S-OIL Corporation and Subsidiaries

Consolidated Financial Statements
December 31, 2023 and 2022

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Independent Auditor's Report

(English Translation of a Report Originally Issued in Korean)

To the Board of Directors and Shareholders of
S-OIL Corporation

Opinion

We have audited the accompanying consolidated financial statements of S-OIL Corporation and its subsidiaries (collectively referred to as the "Group"), which comprise the consolidated statements of financial position as of December 31, 2023 and 2022, and the consolidated statements of comprehensive income, changes in equity and cash flows for the years then ended, and notes to the consolidated financial statements, including material accounting policy information.

In our opinion, the accompanying consolidated financial statements present fairly, in all material respects, the consolidated financial position of the Group as of December 31, 2023 and 2022, and its consolidated financial performance and its consolidated cash flows for the years then ended in accordance with International Financial Reporting Standards as adopted by the Republic of Korea (Korean IFRS).

Basis for Opinion

We conducted our audits in accordance with Korean Standards on Auditing. Our responsibilities under those standards are further described in the *Auditor's Responsibilities for the Audit of the Consolidated Financial Statements* section of our report. We are independent of the Group in accordance with the ethical requirements of the Republic of Korea that are relevant to our audit of the consolidated financial statements and we have fulfilled our other ethical responsibilities in accordance with the ethical requirements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Key Audit Matters

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

Related Party Transactions - Occurrence and Disclosure

Why it is determined to be a key audit matter

Sales and purchases transactions with related parties of the Group in 2023 are ₩ 9,210,762 million and ₩ 27,248,930 million, respectively. These amounts represent 26% of total sales and 88% of total purchases. We focused on the impact of these significant related party transactions on the consolidated financial statements. See Note 34 for details.

More specifically, sales transactions with Aramco Trading Company and its subsidiaries amount to ₩ 8,430,882 million and purchase transactions with Saudi Arabian Oil Company and Aramco Trading Company and its subsidiaries amount to ₩ 26,921,560 million. Given the significant size of transactions, we considered related party transactions with these particular related parties (occurrence and disclosure) as a key audit matter.

How our audit addressed the key audit matter

Our procedures with respect to occurrence and disclosure of sales and purchases from related parties include:

· Obtaining an understanding and evaluating relevant controls relating to the related party transactions

· Examining supporting documents of transactions in a sample basis

· Evaluating appropriateness of disclosure in accordance with the applicable financial reporting framework

Inventory Valuation

Why it is determined to be a key audit matter

Valuation allowance for inventories of ₩ 79,264 million and reversal of loss on valuation of inventories of ₩ 115,345 million were recognized as of and for the year ended December 31, 2023. See Note 12 for details.

In measuring allowance for inventories, significant management's estimates and judgment are made as to future estimated sales price. Given the size of the balance and the extent of judgment involved, we considered inventory valuation as a key audit matter.

How our audit addressed the key audit matter

Our procedures with respect to inventory valuation allowance include:

· Obtaining an understanding and evaluating relevant controls relating to the inventory valuation allowance

· Examining supporting documents for the assumptions management used in measuring inventory valuation allowance

· Recalculating mathematical accuracy of allowance for inventories

Other Matter

Auditing standards and their application in practice vary among countries. The procedures and practices used in the Republic of Korea to audit such consolidated financial statements may differ from those generally accepted and applied in other countries.

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

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

In preparing the consolidated financial statements, management is responsible for assessing the Group's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless management either intends to liquidate the Group or to cease operations.

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

Auditor's Responsibilities for the Audit of the Consolidated Financial Statements

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

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

· Identify and assess the risks of material misstatement of the consolidated financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.

· Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances.

· Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.

· Conclude on the appropriateness of management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Group's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the consolidated financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Group to cease to continue as a going concern.

- Evaluate the overall presentation, structure and content of the consolidated financial statements, including the disclosures, and whether the consolidated financial statements represent the underlying transactions and events in a manner that achieves fair presentation.

- Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Group to express an opinion on the consolidated financial statements. We are responsible for the direction, supervision and performance of the Group audit. We remain solely responsible for our audit opinion.

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

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

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

The engagement partner on the audit resulting in this independent auditor's report is Sung-Hun Lee, Certified Public Accountant.

Samil PricewaterhouseCoopers

Seoul, Korea
March 18, 2024

This report is effective as of March 18, 2024, the audit report date. Certain subsequent events or circumstances, which may occur between the audit report date and the time of reading this report, could have a material impact on the accompanying consolidated financial statements and notes thereto. Accordingly, the readers of the audit report should understand that there is a possibility that the above audit report may have to be revised to reflect the impact of such subsequent events or circumstances, if any.

S-OIL Corporation and Subsidiaries
Consolidated Statements of Financial Position
December 31, 2023 and 2022

(In millions of Korean won)

	Notes		2023		2022
Assets					
Current assets					
Cash and cash equivalents	7,11	₩	1,963,279	₩	1,310,326
Trade receivables	8,11		2,307,545		2,303,579
Other receivables	8,11,36		321,176		136,358
Other current financial assets	9,11		11,002		151,011
Derivative financial instruments	10,11		3,785		16,343
Inventories	12		4,639,174		4,733,160
Other current assets	9		401,799		555,204
			9,647,760		9,205,981
Non-current assets					
Other receivables	8,11,36		98,651		87,786
Other non-current financial assets	9,11		99,393		71,422
Investments in joint venture and associates	13		40,935		36,002
Property, plant and equipment	6,14,17		11,152,018		9,588,032
Intangible assets	6,15		115,597		106,418
Investment property	16		136,065		136,065
Other non-current assets	9,36		161,448		209,202
Net defined benefit assets	21		124,256		172,227
			11,928,363		10,407,154
Total assets		₩	21,576,123	₩	19,613,135
Liabilities					
Current liabilities					
Trade payables	11,18	₩	3,989,487	₩	3,172,420
Other payables	11,18,36		1,336,944		864,996
Borrowings	11,19		2,782,305		2,528,886
Derivative financial instruments	10,11		2,149		312
Current income tax liabilities			145,307		651,723
Provisions for other liabilities and charges	20		31,679		4,818
Contract liabilities	20		15,365		16,676
Other current liabilities	18		951,284		973,327
			9,254,520		8,213,158
Non-current liabilities					
Other payables	11,18,36		197,046		226,309
Borrowings	11,19		2,836,691		2,426,761
Deferred income tax liabilities	31		250,301		263,438
			3,284,038		2,916,508
Total liabilities			12,538,558		11,129,666
Equity					
Share capital	23		291,512		291,512
Share premium	23		379,190		379,190
Reserves	26		989,140		986,123
Treasury share	24		(1,876)		(1,876)
Retained earnings	25		7,379,599		6,828,520
Total equity			9,037,565		8,483,469
Total liabilities and equity		₩	21,576,123	₩	19,613,135

The above consolidated statements of financial position should be read in conjunction with the accompanying notes.

S-OIL Corporation and Subsidiaries
Consolidated Statements of Comprehensive Income
Years Ended December 31, 2023 and 2022

(In millions of Korean won, except earnings per share data)	**Notes**	**2023**	**2022**
Sales	6	₩ 35,726,694	₩ 42,446,028
Cost of sales	27,32	(33,620,949)	(38,291,440)
Gross profit		2,105,745	4,154,588
Selling expenses	28,32	(620,109)	(612,979)
Administrative expenses	28,32	(131,054)	(136,443)
Operating profit		1,354,582	3,405,166
Other income	29	802,824	1,147,592
Other expenses	29	(826,809)	(1,329,905)
Finance income	30	299,062	432,487
Finance costs	30	(500,292)	(756,627)
Share of net profit (loss) of associate and joint venture	13	2,338	(171)
Profit before income tax		1,131,705	2,898,542
Income tax expense	31	(182,857)	(794,155)
Profit for the year		948,848	2,104,387
Other comprehensive income, net of tax			
Items that will not be reclassified to profit or loss			
Remeasurements of net defined benefit liabilities	21	(25,128)	7,516
Gains on valuation of financial assets at fair value through other comprehensive income		2,842	385
Items that may be subsequently reclassified to profit or loss			
Share of other comprehensive income(loss) of associate and joint venture		(4)	-
Currency translation differences	26	179	264
Total other comprehensive income (loss) for the year		(22,111)	8,165
Total comprehensive income for the year		₩ 926,737	₩ 2,112,552
Earnings per share			
Basic and diluted earnings per ordinary share	33	₩ 8,149	₩ 18,075
Basic and diluted earnings per preferred share	33	₩ 8,174	₩ 18,100

The above consolidated statements of comprehensive income should be read in conjunction with the accompanying notes.

S-OIL Corporation and Subsidiaries
Consolidated Statements of Changes in Equity
Years ended December 31, 2023 and 2022

(In millions of Korean won)	Share Capital	Share Premium	Reserves	Treasury Share	Retained Earnings	Total Equity
Balance at January 1, 2022	₩ 291,512	₩ 379,190	₩ 985,474	₩ (1,876)	₩ 5,333,742	₩ 6,988,042
Profit for the year	-	-	-	-	2,104,387	2,104,387
Other comprehensive income (loss)						
Gains on valuation of financial assets at fair value through other comprehensive income	-	-	385	-	-	385
Foreign currency translation adjustments	-	-	264	-	-	264
Remeasurements of net defined benefit liabilities	-	-	-	-	7,516	7,516
Other comprehensive income for the year	-	-	649	-	7,516	8,165
Total comprehensive income for the year	-	-	649	-	2,111,903	2,112,552
Transactions with owners						
Dividends paid for 2021	-	-	-	-	(326,073)	(326,073)
Interim Dividends paid for 2022	-	-	-	-	(291,052)	(291,052)
Balance at December 31, 2022	₩ 291,512	₩ 379,190	₩ 986,123	₩ (1,876)	₩ 6,828,520	₩ 8,483,469

S-OIL Corporation and Subsidiaries
Consolidated Statements of Changes in Equity
Years ended December 31, 2023 and 2022

(In millions of Korean won)	Share Capital	Share Premium	Reserves	Treasury Share	Retained Earnings	Total Equity
Balance at January 1, 2023	₩ 291,512	₩ 379,190	₩ 986,123	₩ (1,876)	₩ 6,828,520	₩ 8,483,469
Profit for the year	-	-	-	-	948,848	948,848
Other comprehensive income (loss)						
Gains on valuation of financial assets at fair value through other comprehensive income	-	-	2,842	-	-	2,842
Share of other comprehensive income(loss) of associate and joint venture	-	-	(4)	-	-	(4)
Foreign currency translation adjustments	-	-	179	-	-	179
Remeasurements of net defined benefit liabilities	-	-	-	-	(25,128)	(25,128)
Other comprehensive income for the year	-	-	3,017	-	(25,128)	(22,111)
Total comprehensive income for the year	-	-	3,017	-	923,720	926,737
Transactions with owners						
Dividends paid for 2022	-	-	-	-	(349,357)	(349,357)
Interim Dividends paid for 2023	-	-	-	-	(23,284)	(23,284)
Balance at December 31, 2023	₩ 291,512	₩ 379,190	₩ 989,140	₩ (1,876)	₩ 7,379,599	₩ 9,037,565

The above consolidated statements of changes in equity should be read in conjunction with the accompanying notes.

S-OIL Corporation and Subsidiaries
Consolidated Statements of Cash Flows
Years ended December 31, 2023 and 2022

(In millions of Korean won)	Notes		2023		2022
Cash flows from operating activities					
Cash generated from operations	35	₩	3,417,149	₩	1,971,978
Interest received			55,081		29,747
Interest paid			(255,000)		(136,597)
Income tax paid			(695,482)		(217,430)
Dividends received			3,961		3,758
Net cash inflow from operating activities			2,525,709		1,651,456
Cash flows from investing activities					
Proceeds from disposal of property, plant and equipment			20,348		29,922
Proceeds from disposal of intangible assets			-		14
Disposal of financial assets at fair value through profit or loss			751		100
Disposal of financial assets at fair value through other comprehensive income			12		56
Decrease in other receivables			22,601		18,372
Decrease in other financial assets			140,000		-
Purchase of property, plant and equipment	14		(2,185,625)		(598,755)
Purchase of intangible assets	15		(2,480)		(861)
Payments for acquisition of associate	13		(3,250)		-
Purchase of financial assets at fair value through profit or loss	4		(900)		(700)
Purchase of financial assets at fair value through other comprehensive income	4		-		(1,239)
Increase in other receivables			(7,280)		(12,817)
Increase in other current assets			(2,051)		(1,055)
Increase in other financial assets			-		(140,000)
Settlement of derivative assets and liabilities			(49,324)		(66,475)
Others			1,067		239
Net cash outflow from investing activities			(2,066,131)		(773,199)
Cash flows from financing activities					
Proceeds from borrowings			1,239,078		279,139
Repayment of borrowings			(590,000)		(1,097,731)
Decrease in other payables			(83,229)		(78,385)
Dividends paid			(372,665)		(617,132)
Net cash inflow (outflow) from financing activities			193,184		(1,514,109)
Net increase (decrease) in cash and cash equivalents			652,762		(635,852)
Cash and cash equivalents at the beginning of the year	7		1,310,326		1,945,526
Effects of exchange rate changes on cash and cash equivalents			191		652
Cash and cash equivalents at the end of the year	7	₩	1,963,279	₩	1,310,326

The above consolidated statements of cash flows should be read in conjunction with the accompanying notes.

1. General Information

The general information of S-OIL Corporation (the "Company" or the "Parent Company") and its subsidiaries, S-International Ltd., North East Chemicals Co., Ltd. and S-OIL Singapore PTE. LTD. (the "Subsidiaries") (collectively referred to as the “Group”) under Korean IFRS 1110 *Consolidated Financial Statements*, are as follows:

The Company

S-OIL Corporation was established in 1976 to manufacture and sell oil refining products, lube products and petrochemical products, and to import and export crude oil and products. In 1987, the Company listed its stock on the Korea Exchange. The Company’s headquarters is located in Mapo-gu, Seoul, Korea.

As of December 31, 2023, the major shareholders of the Company and their respective shareholdings are as follows:

	2023	
Name of shareholders	Number of ordinary shares	Percentage of ownership (%)
Aramco Overseas Co., B.V.	71,387,560	63.41
Institutional and individual investors	41,195,232	36.59
Total	112,582,792	100.00

Consolidated Subsidiaries

Details of the consolidated subsidiaries as of December 31, 2023 and 2022, are as follows:

	Number of Shares	Location	2023 Ownership interest held by the Group (%)	2022 Ownership interest held by the Group (%)	Main business	Closing Month
S-International Ltd.	10	Samoa	100	100	Purchasing and sales of crude oil and petroleum goods	December
S-OIL Singapore PTE. LTD.	1,200,000	Singapore	100	100	Lube base oil trading and overseas services	December

Summarized financial information for consolidated subsidiaries as of and for the years ended December 31, 2023 and 2022, is as follows:

(In millions of Korean won)

	2023					
Subsidiary	Assets	Liabilities	Equity	Sales	Profit for the year	Total comprehensive income
S-International Ltd.	₩ 1,578	₩ -	₩ 1,578	₩ -	₩ 57	₩ 83
S-OIL Singapore PTE. LTD.	73,767	64,232	9,535	478,764	3,714	3,932

(In millions of Korean won)

	2022					
Subsidiary	Assets	Liabilities	Equity	Sales	Profit for the year	Total comprehensive income
S-International Ltd.	₩ 1,495	₩ -	₩ 1,495	₩ -	₩ 18	₩ 113
S-OIL Singapore PTE. LTD.	37,720	32,117	5,603	431,422	2,022	2,286

Changes in Scope for Consolidation

There are no changes in subsidiaries included or excluded in the consolidation for the year ended December 31, 2023.

2. Material Accounting Policies

The principal accounting policies applied in the preparation of these consolidated financial statements are set out below. These policies have been consistently applied to all the years presented, unless otherwise stated.

2.1 Basis of Preparation

The Group maintains its accounting records in Korean won and prepares statutory consolidated financial statements in the Korean language (Hangul) in accordance with International Financial Reporting Standards as adopted by the Republic of Korea ("Korean IFRS"). The accompanying consolidated financial statements have been condensed, restructured and translated into English from the Korean language consolidated financial statements.

Certain information attached to the Korean language financial statements, but not required for a fair presentation of the Group's financial position, financial performance or cash flows, is not presented in the accompanying consolidated financial statements.

The consolidated financial statements of the Group have been prepared in accordance with Korean IFRS. These are the standards, subsequent amendments and related interpretations issued by the International Accounting Standards Board (IASB) that have been adopted by the Republic of Korea.

The financial statements have been prepared on a historical cost basis, except for the following:

- Certain financial assets and liabilities (including derivative instruments), certain classes of property, plant and equipment and investment property – measured at fair value
- assets held for sale – measured at fair value less costs to sell, and
- defined benefit pension plans – plan assets measured at fair value.

The preparation of consolidated financial statements requires the use of critical accounting estimates. Management also needs to exercise judgement in applying the Group's accounting policies. The areas involving a higher degree of judgment or complexity, or areas where assumptions and estimates are significant to the consolidated financial statements are disclosed in Note 5.

(1) New and amended standards adopted by the Group

The Group has applied the following standards and amendments for the first time for their annual reporting period commencing January 1, 2023.

- Korean IFRS 1001 *Presentation of Financial Statements* - Disclosure of Accounting Policies

The amendments to Korean IFRS 1001 define and require entities to disclose their material accounting policy information (being information that, when considered together with other information included in an entity's financial statements, can reasonably be expected to influence decisions that the primary users of financial statements make on the basis of those financial statements). The amendments do not have a significant impact on the financial statements.

- Korean IFRS 1001 *Presentation of Financial Statements* - Disclosure of gain or loss on valuation of financial liabilities subject to adjustment of exercise price

If the entire or a part of financial instrument, whose exercise price is subject to change due to the issuer's share price, is classified as a financial liability, the carrying amount of the financial liability and related gains and losses shall be disclosed. The amendments do not have a significant impact on the financial statements.

- Korean IFRS 1008 *Accounting Policies, Changes in Accounting Estimates and Errors* - Definition of Accounting Estimates

The amendments define accounting estimates and clarify how to distinguish them from changes in accounting policies. The amendments do not have a significant impact on the financial statements.

- Korean IFRS 1012 *Income Taxes* - Deferred Tax related to Assets and Liabilities arising from a Single Transaction

The amendments include an additional condition to the exemption to initial recognition of an asset or liability that a transaction does not give rise to equal taxable and deductible temporary differences at the time of the transaction. The amendments do not have a significant impact on the financial statements.

- New Standard: Korean IFRS 1117 *Insurance Contract*

Korean IFRS 1117 *Insurance Contracts* replaces Korean IFRS 1104 *Insurance Contracts*. This Standard estimates future cash flows of an insurance contract and measures insurance liabilities using discount rates applied with assumptions and risks at the measurement date. The entity recognizes insurance revenue on an accrual basis including services (insurance coverage) provided to the policyholder by each annual period. In addition, investment components (Refunds due to termination/maturity) repaid to a policyholder even if an insured event does not occur, are excluded from insurance revenue, and insurance financial income or expense and the investment income or expense are presented separately to enable users of the information to understand the sources of income or expenses. This standard does not have a significant impact on the financial statements.

- Korean IFRS 1012 *Income Taxes* - International Tax Reform – Pillar Two Model Rules

The amendments provide a temporary relief from the accounting for deferred taxes arising from legislation enacted to implement the Pillar Two model rules, which aim to reform international corporate taxation for multinational enterprises, and require disclosure of related current tax effects, etc. The Group applies the exception to recognizing and disclosing information about deferred tax assets and liabilities related to Pillar Two income taxes. Since the Pillar Two legislation is scheduled to be effective from January 1, 2024, the Group has no current tax expense related to Pillar Two. The impact of the Pillar Two income taxes is described in Note 31.

(2) New standards and interpretations not yet adopted by the Group

The following new accounting standards and interpretations have been published that are not mandatory for December 31, 2023 reporting periods and have not been early adopted by the Group.

- Amendments to Korean IFRS 1001 *Presentation of Financial Statements* - Classification of Liabilities as Current or Non-current

The amendments clarify that liabilities are classified as either current or non-current, depending on the substantive rights that exist at the end of the reporting period. Classification is unaffected by the likelihood that an entity will exercise right to defer settlement of the liability or the expectations of management. Also, the settlement of liability includes the transfer of the entity's own equity instruments, however, it would be excluded if an option to settle them by the entity's own equity instruments if compound financial instruments is met the definition of equity instruments and recognized separately from the liability. The amendments should be applied for annual periods beginning on or after January 1, 2024, and earlier application is permitted. The Group is in review for the impact of these amendments on the financial statements.

- Amendments to Korean IFRS 1007 *Statement of Cash Flows*, Korean IFRS 1107 *Financial Instruments: Disclosures* – Supplier finance arrangements

When applying supplier finance arrangements, an entity shall disclose information about its supplier finance arrangements that enables users of financial statements to assess the effects of those arrangements on the entity's liabilities and cash flows and on the entity's exposure to liquidity risk. The amendments should be applied for annual periods beginning on or after January 1, 2024, and earlier application is permitted. The Group is in review for the impact of these amendments on the financial statements.

- Amendments to Korean IFRS 1116 *Leases* - Lease Liability in a Sale and Leaseback

When subsequently measuring lease liabilities arising from a sale and leaseback, a seller-lessee shall determine lease payments or revised lease payments in a way that the seller-lessee would not recognize any amount of the gain or loss that relates to the right of use retained by the seller-lessee. The amendments should be applied for annual periods beginning on or after January 1, 2024, and earlier application is permitted. The Group is in review for the impact of these amendments on the financial statements.

- Amendments to Korean IFRS 1001 *Presentation of Financial Statements* – Disclosure of Cryptographic Assets

The amendments require for an additional disclosure if an entity holds cryptographic assets, or holds cryptographic assets on behalf of the customer, or issues cryptographic assets. The amendments should be applied for annual periods beginning on or after January 1, 2024, and earlier application is permitted. The amendments do not have a significant impact on the financial statements.

- Amendments to Korean IFRS 1021 The Effects of Changes in Foreign Exchange Rates and 1101 First-time Adoption of International Financial Reporting Standards - Lack of Exchangeability

When an entity estimates a spot exchange rate and exchangeability between two currencies is lacking, the entity shall disclose related information. The amendments should be applied for annual periods beginning on or after January 1, 2024, and earlier application is permitted. The amendments do not have a significant impact on the financial statements.

2.2 Consolidation

The Group has prepared the consolidated financial statements in accordance with Korean IFRS 1110 *Consolidated Financial Statements.*

(1) Subsidiaries

Subsidiaries are all entities over which the Group has control. The Group controls an entity when the Group is exposed to, or has rights to, variable returns from its involvement with the entity and has the ability to affect those returns through its power to direct the activities of the entity. Subsidiaries are fully consolidated from the date on which control is transferred to the Group. They are deconsolidated from the date that control ceases.

The acquisition method of accounting is used to account for business combinations by the Group. The consideration transferred is measured at the fair values of the assets transferred, and identifiable assets acquired and liabilities and contingent liabilities assumed in a business combination are measured initially at their fair values at the acquisition date. The Group recognizes any non-controlling interest in the acquired entity on an acquisition-by-acquisition basis either at fair value or at the non-controlling interest’s proportionate share of the acquired entity’s net identifiable assets. All other non-controlling interests are measured at fair values, unless otherwise required by other standards. Acquisition-related costs are expensed as incurred.

The excess of consideration transferred, amount of any non-controlling interest in the acquired entity and acquisition-date fair value of any previous equity interest in the acquired entity over the fair value of the net identifiable assets acquired is recoded as goodwill. If those amounts are less than the fair value of the net identifiable assets of the business acquired, the difference is recognized directly in the profit or loss as a bargain purchase.

Intercompany transactions, balances and unrealized gains on transactions between group companies are eliminated. Accounting policies of subsidiaries have been changed where necessary to ensure consistency with the policies adopted by the Group.

(2) Associates

Associates are entities over which the Group has significant influence but not control or joint control. Investments in associates are accounted for using the equity method of accounting, after initially being recognized at cost. Unrealized gains on transactions between the Group and its associates are eliminated to the extent of the Group's interest in the associates. If the Group's share of losses of an associate equals or exceeds its interest in the associate (including long-term interests that, in substance, form part of the Group's net investment in the associate), the Group discontinues recognizing its share of further losses. After the Group's interest is reduced to zero, additional losses are provided for, and a liability is recognized, only to the extent that the Group has incurred legal or constructive obligations or made payments on behalf of the associate. If there is an objective evidence of impairment for the investment in the associate, the Group recognizes the difference between the recoverable amount of the associate and its book amount as impairment loss. If an associate uses accounting policies other than those of the Group for like transactions and events in similar circumstances, if necessary, adjustments shall be made to make the associate′s accounting policies conform to those of the Group when the associate′s financial statements are used by the entity in applying the equity method.

(3) Joint Arrangements

A joint arrangement, wherein two or more parties have joint control, is classified as either a joint operation or a joint venture. A joint operator recognizes its direct right to the assets, liabilities, revenues and expenses of joint operations and its share of any jointly held or incurred assets, liabilities, revenues and expenses. Interests in joint ventures are accounted for using the equity method, after initially being recognized at cost in the consolidated statement of financial position.

2.3 Foreign Currency Translation

(1) Functional and presentation currency

Items included in the financial statements of each of the Group's entities are measured using the currency of the primary economic environment in which each entity operates (the "functional currency"). The consolidated financial statements are presented in Korean won, which is the Parent Company's functional and presentation currency.

(2) Transactions and balances

Foreign currency transactions are translated into the functional currency using the exchange rates at the dates of the transactions. Foreign exchange gains and losses resulting from the settlement of such transactions and from the translation of monetary assets and liabilities denominated in foreign currencies at year end exchange rates are generally recognized in profit or loss.

Non-monetary items that are measured at fair value in a foreign currency are translated using the exchange rates at the date when the fair value was determined. Translation differences on assets and liabilities carried at fair value are reported as part of the fair value gain or loss. For example, translation differences on non-monetary assets and liabilities such as equities held at fair value through profit or loss are recognized in profit or loss as part of the fair value gain or loss and translation differences on non-monetary assets such as equities held at fair value through other comprehensive income are recognized in other comprehensive income.

(3) Translation to presentation currency

The results and financial position of subsidiary that have a functional currency different from the presentation currency are translated into the presentation currency of as follows:

- assets and liabilities for each statement of financial position presented are translated at the closing rate at the end of the reporting period,
- income and expenses for each statement of profit or loss are translated at average exchange rates,
- equity is translated at the historical exchange rate, and
- all resulting exchange differences are recognized in other comprehensive income.

2.4 Financial Assets

(1) Classification

The Group classifies its financial assets in the following measurement categories:

- those to be measured at fair value through profit or loss,
- those to be measured at fair value through other comprehensive income, and
- those to be measured at amortized cost.

The classification depends on the Group's business model for managing the financial assets and the contractual terms of the cash flows.

For financial assets measured at fair value, gains and losses will either be recorded in profit or loss or other comprehensive income. For investments in debt instruments, this will depend on the business model in which the investment is held. The Group reclassifies debt investments when, and only when its business model for managing those assets changes.

For investments in equity instruments that are not held for trading, this will depend on whether the Group has made an irrevocable election at the time of initial recognition to account for the equity investment at fair value through other comprehensive income. Changes in fair value of non-designated equity investment are recognized in profit or loss.

(2) Measurement

At initial recognition, the Group 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 that are directly attributable to the acquisition of the financial asset. Transaction costs of financial assets carried at fair value through profit or loss are expensed in profit or loss.

Financial assets with embedded derivatives are considered in their entirety when determining whether their cash flows are solely payment of principal and interest.

A. Debt instruments

Subsequent measurement of debt instruments depends on the Group's business model for managing the asset and the cash flow characteristics of the asset. The Group classifies its debt instruments into one of the following three measurement categories:

- Amortized cost: Assets that are held for collection of contractual cash flows where those cash flows represent solely payments of principal and interest are measured at amortized cost. A gain or loss on a debt investment that is subsequently measured at amortized cost and is not part of a hedging relationship is recognized in profit or loss when the asset is derecognized or impaired. Interest income from these financial assets is included in 'finance income' using the effective interest rate method.

- Fair value through other comprehensive income: Assets that are held for collection of contractual cash flows and for selling the financial assets, where the assets' cash flows represent solely payments of principal and interest, are measured at fair value through other comprehensive income. Movements in the carrying amount are taken through other comprehensive income, except for the recognition of impairment loss (reversal of impairment loss), interest income and foreign exchange gains and losses which are recognized in profit or loss. When the financial asset is derecognized, the cumulative gain or loss previously recognized in other comprehensive income is reclassified from equity to profit or loss. Interest income from these financial assets is included in 'finance income' using the effective interest rate method. Foreign exchange gains and losses are presented in 'other income or expenses' and impairment losses are presented in 'other expenses'.

- Fair value through profit or loss: Assets that do not meet the criteria for amortized cost or fair value through other comprehensive income are measured at fair value through profit or loss. A gain or loss on a debt investment that is subsequently measured at fair value through profit or loss and is not part of a hedging relationship is recognized in profit or loss and presented net in the statement of profit or loss within 'other income or expenses' in the year in which it arises.

B. Equity instruments

The Group subsequently measures all equity investments at fair value. Where the Group's management has elected to present fair value gains and losses on equity investments, which held for long-term investment or strategic purpose, in other comprehensive income, there is no subsequent reclassification of fair value gains and losses to profit or loss following the derecognition of the investment. Dividend income from such investments continue to be recognized in profit or loss as 'other income' when the right to receive payments is established.

Changes in the fair value of financial assets at fair value through profit or loss are recognized in 'other income and expenses' in the statement of profit or loss as applicable. Impairment loss (reversal of impairment loss) on equity investments measured at fair value through other comprehensive income are not reported separately from other changes in fair value.

(3) Impairment

The Group assesses on a forward-looking basis the expected credit losses associated with its debt instruments carried at amortized cost and fair value through other comprehensive income. The impairment methodology applied depends on whether there has been a significant increase in credit risk. For trade receivables and lease receivables, the Group applies the simplified approach, which requires expected lifetime credit losses to be recognized from initial recognition of the receivables.

(4) Recognition and derecognition

Regular way purchases and sales of financial assets are recognized or de-recognized on trade-date, the date on which the Group commits to purchase or sell the asset. Financial assets are derecognized when the rights to receive cash flows from the financial assets have expired or have been transferred and the Group has transferred substantially all the risks and rewards of ownership.

(5) Offsetting of financial instruments

Financial assets and liabilities are offset and the net amount reported in the statements of financial position where there is a legally enforceable right to offset the recognized amounts and there is an intention to settle on a net basis or realize the assets and settle the liability simultaneously. The legally enforceable right must not be contingent on future events and must be enforceable in the normal course of business and in the event of default, insolvency or bankruptcy of the Group or the counterparty.

2.5 Derivative Instruments

Derivatives are initially recognized at fair value on the date when a derivative contract is entered into and are subsequently remeasured at their fair value at the end of each reporting period. Changes in the fair value of any derivative instrument that does not qualify for hedge accounting are recognized immediately in profit or loss within 'other income or other expenses' based on the nature of transactions.

The Group applies cash flow hedge accounting to hedge the foreign currency risk associated with forecast sale. The effective portion of changes in the fair value of derivatives that are designated and qualify as cash flow hedges is recognized in the cash flow hedge reserve within equity, limited to the cumulative change in fair value (present value) of the hedged item (the present value of the cumulative change in the future expected cash flows of the hedged item) from the inception of the hedge. The ineffective portion is recognized in ‘other income or other expenses’.

When forward contracts are used to hedge the foreign currency risk associated with forecast sale, the Group generally designates only the change in fair value of the forward contract related to the spot element as the hedging instrument. Gains or losses relating to the effective portion of the change in the spot element of the forward contracts are recognized in the cash flow hedge reserve within equity. Amounts accumulated in equity are reclassified to ‘sale’ in the periods when the hedged item affects profit or loss.

2.6 Inventories

Inventories are stated at the lower of cost and net realizable value. Cost is determined using the first-in, first-out (FIFO) method except for in-transit inventories which are determined using the specific identification method and supplies which are determined using the moving weighted average method.

2.7 Property, Plant and Equipment

Property, plant and equipment are stated at historical cost less accumulated depreciation and accumulated impairment losses. Historical cost includes expenditure that is directly attributable to the acquisition of the items.

Depreciation of all property, plant and equipment, except for land and catalysts, is calculated using the straight-line method to allocate their cost or revalued amounts, net of their residual values, over their estimated useful lives as follows:

	Estimated useful lives
Buildings	20 - 40 years
Structures	20 - 40 years
Machinery and equipment	15 - 30 years
Vehicles	5 years
Other property, plant and equipment	3 - 5 years
Catalysts	Units-of-production method

The assets’ depreciation method, residual values and useful lives are reviewed, and adjusted if appropriate, at the end of each reporting period.

2.8 Borrowing Costs

General and specific borrowing costs that are directly attributable to the acquisition, construction or production of a qualifying asset are capitalized during the period of time that is required to complete and prepare the asset for its intended use or sale. Investment income earned on the temporary investment of specific borrowings on qualifying assets is deducted from the borrowing costs eligible for capitalization. Other borrowing costs are expensed in the period in which they are incurred.

2.9 Intangible Assets

Goodwill is measured as described in Note 2.2 (1), and carried at cost less accumulated impairment losses.

Intangible assets, except for goodwill, are initially recognized at its historical cost and carried at its cost less accumulated amortization and accumulated impairment losses. Membership rights that have an indefinite useful life are not subject to amortization because there is no foreseeable limit to the period over which the assets are expected to be utilized. The Group amortizes intangible assets with a limited useful life using the straight-line method over the following periods:

	Estimated useful lives
Facility usage rights	Periods with exclusive supply rights or contract periods
Other intangible assets	5 years

2.10 Investment Property

Investment property is property (including the right-of-use asset) held to earn rentals or for capital appreciation or both. An investment property is measured initially at its cost. An investment property is measured after initial measurement at depreciated cost (less any accumulated impairment losses). After recognition as an asset, investment property is carried at cost less accumulated depreciation and impairment losses. The investment property held by the Group is land.

2.11 Impairment of Non-financial Assets

Goodwill and intangible assets that have an indefinite useful life are not subject to amortization and are tested annually for impairment, or more frequently if events or changes in circumstances indicate that they might be impaired. Other assets are tested for impairment whenever events or changes in circumstances indicate that the carrying amount may not be recoverable. An impairment loss is recognized for the amount by which the asset’s carrying amount exceeds its recoverable amount. The recoverable amount is the higher of an asset’s fair value less costs of disposal and value in use. Non-financial assets other than goodwill that suffered an impairment are reviewed for possible reversal of the impairment at the end of each reporting period.

2.12 Financial Liabilities

(1) Classification and measurement

The Group's financial liabilities at fair value through profit or loss are financial instruments held for trading. A financial liability is held for trading if it is incurred principally for the purpose of repurchasing in the near term. A derivative that is not a designated as hedging instruments and an embedded derivative that is separated are also classified as held for trading.

The Group classifies non-derivative financial liabilities, except for financial liabilities at fair value through profit or loss, financial guarantee contracts and financial liabilities that arise when a transfer of financial assets does not qualify for derecognition, as financial liabilities carried at amortized cost and present as 'trade payables', 'other payables' and 'borrowings' in the consolidated statement of financial position.

(2) Derecognition

Financial liabilities are removed from the consolidated statement of financial position when it is extinguished; for example, when the obligation specified in the contract is discharged or cancelled or expired or when the terms of an existing financial liability are substantially modified.

2.13 Current Tax and Deferred Tax

The tax expense for the period consists of current tax and deferred tax. Current tax and deferred tax are recognized in profit or loss, except to the extent that it relates to items recognized in other comprehensive income or directly in equity. In this case, the tax is also recognized in other comprehensive income or directly in equity, respectively.

The current tax is measured at the amount expected to be paid to the taxation authorities, using the tax rates (and tax laws) that have been enacted or substantively enacted by the end of the reporting period.

Management periodically evaluates positions taken in tax returns with respect to situations in which applicable tax regulation is subject to interpretation. The Group recognizes current income tax on the basis of amounts expected to be paid to the tax authorities.

Deferred tax is provided in full, using the liability method, on temporary differences arising between the tax bases of assets and liabilities and their carrying amounts in the consolidated financial statements. However, deferred income tax is not accounted for if it arises from initial recognition of an asset or liability in a transaction other than a business combination that at the time of the transaction affects neither accounting nor taxable profit or loss. Deferred tax assets are recognized only if it is probable that future taxable amounts will be available to utilize those temporary differences and losses.

The Group recognizes deferred tax liability all taxable temporary differences associated with investments in subsidiaries, associates, and interests in joint arrangements, except to the extent that the Group is able to control the timing of the reversal of the temporary difference and it is probable that the temporary difference will not reverse in the foreseeable future. In addition, The Group recognizes a deferred tax asset for all deductible temporary differences arising from such investments to the extent that it is probable the temporary difference will reverse in the foreseeable future and taxable profit will be available against which the temporary difference can be utilized.

Deferred tax assets and liabilities are offset when there is a legally enforceable right to offset current tax assets and liabilities and when the deferred tax balances relate to the same taxation authority. Current tax assets and tax liabilities are offset where the entity has a legally enforceable right to offset and intends either to settle on a net basis.

2.14 Post-employment Benefits

The Group operates both defined contribution and defined benefit pension plans.

For defined contribution plans, the Group pays contribution to publicly or privately administered pension insurance plans on mandatory, contractual or voluntary basis. The Group has no further payment obligation once the contribution have been paid. The contribution are recognized as employee benefit expense when they are due.

A defined benefit plan is a pension plan that is not a defined contribution plan. Generally, post-employment benefits are payable after the completion of employment, and the benefit amount depended on the employee’s age, periods of service or salary levels. The liability recognized in the consolidated statement of financial position in respect of defined benefit pension plans is the present value of the defined benefit obligation at the end of the reporting period less the fair value of plan assets. The defined benefit obligation is calculated annually by independent actuaries using the projected unit credit method. The present value of the defined benefit obligation is determined by discounting the estimated future cash outflows using interest rates of high-quality corporate bonds that are denominated in the currency in which the benefits will be paid, and that have terms approximating to the terms of the related obligation. Remeasurement gains and losses arising from experience adjustments and changes in actuarial assumptions are recognized in the period in which they occur, directly in other comprehensive income.

Changes in the present value of the defined benefit obligation resulting from plan amendments or curtailments are recognized immediately in profit or loss as past service costs.

2.15 Provisions

Provisions are measured at the present value of management’s best estimate of the expenditure required to settle the present obligation at the end of the reporting period, and the increase in the provision due to the passage of time is recognized as interest expense.

2.16 Customer Loyalty Program

The award credits ("points") provide the customers with benefits that they would not have if there is no contract entered into. Accordingly, providing points to customers is a separate performance obligation. Transaction price per performance obligation is allocated based on relative stand-alone selling price of goods and points. The management estimates the stand-alone selling price of points based on discounts to be provided when the points are redeemed and the probability of redemption from past experience. Stand-alone selling price of goods are estimated based on the retail price.

2.17 Share Capital

Ordinary shares and preferred shares that are not mandatorily redeemable are classified as equity.

Where the Company purchases its own equity share capital (treasury share), the consideration paid, including any directly attributable incremental costs is deducted from equity attributable to the subsequently reissued, any consideration received is included in equity attributable to the Company's equity holders.

2.18 Revenue Recognition

The Group manufactures and sells oil refining products, lube products and petrochemical products, and imports and exports crude oil and products. Revenue from the sale of goods is recognized when the Group sells a product to the customer based on the contract.

The Group estimates an amount of variable consideration by using the expected value which the Group expects to better predict the amount of consideration. The Group recognize revenue with transaction price including variable consideration only to the extent that it is highly probable that a significant reversal in the amount of cumulative revenue recognized will not occur when the refund period has lapsed. The refund liability is measured at the amount of consideration received for which the Group does not expect to be entitled.

The transaction price in an arrangement must be allocated to each separate performance obligation based on the relative stand-alone selling prices of the goods or services being provided to a customer. The Group determines the stand-alone selling price for each separate performance obligation by using 'adjust market assessment approach'. In limited circumstances, the Group plans to use 'expected cost plus a margin approach' to estimate expected cost plus a reasonable margin.

A gross contract liability (refund liability) for the expected refunds to customers is recognized and sales are adjusted. At the same time, the Group has a right to collect the product from the customer when the customer exercises the right of return and recognizes an asset and adjusts cost of sales.
Right to collect the product from the customer is measured by previous book amount of the product less cost to collect the product.

2.19 Lease

(1) Lessor

Lease income from operating leases where the Group is a lessor is recognized in income on a straight-line basis over the lease term. Initial direct costs incurred in obtaining an operating lease are added to the carrying amount of the underlying asset and recognized as expense over the lease term on the same basis as lease income. The respective leased assets are included in the statement of financial position based on their nature.

(2) Lessee

The Group leases vessels, storage facilities, sites for gas station and charging station and other facilities and machinery. Lease contracts are made for fixed periods of 1 to 20 years, but may have extension options.

Contracts may contain both lease and non-lease components. The Group allocates the consideration in the contract to the lease and non-lease components based on their relative stand-alone prices.

Lease terms are negotiated on an individual basis and contain a wide range of different terms and conditions.

The lease agreements do not impose any covenants, but leased assets may not be used as security for borrowing purposes.

The Group determines the lease term as the non-cancellable period of a lease, together with periods covered by an option to extend the lease if the lessee is reasonably certain to exercise that option. When the lessee and the lessor each has the right to terminate the lease without permission from the other party, the Group should consider a termination penalty in determining the period for which the contract is enforceable.

Assets and liabilities arising from a lease are initially measured on a present value basis. Lease liabilities include the net present value of the following lease payments:

- Fixed payments (including in-substance fixed payments), less any lease incentives receivable
- Variable lease payment that are based on an index or a rate, initially measured using the index or rate as of the commencement date
- Amounts expected to be payable by the Group (the lessee) under residual value guarantees
- The exercise price of a purchase option if the Group (the lessee) is reasonably certain to exercise that option, and
- Payments of penalties for terminating the lease, if the lease term reflects the Group (the lessee) exercising that option

The lease payments are discounted using the interest rate implicit in the lease. If that rate cannot be determined, the lessee's incremental borrowing rate is used, being the rate that the lessee would have to pay to borrow the funds necessary to obtain an asset of similar value in a similar economic environment with similar terms and conditions.

To determine the incremental borrowing rate, the Group:

- where possible, uses recent third-party financing received by the individual lessee as a starting point, adjusted to reflect changes in financing conditions since third party financing was received, and
- makes adjustments specific to the lease, for example term, country, currency and security.

The Group is exposed to potential future increases in variable lease payments based on an index or rate, which are not included in the lease liability until they take effect. When adjustments to lease payments based on an index or rate take effect, the lease liability is reassessed and adjusted against the right-of-use asset.

Each lease payment is allocated between the liability and finance cost. The finance cost is charged to profit or loss over the lease period so as to produce a constant periodic rate of interest on the remaining balance of the liability for each period.

Right-of-use assets are measured at cost comprising the following:

- the amount of the initial measurement of lease liability
- any lease payments made at or before the commencement date less any lease incentives received
- any initial direct costs, and
- restoration costs

The right-of-use asset is depreciated over the shorter of the asset's useful life and the lease term on a straight-line basis. If the Group is reasonably certain to exercise a purchase option, the right-of-use asset is depreciated over the underlying asset's useful life of 1 to 20 years.

Payments associated with short-term leases and leases of low-value assets are recognized on a straight-line basis as an expense in profit or loss. Short-term leases are leases with a lease term of 12 months or less. Low-value assets comprise IT-equipment and others.

2.20 Dividends

Dividends paid to the Group's shareholders is recognized as a liability in the consolidated financial statements in the period in which the dividends are approved by the Group's shareholders.

2.21 Earnings per Share

Basic earnings per share is calculated by dividing the profit attributable to equity holders of the Group by the weighted average number of ordinary shares in issue during the year. Basic earnings per preferred share is also calculated by dividing the profit attributable to participating shares with right to participate in distribution of earnings by the weighted average number of preferred shares in issue during the year.

2.22 Segment Reporting

Information of each operating segment is reported in a manner consistent with the internal business segment reporting provided to the chief operating decision-maker. The chief operating decision-maker, who is responsible for allocating resources and assessing performance of the operating segments, has been identified as the Board of Directors that makes strategic decisions.

2.23 Greenhouse Gas Emission Permits and Obligations

With enforcement of *The Act on the Allocation and Trading of Greenhouse Gas Emission Permits*, emission permits that are allocated free of charge from the government are measured at zero, and emission permits purchased are recognized at acquisition cost by including any directly attributable costs incurred during the normal course of business. Emission permits are carried at cost less accumulated impairment losses, and those to be submitted to the government within one year from the end of reporting period are classified as current assets.

Emission obligation is a present obligation of submitting the allowances to the government. Emissions obligations are measured as the sum of the carrying amount of the allocated allowances that will be submitted to the government and the best estimate of expenditure required to settle the obligation at the end of reporting period for any excess emission. The emission obligations to be settled within one year from the end of the reporting period are classified as current liabilities.

The Group derecognizes the emission permits when the emission allowance is disposed or submitted to the government or becomes unable to be disposed or submitted, and accordingly, the future economic benefits are no longer expected to be probable. The Group derecognizes the emission obligations when the Group submits the emission permits to the government. The emission permits and emission obligations are classified as intangible assets and provisions, respectively, in the statement of financial position.

2.24 Approval of Issuance of the Consolidated Financial Statements

The issuance of the consolidated financial statements for the year 2023 of the Group was approved by the Board of Directors on February 26, 2024, which is subject to change with the approval of shareholders at the general shareholders' meeting.

3. Financial Risk Management

3.1 Financial Risk Factors

The Group's activities expose it to a variety of financial risks: market risk, credit risk and liquidity risk. The Group's overall risk management program focuses on the unpredictability of financial markets and seeks to minimize any adverse effects on the financial performance of the Group.

Risk management is carried out by each relevant department under policies approved by the Board of Directors. The Group identifies, evaluates and hedges financial risks in close co-operation with the Group's operating units.

(1) Market risk

a. Foreign exchange risk

The Group operates internationally and is exposed to foreign exchange risk arising from foreign currency transactions, primarily with respect to the US dollar. Foreign exchange risk arises when future commercial transactions, recognized asset and liabilities are presented in currencies other than the functional currency.

The purpose of foreign exchange risk management is to maximize the Group's value by minimizing the uncertainty and volatility of foreign exchange gains and losses from foreign exchange rate fluctuations.

The Group maintains foreign exchange risk management system to offset foreign exchange effects arising from recognized income/expense and assets/liabilities.

As of December 31, 2023, if the Korean won had weakened or strengthened by 10% against the foreign currencies with all other variables held constant, profit before tax would have been decreased or increased by ₩ 354,114 million (2022: ₩ 332,266 million) in relation to foreign currency-denominated trade receivables, trade payables, and usance borrowings. However, the Group's foreign exchange risk is controlled effectively as the above foreign exchange risk has offsetting effect with other foreign exchange effects affecting operating income.

The Group's financial instruments denominated in major currencies as of December 31, 2023 and 2022, are converted into Korean won as follows:

(In millions of Korean won)		**2023**		**2022**
Trade receivables				
KRW	₩	642,179	₩	599,931
USD		1,648,199		1,672,046
EUR		12,643		26,019
AUD		4,524		5,583
Total	₩	2,307,545	₩	2,303,579
Trade payables				
KRW	₩	202,623	₩	91,223
USD		3,785,924		3,080,210
JPY		940		987
Total	₩	3,989,487	₩	3,172,420
Borrowings				
KRW	₩	3,476,527	₩	3,016,525
USD		2,142,469		1,939,122
Total	₩	5,618,996	₩	4,955,647

b. Product margin risk

The Group is exposed to product margin risk arising from difference in timing of purchase and sale. The purpose of product margin risk management is to maximize the Group's value by minimizing the uncertainty of volatility of product margin.

In order to minimize the product margin risk, the Group tries to sell products produced within the month. For the products that need to be stored for a longer period, the Group secures the product margin by executing product swap to mitigate a risk of future price fluctuation.

c. Interest rate risk

Interest rate risk is defined as the risk that the interest income or expenses arising from deposits and borrowings will fluctuate because of changes in future market interest rate. The interest rate risk mainly arises on floating rate deposits and borrowings. As a result, the Group is exposed to cash flow interest rate risk.

The objective of interest rate risk management lies in maximizing the Group's value by minimizing uncertainty caused by fluctuations in interest rates and minimizing net interest expense.

When the interest rate has increased or decreased by 100 basis point with all other variables held constant, the Company's profit before tax for the year ended December 31, 2023, will decrease or increase by ₩ 7,000 million (2022: -) due to the borrowings at floating rates.

d. Price risk of financial assets at fair value through other comprehensive income and financial assets at fair value through profit or loss

The Group is exposed to equity securities price risk arises from investments held by the Group that are classified as financial assets at fair value through other comprehensive income and financial assets at fair value through profit or loss in the consolidated statement of financial position. To manage its price risk arising from investments in equity securities, the Group diversifies its portfolio.

The table below summarizes the impact of increases or decreases of these two indexes on the Group's total comprehensive income for the year (before applying the tax effect). The analysis is based on the assumption that the equity indexes has increased/decreased by 10% with all other variables held constant, and that all the Group's equity instruments moved in line with the indexes.

(In millions of Korean won)		2023		2022
Unlisted stocks	₩	5,927	₩	5,584
Fund and others		4,011		1,557
	₩	9,938	₩	7,141

(2) Credit risk

a. Risk management

Credit risk arises from receivables, cash and cash equivalents, derivative financial instruments and deposits with banks and financial institutions. For banks and financial institutions, only independently rated parties with high ratings are accepted. If customers are independently rated, these ratings are used. If there is no independent rating, the credit quality of the customer is evaluated taking into account its financial position, past experience and other factors.

Individual risk limits are set based on internal or external ratings in accordance with limits set by the Group. The utilization of credit limits is strictly executed.

The maximum exposure to credit risk as of December 31, 2023 and 2022, is as follows:

(In millions of Korean won)		2023		2022
Financial assets				
Cash and cash equivalents	₩	1,963,202	₩	1,310,278
Trade receivables		2,307,545		2,303,579
Other receivables		419,827		224,144
Other financial assets		11,016		151,026
Derivative financial assets		3,785		16,343
Total	₩	4,705,375	₩	4,005,370

With the exception of trade receivables and other receivables, none of financial assets is past due or impaired. There is no collateral held by the Group except for trade receivables and other receivables.

b. Impairment of financial assets

The Group has four types of financial assets that are subject to the expected credit loss model:

- trade receivables for sales of goods and provision of services,
- other receivables and other financial assets at amortized cost,
- debt investments carried at fair value through other comprehensive income, and
- lease receivables, which are subject to application of Korean IFRS 1116 *Leases*.

The identified impairment loss in lease receivables was immaterial. While cash equivalents are also subject to the impairment requirement, the identified impairment loss was immaterial.

(i) Trade receivables

The Group applies the simplified approach to measuring expected credit losses which uses a lifetime expected loss allowance for all trade receivables.

Expected credit losses are estimated based on the information that has impact on credit risk related to customers.

(ii) Other receivables and other financial assets at amortized cost

There are no movements in loss allowance provision for other receivables and other financial assets at amortized cost for the year ended December 31, 2023.

All of the other receivables and other financial assets at amortized costs other than lease receivables are considered to have low credit risk, and the loss allowance recognized during the period was, therefore, limited to 12 months expected losses. Other instruments are considered to be low credit risk when they have a low risk of default and the issuer has a strong capacity to meet its contractual cash flow obligations in the near term. The Group applies the simplified approach to measuring expected credit losses which uses a lifetime expected loss allowance for all lease receivables.

(iii) Debt investments at fair value through other comprehensive income

Debt investments at fair value through other comprehensive income include government bonds, corporate bonds and trade receivables subject to be sold or discounted. The loss allowance for debt investments at fair value through other comprehensive income is recognized in profit or loss and reduces the fair value loss otherwise recognized in other comprehensive income.

All of the debt investments at fair value through other comprehensive income other than trade receivables subject to be sold or discounted are considered to have low credit risk, and the loss allowance recognized during the period was, therefore, limited to 12 months expected losses. Management considers ‘low credit risk’ for listed bonds to be an investment grade credit rating with at least one major rating agency. Other instruments are considered to be low credit risk when they have a low risk of default and the issuer has a strong capacity to meet its contractual cash flow obligations in the near term.

The Group applies the simplified approach to measure expected credit losses which uses a lifetime expected loss allowance for all trade receivables. There are no movements in loss allowance provision for other financial assets at fair value through other comprehensive income other than trade receivables subject to be sold or discounted for the year ended December 31, 2023.

(3) Liquidity risk

Liquidity risk is defined as the risk that the Group is unable to meet its short-term payment obligations on time due to deterioration of its business performance.

The Group monitors rolling forecasts of the Group's liquidity requirements to ensure it has sufficient cash to meet operational needs while maintaining sufficient headroom on its undrawn committed borrowing facilities at all times so that the Group does not breach borrowing limits or covenants on any of its borrowing facilities. The Group's liquidity management policy involves projecting cash flows in major currencies and considering the level of liquid assets necessary to meet these, monitoring balance sheet liquidity ratios against internal and external regulatory requirements and maintaining debt financing plans.

Details of the Group's liquidity risk analysis as of December 31, 2023 and 2022, are as follows:

(In millions of Korean won)	2023			
	Less than 1 year	**Between 1 and 2 years**	**Over 2 years**	**Total**
Trade payables	₩ 3,989,487	₩ -	₩ -	₩ 3,989,487
Other payables	1,337,735	35,849	190,192	1,563,776
Borrowings	2,932,076	734,418	2,417,308	6,083,802
Currency forward (gross)				
Inflow	(25,697)	-	-	(25,697)
Outflow	24,529	-	-	24,529
Commodity Swap (net)	(470)	-	-	(470)
Total	₩ 8,257,660	₩ 770,267	₩ 2,607,500	₩ 11,635,427

(In millions of Korean won)	2022			
	Less than 1 year	**Between 1 and 2 years**	**Over 2 years**	**Total**
Trade payables	₩ 3,172,420	₩ -	₩ -	₩ 3,172,420
Other payables	881,292	67,807	174,544	1,123,643
Borrowings	2,629,506	687,357	1,883,657	5,200,520
Currency forward (gross)				
Inflow	(556,919)	-	-	(556,919)
Outflow	542,588	-	-	542,588
Commodity Swap (net)	(1,731)	-	-	(1,731)
Total	₩ 6,667,156	₩ 755,164	₩ 2,058,201	₩ 9,480,521

The amounts disclosed in the above table are undiscounted cash flows.

3.2 Capital Risk Management

The Group's objectives when managing capital are to safeguard the Group's ability to continue as a going concern, so the Group can continue to provide returns for shareholders and benefits for other stakeholders, and to maintain an optimal capital structure to reduce the cost of capital.

The Group monitors financial ratios, such as debt-to-equity ratio and net borrowings-to-equity ratio each month and implements required action plan to maintain or adjust the capital structure.

Debt-to-equity ratio and net borrowings-to-equity ratio as of December 31, 2023 and 2022, are as follows:

(In millions of Korean won)	**2023**	**2022**
Interest bearing liabilities (A)[1]	₩ 5,835,936	₩ 5,219,303
Cash and cash equivalents and current financial deposits (B)	1,974,279	1,461,326
Net borrowings (C=A-B)	3,861,657	3,757,977
Equity (D)	9,037,565	8,483,469
Debt-to-equity ratio (A/D)	65%	62%
Net borrowings-to-equity ratio (C/D)	43%	44%

[1] Borrowings and lease liabilities are included.

4. Fair Value

4.1 Fair Value of Financial Instruments by Category

Carrying amount and fair value of financial instruments by category as of December 31, 2023 and 2022, are as follows:

(In millions of Korean won)	2023		2022	
	Carrying amount	**Fair value**	**Carrying amount**	**Fair value**
Financial assets				
Financial assets at fair value through other comprehensive income	₩ 59,274	₩ 59,274	₩ 55,859	₩ 55,859
Financial assets at fair value through profit or loss	43,898	43,898	31,909	31,909
Total	₩ 103,172	₩ 103,172	₩ 87,768	₩ 87,768
Financial liabilities				
Derivative financial liabilities	₩ 2,149	₩ 2,149	₩ 312	₩ 312
Public bonds	2,776,820	2,695,024	3,016,525	2,782,974
Total	₩ 2,778,969	₩ 2,697,173	₩ 3,016,837	₩ 2,783,286

Carrying amount of other financial assets and liabilities other than financial assets at fair value and derivative financial instruments and public bonds is a reasonable approximation of fair value.

4.2 Fair Value Hierarchy

Items that are measured at fair value are categorized by the fair value hierarchy levels, and the defined levels are as follows:

- Quoted prices (unadjusted) in active markets for identical assets or liabilities that an entity can access at the measurement date. The quoted market price incorporates the market's assumptions with respect to changes in economic climate such as rising interest rates and inflation, as well as changes due to ESG risk (Level 1).

- All inputs other than quoted prices included in level 1 that are observable (either directly that is, prices, or indirectly that is, derived from prices) for the asset or liability (Level 2).

- Unobservable inputs for the asset or liability. This is the case for unlisted equity securities and for instruments where ESG risk gives rise to a significant unobservable adjustment (Level 3).

Fair value hierarchy classifications of the financial instruments that are measured at fair value as of December 31, 2023, are as follows:

(In millions of Korean won)	**Level 1**	**Level 2**	**Level 3**	**Total**
Financial assets/liabilities that are measured at fair value				
Assets				
Financial assets at fair value through other comprehensive income				
Equity securities	₩ -	₩ -	₩ 59,266	₩ 59,266
Debt securities	8	-	-	8
Financial assets at fair value through profit or loss				
Derivative financial assets held for trading	-	3,785	-	3,785
Equity securities	-	-	40,113	40,113
Total	₩ 8	₩ 3,785	₩ 99,379	₩ 103,172
Liabilities				
Financial liabilities at fair value through profit or loss				
Derivative financial liabilities held for trading	₩ -	₩ 2,149	₩ -	₩ 2,149
Borrowings				
Public bonds	2,695,024	-	-	2,695,024
Total	₩ 2,695,024	₩ 2,149	₩ -	₩ 2,697,173

Fair value hierarchy classifications of the financial instruments that are measured at fair value as of December 31, 2022, are as follows:

(In millions of Korean won)	**Level 1**	**Level 2**	**Level 3**	**Total**
Financial assets/liabilities that are measured at fair value				
Assets				
Financial assets at fair value through other comprehensive income				
Equity securities	₩ -	₩ -	₩ 55,841	₩ 55,841
Debt securities	18	-	-	18
Financial assets at fair value through profit or loss				
Derivative financial assets held for trading	-	16,343	-	16,343
Equity securities	-	-	15,566	15,566
Total	₩ 18	₩ 16,343	₩ 71,407	₩ 87,768
Liabilities				
Financial liabilities at fair value through profit or loss				
Derivative financial liabilities held for trading	₩ -	₩ 312	₩ -	₩ 312
Borrowings				
Public bonds	2,782,974	-	-	2,782,974
Total	₩ 2,782,974	₩ 312	₩ -	₩ 2,783,286

4.3 Transfers between Fair Value Hierarchy Levels of Recurring Fair Value Measurements

The Group's policy is to recognize transfers between levels of the fair value at the end of the reporting period. There were no transfers between levels 1 and 2 for recurring fair value measurements during the year. Changes in level 3 for recurring fair value measurements for the years ended December 31, 2023 and 2022, are as follows:

(In millions of Korean won)		2023		2022
Beginning balance	₩	71,407	₩	69,417
Acquisition		900		1,935
Disposal		(751)		(100)
Total profit or loss				
Gains on valuation (profit or loss)		24,398		-
Gains on valuation (other comprehensive income)		3,425		155
Ending balance	₩	99,379	₩	71,407

4.4 Valuation Technique and the Inputs

Valuation techniques and inputs used in levels 2 and 3 fair value measurements as of December 31, 2023, are as follows:

(1) Level 3

(In millions of Korean won)	Fair value	Level	Valuation techniques	Inputs	Range of inputs
Equity instruments at fair value through other comprehensive income					
Equity securities	₩ 59,266	3	Discounted cash flow model	Perpetual growth rate	0%
				Discount rate	8.39%
Financial assets at fair value through profit or loss					
Equity securities	40,113	3	Discounted cash flow model and others	Perpetual growth rate	1%
				Discount rate	16.90%~ 16.95

(2) Level 2

(In millions of Korean won)	Fair value	Level	Valuation techniques
Financial assets at fair value through profit or loss			
Currency forward	₩ 1,166	2	Present value technique
Commodity swap	2,619	2	Present value technique
Financial liabilities at fair value through profit or loss			
Commodity swap	2,149	2	Present value technique

4.5 Valuation Processes for Fair Value Measurements Categorized as Level 3

The accounting department of the Group that performs the fair value measurements required for financial reporting purposes, including Level 3 fair values. This department discusses valuation processes and result with the management.

4.6 Sensitivity Analysis for Recurring Fair Value Measurements Categorized as Level 3

Sensitivity analysis of financial instruments is performed to measure favorable and unfavorable changes in the fair value of financial instruments which are affected by the unobservable parameters, using a statistical technique. When the fair value is affected by more than two input parameters, the most favorable or most unfavorable amounts are presented. Changes in fair value of financial instruments categorized as level 3 subject to sensitivity analysis; such as, equity securities, are recognized in other comprehensive income or profit or loss.

5. Critical Accounting Estimates and Assumptions

The preparation of consolidated financial statements requires the Group to make estimates and assumptions concerning the future. Estimates and judgements are continually evaluated and are based on historical experience and other factors, including expectations of future events that are believed to be reasonable under the circumstances. The resulting accounting estimates will, by definition, seldom equal the related actual results.

The estimates and assumptions that have a significant risk of causing a material adjustment to the carrying amounts of assets and liabilities within the next financial year are discussed below.

5.1 Net Defined Benefit Liabilities

The present value of net defined benefit liability depends on a number of factors that are determined on an actuarial basis using a number of assumptions including the discount rate (Note 21).

5.2 Fair Value of Financial Instruments

The fair value of financial instruments that are not traded in an active market is determined by using valuation techniques. The Group uses its judgment to select a variety of methods and make assumptions that are mainly based on market conditions existing at the end of each reporting period (Note 4).

5.3 Income Taxes

The Group’s taxable income generated from these operations are subject to income taxes based on tax laws and interpretations of tax authorities in numerous jurisdictions. There are many transactions and calculations for which the ultimate tax determination is uncertain (Note 31).

If certain portion of the taxable income is not used for investments or increase in wages or dividends, the Group is liable to pay additional income tax calculated based on the tax laws for the specified periods. Accordingly, the measurement of current and deferred income tax is affected by the tax effects. As the Group's income tax is dependent on the investments, increase in wages and dividends, there is an uncertainty measuring the final tax effects.

5.4 Estimated Goodwill Impairment

The recoverable amount of a cash generating unit (CGU) is determined based on value-in-use calculations (Note 15).

5.5 Lease

In determining the lease term, management considers all facts and circumstances that create an economic incentive to exercise an extension option, or not exercise a termination option. Extension options (or periods after termination options) are only included in the lease term if the lease is reasonably certain to be extended (or not terminated).

Most extension options in offices and others have not been included in the lease liability, because the Group could replace the assets without significant cost or business disruption.

The lease term is reassessed if an option is actually exercised (or not exercised) or the Group becomes obliged to exercise (or not exercise) it. The assessment of reasonable certainty is only revised if a significant event or a significant change in circumstances occurs, which affects this assessment, and that is within the control of the lessee.

In addition, the Group initially estimates and recognizes amounts expected to be payable under residual value guarantees as part of the lease liability. Typically, the expected residual value at lease commencement is equal to or higher than the guaranteed amount, and so the Group does not expect to pay anything under the guarantees.

5.6 Measurement of Net Realizable Value of Inventories

Inventories are measured at the lower of cost and net realizable value. It is required to estimate the expected selling price and the expected selling expenses in the measurement of the net realizable value. In these estimation processes, the management's judgments take an important role.

6. Operating Segment Information

The reportable operating segments of the Group are oil refining business, lube oil business and petrochemical business.

Financial information by operating segments as of and for the years ended December 31, 2023 and 2022, is as follows:

(In millions of Korean won)	2023			
	Oil Refining Business	**Lube Oil Business**	**Petrochemical Business**	**Total**
Sales from external customers	₩ 28,257,054	₩ 3,084,877	₩ 4,384,763	₩ 35,726,694
Inter-segment sales	7,308,838	327,927	2,136,005	9,772,770
Total sales	₩ 35,565,892	₩ 3,412,804	₩ 6,520,768	₩ 45,499,464
Operating profit	₩ 353,485	₩ 810,463	₩ 190,634	₩ 1,354,582
Property, plant, equipment and intangible assets	8,025,069	164,241	3,078,305	11,267,615
Depreciation and amortization and others	454,713	11,077	191,098	656,888

(In millions of Korean won)	2022			
	Oil Refining Business	**Lube Oil Business**	**Petrochemical Business**	**Total**
Sales from external customers	₩ 34,004,929	₩ 3,415,563	₩ 5,025,536	₩ 42,446,028
Inter-segment sales	8,660,897	432,491	2,232,499	11,325,887
Total sales	₩ 42,665,826	₩ 3,848,054	₩ 7,258,035	₩ 53,771,915
Operating profit (loss)	₩ 2,344,309	₩ 1,110,689	₩ (49,832)	₩ 3,405,166
Property, plant, equipment and intangible assets	6,882,758	157,883	2,653,809	9,694,450
Depreciation and amortization and others	400,962	12,647	172,718	586,327

Sales by geographic region for the years ended December 31, 2023 and 2022, are as follows:

(In millions of Korean won)		2023		2022
Korea	₩	16,756,295	₩	19,075,141
Southeast Asia		5,623,368		7,326,491
China		1,950,411		2,762,638
America		2,687,703		2,531,523
Japan		2,355,015		3,186,945
Australia		2,789,910		3,566,443
Europe		897,869		852,002
Others		2,666,123		3,144,845
Total	₩	35,726,694	₩	42,446,028

Details of a customer, who contributes more than ten percent of the Group sales for the years ended December 31, 2023 and 2022, are as follows:

(In millions of Korean won)		2023		2022	Segments
Customer 1 [1]	₩	8,430,883	₩	8,669,447	Oil refining and petrochemical business

[1] Aramco Trading Singapore PTE. LTD., a related party of the Group.

7. Cash and Cash Equivalents

Cash and cash equivalents as of December 31, 2023 and 2022, consists of:

(In millions of Korean won)		2023		2022
Cash on hand	₩	77	₩	48
Checking accounts		2		8
Passbook accounts		10,576		7,546
Foreign currency deposits		816,537		232,969
Time deposits		240,000		635,000
Others		896,087		434,755
Total	₩	1,963,279	₩	1,310,326

Cash and cash equivalents presented in the consolidated statements of financial position and cash flows are identical as of December 31, 2023 and 2022.

8. Trade and Other Receivables

Trade and other receivables as of December 31, 2023 and 2022, are as follows:

(In millions of Korean won)	2023		2022	
	Current	**Non-current**	**Current**	**Non-current**
Trade receivables	₩ 2,311,955	₩ -	₩ 2,307,132	₩ -
Less : provision for impairment	(4,410)	-	(3,553)	-
Trade receivables, net	2,307,545	-	2,303,579	-
Other receivables				
Non-trade receivables	298,485	-	118,336	-
Accrued income	1,529	-	1,814	-
Loans	6,035	27,374	5,804	31,095
Lease receivables (Note 36)	15,127	39,686	10,404	27,418
Guaranty deposits	-	31,591	-	29,273
	321,176	98,651	136,358	87,786
Net book amount	₩ 2,628,721	₩ 98,651	₩ 2,439,937	₩ 87,786

Movements in the allowance for credit losses provision for trade receivables for the years ended December 31, 2023 and 2022, are as follows:

(In millions of Korean won)	**2023**	**2022**
Beginning balance	₩ 3,553	₩ 2,709
Impairment losses	1,050	844
Write-off	(194)	-
Effect of foreign currency rate changes	1	-
Ending balance	₩ 4,410	₩ 3,553

The aging analysis of trade and other receivables as of December 31, 2023 and 2022, is as follows:

(In millions of Korean won)	2023		2022	
	Trade receivables	**Other receivables**	**Trade receivables**	**Other receivables**
Receivables not past due	₩ 2,299,077	₩ 419,792	₩ 2,302,002	₩ 224,144
Receivables past due				
Up to one month	10,825	35	3,999	-
One to three months	1,204	-	631	-
Three to six months	270	-	17	-
Six to twelve months	90	-	81	-
Over one year	489	-	402	-
	₩ 2,311,955	₩ 419,827	₩ 2,307,132	₩ 224,144

As of December 31, 2023, trade and other receivables of ₩ 1,162,897 million (2022: ₩ 959,773 million) have collateral provided by customers. Among those trade receivables, ₩ 7,947 million (2022: ₩ 3,578 million) is past due but not impaired.

See Note 3.2 (2) b for the impairment of trade receivables, other financial assets at amortized cost and the Group’s exposure to credit risk.

As of December 31, 2023, the balance of trade receivables that have been transferred but are not past due amounts to USD 221 million (2022: USD 171 million). As of December 31, 2023, the Group transferred the trade receivables to the HSBC and one other financial institution and derecognized the transferred receivables as all the risks and rewards are substantially transferred (Note 22).

The Group holds the trade receivables with the objective to collect the contractual cash flows and, therefore, the Group's business model for managing trade receivables is to collect the contractual cash flows. When discount agreements have been made on certain types of trade receivables, judgment on the business model is assessed. If selling price is infrequently observed or individually or collectively not significant, it is probable that the judgment is consistent with the business model with the objective of collecting the contractual cash flows. Portfolio for certain types of trade receivables which are discounted are classified as business model for selling or for collection of contractual cash flows, while undiscounted portfolio is classified as business model with the objective of collection of contractual cash flows. Trade receivables that are held for selling or for collection of contractual cash flows are measured at fair value and gains or losses on valuation are recognized as other comprehensive income.

9. Other Financial Assets and Other Assets

9.1 Other financial assets fair value through profit or loss

Other financial assets fair value through profit or loss as of December 31, 2023 and 2022, are as follows:

(In millions of Korean won)		2023		2022
Non-current				
Fund and others	₩	40,113	₩	15,566

9.2 Other financial assets at fair value through other comprehensive income

Other financial assets at fair value through other comprehensive income as of December 31, 2023 and 2022, are as follows:

(1) Equity investments at fair value through other comprehensive income

(In millions of Korean won)		2023		2022
Non-current				
Non-listed equity securities	₩	59,266	₩	55,841

As of December 31, 2023 and 2022, the fair value of unlisted equities is determined using discounted cash flow analysis based on the risk adjusted yield.

Upon disposal of these equity investments, any balance within the accumulated other comprehensive income for these equity investments is reclassified to retained earnings and is not reclassified to profit or loss.

(2) Debt investments at fair value through other comprehensive income

Debt investments at fair value through other comprehensive income comprise the following investments in bonds having solely payments of principal and interest:

(In millions of Korean won)		2023		2022
Government bonds				
Current	₩	2	₩	11
Non-current		6		7
Total	₩	8	₩	18

Upon disposal of these debt investments, any balance within the accumulated other comprehensive income for these debt investments is reclassified to profit or loss.

9.3 Other financial assets at amortized cost

Other financial assets at amortized cost as of December 31, 2023 and 2022, are as follows:

(In millions of Korean won)	2023			2022		
	Current	Non-current	Total	Current	Non-current	Total
Short-term financial instruments (time deposits) [1]	₩ 11,000	₩ -	₩ 11,000	₩ 151,000	₩ -	₩ 151,000
Long-term deposit [1]	-	8	8	-	8	8
	₩ 11,000	₩ 8	₩ 11,008	₩ 151,000	₩ 8	₩ 151,008

[1] Short-term financial instruments include ₩ 4,627 million which are subject to restricted use in relation to contractual guarantee (Note 17). Long-term deposit of ₩ 8 million is subject to withdrawal restrictions.

Changes in financial assets at fair value through other comprehensive income for the years ended December 31, 2023 and 2022, are as follows:

(In millions of Korean won)	2023	2022
Beginning balance	₩ 55,859	₩ 54,517
Acquisition/Amortization	2	1,243
Disposal	(12)	(56)
Other comprehensive income	3,425	155
Ending balance	59,274	55,859
Less: non-current portion	59,272	55,848
Current portion	₩ 2	₩ 11

Other assets as of December 31, 2023 and 2022, are as follows:

(In millions of Korean won)	2023		2022	
	Current	Non-current	Current	Non-current
Advance payments	₩ 810	₩ -	₩ 566	₩ -
Prepaid expenses	18,681	12,508	13,031	-
Tax receivables	382,308	-	540,622	-
Greenhouse gas emission permits (Note 37)	-	-	985	-
Right-of-use assets (Note 36)	-	148,940	-	209,202
	₩ 401,799	₩ 161,448	₩ 555,204	₩ 209,202

10. Derivative Financial Instruments

Details of derivative financial instruments as of December 31, 2023 and 2022, are as follows:

(In millions of Korean won)	2023		2022	
	Assets	**Liabilities**	**Assets**	**Liabilities**
Trading purpose				
Forward foreign exchange	₩ 1,166	₩ -	₩ 14,300	₩ -
Commodity swap	2,619	2,149	2,043	312
	₩ 3,785	₩ 2,149	₩ 16,343	₩ 312

Derivatives financial instruments held for trading purposes are classified as current assets or liabilities.

11. Financial Instruments by Category

Carrying amounts of financial assets and liabilities by category as of December 31, 2023 and 2022, are as follows:

(In millions of Korean won)	2023				
	Financial assets at amortized cost	**Financial assets at fair value through other comprehensive income**	**Financial assets at fair value through profit or loss**	**Other financial assets[1]**	**Total**
Assets					
Cash and cash equivalents	₩ 1,963,279	₩ -	₩ -	₩ -	₩1,963,279
Trade receivables	2,307,545	-	-	-	2,307,545
Other receivables	365,014	-	-	54,813	419,827
Other financial assets	11,008	59,274	40,113	-	110,395
Derivative financial instruments	-	-	3,785	-	3,785
Total	₩ 4,646,846	₩ 59,274	₩ 43,898	₩ 54,813	₩4,804,831

[1] Other financial assets represent lease receivables, which are not subject to financial asset categorizations.

(In millions of Korean won)	2023			
	Financial liabilities at amortized cost	**Financial liabilities at fair value through profit or loss**	**Other financial liabilities[1]**	**Total**
Liabilities				
Trade payables	₩ 3,989,487	₩ -	₩ -	₩ 3,989,487
Other payables	1,317,050	-	216,940	1,533,990
Borrowings	5,618,996	-	-	5,618,996
Derivative financial instruments	-	2,149	-	2,149
Total	₩ 10,925,533	₩ 2,149	₩ 216,940	₩ 11,144,622

[1] Other financial liabilities represent lease liabilities, which are not subject to financial liability categorizations.

(In millions of Korean won)	2022				
	Financial assets at amortized cost	**Financial assets at fair value through other comprehensive income**	**Financial assets at fair value through profit or loss**	**Other financial assets[1]**	**Total**
Assets					
Cash and cash equivalents	₩ 1,310,326	₩ -	₩ -	₩ -	₩1,310,326
Trade receivables	2,303,579	-	-	-	2,303,579
Other receivables	186,322	-	-	37,822	224,144
Other financial assets	151,008	55,859	15,566	-	222,433
Derivative financial instruments	-	-	16,343	-	16,343
Total	₩ 3,951,235	₩ 55,859	₩ 31,909	₩ 37,822	₩4,076,825

[1] Other financial assets represent lease receivables, which are not subject to financial asset categorizations.

(In millions of Korean won)	2022			
	Financial liabilities at amortized cost	**Financial liabilities at fair value through profit or loss**	**Other financial liabilities[1]**	**Total**
Liabilities				
Trade payables	₩ 3,172,420	₩ -	₩ -	₩ 3,172,420
Other payables	827,649	-	263,656	1,091,305
Borrowings	4,955,647	-	-	4,955,647
Derivative financial instruments	-	312	-	312
Total	₩ 8,955,716	₩ 312	₩ 263,656	₩ 9,219,684

[1] Other financial liabilities represent lease liabilities, which are not subject to financial liability categorizations.

Net gains or losses on each category of financial instruments for the years ended December 31, 2023 and 2022, are as follows:

(In millions of Korean won)	**2023**	**2022**
Financial assets at amortized cost		
Interest income	₩ 54,793	₩ 30,199
Foreign currency gains	9,017	172,089
Provision for impairment	(1,050)	(844)
Assets and liabilities at fair value through profit or loss		
Derivative financial instruments gains (losses)	(62,767)	(49,482)
Gains on valuation	24,398	-
Financial assets at fair value through other comprehensive income		
Gains on valuation (other comprehensive income)	3,425	155
Interest income	2	1
Dividend income	3,311	2,108
Other financial assets		
Interest income	1,538	793
Financial liabilities at amortized cost		
Foreign currency losses	(67,483)	(505,287)
Interest expenses[1]	(230,127)	(144,644)
Other financial liabilities		
Interest expenses	(6,749)	(6,505)
Foreign currency losses	(1,206)	(5,634)

[1] Interest expenses exclude capitalized borrowing costs on qualifying assets.

12. Inventories

Inventories as of December 31, 2023 and 2022, are as follows:

(In millions of Korean won)	**2023**	**2022**
Merchandise	₩ 45,678	₩ 74,457
Valuation allowance for merchandise	(154)	(636)
Finished goods	1,106,615	936,655
Valuation allowance for finished goods	(41,129)	(87,343)
Work in progress	589,394	758,427
Valuation allowance for work in progress	(22,363)	(75,479)
Raw materials and materials-in-transit	2,920,189	3,106,972
Valuation allowance for raw materials and materials-in-transit	(15,618)	(31,151)
Supplies	56,562	51,258
Total	₩ 4,639,174	₩ 4,733,160

Inventories cost that was recognized as cost of sales for the year ended December 31, 2023 amounted to ₩ 30,310,289 million (2022: ₩ 35,232,628 million). The Group recognized reversal of losses on valuation of inventories for ₩ 115,345 million for the year ended December 31, 2023 (2022: losses of ₩ 149,701 million).

13. Investments in Joint venture and Associate

Details of joint venture and associate as of December 31, 2023 and 2022, are as follows:

(In millions of Korean won, except number of shares)

Investee	Location	Closing Month	Number of Shares	Percentage of Ownership (%)	Acquisition Cost	Book value 2023	Book value 2022
Joint venture[1]							
S-OIL TOTAL Energies Lubricants Co., Ltd.	Korea	December	3,500,001	50% plus one share	₩ 20,134	₩ 31,872	₩ 28,494
Associate[2]							
FCI Co., Ltd.	Korea	December	937,591	21.15%	11,450	9,063	7,508
					₩ 31,584	₩ 40,935	₩ 36,022

[1] Although the Group owns more than 50% of voting rights of S-OIL TOTAL Energies Lubricants Co., Ltd., as of December 31, 2023, it is excluded from the consolidation subsidiaries as the Group is unable to exercise controls by virtue of an agreement with other investors.

[2] The Company acquired additional shares issued by FCI Co., Ltd. for the year ended December 31, 2023.

Details of adjustments from financial information of joint venture and associate to the book value of investments in joint venture and associate for the years ended December 31, 2023 and 2022, are as follows:

(In millions of Korean won)

		2023				
		Net assets at the end of the year	Percentage of ownership (%)	Group's share	Unrealized gain or loss and others	Book value
Joint venture	S-OIL TOTAL Energies Lubricants Co., Ltd.	₩ 64,216	50% plus one share	₩ 32,108	₩ (236)	₩ 31,872
Associate	FCI Co., Ltd.	3,430	21.15%	725	8,338	9,063

(In millions of Korean won)

		2022				
		Net assets at the end of the year	Percentage of ownership (%)	Group's share	Unrealized gain or loss and others	Book value
Joint venture	S-OIL TOTAL Energies Lubricants Co., Ltd.	₩ 57,353	50% plus one share	₩ 28,677	₩ (183)	₩ 28,494
Associate	FCI Co., Ltd.	7,033	19.08%	1,342	6,166	7,508

The table below provides summarized financial information for joint venture and associate as of and for the years ended December 31, 2023 and 2022.

(In millions of Korean won)	S-OIL TOTAL Energies Lubricants Co., Ltd.		FCI Co., Ltd.	
	2023	**2022**	**2023**	**2022**
Current assets	₩ 100,395	₩ 128,282	₩ 3,637	₩ 4,082
Non-current assets	40,636	31,811	12,776	9,003
Total assets	₩ 141,031	₩ 160,093	₩ 16,413	₩ 13,085
Current liabilities	₩ 56,239	₩ 94,451	₩ 8,065	₩ 1,534
Non-current liabilities	20,576	8,289	4,918	4,518
Total liabilities	₩ 76,815	₩ 102,740	₩ 12,983	₩ 6,052
Total equity	₩ 64,216	₩ 57,353	₩ 3,430	₩ 7,033
Sales	₩ 348,858	₩ 359,569	₩ 954	₩ -
Operating profit (loss)	13,390	5,105	(7,973)	(9,242)
Profit (loss) before income tax	10,437	1,958	(8,320)	(8,864)
Profit (loss) for the year	8,072	1,227	(8,320)	(8,864)
Total comprehensive income (loss) for the year	8,061	1,227	(8,320)	(8,864)

Details of valuation of investments in joint venture and associate that are accounted for using the equity method for the years ended December 31, 2023 and 2022, are as follows:

(In millions of Korean won)	2023			2022		
	S-OIL TOTAL Energies Lubricants Co., Ltd.	**FCI Co., Ltd.**	**Total**	**S-OIL TOTAL Energies Lubricants Co., Ltd.**	**FCI Co., Ltd.**	**Total**
Beginning balance	₩ 28,494	₩ 7,508	₩ 36,002	₩ 29,690	₩ 8,133	₩ 37,823
Acquisition	-	3,250	3,250	-	-	-
Share of profit (loss)	4,087	(1,684)	2,403	551	(1,879)	(1,328)
Share of other comprehensive income	(5)	-	(5)	-	-	-
Unrealized gains (losses)	(54)	(11)	(65)	(97)	1,254	1,157
Dividend received	(650)	-	(650)	(1,650)	-	(1,650)
Ending balance	₩ 31,872	₩ 9,063	₩ 40,935	₩ 28,494	₩ 7,508	₩ 36,002

14. Property, Plant and Equipment

Changes in property, plant and equipment for the years ended December 31, 2023 and 2022, are as follows:

(In millions of Korean won)	2023								
	Land	**Buildings**	**Structures**	**Machinery and equipment**	**Vehicles**	**Others**	**Catalysts**	**Construction-in-progress**	**Total**
At January 1, 2023									
Acquisition cost	₩ 1,748,774	₩ 515,832	₩ 1,971,815	₩ 8,244,053	₩ 10,163	₩ 972,626	₩ 961,274	₩ 1,038,798	₩ 15,463,335
Accumulated depreciation	-	(135,475)	(824,331)	(3,643,876)	(9,328)	(513,737)	(741,956)	-	(5,868,703)
Accumulated impairment losses	-	-	-	(6,600)	-	-	-	-	(6,600)
Net book amount	₩ 1,748,774	₩ 380,357	₩ 1,147,484	₩ 4,593,577	₩ 835	₩ 458,889	₩ 219,318	₩ 1,038,798	₩ 9,588,032
Changes during 2023									
Beginning net book amount	₩ 1,748,774	₩ 380,357	₩ 1,147,484	₩ 4,593,577	₩ 835	₩ 458,889	₩ 219,318	₩ 1,038,798	₩ 9,588,032
Additions	-	54	124	6	523	99,368	183,249	1,955,983	2,239,307
Transfers	126,677	110,532	24,628	84,250	3	194,807	60,338	(615,479)	(14,244)
Disposals	(5,534)	(267)	(93)	-	-	(350)	(5,649)	-	(11,893)
Depreciation	-	(13,964)	(75,135)	(233,297)	(337)	(145,966)	(180,485)	-	(649,184)
Ending net book amount	₩ 1,869,917	₩ 476,712	₩ 1,097,008	₩ 4,444,536	₩ 1,024	₩ 606,748	₩ 276,771	₩ 2,379,302	₩ 11,152,018
At December 31, 2023									
Acquisition cost	₩ 1,869,917	₩ 625,933	₩ 1,996,053	₩ 8,320,575	₩ 9,439	₩ 1,244,818	₩ 1,199,212	₩ 2,379,302	₩ 17,645,249
Accumulated depreciation	-	(149,221)	(899,045)	(3,876,039)	(8,415)	(638,070)	(922,441)	-	(6,493,231)
Net book amount	₩ 1,869,917	₩ 476,712	₩ 1,097,008	₩ 4,444,536	₩ 1,024	₩ 606,748	₩ 276,771	₩ 2,379,302	₩ 11,152,018

(In millions of Korean won)	2022								
	Land	**Buildings**	**Structures**	**Machinery and equipment**	**Vehicles**	**Others**	**Catalysts**	**Construction-in-progress**	**Total**
At January 1, 2022									
Acquisition cost	₩ 1,760,455	₩ 517,631	₩ 1,967,025	₩ 8,256,057	₩ 11,264	₩ 806,572	₩ 776,048	₩ 794,513	₩ 14,889,565
Accumulated depreciation	-	(124,526)	(757,405)	(3,440,467)	(10,432)	(417,380)	(574,516)	-	(5,324,726)
Net book amount	₩ 1,760,455	₩ 393,105	₩ 1,209,620	₩ 4,815,590	₩ 832	₩ 389,192	₩ 201,532	₩ 794,513	₩ 9,564,839
Changes during 2022									
Beginning net book amount	₩ 1,760,455	₩ 393,105	₩ 1,209,620	₩ 4,815,590	₩ 832	₩ 389,192	₩ 201,532	₩ 794,513	₩ 9,564,839
Additions	-	84	39	10	387	84,020	165,625	372,889	623,054
Transfers	-	2,190	15,198	10,148	7	104,112	19,600	(128,604)	22,651
Disposals	(11,681)	(658)	(2,647)	(725)	-	(449)	-	-	(16,160)
Depreciation	-	(13,103)	(74,726)	(206,446)	(391)	(117,987)	(167,439)	-	(580,092)
Impairment loss	-	(1,261)	-	(25,000)	-	-	-	-	(26,261)
Effect of foreign currency rate changes	-	-	-	-	-	1	-	-	1
Ending net book amount	₩ 1,748,774	₩ 380,357	₩ 1,147,484	₩ 4,593,577	₩ 835	₩ 458,889	₩ 219,318	₩ 1,038,798	₩ 9,588,032
At December 31, 2022									
Acquisition cost	₩ 1,748,774	₩ 515,832	₩ 1,971,815	₩ 8,244,053	₩ 10,163	₩ 972,626	₩ 961,274	₩ 1,038,798	₩ 15,463,335
Accumulated depreciation	-	(135,475)	(824,331)	(3,643,876)	(9,328)	(513,737)	(741,956)	-	(5,868,703)
Accumulated impairment losses	-	-	-	(6,600)	-	-	-	-	(6,600)
Net book amount	₩ 1,748,774	₩ 380,357	₩ 1,147,484	₩ 4,593,577	₩ 835	₩ 458,889	₩ 219,318	₩ 1,038,798	₩ 9,588,032

Depreciation expense of ₩ 612,214 million (2022: ₩ 546,784 million) was charged to cost of sales, ₩ 31,409 million (2022: ₩ 29,157 million) to selling expenses and ₩ 5,561 million (2022: ₩ 4,151 million) to administrative expense.

As of December 31, 2023, a certain portion of property, plant and equipment is pledged as collateral for various borrowings and guarantees (Note 17).

During the year, the Group has capitalized borrowing costs amounting to ₩ 40,534 million (2022: ₩ 6,353 million) on property, plant and equipment that are qualifying assets. The capitalization rate of borrowings used to determine the amount of borrowing costs to be capitalized is 3.93% for specific borrowings and 3.54% (2022: 2.00%) for general borrowings.

As of December 31, 2023, construction-in-progress consists of purchases related to facilities installation and land.

15. Intangible Assets

Changes in intangible assets for the years ended December 31, 2023 and 2022, are as follows:

(In millions of Korean won)	2023					
	Facility usage Rights	**Others**	**Membership rights**	**Greenhouse gas emission permit (Note 36)**	**Goodwill**	**Total**
At January 1, 2023						
Acquisition cost	₩ 10,794	₩ 116,926	₩ 19,859	₩ 13,531	₩ 57,080	₩ 218,190
Accumulated amortization	(7,763)	(102,224)	(1,785)	-	-	(111,772)
Net book amount	₩ 3,031	₩ 14,702	₩ 18,074	₩ 13,531	₩ 57,080	₩ 106,418
Changes during 2023						
Beginning net book amount	₩ 3,031	₩ 14,702	₩ 18,074	₩ 13,531	₩ 57,080	₩ 106,418
Additions	-	197	1,596	687	-	2,480
Transfers	-	14,244	-	151	-	14,395
Amortization	(463)	(7,239)	-	-	-	(7,702)
Effect of foreign currency rate changes	-	6	-	-	-	6
Ending net book amount	₩ 2,568	₩ 21,910	₩ 19,670	₩ 14,369	₩ 57,080	₩ 115,597
At December 31, 2023						
Acquisition cost	₩ 10,794	₩ 131,381	₩ 21,455	₩ 14,369	₩ 57,080	₩ 235,079
Accumulated amortization[1]	(8,226)	(109,471)	(1,785)	-	-	(119,482)
Net book amount	₩ 2,568	₩ 21,910	₩ 19,670	₩ 14,369	₩ 57,080	₩ 115,597

[1] The amounts include accumulated impairment losses.

(In millions of Korean won)	2022											
		Facility usage Rights		**Others**		**Membership rights**		**Greenhouse gas emission permit (Note 36)**		**Goodwill**		**Total**
At January 1, 2022												
Acquisition cost	₩	10,794	₩	113,524	₩	19,279	₩	13,275	₩	57,080	₩	213,952
Accumulated amortization		(7,271)		(96,525)		(1,785)		-		-		(105,581)
Net book amount	₩	3,523	₩	16,999	₩	17,494	₩	13,275	₩	57,080	₩	108,371
Changes during 2022												
Beginning net book amount	₩	3,523	₩	16,999	₩	17,494	₩	13,275	₩	57,080	₩	108,371
Additions		-		280		580		-		-		860
Transfers		-		3,147		-		256		-		3,403
Amortization		(492)		(5,742)		-		-		-		(6,234)
Effect of foreign currency rate changes		-		18		-		-		-		18
Ending net book amount	₩	3,031	₩	14,702	₩	18,074	₩	13,531	₩	57,080	₩	106,418
At December 31, 2022												
Acquisition cost	₩	10,794	₩	116,926	₩	19,859	₩	13,531	₩	57,080	₩	218,190
Accumulated amortization[1]		(7,763)		(102,224)		(1,785)		-		-		(111,772)
Net book amount	₩	3,031	₩	14,702	₩	18,074	₩	13,531	₩	57,080	₩	106,418

[1] The amounts include accumulated impairment losses.

Amortization expense of ₩ 3,176 million (2022: ₩ 2,413 million) is included in cost of sales, ₩ 796 million (2022: ₩ 803 million) in selling expenses and ₩ 3,730 million (2022: ₩ 3,018 million) in administrative expense.

The Group recognized total research and development costs of ₩ 17,226 million (2022: ₩ 17,353 million) as expenses.

16. Investment Property

Details of investment property as of December 31, 2023 and 2022, are as follows:

(In millions of Korean won)		**2023**		**2022**
At January 1				
Cost	₩	136,065	₩	136,065
Accumulated depreciation		-		-
Book amount	₩	136,065	₩	136,065
Changes during the year	₩	-		-
At December 31				
Cost	₩	136,065	₩	136,065
Accumulated depreciation		-		-
Book amount	₩	136,065	₩	136,065

There was no rental income generated from the investment property and no direct operating expenses related to the investment property were incurred during the year ended December 31, 2023.

Fair value of investment property as of December 31, 2023, is ₩ 193,807 million (2022: ₩ 210,200 million). The fair value of investment property was measured by reflecting the appraisal value of land in 2020, valuated by an independent appraisal firm that holds a publicly certified professional qualification according to the Official Land Price Standards Act and subsequently reflecting the growth rate of official land value, which is classified as Level 3 in the fair value hierarchy.

17. Assets Pledged as Collateral

As of December 31, 2023, assets pledged as collateral are as follows:

(In millions of Korean won and millions of other foreign currencies)

Pledged Assets as Collateral	Creditors	Related Borrowings/ Guarantees	Secured Amount	Balance of Borrowings
Property, plant and equipment (land, Buildings, and others)	The Korea Development Bank	Short-term borrowings (Usance borrowings)	₩ 19,350 USD 144 FRF 155	USD 560
		Long-term borrowings (Facility fund)	JPY 11,781	₩ 200,000
Time deposits[1]	Korea Industrial Complex Corporation	Contractual Guarantee	₩ 4,627	-
Total			₩ 350,387	₩ 922,704

[1] Short-term financial instruments include ₩ 4,627 million which are subject to restricted use in relation to contractual guarantee.

18. Trade Payables, Other Payables and Other Liabilities

Trade payables and other payables as of December 31, 2023 and 2022, are as follows:

(In millions of Korean won)	2023		2022	
	Current	**Non-current**	**Current**	**Non-current**
Trade payables	₩ 3,989,487	₩ -	₩ 3,172,420	₩ -
Other payables				
Non-trade payables	1,238,088	-	763,997	-
Accrued expenses	35,809	-	21,438	-
Dividend payables	30	-	53	-
Lease liabilities (Note 36)	63,017	153,923	79,508	184,148
Leasehold deposit received	-	43,123	-	42,161
	1,336,944	197,046	864,996	226,309
Total	₩ 5,326,431	₩ 197,046	₩ 4,037,416	₩ 226,309

Other liabilities as of December 31, 2023 and 2022, are as follows:

(In millions of Korean won)	2023		2022	
	Current	**Non-current**	**Current**	**Non-current**
Advances from customers	₩ 140,720	₩ -	₩ 179,103	₩ -
Withholdings	6,459	-	12,962	-
Tax payables	804,105	-	781,262	-
Total	₩ 951,284	₩ -	₩ 973,327	₩ -

19. Borrowings

Details of borrowings as of December 31, 2023 and 2022, are as follows:

(In millions of Korean won)	2023	2022
Current		
Banker's usance	₩ 2,142,469	₩ 1,939,122
Current maturities of debentures	639,836	589,764
	2,782,305	2,528,886
Non-current		
Long-term borrowings	699,707	-
Debentures	2,136,984	2,426,761
	2,836,691	2,426,761
Total	₩ 5,618,996	₩ 4,955,647

Details of carrying amount of borrowings as of December 31, 2023 and 2022, are as follows:

(In millions of Korean won)	Creditor	Maturity date	Interest rates (%) Dec. 31, 2023	2023	2022
Short-term borrowings					
Banker's usance	The Korea Development Bank and others	Mar. 25, 2024 and others	5.75~6.07	₩ 2,142,469	₩ 1,939,122
				2,142,469	1,939,122
Long-term borrowings					
Industrial facility fund	Shinhan Bank and others	Aug. 18, 2031 and others	3.85~4.32	699,707	-
				699,707	-
Total				₩ 2,842,176	₩ 1,939,122

Details of carrying amount of debentures as of December 31, 2023 and 2022, are as follows:

(In millions of Korean won)	Issuance date	Maturity Date	Interest Rates (%) Dec. 31, 2023	2023	2022
Public bonds (46-3)	Jun. 26, 2014	Jun. 26, 2024	3.468	₩ 70,000	₩ 70,000
Public bonds (47-3)	Nov. 27, 2014	Nov. 27, 2024	2.990	130,000	130,000
Public bonds (48-3)	Oct. 29, 2015	Oct. 29, 2025	2.657	100,000	100,000
Public bonds (49-2)	Apr. 18, 2016	Apr. 18, 2023	-	-	60,000
Public bonds (49-3)	Apr. 18, 2016	Apr. 18, 2026	2.225	60,000	60,000
Public bonds (50-2)	Sep. 2, 2016	Sep. 2, 2023	-	-	80,000
Public bonds (50-3)	Sep. 2, 2016	Sep. 2, 2026	1.932	60,000	60,000
Public bonds (51-2)	Feb. 22, 2017	Feb. 22, 2024	2.438	110,000	110,000
Public bonds (51-3)	Feb. 22, 2017	Feb. 22, 2027	2.559	60,000	60,000
Public bonds (52-3)	Sep. 19, 2017	Sep. 19, 2024	2.531	60,000	60,000
Public bonds (53-2)	Jul. 3, 2018	Jul. 3, 2023	-	-	110,000
Public bonds (53-3)	Jul. 3, 2018	Jul. 3, 2025	2.708	80,000	80,000
Public bonds (54-1)	Jun. 7, 2019	Jun. 7, 2024	1.762	110,000	110,000
Public bonds (54-2)	Jun. 7, 2019	Jun. 7, 2026	1.769	100,000	100,000
Public bonds (54-3)	Jun. 7, 2019	Jun. 7, 2029	1.860	190,000	190,000
Public bonds (55-1)	Nov. 4, 2019	Nov. 4, 2024	1.904	160,000	160,000
Public bonds (55-2)	Nov. 4, 2019	Nov. 4, 2026	1.926	40,000	40,000
Public bonds (55-3)	Nov. 4, 2019	Nov. 4, 2029	2.102	60,000	60,000
Public bonds (56-1)	Mar. 10, 2020	Mar. 10, 2025	1.492	440,000	440,000
Public bonds (56-2)	Mar. 10, 2020	Mar. 10, 2027	1.549	70,000	70,000
Public bonds (56-3)	Mar. 10, 2020	Mar. 10, 2030	1.648	170,000	170,000
Public bonds (57-1)	Aug. 28, 2020	Aug. 28, 2023	-	-	340,000
Public bonds (57-2)	Aug. 28, 2020	Aug. 28, 2025	1.639	40,000	40,000
Public bonds (57-3)	Aug. 28, 2020	Aug. 28, 2030	1.817	40,000	40,000
Public bonds (58-1)	Feb. 17, 2022	Feb. 17, 2027	2.951	160,000	160,000
Public bonds (58-2)	Feb. 17, 2022	Feb. 17, 2029	2.970	60,000	60,000
Public bonds (58-3)	Feb. 17, 2022	Feb. 17, 2032	3.179	60,000	60,000
Public bonds (59-1)	Jun. 19, 2023	Jun. 19, 2028	4.346	200,000	-
Public bonds (59-2)	Jun. 19, 2023	Jun. 19, 2030	4.484	40,000	-
Public bonds (59-3)	Jun. 19, 2023	Jun. 19, 2033	4.763	110,000	-
Less: Present value discount				(3,180)	(3,475)
Sub total				2,776,820	3,016,525
Less: Current maturities				(639,836)	(589,764)
Total				₩ 2,136,984	₩ 2,426,761

As of December 31, 2023 and 2022, a certain portion of property, plant and equipment and others are pledged as collateral for various borrowings (Note 17).

20. Provisions and Contract Liabilities

Details and changes in provisions for other liabilities and charges for the years ended December 31, 2023 and 2022, are as follows:

(In millions of Korean won)	2023				2022		
	Environmental Restoration	Provision for Emission Obligation	Provision for litigation	Total	Environmental Restoration	Provision for Emission Obligation	Total
Beginning balance	₩ 2,875	₩ 1,943	₩ -	₩ 4,818	₩ 2,875	₩ 11,752	₩ 14,627
Additional provision	-	8,387	21,359	29,746	-	2,014	2,014
Used during year	-	(2,885)	-	(2,885)	-	(11,823)	(11,823)
Ending balance	₩ 2,875	₩ 7,445	₩ 21,359	₩ 31,679	₩ 2,875	₩ 1,943	₩ 4,818

Changes in contract liabilities for the years ended December 31, 2023 and 2022, are as follows:

(In millions of Korean won)	2023	2022
Beginning balance	₩ 16,676	₩ 18,431
Additions	5,524	5,136
Used during year	(6,835)	(6,891)
Ending balance	₩ 15,365	₩ 16,676

Contract liabilities arise from customer loyalty program and are adjusted from revenue.

21. Net Defined Benefit Assets/Liabilities

The majority of the plans are final salary pension plans, which provide benefit to employees in the form of a guaranteed level of pension payable for life. The level of benefits provided depends on employees' length of severance and their salary in the final years leading up to retirement. The majority of benefit payments are from trustee administered funds; however, there are also a number of unfunded plans. Plan assets held in trusts are governed by local regulations and practice in each country.

Details of net defined benefit liabilities (assets) recognized in the consolidated statements of financial position as of December 31, 2023 and 2022, are as follows:

(In millions of Korean won)		2023		2022
Present value of defined benefit obligations	₩	518,822	₩	464,076
Fair value of plan assets[1]		643,078		636,303
Net defined benefit assets	₩	124,256	₩	172,227

[1] The contributions to the National Pension Fund of ₩ 288 million are included in the fair value of plan assets as of December 31, 2023 (2022: ₩ 306 million).

Changes in the defined benefit obligations for the years ended December 31, 2023 and 2022, are as follows:

(In millions of Korean won)		2023		2022
Beginning balance	₩	464,076	₩	432,416
Current service cost		46,199		45,115
Past service cost		-		23,018
Interest expense		25,875		14,219
Remeasurements:				
Actuarial losses (gains) arising from change in financial assumptions		30,676		(54,738)
Actuarial gains arising from change in demographic assumptions		(873)		-
Actuarial losses (gains) from experience adjustments		(4,123)		36,551
Benefits payments		(43,019)		(32,517)
Foreign currency rate changes		11		12
Ending Balance	₩	518,822	₩	464,076

Changes in the fair value of plan assets for the years ended December 31, 2023 and 2022, are as follows:

(In millions of Korean won)		2023		2022
Beginning balance	₩	636,303	₩	475,821
Interest income		35,070		14,932
Remeasurements:				
Return on plan assets		(7,042)		(7,155)
Contributions		21,000		185,000
Benefits payments		(42,253)		(32,295)
Ending balance	₩	643,078	₩	636,303

Plan assets as of December 31, 2023 and 2022, consist of financial assets including deposits.

The significant actuarial assumptions as of December 31, 2023 and 2022, are as follows:

	2023	2022
Discount rate	5.04%	5.80%
Salary growth rate	5.97%	6.03%

The sensitivity of the defined benefit obligation to changes in the principal assumptions is:

	Changes in assumption	Impact on defined benefit obligations	
		2023	2022
Salary growth rate	One percent increase	9.51% increase	8.29% increase
	One percent decrease	8.28% decrease	7.27% decrease
Discount rate	One percent increase	8.28% decrease	7.08% decrease
	One percent decrease	9.71% increase	8.20% increase

The above sensitivity analyses are based on a change in an assumption while holding all other assumptions constant. The sensitivity of the defined benefit obligation to changes in principal actuarial assumptions is calculated using the projected unit credit method, the same method applied when calculating the defined benefit obligations recognized on the consolidated statement of financial position. The methods and types of assumptions used in preparing the sensitivity analysis did not change compared to the prior period.

The Group reviews the funding level on an annual basis and has a policy of eliminating deficit from the fund.

The weighted average duration of the defined benefit obligation is 8.99 years and expected contributions to post-employment benefit plans for the year ending December 31, 2024 are ₩ 75,328 million.

The expense and others recognized in the current period in relation to defined contribution plan was ₩ 12,950 million (2022: ₩ 13,970 million).

22. Contingencies and Commitments

As of December 31, 2023, the Group has overdraft agreements of up to ₩ 23,000 million and USD 582 million with Shinhan Bank and three other banks.

As of December 31, 2023, the Group has banker’s usance agreements and imported credit agreements of up to a maximum of USD 4,480 million with the Korea Development Bank and 14 other banks.

As of December 31, 2023, Shinhan Bank has provided guarantees up to ₩ 30,000 million for the Group’s obligation for repayment of remaining bonus points.

As of December 31, 2023, KEB Hana Bank has provided guarantees up to ₩ 3,063 million for the restoration responsibilities of Onsan National Industrial Complex.

As of December 31, 2023, the Group offered two blank checks to Korea National Oil Corporation as payment guarantee.

As of December 31, 2023, the balance of trade receivables that have been transferred but are not past due amounts to USD 221 million (2022: USD 171 million). As of December 31, 2023, the Group transferred the trade receivables to the HSBC and one other financial institution and derecognized the transferred receivables as all the risks and rewards are substantially transferred (Note 8).

As of December 31, 2023, the Group has Stand-by credit line agreements with the Korea Development Bank and one other financial institution up to ₩ 350,000 million and has imported credit agreements up to USD 50 million with Shinhan Bank and two other financial institutions.

As of December 31, 2023, the Company has agreements with Shinhan Bank and one other financial institution in relation to industrial facility fund of up to ₩ 1,000,000 million.

As of December 31, 2023, the Group has been provided with performance guarantee and others amounting to ₩ 15,120 million by Seoul Guarantee Insurance.

As of December 31, 2023, the Company has recognized provisions for litigation for which reasonable the result can be reasonably expected (Note 20). The outstanding amount related to pending litigation in which the Company is either a sole or joint defendant is ₩ 30,651 million.

As of December 31, 2023, the amount of commitment in relation to the Group’s purchase of property, plant and equipment is ₩ 6,286,035 million.

23. Share Capital and Share Premium

Share capital and share premium as of December 31, 2023 and 2022, are as follows:

(In millions of Korean won, except number of shares)	**Number of issued ordinary shares**	**Number of issued preferred shares**	**Share capital (Ordinary share)**	**Share capital (Preferred share)**	**Share premium**	**Total**
December 31, 2022	112,582,792	4,021,927	₩ 281,457	₩ 10,055	₩ 379,190	₩ 670,702
December 31, 2023	112,582,792	4,021,927	₩ 281,457	₩ 10,055	₩ 379,190	₩ 670,702

Under its Articles of Incorporation, the Company is authorized to issue 60 million cumulative, participating preferred shares that are non-voting and entitled to a minimum cash dividend at 9% of par value. As all of the preferred share as of December 31, 2023, was issued before March 27, 1998, it receives 1% more dividends over ordinary share under the Articles of Incorporation.

The Company is authorized to issue non-voting convertible share up to 4 million shares. Each share of this non-voting convertible share was converted to one ordinary share. As of December 31, 2023, there is no outstanding convertible share issued by the Company.

The Company may grant options to purchase the Company's ordinary share to key employees or directors. The grant limit of the options is 15% of outstanding shares and the options may be granted with the special resolution of the shareholders. As of December 31, 2023, no option has been granted.

The Company is authorized to issue 180,000,000 ordinary shares with a par value of ₩ 2,500 per share and 112,582,792 ordinary shares are issued. The Company is authorized to issue 60,000,000 preferred shares with par value of ₩ 2,500 per share and 4,021,927 preferred shares are issued.

24. Treasury Share

As of December 31, 2023, the Company holds 184,080 treasury share of preferred shares amounting to ₩ 1,876 million and is deducted from shareholders' equity. The Company intends to dispose of the treasury share depending on the market conditions.

25. Retained Earnings

Retained earnings as of December 31, 2023 and 2022, consist of:

(In millions of Korean won)		2023		2022
Legal reserve				
Earned surplus reserve[1]	₩	145,756	₩	145,756
Discretionary reserve				
Reserve for improvement of financial structure		55,700		55,700
Reserve for business rationalization		103,145		103,145
Reserve for market development		5,174,498		3,703,698
		5,333,343		3,862,543
Revaluation reserve		984,648		984,648
Retained earnings before appropriation		915,852		1,835,573
	₩	7,379,599	₩	6,828,520

[1] The Commercial Code of the Republic of Korea requires the Company to appropriate, as a legal reserve, an amount equal to a minimum of 10% of annual cash dividends paid, until such reserve equals 50% of its issued share capital. As the Company's reserve exceeds 50% of its issued share capital, additional reserve is unnecessary. The reserve is not available for cash dividends payment, but may be transferred to share capital or used to reduce accumulated deficit.

Year-end cash dividends for 2022 amounting to ₩ 11,609 million for preferred share and ₩ 337,748 million for ordinary share were paid out in April 2023 (Dividends paid in 2022: ₩ 10,841 million for preferred share and ₩ 315,232 million for ordinary share).

In accordance with the Articles of Incorporation, on July 27, 2023, the Board of Directors declared interim cash dividends of ₩ 200 per share with dividend date on June 30, 2023.

(In millions of Korean won, except number of shares)	Number of shares		Share capital amount	Dividend rate		Cash dividends
Ordinary shares	112,582,792	₩	281,457	8%	₩	22,517
Preferred shares[1]	3,837,847		9,595	8%		767
	116,420,639	₩	291,052		₩	23,284

[1] The number of treasury share are excluded from the number of shares issued.

A dividend in respect of the year ended December 31, 2023 of ₩ 1,525 per preferred share and ₩ 1,500 per ordinary share, amounting to total dividend of ₩ 174,727 million, is to be proposed to shareholders at the annual general meeting on March 28, 2024. These separate financial statements do not reflect this dividend payable.

26. Reserves

Changes in reserves for the years ended December 31, 2023 and 2022, are as follows:

(In millions of Korean won)	2022				
	Gains on disposal of treasury share	**Gains (losses) on valuation of financial assets at fair value through other comprehensive income**	**Share of other comprehensive income (loss) of joint venture**	**Unrealized translation gains (losses) on foreign operation**	**Total**
Balance at January 1, 2022	₩ 952,311	₩ 24,938	₩ (65)	₩ 8,290	₩ 985,474
Gains on valuation of financial assets at fair value through other comprehensive income	-	385	-	-	385
Foreign currency translation adjustments	-	-	-	264	264
Balance at December 31, 2022	₩ 952,311	₩ 25,323	₩ (65)	₩ 8,554	₩ 986,123
	2023				
Balance at January 1, 2023	₩ 952,311	₩ 25,323	₩ (65)	₩ 8,554	₩ 986,123
Gains on valuation of financial assets at fair value through other comprehensive income	-	2,842	-	-	2,842
Share of other comprehensive income of associate and joint venture	-	-	(4)	-	(4)
Foreign currency translation adjustments	-	-	-	179	179
Balance at December 31, 2023	₩ 952,311	₩ 28,165	₩ (69)	₩ 8,733	₩ 989,140

27. Cost of Sales

Cost of sales for the years ended December 31, 2023 and 2022, consists of:

(In millions of Korean won)		2023		2022
Beginning balance of merchandise and finished goods	₩	923,133	₩	840,852
Purchases of merchandise		3,038,863		3,048,297
Manufacturing cost for the year		33,468,977		38,240,985
Transfer from other accounts		112,650		4,469
Transfer to other accounts		(1,973,995)		(2,062,445)
Ending balance of merchandise and finished goods		(1,111,010)		(923,133)
Adjustments		(837,670)		(857,585)
Total	₩	33,620,949	₩	38,291,440

28. Selling and Administrative Expenses

Selling and administrative expenses for the years ended December 31, 2023 and 2022, are as follows:

(In millions of Korean won)	Selling expenses				Administrative expenses			
		2023		2022		2023		2022
Salaries	₩	70,351	₩	73,699	₩	38,095	₩	42,951
Post-employment benefits		8,842		11,969		4,641		6,209
Employee benefits		51,232		61,369		27,571		28,683
Communication expenses		4,286		3,106		1,307		1,276
Service expenses for oil storages		20,857		18,745		-		-
Service fees		11,773		13,139		898		949
Export expenses		150,583		150,166		-		-
IT operating expenses		2,717		2,347		8,101		7,073
General service expenses		6,727		6,962		3,557		2,846
Promotional and advertising expenses		23,116		20,333		7,455		6,799
Freight expenses		191,073		177,299		-		-
Taxes and dues		5,356		5,272		7,771		9,741
Depreciation expenses		31,409		29,157		5,561		4,151
Amortization expenses		796		803		3,730		3,018
Depreciation of right-of-use assets		12,168		10,240		3,104		3,104
Provision for impairment losses on receivables		1,050		844		-		-
Others		27,773		27,529		19,263		19,643
Total	₩	620,109	₩	612,979	₩	131,054	₩	136,443

29. Other Income and Expenses

Other income and expenses for the years ended December 31, 2023 and 2022, are as follows:

Other income

(In millions of Korean won)		**2023**		**2022**
Gains on disposal of property, plant and equipment	₩	17,440	₩	9,942
Dividend income		3,311		2,108
Gains on foreign currency transactions		540,324		812,079
Gains on foreign currency translation		68,121		141,786
Gains on derivative transactions		63,164		127,051
Gains on valuation of derivatives		3,785		16,343
Gains on valuation of securities		24,398		-
Miscellaneous income		82,281		38,283
Total	₩	802,824	₩	1,147,592

Other expenses

(In millions of Korean won)		**2023**		**2022**
Losses on disposal of property, plant and equipment	₩	5,802	₩	406
Losses on reduction of property, plant and equipment		-		26,261
Donations		9,556		7,053
Losses on foreign currency transactions		627,160		1,016,985
Losses on foreign currency translation		20,270		71,728
Losses on derivative transactions		127,567		192,564
Losses on valuation of derivatives		2,149		312
Miscellaneous loss		34,305		14,596
Total	₩	826,809	₩	1,329,905

30. Finance Income and Costs

Finance income and costs for the years ended December 31, 2023 and 2022, consist of:

Finance income

(In millions of Korean won)		2023		2022
Interest income	₩	56,333	₩	30,993
Gains on foreign currency transactions		196,604		253,396
Gains on foreign currency translation		46,125		148,098
Total	₩	299,062	₩	432,487

Finance costs

(In millions of Korean won)		2023		2022
Interest expenses[1]	₩	236,876	₩	151,149
Losses on foreign currency transactions		259,572		605,228
Losses on foreign currency translation		3,844		250
Total	₩	500,292	₩	756,627

[1] Interest expenses exclude capitalized borrowing costs on qualifying assets (Note 14).

31. Tax Expense and Deferred Tax

Income tax expense for the years ended December 31, 2023 and 2022, consists of:

(In millions Korean won)		2023		2022
Current tax				
Current tax on profit for the year	₩	181,726	₩	749,936
Adjustments due to changes in estimates related to prior years		7,319		(7,108)
Total current tax		189,045		742,828
Deferred tax				
Changes in deferred tax due to temporary differences		(6,188)		51,327
Income tax expense	₩	182,857	₩	794,155

Reconciliation between actual income tax expense and amount computed by applying the statutory tax rates to profit before income tax for the years ended December 31, 2023 and 2022 are follows:

(In millions of Korean won)		**2023**		**2022**
Profit before income tax	₩	1,131,705	₩	2,898,542
Tax at statutory tax rates applicable to profits in the respective countries	₩	288,050	₩	786,603
Non-taxable income		(403)		(797)
Non-deductible expenses		3,053		5,939
Adjustments in respect of prior years		1,365		(7,108)
Tax credit		(95,924)		(284)
Others		(13,284)		9,802
Income tax expense	₩	182,857	₩	794,155

The effective tax rate of the Group for the year ended December 31, 2023 is 16.16% (2022: 27.40%).

The tax effect relating to components of other comprehensive income (expenses) for the years ended December 31, 2023 and 2022, is as follows:

(In millions Korean won)	2023					
	Before Tax		**Tax effect**		**After tax**	
Gains on valuation of financial assets at fair value through other comprehensive income	₩	3,425	₩	(583)	₩	2,842
Remeasurements of net defined benefit liabilities		(32,723)		7,595		(25,128)
Share of other comprehensive income of associate and joint venture		(6)		2		(4)
Foreign currency translation adjustments		244		(65)		179
Total	₩	(29,060)	₩	6,949	₩	(22,111)

(In millions Korean won)	2022					
	Before Tax		**Tax effect**		**After tax**	
Gains on valuation of financial assets at fair value through other comprehensive income	₩	155	₩	230	₩	385
Remeasurements of net defined benefit liabilities		11,032		(3,516)		7,516
Foreign currency translation adjustments		359		(95)		264
Total	₩	11,546	₩	(3,381)	₩	8 165

The analysis of deferred tax assets and liabilities as of December 31, 2023 and 2022, is as follows:

(In millions of Korean won)		**2023**		**2022**
Deferred tax assets				
Deferred tax asset to be recovered after more than 12 months	₩	54,679	₩	39,978
Deferred tax asset to be recovered within 12 months		69,956		41,304
		124,635		81,282
Deferred tax liabilities				
Deferred tax liability to be recovered after more than 12 months		(330,501)		(306,223)
Deferred tax liability to be recovered within 12 months		(44,435)		(38,497)
		(374,936)		(344,720)
Deferred tax liabilities, net	₩	(250,301)	₩	(263,438)

Changes in deferred tax for the years ended December 31, 2023 and 2022, are as follows:

(In millions of Korean won)		**2023**		**2022**
Beginning balance	₩	(263,438)	₩	(208,730)
Deferred income tax charged to income		6,188		(51,327)
Deferred income tax charged to equity		6,949		(3,381)
Ending balance	₩	(250,301)	₩	(263,438)

Changes in deferred tax assets and liabilities for the years ended December 31, 2023 and 2022, are as follows:

(In millions of Korean won)	**2023**							
		Beginning Balance		**Statement of profit or loss**		**Other comprehensive income**		**Ending Balance**
Salaries and wages payable	₩	41,303	₩	(15,102)	₩	-	₩	26,201
Provisions and contract liabilities		5,818		6,495		-		12,313
Employee benefits		12,357		467		-		12,824
Subsidiary and joint ventures		(3,180)		(382)		(63)		(3,625)
Losses on valuation of derivative instruments		(449)		342		-		(107)
Accrued revenue		(468)		131		-		(337)
Customs duties receivable		(36,144)		(7,848)		-		(43,992)
Net defined benefit liabilities		(42,386)		7,334		7,595		(27,457)
Gains (losses) on valuation of financial assets		(8,805)		(6,099)		(583)		(15,487)
Revaluation of lands		(185,211)		6,476		-		(178,735)
Depreciation and others		(46,273)		(34,351)		-		(80,624)
Tax loss carryforwards and tax credits		-		48,725		-		48,725
Total	₩	(263,438)	₩	6,188	₩	6,949	₩	(250,301)

(In millions of Korean won)	2022			
	Beginning Balance	Statement of profit or loss	Other comprehensive income	Ending Balance
Salaries and wages payable	₩ 44,094	₩ (2,791)	₩ -	₩ 41,303
Provisions and contract liabilities	8,996	(3,178)	-	5,818
Employee benefits	8,432	3,925	-	12,357
Subsidiary and joint ventures	(3,631)	546	(95)	(3,180)
Losses on valuation of derivative instruments	520	(969)	-	(449)
Accrued revenue	(149)	(319)	-	(468)
Customs duties receivable	(31,938)	(4,206)	-	(36,144)
Net defined benefit liabilities	4,859	(43,729)	(3,516)	(42,386)
Gains (losses) on valuation of financial assets	(9,035)	-	230	(8,805)
Revaluation of lands	(191,432)	6,221	-	(185,211)
Depreciation and others	(42,008)	(4,265)	-	(46,273)
Tax loss carryforwards and tax credits	2,562	(2,562)	-	-
Total	₩ (208,730)	₩ (51,327)	₩ (3,381)	₩ (263,438)

The Group is in the process of assessing its exposure to the Pillar Two legislation when it comes into effect. As of December 31, 2023, all entites within the Group have an effective tax rate that exceeds 15%.

Under the Pillar Two legislation, the Group is liable to pay a top-up tax for the difference between their effective tax rate per jurisdiction and 15% minimum rate.

32. Breakdown of Expenses by Nature

Expenses by nature for the years ended December 31, 2023 and 2022, are as follows:

(In millions of Korean won)	2023	2022
Raw materials and supplies used	₩ 30,382,249	₩ 35,504,426
Changes in inventories of finished goods, work in-progress and merchandise	(71,960)	(271,798)
Employee benefit expense	453,237	451,738
Utility expenses	1,859,453	1,709,813
Depreciation and amortization	656,888	586,326
Depreciation of right-of-use assets	62,280	63,526
Freight expenses	294,526	293,653
Advertising costs	15,265	13,181
Other expenses	720,174	689,997
Total cost of sales, selling and administrative expenses	₩ 34,372,112	₩ 39,040,862

33. Earnings per Share

Basic earnings per ordinary share is calculated by dividing the profit attributable to ordinary shareholders of the Group by the weighted average number of ordinary shares during the financial year. As the Group's preferred shares are participating shares with right to participate in distribution of earnings, earnings per share on preferred share is also calculated.

Basic earnings per ordinary share for the years ended December 31, 2023 and 2022, is calculated as follows:

(In millions of Korean won, except per share data)		**2023**		**2022**
Profit for the year	₩	948,848	₩	2,104,387
Adjustments:				
Dividends for preferred share		(96)		(96)
Additional dividends for preferred share		(31,275)		(69,368)
Profit attributable to ordinary share shareholders		917,477		2,034,923
Weighted average number of shares of ordinary share		112,582,792		112,582,792
Basic earnings per ordinary share	₩	8,149	₩	18,075

Basic earnings per preferred share for the years ended December 31, 2023 and 2022, is calculated as follows:

(In millions of Korean won, except per share data)		**2023**		**2022**
Profit attributable to preferred share shareholders	₩	31,371	₩	69,465
Weighted average number of shares of preferred share[1]		3,837,847		3,837,847
Basic earnings per preferred share	₩	8,174	₩	18,100

[1] The 184,080 treasury shares are excluded in calculating weighted average number of shares of preferred share.

As there are no dilutive items outstanding, diluted earnings per share is identical to basic earnings per share.

34. Related Party Transactions

Details of related parties as of December 31, 2023 and 2022, are as follows:

	2023	**2022**
Ultimate parent company	Saudi Arabian Oil Company[1]	Saudi Arabian Oil Company[1]
Parent company	Aramco Overseas Co., B.V.	Aramco Overseas Co., B.V.
Joint venture	S-OIL TOTAL Energies Lubricants Co., Ltd.	S-OIL TOTAL Energies Lubricants Co., Ltd.
Associate	FCI Co., Ltd.	FCI Co., Ltd.
Other related parties who have transactions with the Company	Aramco Trading Company[2]	Aramco Trading Company[2]
	Aramco Trading Singapore PTE. LTD.[2]	Aramco Trading Singapore PTE. LTD.[2]
	Aramco Asia Singapore PTE Limited[2]	Aramco Asia Singapore PTE Limited[2]
	Saudi Aramco Base Oil Company – Luberef Saudi Arabia[2]	Saudi Aramco Base Oil Company – Luberef Saudi Arabia[2]
	Saudi Basic Industries Corporation[2]	Saudi Basic Industries Corporation[2]
	Aramco Trading Fujairah FZE[2]	Aramco Trading Fujairah FZE[2]
	Motiva Enterprises LLC[2]	Motiva Enterprises LLC[2]
	-	Motiva Trading LLC[2]
	Aramco Chemicals Company[2]	-
	Valvoline Cummins Private Limited[2,4]	-
	Ellis Enterprises B.V[2,4]	-
	Valvoline (Zhangjiagang) Lubricants[2,4]	-
	Valvoline (Thailand) Ltd.[2,4]	-
	Valvoline Cummins Pvt. Ltd.[2,4]	-
	The National Shipping Company of Saudi Arabia[3]	The National Shipping Company of Saudi Arabia[3]
	HD Hyundai Oilbank Co., Ltd.[3]	Hyundai Oilbank Co., Ltd.[3]
	HD Hyundai Oil Singapore Pte Ltd[3]	-

[1] The ultimate parent of Aramco Overseas Co., B.V.

[2] Subsidiaries of Saudi Arabian Oil Company.

[3] Associates of Saudi Arabian Oil Company.

[4] Valvoline Cummins Private Limited, Ellis Enterprises B.V, Valvoline (Zhangjiagang) Lubricants, Valvoline (Thailand) Ltd. and Valvoline Cummins Pvt. Ltd. are included in the Group's related parties, since these entities have been newly included in the scope of subsidiaries of Saudi Arabian Oil Company, the ultimate parent of the Group during the current year.

Significant transactions with related parties for the years ended December 31, 2023 and 2022, and the related receivables and payables as of December 31, 2023 and 2022, are as follows:

(In millions of Korean won)	Sales and others		Purchases and others	
	2023	2022	2023	2022
Ultimate parent company				
Saudi Arabian Oil Company[1]	₩ -	₩ -	₩ 20,735,053	₩ 25,860,588
Parent company				
Aramco Overseas Co., B.V.	-	-	137	58
Joint venture				
S-OIL TOTAL Energies Lubricants Co., Ltd.	120,447	147,122	72,613	46,735
Associate				
FCI Co., Ltd.	-	-	300	-
Other related parties				
Aramco Trading Company	-	-	390	675,333
Aramco Trading Singapore PTE. LTD.	8,434,467	8,669,469	5,502,145	5,847,512
HD Hyundai Oilbank Co., Ltd. (formerly, Hyundai Oilbank Co., Ltd.)[2]	698,393	679,024	701,995	781,702
Others	642,774	764,768	938,293	1,280,499
Total	₩ 9,896,081	₩ 10,260,383	₩ 27,950,926	₩ 34,492,427

(In millions of Korean won)	Receivables and others		Payables and others	
	2023	2022	2023	2022
Ultimate parent company				
Saudi Arabian Oil Company[1]	₩ -	₩ -	₩ 3,016,239	₩ 2,836,673
Parent company				
Aramco Overseas Co., B.V.	-	-	24	-
Joint venture				
S-OIL TOTAL Energies Lubricants Co., Ltd.	3,298	13,485	20,084	3,803
Associate				
FCI Co., Ltd.	-	-	-	-
Other related parties				
Aramco Trading Company	-	-	-	-
Aramco Trading Singapore PTE. LTD.	438,223	360,028	531,609	173,434
HD Hyundai Oilbank Co., Ltd. (formerly, Hyundai Oilbank Co., Ltd.)[2]	10,477	4,968	29,570	12,099
Others	27,636	48,997	74,415	47,895
Total	₩ 479,634	₩ 427,478	₩ 3,671,941	₩ 3,073,904

[1] The Group is under a long-term purchasing agreement with Saudi Arabian Oil Company in relation with crude oil purchase as of December 31, 2023.

[2] This is the inventory exchange transaction and others with HD Hyundai Oilbank Co., Ltd. (formerly, Hyundai Oilbank Co., Ltd.).

Financial transactions with related parties for the years ended December 31, 2023 and 2022, are as follows:

(In millions of Korean won)	Investment in cash		Dividends received		Dividends paid	
	2023	2022	2023	2022	2023	2022
Parent company						
Aramco Overseas Co., B.V.	₩ -	₩ -	₩ -	₩ -	₩ 229,574	₩380,226
Joint venture						
S-OIL TOTAL Energies Lubricants Co., Ltd.	-	-	650	1,650	-	-
Associate						
FCI Co., Ltd.[1]	3,250	-	-	-	-	-
Total	₩ 3,250	₩ -	₩ 650	₩ 1,650	₩ 229,574	₩380,226

[1] The Group acquired additional shares issued by FCI Co., Ltd. for the year ended December 31, 2023.

The compensation to key management for employee services for the years ended December 31, 2023 and 2022, consists of:

(In millions of Korean won)	2023	2022
Short-term employee benefits	₩ 1,845	₩ 1,811
Post-employment benefits	210	200
Total	₩ 2,055	₩ 2,011

Key management consists of registered executive officers who have the authority and responsibility in the planning, directing and control over the Group's operations.

35. Cash Generated From Operations

Cash generated from operations for the years ended December 31, 2023 and 2022, is as follows:

(In millions of Korean won)	2023	2022
Profit for the year	₩ 948,848	₩ 2,104,387
Adjustments:		
Income tax expense	182,857	794,155
Depreciation expense of property, plant and equipment	649,184	580,092
Amortization expense	7,702	6,234
Depreciation of right-of-use assets	62,280	63,526
Post-employment benefits	37,004	67,420
Provision for impairment losses on receivables	1,050	844
Interest expense	236,876	151,149
Losses on foreign currency transactions	124,617	383,484
Losses on foreign currency translation	24,114	71,978
Losses on derivative transactions	127,567	192,564
Losses on valuation of derivatives	2,149	312
Losses on disposal of property, plant and equipment	5,802	406
Impairment loss on property, plant and equipment	-	26,261
(Reversal of) Losses on valuation of inventories	(115,345)	149,701
Share of net loss (profit) of joint venture and associates	(2,338)	171
Interest income	(56,333)	(30,993)

(In millions of Korean won)	2023	2022
Gains on foreign currency transactions	(69,017)	(17,454)
Gains on foreign currency translation	(114,246)	(289,884)
Gains on disposal of property, plant and equipment	(17,440)	(9,942)
Gains on derivative transactions	(63,164)	(127,051)
Gains on valuation of derivatives	(3,785)	(16,343)
Gains on valuation of securities	(24,398)	-
Dividend income	(3,311)	(2,108)
Others	3,377	5,353
Changes in net working capital:		
Trade receivables	(27,295)	(386,249)
Other receivables	(60,036)	(9,528)
Other assets	139,914	212,260
Inventories	209,331	(1,337,521)
Trade payables	881,568	221,313
Other payables	344,992	255,558
Other liabilities	(22,043)	(903,153)
Net defined benefit liabilities	(21,767)	(185,222)
Provisions for other liabilities and charges	29,746	2,013
Contract liabilities	(1,311)	(1,755)
Cash generated from operations	₩ 3,417,149	₩ 1,971,978

Significant transactions not affecting cash flows for the years ended December 31, 2023 and 2022, are as follows:

(In millions of Korean won)	2023	2022
Reclassification of construction in-progress to property, plant and equipment and intangible assets	₩ 615,479	₩ 128,604
Current portion of long-term borrowings and debentures	639,716	589,660
Other payables related to acquisition of property, plant and equipment	13,147	17,944
Other receivables related to disposal of property, plant and equipment	(3,183)	-

Changes in liabilities arising from financing activities for the years ended December 31, 2023 and 2022, are as follows:

(In millions of Korean won)

2023	Beginning balance	Cash flows from financing activities	Changes in non-cash transaction: Current portion	Interest expense	Increase in lease liabilities	Changes in foreign exchange rates	Reclassification from retained earnings	Ending balance
Short-term borrowings and banker's usance	₩ 1,939,122	₩ 190,367	₩ -	₩ -	₩ -	₩ 12,980	₩ -	₩ 2,142,469
Long-term borrowings	-	699,690	-	17	-	-	-	699,707
Current maturities of debentures	589,764	(590,000)	639,716	356	-	-	-	639,836
Debentures	2,426,761	349,021	(639,716)	918	-	-	-	2,136,984
Dividend payables	53	(372,665)	-	-	-	-	372,642	30
Current other payables (lease liabilities)	79,508	(83,229)	66,738	-	-	-	-	63,017
Other payables (lease liabilities)	184,148	-	(66,738)	6,749	28,529	1,235	-	153,923
	₩ 5,219,356	₩ 193,184	₩ -	₩ 8,040	₩ 28,529	₩ 14,215	₩ 372,642	₩ 5,835,966

(In millions of Korean won)

2022	Beginning balance	Cash flows from financing activities	Changes in non-cash transaction: Current portion	Interest expense	Increase in lease liabilities	Changes in foreign exchange rates	Reclassification from retained earnings	Ending balance
Short-term borrowings and banker's usance	₩ 2,358,921	₩ (637,731)	₩ -	₩ -	₩ -	₩ 217,932	₩ -	₩ 1,939,122
Current maturities of debentures	459,904	(460,000)	589,660	200	-	-	-	589,764
Debentures	2,736,087	279,139	(589,660)	1,195	-	-	-	2,426,761
Dividend payables	60	(617,132)	-	-	-	-	617,125	53
Current other payables (lease liabilities)	72,417	(78,385)	85,476	-	-	-	-	79,508
Other payables (lease liabilities)	214,575	-	(85,476)	6,505	42,861	5,683	-	184,148
	₩ 5,841,964	₩(1,514,109)	₩ -	₩ 7,900	₩ 42,861	₩ 223,615	₩ 617,125	₩ 5,219,356

36. Leases

36.1 Amounts recognized in the consolidated statement of financial position

The consolidated statement of financial position shows the following amounts relating to leases:

(In millions of Korean won)		2023		2022
Right-of-use assets[1]				
Vessels	₩	57,151	₩	90,861
Gas station and charging station		9,592		11,866
Storage and other facilities		82,197		106,475
	₩	148,940	₩	209,202

(In millions of Korean won)		2023		2022
Lease liabilities[2]				
Current	₩	63,017	₩	79,508
Non-current		153,923		184,148
	₩	216,940	₩	263,656

(In millions of Korean won)		2023		2022
Lease receivables[3]				
Current	₩	15,127	₩	10,404
Non-current		39,686		27,418
	₩	54,813	₩	37,822

[1] Included in ‘Other assets’ in the consolidated statement of financial position.

[2] Included in ‘Other payables’ in the consolidated statement of financial position.

[3] Included in ‘Other receivables’ in the consolidated statement of financial position.

36.2 Amounts recognized in the consolidated statements of comprehensive income

The consolidated statements of comprehensive income show the following amounts relating to leases:

(In millions of Korean won)		2023		2022
Depreciation of right-of-use assets				
Vessels	₩	33,709	₩	30,615
Gas station and charging station		3,479		4,967
Storage and other facilities		25,092		27,944
	₩	62,280	₩	63,526
Interest expense relating to lease liabilities (included in finance cost)	₩	6,749	₩	6,505
Interest income relating to lease receivables (included in finance income)		(1,538)		(793)
Expense relating to short-term leases[1]		13,546		13,735
Expense relating to leases of low-value assets that are not short-term leases[1]		64		441
Expense relating to variable lease payments not included in lease liabilities[1]		85,323		82,788
Foreign currency translation gains and losses for lease liabilities		1,207		5,634

[1] Included in 'Cost of sales' and 'Selling and administrative expenses' in the consolidated statement of comprehensive income.

Total cash outflow and inflow with respect to leases amount to ₩ 182,162 million (2022: ₩ 175,350 million) and ₩ 14,148 million (2022: ₩ 10,594 million), respectively in 2023.

36.3 Changes in asset and liabilities related to lease

Changes in right-of-use assets during the years ended December 31, 2023 and 2022, are as follows:

(In millions of Korean won)		2023		2022
Beginning net book amount	₩	209,202	₩	248,627
Additions		1,989		24,052
Depreciation		(62,280)		(63,526)
Foreign currency rate changes		29		49
Ending net book amount	₩	148,940	₩	209,202

Changes in lease liabilities during the years ended December 31, 2023 and 2022, are as follows:

(In millions of Korean won)		2023		2022
Beginning net book amount	₩	263,656	₩	286,992
Increase		28,529		42,861
Interest expenses		6,749		6,505
Foreign currency translation		1,207		5,634
Foreign currency rate changes		28		49
Repayments of lease liabilities		(83,229)		(78,385)
Ending net book amount	₩	216,940	₩	263,656

Changes in lease receivables during the years ended December 31, 2023 and 2022, are as follows:

(In millions of Korean won)		2023		2022
Beginning net book amount	₩	37,822	₩	34,303
Additions		29,601		13,320
Interest income		1,538		793
Received		(14,148)		(10,594)
Ending net book amount	₩	54,813	₩	37,822

37. Greenhouse Gas Emission Permits and Obligations

Quantities of emission permits which are allocated free of charge for the 3rd plan period (2021~2025) as of December 31, 2023, are as follows:

(In thousands of tCO2-eq)	2021	2022	2023	2024	2025	Total
Allocation with free of charge	8,583	8,583	8,583	8,502	8,502	42,753

Changes in emission permits quantities and the carrying amounts for the years ended December 31, 2023 and 2022, are as follows.

(In millions of Korean won and thousands of tCO2-eq)	2023											
	2022			2023			2024~2025			Total		
	Quantity		Amount	Quantity		Amount	Quantity		Amount	Quantity		Amount
At January 1 and allocation with nil consideration[1]	9,219	₩	985	9,291	₩	13,531	17,005	₩	-	35,515	₩	14,516
Purchase (disposal)	173		2,051	-		-	61		686	234		2,737
Withdrawal to the government[3]	(9,386)		(2,884)	-		-	-		-	(9,386)		(2,884)
Carrying forward	(6)		(152)	(470)		(13,531)	476		13,683	-		-
At December 31	-	₩	-	8,821	₩	-	17,542	₩	14,369	26,363	₩	14,369

[1] The initial number of allocation with nil consideration and additional allocation are included in allocation with nil consideration for the year 2023.

(In millions of Korean won and thousands of tCO2-eq)	2022											
	2021			2022			2023~2025			Total		
	Quantity		Amount	Quantity		Amount	Quantity		Amount	Quantity		Amount
At January 1 and allocation with nil consideration[1]	10,102	₩	11,752	8,853	₩	-	26,038	₩	13,275	44,993	₩	25,027
Purchase (disposal)	61		1,056	-		-	20		256	81		1,312
Withdrawal to the government[3]	(9,775)		(11,823)	-		-	-		-	(9,775)		(11,823)
Carrying forward	(388)		(985)	388		985	-		-	-		-
At December 31	-	₩	-	9,241	₩	985	26,058	₩	13,531	35,299	₩	14,516

[1] The initial number of allocation with nil consideration and additional allocation are included in allocation with nil consideration for the year 2022.

As of December 31, 2023, emission is estimated at 9,646 thousand tons (tCO2-eq).

Details of emission obligations for the years ended December 31, 2023 and 2022, are as follows:

(In millions of Korean won and thousands of tCO2-eq, except quantities)	2023			2022		
	Quantity	**Amount**		**Quantity**	**Amount**	
At January 1	9,363	₩	1,943	9,789	₩	11,752
Addition	9,669		8,387	9,349		2,014
Withdrawal	(9,386)		(2,885)	(9,775)		(11,823)
At December 31	9,646	₩	7,445	9,363	₩	1,943

38. Events After the Reporting Period

The Group issued corporate bonds on January 26, 2024, after the reporting period, and details are as follows:

	Issuance date	Maturity	Interest rate (%)	Amount	
Public bonds (60-1)	Jan. 26, 2024	Jan. 26, 2029	3.883	₩	190,000
Public bonds (60-2)	Jan. 26, 2024	Jan. 26, 2031	4.069		100,000
Public bonds (60-3)	Jan. 26, 2024	Jan. 26, 2034	4.145		110,000
				₩	400,000

Independent Auditor's Report on
Internal Control over Financial Reporting for Consolidation Purposes

(English Translation of a Report Originally Issued in Korean)

To the Board of Directors and Shareholders of
S-OIL Corporation

Opinion on Internal Control over Financial Reporting for Consolidation Purposes
We have audited Internal Control over Financial Reporting (ICFR) of S-OIL Corporation and its subsidiaries (collectively referred to as the "Group") for consolidation purposes as at December 31, 2023, based on *Conceptual Framework for Designing and Operating Internal Control over Financial Reporting*.

In our opinion, the Group maintained, in all material respects, effective ICFR for consolidation purposes as at December 31, 2023, based on *Conceptual Framework for Designing and Operating Internal Control over Financial Reporting*.

We also have audited, in accordance with Korean Standards on Auditing, the consolidated financial statements of the Group, which comprise the consolidated statement of financial position as at December 31, 2023, and the consolidated statement of comprehensive income, changes in equity and cash flow for the year then ended, and notes to the consolidated financial statements including material accounting policy information, and our report dated March 18, 2024 expressed unqualified opinion.

Basis for Opinion on Internal Control over Financial Reporting for Consolidation Purposes
We conducted our audit in accordance with Korean Standards on Auditing. Our responsibility under these standards are further described in the *Auditor's Responsibilities for the Audit of Internal Control over Financial Reporting for consolidation purposes* section of our report. We are independent of the Group in accordance with the ethical requirements of the Republic of Korea that are relevant to our audit of ICFR for consolidation purposes and we have fulfilled our other ethical responsibilities in accordance with the ethical requirements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Responsibilities of Management and Those Charged with Governance for Internal Control over Financial Reporting for Consolidation Purposes
Management is responsible for designing, implementing and maintaining effective ICFR for consolidation purposes, and for its assessment about the effectiveness of ICFR for consolidation purposes, included in the accompanying Management's Report on the Effectiveness of Consolidated Internal Control over Financial Reporting.

Those charged with governance have the responsibilities for overseeing ICFR for consolidation purposes.

Auditor's Responsibilities for the Audit of Internal Control over Financial Reporting for Consolidation Purposes
Our responsibility is to express an opinion on ICFR for consolidation purposes of the Group based on our audit. We conducted the audit in accordance with Korean Standards on Auditing. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective ICFR for consolidation purposes was maintained in all material respects.

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

Definition and Inherent Limitations of Internal Control over Financial Reporting for Consolidation Purposes

An entity's ICFR for consolidation purposes is a process effected by those charged with governance, management, and other personnel, designed to provide reasonable assurance regarding the preparation of reliable financial statements in accordance with International Financial Reporting Standards as adopted by the Republic of Korea. An entity's ICFR for consolidation purposes 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 entity; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with International Financial Reporting Standards as adopted by the Republic of Korea, and that receipts and expenditures of the entity are being made only in accordance with authorizations of management and those charged with governance; and (3) provide reasonable assurance regarding prevention, or timely detection and correction of unauthorized acquisition, use, or disposition of the entity's assets that could have a material effect on the financial statements.

Because of its inherent limitations, ICFR for consolidation purposes may not prevent, or detect and correct, misstatements. Also, projections of any assessment of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

The engagement partner on the audit resulting in this independent auditor's report is Sung-Hun Lee, Certified Public Accountant.

Samil PricewaterhouseCoopers

Seoul, Korea

March 18, 2024

This report is effective as at March 18, 2024, the audit report date. Certain subsequent events or circumstances, which may occur between the audit report date and the time of reading this report, could have a material impact on the Group's ICFR for consolidation purposes thereto. Accordingly, the readers of the audit report should understand that there is a possibility that the above audit report may have to be revised to reflect the impact of such subsequent events or circumstances, if any.

Report on the Effectiveness of Consolidated Internal Control over Financial Reporting
(English Translation of a Report Originally Issued in Korean)

Operation result of the Consolidated IAMS for fiscal year 2023

To the Shareholders, Board of Directors and Board Audit Committee of S-OIL

We, as the Chief Executive Officer (CEO) and the Internal Accounting Controller (IAC) of S-OIL (the Company), assessed the operating status of the Company's Consolidated Internal Accounting Management System (IAMS), generally referred to Consolidated Internal Control over Financial Reporting (ICFR), for the year ending December 31, 2023.

The Company's management, including the CEO and the IAC is responsible for adequate design and operation of Consolidated IAMS. We evaluated whether the Company effectively designed and operated its Consolidated IAMS to prevent and detect errors or frauds which may cause a misstatement in consolidated financial statements to ensure preparation and disclosure of reliable consolidated financial information.

We used the "Conceptual Framework for Design and Operation of Internal Control over Financial Reporting" established by the Operating Committee of Internal Control over Financial Reporting in Korea as the criteria for design and operation of the Company's Consolidated IAMS and conducted an evaluation of Consolidated IAMS according to "Management Guideline for Evaluation and Reporting of Internal Control over Financial Reporting" established by the Operating Committee of Internal Control over Financial Reporting in Korea.

Based on our assessment, under the framework set forth in "Conceptual Framework for Design and Operation of Internal Control over Financial Reporting", we concluded that the Company's Consolidated IAMS is designed and operated effectively as of December 31, 2023, in all material respects.

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

February 19, 2024

Internal Accounting Controller J. W. Bang

RD & CEO Anwar A. Al-Hejazi