings	-	60,000,000	60,000,000
Current portion of long-term liabilities	-	113,568,430	113,568,430
Current portion of lease liabilities	-	165,942	165,942
Sub-total	6,240	294,247,753	294,253,993
Non-current liabilities:			
Bonds payable	-	199,652,203	199,652,203
Long-term borrowings	-	80,000,000	80,000,000
Derivative financial liabilities	215,550	-	215,550
Lease liabilities	-	32,547	32,547
Other non-current liabilities	-	50,000	50,000
Sub-total	215,550	279,734,750	279,734,750
Total	₩ 221,790	573,982,503	574,204,293

3. Financial assets and liabilities (cont'd)

Gain and loss of financial instruments by category

Details of gain and loss of financial instruments by category for each of the two years in the period ended December 31, 2024 are as follows (Korean won in thousands):

	2024				
	Financial assets at fair value through profit or loss	Financial assets at amortized cost	Financial liabilities at fair value through profit or loss	Financial liabilities at amortized cost	Total
Interest income (expense)	₩ -	4,190,634	-	(28,810,473)	(24,619,839)
Gain on translation of financial assets at FVPL	385,938	-	-	-	385,938
Gain (loss) on foreign currency translation	-	29,969	-	(1,916,708)	(1,886,739)
Gain (loss) on foreign currency transaction	-	1,825,134	-	(3,911,997)	(2,086,863)
Gain (loss) on valuation of derivative instruments	1,147,076	-	(735,412)	-	411,664
Gain (loss) on transaction of derivative instruments	2,935,390	-	(1,404,316)	-	1,531,074
	₩ 4,468,404	6,045,737	(2,139,728)	(34,639,178)	(26,264,765)

	2023				
	Financial assets at fair value through profit or loss	Financial assets at amortized cost	Financial liabilities at fair value through profit or loss	Financial liabilities at amortized cost	Total
Interest income (expense)	₩ -	1,563,771	-	(18,766,523)	(17,202,752)
Loss on valuation of financial assets at FVPL	(4,026,034)	-	-	-	(4,026,034)
Gain on translation of financial assets at FVPL	2,654,774	-	-	-	2,654,774
Loss on foreign currency translation	-	(124,125)	-	(530,000)	(654,125)
Gain (loss) on foreign currency transaction	-	1,470,238	-	(387,109)	1,083,129
Gain (loss) on valuation of derivative instruments	896,051	-	(6,240)	-	889,811
Gain (loss) on transaction of derivative instruments	(1,707,394)	-	501,553	-	(1,205,841)
	₩ (2,182,603)	2,909,884	495,313	(19,683,632)	(18,461,038)

Restricted deposits

Details of restricted bank deposits as of December 31, 2024 and 2023 are as follows (Korean won in thousands):

Account	Financial institution	December 31, 2024	December 31, 2023	Description
Long-term financial instruments	Hana Bank	₩ 2,000	₩ 2,000	Deposit for checking account

4. Trade and other receivables

Trade and other receivables as of December 31, 2024 and 2023 are as follows (Korean won in thousands):

		December 31, 2024		December 31, 2023
Current assets :				
Trade receivables	₩	98,124,677	₩	51,709,194
Non-trade receivables		4,055,585		6,528,047
Finance lease receivables		240,100		245,467
Non-current assets :				
Finance lease receivables		2,483,162		2,591,548
	₩	104,903,524	₩	61,074,256

As of December 31, 2024, the Company has no trade and other receivables past due or impaired.

5. Inventories

Inventories as of December 31, 2024 and 2023 are as follows (Korean won in thousands):

		December 31, 2024		December 31, 2023
Finished goods	₩	3,144,595	₩	9,708,063
Supplies		5,302,422		6,126,698
Raw materials		1,703,093		-
	₩	10,150,110	₩	15,834,761

Meanwhile, a reversal of loss on valuation of inventories reflected in cost of sales for the year ended December 31, 2024 amounts to ₩1,501,875 thousand, and a loss on valuation of inventories reflected in cost of sales for the year ended December 31, 2023 amounts to ₩1,466,135 thousand.

6. Other assets

Other current and non-current assets as of December 31, 2024 and 2023 are as follows (Korean won in thousands):

		December 31, 2024		December 31, 2023
Other current assets :				
Advanced payments	₩	19,760	₩	-
Prepaid expenses		1,005,126		631,950
Prepaid value-added tax		1,982,985		6,806,593
Other non-current assets :				
Long-term advanced payments		912,119		646,397
Long-term prepaid expenses		66,627		160,366
	₩	3,986,617	₩	8,245,306

7. Investments in joint venture

The current status and book value of investments in joint venture as of December 31, 2024 and 2023 are as follows (Korean won in thousands):

Joint venture	Location	December 31, 2024 Equity rate (%)	December 31, 2024 Book value (KRW)	December 31, 2023 Equity rate (%)	December 31, 2023 Book value (KRW)
Ulsan PP Co., Ltd. (*1, 2)	Korea (Ulsan)	50.00	68,109,273	50.00	77,264,069

(*1) The joint arrangement with joint control is structured through a separate vehicle, and it was classified as a joint venture because the Company determined that a party that has joint control has the right to net assets of the joint arrangement. The Company participated in capital increase of Ulsan PP Co., Ltd., and the book value increased by ₩10,000,000 thousand and ₩20,000,000 thousand as of December 31, 2024 and 2023, respectively.
(*2) The Ulsan PP Co., Ltd. applies Accounting Standards for Non-Public Entities in the Republic of Korea (KGAAP).

Changes in the book value of investments in joint venture for each of the two years in the period ended December 31, 2024 are as follows (Korean won in thousands):

2024	Beginning balance	Addition	Changes in equity	Loss on valuation of equity method	Ending balance
Joint venture	77,264,069	10,000,000	(82,994)	(19,071,802)	68,109,273

2023	Beginning balance	Addition	Changes in equity	Loss on valuation of equity method	Ending balance
Joint venture	89,057,432	20,000,000	261,160	(32,054,523)	77,264,069

The financial information as of and for the years ended December 31, 2024 and 2023 is as follows (Korean won in thousands):

	2024 (*1)	2023 (*1)
Assets	₩ 534,448,813	₩ 529,704,477
Liabilities	402,850,223	377,473,820
Equity	131,598,590	152,230,657
Sales	463,577,476	349,416,772
Loss for the year	(40,466,079)	(56,352,253)

(*1) The summary of financial information considers the effect of converting to KIFRS as Ulsan PP Co., Ltd. applies KGAAP.

Reconciliation between financial information of the joint venture and book value of share of its net assets as of December 31, 2024 and 2023 is as follows (Korean won in thousands):

December 31, 2024

Joint venture	Net assets	Ratio (%)	Share of net assets	Investment difference.	Ending balance
Ulsan PP Co., Ltd	131,598,590	50%	65,799,212	2,310,061	68,109,273

December 31, 2023

Joint venture	Net assets	Ratio (%)	Share of net assets	Investment difference.	Ending balance
Ulsan PP Co., Ltd	152,230,657	50%	76,115,222	1,148,847	77,264,069

8. Property, plant and equipment

Details of property, plant and equipment as of December 31, 2024 and 2023 are as follows (Korean won in thousands):

	December 31, 2024		
	Acquisition cost	Accumulated depreciation	Net book value
Land	₩ 45,689,960	₩ -	₩ 45,689,960
Buildings	43,504,272	(12,493,995)	31,010,277
Structures	268,456,637	(77,247,361)	191,209,276
Storage tanks	46,037,355	(14,582,960)	31,454,395
Machinery	556,759,907	(225,668,302)	331,091,605
Vehicles	18,940	(18,939)	1
Tools, furniture and fixtures	12,063,294	(11,644,870)	418,424
Other properties	58,164,078	(14,856,814)	43,307,264
Construction-in-progress	5,249,031	-	5,249,031
	₩ 1,035,943,474	₩ (356,513,241)	₩ 679,430,233

	December 31, 2023		
	Acquisition cost	Accumulated depreciation	Net book value
Land	₩ 45,689,960	₩ -	₩ 45,689,960
Buildings	43,255,360	(11,045,085)	32,210,275
Structures	268,137,386	(68,296,471)	199,840,915
Storage tanks	44,933,105	(12,594,264)	32,338,841
Machinery	538,282,084	(204,548,038)	333,734,046
Vehicles	18,940	(18,939)	1
Tools, furniture and fixtures	11,935,180	(11,257,726)	677,454
Other properties	48,700,550	(39,767,482)	8,933,065
Construction-in-progress	50,382,297	-	50,382,297
	₩ 1,051,334,862	₩ (347,528,008)	₩ 703,806,854

Changes in the book value of property, plant and equipment for each of the two years in the period ended December 31, 2024 are as follows (Korean won in thousands):

	2024					
	Beginning balance	Additions	Disposal	Transfers(*1)	Depreciation	Ending balance
Land	₩ 45,689,960	₩ -	₩ -	₩ -	₩ -	₩ 45,689,960
Buildings	32,210,275	146,913	-	102,000	(1,448,911)	31,010,277
Structures	199,840,915	319,251	-	-	(8,950,890)	191,209,276
Storage tanks	32,338,841	979,250	-	125,000	(1,988,696)	31,454,395
Machinery	333,734,046	21,440,217	(1,212,917)	8,112,060	(30,981,801)	331,091,605
Vehicles	1	-	-	-	-	1
Tools, furniture and fixtures	677,454	32,114	-	96,000	(387,144)	418,424
Other properties	8,933,065	9,025,887	(3,079,350)	39,587,221	(11,159,559)	43,307,264
Construction-in-progress	50,382,297	3,348,271	-	(48,481,537)	-	5,249,031
	₩ 703,806,854	₩ 35,291,903	₩ (4,292,267)	₩ (459,256)	₩ (54,917,001)	₩ 679,430,233

(*1) Transfers to intangible assets and transfers from supplies are included.

8. Property, plant and equipment (cont'd)

	2023				
	Beginning balance	Additions	Transfers	Depreciation	Ending balance
Land	₩ 45,689,960	₩ -	₩ -	₩ -	₩ 45,689,960
Buildings	33,582,032	-	70,967	(1,442,724)	32,210,275
Structures	208,791,246	-	-	(8,950,331)	199,840,915
Storage tanks	34,011,887	250,252	-	(1,923,298)	32,338,841
Machinery	363,642,317	17,557	-	(29,925,828)	333,734,046
Vehicles	1	-	-	-	1
Tools, furniture and fixtures	921,779	118,443	65,221	(427,989)	677,454
Other properties	16,910,080	-	-	(7,977,015)	8,933,065
Construction-in-progress	26,612,713	23,905,772	(136,188)	-	50,382,297
	₩ 730,162,015	₩ 24,292,024	₩ -	₩ (50,647,185)	₩ 703,806,854

Insured assets

The Company carries comprehensive insurance on its property, plant and equipment against fire and other casualty losses for up to ₩1, 330,373,797 thousand and ₩1,320,399,820 thousand as of December 31, 2024 and 2023, respectively.

9. Company as a lessee or lessor

Details of right-of-use assets as of December 31, 2024 and 2023 are as follows (Korean won in thousands):

	December 31, 2024		
	Acquisition cost	Accumulated depreciation	Net book value
Vehicles	₩ 236,084	₩ (74,528)	₩ 161,556
Buildings	1,004,258	(670,495)	333,763
	₩ 1,240,342	₩ (745,023)	₩ 495,319

	December 31, 2023		
	Acquisition cost	Accumulated depreciation	Net book value
Vehicles	₩ 96,082	₩ (31,781)	₩ 64,301
Buildings	919,916	(797,582)	122,334
	₩ 1,015,998	₩ (829,363)	₩ 186,635

9. Company as a lessee or lessor (cont'd)

Changes in the book value of 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 thousands):

2024

	Right-of-use assets						Lease liabilities	
	Vehicles		Buildings		Total			
Beginning balance	₩	64,301	₩	122,334	₩	186,635	₩	198,489
Addition		198,343		430,102		628,445		628,445
Disposal		(39,427)		(78,016)		(117,443)		(125,292)
Depreciation		(61,661)		(140,657)		(202,318)		-
Interest expense		-		-		-		25,157
Lease payments		-		-		-		(221,050)
Ending balance	₩	161,556	₩	333,763	₩	495,319	₩	505,749

2023

	Right-of-use assets						Lease liabilities	
	Vehicles		Buildings		Total			
Beginning balance	₩	29,759	₩	259,195	₩	288,954	₩	310,209
Addition		58,341		-		58,341		58,341
Disposal		-		-		-		(732)
Depreciation		(23,799)		(136,861)		(160,660)		-
Interest expense		-		-		-		10,712
Lease payments		-		-		-		(180,041)
Ending balance	₩	64,301	₩	122,334	₩	186,635	₩	198,489

9. Company as a lessee or lessor (cont'd)

Lease liabilities as of December 31, 2024 and 2023 are as follows (Korean won in thousands):

	December 31, 2024			
	Minimum lease payment		Present value	
Less than 1 year	₩	216,575	₩	210,661
1 to 5 years		328,132		295,088
	₩	544,707	₩	505,749

	December 31, 2023			
	Minimum lease payment		Present value	
Less than 1 year	₩	169,952	₩	165,942
1 to 5 years		34,297		32,547
	₩	204,249	₩	198,489

The table below summarizes the maturity profile of the lease liabilities as of December 31, 2024 and 2023 (Korean won in thousands):

	December 31, 2024					
	Less than 1 year		1 to 5 years		Total	
Vehicles	₩	61,690	₩	121,618	₩	183,308
Buildings		154,885		206,514		361,399
	₩	216,575	₩	328,132	₩	544,707

	December 31,2023					
	Less than 1 year		1 to 5 years		Total	
Vehicles	₩	34,644	₩	34,297	₩	68,941
Buildings		135,308		-		135,308
	₩	169,952	₩	34,297	₩	204,249

Income and expense from lease contracts for each of the two years in the period ended December 31, 2024 are as follows (Korean won in thousands):

	2024		2023	
Revenue				
Interest income of finance lease receivables	₩	131,713	₩	137,066
Cost				
Depreciation of right-of-use assets		(202,318)		(160,660)
Interest expense of lease liabilities		(25,157)		(10,712)
Lease payments (leases of low-value assets and short-term leases)		(70,269)		(56,094)
	₩	(166,031)	₩	(90,400)

Total cash outflows from leases

Total cash outflows related to leases for each of the two years in the period ended December 31, 2024 are as follows (Korean won in thousands):

	2024		2023	
Total cash outflows from leases	₩	291,319	₩	236,135

9. Company as a lessee or lessor (cont'd)

The table below summarizes the maturity profile of the undiscounted lease receivables (Korean won in thousands):

	December 31, 2024	December 31, 2023
Less than 1 year	₩ 240,100	₩ 245,467
1 to 5 years	906,733	928,200
Over 5 years	3,134,367	3,353,000
	₩ 4,281,200	₩ 4,526,667

10. Intangible assets

Changes in the book value of intangible assets for each of the two years in the period ended December 31, 2024 are as follows (Korean won in thousands):

	2024					
	Beginning balance	Additions	Disposal	Transfer(*1)	Amortization	Ending balance
Memberships	₩ 332,904	₩ -	₩ -	₩ -	₩ -	332,904
Software	1,179,707	29,210	-	213,675	(679,458)	743,134
Carbon Credits	132,745	-	-	-	-	132,745
	₩ 1,645,356	₩ 29,210	₩ -	₩ 213,675	₩ (679,458)	1,208,783

	2023					
	Beginning balance	Additions	Disposal	Transfer	Amortization	Ending balance
Memberships	₩ 262,812	₩ 255,062	₩ (184,970)	₩ -	₩ -	332,904
Software	2,307,973	8,000	-	-	(1,136,266)	1,179,707
Carbon Credits	-	-	-	132,745	-	132,745
	₩ 2,570,785	₩ 263,062	₩ (184,970)	₩ 132,745	₩ (1,136,266)	1,645,356

(*1) Transfer from construction-in-progress is included.

As of December 31, 2024, the Company had no impairment loss on its intangible assets.

11. Trade and other payables

Trade and other payables as of December 31, 2024 and 2023 are as follows (Korean won in thousands):

	December 31, 2024	December 31, 2023
Trade payables	₩ 167,340,342	₩ 111,067,420
Other payables	13,795,199	8,806,915
Accrued expenses	2,134,551	1,642,845
	₩ 183,270,092	₩ 121,517,180

12. Borrowings and bonds payable

Short-term borrowings

Details of short-term borrowings as of December 31, 2024 and 2023 are as follows (Korean won in thousands):

	Financial institution	Interest rate (%)	December 31, 2024	December 31, 2023
Short-term borrowings	Hana Bank	5.85	10,000,000	20,000,000
	Kookmin Bank	6M MOR + 1.90	20,000,000	20,000,000
		3M MOR + 1.90	10,000,000	10,000,000
	Woori Bank	3M CD + 1.90	10,000,000	10,000,000
			₩ 50,000,000	₩ 60,000,000

Current portion of long-term liabilities

Details of current portion of long-term liabilities as of December 31, 2024 and 2023 are as follows (Korean won in thousands):

	2024	2023
Current portion of bonds payable	₩ 145,871,893	₩ 113,568,430
Current portion of long-term borrowings(*1)	80,000,000	-
Current portion of long-term commercial paper(*2)	30,000,000	-
	₩ 255,871,893	₩ 113,568,430

(*1) It presents the amount of long-term borrowings from KDB Industrial Bank transferred to the current portion of long-term borrowings (see Note 12-3).
(*2) It presents the amount of long-term commercial paper (CP) from Korea Investment & Securities Co.,Ltd. transferred to the current portion of long-term commercial paper (see Note 12-3).

Long-term borrowings

Details of long-term borrowings as of December 31, 2024 and 2023 are as follows (Korean won in thousands):

	Maturity date	Interest rate (%)	December 31, 2024	December 31, 2023
Long-term borrowings from KDB Bank (*1)	2025-09-29-	3M CD + 1.46	₩ 80,000,000	₩ 80,000,000
Long-term commercial paper	2025-04-07	5.65	30,000,000	
Less: current portion			(110,000,000)	-
Total			₩ -	₩ 80,000,000

(*1) The amount of the interest rate swap agreement entered into to mitigate the risk of variable interest rates is included (see Note 14-2).

12. Borrowings and bonds payable (cont'd)

Bonds payable

Details of bonds payable as of December 31, 2024 and 2023 are as follows (Korean won in thousands):

	Issue date	Maturity date	Interest rate (%)	December 31, 2024	December 31, 2023	Description
1st Unsecured foreign bond(*1)	2021-12-03	2024-12-03	1.80	-	38,682,000 ($30,000,000)	Interest payment made at every quarter end and lump-sum repayment on maturity
2nd Unsecured foreign bond(*1)	2024-12-03	2027-12-03	USD SOFR AVERAGE 3M + 1.5	35,280,000 ($24,000,000)	-	
3rd Unsecured foreign bond(*1) (*2)	2024-12-13	2027-12-13	COMPOUNDED SOFR + 1.1	22,050,000 ($15,000,000)	-	
4th -1 Unsecured public bond	2022-02-23	2024-02-23	3.16	-	50,000,000	
4th -2 Unsecured public bond	2022-02-23	2025-02-21	3.55	100,000,000	100,000,000	
5th Unsecured private bond	2022-09-30	2024-09-30	3M CD + 2.03	-	20,000,000	
6th Unsecured private bond	2023-01-13	2024-01-12	6.00	-	5,000,000	
7th Unsecured private bond	2023-03-07	2026-03-06	5.89	30,000,000	30,000,000	
8th Unsecured private bond	2023-03-27	2026-03-27	5.06	10,000,000	10,000,000	
9th Unsecured private bond	2023-04-14	2026-04-14	5.90	10,000,000	10,000,000	
10th Unsecured private bond	2023-11-27	2026-11-27	5.63	40,000,000	40,000,000	
11th Unsecured private bond	2023-12-15	2026-12-15	3M CD + 2.21	10,000,000	10,000,000	
12th -1 Unsecured public bond	2024-05-03	2025-11-03	6.70	46,000,000	-	Interest payment made at every month end and lump-sum repayment on maturity
12th -2 Unsecured public bond	2024-05-03	2026-04-30	6.80	39,000,000	-	
13th Unsecured private bond	2024-06-13	2026-06-13	6.65	30,000,000	-	Interest payment made at every quarter end and lump-sum repayment on maturity

12. Borrowings and bonds payable (cont'd)

	Issue date	Maturity date	Interest rate (%)	December 31, 2024	December 31, 2023	Description
14th -1 Unsecured public bond	2024-09-09	2026-03-09	6.38	26,000,000	-	Interest payment made at every month end and lump-sum repayment on maturity
14th -2 Unsecured public bond	2024-09-09	2026-09-09	6.19	73,879,500	-	
Sub-total				472,209,500	313,682,000	
Less: present value discount				(1,509,950)	(461,367)	
Less: current portion				(145,871,893)	(113,568,430)	
Total				324,827,657	199,652,203	

(*1) To mitigate the foreign exchange risk associated with the interest payments and principal repayment of foreign currency denominated bonds, a currency interest rate swap agreement has been executed (see Note 14-2).
(*2) The 3rd foreign currency private placement bond was issued with a guarantee from Woori Bank (see Note 14-1).

13. Defined benefit liabilities

The Company operates defined benefit plans and also has a defined contribution plan for certain employees. The defined benefit obligation is calculated annually by competent and independent actuaries using the projected unit credit method.

Defined benefit liabilities in the statements of financial position as of December 31, 2024 and 2023 are as follows (Korean won in thousands):

		December 31, 2024		December 31, 2023
Defined benefit liabilities in the statements of financial position:				
Present value of defined benefit obligation		6,052,746		6,803,592
Fair value of plan assets		(7,761,165)		(7,413,812)
	₩	(1,708,419)	₩	(610,220)

Expenses incurred in relation to the defined benefit pension plan for each of the two years in the period ended December 31, 2024 are as follows (Korean won in thousands):

		2024 (*1)		2023 (*1)
Current service cost	₩	925,827	₩	773,597
Interest cost		370,338		269,918
Expected return on plan assets		(432,096)		(467,521)
	₩	864,069	₩	575,994

(*1) The amount of ₩35,928 thousand contributed to defined contribution plans has been excluded from the total expenses recognized for the year ended December 31, 2024 (for the year ended December 31, 2023: ₩23,233 thousand).

Changes in the present value of the defined benefit obligation for each of the two years in the period ended December 31, 2024 are as follows (Korean won in thousands):

		2024		2023
Beginning balance	₩	6,803,592	₩	4,686,399
Current service cost		925,827		773,597
Interest cost		370,338		269,918
Retirement benefits paid		(290,347)		(284,619)
Transfer from (to) affiliates		(339,442)		(287,647)
Re-measurement of defined benefit obligation		(1,417,222)		1,645,944
Ending balance	₩	6,052,746	₩	6,803,592

13. Defined benefit liabilities (cont'd)

Changes in the fair value of plan assets for each of the two years in the period ended December 31, 2024 are as follows (Korean won in thousands):

		2024		2023
Beginning balance	₩	7,413,812	₩	7,181,460
Expected return on plan assets		432,096		467,521
Contributions by employer		650,000		530,000
Retirement benefits paid		(290,347)		(288,633)
Transfer from (to) affiliates		(339,442)		(360,420)
Re-measurement of defined benefit obligation		(104,954)		(116,116)
Ending balance	₩	7,761,165	₩	7,413,812

As of December 31, 2024, the plan assets consist of principal-guaranteed type financial instruments.

The composition of the re-measurement of the defined benefit pension plan for each of the two years in the period ended December 31, 2024 is as follows (Korean won in thousands):

		2024		2023
Re-measurement loss (gain):				
Demographic assumptions	₩	(1,109)	₩	-
Financial assumptions		(1,482,057)		1,287,134
Experience adjustments		65,944		358,810
Loss from plan assets		104,954		116,116
	₩	(1,312,268)	₩	1,762,060

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

	December 31, 2024	December 31, 2023
Discount rate	4.82%	5.57%
Future salary increase rate	3.00%	5.54%

The following table demonstrates a sensitivity analysis on the effect of changes in the principal assumptions used in actuarial calculation on the present value of defined benefit liabilities as of December 31, 2024 (Korean won in thousands):

	Effect of changes in the discount rate				Effect of changes in future salaries increase rate			
	+1%		-1%		+1%		-1%	
Defined benefit liabilities	₩	(638,219)	₩	764,824	₩	771,561	₩	(654,387)

The estimated contribution by employer under the defined benefit plan for the next annual reporting period is ₩753,013,000, and the weighted average duration of the defined benefit obligation as of December 31, 2024 and 2023 was 12.39 years and 14.09 years, respectively.

14. Commitments and contingencies

Borrowing arrangements

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

Financial institution	Remarks	December 31, 2024		December 31, 2023	
		Credit line	Outstanding	Credit line	Outstanding
Hana Bank	Comprehensive (*1)	USD 7.5 million	-	USD 9.5 million	USD 7.76 million
	General borrowing	₩ 10,000 million	₩ 10,000 million	10,000 million	₩ 10,000 million
Woori Bank	Limit loan	₩ -	₩ -	₩ 10,000 million	₩ -
	Foreign payment guarantee (*2)	USD 15.3 million	USD 15.3 million	-	-
Shinhan Bank	Limit loan	₩ 10,000 million	₩ -	₩ 10,000 million	₩ -
Nonghyup Bank	Limit loan	₩ 20,000 million	₩ -	₩ 20,000 million	₩ -
Kookmin Bank	Limit loan	₩ 10,000 million	₩ -	₩ 10,000 million	₩ -
KDB Bank	Operating loan	₩ 80,000 million	₩ 80,000 million	₩ 80,000 million	₩ 80,000 million
Bank of China	Trade credit limit	USD 5 million	-	USD 5 million	-

(*1) A comprehensive line of credit is for foreign-currency working capital loan, trade and working capital loan, establishment of an import letter of credit, and foreign-currency payment guarantee.

(*2) Woori Bank committed to provide the payment guarantee of USD 15,300,000 equivalent to 102% of amount collected from the issuance of the 3rd foreign currency private placement bond.

Derivative contracts

As of December 31, 2024 and 2023, details of derivative assets and liabilities are as follows (Korean won in thousands):

Remarks	December 31, 2024			
	Derivative assets		Derivative liabilities	
	Current	Non-current	Current	Non-current
Currency forward	-	-	443,766	-
Currency interest rate swap	₩ -	1,147,076	-	325,428
Interest rate swap	₩ -	-	181,768	-
	-	1,147,076	625,534	325,428

Remarks	December 31, 2023			
	Derivative assets		Derivative liabilities	
	Current	Non-current	Current	Non-current
Currency forward	-	-	6,240	-
Currency interest rate swap	₩ 2,346,889	-	-	-
Interest rate swap	₩ -	-	-	215,550
	2,346,889	-	6,240	215,550

14. Commitments and contingencies (cont'd)

As of December 31, 2024 and 2023, the Company has currency forward contracts with the following financial institutions for the purpose of hedging foreign exchange rate fluctuation risk arising from foreign currency transactions. Details of the currency forward contracts held by the Company as of December 31, 2024 and 2023 are presented below (Korean won in thousands):

December 31, 2024			
Financial institution	Buy/Sell	Notional amount	Derivative liabilities
Hana Bank	Sell	USD 9,003,000	₩ 434,259
Kookmin Bank	Sell	USD 1,864,225	9,507

December 31, 2023			
Financial institution	Buy/Sell	Notional amount	Derivative liabilities
Hana Bank	Sell	USD 1,273,500	₩ 6,240

The Company has a currency swap contract in order to hedge foreign currency risk for fixed-rate foreign currency borrowings. Details of the currency swap as of December 31, 2024 are as follows (Korean won in thousands):

					December 31, 2024	
Contractor	Period	Contracted amount	Interest rate		Non-current assets	Non-current liabilities
Hana Bank	2024.12.03~ 2027.12.03	$24,000,000	USD SOFR AVERAGE 3M + 1.5%	4.32%	1,147,076	-
Woori Bank	2024.12.13~ 2027.12.13	$15,000,000	COMPOUNDED SOFR + 1.1%	4.30%	-	325,428

					December 31, 2023	
Contractor	Period	Contracted amount	Interest rate		Current assets	Non-current liabilities
Hana Bank	2021-12-03~ 2024-12-03	$30,000,000	2.21%	1.80%	2,346,889	-

The Company has entered into an interest rate swap contract in order to hedge the risk associated with the interest rate fluctuations of variable interest-bearing borrowings. Details of the interest swap as of December 31, 2024 are as follows (Korean won in thousands):

					December 31, 2024	
Contractor	Period	Contracted amount	Interest rate		Current Assets	Current Liabilities
KDB Bank	2023-01-09~ 2025-09-29	40,000,000	5.095%	3M CD + 1.46%	-	181,768

					December 31, 2023	
Contractor	Period	Contracted amount	Interest rate		Non-Current Assets	Non-Current Liabilities
KDB Bank	2023-01-09~ 2025-09-29	40,000,000	5.095%	3M CD + 1.46%	-	215,550

14. Commitments and contingencies (cont'd)

Payment guarantee

As of December 31, 2024, details of the payment guarantees are as follows (Korean won in thousands):

Description	Company	Type	Amount	
Guarantee provided	Seoul Guarantee Insurance Company	Payment	₩	7,328

Capital Deficiency Support

As of the December 31, 2024, the Company has entered into a capital deficiency support with the lenders including KDB Industrial Bank, in relation to the loan of KRW 300,000 million borrowed by its related party, Ulsan PP Co., Ltd. Under this agreement, the Company has committed to provide funding, either by equity contribution or loan, up to a limit of KRW 10,000 million in case of a shortfall in principal and interest repayment funds.

Others

As of December 31, 2024, the Company has long-term purchase agreements for raw materials with SK Gas Co., Ltd., a related party. Following the amendment agreement signed on July 31, 2024, the contract period changed to the period from August 1, 2024 to January 31, 2026.

Based on the joint arrangement dated June 22, 2018, the Company sells propylene to Ulsan PP Co., Ltd., a related party, and the contract term is 20 years and renewed every 3 years.

15. Emission allowances and emission liabilities

Emission allowances

Details of annual quantity of allocated emission allowances as of December 31, 2024 for each compliance year of the 3rd commitment period are as follows (tCO2-eq):

	2021	2022	2023	2024	2025	Total
Allocated emission allowance	700,783	700,783	700,783	694,220	694,220	3,490,789

Changes in emission allowances for each of the two years in the period ended December 31, 2024 by each compliance year are as follows (tCO2-eq and Korean won in thousands):

2024						
	2021	2022	2023	2024	2025	Sum
	Quantity	Quantity	Quantity	Quantity	Quantity	Quantity
Beginning	32,116	55,549	176,546	263,974	-	32,116
Free-allocation	700,783	700,783	700,783	694,220	694,220	3,490,789
Submission to the government (*1)	(649,575)	(491,512)	(525,364)	(529,306)	-	(2,195,757)
Purchase (sale) (*2)	(27,775)	(88,274)	(87,991)	-	-	(204,040)
Borrowed (carryforward)	(55,549)	(176,546)	(263,974)	-	-	-
Ending	-	-	-	428,888	694,220	1,123,108

(*1) Submission to the government for the compliance year 2024 can change since the quantity is an estimate made for the year ended December 31, 2024.
(*2) Gains on sale of emission allowances are deducted from the cost of sales as incur.

Emission liabilities

Emission liabilities is recognized only where actual emissions exceed the allocated emission allowances. Estimated greenhouse gas emissions as of December 31, 2024 amount to 529,306 tCO2-eq, and there are no emission liabilities as of December 31, 2024.

There are no emission allowances that have been provided as collateral as of December 31, 2024.

16. Related parties

Related parties of the Company and nature of its relationship as of December 31, 2024 are as follows:

Relationship	Related party
Parent companies of the entities with significant influence over the Company	SK Discovery Co., Ltd. (*1) Advanced Petrochemical Company (*2) Kuwait Petroleum Corporation (*3)
Entities with significant influence over the Company	SK Gas Co., Ltd. Advanced Global Investment Company Petrochemical Industries Company K.S.C
Joint venture	Ulsan PP Co., Ltd. (*4)
Large-scale business group, etc. (*5)	Affiliates of SK conglomerates such as : SK Chemicals Co., Ltd. SK Multi Utility Co., Ltd. SK PIC Global Co., Ltd. SK Ecoplant Co., Ltd. SK Energy Co., Ltd. SK Geo Centric Co., Ltd. SK Co., Ltd. SK Innovation Co., Ltd SK Telecom Co., Ltd. SK Networks Co., Ltd. SK D&D Co., Ltd. SK Materials Airplus Co., Ltd. Happynarae Co., Ltd. SK Gas International Pte. Ltd. Etc.

(*1) SK Discovery Co., Ltd. is the parent company of SK Gas Co., Ltd.
(*2) Advanced Petrochemical Company is the parent company of Advanced Global Investment Company.
(*3) Kuwait Petroleum Corporation is the parent company of Petrochemical Industries Company K.S.C.
(*4) As of December 31, 2024, the Company holds 50% of shares -1 in Ulsan PP Co., Ltd.
(*5) The entities classified as large-scale business group are not related parties of the Company as defined in paragraph 9 of KIFRS 1024. In accordance with a resolution of the Securities and Futures Commission, the entities designated as the large-scale business group by the Fair Trade Commission are classified as related parties in accordance with the substance of relationship defined in paragraph 10 of KIFRS 1024.

16. Related parties (cont'd)

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 thousands):

Description	Related party	Transactions		2024	2023
Entities with significant influence over the Company	SK Gas Co., Ltd.	Revenue	Others	₩ 291,758	₩ 208,013
		Expense	Purchase	567,236,214	464,358,545
			Others	512,301	480,361
	Advanced Global Investment Company	Expense	Others	-	-
	Petrochemical Industries Company K.S.C	Expense	Others	-	-
Joint venture	Ulsan PP Co., Ltd.	Revenue	Sales	379,629,683	255,023,360
			Others	5,097,739	4,001,561
Large-scale business group, etc.	SK Chemicals Co., Ltd.	Revenue	Sales	3,452,085	3,162,573
		Expense	Others	515,021	616,235
	SK Multi Utility Co., Ltd.	Revenue	Others	3,968,816	5,153,700
		Expense	Others	4,349,608	4,216,784
	SK PIC Global Co., Ltd.	Revenue	Sales	419,804	4,858,072
	SK Energy Co., Ltd.	Revenue	Sales	37,344,417	41,082,590
		Expense	Others	28,832	640
	SK Geo Centric Co., Ltd.	Expense	Purchase	1,746,697	75,446
			Others	111,404	
	SK Co., Ltd.	Expense	Others	760,900	634,500
	SK Materials Airplus Co., Ltd.	Expense	Others	2,504,392	2,814,572
	SK shieldus Co., Ltd.	Expense	Others	-	295,059
	SK Securities Co., Ltd.	Expense	Others	300,000	-
	Happynarae Co., Ltd.	Expense	Others	51,097	88,017
	Others	Revenue	Others	2,789	
		Expense	Others	125,610	143,064
	SK Gas International Pte. Ltd.	Expense	Others	51,062	55,003

16. Related parties (cont'd)

The significant receivables and payables arising from transactions with the related parties as of December 31, 2024 and 2023 are as follows. (Korean won in thousands):

Description	Related party	Transactions (*)		December 31, 2024	December 31, 2023
Entities with significant influence over the Company	SK Gas Co., Ltd.	Receivables	Others	₩ 241,517	₩ 143,165
		Payables	Trade payables	157,392,391	97,035,763
			Others	102,010	98,454
Joint venture	Ulsan PP Co., Ltd.	Receivables	Trade receivables	72,901,433	36,009,547
			Others	1,477,536	-
Large-scale business group, etc.	SK Chemicals Co., Ltd.	Receivables	Trade receivables	183,501	-
		Payables	Others	44,970	39,684
	SK Multi Utility Co., Ltd.	Receivables	Others	3,044,161	2,869,928
		Payables	Others	977,644	1,138,008
	SK Energy Co., Ltd.	Receivables	Trade receivables	2,480,576	-
		Payables	Others	352	-
	SK Geo Centric Co., Ltd.	Payables	Trade payables	1,921,367	-
	SK Co., Ltd.	Payables	Others	289,108	82,266
	SK Innovation., Ltd.	Receivables	Others	2,890	-
	SK Materials Airplus Co., Ltd.	Payables	Others	271,990	269,699
	SK shieldus Co., Ltd.	Payables	Others	-	74,336
	Happynarae Co., Ltd.	Payables	Others	1,756	18,875
	Others	Payables	Others	9,185	18,404
	SK Gas International Pte. Ltd.	Payables	Others	51,062	55,003

(*) None of bad debt expenses are recognized for the above receivables from the related parties for each of the two years in the period ended December 31, 2024.

Details of capital transactions with the related parties for each of the two years in the period ended December 31, 2024 are as follows (Korean won in thousands):

		2024		2023	
Account	Company name	Investment	Return	Investment	Return
Joint venture	Ulsan PP Co., Ltd.	₩ 10,000,000	₩ -	₩ 20,000,000	₩ -

Compensation for key management personnel for each of the two years in the period ended December 31, 2024 is as follows (Korean won in thousands):

	2024	2023
Salary and bonus	₩ 368,198	₩ 303,017

Key management personnel are standing directors who have authorities and responsibilities for the planning, operations and control of the business of the Company.

The Company's agreements with the related parties are described in Notes 14-4 and 14-5.

17. Equity

Issued capital
Issued capital as of December 31, 2024 and 2023 are as follows:

Description	Unit	December 31, 2024	December 31, 2023
Authorized shares	Per share	50,000,000	50,000,000
Par value	Korean won	10,000	10,000
Ordinary shares issued	Per share	3,400,660	3,400,660
Issued capital	Korean won in thousands	34,006,600	34,006,600

Capital surplus
Details of the Company's capital surplus as of December 31, 2024 and 2023 are as follows (Korean won in thousands):

	December 31, 2024	December 31, 2023
Capital surplus	₩ 353,695,009	₩ 353,695,009

Accumulated other comprehensive loss
Details of the Company's accumulated other comprehensive loss as of December 31, 2024 and 2023 are as follows (Korean won in thousands):

	December 31, 2024	December 31, 2023
Changes in equity from equity method investee	₩ (22,976)	₩ (19,939)

Retained earnings (Accumulated deficits)
Details of retained earnings as of December 31, 2024 and 2023 are as follows (Korean won in thousands):

	December 31, 2024	December 31, 2023
Legal reserve	₩ 3,278,237	₩ 3,278,237
Unappropriated retained earnings (undisposed accumulated deficits)	(158,786,460)	5,967,692
	₩ (155,508,223)	₩ 9,245,929

Statements of appropriation of retained earnings (disposition of accumulated deficits)
Details of the disposition of accumulated deficits for the year ended December 32, 2024 and the appropriation of retained earnings for the year ended December 31, 2023 are as follows (Korean won in thousands):

	2024	2023
Retained earnings before appropriations (accumulated deficits before disposition):		
Unappropriated retained earnings carried forward from the prior year	₩ 5,967,692	₩ 119,401,988
Re-measurement gain (loss) on defined benefit liabilities	1,038,004	(1,342,953)
Changes in retained earnings from equity method investee	(79,958)	267,733
Loss for the year	(165,712,198)	(112,359,077)
	(158,786,460)	5,967,692
Unappropriated retained earnings (Undisposed accumulated deficits) to be carried forward to the next year	₩ (158,786,460)	₩ 5,967,692

The appropriation of retained earnings for the year ended December 31, 2023 was approved on March 28, 2024 and the disposition of accumulated deficits for the year ended December 31, 2024 is scheduled to be approved on March 28, 2025.

18. Revenue from contracts with customers

Operating segment

The Company operates as a single business segment. Therefore, the notes on operating profit, profit before tax, and total assets and liabilities by business segments are not disclosed.

Disaggregated revenue information

Set out below is the disaggregation of the Company's revenue from contracts with customers for each of the two years in the period ended December 31, 2024 (Korean won in thousands):

		2024		2023
Revenue from contract with customers				
Finished goods	₩	658,161,673	₩	550,649,836
Merchandise		28,908,327		47,152,893
Services		1,007,722		1,290,731
	₩	688,077,722	₩	599,093,460
Geographical market				
Domestic	₩	599,611,386	₩	443,763,651
China		-		13,501,624
Japan		85,427,711		132,206,975
Others		3,038,625		9,621,210
	₩	688,077,722	₩	599,093,460
Timing of transfer of goods or services				
Goods transferred at one time	₩	687,070,000	₩	597,802,729
Services transferred over time		1,007,722		1,290,731
	₩	688,077,722	₩	599,093,460

The revenue from major customers which account for more than 10% of total sales of the Company for each of the two years in the period ended December 31, 2024 is as follows: revenue from two major customers amounts to 463,717,830 thousand KRW for the year ended December 31, 2024, and revenue from three major customers amounts to 401,376,753 thousand KRW for the year ended December 31, 2023.

19. Operating expenses

Classification of expenses by nature

Details of expenses by nature for each of the two years in the period ended December 31, 2024 are as follows (Korean won in thousands):

		2024		2023
Changes in inventories	₩	7,387,745	₩	(7,511,882)
Raw material and cost of merchandise		584,431,596		512,619,011
Salary and bonus		13,560,811		12,063,344
Retirement benefits		899,997		599,227
Depreciation		54,917,001		50,647,186
Depreciation of right-of-use assets		202,318		160,660
Amortization of intangible assets		679,458		1,136,266
Utilities		136,665,231		108,947,112
Commission fee		5,900,092		4,896,746
Employee welfare benefits		3,537,936		3,887,083
Taxes and dues		588,966		567,098
Tariff refunds, etc.		(4,560,482)		(6,393,042)
	₩	804,210,669	₩	681,618,809

19. Operating expenses (cont'd)

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 thousands):

	2024		2023	
Salary and bonus	₩	2,593,312	₩	2,117,723
Retirement benefits		161,328		115,072
Employee welfare benefits		1,346,925		1,732,482
Conference		22,602		37,599
Lease payments		255,236		249,701
Depreciation		50,545		62,405
Depreciation of right-of-use assets		202,318		160,660
Amortization of intangible assets		521,824		984,718
Consumable supplies expenses		12,853		14,984
Utilities		3,153		3,166
Travel		73,850		73,970
Vehicle maintenance		15,284		11,348
Communication		7,486		7,084
Taxes and dues		96,691		59,978
Insurance		5,294		5,451
Commission fee		2,738,595		1,967,062
Gifts and entertainment		102,401		98,819
Training		225,679		216,580
Advertising		-		4,049
Others		84,570		69,795
	₩	8,519,946	₩	7,992,646

20. Finance income and costs and other non-operating income and expense

Finance income and costs

Finance income and finance costs for each of the two years in the period ended December 31, 2024 are as follows (Korean won in thousands):

		2024		2023
Finance income:				
Interest income	₩	4,190,634	₩	1,563,771
Gain on transaction of financial assets at fair value through profit or loss		385,938		2,654,774
Gain on foreign currency translation		469,959		133,000
Gain on foreign currency transactions		3,163,547		3,416,294
Gain on valuation of derivative instruments		1,147,076		1,111,601
Gain on transaction of derivative instruments		5,102,899		1,107,775
	₩	14,460,053	₩	9,987,215
Finance costs:				
Interest expense	₩	28,810,473	₩	18,766,523
Loss on valuation of financial assets at fair value through profit or loss		-		4,026,034
Loss on foreign currency translation		2,356,699		787,125
Loss on foreign currency transactions		5,250,410		2,333,165
Loss on valuation of derivative instruments		735,412		221,790
Loss on transaction of derivative instruments		3,571,825		2,313,615
	₩	40,724,819	₩	28,448,252

Other non-operating income and expenses

Other non-operating income and expenses for each of the two years in the period ended December 31, 2024 are as follows (Korean won in thousands):

		2024		2023
Other non-operating income:				
Gain on disposal of intangible assets	₩	-	₩	78,667
Miscellaneous revenue		1,442,724		1,137,496
	₩	1,442,724	₩	1,216,163
Other non-operating expenses:				
Loss on disposal of trade receivables	₩	-	₩	163,670
Loss on bond redemption		640		-
Loss on disposal of property, plant and equipment		4,254,179		-
Miscellaneous expense		11,629		1,904
	₩	4,266,448	₩	165,574

21. Income tax

Major components of income tax expense for each of the two years in the period ended December 31, 2024 are as follows (Korean won in thousands):

	2024	2023
Current income tax, including additional surtaxes	₩ (1,794,080)	₩ (1,328,323)
Changes in deferred tax due to temporary differences	3,487,303	(18,644,943)
Income tax expense directly reflected in equity	(274,264)	342,023
Income tax expense (benefit)	₩ 1,418,959	₩ (19,631,243)

Income tax expense directly reflected in equity for each of the two years in the period ended December 31, 2024 are as follows (Korean won in thousands):

	2024	2023
Re-measurement of defined benefit obligation	₩ (274,264)	₩ 342,023
	₩ (274,264)	₩ 342,023

Reconciliation of income tax expense applicable to profit before income tax at the Korea statutory tax rate to income tax expense at the effective tax rate of the Company for each of the two years in the period ended December 31, 2024 is summarized as follows (Korean won in thousands):

	2024	2023
Loss for the year before income tax	₩ (164,293,240)	₩ (131,990,320)
Tax benefit at the statutory tax rate (*1)	(22,201,749)	(27,585,977)
Adjustments:		
Expenses not deductible for tax purposes	30,154	74,052
Non-taxable Income	(1,931)	(2,571)
Adjustments in respect of current income tax of previous years	(1,794,080)	(248,147)
Unrecognized deferred tax assets (liabilities)	25,906,144	7,881,327
Others	(519,579)	250,073
Income tax expense (benefit)	₩ 1,418,959	₩ (19,631,243)
Effective tax rate (*2)	-	-

(*1) Details of statutory tax rate is as follows:

	2024
Less than ₩200,000,000	9%
Over ₩200,000,000 and less than ₩20,000,000,000	19%
Over ₩20,000,000,000 and less than ₩300,000,000,000	21%
Over ₩300,000,000,000	24%
Local income tax	10% of income tax

(*2) Effective tax rate for each of the two years in the period ended December 31, 2024 is not presented as the Company recorded loss for the year before tax.

21. Income tax (cont'd)

Significant changes in cumulative temporary differences and deferred tax assets and liabilities for each of the two years in the period ended December 31, 2024 are as follows (Korean won in thousands):

	2024			
	Beginning balance	Recognized in profit or loss	Recognized directly to equity	Ending balance
Accrued revenues	₩ -	₩ (52,154)	₩ -	₩ (52,154)
Defined benefit liabilities	1	250,443	(274,264)	(23,820)
Other long-term employee benefit liabilities	91,745	(2,598)	-	89,147
Unsettled costs	110,156	(35,155)	-	75,001
Construction-in-progress	(41,580)	20,140	-	(21,440)
Loss on valuation of derivative instruments	223,033	(78,614)	-	144,419
Buildings	576,493	(154,861)	-	421,632
Structures	(3,227,958)	1,309,755	-	(1,918,203)
Machinery	(29,582,380)	9,319,112	-	(20,263,268)
Other properties	4,876,345	(4,445,494)	-	430,851
Valuation allowance for inventories	416,461	(350,142)	-	66,319
Depreciation	1,354,626	(478,754)	-	875,872
Right-of-use assets	(39,007)	(27,928)	-	(66,935)
Lease liabilities	41,484	26,860	-	68,344
Tariff refunds	(1,343,781)	1,039,231	-	(304,550)
Short-term financial assets	684,691	(241,985)	-	442,706
Impairment loss on subordinated bond	156,750	(55,399)	-	101,351
Intangible assets	74,613	(35,848)	-	38,765
Deficit carried over	42,553,795	(9,863,052)	-	32,690,743
Others	-	643,404	-	643,404
	₩ 16,925,487	₩ (3,213,039)	₩ (274,264)	₩ 13,438,184

21. Income tax (cont'd)

	2023			
	Beginning balance	Recognized in profit or loss	Recognized directly to equity	Ending balance
Accrued revenues	₩ (40,674)	₩ 40,674	₩ -	₩ -
Defined benefit liabilities	1	(342,023)	342,023	1
Other long-term employee benefit liabilities	74,418	17,327	-	91,745
Unsettled costs	86,188	23,968	-	110,156
Construction-in-progress	(55,502)	13,922	-	(41,580)
Loss on valuation of derivative instruments	(352,799)	575,832	-	223,033
Buildings	556,104	20,389	-	576,493
Structures	(3,904,792)	676,834	-	(3,227,958)
Machinery	(33,394,577)	3,812,197	-	(29,582,380)
Other properties	4,677,877	198,468	-	4,876,345
Valuation allowance for inventories	122,148	294,313	-	416,461
Depreciation	1,503,700	(149,074)	-	1,354,626
Right-of-use assets	(67,038)	28,031	-	(39,007)
Lease liabilities	71,968	(30,484)	-	41,484
Tariff refunds	-	(1,343,781)		(1,343,781)
Short-term financial assets	-	684,691		684,691
Impairment loss on subordinated bond	-	156,750		156,750
Intangible assets	-	74,613		74,613
Deficit carried over	29,003,523	13,550,272	-	42,553,795
	₩ (1,719,455)	₩ 18,302,919	₩ 342,023	₩ 16,925,487

The Company applied the tax rate at the time when temporary differences are expected to lapse which is the estimated future tax rate applied to temporary differences.

The temporary differences which the Company has not recognized as deferred tax assets as of December 31, 2024 and 2023 are as follows (Korean won in thousands):

	December 31, 2024	December 31, 2023
Investment in joint venture	₩ 90,920,527	₩ 71,135,731
Unused deficit carried over	180,264,907	
Other deductible temporary differences	3,263,373	

Probability of deferred tax assets depends on various factors, including the Company's ability to generate taxable income during the period in which temporary differences are realized, the overall economic environment and outlook of the industry. The Company reviews these factors periodically and recognizes deferred tax assets for deductible temporary differences to the extent that it is probable that taxable income will be available against which the deductible temporary differences can be utilized as of December 31, 2024 and 2023.

22. Losses per share

The Company's basic losses per share for each of the two years in the period ended December 31, 2024 are computed as follows:

	2024	2023
Loss for the year attributable to ordinary shares	₩ (165,712,198,318)	₩ (112,359,076,675)
Weighted average number of ordinary shares outstanding	3,400,660 shares	3,400,660 shares
Basic and diluted loss per share	₩ (48,729)	₩ (33,040)

Diluted losses per share are equal to the basic losses per share as there are no dilutive potential shares for the years ended December 31, 2024 and 2023.

The weighted average number of ordinary shares outstanding for each of the two years in the period ended December 31, 2024 is computed as follows (Korean won in thousands, except per share amounts):

2024					
Type	Start date	Closing date	Number of days	Number of shares outstanding	Weighted average number of shares
Base shares	2024.1.1	2024.12.31	366	3,400,660	3,400,660

2023					
Type	Start date	Closing date	Number of days	Number of shares outstanding	Weighted average number of shares
Base shares	2023.1.1	2023.12.31	365	3,400,660	3,400,660

23. Statement of cash flows

Cash in the statements of cash flows represent cash and cash equivalents in the statements of financial position.

The statements of cash flows of the Company are prepared by the indirect method, and significant non-cash transactions for each of the two years in the period ended December 31, 2024 are as follows (Korean won in thousands):

Description	2024	2023
Changes in other payables for acquisition of property, plant and equipment	₩ 3,806,608	₩ 4,670,880
Transfer of construction-in-progress to property, plant and equipment	48,481,537	136,188

23. Statement of cash flows (cont'd)

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 thousands):

	2024									
	Beginning balance		Cash flows from financing activities		Reclassification to current portion		Others (*1)		Ending balance	
Short-term borrowings (*2)	₩	60,000,000	₩	(10,000,000)	₩	-	₩	-	₩	50,000,000
Accrued expenses		1,642,844		(26,168,459)		-		26,660,166		2,134,551
Current portion of long-term liabilities		113,568,430		(113,802,500)		255,871,893		234,070		255,871,893
Long-term borrowings		80,000,000		28,021,726		(110,000,000)		1,978,274		-
Current portion of lease liabilities		165,942		(221,050)		142,798		122,971		210,661
Bonds payable		199,652,203		268,482,473		(145,871,893)		2,564,874		324,827,657
Lease liabilities		32,547		-		(142,798)		405,339		295,088
	₩	455,061,966	₩	146,312,190	₩	-	₩	31,965,694	₩	633,339,850

(*1) Others include interest payable accrued for interest-bearing loans and changes in lease liabilities due to new lease contracts.
(*2) The Company has repaid ₩180,000,000,000 and borrowed ₩170,000,000,000 in short-term borrowings for the year ended December 31, 2024.

	2023									
	Beginning balance		Cash flows from financing activities		Reclassification to current portion		Others (*1)		Ending balance	
Short-term borrowings (*2)	₩	89,010,000	₩	(29,010,000)	₩	-	₩	-	₩	60,000,000
Accrued expenses		788,634		(17,517,500)		-		18,371,710		1,642,844
Current portion of long-term liabilities		-		-		113,568,430		-		113,568,430
Long-term borrowings		40,000,000		40,000,000		-		-		80,000,000
Current portion of lease liabilities		162,175		(180,041)		183,808		-		165,942
Bonds payable		207,402,453		104,771,080		(113,568,430)		1,047,100		199,652,203
Lease liabilities		148,034		-		(183,808)		68,321		32,547
	₩	337,511,296	₩	98,063,539	₩	-	₩	19,487,131	₩	455,061,966

(*1) Others include interest payable accrued for interest-bearing loans and changes in lease liabilities due to new lease contracts.
(*2) The Company has repaid ₩131,000,000,000 and borrowed ₩101,990,000,000 in short-term borrowings for the year ended December 31, 2023.

24. Financial risk management objectives and policies

The Company's principal financial liabilities comprise bonds payable and trade and other payables. The main purpose of these financial liabilities is to finance the Company's operations and to provide guarantees to support its operations. Also, the Company has various financial assets, including trade and other receivables, cash and cash equivalents, and others.

The Company is exposed to market risk, credit risk and liquidity risk. The Company's senior management oversees the management of these risks in accordance with the Company's risk policies, which are reviewed regularly, and details are provided below. Furthermore, it is the Company's policy that no trading in derivatives for speculative purposes shall be undertaken.

24. Financial risk management objectives and policies (cont'd)

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

Interest rate risk
Interest rate risk is the risk that the fair value or future cash flows of a financial instrument will fluctuate arising from changes in market interest rates. The Company manages its interest rate risk by monitoring a fluctuation of 1%p in interest rates. The fluctuation in interest rates reflects management's assumptions that may reasonably arise. Details of borrowings with variable rate as of December 31, 2024 and 2023 are as follows (Korean won in thousands):

	2024		2023	
Short-term borrowings	₩	40,000,000	₩	40,000,000
Current portion of long-term liabilities		40,000,000		-
Long-term borrowings(*1)		-		40,000,000
Bond payable (*2)		10,000,000		30,000,000
	₩	90,000,000	₩	110,000,000

(*1) As of December 31, 2024, the Company has entered into interest swap contracts for ₩40,000,000 thousand out of ₩80,000,000 thousand of long-term borrowings.
(*2) As of December 31, 2024, the Company has entered into currency interest swap contracts for USD 39 million out of ₩472,209,500 thousand of foreign currency private placement bond in order to hedge the risk associated with the interest rate fluctuations of variable interest-bearing borrowings (see Note 14 -2).

The following table demonstrates the sensitivity to a reasonable change in the interest rate, with all other variables held constant, on the Company's profit before income tax as of December 31, 2024 and 2023 (Korean won in thousands):

	December 31, 2024				December 31, 2023			
	1%p increase		1%p decrease		1%p increase		1%p decrease	
Short-term borrowings	₩	(163,661)	₩	163,661	₩	(165,479)	₩	165,479
Current portion of long-term liabilities	₩	(400,000)		400,000		-		-
Long-term borrowings	₩	-		-	₩	(390,137)		390,137
Bond payable	₩	(100,000)		100,000	₩	(204,658)		204,658
	₩	(663,661)		663,661	₩	(760,274)		760,274

Foreign currency risk
Foreign currency risk is the risk that the fair value or future cash flows of a financial instrument will fluctuate because of changes in foreign exchange rates. The book values of monetary assets and liabilities which are not presented in functional currency as of December 31, 2024 and 2023 are as follows (Korean won in thousands):

	December 31, 2024(*1)				December 31, 2023			
	Assets		Liabilities(*1)		Assets		Liabilities(*1)	
USD	₩	18,772,716	₩	2,735,359	₩	11,632,483	₩	14,030,489

(*1) Foreign-currency bond payables for which currency swap contracts were executed are excluded as they are not exposed to foreign exchange rate risk.

24. Financial risk management objectives and policies (cont'd)

The Company manages its foreign currency risk periodically. The following table demonstrates the sensitivity to a reasonable change in the Korean Won exchange rate, with all other variables held constant, on the Company's profit before income tax as of December 31, 2024 and 2023 (Korean won in thousands):

	December 31, 2024		December 31, 2023	
	5% increase	5% decrease	5% increase	5% decrease
USD	₩ 801,868	₩ (801,868)	₩ (119,900)	₩ 119,900

Other price risk
Other price risk is the risk that fair value or future cash flows of financial instruments will fluctuate due to fluctuations in market prices other than interest rate risk or foreign currency risk. As of December 31, 2024, the Company has no assets or liabilities which are exposed to other price risk.

Credit risk
Credit risk is the risk that a counterparty will not meet its obligations under a financial instrument or customer contract, leading to a financial loss of the Company.

Other receivables
Customer credit risk is managed by each business unit subject to the Company's established policy, procedures and control relating to customer credit risk management. Credit quality of the customer is assessed based on an extensive credit rating scorecard and individual credit limits are defined in accordance with this assessment. Outstanding customer receivables are regularly monitored and any shipments to major customers are generally covered by letters of credit or other forms of credit insurance. The Company evaluates the impairment of trade receivables and other receivables at every reporting date. The maximum exposure to credit risk at the reporting date is the book value of financial assets (See Note 3).

Other assets
Credit risks associated with the Company's other assets which consist of cash, short-term deposits and short-term and long-term loans arising from the default by the counterparties. Maximum exposure to credit risks will be the book value of the related other assets. The Company deposits its surplus funds with Hana Bank and other financial institutions whose credit ratings are high. Accordingly, credit risk related to financial institutions is considered limited.

Liquidity risk
Liquidity risk refers to the risk that the Company may default on the contractual obligations that become due.

The Company manages its risk of a shortage of funds using a recurring liquidity planning tool, and matches the financial liabilities with the financial assets, taking into account the maturity dates and cash flows from the operating activities of those financial instruments.

The table below summarizes the maturity profile of the Company's financial liabilities based on the contractual undiscounted payments (Korean won in thousands):

	December 31, 2024		
	Less than 1 year	1 to 5 years	Total
Trade and other payables	₩ 181,250,995	₩ -	₩ 181,250,995
Short-term borrowings	50,000,000	-	50,000,000
Bond payable	146,000,000	326,209,500	472,209,500
Long-term borrowings	80,000,000	-	80,000,000
Commercial paper	30,000,000	-	30,000,000
Other non-current liabilities	-	167,708	167,708
Lease liabilities	216,575	328,132	544,707
	₩ 487,467,570	₩ 326,705,340	₩ 814,172,910

24. Financial risk management objectives and policies (cont'd)

	December 31, 2023					
	Less than 1 year		1 to 5 years		Total	
Trade and other payables	₩	120,513,381	₩	-	₩	120,513,381
Short-term borrowings		60,000,000		-		60,000,000
Bond payable		113,682,000		200,000,000		313,682,000
Long-term borrowings		-		80,000,000		80,000,000
Other non-current liabilities		-		50,000		50,000
Lease liabilities		169,952		34,297		204,249
	₩	294,365,333	₩	280,084,297	₩	574,449,630

Capital management
The primary objective of the Company's capital management is to ensure that it maintains a strong credit rating and healthy capital ratios in order to support its business and maximize shareholders' value.

The Company manages its capital structure and makes adjustments to it in light of changes in economic conditions. To maintain the sound capital structure, the Company may adjust the dividend payment to shareholders, reduce capital stock, or issue new shares.

The Company has not made any change to the objectives, policies or processes for managing capital during the years ended December 31, 2024.

The Company monitors the debt-to-equity ratio which is total liabilities divided by the total equity. The debt-to-equity ratio as of the December 31, 2024 and 2023 are as follows (Korean won in thousands):

	December 31, 2024		December 31, 2023	
Total liabilities	₩	816,611,066	₩	576,062,031
Total equity	₩	232,170,409	₩	396,927,598
Debt-to-equity ratio		351.73%		145.13%

25. Fair value measurement

Fair value of financial instruments

Details of the book values and fair values of financial assets and liabilities as of December 31, 2024 and 2023 are as follows (Korean won in thousands):

	December 31, 2024		December 31, 2023	
	Book value	Fair value	Book value	Fair value
Financial assets:				
Fair value of financial assets:				
Short-term financial instruments	₩ -	₩ -	₩ 14,677,482	₩ 14,677,482
Derivative financial assets	1,147,076	1,147,076	2,346,889	2,346,889
Amortized cost of financial assets:				
Cash and cash equivalents	163,447,903	163,447,903	69,872,344	69,872,344
Trade and other receivables	102,420,362	102,420,362	58,482,708	58,482,708
Long-term financial instruments	2,000	2,000	2,000	2,000
Deposits	129,071	129,071	123,008	123,008
Long-term trade and other receivables	2,483,162	2,483,162	2,591,548	2,591,548
Total financial assets	₩ 269,629,574	₩ 269,629,574	₩ 148,095,979	₩ 148,095,979

	December 31, 2024		December 31, 2023	
	Book value	Fair value	Book value	Fair value
Financial liabilities:				
Fair value of financial liabilities:				
Derivative financial liabilities	₩ 950,962	₩ 950,962	₩ 221,790	₩ 221,790
Amortized cost of financial liabilities:				
Trade and other payables	181,250,995	181,250,995	120,513,381	120,513,381
Short-term borrowings	50,000,000	50,000,000	60,000,000	60,000,000
Current portion of long-term liabilities	255,871,893	255,871,893	113,568,430	113,568,430
Long-term borrowings	-	-	80,000,000	80,000,000
Current portion of lease liabilities	210,661	210,661	165,942	165,942
Bonds payable	324,827,657	324,827,657	199,652,203	199,652,203
Lease liabilities	295,088	295,088	32,547	32,547
Other non-current liabilities	167,708	167,708	50,000	50,000
Total financial liabilities	₩ 812,624,002	₩ 812,624,002	₩ 573,982,503	₩ 573,982,503

25. Fair value measurement (cont'd)

The Company classifies fair value measurements according to the fair value hierarchy that reflects the significance of the inputs used to measure fair value, and the level of the fair value hierarchy is as follows:

Level	Significance of the inputs
Level 1	The (unadjusted) published price of the active market for the same asset or liability
Level 2	Input variables for assets or liabilities that are directly or indirectly observable
Level 3	Input variables for assets or liabilities that are not based on observable market data (non-observable inputs)

Fair value on the statement of financial position:
As of December 31, 2024 and 2023, the fair value of financial instrument by fair value hierarchy is as follow (Korean won in thousands):

	December 31, 2024			
	Level 1	Level 2	Level 3	Total
Financial assets				
Financial assets measured at fair value through profit or loss :				
Derivative financial assets	-	1,147,076	-	1,147,076
Total financial assets	₩ -	₩ 1,147,076	₩ -	₩ 1,147,076
Financial liabilities				
Financial liabilities at fair value through profit or loss :				
Derivative financial liabilities	₩ -	₩ 950,962	₩ -	₩ 950,962
Total financial liabilities	₩ -	₩ 950,962	₩ -	₩ 950,962

Meanwhile, cash and cash equivalents, trade and other receivables, long-term financial instruments, deposits, long-term trade and other receivables, trade and other payables, and short-term and long-term borrowings measured at amortized cost have been excluded from fair value disclosure, as the effect of discounting is not significant and their carrying amounts are considered to approximate their fair values.

25. Fair value measurement (cont'd)

	December 31, 2023			
	Level 1	Level 2	Level 3	Total
Financial assets				
Financial assets measured at fair value through profit or loss :				
Short-term financial instruments	₩ -	₩ 14,677,482	₩ -	₩ 14,677,482
Derivative financial assets	-	2,346,889	-	2,346,889
Financial assets at amortized cost :				
Cash and cash equivalents	-	69,872,344	-	69,872,344
Trade and other receivables	-	-	58,482,708	58,482,708
Long-term financial instruments	-	2,000	-	2,000
Deposits	-	-	123,008	123,008
Long-term trade and other Receivables	-	-	2,591,548	2,591,548
Total financial assets	₩ -	₩ 86,898,715	₩ 61,197,264	₩ 148,095,979
Financial liabilities				
Financial liabilities at fair value through profit or loss :				
Derivative financial liabilities	₩ -	₩ 221,790	₩ -	₩ 221,790
Financial liabilities at amortized cost :				
Trade and other payables	-	-	120,513,381	120,513,381
Short-term borrowings	-	60,000,000	-	60,000,000
Current portion of long-term borrowings	-	113,568,430	-	113,568,430
Long-term borrowings	-	80,000,000	-	80,000,000
Current portion of lease liabilities	-	165,942	-	165,942
Bonds payable	-	199,652,203	-	199,652,203
Lease liabilities	-	32,547	-	32,547
Other non-current liabilities	-	-	50,000	50,000
Total financial liabilities	₩ -	₩ 453,640,912	₩ 120,563,381	₩ 574,204,293

Review conclusion on internal control over financial reporting

The accompanying independent auditor's report on review of internal control over financial reporting is attached as a result of reviewing the internal control over financial reporting of SK Advanced Co., Ltd. (the "Company") and auditing the financial statements of the Company for the year ended December 31, 2024 in accordance with Article 8 of the *Act on External Audit of Stock Companies*.

Attachments:
1. Independent auditor's report on review of internal control over financial reporting
2. Management's report on the operations of internal control over financial reporting

EY 한영
Shape the future
with confidence

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

SK Advanced Co., Ltd.
The Shareholders and Board of Directors

We have reviewed the accompanying management's report on the operations of internal control over financial reporting (the "ICFR") of SK Advanced Co., Ltd. (the "Company") as of December 31, 2024. The Company's management is responsible for effective design and operations of its ICFR, including the reporting of its operations. Our responsibility is to review the management's ICFR report and issue a report based on our review. The accompanying management's report on the operations of ICFR of the Company states, "Based on the assessment of the operations of ICFR as of December 31, 2024, the Company's ICFR has been designed and is operating effectively in all material respects in accordance with the Conceptual Framework for Design and Operation of ICFR (referred as "Concept Framework for the Design and Operation of ICFR" in the management's report on the operations of ICFR)."

We conducted our review in accordance with the ICFR review standards established by the Korean Institute of Certified Public Accountants. These standards require that we plan and perform our review to obtain assurance less than an audit as to management's report on the operations of ICFR. A review includes the procedures of obtaining an understanding of ICFR, inquiring as to management's report on the operations of ICFR and performing a review of related documentation within limited scope, if necessary. However, as the Company is a non-public large-sized company, the design, operations and assessment of its ICFR are limited compared with those of public large-sized companies, in accordance with Chapter 4 *Application for small-and-medium sized companies* of the *Conceptual Framework for Design and Operation of ICFR* and Chapter 4 *Application for small-and medium-sized companies* of the *Management Guideline for Evaluation and Reporting of ICFR*. As such, we performed our review in accordance with Chapter 14 *Review standards for small-and-medium sized companies* of the ICFR review standards.

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 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 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 financial statements. Because of its inherent limitations, ICFR may not prevent or detect material misstatements of the 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.

Based on our review of the management's report on the operations of ICFR, nothing has come to our attention that causes us to believe that the management's report on the operations of ICFR referred to above is not presented, in all material respects, in accordance with Chapter 4 *Application for small-and-medium sized companies* of the *Management Guideline for Evaluation and Reporting of ICFR*.

We conducted our review of ICFR in place as of December 31, 2024, and we did not review ICFR subsequent to December 31, 2024. This report has been prepared for regulatory purposes pursuant to the *Act on External Audit of Stock Companies* in the Republic of Korea, and may not be appropriate for other purposes or for other users.

Ernst & Young Han Young

March 11, 2025

This review report is effective as of March 11, 2025, the independent auditor's review report date. Accordingly, certain material subsequent events or circumstances may have occurred during the period from the date of the independent auditor's review report to the time this report is used. Such events and circumstances could significantly affect the Company's ICFR and may result in modifications to this report.

Management's report on the operations of internal control over financial reporting

To the Shareholders, Board of Directors and Audit of
SK Advanced co. ltd

We, as the Chief Executive Officer and the Internal Accounting Manager of SK Advanced co. ltd (the "Company"), assessed operating status of the Company's Internal Control over Financial Reporting("ICFR") as of December 31, 2024.

The Company's management, including the Chief Executive Officer and the Internal Accounting Manager, is responsible for designing and operating ICFR. We evaluated whether the Company effectively designed and operated ICFR to prevent and detect any errors or frauds which may cause any misstatement in financial statements to ensure preparation and disclosure of reliable financial information. We followed the guidelines provided in the Chapter 4(Application to Small and Medium sized Companies) of the Concept Framework for the Design and Operation of the ICFR as the basis for designing and operating the ICFR. Additionally, we used the Chapter 4(Application to Small and Medium sized Companies) of Evaluation and Reporting Best Practices for the ICFR as evaluation criteria for assessing the design and operational status of the ICFR.

Based on our assessment of the operations of the ICFR as of December 31, 2024, from the perspective of its importance, our ICFR is effectively designed and operated based on the "Concept Framework for the Design and Operation of ICFR."

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.

2025.02.24

Kim Chul Jin

Chief Executive Officer

Kim Kyu Woong
Internal Accounting Manager