SK Gas Co., Ltd.

Separate Financial Statements

December 31, 2022

(With Independent Auditors' Report Thereon)

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Independent Auditors' Report

Based on a report originally issued in Korean

To the Shareholders and Board of Directors of SK Gas Co., Ltd.

Opinion

We have audited the separate financial statements of SK Gas Co., Ltd. ("the Company"), which comprise the separate statement of financial position as of December 31, 2022, the separate statements of comprehensive income, changes in equity and cash flows for the year then ended, and notes to the separate financial statements, including significant accounting policies and other explanatory information.

In our opinion, the accompanying separate financial statements present fairly, in all material respects, the separate financial position of the Company as of December 31, 2022, and its separate financial performance and its separate cash flows for the year then ended in accordance with Korean International Financial Reporting Standards ("K-IFRS").

We also have audited, in accordance with Korean Standards on Auditing (KSAs), the Company's Internal Control over Financial Reporting ("ICFR") as of December 31, 2022, based on criteria established in Conceptual Framework for Designing and Operating Internal Control over Financial Reporting issued by the Operating Committee of Internal Control over Financial Reporting in Republic of Korea, and our report dated March 15, 2023, expressed an unmodified opinion on the effectiveness of the Company's internal control over financial reporting.

Basis for Opinion

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

Key Audit Matters

Key audit matters are those matters that, in our professional judgment, were of most significance in our audit of the separate financial statements as of and for the year ended December 31, 2022. These matters were addressed in the context of our audit of the separate financial statements as a whole, and in forming our opinion thereon, and we do not provide a separate opinion on these matters. We considered the following as key audit matters to be communicated in the audit report.

(1) Occurrence and cut-off of domestic LPG sales

Reason why it is determined to be a key audit matter

The Company's domestic LPG sales mainly arise from LPG gas stations and petrochemical companies. Domestic LPG sales recognized during the year ended December 31, 2022, account for 66% of total sales. Therefore, the Company identifies performance obligations in the contract with respect to revenue recognition for domestic LPG transactions; allocates the transaction price to each performance obligation; and recognizes revenue when such performance obligation is satisfied. The timing of revenue recognition requires the management's judgment. As a result, there are inherent risks related to sales cut-off due to errors in the management's significant judgment, and as the amount of domestic LPG sales recognized in the separate financial statements is significant, the occurrence and cut-off of sales thereof is identified as the key audit matter.



How the key audit matter was addressed in our audit

The primary procedures we performed to address the key audit matter are as follows:

- Obtained an understanding of the key process related to domestic LPG transactions and tested the relevant internal controls.
- Reviewed and inspected documents of key transaction terms.
- Assessed the revenue recognition standards for domestic LPG transactions.
- Inquired of and inspected documents with regards to negative sales for domestic LPG transactions.
- Inspected supporting documents for sampled domestic LPG transactions occurred during the reporting period.
- Inspected the supporting documents of domestic LPG transactions that occurred before and after the reporting period end and compared the timing of revenue recognition.
- (2) An impairment testing on the investments in Ulsan GPS Co., Ltd.

Reason why it is determined to be a key audit matter

As discussed in Note 2.2.15 to the separate financial statements, management assesses at each reporting date whether there is an indication that an asset may be impaired. If any indication exists, management compares the asset's estimated recoverable amount to its book value to determine whether it is impaired.

Management concluded that there was an indication of impairment in the investments in Ulsan GPS Co., Ltd. as Ulsan GPS Co., Ltd. is unable to generate separate operating cash flows until the construction of LPG/LNG combined thermal power plant is completed and normal operations has started.

As described in Note 11 to the separate financial statements, management performed the impairment test on the investments in Ulsan GPS Co., Ltd. by comparing the carrying amount of W452,785 million to the value in use calculated based on the discounted cash flows forecast. Key assumptions, such as future sales volume, selling price, fuel costs, and discount rates, have a material impact on the estimation of value-in-use, which involve management's significant judgment. The carrying amounts of related assets are material to the separate financial statements. Also, estimating discounted cash flows is complex, and there are uncertainties and the risk of possible bias in management's judgments as significant judgment is involved in determining various inputs. Therefore, we identified the impairment testing on investments in Ulsan GPS Co., Ltd. held by the Company as a key audit matter.

How the key audit matter was addressed in our audit

The primary procedures we performed to address the key audit matter are as follows

- Obtained an understanding of the impairment process of investments in subsidiaries and tested the internal controls .
- Assessed whether management bias is involved in key inputs such as future forecast sales volume, selling price, and purchase cost of fuel used to estimate value-in-use by referring to the Company's business plan and external data.
- Involved our internal valuation specialists to independently recalculate the discount rate based on market data and the inherent information of the Group and assess whether there is a significant difference compared with the discount rate applied by management.
- Obtained management's sensitivity analysis on the discount rates applied to the discounted cash flow forecasts and assessed for indication of management's bias and the effect of changes in key assumptions on management's conclusion.



Other Matter

The separate financial statements of the Company for the year ended December 31, 2021 were audited by another auditor who expressed an unmodified opinion on those statements on March 11, 2022.

The procedures and practices utilized in the Republic of Korea to audit such separate financial statements may differ from those generally accepted and applied in other countries.

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

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

In preparing the separate financial statements, management is responsible for assessing the Company's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless management either intends to liquidate the Company or to cease operations, or has realistic alternative but to do so.

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

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

Our objectives are to obtain reasonable assurance about whether the separate financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditors' 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 KSAs will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these separate financial statements.

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

- Identify and assess the risks of material misstatement of the separate 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 in the preparation of the separate financial statements and the reasonableness of accounting estimates and related disclosures made by management.
- Conclude on the appropriateness of management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Company's ability to continue as a going concern. If we conclude that a material uncertainty exists, then we are required to draw attention in our auditor's report to the related disclosures in the separate financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Company to cease to continue as a going concern.
- Evaluate the overall presentation, structure and content of the separate financial statements, including the disclosures, and whether the separate financial statements represent the underlying transactions and events in a manner that achieves fair presentation.



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

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

From the matters communicated with those charged with governance, we determine those matters that were of most significance in the audit of the separate 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 auditors' report is Cho, Seung Hee.

KPMG Samjory Accounting Corp.

Seoul, Korea March 15, 2023

This report is effective as of March 15, 2023, 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 separate financial statements and notes thereto. Accordingly, the readers of the audit report should understand that the above audit report has not been updated to reflect the impact of such subsequent events or circumstances, if any.

SK Gas Co., Ltd.

Separate financial statements for the years ended December 31, 2022 and 2021

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

Byung Suk Yoon Chief Executive Officer SK Gas Co., Ltd.

SK Gas Co., Ltd. Separate statements of financial position

as of December 31, 2022 and 2021 (Korean won in millions and US dollar in thousands)

Assets	2022	2021	2022		2021
Current assets:					
Cash and cash equivalents (Notes 5, 30 and 32)	₩ 211,048	₩ 63,870	\$ 16	6,534 \$	53,876
Short-term financial assets (Notes 5, 10 and 32)	317,069	563,711	-	0,192	475,505
Current trade and other receivables, net (Notes 5, 6, 22, 25 and 32)	966,086	823,597		2,318	694,725
Current derivative assets (Notes 5, 20, and 32)	44,682	65,325		5,258	55,103
Inventories (Note 7)	375,407	437,145		6,226	368,743
Other current financial assets (Notes 5, 8 and 32)	158,769	16,674		5,220 5,281	14,065
		59,740			50,392
Other current assets (Note 9)	38,500	59,740		0,380	50,592
Non-current asset held for sale (Note 33) Total current assets	75,095 2,186,656	2,030,062		9,256 5,445	1,712,409
	2,100,000	2,030,002	1,72	J,44J	1,712,409
Non current assets:					
Long-term financial assets (Notes 5, 10 and 32)	118,678	109,479	9	3,647	92,349
Non-current trade and other receivables, net (Notes 5, 6 and 32)	4,909	2,148		3,873	1,812
Non-current derivative assets (Notes 5, 20 and 32)	96,968	50,039		6,515	42,209
Investments in subsidiaries(Note 11)	603,543	463,925		6,243	391,333
Investments in associates and joint ventures (Note 11)	515,049	580,159		6,415	489,379
Property, plant and equipment, net (Note 12)	918,582	912,323		4,834	769,569
Intangible assets, net (Note 13)	34,857	38,814		4,834 7,505	32,740
Right-of-use assets, net (Note 13)	432,834	425,526		7,505 1,541	358,942
Other non-current financial assets (Notes 5, 8 and 32)	432,834 32,052	425,526 34,489		5,292	358,942 29,092
Net defined benefit assets (Note 17)		54,469			29,092
	9,488	-		7,487	-
Other non-current assets (Note 9)	33,488	30,612		6,423	25,823
Total non-current assets	2,800,448	2,647,514	2,20	9,775	2,233,248
Total assets	₩ 4,987,104	₩ 4,677,576	\$ 3,93	5,220 \$	3,945,657
Liabilities and equity					
Current liabilities:					
Trade and other payables (Notes 5, 15, 22, 31 and 32)	₩ 196,643	₩ 190,893	\$ 15	5,167 \$	161,023
Short-term borrowings (Notes 5, 16, 31 and 32)	899,681	796,494	-	9,920	671,863
Current portion of bond payable (Notes 5, 16, 31 and 32)	149,921	199,954		8,299	168,666
Current derivative liabilities (Notes 5, 20, 31 and 32)	202,023	16,254		9,412	13,711
Current tax payables (Note 28)	67,273	53,155		3,084	44,838
Current portion of lease liabilities (Notes 5, 14, 31 and 32)	63,170	60,425		9,846	50,970
Other current financial liabilities (Notes 5, 18, 31 and 32)	3,194	284		2,520	240
Other current liabilities (Note 19 and 25)	14,607	8,989		1,526	7,583
Total current liabilities	1,596,512	1,326,448		9,774	1,118,894
	.,	.,,	.,	.,	.,,
Non-current liabilities:					
Bonds payable (Notes 5, 16, 31 and 32)	917,702	1,066,658	724	4,140	899,753
Non-current derivative liabilities (Notes 5, 20, 31 and 32)	114	-		90	-
Defined benefit liabilities (Note 17)	-	2,182		-	1,841
Deferred tax liabilities (Note 28)	20,119	39,461	1	5,876	33,287
Non-current lease liabilities (Notes 5, 14, 31 and 32)	349,258	338,452	27	5,592	285,493
Other non-current financial liabilities (Notes 5, 18, 31 and 32)	35,540	34,566	2	8,044	29,157
Other non-current liabilities (Note 19)	1,530	747		1,207	630
Total non-current liabilities	1,324,263	1,482,066	1,04	4,949	1,250,161
Total liabilities	2,920,775	2,808,514	2,30	4,723	2,369,055
Equity:					
	16 1F1	16 1F1	0	6 / 17	20 020
Issued capital (Note 23)	46,151	46,151		6,417 2,569	38,930 216 545
Capital surplus (Note 23)	256,714	256,714		2,568	216,545
Other components of equity (Notes 23 and 24)	(5,569)	(6,293)		4,394)	(5,308)
Accumulated other comprehensive income (loss) (Notes 10, 14 and 23)	(29,214)	(11,852)	-	3,053)	(9,998)
	1,798,247	1,584,342	1,41	8,959	1,336,433
Retained earnings (Note 23)					
Retained earnings (Note 23) Total equity	2,066,329	1,869,062	1,63	0,497	1,576,602

SK Gas Co., Ltd. Separate statements of comprehensive income for the years ended December 31, 2022 and 2021

(Korean won in millions and US dollar in thousands except earnings per share)

		2022		2021	 2022	 2021
Sales (Notes 22 and 25) Cost of sales (Notes 22 and 26)	₩	6,978,938 (6,295,895)	₩	4,998,281 (4,662,240)	\$ 5,506,934 (4,967,959)	\$ 4,216,180 (3,932,720)
Gross profit		683,043		336,041	 538,975	 283,460
Selling and administrative expenses						
(Notes 22, 24 and 26)		(255,153)		(237,443)	 (201,335)	 (200,290)
Operating income		427,890		98,598	337,640	83,170
Finance income (Notes 20 and 27)		652,480		384,924	514,858	324,694
Finance costs (Notes 20 and 27)		(730,742)		(276,199)	(576,613)	(232,981)
Other non-operating income (Notes 22 and 27)		19,676		106,624	15,526	89,940
Other non-operating expenses (Notes 22 and 27)		(14,272)		(13,235)	(11,262)	(11,164)
Profit before income tax		355,032		300,712	 280,149	253,659
Income tax expense (Note 28)		(86,128)		(73,488)	(67,961)	(61,989)
Net profit for the year	₩	268,904	₩	227,224	\$ 212,188	\$ 191,670
Other comprehensive income (loss): Other comprehensive income (loss) to be reclassified to profit or loss in subsequent periods (net of tax): Net gain (loss) on valuation of derivatives (Note 14) Other comprehensive income (loss) not to be reclassified to profit or loss in subsequent periods (net of tax):		(15,246)		(22,559)	(12,031)	(19,030)
Net gain (loss) on valuation of financial assets fair value through other comprehensive income (Note 10)		(2,116)		2,845	(1,669)	2,400
Re-measurement loss on defined benefit plans (Note 17)		(251)		(950)	(198)	 (802)
Other comprehensive income (loss) for the year, net of tax		(17,613)		(20,664)	 (13,898)	 (17,432)
Total comprehensive income for the year, net of tax	₩	251,291	₩	206,560	\$ 198,290	\$ 174,238
Earnings per share (Note 29):						
Basic earnings per share (in won)	₩	29,961	₩	25,317	\$ 23.64	\$ 21.36
Diluted earnings per share (in won)		29,872		25,244	23.57	21.29

SK Gas Co., Ltd. Separate statements of changes in equity for the years ended December 31, 2022 and 2021 (Korean won in millions and US dollar in thousands)

					Other components of	Accumulated other f comprehensive	ted other hensive		
	Issued	ed capital	Capital surplus	rplus	equity	income (loss)	(loss)	Retained earnings	Total equity
As of January 1, 2021	æ	46,151	*	256,714 V	W (6,561)	* (7,862 W	1,393,968 W	1,698,134
Total comprehensive income:									
Net profit for the year		'		•	•		,	227,224	227,224
Net gain on valuation of financial assets at fair value through									
other comprehensive income		'		'	•		2,845	ı	2,845
Re-measurement loss on defined benefit plans		'		'				(950)	(020)
Hedge accounting - loss on lease liability valuation		'		•	•		(22,559)		(22,559)
Sub-total		•		•			(19,714)	226,274	206,560
Transactions with shareholders directly recognised in equity:									
Dividends		'		•				(35,900)	(35,900)
Stock option		'		'	268				268
Sub-total		.		.	268		.	(35,900)	(35,632)
As of December 31, 2021	₩	46,151	*	256,714 W	F (6,293)	(M	(11,852) ₩	1,584,342	1,869,062
US dollar	÷	38,930	÷	216,545 \$	(5,308)	\$	(6,998)	1,336,433 \$	1,576,602
As of January 1, 2022	æ	46,151	M N	256,714 W	f (6,293)	₩ ((11,852) W	1,584,342 W	1,869,062
Total comprehensive income									
Net profit for the year		'		•				268,904	268,904
Net gain on valuation of financial assets at fair value through									
other comprehensive income		1		ı	•		(2,116)	I	(2,116)
Re-measurement loss on defined benefit plans		'		'	•			(251)	(251)
Hedge accounting - loss on lease liability valuation		'		•			(15,246)		(15,246)
Sub-total		•		•			(17,362)	268,653	251,291
Transactions with shareholders directly recognised in equity:									
Dividends		'		•	•		,	(54,748)	(54,748)
Stock option					724			1	724
Sub-total		•		•	724		•	(54,748)	(54,024)
As of December 31, 2022	M	46,151	M	256,714 ¥	W (5,569)) W	(29,214)	1,798,247 W	2,066,329
US dollar	s	36,417	\$	202,568 \$	(4,394)) \$	(23,053) \$	1,418,959 \$	1,630,497

SK Gas Co., Ltd. Separate statements of cash flows for the years ended December 31, 2022 and 2021

(Korean won in millions and US dollar in thousands)

		2022		2021		2022		2021
Operating activities								
Cash generated from operations								
Net profit for the year	₩	268,904	₩	227,224	\$	212,188	\$	191,670
Non-cash adjustments to reconcile profit for the year (Note 30)		151,099		(70,170)		119,229		(59,190)
Working capital adjustments (Note 30)		(138,245)		(484,451)		(109,086)		(408,648)
Interest received		154		31		122		27
Income tax payment		(86,030)		(42,966)		(67,885)		(36,243)
Net cash flows provided by (used in) operating activities		195,882		(370,332)		154,568		(312,384)
Investing activities								
Net decrease (increase) in short-term financial instruments	₩	267,146	₩	30,944	\$	210,800	\$	26,102
Increase in short-term loans receivable		(300)		(5,300)		(237)		(4,471)
Decrease in short-term loans receivable		11,863		14,536		9,361		12,262
Increase in long-term financial instruments		(6,650)		(9,496)		(5,247)		(8,010)
Decrease in long-term financial instruments		6		6		5		5
Acquisition of investments in subsidiaries		(139,617)		(234,563)		(110,169)		(197,860)
Acquisition of investments in associates and joint ventures		(2,985)		(214,999)		(2,355)		(181,358)
Proceeds from disposal of investments in associates and joint ventures		-		282,757		-		238,513
Acquisition of property, plant and equipment		(73,344)		(89,374)		(57,874)		(75,389)
Proceeds from disposal of property, plant and equipment		43		47,085		34		39,717
Acquisition of intangible assets		(3,711)		(10,129)		(2,928)		(8,544)
Proceeds from disposal of intangible assets		151		442		119		373
Payment of prepaid expenses for investment		(5,200)		-		(4,103)		-
Collection of financial lease receivables		1,470		1,118		1,160		943
Dividend received		1,780		10,197		1,404		8,602
Settlement of derivative instruments		98,105		81,950		77,412		69,127
Net cash flows provided by investing activities		148,757		(94,826)	_	117,382	_	(79,988)
Financing activities (Note 30)								
Net increase (decrease) in short-term borrowings in foreign currencies	₩	169,281	₩	222,716	\$	133,576	\$	187,868
Repayment of short-term borrowings		-		(60,000)		-		(50,612)
Repayment of current portion of bond payable		(200,000)		-		(157,816)		-
Repayment of long-term borrowings		-		(61)		-		(51)
Proceeds from issuance of bonds		-		448,073		-		377,961
Interest paid		(50,485)		(37,054)		(39,837)		(31,256)
Cash repayment of lease liabilities		(61,509)		(58,171)		(48,536)		(49,069)
Payment of dividends		(54,748)		(35,900)		(43,200)		(30,283)
Net cash flows used in financing activities		(197,461)		479,603	_	(155,813)	_	404,558
Net increase (decrease) in cash and cash equivalents		147,178		14,445		116,137		12,186
Cash and cash equivalents at the beginning of the year		63,870		49,425		50,397		41,690
Cash and cash equivalents at the end of the year	₩	211,048	₩	63,870	\$	166,534	\$	53,876

1. Corporate information

SK Gas Co., Ltd. (the "Company") was incorporated on December 20, 1985 under the Commercial Code of the Republic of Korea and was listed on the Korea Stock Exchange in August 1997. The Company is currently engaged in the importation, storage and sale of liquefied petroleum gas (LPG). The Company's headquarter is located in Pangyo-ro, Bundang-gu, Seongnam-si, Gyeonggi-do.

The Company has issued capital several times since its foundation. As at December 31, 2022, the Company's issued capital amounts to $\mathbb{W}46,151,220$ thousand of which 72.2% is owned by SK Discovery Co., Ltd.

The accompanying 2022 and 2021 financial statements are expressed in Korean won, and solely for the convenience of the reader, have been translated into United States dollar at the rate of #1,267.30 and #1,185.50 to US\$1, the exchange rates on December 31, 2022 and 2021, respectively. Such translation should not be construed as a representation that the Korean won amounts can actually be converted into United States dollar at the exchange rate used for the purpose of such translation.

2. Summary of significant accounting policies

2.1 Basis of financial statements preparation and statement of compliance

The Company maintains its official accounting records in Korean won and prepares statutory financial statements in the Korean language in accordance with Korean International Financial Reporting Standards (KIFRS) enacted by the *Act on External Audit of stock Companies*.

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

The separate financial statements have been prepared on a historical cost basis, except for derivative financial instruments, debt and equity financial assets, contingent consideration that have been measured at fair value. The carrying values of recognized assets and liabilities that are designated as hedged items in fair value hedges that would otherwise be carried at amortized cost are adjusted to record changes in the fair values attributable to the risks that are being hedged in effective hedge relationships.

The separate financial statements are presented in Korean won (KRW) and all values are rounded to the nearest thousand, except when otherwise indicated.

2.2 Significant accounting policies

2.2.1 Investment in subsidiaries, associates and joint ventures

Pursuant to KIFRS 1027, the accompanying separate financial statements are accounted for, by a parent, investments in a subsidiary or an associate or a joint venture on the basis of the direct equity interest rather than on the basis of the reported results and net assets of the investees. The Company selected cost method in accordance with KIFRS 1027 for accounting for the investments in subsidiaries, associates or joint ventures according to KIFRS 1027. Moreover, KIFRS 1027 requires that, in the separate financial statements, investments in subsidiaries, affiliates or joint ventures should be accounted for at cost. Meanwhile, dividends received from subsidiaries, associates and joint venture investments are recognized in profit or loss at the time the right to dividends is confirmed.

2.2.2 Foreign currency translation

The Company's separate financial statements are presented in Korean won, which is also its functional currency.

Transactions in foreign currencies are initially recorded by the Company at their respective functional currency spot rates at the date the transaction first qualifies for recognition. Monetary assets and liabilities denominated in foreign currencies are retranslated at the functional currency spot rate of exchange at the reporting date. The differences arising from translation are reflected in profit or loss.

However, exchange differences arising from the following items are recognized in other comprehensive income:

- Investments in equity instruments designated as fair value through other comprehensive income financial assets (excluding impairment losses in which foreign exchange differences recognized in other comprehensive income are reclassified to profit or loss)
- Financial liabilities designated as hedges for net investments in foreign operations (effective part on hedge risks)
- Cash flow hedge that satisfies the conditions (effective part on hedge risk)

Non-monetary items that are measured in terms of historical cost in a foreign currency are translated using the exchange rates as at the dates of the initial transactions. Non-monetary items measured at fair value in a foreign currency are translated using the exchange rates at the dates when the fair value is determined.

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

2.2.3 Current versus non-current classification

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

An asset is current when it is:

- Expected to be realized or intended to be sold or consumed in the normal operating cycle
- Held primarily for the purpose of trading
- Expected to be realized within twelve months after the reporting period, or
- Cash or cash equivalent unless restricted from being exchanged or used to settle a liability for at least twelve months after the reporting period

All other assets are classified as non-current.

A liability is current when:

- It is expected to be settled in the normal operating cycle
- It is held primarily for the purpose of trading
- It is due to be settled within twelve months after the reporting period, or
- There is no unconditional right to defer the settlement of the liability for at least twelve months after the reporting period

The Company classifies all other liabilities as non-current.

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

2.2.4 Fair value measurement

The Company measures financial instruments such as derivatives, and non-financial assets such as investment properties, at fair value at each balance sheet date.

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

- In the principal market for the asset or liability, or
- > In the absence of a principal market, in the most advantageous market for the asset or liability

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

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

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

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

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

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

For assets and liabilities that are recognized in the financial statements at fair value on a recurring basis, the Company determines whether transfers have occurred between levels in the hierarchy by re-assessing categorization (based on the lowest level input that is significant to the fair value measurement as a whole) at the end of each reporting period.

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

Fair-value related disclosures for financial instruments and non-financial assets that are measured at fair value or where fair values are disclosed, are summarized in the following note 32.

2.2.5 Revenue from contracts with customers

The Company is in the business of importing, storing and selling liquefied petroleum gas (LPG). Revenue from contracts with customers is recognized when control of the goods or services are transferred to the customer at an amount that reflects the consideration to which the Company expects to be entitled in exchange for those goods or services. The Company has generally concluded that it is the principal in its revenue arrangements, except for the agency services below, because it typically controls the goods or services before transferring them to the customer.

Sale of goods

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

payable to the customer (if any).

(1) Variable consideration

The terms and conditions of the contract with the customer may change the consideration received from the customer, but since the Company usually recognizes revenue by including the variable consideration in the transaction price, the financial effect of the variable consideration regulation is deemed to be limited.

(2) Significant financing component

Generally, the Company receives short-term advances from its customers. Using the practical expedient in KIFRS 1115, the Company does not adjust the promised amount of consideration for the effects of a significant financing component if it expects, at contract inception, that the period between the transfer of the promised good or service to the customer and when the customer pays for that good or service will be one year or less.

(3) Non-cash consideration

The Company applies the requirements of KIFRS 1113 Fair Value Measurement in measuring the fair value of the non-cash consideration. If the fair value cannot be reasonably estimated, the non-cash consideration is measured indirectly by reference to the stand-alone selling price of the fire prevention equipment.

- Customer loyalty Program

The Company provides a certain percentage of Muffin point or OKCashbag points in terms of revenue when presenting the Muffin membership card or OKCashbag card to customers who purchase the product and recognizes them as a reduction in sales.

- Transportation

The Company provide transportation services with the transfer of goods. Transportation services are available from third parties and do not significantly customize or modify the goods. A contract that provides both the sale and transport of goods consists of two performance obligations. This is because the transfer of goods and the provision of transport services are distinct and separately identifiable. Therefore, The Company distribute the transaction price based on the relative stand-alone selling price of the goods and transport services.

The Company recognizes revenue for the provision of transport services over time as a progress rate in accordance with the input method. This is because the customer simultaneously receives and consumes the benefits of the entity's performance as the Company do. Revenue from the sale of goods is recognized at a point in time, which is typically the time of delivery of the goods.

2.2.5 Revenue from contracts with customers (cont'd)

Contract balances

(1) Trade receivables

A receivable represents the Company's right to an amount of consideration that is unconditional (i.e., only the passage of time is required before payment of the consideration is due). Refer to accounting policies of financial assets in the Note 2.2.12

(2) Contract liabilities

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

2.2.6 Taxes

(1) Current income tax

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

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

(2) Deferred tax

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

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

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

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

2.2.6 Taxes (cont'd)

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

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

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

Deferred tax assets and deferred tax liabilities are offset, if a legally enforceable right exists to set off current tax assets against current income tax liabilities and the deferred taxes relate to the same taxable entity and the same taxation authority.

2.2.7 Cash dividend

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

2.2.8 Property, plant and equipment

Property, plant and equipment is stated at cost, net of accumulated depreciation and accumulated impairment losses, if any. Such cost includes the cost of replacing part of the plant and equipment and borrowing costs for long-term construction projects if the recognition criteria are met. Likewise, when a major inspection is performed, its cost is recognized in the book value of the plant and equipment as a replacement if the recognition criteria are satisfied. All other repair and maintenance costs are recognized in profit or loss as incurred. Depreciation of property, plant and equipment is provided using the straight-line method over the estimated useful lives of the assets as follows:

	Economical useful Life
Buildings	15 - 40
Structures	10 - 40
LPG storage tanks	4 - 25
Machinery	4 - 25
Vehicles	4 - 6
Tools, furniture and fixtures	3 - 5

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

The assets' residual values, useful lives and methods of depreciation are reviewed at each financial year end, and adjusted prospectively, if appropriate. In particular, the Company considers the impact of health, safety and environmental legislation in its assessment of expected useful lives and estimated residual values.

2.2.9 Leases

The Company determines whether the contract itself is a lease or whether the contract includes a lease at the time of the contract's contract, taking into account whether or not the contract controls the use of the identified assets in exchange for a certain period of time.

Company as a lessee

The Company applies one perception overmeasurement approach to all leases except short-term leases and small-scale leases. The Company recognizes lease liabilities representing the obligation to pay lease payments and license assets representing the right-of-use underlying assets.

Right-of-use asset

The Company recognizes licensed assets at the lease commencement date (i.e., when the underlying assets are available). Licensed assets are measured at cost, and the cost model is applied for subsequent measurement. In order to apply the cost model, the accumulated depreciation amount and the accumulated impairment loss are deducted, and the adjustment according to the remeasurement of the lease liability is reflected. The cost of the licensed asset includes the recognized lease liability amount, the initial direct cost, and the lease payments paid before or after the lease commencement less the lease incentive received. The estimated useful life of licensed assets is as follows.

	Estimated Useful life
Vessels	10 – 24
LPG stations	2 - 10
Vehicles	2 – 4
Sites	3 – 50
Others	2 – 10

If the ownership of the underlying asset is transferred to the Company at the end of the lease term or the cost of the licensed asset reflects that the Company will exercise the purchase option, the depreciation is calculated using the estimated useful life of the underlying asset of the asset.

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

Lease liabilities

On the lease commencement date, the Company measures the lease liability at the present value of the lease payments to be paid over the lease term. Lease payments consist of fixed lease payments (including actual fixed lease payments, lease incentives to be deducted), variable lease payments depending on the index or rate, and the amount expected to be paid according to the residual value guarantee. The lease payment also includes the price paid to terminate the lease if the option of the purchase option is exercised and the lease term reflects our exercise of the termination option if it is fairly certain that the Company will exercise that option. Variable lease payments, other than variable lease payments that vary by index or rate, are recognized as expenses during the period in which the event or condition that triggers the lease payment occurs (if not incurred in the production of the inventory).

When calculating the present value of the lease payments, the Company uses the incremental borrowing rate at the lease commencement date because it is not easy to calculate the lease's intrinsic interest rate. After the lease commencement date, the amount of lease liabilities increases to reflect interest and decreases to reflect the lease payments paid. In addition, the book value of a lease liability is subject to changes in the lease term, changes in lease payments (e.g., changes in future lease payments due to changes in the index or rate used to calculate the lease payments), or the valuation of options for buying underlying assets. If present, it will be remeasured.

2.2.9 Leases (cont'd)

Short-term leases and low-value assets

The Company applies an exemption policy for the recognition of short-term leases (i.e., these leases are less than 12 months from the date the lease commences and do not include the option to buy) for the lease of other assets. In addition, the Company applies an exemption on recognition of low-value asset of other assets that are considered low-value assets. Lease payments for short-term leases and low-value asset leases are recognized as expenses on a straight-line basis over the lease term.

Company as a lessor

Leases in which the Company does not transfer substantially all the risks and rewards of ownership of an asset are classified as operating leases. Rental income arising is accounted for on a straight-line basis over the lease terms and is included in revenue in the statement of profit or loss due to its operating nature. Initial direct costs incurred in negotiating and arranging an operating lease are added to the book value of the leased asset and recognized over the lease term on the same basis as rental income. Contingent rents are recognized as revenue in the period in which they are earned.

2.2.10 Borrowing costs

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

2.2.11 Intangible assets

Intangible assets acquired separately are measured on initial recognition at cost. The cost of intangible assets acquired in a business combination is their fair value at the date of acquisition. Following initial recognition, intangible assets are carried at cost less any accumulated amortization and accumulated impairment losses. Internally generated intangibles, excluding capitalized development costs, are not capitalized and related expenditure is recognized profit or loss in the period in which the expenditure is incurred.

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

	Amortization method	Estimated Useful life
Goodwill	Straight-line	20 – 26
Software	Straight-line	4
Others	Units-of-production	-

Otherwise, Intangible assets with indefinite useful lives are tested for impairment annually or individually or included in cash-generating units. In addition, the Company evaluates whether it is appropriate to apply the indefinite useful lives to the intangible assets each year, and if not, changes the intangible assets to finite useful lives.

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

2.2.12 Financial instruments – initial recognition and subsequent measurement

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

(1) Financial assets

Initial recognition and measurement

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

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

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

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

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

Subsequent measurement

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

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

Financial assets at amortized cost (debt instruments)

This category is the most relevant to the Company. The Company measures financial assets at amortized cost if both of the following conditions are met:

- The financial asset is held within a business model with the objective to hold financial assets in order to collect contractual cash flows, and
- The contractual terms of the financial asset give rise on specified dates to cash flows that are solely payments of principal and interest on the principal amount outstanding

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

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

Financial assets at fair value through OCI (debt instruments)

- The Company measures debt instruments at fair value through OCI if both of the following conditions are met:
- The financial asset is held within a business model with the objective of both holding to collect contractual cash flows and selling, and
- The contractual terms of the financial asset give rise on specified dates to cash flows that are solely payments of principal and interest on the principal amount outstanding

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

The Company's debt instruments at fair value through OCI includes investments in quoted debt instruments included under other non-current financial assets.

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

Upon initial recognition, the Company can elect to classify irrevocably its equity investments as equity instruments designated at fair value through OCI when they meet the definition of equity under KIFRS 1032 Financial Instruments: Presentation and are not held for trading. The classification is determined on an instrument-by-instrument basis.

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

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

Financial assets at fair value through profit or loss

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

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

A derivative embedded in a hybrid contract, with a financial liability or non-financial host, is separated from the host and accounted for as a separate derivative if: the economic characteristics and risks are not closely related to the host; a separate instrument with the same terms as the embedded derivative would meet the definition of a derivative; and the hybrid contract is not measured at fair value through profit or loss. Embedded derivatives are measured at fair value with changes in fair value recognized in profit or loss.

Reassessment only occurs if there is either a change in the terms of the contract that significantly modifies the cash flows that would otherwise be required or a reclassification of a financial asset out of the fair value through profit or loss category.

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

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

Derecognition

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

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

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

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

Impairment of financial assets

Further disclosures relating to impairment of financial assets are also provided in Note 6.:

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

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

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

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

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

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

(2) Financial liabilities

Initial recognition and measurement

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

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

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

Subsequent measurement

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

Financial liabilities at fair value through profit or loss

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

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

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

Loans and borrowings

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

Amortized cost is calculated by taking into account any discount or premium on acquisition and fees or costs that are an integral part of the EIR. The EIR amortization is included as finance costs in the statement of profit or loss.

This category generally applies to interest-bearing loans and borrowings.

Derecognition

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

(3) Offsetting of financial instruments

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

2.2.13 Derivative and non-derivative financial instruments and hedge accounting

Initial recognition and subsequent measurement

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

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

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

At the beginning of risk hedging, Company formally designate and document the risk hedging relationship, risk management objectives and risk hedging strategies that the Company want to apply.

The documentation includes identification of the hedging instrument, the hedged item, the nature of the risk being hedged and how the Company will assess whether the hedging relationship meets the hedge effectiveness requirements (including the analysis of sources of hedge ineffectiveness and how the hedge ratio is determined). A hedging relationship qualifies for hedge accounting if it meets all of the following effectiveness requirements:

- There is 'an economic relationship' between the hedged item and the hedging instrument.
- The effect of credit risk does not 'dominate the value changes' that result from that economic relationship.
- The hedge ratio of the hedging relationship is the same as that resulting from the quantity of the hedged item that the Company actually hedges and the quantity of the hedging instrument that the Company actually uses to hedge that quantity of hedged item.

The Company applies cash flow hedge accounting to reduce the risk of future cash flow changes in expected transactions due to specific risks. Hedges that meet all the criteria for hedge accounting are accounted for as follows:

Cash flow hedges

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

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

The Company has applied hedge accounting, which specifies the amount of lease repayment as a hedge measure for non-financial items. The effective part of hedge is recognized in other comprehensive income and as a cash flow hedge reserve as a separate capital item.

2.2.13 Derivative and non-derivative financial instruments and hedge accounting (cont'd)

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

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

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

2.2.14 Inventories

Inventories are measured at the lower of cost and net realizable value. The cost of merchandise is based on the gross average method, the merchandise in transit is based on specific identification method and the supplies is based on moving average method. The cost of inventories comprises purchase costs, conversion costs, and other costs required to prepare inventory for use. Net realizable value is the estimated selling price in the ordinary course of business, less estimated costs of completion and the estimated costs necessary to make the sale.

2.2.15 Impairment of non-financial assets

The Company assesses at each reporting date, whether there is an indication that an asset may be impaired. If any indication exists, or when annual impairment testing for an asset is required, the Company estimates the asset's recoverable amount. An asset's recoverable amount is the higher of an asset's or cash-generating unit's (CGU) fair value less costs of disposal and its value in use. Recoverable amount is determined for an individual asset, unless the asset does not generate cash inflows that are largely independent of those from other assets or group of assets. When the book value of an asset or CGU exceeds its recoverable amount, the asset is considered impaired and is written down to its recoverable amount. In assessing value in use, the estimated future cash flows are discounted to their present value using a pre-tax discount rate that reflects current market assessments of the time value of money and the risks specific to the asset. Fair value is determined using an appropriate valuation model using stock prices of subsidiaries traded in the open market or other available fair value measurement indicators.

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

Impairment losses are recognized in profit or loss in expense categories consistent with the function of the impaired asset, except for properties previously revalued with the revaluation taken to other comprehensive income. For such properties, the impairment is recognized in other comprehensive income up to the amount of any previous revaluation.

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

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

The following assets have specific characteristics for impairment testing:

Goodwill

Goodwill arising on the acquisition of subsidiaries is tested for impairment annually as of December 31 and when circumstances indicate that the carrying value may be impaired.

Impairment is determined for goodwill by assessing the recoverable amount of each CGU (or group of CGUs) to which the goodwill relates. When the recoverable amount of the CGU is less than its book value, an impairment loss is recognized. Impairment losses relating to goodwill cannot be reversed in future periods.

Other Intangible assets

Intangible assets with indefinite useful lives are tested for impairment annually as of December 31 at the CGU level, as appropriate, and when circumstances indicate that the carrying value may be impaired.

2.2.16 Cash and cash equivalents

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

2.2.17 Treasury shares

Own equity instruments that are reacquired (treasury shares) are recognized at cost and deducted from equity. No gain or loss is recognized in the statement of profit or loss and other comprehensive income on the purchase, sale, issue or cancellation of the Company's own equity instruments. Any difference between the carrying amount and the consideration, if reissued, is recognized in the share premium. Share options exercised during the reporting period are satisfied with treasury shares.

2.2.18 Provisions

Provisions are recognized when the Company has a present obligation (legal or constructive) as a result of a past event, it is probable that an outflow of resources embodying economic benefits will be required to settle the obligation and a reliable estimate can be made of the amount of the obligation. When the Company expects some or all of a provision to be reimbursed, for example, under an insurance contract, the reimbursement is recognized as a separate asset, but only when the reimbursement is virtually certain. The expense relating to a provision is presented in the statement of profit or loss and other comprehensive income net of any reimbursement.

If the effect of the time value of money is material, provisions are discounted using a current pre-tax rate that reflects, when appropriate, the risks specific to the liability. When discounting is used, the increase in the provision due to the passage of time is recognized as a finance cost.

2.2.19 Pension benefits and other post-retirement benefits

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

Past service costs are recognized in profit or loss on the earlier of :

- The date of the plan amendment or curtailment, and
- The date that the Company recognizes related restructuring costs

Net interest is calculated by applying the discount rate to the net defined benefit liability or asset. The Company recognizes the following changes in the net defined benefit obligation under 'cost of sales' and 'selling and administrative expenses' in the separate statement of profit or loss and other comprehensive income:

The Company operate a defined contribution system for some executives and employees, and contributions are recognized as expenses when they provide service.

2.2.20 Share-based payments

The Company provides share-based compensation for employees' work services and is operated in the form of an equity settlement type share-based compensation that grants the share options to employees and officers. The equity settlement type share-based compensation costs are measured at fair value as of the date of granting using an appropriate valuation model.

That cost is recognized in employee benefits expense, together with a corresponding increase in equity (other capital reserves), over the period in which the service and, where applicable, the performance conditions are fulfilled (the vesting period). The cumulative expense recognized for equity-settled transactions at each reporting date until the vesting date reflects the extent to which the vesting period has expired and the Company's best estimate of the number of equity instruments that will ultimately vest. The expense or credit in the statement of profit or loss and other comprehensive income for a period represents the movement in cumulative expense recognized as of the beginning and end of that period.

Service and non-market performance conditions are not taken into account when determining the grant date fair value of awards, but the likelihood of the conditions being met is assessed as part of the Company's best estimate of the number of equity instruments that will ultimately vest. Market performance conditions are reflected within the grant date fair value. Any other conditions attached to an award, but without an associated service requirement, are considered to be non-vesting conditions. Non-vesting conditions are reflected in the fair value of an award and lead to an immediate expensing of an award unless there are also service and/or performance conditions.

No expense is recognized for awards that do not ultimately vest because non-market performance and/or service conditions have not been met. Where awards include a market or non-vesting condition, the transactions are treated as vested irrespective of whether the market or non-vesting condition is satisfied, provided that all other performance and/or service conditions are satisfied.

When the terms of an equity-settled award are modified, the minimum expense recognized is the grant date fair value of the unmodified award, provided the original terms of the award are met. An additional expense, measured as of the date of modification, is recognized for any modification that increases the total fair value of the share-based payment transaction, or is otherwise beneficial to the employee. Where an award is cancelled by the entity or by the counterparty, any remaining element of the fair value of the award is expensed immediately through profit or loss.

The dilutive effect of outstanding options is reflected as additional share dilution in the computation of diluted earnings per share.

2.2.20 Share-based payments (cont'd)

For cash-settled share-based payment transactions that pay cash in exchange for goods or services received, the goods or services received and the liabilities borne in return are measured at fair value and recognized as share-based payment expenses and liabilities during the vesting period. In addition, the fair value of the liabilities are remeasured at the end of each reporting period and on the final settlement date until the liabilities are settled, and any change in fair value are recognized as share-based compensation expense.

2.2.21 Earnings per share

The Company calculates the basic and diluted earnings per share of common stock for continuing operations and net profit (loss) and presents those in the consolidated financial statements. Basic earnings per share is calculated by dividing net profit (loss) attributed to common stock by weighted average number of common stocks outstanding during the reporting period. Diluted earnings per share are calculated by adjusting the net profit (loss) attributable to common stocks and the weighted average number of common stocks outstanding, taking into account the impact of all potential common shares with dilution effects, including share-based compensation granted to employees.

2.2.22 Assets held for sale

The Company classifies assets held for sale if their carrying amounts will be recovered principally through a sale or distribution rather than through continuing use. The criteria for held for sale classification is regarded as met only when the sale is highly probable, and the asset is available for immediate sale in its present condition. Such assets classified as held for sale are measured at the lower of their carrying amount and fair value less costs to sell or to distribute. If the net fair value of the assets recognized for impairment has decreased than the amount of initial recognition, the impairment loss is immediately recognized as profit or loss, and if the net fair value increases, the accumulated impairment loss is recognized up to the limit of the accumulated impairment loss previously recognized.

Property, plant and equipment and intangible assets are not depreciated or amortized once classified as held for sale.

2.3 Effectiveness of new and amended interpretations

The Company applied for the first-time certain standards and amendments, which are effective for annual periods beginning on or after January 1, 2022. The Company has not early adopted any standards, interpretations or amendments that have been issued but are not yet effective.

Amendments to KIFRS 1116 Covid-19 Related Rent Concessions beyond 30 June 2021

The practical expedient that allows to avoid assessing whether a discount on rent that occurs due to a direct result of COVID-19 constitutes a lease modification has been expanded to a lease reduction that affects lease payments to be due before June 30, 2022. Lessors should apply the practical expedients consistently to contracts with similar characteristics under similar circumstances.

This amendment had no impact on the separate financial statements of the Company.

Amendments to KIFRS 1103 Reference to the Conceptual Framework

Although a definition of assets and liabilities to be recognized in a business combination has been revised to reference the revised Conceptual Framework for Financial Reporting, this relevant interpretation would be applied for liabilities and contingent liabilities that would be within the scope of KIFRS 1037 *Provisions, Contingent Liabilities and Contingent Assets* or KIFRS Interpretation 2121 *Levies* as an exception and clarifies that contingent assets do not qualify for recognition at the acquisition date.

This amendment had no impact on the separate financial statements of the Company.

2.3 Effectiveness of new and amended interpretations (cont'd)

Amendment to KIFRS 1016 Proceeds before Intended Use

The amendments require entities recognize the proceeds from selling such items, and the costs of producing those items, in profit or loss before being capable of operating in the manner intended by management, and prohibit entities from deducting from the acquisition cost of property, plant and equipment.

This amendment had no impact on the separate financial statements of the Company.

Onerous Contracts – Costs of Fulfilling a Contract – Amendments to KIFRS 1037

The amendment specifies that when assessing whether a contract is onerous, the scope of cost of fulfilling a contract is an allocation of both incremental costs to fulfill the contract and other costs directly related to the contract fulfillment.

This amendment had no impact on the separate financial statements of the Company.

Annual improvements to KIFRS 2018-2020

These amendments were effective for annual reporting periods beginning on or after January 1, 2022 with earlier adoption permitted. These amendments had no impact on the separate financial statements of the Company.

- KIFRS 1101 First-time Adoption of International Financial Reporting Standards Subsidiary as a firsttime adopter
- KIFRS 1109 Financial Instruments Fees in the '10 per cent' test for derecognition of financial liabilities
- > KIFRS 1041 Agriculture Taxation in fair value measurements

3. Significant accounting judgments, estimates and assumptions

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

Other disclosures about risks and uncertainties that have been exposed to the Company include the objectives and policies of financial risk management, as described in Note 31.

Estimates and assumptions

The key assumptions concerning the future and other key sources of estimation uncertainty at the reporting date, that have a significant risk of causing a material adjustment to the carrying amounts of assets and liabilities within the next financial year, are described below. The Company based its assumptions and estimates on parameters available when the separate financial statements were prepared. Existing circumstances and assumptions about future developments, however, may change due to market changes or circumstances arising beyond the control of the Company. Such changes are reflected in the assumptions when they occur.

(1) Impairment of non-financial assets

The Company assesses, at each reporting date, whether there is an indication that an asset may be impaired. Goodwill and intangible assets with indefinite useful lives are tested for impairment annually, or when circumstances indicate that the carrying value may be impaired. Other non-financial assets are tested for impairment when circumstances indicate that it's carrying amount may not be recoverable. In determining a value in use, management estimates future cash flows to be derived from the asset or CGU and applies the appropriate discount rate to those future cash flows.

3. Significant accounting judgments, estimates and assumptions (cont'd)

(2) Provision for expected credit losses of trade and other receivables

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

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

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

(3) Share-based payments

The Company measures the cost of equity-settled transactions with employees by reference to the fair value of the equity instruments at the date at which they are granted. Estimating fair value for share-based payment transactions requires determination of the most appropriate valuation model, which depends on the terms and conditions of the grant. This estimate also requires determination of the most appropriate inputs to the valuation model including the expected life of the share option, volatility and dividend yield and making assumptions about them. The assumptions and models used for estimating fair value for share-based payment transactions are disclosed in Note 24.

(4) Defined benefit plans (pension benefits)

The cost of the defined benefit pension plan and other post-employment medical benefits and the present value of the pension liability are determined using actuarial valuations. An actuarial valuation involves making various assumptions that may differ from actual developments in the future. These include the determination of the discount rate, future salary increases, mortality rates and future pension increases. Due to the complexities involved in the valuation and its long-term nature, a defined benefit liability is highly sensitive to changes in these assumptions. All assumptions are reviewed at each reporting date.

(5) Fair value measurement of financial instruments

When the fair values of financial assets and financial liabilities recorded in the statement of financial position cannot be measured based on quoted prices in active markets, their fair value is measured using valuation techniques including the discounted cash flow (DCF) model. The inputs to these models are taken from observable markets where possible, but where this is not feasible, a degree of judgement is required in establishing fair values. Judgements include considerations of inputs such as liquidity risk, credit risk and volatility. Changes in assumptions relating to these factors could affect the reported fair value of financial instruments.

(6) Leases - Estimating the incremental borrowing rate

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

3. Significant accounting judgments, estimates and assumptions (cont'd)

(7) Lease term

When calculating the lease term, the Company considers all facts and circumstances that create an economic incentive to exercise an extension option or not to exercise a termination option. The period covered by the extension option (or the period covered by the termination option) is included in the lease term only if it is reasonably certain that the lessee will (or will not) exercise the extension option. The lease term is reassessed when the option is exercised (not exercised) or obligated to exercise the option (not exercised). Only when a significant event occurs or when significant change in circumstances that affects the calculation of the lease period is within the control of the lessee, the Company changes its judgment that it is quite certain to exercise (or not to exercise) the extension option.

4. Standards issued but not yet effective

The new and amended standards and interpretations that are issued, but not yet effective, up to the date of issuance of the Company's financial statements are disclosed below. At the date of authorization of these financial statements, the Company has not applied the following new and revised KIFRS Standards that have been issued but are not yet effective.

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

The classification of liabilities as current or non-current is based on rights that are in existence at the end of the reporting period, and the classification is unaffected by the right to defer the liability settlement or management's expectations. The settlement of liability includes the transfer of an equity instrument, unless the option to settle an equity instrument in a compound financial instrument meets the definition of an equity instrument and is recognized separately from the liability.

The amendments are effective for annual reporting periods beginning on or after January 1, 2024 and can be applied early. The amendments are not expected to have a material impact on the Company.

Disclosure of Accounting Policies - Amendments to KIFRS 1001

It defines 'material' accounting policies and requires disclose. The amendments are applicable for annual reporting periods beginning on or after January 1, 2023 and can be applied early. The amendments are not expected to have a material impact on the Company.

Definition of Accounting Estimates - Amendments to KIFRS 1008

It defines accounting estimates and clarify the distinction between the accounting estimates and changes in accounting policies. The amendments are effective for annual reporting periods beginning on or after January 1, 2023 and can be applied early. The amendments are not expected to have a material impact on the Company.

Deferred Tax related to Assets and Liabilities arising from a Single Transaction - Amendments to KIFRS 1012

The exception to the initial recognition of an asset or liability transaction, it added a requirement that the transaction does not create a same temporary difference deduction and same temporary difference addition at the time of the transaction. The amendments are effective for annual reporting periods beginning on or after January 1, 2023 and can be applied early. The amendments are not expected to have a material impact on the Company.

KIFRS 1117 Insurance Contracts

Insurance liabilities are measured at market value using a discount rate at the end of each fiscal year, not at the cost evaluation, and insurance revenue is recognized on an accrual basis, not at the cash basis. The amendments are effective for annual reporting periods beginning on or after January 1, 2023 and the Company which applies KIFRS 1109 'Financial assets and liability' can be applied early. The amendments are not expected to have a material impact on the Company.

5. Financial assets and liabilities

Financial assets as at December 31, 2022 and 2021 are as follows (Korean won in thousands):

		202	22	
		Financial assets at fair value through		
	Financial assets at	other		
	fair value through profit or loss	comprehensive income	Financial assets at amortized cost	Total
Current assets:				
Cash and cash equivalents	₩ -	₩ -	₩ 211,047,956	₩ 211,047,956
Short-term financial assets	315,168,804	-	1,900,000	317,068,804
Trade and other receivables	19,296,638	-	946,789,104	966,085,742
Derivative financial assets	44,681,881	-	-	44,681,881
Other current financial assets	-	-	158,768,681	158,768,681
Sub-total	379,147,323	-	1,318,505,741	1,697,653,064
Non-current assets:				
Long-term financial assets	18,028,229	19,661,219	80,988,984	118,678,432
Trade and other receivables	-	-	4,908,674	4,908,674
Derivative financial assets	96,968,092	-	-	96,968,092
Other non-current financial assets	-	-	32,052,489	32,052,489
Sub-total	114,996,321	19,661,219	117,950,147	252,607,687
Total	₩ 494,143,644	₩ 19,661,219	₩ 1,436,455,888	₩ 1,950,260,751

				20	21			
		ncial assets at value through	fair	ncial assets at value through other mprehensive	Fina	ncial assets at		
		rofit or loss		income	an	nortized cost		Total
Current assets:								
Cash and cash equivalents	₩	-	₩	-	₩	63,870,020	₩	63,870,020
Short-term financial assets		557,091,074		-		6,620,000		563,711,074
Trade and other receivables		-		-		823,596,710		823,596,710
Derivative financial assets		65,325,132		-		-		65,325,132
Other current financial assets		-		-		16,674,298		16,674,298
Sub-total		622,416,206		-		910,761,028		1,533,177,234
Non-current assets:								
Long-term financial assets		1,370,055		22,415,853		85,693,500		109,479,408
Trade and other receivables		-		-		2,147,733		2,147,733
Derivative financial assets		50,038,587		-		-		50,038,587
Other non-current financial assets		-		-		34,489,008		34,489,008
Sub-total		51,408,642		22,415,853		122,330,241		196,154,736
Total	₩	673,824,848	₩	22,415,853	₩	1,033,091,269	₩	1,729,331,970

5. Financial assets and liabilities (cont'd)

Financial liabilities as at December 31, 2022 and 2021 are as follows (Korean won in thousands):

						2022			
	at fa	ancial liabilities iir value through profit or loss		dge designated ancial liabilities		ncial liabilities at mortized cost	0	ther financial liabilities	Total
Current liabilities:									
Trade and other payables	₩	57,282,069	₩	-	₩	139,360,649	₩	- ₩	196,642,718
Short-term borrowings		-		-		899,681,398		-	899,681,398
Current portion of bond payable		-		-		149,920,649		-	149,920,649
Derivative financial liabilities		202,022,753		-		-		-	202,022,753
Current portion of lease liabilities (*1)		-		42,444,241		-		20,725,543	63,169,784
Other current financial liabilities		260,081		-		-		2,934,058	3,194,139
Sub-total		259,564,903		42,444,241		1,188,962,696		23,659,601	1,514,631,441
Non-current liabilities:									
Bonds payable		-		-		917,702,041		-	917,702,041
Derivative financial liabilities		113,607		-		-		-	113,607
Lease liabilities (*1)		-		289,247,130		-		60,011,138	349,258,268
Other non-current financial liabilities		260,081		-		35,279,697		-	35,539,778
Sub-total		373,688		289,247,130		952,981,738		60,011,138	1,302,613,694
Total	₩	259,938,591	₩	331,691,371	₩	2,141,944,434	₩	83,670,739 ₩	2,817,245,135

(*1) The effective part of cash flow hedge amount of #15,246,949 thousand (including the income tax effect) is recognized in other comprehensive loss.

						2021			
	at fai	ncial liabilities r value through rofit or loss		dge designated ancial liabilities		ncial liabilities at mortized cost	0	ther financial liabilities	Total
Current liabilities:									
Trade and other payables	₩	21,856,563	₩	-	₩	169,035,995	₩	- ₩	190,892,558
Short-term borrowings		-		-		796,493,518		-	796,493,518
Current portion of bond payable		-		-		199,953,852		-	199,953,852
Derivative financial liabilities		16,253,939		-		-		-	16,253,939
Current portion of lease liabilities (*1)		-		40,006,633		-		20,418,233	60,424,866
Other current financial liabilities		-				-		284,468	284,468
Sub-total		38,110,502		40,006,633		1,165,483,365		20,702,701	1,264,303,201
Non-current liabilities:									
Bonds payable		-		-		1,066,657,697		-	1,066,657,697
Lease liabilities (*1)		-		310,050,758		-		28,401,443	338,452,201
Other non-current financial liabilities		392,192		-		34,173,890		-	34,566,082
Sub-total		392,192		310,050,758		1,100,831,587		28,401,443	1,439,675,980
Total	₩	38,502,694	₩	350,057,391	₩	2,266,314,952	₩	49,104,144 ₩	2,703,979,181

(*1) The effective part of cash flow hedge amount of #22,559,636 thousand (including the income tax effect) is recognized in other comprehensive loss.

5. Financial assets and liabilities (cont'd)

Profit or loss details of financial instruments for the years ended December 31, 2022 and 2021 are as follows (Korean won in thousands):

				2022			
	Financial assets at fair value through profit or loss	Financial assets at fair value through other comprehensive income	Financial assets at amortized cost	Financial liabilities designated as hedge accounting	Financial liabilities at amortized cost	Other financial liabilities	Total
Profit or loss:							
Interest income (expense)	₩ -	₩ -	₩ 2,844,367	₩ (8,402,712)	₩ (46,472,970)	₩ (1,572,442)	₩ (53,603,757)
Dividend income (*1)	-	188,066	-	-	-	-	188,066
Reversal of allowance for							
bad debt	-	-	42,326	-	-	-	42,326
Gain from valuation of financial instruments	2,822,299						0 000 000
Gain from transactions of	2,022,299	-	-	-	-	-	2,822,299
financial instruments	25,558,611	-	-	-	-	-	25,558,611
Financial guarantee							
income	-	-	-	-		723,766	723,766
Sub-total	28,380,910	188,066	2,886,693	(8,402,712)	(46,472,970)	(848,676)	(24,268,689)
Other comprehensive							
income:							
Loss from valuation of		(2 115 550)		(15.046.040)			(17 262 600)
financial instruments (*2) Total		(2,115,559)		(15,246,949)			(17,362,508)
IUlai	₩ 28,380,910	₩ (1,927,493)	₩ 2,886,693	₩ (23,649,661)	₩ (46,472,970)	₩ (848,676)	₩ (41,631,197)

(*1) Dividend income from investments in subsidiaries, associates and joint ventures were excluded.

(*2) Amount is net of income tax effect.

				2021			
	Financial assets at fair value through profit or loss	Financial assets at fair value through other comprehensive income	Financial assets at amortized cost	Financial liabilities designated as hedge accounting	Financial liabilities at amortized cost	Other financial liabilities	Total
Profit or loss:							
Interest income (expense)	₩ -	₩ -	₩ 3,351,563	₩ (9,364,024)	₩ (29,751,919)	₩ (1,281,627)	₩ (37,046,007)
Dividend income (*1)	-	223,855	-	-	-	-	223,855
Bad debt expense	-	-	(3,083,000)	-	-	-	(3,083,000)
Gain from valuation of							
financial instruments	775,317	-	-	-	-	-	775,317
Gain from transactions of	10 017 074						40.047.074
financial instruments	10,617,374	-	-	-	-	-	10,617,374
Financial guarantee income	_			-	-	308,548	308,548
Sub-total	11,392,691	223,855	268,563	(9,364,024)	(29,751,919)	(973,079)	(28,203,913)
Other comprehensive	11,392,091	223,033	200,505	(3,304,024)	(23,751,919)	(313,019)	(20,203,913)
income: Gain(loss) from valuation of							
financial instruments (*2)	-	2,845,200	-	(22,559,636)	-	-	(19,714,436)
Total	₩ 11,392,691	₩ 3,069,055	₩ 268,563	₩ (31,923,660)	₩ (29,751,919)	₩ (973,079)	₩ (47,918,349)

(*1) Dividend income from investments in subsidiaries, associates and joint ventures were excluded.

(*2) Amount is net of income tax effect.

Other gain or loss by financial instruments for the years ended December 31, 2022 and 2021 are as follows (Korean won in thousands):

		2022		2021						
	Financial assets/			Financial assets/						
	liabilities at fair value through	alue through liabilities at		liabilities at fair value through	Financial assets/ liabilities at					
	profit or loss	amortized cost	Total	profit or loss	amortized cost	Total				
Gain (loss) on foreign currency										
translation	₩ -	₩ 48,736,828	₩ 48,736,828	₩ -	₩ (1,452,921)	₩ (1,452,921)				
Foreign exchange gain (loss)	-	(128,969,291)	(128,969,291)	-	(67,848,205)	(67,848,205)				
Derivative valuation gain (loss)	(110,524,975)	-	(110,524,975)	81,327,180	-	81,327,180				
Derivative transaction gain (loss)	135,214,360	-	135,214,360	111,846,558	-	111,846,558				
Share-based compensation										
costs	(127,971)	-	(127,971)	(392,192)	-	(392,192)				
Total	₩ 24,561,414	₩ (80,232,463)	₩ (55,671,049)	₩ 192,781,546	₩ (69,301,126)	₩ 123,480,420				

5. Financial assets and liabilities (cont'd)

Details of restricted bank deposits as of December 31, 2022 and 2021 are as follows (Korean won in thousands):

	Financial institution	2	2022		2021	Description
Long-term financial assets	Woori Bank and others	₩	17,000	₩	17,000	Maintenance of checking account

Details of cash and cash equivalents as of December 31, 2022 and 2021 are as follows (Korean won in thousands):

		2022		2021
Cash	₩	-	₩	1,160
Ordinary deposit and others		211,047,956		63,868,860
Total	₩	211,047,956	₩	63,870,020

6. Trade and other receivables

Trade and other receivables as of December 31, 2022 and 2021 are as follows (Korean won in thousands):

	2022	2021
Current assets:		
Trade receivables	₩ 904,271,685	₩ 774,622,652
Less: allowance for doubtful accounts	(646,144)	(688,469)
Other accounts receivables	60,989,787	48,515,001
Finance lease receivables	1,470,414	1,147,526
Total	₩ 966,085,742	₩ 823,596,710
Non-current assets:		
Finance lease receivables	₩ 2,144,390	₩ 2,147,733
Long-term other accounts receivables	2,764,284	-
	₩ 4,908,674	₩ 2,147,733

Changes in allowance for doubtful accounts for trade and other receivables for the years ended December 31, 2022 and 2021 are as follows (Korean won in thousands):

		2022		2021
As of January 1	₩	(688,469)	₩	(438,846)
Bad debt expense		-		(820,623)
Reversal of allowance for bad debt		42,325		-
Write-off		-		571,000
As of December 31	₩	(646,144)	₩	(688,469)

6. Trade and other receivables (cont'd)

For trade receivables classified as financial assets at amortized cost, the Company applies a simplified method of recognizing the expected credit losses for the entire period as an allowance for doubtful accounts, and the expected credit losses include forward-looking information. To measure the amount, the Company classified trade receivables based on credit risk and overdue period and calculated the expected loss rate based on actual credit loss experience over the past three years. As a result, the allowance for doubtful accounts as of the end of the current term is as follows:

		2022					
	Expected credit loss	Tot	al receivable		owance for otful account		
Collective assessment							
Not past due	0.05%	₩	748,854,013	₩	(366,774)		
Past due							
≤ 3 months	0.71%		17,628,334		(125,755)		
3 ~ 6 months	6.84%		2,077,266		(142,073)		
6 ~ 9 months	47.68%		-		-		
9 ~ 12 months	77.07%		-		-		
> 12 months	100.00%		11,542		(11,542)		
Sub-total			19,717,142		(279,370)		
Individual assessment	0.00%		116,403,891		-		
Total		₩	884,975,046	₩	(646,144)		

The Company conducts an individual assessment for the receivables with collateral and joint guarantors and performs a collective credit analysis according to expected credit losses for unsecured receivables. Meanwhile, other receivables other than trade receivables are individually evaluated to measure expected credit losses. There is no loss allowance for the years ended December 31, 2022 and December 31, 2021.

7. Inventories

Inventories as of December 31, 2022 and 2021 are as follows (Korean won in thousands):

		2022	2021		
Merchandise	₩	122,548,795	₩	106,041,158	
Merchandise in transit		247,247,462		324,774,497	
Supplies		5,610,815		6,328,930	
Total	₩	375,407,072	₩	437,144,585	

No valuation loss on inventories was recognized in cost of sales for the years ended December 31, 2022 and December 31, 2021. The Company carries comprehensive insurance to Samsung Fire & Marine Insurance with its inventories against fire and other casualty losses for up to #433,362,281 thousand and #291,804,262 thousand as of December 31, 2022 and 2021, respectively.

8. Other Financial assets

Other financial assets as of December 31, 2022 and 2021 are as follows (Korean won in thousands):

	2022			2021
Other current financial assets:				
Short-term deposits	\mathbb{W}	158,768,681	₩	16,674,298
Other non-current financial assets:				
Long-term deposits	\mathbb{W}	32,052,489	₩	34,489,008

Financial assets and financial liabilities are offset and the net amount is reported in the separate statements of financial position if there is a currently enforceable legal right to offset the recognized amounts and there is an intention to settle on a net basis, to realize the assets and settle the liabilities simultaneously. W33,673,704 thousand of the current year short-term deposits were offset against other payables.

9. Other assets

Other current assets and other non-current assets as of December 31, 2022 and 2021 are as follows (Korean won in thousands):

		2022		2021
Other current assets: Advanced payments	₩	22,485,775	₩	19,073,187
Prepaid expenses		3,863,401		4,031,947
Prepaid value added taxes		12,151,258		36,634,968
Total	₩	38,500,434	₩	59,740,102
Other non-current assets:				
Long-term prepaid expenses	₩	33,487,500	₩	30,612,500

10. Financial assets

Financial assets as of December 31, 2022 and 2021 are as follows (Korean won in thousands):

		2022		2021
Current:				
Financial assets at amortized cost	₩	1,900,000	₩	6,620,000
Financial assets at fair value through profit or loss		315,168,804		557,091,074
Total	₩	317,068,804	₩	563,711,074
Non-current:				
Financial assets at amortized cost	₩	80,988,984	₩	85,693,500
Financial assets at fair value through other comprehensive income		19,661,219		22,415,853
Financial assets at fair value through profit or loss		18,028,229		1,370,055
Total	₩	118,678,432	₩	109,479,408

Financial assets at amortized cost as of December 31, 2022 and 2021 are as follows (Korean won in thousands):

	Description	Interest rate (%)		2022	2021		
Current:							
Operating loans to gas stations	Operating capital and others	-	₩	1,900,000	₩	6,620,000	
Non-current:							
Long-term financial assets	Maintenance of checking account	-	₩	17,000	₩	17,000	
Operating loans to gas stations	Operating capital and others	-		84,523,326		89,758,616	
Employees' loans	Housing loans	2.3		101,071		56,786	
S	Sub-total			84,641,397		89,832,402	
Less: pres	ent value discount			(1,772,078)		(2,258,567)	
Less: allowance f	or doubtful accounts (*	1)		(1,880,335)		(1,880,335)	
	Total		₩	80,988,984	₩	85,693,500	

(*1) Loans such as operating loans to gas stations are secured, and the expected credit losses are measured by individual assessment.

10. Financial assets (cont'd)

Meanwhile, the Company recognizes the difference between the present value and the nominal value of operating loans as a deduction of sales.

Current financial assets at fair value through profit or loss as of December 31, 2022 and 2021 are as follows (Korean won in thousands):

	2022	2021
MMW and others	₩ 315,168,804	₩ 557,091,074

Non-current financial assets as of December 31, 2022 and 2021 are as follows (Korean won in thousands):

			202		2021		
	Equity ownership		Acquisition	-	ook value /		look value /
	(%)		cost	fa	ir value (*3)	12	air value (*3)
Financial assets at fair value through							
other comprehensive income (FVOCI) (*1)							
Hanil Holdings Co., Ltd. (*2)	0.26	₩	1,586,720	₩	869,011	₩	1,015,200
Hanil Cement Co., Ltd. (*2)	0.26		2,181,746		2,135,911		3,850,140
Bloom Energy (*2)	0.20		5,597,994		8,076,917		8,665,996
Kornatus Co., Ltd. – Convertible Preference Shares ("CPS")	4.89		1,000,053		1,000,053		1,000,053
Korea Business Finance Co., Ltd. (*2)	10.34		3,000,000		4,980,600		4,737,000
SK TIC (*2)	1.62		2,852,212		2,298,337		2,847,074
Ip Sung Co., Ltd.	12.40		299,992		299,992		299,992
Others	-		398		398		398
Sub-total			16,519,115		19,661,219		22,415,853
Financial assets at fair value through profit or loss (FVPL)							
Korea LPG Association	50.00		70,000		70,000		70,000
Safeschoolbus Co., Ltd Redeemable Convertible Preference Shares ("RCPS")	6.00		300,001		300,001		300,001
Hylium Industries, Inc RCPS	2.54		1,000,054		1,000,054		1,000,054
EverBest Medellian Private Equity Investment Limited (*4, *5)	92.59		5,000,000		5,161,983		-
Gridwiz Co., Ltd – RCPS (*4)	5.76		8,501,260		11,496,191		-
Sub-total			14,871,315		18,028,229		1,370,055
Total		₩	31,390,430	₩	37,689,448	₩	23,785,908

(*1) As of December 31, 2022, equity securities to be held for the long-term for the Company's strategic purpose are classified as FVOCI.

(*2) The Company assessed financial instruments for which an active transaction market exists or fair value can be assessed reliably. Differences of W2,115,559 thousand between the book value and fair value measured based on quoted prices in active markets was recorded in other comprehensive income after deducting the income tax effect of W639,075 thousand from W2,754,634 thousand.

(*3) For financial assets measured at fair value through other comprehensive income that are non-listed shares where no active trade market exists, fair value cannot be reliably measured, or there is no material difference between fair value and acquisition costs, the Company determined acquisition cost is the appropriate fair value.

(*4) The Company evaluated financial instruments where the fair value can be reliably evaluated, and the difference from the book value of \mathbb{W} 3,156,914 thousand was recorded as current year profit.

(*5) According to the articles of incorporation of EverBest Medellian Private Equity Investment Limited, the Company has no power over the investee and no ability to participate in financial and operating policies. Hence, it is classified as a financial instrument as it is considered as no control or significant influence over the investee.

10. Financial assets (cont'd)

Changes in financial assets for the years ended December 31, 2022 and 2021 are as follows (Korean won in thousands):

					2022	2					
	Jan. 1		Increase		Decrease	F	Revaluation	(Others (*1)		Dec. 31
₩	6,620,000	₩	300,000	₩	(11,863,319)	₩	-	₩	6,843,319	₩	1,900,000
	557,091,074		-		(241,587,655)		(334,615)		-		315,168,804
₩	563,711,074	₩	300,000	₩	(253,450,974)	₩	(334,615)	₩	6,843,319	₩	317,068,804
₩	85,693,500	₩	1,650,000	₩	(5,715)	₩	-	₩	(6,348,801)	₩	80,988,984
	22,415,853		-		-		(2,754,634)		-		19,661,219
	1,370,055		5,000,000		-		3,156,914		8,501,260		18,028,229
₩	109,479,408	₩	6,650,000	₩	(5,715)	₩	402,280	₩	2,152,459	₩	118,678,432
	₩	 ₩ 6,620,000 557,091,074 ₩ 563,711,074 ₩ 85,693,500 22,415,853 1,370,055 	 ₩ 6,620,000 ₩ 557,091,074 ₩ 563,711,074 ₩ ₩ 85,693,500 ₩ 22,415,853 1,370,055 	₩ 6,620,000 ₩ 300,000 557,091,074 - - ₩ 563,711,074 ₩ 300,000 ₩ 85,693,500 ₩ 1,650,000 22,415,853 - - 1,370,055 5,000,000	₩ 6,620,000 ₩ 300,000 ₩ 557,091,074 - - - ₩ 563,711,074 ₩ 300,000 ₩ ₩ 85,693,500 ₩ 1,650,000 ₩ 22,415,853 - - - 1,370,055 5,000,000 - -	Jan. 1 Increase Decrease ₩ 6,620,000 ₩ 300,000 ₩ (11,863,319) 557,091,074 - (241,587,655) ₩ 563,711,074 ₩ 300,000 ₩ (253,450,974) ₩ 85,693,500 ₩ 1,650,000 ₩ (5,715) 22,415,853 - - - 1,370,055 5,000,000 - -	₩ 6,620,000 ₩ 300,000 ₩ (11,863,319) ₩ 557,091,074 - (241,587,655) ₩ (253,450,974) ₩ ₩ 563,711,074 ₩ 300,000 ₩ (253,450,974) ₩ ₩ 85,693,500 ₩ 1,650,000 ₩ (5,715) ₩ 22,415,853 - - - - - 1,370,055 5,000,000 - - -	Jan. 1 Increase Decrease Revaluation ₩ 6,620,000 ₩ 300,000 ₩ (11,863,319) ₩ - 557,091,074 - (241,587,655) (334,615) ₩ 563,711,074 ₩ 300,000 ₩ (253,450,974) ₩ (334,615) ₩ 85,693,500 ₩ 1,650,000 ₩ (5,715) ₩ - 22,415,853 - - (2,754,634) 1,370,055 5,000,000 - 3,156,914	Jan. 1 Increase Decrease Revaluation 0 ₩ 6,620,000 ₩ 300,000 ₩ (11,863,319) ₩ - ₩ 557,091,074 - (241,587,655) (334,615) ₩ ₩ 563,711,074 ₩ 300,000 ₩ (253,450,974) ₩ (334,615) ₩ ₩ 85,693,500 ₩ 1,650,000 ₩ (5,715) ₩ - ₩ 22,415,853 - - (2,754,634) - 3,156,914 -	Jan. 1 Increase Decrease Revaluation Others (*1)	Jan. 1 Increase Decrease Revaluation Others (*1)

(*1) Others include changes in current/non-current classification, changes in the present value discount, foreign currency valuation.

(*2) Increase in the financial assets is presented as net amount including the decreases.

						20	21					
		Jan. 1		Increase		Decrease	R	evaluation	(Others (*1)		Dec. 31
Current:												
Financial assets at amortized cost	₩	2,136,000	₩	5,300,000	₩	(14,536,485)	₩	-	₩	13,720,485	₩	6,620,000
Financial assets at fair value												
through profit of loss (*2)		576,642,234		-		(20,326,477)		775,317		-		557,091,074
Total	₩	578,778,234	₩	5,300,000	₩	(34,862,962)	₩	775,317	₩	13,720,485	₩	563,711,074
Non-current:												
Financial assets at amortized cost	₩	91,615,372	₩	8,729,858	₩	(5,714)	₩	(2,262,377)	₩	(12,383,639)	₩	85,693,500
Financial assets at fair value												
through other comprehensive												
income		18,662,291		-		-		3,753,562		-		22,415,853
Financial assets at fair value												
through profit of loss		1,370,055		102,086		(102,086)		-		-		1,370,055
Total	₩	111,647,718	₩	8,831,944	₩	(107,800)	₩	1,491,185	₩	(12,383,639)	₩	109,479,408

(*1) Others include changes in current/non-current classification, changes in the present value discount, foreign currency valuation.

(*2) Increase in the financial assets is presented as net amount including the decreases.

10. Financial assets (cont'd)

De	etail	Description
Amounts invest	ed	KRW 8,501 million
Number of shares invested (share)		Registered Redeemable Convertible Preference Shares ("RCPS") with voting right. 15,026 shares
Price per share	(in Korean Won)	KRW 565,770
Expected Perio	d	10 years from issue date
Conversion condition	Conversion period	From the day after the issue date to the day before the expiration of the expected period
	Conversion ratio	1:1 The conversion ratio is the issue price that is lower than issue price of RCPS and is adjusted when certain conditions are met, such as IPO (stock offering), paid-in capital increase, stock dividend, and capital Increase without consideration.
Repayment condition	Repayment period	From the day 4 years have elapsed from the issue date to the day before the expiration of the expected period.
	Repayment price	Acquisition price per share* 5% annual compound - dividends paid
Profit dividends		1.0% per year based on the par value of the issue price (cumulative, participating)

Details of Gridwiz's Redeemable Convertible Preference Shares ("RCPS") are as follows.

11. Investments in subsidiaries, associates and joint ventures

Investments in subsidiaries, associates and joint ventures as of December 31, 2022 and 2021 are as follows (Korean won in thousands):

				2022		2		2021
Subsidiaries and associates	Country of domicile	Year-end date	Principal activities	Equity ownership (%)		Book value	Equity ownership (%)	Book value
Investments in subsidiaries:			-					
Ulsan GPS Co., Ltd. (*1)	Korea	12.31	Electricity	100.00	₩	452,784,938	100.00	₩ 347,784,938
SK Gas USA Inc.	US	12.31	Sales of liquefied petroleum gas	100.00		51,188,098	100.00	51,188,098
SK Gas International Pte. Ltd.	Singapore	12.31	Sales of liquefied petroleum gas	100.00		99,569,393	100.00	64,952,441
Total					₩	603,542,429		₩ 463,925,477
Investments in joint ventures	:							
Dangjin Eco Power Co., Ltd. (*2,3)	Korea	12.31	Electricity	66.00		48,835,671	66.00	48,835,671
Korea Energy Terminal Co., Ltd. (*3)	Korea	12.31	Construction and operation of tank terminals	47.58		84,441,100	47.58	84,441,100
KD Eco Hub Co., Ltd. (*3)	Korea	12.31	Rent and management of pipeline	40.00		400,000	-	-
Lotte SK Eneroute Co., Ltd. (*3)	Korea	12.31	Supply/sale of hydrogen	45.00		1,350,000	-	-
G-Energy Corp. (*3)	Korea	12.31	Coal supply	50.00		100,000	50.00	100,000
Sub-total						135,126,771		133,376,771
Investments in associates:						<u> </u>		
Global Opportunities Fund	Cayman Islands	12.31	Finance	20.63		1,130,883	20.63	1,130,883
Weonil Energy Co., Ltd.	Korea	12.31	LPG gas station	29.00		2,610,000	29.00	2,610,000
SK Advanced Co., Ltd.	Korea	12.31	PDH manufacturing	45.00		184,216,588	45.00	184,216,588
Bitgoeul Eco Energy Co., Ltd	Korea	12.31	Construction and operation of fuel cell power plant	29.00		4,640,000	29.00	4,640,000
SK Holdco Pte. Ltd. (*6)	Singapore	12.31	Investments	-		-	36.49	59,593,096
Gridwiz Co., Ltd. (*7)	Korea	12.31	Power demand management service	19.95		13,000,000	19.95	13,000,000
Gridwiz Co., Ltd. - Preferred share (*4)	Korea	12.31	Power demand management service	-		-	5.76	8,501,260
KOHYGEN Corp.(*5)	Korea	12.31	Hydrogen fueling infrastructure operation	9.05		2,185,000	9.50	950,000
Goseong Green Power Co., Ltd. (*5)	Korea	12.31	Coal-fired power plant construction and operation	19.00		172,140,000	19.00	172,140,000
Sub-total			·			379,922,471		446,781,827
Total					₩	515,049,242		₩ 580,158,598

(*1) The Company's 100% equity ownership in the entity include 0.52% equity ownership to be acquired when the put options held by Korea Development Bank are exercised.

(*2) The Company's 66% equity ownership in the entity include 11.13% equity ownership to be acquired when the put options held by Korea Development Bank are exercised.

(*3) The Company classified the joint arrangement that it has joint control of as a joint venture since the arrangement has been structured through a separate vehicle and the parties holding joint control hold the rights to the net assets of the joint arrangement.

(*4) This is redeemable convertible preferred shares of Gridwiz Co., Ltd, and the Company reclassified the preferred share of Gridwiz Co., Ltd. as a financial asset measured at Fair Value through Profit or Loss (FVPL) during the current period. (See Note 10)

(*5) The Company classified it as investments in associates because it can exercise voting rights on the board of directors of the investee although its shareholding is less than 20%.

(*6) The Company signed a sale contract during the current period and classified it as a non-current asset held for sale. (See note 33)

(*7) The equity ratio calculated by combining the issued common stocks and preferred stocks is 19.95%, and the equity ratio calculated based on the issued common stocks is 32.91%.

11. Investments in subsidiaries, associates and joint ventures (cont'd)

Changes in investments in subsidiaries, associates and joint ventures for the years ended December 31, 2022 and 2021 are as follows (Korean won in thousands):

	2022												
Associates		Jan. 1	A	dditions (*1)		Others (*2)		Dec. 31					
Investments in subsidiaries:													
Ulsan GPS Co., Ltd.	₩	347,784,938	₩	105,000,000	₩	-	₩	452,784,938					
SK Gas USA Inc. SK Gas International		51,188,098		-		-		51,188,098					
Pte. Ltd.		64,952,441		34,616,952		-		99,569,393					
Total	₩	463,925,477	₩	139,616,952	₩	-	₩	603,542,429					
Investments in associates a Dangjin Eco Power	nd joir	t ventures:											
Co., Ltd.		48,835,671		-		-		48,835,671					
Korea Energy Terminal Co., Ltd. Bitgoeul Eco Energy		84,441,100		-		-		84,441,100					
Co., Ltd. Global Opportunities		4,640,000		-		-		4,640,000					
Fund		1,130,883		-		-		1,130,883					
Weonil Energy Co., Ltd.		2,610,000		-		-		2,610,000					
SK Advanced Co., Ltd.		184,216,588		-		-		184,216,588					
SK Holdco Pte. Ltd.		59,593,096		-		(59,593,096)		-					
Gridwiz Co., Ltd. Gridwiz Co., Ltd.		13,000,000		-		-		13,000,000					
- Preferred share		8,501,260		-		(8,501,260)		-					
KD Eco Hub Co., Ltd. Lotte SK Eneroute Co.,		-		400,000		-		400,000					
Ltd.		-		1,350,000		-		1,350,000					
G-Energy Corp.		100,000		-		-		100,000					
KOHYGEN Corp. Goseong Green Power		950,000		1,235,000		-		2,185,000					
Co., Ltd.	117	172,140,000		-	117	-	117	172,140,000					
Total	₩	580,158,598	₩	2,985,000	₩	(68,094,356)	₩	515,049,242					

(*1) It is the amount of acquisition due to paid-in capital increase.

(*2) The Company signed a sale contract during the current period and classified it as a non-current asset held for sale. (See note 33). Also, during the current period, the preferred shares of Gridwis Co., Ltd are reclassified as a financial asset measured at Fair Value through Profit or Loss (FVPL).

						2021				
Associates		Jan. 1	A	dditions (*1)		Disposal		Others (*2)		Dec. 31
Investments in subsidiaries: Ulsan GPS Co., Ltd.	₩	187,784,938	₩	160,000,000	₩	-	₩	-	₩	347,784,938
SK Gas USA Inc.		26,823,848		24,364,250		-		-		51,188,098
SK Gas International Pte. Ltd.		14,753,825		50,198,616		_				64,952,441
Total	₩	229,362,611	₩	234,562,866	₩	-	₩	-	₩	463,925,477
Investments in associates a	nd jo	pint ventures:								
SK D&D Co., Ltd.	₩	151,371,527	₩	-	₩	(202,471,527)	₩	51,100,000	₩	-
SK D&D Co., Ltd. - Preferred share Dangjin Eco Power		51,100,000		-		-		(51,100,000)		-
Co., Ltd.		48,835,671		-		-		-		48,835,671
Korea Energy Terminal Co., Ltd. Bitgoeul Eco Energy		45,342,650		39,098,450		-		-		84,441,100
Co., Ltd. Global Opportunities		29,000		4,611,000		-		-		4,640,000
Fund		1,130,883		-		-		-		1,130,883
Weonil Energy Co., Ltd.		2,610,000		-		-		-		2,610,000
SK Advanced Co., Ltd.		184,216,588		-		-		-		184,216,588
SK Holdco Pte. Ltd.		59,593,096		-		-		-		59,593,096
Gridwiz Co., Ltd.		13,000,000		-		-		-		13,000,000
Gridwiz Co., Ltd. - Preferred share		8,501,260		-		-		-		8,501,260
G-Energy Corp.		-		100,000		-		-		100,000
KOHYGEN Corp.		-		950,000		-		-		950,000
Goseong Green Power Co., Ltd.		1,900,000		170,240,000				-		172,140,000
Total	₩	567,630,675	₩	214,999,450	₩	(202,471,527)	₩	-	₩	580,158,598

11. Investments in subsidiaries, associates and joint ventures (cont'd)

(*1) It is the amount of acquisition due to paid-in capital increase.

(*2) During the current period, all convertible preferred stocks of SK D&D Co., Ltd. were converted to common stocks.

11. Investments in subsidiaries, associates and joint ventures (cont'd)

Impairment test for the non-financial assets

The Company assesses assets excluding goodwill, at each reporting date, to determine whether there is an indication that previously recognized impairment losses no longer exist or have decreased. If such indication exists, the Company estimates the asset's or CGU's recoverable amount.

The Company decided that there was an indication of impairment to the investment in subsidiary because Ulsan GPS Co., Ltd. is unable to generate separate operating cash flows until the construction of LPG/LNG combined thermal power plant under construction is completed and the normal operation is started.

Accordingly, the Company performed an impairment assessment on the investment in subsidiary by comparing the carrying amount of KRW 452,785 million to the investment stocks on Ulsan GPS Co., Ltd., with the value in use based on the discounted cash flow forecast, and the recoverable amount of the investment stocks was evaluated.

Key assumptions used in calculation of value in use

The following factors are sensitive to the calculation of the value in use of the investment in subsidiary, Ulsan GPS Co., Ltd.

- ① Based on the 10th Basic Plan for Electricity Demand and Supply, cash flows estimated based on the 30-year financial budget of the Combined Cycle Power Plant (LNG / LPG) project period are used.
- ② Future cash flows are estimated based on past experience and the mid- to long-term business plan proposed by the Company.
- ③ When determining the recoverable amount, the after-tax discount rate was applied to the weighted average capital cost (5.41%).

The main assumptions used in the calculation of value in use reflect management's assessment of the industry's future, which is determined by considering external and internal information. However, it is determined that the related total carrying amount will not exceed the total recoverable amount due to reasonably possible changes in the key assumptions but may be offset by changes in the key assumptions.

For the year ended December 31, 2022, some of the shares in subsidiaries, associates and joint ventures are provided as collateral for project financing commitments. (See Note 21)

12. Property, plant and equipment

Details of property, plant and equipment as of December 31, 2022 and 2021 are as follows (Korean won in thousands):

		2022										
				Accumulated	Accumulated							
	A	cquisition cost		depreciation	impairment loss	Net book value						
Land	₩	357,173,444	₩	-	₩ -	₩	357,173,444					
Buildings		175,791,861		(56,612,345)	(255,000)		118,924,516					
Structures		186,272,295		(100,903,651)	-		85,368,644					
LPG storage tanks		292,398,028		(147,877,522)	-		144,520,506					
Machinery		340,444,121		(201,911,730)	(5,244,346)		133,288,045					
Vehicles		353,628		(278,105)	-		75,523					
Tools, furniture and fixtures		61,217,658		(47,346,846)	-		13,870,812					
Construction-in-progress		65,360,077		-	-		65,360,077					
Total	₩	1,479,011,112	₩	(554,930,199)	₩ (5,499,346)	₩	918,581,567					

	A	Acquisition cost		Accumulated depreciation	-	Accumulated	Ne	t book value
Land	₩	357,035,514	₩	-	₩	-	₩	357,035,514
Buildings		170,219,331		(50,848,853)		(255,000)		119,115,478
Structures		185,512,955		(93,605,288)		-		91,907,667
LPG storage tanks		283,813,228		(135,379,536)		-		148,433,692
Machinery		327,786,545		(187,855,834)		(5,244,346)		134,686,365
Vehicles		353,628		(215,883)		-		137,745
Tools, furniture and fixtures		55,562,842		(43,032,273)		-		12,530,569
Construction-in-progress		48,476,460		-		-		48,476,460
Total	₩	1,428,760,503	₩	(510,937,667)	₩	(5,499,346)	₩	912,323,490

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

Changes in the book value of property, plant and equipment for the years ended December 31, 2022 and 2021 are as follows (Korean won in thousands):

								2022							
		Jan. 1		Additions		Disposal	D	epreciation	Tr	ansfers (*1)		dule for e (*2)	-		Dec. 31
Land	₩	357,035,514	₩	148,280	₩	(10,350)	₩	-	₩	-	₩		-	₩	357,173,444
Buildings		119,115,478		4,834,687		(5,051)		(5,772,824)		752,226			-		118,924,516
Structures		91,907,667		813,951		(55,764)		(7,303,028)		5,818			-		85,368,644
LPG storage tanks		148,433,692		6,620,209		(973,798)		(14,937,153)		5,377,556			-		144,520,506
Machinery		134,686,365		11,921,086		(741,966)		(17,753,111)		5,175,671			-		133,288,045
Vehicles		137,745		-		-		(62,222)		-			-		75,523
Tools, furniture and fixtures Construction-in		12,530,569		3,603,353		(21,366)		(5,546,922)		3,305,178			-		13,870,812
-progress		48,476,460		48,356,394		-		-		(15,970,710)	(15	5,502,06	67)		65,360,077
Total	₩	912,323,490	₩	76,297,960	₩	(1,808,295)	₩	(51,375,260)	₩	(1,354,261)	₩ (15	502,06	67)	₩	918,581,567

(*1) During the year ended December 31, 2022, #1,354,261 thousand was transferred to other intangible assets from construction-in-progress.

(*2) As explained in Note 33, the assets subject to sell to KD Eco Hub Co., Ltd. for #15,502,067 thousand according to the agreement were reclassified from assets under construction to non-current assets held for sale during the year ended December 31, 2022.

						20	021					
		Jan. 1	A	Additions		Disposal	D	epreciation	Tra	ansfers (*1)		Dec. 31
Land	₩	370,687,544	₩	-	₩	(13,652,030)	₩	-	₩	-	₩	357,035,514
Buildings		122,879,514		1,524,756		(226,497)		(5,710,144)		647,849		119,115,478
Structures		97,237,583		1,764,695		(2,335)		(7,357,475)		265,199		91,907,667
LPG storage tanks		156,189,722		5,735,087		(576,352)		(14,647,624)		1,732,859		148,433,692
Machinery		134,247,583		17,672,314		(763,750)		(19,914,204)		3,444,422		134,686,365
Vehicles Tools. furniture		122,134		26,010		(2)		(62,098)		51,701		137,745
and fixtures Construction-in		11,105,733		7,276,921		(1,221,978)		(5,649,084)		1,018,977		12,530,569
-progress		23,162,588		36,843,284		(838,587)		-		(10,690,825)		48,476,460
Total	₩	915,632,401	₩	70,843,067	₩	(17,281,531)	₩	(53,340,629)	₩	(3,529,818)	₩	912,323,490

(*1) During the year ended December 31, 2021, #3,529,818 thousand was transferred to other intangible assets from construction-in-progress.

Borrowing cost

The amount of borrowing costs capitalized during the year ended December 31, 2022 was \mathbb{W} 1,168,207 thousand (2021: \mathbb{W} 267,836 thousand). The rate used to determine the amount of borrowing costs eligible for capitalization was 1.76% (2021: 1.48%), which is the EIR on the general borrowing and 5.75% on the certain borrowing.

Insured assets

The Company carries a comprehensive insurance to Samsung Fire & Marine Insurance and other insurance company on its property, plant and equipment against fire and other casualty losses for up to #1,437,482,948 thousand and #1,239,980,450 thousand as at December 31, 2022 and 2021, respectively.

Collateralized assets

As of the year ended December 31, 2022, some of the Company's fixed assets are provided as collateral for project financing commitments (See note 21).

13. Intangible assets

Details of intangible assets as at December 31, 2022 and 2021 are as follows (Korean won in thousands):

		2022											
	Ac	quisition cost		amortization	im	pairment loss	Net	book value					
Membership	₩	15,520,878	₩	-	₩	(1,175,662)	₩	14,345,216					
Other intangible assets		43,349,111		(22,837,120)		-		20,511,991					
Total	₩	58,869,989	₩	(22,837,120)	₩	(1,175,662)	₩	34,857,207					

		2021										
				Accumulated	A	ccumulated						
	Acquisition cost			amortization	im	pairment loss	Net	t book value				
Membership	₩	16,031,878	₩	-	₩	(1,524,262)	₩	14,507,616				
Other intangible assets		38,264,816		(13,958,733)	<u> </u>	-		24,306,083				
Total	₩	54,296,694	₩	(13,958,733)	₩	(1,524,262)	₩	38,813,699				

Changes in the book value of intangible assets for the years ended December 31, 2022 and 2021 are as follows (Korean won in thousands):

		2022											
		Jan. 1		Additions		Disposal		mortization	Tra	ansfers (*1)		Dec. 31	
Memberships Other intangible	₩	14,507,616	₩	-	₩	(162,400)	₩	-	₩	-	₩	14,345,216	
assets		24,306,083		4,027,614		(657)		(9,175,310)		1,354,261		20,511,991	
Total	₩	38,813,699	₩	4,027,614	₩	(163,057)	₩	(9,175,310)	₩	1,354,261	₩	34,857,207	

(*1) During the current year, ₩ 1,354,261 thousand was transferred to other intangible assets from construction-in-progress.

		2021														
														Reversal of		-
		Jan. 1		Additions		Disposals	_	Amortization		Transfers (*1)		Impairment		Impairment	Dec. 31	_
Memberships	₩	12,425,226	₩	1,271,360	₩	(302,065)	₩	-	₩	-	₩	(348,600)	₩	1,461,695	₩ 14,507,610	6
Other intangible												,				
assets		18,870,341		8,857,507		(6,867)		(6,944,716)		3,529,818		-		-	24,306,083	3
Total	₩	31,295,567	₩	10,128,867	₩	(308,932)	₩	(6,944,716)	₩	3,529,818	₩	(348,600)	₩	1,461,695	₩ 38,813,699	9

(*1) During the current year, ₩ 3,529,818 thousand was transferred to other intangible assets from constructionin-progress.

Impairment test for the intangible assets with indefinite useful lives

The Company conducted an impairment test on the intangible assets with indefinite useful lives, and does not recognize any impairment losses during the year ended December 31, 2022. The Company recognized #348,600 thousand and reversal of impairment losses of #1,461,695 thousand during the year ended December 31, 2021.

Amortization

Amortization expenses of customer-related intangible assets included in other intangible assets are recognized as cost of sales, and all the other amortization expenses are recognized as selling and administrative expenses.

14. Leases

Right-of-use assets as of December 31, 2022 and 2021 are follows (Korean won in thousands):

	Ac	quisition cost	Depreciation	Net book value		
Vessels	₩	457,531,396	₩ (101,431,808)	₩	356,099,588	
LPG stations		96,819,697	(69,690,759)		27,128,938	
Vehicles		3,745,665	(1,588,514)		2,157,151	
Sites		44,280,464	(757,795)		43,522,669	
The others		7,410,780	(3,484,795)		3,925,985	
Total	₩	609,788,002	₩ (176,953,671)	₩	432,834,331	

2022

	2021							
	Accumulated							
	Acquisition cost Depreciation Net book value							
Vessels	₩ 457,531,396 ₩ (76,073,856) ₩ 381,457,540							
LPG stations	93,835,342 (52,753,513) 41,081,829							
Vehicles	3,507,466 (1,924,942) 1,582,524							
Sites	749,260 (302,151) 447,109							
The others	3,551,887 (2,594,939) 956,948							
Total	₩ 559,175,351 ₩ (133,649,401) ₩ 425,525,950							

14. Leases (cont'd)

Changes in the book value of right-of-use assets and lease liabilities for the years ended December 31, 2022 and 2021 are as follows (Korean won in thousands):

	2022												
			Right-of-us				Lease liabilities						
	Vessels	LPG stations	Vehicles	Sites	The others	Total							
Jan. 1	₩ 381,457,540	₩ 41,081,829	₩ 1,582,524	₩ 447,109	₩ 956,948	₩ 425,525,950	₩ 398,877,068						
Increase	-	8,389,290	1,709,884	43,531,955	3,881,229	57,512,358	56,509,728						
Decrease	-	(3,359,643)	(25,610)	-	-	(3,385,253)	(817,391)						
Depreciation Interest	(25,357,952)	(18,982,538)	(1,109,647)	(456,395)	(912,192)	(46,818,724)	-						
expense	-	-	-	-	-	-	10,508,051						
Payment	-	-	-	-	-	-	(72,017,313)						
Valuation (*1)							19,367,909						
Dec. 31	₩ 356,099,588	₩ 27,128,938	₩ 2,157,151	₩ 43,522,669	₩ 3,925,985	₩ 432,834,331	₩ 412,428,052						

(*1) This includes gain on valuation of foreign currency lease liabilities. During the year ended December 31, 2022, the Company recognized #484,889 thousand in profit and #15,246,949 thousand (including the effect of income tax) as other comprehensive income.

				2021			
			Right-of-use				Lease liabilities
	Vessels	LPG stations	Vehicles	Sites	The others	Total	
Jan. 1	₩ 406,815,494	₩ 53,502,079	₩ 1,544,972	₩ 547,769	₩ 1,780,496	₩ 464,190,810	₩ 418,501,801
Increase	-	10,806,671	1,450,780	6,978	100,418	12,364,847	9,625,383
Decrease	-	(3,864,894)	(233,115)	-	-	(4,098,009)	(374,396)
Depreciation	(25,357,954)	(19,362,027)	(1,180,113)	(107,638)	(923,966)	(46,931,698)	-
Interest expense	-	-	-	-	-	-	10,645,651
Payment	-	-	-	-	-	-	(68,816,970)
Valuation (*1)							29,295,599
Dec. 31	₩ 381,457,540	₩ 41,081,829	₩ 1,582,524	₩ 447,109	₩ 956,948	₩ 425,525,950	₩ 398,877,068

(*1) This includes gain on valuation of foreign currency lease liabilities. During the year ended December 31, 2021, the Company recognized #466,455 thousand in profit and #22,559,636 thousand (including the effect of income tax) as other comprehensive loss.

Amounts recognized in the statements of profit or loss and other comprehensive income relating to leases are as follows (Korean won in thousands):

	Increase (decrease)				
		2022		2021	
Profit:					
Interest income on financial lease receivables	₩	(721,109)	₩	(1,235,623)	
Loss:					
Depreciation expense of right-of-use assets		46,818,724		46,931,698	
Interest expense on lease liabilities (*1)		9,975,155		10,645,651	
Expense relating to short-term lease and leases of low-value assets		7,954,871		3,976,826	
Others		829,841		(2,149,433)	
Gain (loss) on valuation of lease liabilities recognized in profit or loss		(484,889)		(466,455)	
Gain (loss) on valuation of lease liabilities recognized				. ,	
in other comprehensive income (loss) (*2)		15,246,949	·	22,559,636	
Net amount recognized in comprehensive income	₩	79,619,542	₩	80,262,300	

(*1) The interest expense includes ₩532,896 thousand of capitalized borrowing cost.

(*2) The effect of income tax included.

14. Leases (cont'd)

Total cash outflows for leases in years ended December 31, 2022 and 2021 are as follows (Korean won in thousands):

		2022		2021
Payment of principal portion of lease liabilities	₩	61,509,263	₩	58,171,319
Payment of interest portion of lease liabilities		10,508,051		10,645,651
Short-term lease payments, payments for leases of low-value assets and variable lease payments		7,954,871		3,976,826
Total	₩	79,972,185	₩	72,793,796

Undiscounted contractual repayment plans for lease liabilities related to right-of-use assets are as follows (Korean won in thousands):

								2022																										
	Less th	ess than 1 year		to 2 years	2	to 3 years	3 to 4 years		3 to 4 years		3 to 4 years		3 to 4 years		3 to 4 years		3 to 4 years		3 to 4 years		3 to 4 years		4 to 5 years		years 4 to 5		4 to 5 years		4 to 5 years		More than 5 years			Total
Vessels	₩	50,846,220	₩	52,342,518	₩	52,299,146	₩	44,201,152	₩	39,502,787	₩	134,165,282	₩	373,357,105																				
LPG stations		19,255,501		8,151,399		3,203,055		1,458,900		504,000		670,000		33,242,855																				
Vehicles		1,152,274		756,821		363,968		5,138		-		-		2,278,201																				
Sites		2,600,890		2,600,890		2,600,890		2,600,890		2,600,297		112,140,078		125,143,935																				
The others		948,683		943,676		898,151		922,702		446,027		-		4,159,239																				
Total	₩	74,803,568	₩	64,795,304	₩	59,365,210	₩	49,188,782	₩	43,053,111	₩	246,975,360	₩	538,181,335																				

Non-financial hedging

For stable LPG supply, the Company have signed long-term contracts for LPG transport with shipping companies and recognize the amount of foreign currency that the Company have to pay as a lease liability under the long-term contracts for LPG transport. Foreign currency sales of LPG revenue for petrochemicals provided at the same day with the repayment of the lease liabilities are exposed to the corresponding risk of exchange rate fluctuations. In order to avoid the risk of foreign currency fluctuations of LPG sales for petrochemical, the Company identified those foreign currency LPG sales instrument as the risks of exchange rate fluctuations and designated the lease liabilities as hedging instrument. Hedge accounting is applied, in which the repayment amount is designated as a hedge instrument for non-financial items. The future cash flow amount and schedule for the hedging purpose is in note 14.

During the year ended December 31, 2022, the Company recognized #15,246,949 thousand of valuation loss (including the income tax effect) (#22,559,636 thousand of valuation loss 2021) on the hedging instruments in other comprehensive income or loss since it was determined to be the effective portion of the cash flow hedges. There is no amount considered as ineffective portion of the cash flow hedges and recognized as profit or loss of the year.

Company as a lessor

Details of undiscounted financial lease receivable contract maturity analysis are as follows (Korean won in thousands):

		2022		2021
Less than 1 year	₩	1,564,364	₩	1,208,000
1 to 2 years		1,235,864		906,000
2 to 3 years		764,727		699,000
3 to 4 years		216,000		402,000
4 to 5 years		-		216,000
More than 5 years		-		-
Total undiscounted lease		3,780,955		3,431,000
Less: Unrealized financial income		166,150		135,741
Net lease investment	₩	3,614,805	₩	3,295,259

14. Leases (cont'd)

Operating leases

The Company have signed operating lease contracts for tanks, LPG gas stations, offices, etc., with the period from 1 to 14 years. The contracts include provisions to adjust lease payments according to market conditions. The rental income recognized by the Company during the year ended December 31, 2022 was W69,740,836 thousand (W65,936,290 thousand in 2021).

As of December 31, 2022 and 2021, the future undiscounted lease payment plans related to the operating lease contract provided by the Company are as follows (Korean won in thousands):

		2022		2021
Less than 1 year	₩	54,439,233	₩	64,459,023
1 to 2 years		51,810,106		69,755,914
2 to 3 years		50,879,472		68,502,930
3 to 4 years		13,465,772		18,130,000
4 to 5 years		918,302		1,236,381
More than 5 years		459,151		650,710
Total	₩	171,972,036	₩	222,734,958

15. Trade and other payables

Trade and other payables as at December 31, 2022 and 2021 are as follows (Korean won in thousands):

		2022		2021
Trade payables	₩	109,810,221	₩	71,205,859
Other payables		48,998,652		89,552,320
Accrued expenses		37,833,845		30,134,379
Total	₩	196,642,718	₩	190,892,558

16. Borrowings

Short-term borrowings

Short-term borrowings as of December 31, 2022 and 2021 consist of the following (Korean won in thousands and US dollar):

	Financial			
 Classification	institution	Interest rate (%)	2022	2021
Usance	Kookmin Bank and others	4.10 ~ 6.17	000,001,000	₩ 796,493,518 (US\$ 671,862,942)

Current portion of bond payable

Current portion of bond payable as of December 31, 2022 and 2021 consist of the following (Korean won in thousands):

	2022	2021
Current portion of bonds payable	₩ 149,920,649	₩ 199,953,852

16. Borrowings (cont'd)

Bonds payable

Details of bonds payable as at December 31, 2022 and 2021 are as follows (Korean won in thousands):

			Interest					
	Issue date	Maturity date	rate (%)		2022		2021	Description
33-2 nd unsecured	2015.03.06	2022.03.06	2.58	₩	-	₩	100,000,000	
34-2 nd unsecured	2017.04.17	2022.04.17	2.42		-		100,000,000	
35-1 st unsecured	2019.09.27	2024.09.27	1.79		40,000,000		40,000,000	
35-2 nd unsecured	2019.09.27	2026.09.27	2.07		80,000,000		80,000,000	
36-1 st unsecured	2020.03.06	2023.03.06	1.37		50,000,000		50,000,000	Interest
36-2 nd unsecured	2020.03.06	2025.03.06	1.56		140,000,000		140,000,000	payment at
36-3 rd unsecured	2020.03.06	2027.03.06	1.82		60,000,000		60,000,000	every
37-1 st unsecured	2020.06.19	2023.06.19	1.46		100,000,000		100,000,000	quarter
37-2 nd unsecured	2020.06.19	2025.06.19	1.70		60,000,000		60,000,000	and lump- sum
37-3 rd unsecured	2020.06.19	2027.06.19	1.96		90,000,000		90,000,000	repayment
38-1 st unsecured	2021.03.04	2024.03.04	1.31		50,000,000		50,000,000	on maturity
38-2 nd unsecured	2021.03.04	2026.03.04	1.73		150,000,000		150,000,000	-
38-3 rd unsecured	2021.03.04	2028.03.04	2.08		100,000,000		100,000,000	
39-1 st unsecured	2021.07.20	2024.07.20	1.77		80,000,000		80,000,000	
39-2 nd unsecured	2021.07.20	2028.07.20	2.28		70,000,000		70,000,000	
	Sub-tota	al			1,070,000,000		1,270,000,000	_
	Less: discount o	on bonds			(2,377,310)		(3,388,451)	
	Less: current	portion			(149,920,649)		(199,953,852)	
	Total			₩	917,702,041	₩	1,066,657,697	-

17. Employee benefits

The Company has a defined benefit plan for its employees and defined contribution plan for some executives and employees. The present value of the pension liability is determined using the projected unit credit method based on actuarial assumptions and on a discount basis by an independent actuary firm.

Changes in the net defined benefit liability(asset) for the years ended December 31, 2022 and 2021 are as follows (Korean won in thousands):

	2022	2021
Changes in net defined benefit liability(asset):		
Beginning balance	₩ 2,182,444	₩ 2,412,906
Retirement benefits paid	(1,408,479)	(743,505)
Provision during the period	4,311,537	4,739,397
Re-measurement loss	326,927	1,253,539
Contributions by the Company	(14,900,108)	(5,479,893)
Ending balance	(9,487,679)	2,182,444
Defined benefit liability in the statement of financial position:		
Present value of defined benefit obligation	40,665,818	39,583,152
Fair value of plan assets	(50,153,497)	(37,400,708)
Total	₩ (9,487,679)	₩ 2,182,444

Expenses incurred in relation to the defined benefit plan for the years ended December 31, 2022 and 2021 are as follows (Korean won in thousands):

		2022	2021		
Current service cost	₩	4,887,557	₩	4,683,901	
Interest cost on defined benefit obligation		820,055		763,926	
Expected return on plan assets		(1,396,075)		(708,430)	
Total	₩	4,311,537	₩	4,739,397	

Changes in the present value of the defined benefit obligation for the years ended December 31, 2022 and 2021 are as follows (Korean won in thousands):

		2022		2021
Beginning balance	₩	39,583,152	₩	34,434,376
Retirement benefits paid		(3,029,865)		(2,809,918)
Current service cost		4,887,557		4,683,901
Interest cost on benefit liability		820,055		763,926
Re-measurement loss (gain)		(353,407)		1,062,357
Transfer from/to related parties		(1,241,674)		1,448,510
Ending balance	₩	40,665,818	₩	39,583,152

17. Employee benefits (cont'd)

Changes in the fair value of plan assets for the years ended December 31, 2022 and 2021 are as follows (Korean won in thousands):

		2022		2021
Beginning balance	₩	(37,400,708)	₩	(32,021,471)
Retirement benefits paid		1,621,386		2,066,414
Expected return on plan assets		(1,396,075)		(708,430)
Re-measurement loss		680,334		191,182
Contributions by the Company		(14,900,108)		(5,479,893)
Transfer from/to related parties		1,241,674		(1,448,510)
Ending balance	₩	(50,153,497)	₩	(37,400,708)

As of December 31, 2022 and 2021, plan assets consist of time deposits.

The components of the re-measurement factors of the defined benefit plan for the years ended December 31, 2022 and 2021 are as follows (Korean won in thousands):

		2022		2021
Re-measurement loss:				
Demographic assumptions	₩	402,762	₩	-
Financial assumptions		(5,113,904)		(187,422)
Empirical adjustments		4,357,735		1,249,779
Sub-total		(353,407)		1,062,357
Remeasurements of plan assets:		680,334		191,182
Total	₩	326,927	₩	1,253,539

The principal assumptions used in the actuarial calculation as at December 31, 2022 and 2021 are as follows:

	2022	2021
Discount rate	5.75%	3.65 %
Future salary increases	4.39%	4.58 %

The following table demonstrates a sensitivity analysis on the effect of changes in the principal assumptions used in the actuarial calculation on the present value of the defined benefit obligation as of December 31, 2022 and 2021 (Korean won in thousands):

	2022					
			Changes in future	e salaries increase		
	Changes in	discount rate	ra	ate		
	+1% points	-1% points	+1% points	-1% points		
Defined benefit obligation	₩ (1,641,900)	₩ 1,884,874	₩ 1,893,852	₩ (1,678,291)		
		20)21			
			Changes in future	e salaries increase		
	Changes in	discount rate	ra	ate		
	+1% points	-1% points	+1% points	-1% points		
Defined benefit obligation	₩ (2,252,857)	₩ 2,650,738	₩ 2,599,660	₩ (2,255,254)		

The sensitivity analyses above have been determined based on a method that extrapolates the impact on the defined benefit obligation as a result of reasonable changes in key assumptions occurring at the end of the reporting period. The sensitivity analyses are based on a change in a significant assumption, keeping all other assumptions constant. The sensitivity analyses may not be representative of an actual change in the defined benefit obligation as it is unlikely that changes in assumptions would occur in isolation from one another.

17. Employee benefits (cont'd)

Detail of the plan assets for the year ended December 31, 2022 is as follows (Korean won in thousands):

		Amount	%
Principal and interest compensation financial instruments	₩	46,509,956	92.7%
Deposits		3,643,330	7.3%
Others		211	0.0%
Total	₩	50,153,497	100.0%

The expected payment to the defined benefit plan in the next reporting period is \mathbb{W} 5,431,214 thousand and the average duration of the defined benefit obligation as of December 31, 2022 is 11.4 years (10.8 years in 2021).

The expense recognized in relation to the defined contribution plan during the current year is \circledast 375,264 thousand.

18. Other financial liabilities

Other financial liabilities as of December 31, 2022 and 2021 are as follows (Korean won in thousands):

		2022	_	2021
Other current financial liabilities:				
Stock Appreciation Rights (Note 24)	₩	260,081	₩	-
Financial guarantee liabilities		2,934,058		284,468
Total	₩	3,194,139	₩	284,468
Other non-current financial liabilities:				
Long-term deposits	₩	4,677,876	₩	4,238,917
Non-current financial liabilities (Note 21)		30,601,821		29,934,973
Stock Appreciation Rights (Note 24)		260,081		392,192
Total	₩	35,539,778	₩	34,566,082

19. Other liabilities

Other current liabilities and other non-current liabilities as of December 31, 2022 and 2021 are as follows (Korean won in thousands):

		2022		2021
Other current liabilities:				
Advance received	₩	415,057	₩	4,895,476
Contract liabilities		9,282,869		3,242,306
Withholding tax		828,761		629,450
Other withholdings		4,080,040		221,915
Total	₩	14,606,727	₩	8,989,147
Other non-current liabilities:				
Long-term unearned income	₩	86,689	₩	96,719
Other long-term employee benefits		1,361,323		649,902
Provision for restoration	_	81,509		-
Total	₩	1,529,521	₩	746,621

20. Derivative instruments

Derivative assets and liabilities as of December 31, 2022 and 2021 are as follows (Korean won in thousands):

	2022								
		Derivative assets				Derivative liabilities			
		Current	Ν	Ion-current		Current	Ν	lon-current	
Currency forward contracts	₩	11,164,839	₩	-	₩	84,265,224	₩	-	
LPG forward contracts		33,517,042		12,688,196		116,978,065		113,607	
Options		-		5,567,896		779,464		-	
TRS		-		78,712,000		-		-	
Total	₩	44,681,881	₩	96,968,092	₩	202,022,753	₩	113,607	
				20)21				
		Derivative assets				Derivativ	e liabi	lities	
		Current	Ν	Ion-current		Current	N	lon-current	
Currency forward contracts	₩	4,321,998	₩	-	₩	1,851,913	₩	-	

Currency forward contracts	₩	4,321,998	₩	-	₩	1,851,913	₩	-
LPG forward contracts		61,003,134		9,854,392		14,402,026		-
Options		-		3,497,195		-		-
TRS		-		36,687,000		-		-
Total	₩	65,325,132	₩	50,038,587	₩	16,253,939	₩	-

The Company evaluates derivatives at fair value at the time of initial recognition and at the end of each reporting period, and for long-term forward derivatives contracts with a maturity of more than one year, the amount that has taken into account the time value of money is reflected in adjusted profit or loss.

Outstanding currency forward contracts as of December 31, 2022 and 2021 are as follows (Korean won in thousands and US dollar):

		2022		
Financial institution	Buy/sell	Contracted	Derivative assets	Derivative liabilities
Hana Bank and others	Buy Sell	\$ 857,051,775 264,632,971	₩ - 11,164,839	₩ 84,259,419 5,805
Total		, ,	₩ 11,164,839	₩ 84,265,224

		2021			
Financial institution	Buy/sell	Contracted	Derivative assets	Derivative liabilities	
Hana Bank and others	Buy Sell	\$ 817,374,148 203,775,977	₩ 3,988,900333,098	₩ 784,035 1,067,878	
Total	0011	200,110,011	₩ 4,321,998	₩ 1,851,913	

20. Derivative instruments (cont'd)

Outstanding LPG forward contracts as of December 31, 2022 and 2021 are as follows (Korean won in thousands and US dollar):

-		2022				
			Contra	cted notional amount		
Account	Buy/Sell	Quantities		(USD)	Fa	air value (*1)
ICE	Buy	903,000 barrel 1,335,000 ton	\$	55,569,180 858,063,110	₩	11,979,525 (145,616,295)
ICE	Sell	2,870,000 barrel 530,000 ton		265,637,140 304,199,740		41,886,257 30,033,000
Macquarie	Buy	36,000 barrel 4,800 ton 350.000 mmbtu		2,158,650 1,869,100 10,500,000		22,424 (49,575) (2,573,886)
Macquarie	Sell	9,000 barrel 1,200 ton		784,500 647,200		301,360 235,448
Nymex	Buy	350,000 mmbtu 8,577,000 barrel 693,000 ton		14,000,000 360,924,165 424,626,700		6,943,908 (55,938,912) (35,262,312)
Nymex	Sell	9,086,000 barrel 301,000 ton		417,671,845 184,159,670	117	64,027,153 13,125,471
					₩	(70,886,434)

(*1) The Company offsets derivative assets and liabilities that have the same maturity on the same exchange.

			Contra	cted notional amount		
Account	Buy/Sell	Quantities		(USD)	Fa	ir value (*1)
ICE	Buy	1,201,000 barrel 659,000 ton	\$	60,061,125 312,920,300	₩	10,483,966 50,122,216
ICE	Sell	1,232,000 barrel 194,500 ton		76,692,930 99,628,140		(8,781,557) (9,113,337)
Macquarie	Buy	72,000 barrel 9,600 ton		3,570,090 3,208,588		1,132,216 964,332
Macquarie	Sell	9,000 barrel 1,200 ton 830,000 mmbtu		522,270 467,448 21,004,900		(78,930) (59,051) 3,591,294
Nymex	Buy	9,234,000 barrel 303,500 ton		454,351,275 215,072,270		17,573,987 (3,041,282)
Nymex	Sell	9,027,000 barrel 324,500 ton		449,951,985 212,111,635		(11,817,338) 5,478,984
					₩	56,455,500

(*1) The Company offsets derivative assets and liabilities that have the same maturity on the same exchange.

Outstanding options as of December 31, 2022 are as follows (Korean won in thousands):

Outstanding options	Contracted notional amount (Barrel)		Derivative assets	Derivative liabilities	
Buying call options and Selling put options (ZCC Option)(*1) Selling call option of Gridwiz Co., Ltd RCPS	504,000	₩	5,567,896 -	₩	- 779,464

(*1) This is the evaluation of derivative assets and liabilities according to the contract price hedging strategy.

The Total Return Swap agreement (TRS)

The Company has entered into a lease agreement for LPG Station for 7 years from the date of the contract with Pine Street Charging Station Private Trust, which has acquired 48 LPG stations from SK Networks Co Ltd. and signed a Total Return Swap agreement with Buldu First Inc, Buldu Second.Inc, Buldu Third.Inc. The Total Return Swap agreement consists of the total return swap associated with changes in the value of the LPG station on the contract expiration date and the total return exchange swap associated with principal and interest during the contract period. During the year ended December 31, 2022, the valuation gain recognized due to the agreement is # 42,025 million (2021: # 17,978 million).

20. Derivative instruments (cont'd)

Detail of netting arrangement

Details of financial assets and financial liabilities subject to the Company's enforceable netting agreements or similar agreements as of the year ended December 31, 2022 are as follows (Korean won in thousand):

	Subject to master netting	agreement
	Total assets	Amount after
	(liabilities) Netted amour	t netting
Derivatives valuation assets	₩ 205,455,409 ₩ (153,682,27	5) ₩ 51,773,134
Derivatives valuation liabilities	(270,773,947) 153,682,27	75 (117,091,672)

21. Commitments and contingences

Outstanding litigation

The Company is a defendant in the following major lawsuits and the final outcome of the pending litigations cannot presently be determined as of December 31, 2022 (Korean won in thousands):

Description	Plaintiff	Defendant	CI	aim amount	Status
	Yoo, In-chul and others	The Company and others	₩	16,160,000	First trial in process
Litigation arising from the Fair Trade Commission investigation	Gangbuk transportation Co., Ltd. and others	The Company and others		4,722,000	First trial in process
	Jung, Man-woo and others	The Company and others		4,289,000	First trial in process
Litigation to confirm absence of debt	GNS Co., Ltd. and others	The Company		764,500	Completion of pleading

Major commitments

As of December 31, 2022, major commitments of the Company are as follows:

Parties	Details
Kookmin Bank and others	Foreign currency transaction commitments for up to \$2,015 million.
	Local currency borrowing commitments for up to $#43,000$ million.
Trafigura and others	Purchase agreements for 1,264 thousand tons of LPG.
E1, GS Caltex and SK Energy Co., Ltd. etc.	LPG commodity exchange agreement
SK Advanced Co., Ltd. and others	Contract for long-term supply of LPG
Goseong Green Power (*1)	Agreement for long-term supply of coal
SK Gas USA Inc	Additional investments commitment of $ \mathbb{W}$ 812 million.
Pine Street Charging Station Private Equity Trust	Lease contract for LPG filling stations
Buldu First, Buldu Second, Buldu Third Inc	Changes in the value of the LPG filling station and the total revenue exchange agreement with the contractual period principal
SK Energy Co.,Ltd.(*2)	The Company entered into a contract to lease additional mooring facilities
	for oil tankers for ₩46.5 billion.
SK Enmove Co., Ltd. (*3)	Consignment contract on reservoirs for petroleum products.
Korea Energy Terminal Co., Ltd. (*4)	Stock sales contract (₩167,484 million), agreement between shareholders and basic contract for using liquefied gas terminal
G-Energy Corp. (*5)	Agreement for joint exercise of coal supply right
QH Oil Investments LLC (*6)	Contract to sell holding stock of SK Holdco Pte. Ltd. (\$ 119 million)
Kookmin Bank and others (*7)	Project financing investor agreement for Ulsan GPS Co., Ltd.
Korea East-West Power Co., Ltd (*8)	Liquefied gas terminal use contract

(*1) The contract period for the coal long-term supply contract is from October 31, 2020 to April 30, 2051.

(*2) Regarding the above arrangement, the long- and short-term prepaid expenses amounted to ₩30,613 million are recorded.

- (*3) Effective from March 26, 2012 to March 25, 2026, a consignment fee of ₩45 billion per annum (adjusted for inflation), plus the amounts in excess of maximum amounts stipulated in the contract. SK Lubricants Co., Ltd. changed its name to SK Enmove Co., Ltd.
- (*4) This is the amount of investment applied to the total size of the business and the purchase amount of the old stock with 45.5% of the Company's initial stake. The equity ratio and amount can be changed and will be paid in installments over the next two years. Also, the contract period for the liquified gas terminal is 20 years from the commencement date of commercial operation.
- (*5) The Company receives a commission for joint exercise of the coal supply right from G-Energy Corp. Even after the contract for the joint exercise of the coal supply right is concluded, the Company maintains the contractual status and other matters for the long-term coal supply contract with Goseong Green Power Co., Ltd.
- (*6) It is a contract to sell all stocks (52 million shares) accounting for 36.49% of SK Holdco PTE. LTD.'s shares held by the Company to invest Eurasia Tunnel. In relation to this contract, investments in associates amounting to \$59,593,096 thousand were classified as non-current assets held for sale (See Note 33).
- (*7) Ulsan GPS Co., Ltd., a subsidiary of the Company, entered into a project financing agreement to construct a power plant. The Company has entered into an investor agreement with the project finance lender, and the agreement includes the Company's obligation to supplement funds for the excess of total project cost and the shortfall in operating cost of Ulsan GPS Co., Ltd.
- (*8) It is a contract to provide liquefied gas terminals use and related services to the contracting party for some of the storage facilities (LNG storage tanks) of liquefied gas terminals scheduled to be built for the Clean Energy Complex project at Section 2 of the Ulsan New Port

Other commitments

(1) As of December 31, 2022, the Company holds voting rights for 0.52% equity interests of Ulsan GPS Co., Ltd. and 11.13% equity interests in Dangjin Eco Power Co., Ltd. held by Korea Development Bank. Put options held by Korea Development Bank can be exercised until one year from the start date of commercial production by Ulsan GS Co., Ltd. The current value of # 30,601,821 thousand of exercise price which will be paid in the event the put option is exercised (#33,570,000 thousand) is recorded as other non-current financial liabilities.

(2) Regarding the long-term coal supply contract signed with Goseong Green Power Co., Ltd., the Company signed an agreement for a joint supply of coal with G-Energy Corp., a joint venture between the Company and GS Global Corp. The period of joint venture between the Company and GS Global Co., Ltd. through G Energy Co., Ltd. is until the end of 2025, but the extensions is determined annually. When the joint venture is terminated, the Company and GS Global Corp. each hold a call option and a put option to purchase or sell all of the mutually held on G-Energy Co., Ltd. stocks at the issuance price.

(3) As of December 31, 2022, the Company provides Letter of Undertaking (LOU) to the financial group for six of the carriers in service, through this LOU, if the carrier fails to fulfill the related contract, the Company will bear all obligations related to the contract fulfillment.

(4) According to the joint investment venture agreement of Lotte SK Energy Root Co., Ltd. established by the Company and Lotte Chemical Co., Ltd, both companies hold a Put Option that allows to request the other party to purchase some of the shares issued by the joint venture if there is a reasonable need for operating of the joint venture.

(5) According to the joint venture agreement of KD Eco Hub Co., Ltd. established by the Company and Kyungdong City Gas Co., Ltd, Kyungdong City Gas Co., Ltd hold a Put Option to sell all of its shares to the Company depending on the situation of the joint venture, and the Company holds a Call Option to purchase all of the shares hold by Kyungdong City Gas Co., Ltd. if there is a reasonable need for operating of the joint venture.

Collateral pledged

As of December 31, 2022, the assets and pledged notes provided as collateral to the other party are as follows. (Korean won in millions):

Pledged assets	Pledged to	Purpose of pledged asset	Во	ok value		apitalized amount		aximum bond amount (*4)
Investment in joint ventures (*1)	Korea Development Bank and others	Provided for Korea Energy Terminal Co., Ltd.'s project financing contract amount of ₩633,700 million	₩	84,441	₩	251,925	₩	760,440
Investment in associates (*2)	Hanhwa life insurance and others	Provided for Goseong Green Power's project financing contract amount of ₩4,340,000 million		172,140		172,140		5,208,000
Investment in subsidiaries and beneficiary certificates (*3)	Kookmin Bank and others	Provided for Ulsan GPS Co., Ltd. project financing contract amount of ₩752,000 million		461,212		461,212		902,400

(*1) As of year ended December 31, 2022, Korea Energy Terminal Co., Ltd.'s project financing execution amount is #389,700 million. The collateral value includes the acquisition cost of #84,441 million for 1,660,822 shares of Korea Energy Terminal Co., Ltd. held by the Company and #167,484 million for additional investment under the stock purchase contract.

(*2) As of year ended December 31, 2022, Goseong Green Power's project financing execution amount is ₩4,062,394 million.

(*3) As of year ended December 31, 2022, Ulsan GPS Co., Ltd project financing execution amount is #50,000 million, and it provides Ulsan GPS Co., Ltd.'s shares owned by the Company and the beneficiary certificate under the real estate collateral trust contract as collateral.

(*4) The maximum bond amount is set at 120% of the total amount of project financing agreements for each borrower related to the purpose of providing collateral.

Payment guarantees

Details of payment guarantees provided to the Company as of December 31, 2022 are as follows (Korean won in thousands and US dollar):

	Guarantor		Guarantee amount	Details
Payment guarantees received	Seoul Guarantee Insurance Company	₩	10,320,151	Performance and deposit guarantees
Payment guarantees provided (*1)	QH Oil Investments LLC		USD 52,281,544	Joint guarantees

(*1) The Company signed a stock trade contract to sell shares of SK Holdco. Pte. Ltd. owned by the Company, SK ecoplant Co., Ltd and SK MENA Co., Ltd. to QH Oil Investments LLC, and provided joint guarantees to SK MENA and SK ecoplant Co., Ltd. with respect to the damages clause in the stock sale contract. In the event of a damage claim, the right to indemnity can be claimed to SK ecoplant Co., Ltd. and SK MENA, after prepayment by the Company.

The Company provided payment guarantees to others for its subsidiaries to others and the details are as follows (Korean won in thousands and US dollar):

	Guaranteed					
	Company	Guarantor	Guaranteed period	Paymer	nt guarantee	Details
	SK Gas International Pte.	Saudi Arabian Oil Co. (ARAMCO)	2022.01.01~2022.12.31	USD	53,000,000	(* 1)
	Ltd.	CHEVRON International	2022.01.01~2022.12.31	USD	38,000,000	
	SK Gas Trading LLC	Energy Transfer LNG Export LLC	2022.06.01~	USD	61,000,000	(* 2)
			2022.06.11~2023.06.10	USD	50,000,000	(* 3)
		SMBC(NY)	2022.08.01~2023.06.10	USD	50,000,000	
		SC USA	2022.06.11~2023.06.10	USD	30,000,000	
		Woori Bank (NY)	2022.06.11~2023.06.10	USD	100,000,000	
Subsidiaries		MIZUHO Bank (LA)	2022.06.11~2023.06.10	USD	180,000,000	
		Hana Bank (LA)	2022.06.11~2023.06.10	USD	60,000,000	
	SK Gas	AGIC	2022.10.01~2024.06.30	USD	132,139,011	(* 4)
	Petrochemical Pte. Ltd.	APOC, Banque Saudi Fransi	2022.06.23~2024.06.30			
		-	2022.02.25~2025.02.25	₩	100,000,000	(* 5)
	Ulsan GPS		2022.02.25~2027.02.25	₩	50,000,000	
	Co., Ltd.		2022.07.11~2025.07.11	₩	120,000,000	
			2022.07.11~2027.07.09	₩	30,000,000	
		Total in	Korean won in thousands	₩	300,000,000	
			Total in USD	USD	754,139,011	

(*1) This is a payment guarantee for the purchase price of LPG.

(*2) It is a performance guarantee for the execution of long-term LNG contracts, and the termination date is the end of LNG purchase contract.

(*3) Payment guarantees for the credit line.

(*4) This is a performance guarantee for all obligations as a shareholder, including investment in new businesses, and the Company has fulfilled its obligation to invest USD 88.4 million of the total guaranteed amount as of December 31, 2022.

(*5) The Company guarantees the payment of principal and interest for public offering bonds scheduled to be issued by Ulsan GPS Co., Ltd. until the final repayment of the principal and interest, and the stated amount is the par value of the bonds scheduled to be issued by Ulsan GPS Co., Ltd. excluding interest.

22. Related party

Related parties of the Company and nature of their relationship with the Company as of December 31, 2022 are as follows:

Relationship	Related party
Parent	SK Discovery Co., Ltd.
Subsidiaries	SK Gas International Pte. Ltd.,
	SK Gas USA Inc.,
	Ulsan GPS Co., Ltd.,
Associates and joint ventures	Dangjin Eco Power Co., Ltd.,
	SK Advanced Co., Ltd.,
	Korea Energy Terminal Co., Ltd.,
	Goseong Green Power Co., Ltd.,
	Global Opportunities Fund, SK Holdco Pte. Ltd. (*7)
	Gridwiz Co., Ltd., Weonil Energy Co., Ltd.,
	Bitgoeul Eco Energy Co., Ltd., G-Energy Corp.(*3),
	KOHYGEN Corp.(*3), KD Ecohub Co., Ltd.(*4),
	Lotte SK Eneroute Co., Ltd(*4)
Subsidiaries of subsidiaries	SK Gas Trading LLC (*1), SK Gas Petrochemical Pte. Ltd (*2)
Associates of subsidiaries	Vopak Gas Terminal LLP(*5),
	SK International Investment Singapore Pte. Ltd. (*5),
	Advanced Polyolefins Industry Company(*6)
Others	Affiliates of SK Enterprise Group (*8)

(*1) The entity is a subsidiary of SK Gas USA Inc.

(*2) The entity is a subsidiary of SK Gas International Pte. Ltd.

(*3) The entities have been included in associates and joint ventures as the Company acquired the shares therein during the year ended December 31, 2021.

(*4) The entities have been included in associates and joint ventures as the Company acquired the shares therein during the year ended December 31, 2022.

(*5) The entity is an associate of SK Gas International Pte. Ltd.

(*6) The entity is an associate of SK Gas Petrochemical Pte. Ltd. and has been included in associates and joint ventures as the Company acquired the shares therein during the year ended December 31, 2021.

(*7) This associate has been classified as non-current asset held for sale during the year ended December 31, 2022.

(*8) The entities have been classified as related parties as designated by the Fair Trade Commission in accordance with the relation of substance as prescribed in paragraph 10 of KIFRS 1024.

Significant transactions with the related parties for the years ended December 31, 2022 and 2021 are as follows (Korean won in thousands):

		2022				
	Related party	Sales (*1)	Other income, sales of asset and others (*2)	Purchases	Other expenses and capital expenditure(*2)	
Parent	SK Discovery Co., Ltd.	₩ -	₩ 587,531	₩ -	₩ 40,652,846	
Subsidiaries	SK Gas International Pte. Ltd.	777,644,439	164,207	1,153,044,447	6	
	Ulsan GPS Co., Ltd.	-	802,100	-	116,605	
Associates	SK Advanced Co., Ltd.	634,525,462	2,331,255	-	1,041,612	
and joint	Korea Energy Terminal					
ventures	Co., Ltd.	-	4,380,272	-	54,018	
	Weonil Energy Co., Ltd.	8,834,608	-	-	15,560	
	Bitgoeul Eco Energy Co., Ltd.	4,811,144	-	-	1,018,578	
	SK Holdco Pte. Ltd.(*9)	-	5,727	-	-	
	G-Energy Corp.	-	5,125,741	-	-	
	Lotte SK Eneroute Co., Ltd.	-	231,937	-	-	
Subsidiaries						
of subsidiaries	SK Gas Trading LLC	-	275,273	1,198,145,069	68,604	
Others	SK Holdings Co., Ltd.	-	-	-	16,315,303	
	SKPIC Global Co., Ltd.	57,946,152	6.055	-	-	
	SK D&D Co., Ltd. (*3)	-	1,876,841	-	115,621	
	SK Energy Co., Ltd.	230,814,453	9,500,224	242,402,697	11,427,169	
	SK Innovation Co., Ltd.	-		-	3,404,947	
	SK Geo Centric Co., Ltd. (*4)	12,345,388	161,654	-	-	
	SK Incheon Petrochem	12,010,000	101,001			
	Co., Ltd.	43,703,558	-	-	-	
	SK Planet Co., Ltd.	-	-	-	4,490,634	
	SK Chemicals Co., Ltd.	10,033,436	487,274	-	345,871	
	Ulsan aromatics Co., Ltd.	47,955,023	82,386	-	-	
	SK Networks Co., Ltd.,	-	-	363,134	484,521	
	SK ecoplant Co., Ltd. (*5)	-	-	-	239,354	
	SK ecoengineering Co., Ltd.					
	(*6)	-	-	-	39,909,988	
	SK bioscience Co., Ltd.	-	2,059,986	-	-	
	SK shielders Co., Ltd. (*7)	-	-	-	1,440,439	
	SK Enmove Co., Ltd. (*8)	53,068,754	-	-	-	
	Other	1,130,421	626,258	-	3,337,720	
Total		₩ 1,882,812,838	₩ 28,704,721	₩ 2,593,955,347	₩ 124,479,396	

(*1) In the above related party transactions with SK Energy Co., Ltd., taxes and dues were excluded from LPG sales.

(*2) Dividend receipts and payments are included.

(*3) During the previous year, all shares on SK D&D Co., Ltd. were disposed, and changed the category from associates to others.

(*4) SK Global Chemical Co., Ltd. changed its name to SK Geo Centric Co., Ltd. during the year ended December 31, 2021.

(*5) SK Engineering & Construction Co., Ltd. changed its name to SK ecoplant Co., Ltd. during the year ended December 31, 2021.

(*6) SK Eco Engineering Co., Ltd. was established through physical division from SK ecoplant Co., Ltd. during the year ended December 31, 2022.

(*7) SK infosec Co., Ltd. changed its name to SK shielders Co., Ltd. after merging with ADT Caps Co., Ltd. during the year ended December 31, 2021.

(*8) SK Lubricants Co., Ltd changed its name to SK Enmove Co., Ltd. during the year ended December 31, 2022.

(*9) This associate has been classified as non-current asset held for sale during the year ended December 31, 2022.

SK Gas Co., Ltd. Notes to the separate financial statements December 31, 2022 and 2021

22. Related party (cont'd)

					20	21		
					ther income,			er expenses
			0-1 (*4)		s of asset and	Duraharar		and capital
	Related party	117	Sales (*1)		others (*2)	Purchases	-	penditure(*2)
Parent	SK Discovery Co., Ltd. (*3)	₩	-	₩	283,184,988	₩ -	₩	27,365,466
Subsidiaries	SK Gas International Pte. Ltd.		385,332,049		47,649	911,601,448		
	Ulsan GPS Co., Ltd.		-		2,349,524	-		288,373
Associates	SK D&D Co., Ltd. (*4)		-		6,975,775	-		601,551
and joint ventures	SK Advanced Co., Ltd.		692,342,827		5,386,496	-		310,306
ventures	Korea Energy Terminal				0 004 4 47			50.040
	Co., Ltd.		-		2,604,147	-		59,218
	Gridwiz Co., Ltd.		-		-	-		175,000
	Weonil Energy Co., Ltd.		8,099,275		3	142,774		-
	Bitgoeul Eco Energy Co., Ltd.		-		20,647	-		-
	SK Holdco Pte. Ltd.		-		4,216	-		25,962
	G-Energy Corp.		-		1,711,693	-		-
Subsideries								
of subsideries	SK Gas Trading LLC				056 470	1 570 464 054		447 474
Others	SK Holdings Co., Ltd.		-		956,479	1,572,464,951		117,474
Others	SK Holdings Co., Ltd.		-		-	-		17,881,574
			-		-	-		5,495
	SK picglobal		31,992,877		5,762	-		1,540
	SK Enmove Co., Ltd (*8)		47,340,366		-	-		-
	SK Energy Co., Ltd.		79,235,334		7,836,157	70,029,235		13,011,187
	SK Innovation Co., Ltd.		-		-	-		3,106,233
	SK Geo Centric Co., Ltd. (*5)		5,869,470		162,136	-		-
	SK Incheon Petrochem		44 750 000					004 454
	Co., Ltd.		14,752,088		-	-		384,451
	SK Planet Co., Ltd.		-		-	-		7,059,677
	SK Chemicals Co., Ltd.		6,028,432		3,289,292	-		386,951
	Ulsan aromatics Co., Ltd.		30,156,288		78,382	-		-
	SK Networks Co., Ltd.		-		-	482,847		174,373
	SK ecoplant Co., Ltd. (*6)		-		-	-		10,890,837
	SK bioscience Co., Ltd.		-		745,004	-		-
	SK shielders Co., Ltd. (*7)		-		-	-		1,628,472
	Other		-		1,178	-		2,677,681
Total		₩	1,301,149,006	₩	315,359,528	₩ 2,554,721,255	₩	86,151,821

(*1) In the above related party transactions with SK Energy Co., Ltd., taxes and dues were excluded from LPG sales.

(*2) Dividend receipts and payments are included.

(*3) During the current year, shares on SK D&D Co., Ltd. were disposed for \282,757 million, and recognized the gain on disposition of share of \80,285 million.

(*4) It's transactions until the termination of the joint venture relationship.

(*5) SK Global Chemical Co., Ltd. changed its name to SK Geo Centric Co., Ltd. during the year ended December 31, 2021.

(*6) SK Engineering & Construction Co., Ltd. changed its name to SK ecoplant Co., Ltd. during the year ended December 31, 2021.

(*7) SK infosec Co., Ltd. changed its name to SK shielders Co., Ltd. after merging with ADT Caps Co., Ltd. year ended December 31, 2021.

(*8) SK Lubricants Co., Ltd changed its name to SK Enmove Co., Ltd. during the year ended December 31, 2022.

Outstanding balances with the related parties as of December 31, 2022 and 2021 are as follows (Korean won in thousands):

		2022				
	Related party	Trade receivables	Other receivables	Trade payables	Other payables	
Parent	SK Discovery Co., Ltd.	₩ -	₩ 78,257	₩ -	₩ 437,009	
Subsidiaries	SK Gas International Pte. Ltd.	-	210,687	20,853,724	136,722	
	Ulsan GPS Co., Ltd.	-	595,772	-	-	
Associates	SK Advanced Co. Ltd	137,777,945	107,487	-	506,201	
and joint	Korea Energy Terminal Co.,					
ventures	Ltd. (*3)	-	7,275,451	-	-	
	Weonil Energy Co., Ltd.	1,255,526	40,495	-	17,408	
	G-Energy Corp.	-	433,238	-	-	
	SK Holdco Pte. Ltd. (*1)	-	141,360	-	-	
	Bitgoeul Eco Energy Co., Ltd.	1,083,270	-	-	-	
Subsidiaries						
of	SK Gas Trading LLC		004.400	40 005 500	00.004	
subsidiaries Others	CK Haldings Co. 1 td	-	934,468	49,665,532	68,604	
Others	SK Holdings Co., Ltd.	-	-	-	1,213,510	
	SK D&D Co., Ltd.	-	193,297	-	993,755	
	SK Energy Co., Ltd. (*2)	32,079,208	49,131,525	-	822,504	
	SK Chemical Co., Ltd.	1,163,251	107,081	-	32,263	
	SKPIC Global Co., Ltd	9,086,678	-	-	-	
	Ulsan aromatics Co., Ltd.	7,274,796	45,312	-	.	
	SK Planet Co., Ltd.	-	-	-	1,066,021	
	SK ecoplant Co., Ltd. (*4)	-	155,031	-	17,489	
	SK Eco engineering Co., Ltd.				500 500	
	(*7) OK Discoisson Os I tal	-	-	-	536,580	
	SK Bioscience Co.,Ltd	-	84,178	-	765,252	
	SK Innovation Co., Ltd.	-	-	-	341,659	
	SK Incheon Petrochem Co., Ltd	21,237,998	_	_	_	
	SK Geo Centric Co., Ltd. (*5)	21,207,330	91,482	-	-	
	SK shielders Co., Ltd. (*6)	-	-	-	419,552	
	SK Networks Co., Ltd.,	-	-	-	29,025	
	SK Enmove Co.,Ltd. (*8)	4,441,866	-	-	3,730,673	
	Others	172,062	271,403	-	202,036	
Total		₩ 215,572,600	₩ 59,896,524	₩ 70,519,256	₩ 11,336,263	

(*1) This associate has been classified as non-current asset held for sale during the year ended December 31, 2022.

(*2) The above other payables include #17,657 million due to LPG volume exchange transactions. The above other receivables include prepaid expense of #30,613 million in relation to the use of large pier oil tanker mooring facilities in Ulsan.

(*3) The above other receivables include ₩5,200 million in relation to the use of large pier oil tanker mooring facilities in Ulsan.

(*4) SK Engineering & Construction Co., Ltd. changed its name to SK ecoplant Co., Ltd. during the year ended December 31, 2021.

(*5) SK Global Chemical Co., Ltd. changed its name to SK Geo Centric Co., Ltd. during the year ended December 31, 2021.

(*6) SK infosec Co., Ltd. changed its name to SK shielders Co., Ltd. after merging with ADT Caps Co., Ltd. year ended December 31, 2021.

(*7) SK Eco Engineering Co., Ltd. was established through physical division from SK ecoplant Co., Ltd. during the year ended December 31, 2022.

(*8) SK Lubricants Co., Ltd changed its name to SK Enmove Co., Ltd. during the year ended December 31, 2022. The above other payables include # 3,731 million of unearned revenue in relation to petroleum product storage consignment contract.

		2021				
	Related party	Trade receivables	Other receivables	Trade payables	Other payables	
Parent	SK Discovery Co., Ltd.	₩ -	₩ 36,351	₩ -	₩ 642,389	
Subsidiaries	SK Gas International Pte. Ltd.	18,723,053	185,962	2,135,596	-	
	Ulsan GPS Co., Ltd.	-	39,967	-	261,522	
Associates	SK Advanced Co. Ltd	153,778,398	114,524	-	234,835	
and joint	Weonil Energy Co., Ltd.	1,169,483	-	-	11,023	
ventures	Korea Energy Terminal Co.,					
	Ltd.	-	918,854	-	-	
	G-Energy Corp.	-	188,837	-	-	
	SK Holdco Pte. Ltd.	-	135,634	-	25,962	
Subsidiaries of	SK Gas Trading LLC					
subsidiaries	SK Gas Hading LLC	-	313,949	35,423,496	65,315	
Others	SK Holdings Co., Ltd.	-	-	-	992,531	
	SK D&D Co., Ltd.	-	158,911	-	717,747	
	SK Incheon Petrochem Co.,		,		,	
	Ltd.	7,470,682	-	-	-	
	SK Enmove Co.,Ltd. (*3)	4,324,985	-	-	7,154	
	SK Energy Co., Ltd. (*1)	10,431,931	33,655,548	4,520,870	14,840,282	
	SK Chemicals Co., Ltd	880,110	115,321	-	25,488	
	SK picglobal	5,365,705	-	-	-	
	Ulsan aromatics Co., Ltd.	4,965,662	43,110	-	-	
	SK Planet Co., Ltd.	-	-	-	1,610,895	
	SK ecoplant Co., Ltd. (*2)	-	-	-	2,175,351	
	SK bioscience Co.,Ltd.	-	104,116	-	361,505	
	Others		95,990	-	774,066	
Total		₩ 207,110,009	₩ 36,107,074	₩ 42,079,962	₩ 22,746,065	

(*1) The above other payables include #13,764 million due to LPG volume exchange transactions. Above other receivables include prepaid expense of #32,938 million in relation to the use of large pier oil tanker mooring facilities in Ulsan.

(*2) SK Engineering & Construction Co., Ltd. changed its name to SK ecoplant Co., Ltd. during the prior period.

(*3) SK Lubricants Co., Ltd changed its name to SK Enmove Co., Ltd. during the year ended December 31, 2022.

Other transactions

Other transactions with the related parties for the years ended December 31, 2022 and 2021 are as follows (Korean won in thousands):

			Investment						
Description	Related party		2022	2021					
Subsidiaries	Ulsan GPS Co., Ltd.)(*1)	₩	105,000,000	₩	160,000,000				
	SK Gas International Pte. Ltd. (*1)		34,616,952		50,198,616				
	SK GAS USA Inc		-		24,364,250				
	Sub-total		139,616,952		234,562,866				
Associates and joint	Korea Energy Terminal Co., Ltd. (*1)		-		39,098,450				
ventures	Bitgoeul Eco Energy Co., Ltd.(*1)		-		4,611,000				
	KOHYGEN Corp. (*1)		1,235,000		950,000				
	G-Energy Corp.		-		100,000				
	KD Ecohub Co., Ltd.		400,000		-				
	Goseong Green Power Co., Ltd.		-		170,240,000				
	Lotte SK Eneroute Co., Ltd.		1,350,000		-				
	Sub-total		2,985,000		214,999,450				
Total		\mathbb{W}	142,601,952	₩	449,562,316				

(*1) This is the equity acquisition amount at paid-in capital increase after the initial acquisition.

Compensation for key management personnel for the years ended December 31, 2022 and 2021 are as follows (Korean won in thousands):

		2022		2021
Salaries	₩	5,501,523	₩	5,362,372
Retirement benefits		519,920		797,018
Stock compensation cost		695,149		90,687
Total	₩	6,716,592	₩	6,250,077

The Company provides guarantees of payment to others for its subsidiaries and other related parties (see Note 21). In this regard, the financial guarantee liabilities of # 2,934,058 thousand is recognized.

The Company provides collateral to others for its subsidiaries, associates and joint ventures (see Note 21).

23. Equity

Issued capital

Issued capital as of December 31, 2022 and 2021 are as follows (Korean won in thousands, except par value amounts):

		2022		2021
Authorized shares (in shares)		20,000,000		20,000,000
Par value (in won)	\mathbb{W}	5,000	₩	5,000
Ordinary shares issued (in shares)		9,230,244		9,230,244
Issued capital	\mathbb{W}	46,151,220	₩	46,151,220

Capital surplus

Details of capital surplus as of December 31, 2022 and 2021 are as follows (Korean won in thousands):

		2022		2021
Paid in capital in excess of par value	₩	30,356,778	₩	30,356,778
Revaluation reserve		120,748,809		120,748,809
Treasury stock gains		44,174,341		44,174,341
Other capital surplus (*1)		61,434,574		61,434,574
Total	₩	256,714,502	₩	256,714,502

(*1) Includes a merger gain of ₩61,222,309 thousand from the merger with G. Hub Co., Ltd.

Other components of capital

Details of other components capital as of December 31, 2022 and 2021 are as follows (Korean won in thousands):

		2022		2021
Treasury stock (*1)	₩	(7,418,439)	₩	(7,418,439)
Stock option		1,849,670		1,125,718
Total	₩	(5,568,769)	₩	(6,292,721)

(*1) The Company acquired treasury stock at market price for the purpose of stabilizing its stock price. As of December 31, 2022, the number of shares of treasury stocks outstanding is 255,198 shares.

Accumulated other comprehensive income (loss)

As of December 31, 2022 and 2021, details of other comprehensive income (loss) are as follows (Korean won in thousands):

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		2022		2021
Income (loss) on valuation of financial instruments at FVOCI	₩	(2,111,413)	₩	4,145
Gain (loss) on valuation of lease liabilities for cash flow hedge		(27,103,334)		(11,856,384)
Total	₩	(29,214,747)	₩	(11,852,239)

23. Equity (cont'd)

Retained earnings

Details of retained earnings as of December 31, 2022 and 2021 are as follows (Korean won in thousands):

		2022		2021	Description
Legal reserve	₩	23,075,610	₩	23,075,610	Legal (*1)
Business rationalization reserve		83,060		83,060	Discretionary
Capital expenditure reserve		1,089,204		1,089,204	Discretionary (*2)
Unappropriated		1,773,999,149		1,560,093,627	
Total	₩	1,798,247,023	₩	1,584,341,501	

(*1) In accordance with the Korean Commercial Code, an amount equal to at least 10% of cash dividends is required to be appropriated as a legal reserve until the reserve equals 50% of issued capital. The legal reserve may not be utilized for cash dividends but may only be used to offset a deficit, if any, or be transferred to capital.

(*2) The Korean Financial Control Regulation for listed companies requires that an amount be appropriated as reserve for improvement of financial position until the ratio of equity to total assets equals 30%. Effective from December 2007, such reserve is no longer required by the revised Tax Incentives Limitation Law.

Statements of appropriation of retained earnings

Details of the appropriation of retained earnings for the years ended December 31, 2022 and 2021 are as follows (Korean won in thousands):

	2022	2021
Retained earnings before appropriations:		
Unappropriated retained earnings carried forward		
from the prior year	₩ 1,514,320,892	₩ 1,333,819,335
Re-measurement loss on defined benefit liability	(251,081)	(950,182)
Profit for the year	268,904,384	227,224,474
Interim dividends	(8,975,046)	-
Total	1,773,999,149	1,560,093,627
Appropriation of retained earnings:		
Appropriations for cash dividends	49,362,753	45,772,735
Unappropriated retained earnings to be carried forward to the next year	₩ 1,724,636,396	₩ 1,514,320,892

The appropriation approval date for 2022 is March 23, 2023 and for 2021 was March 24, 2022.

Dividends paid and proposed

Details of dividends proposed for the years ended December 31, 2022 and 2021 are as follows (Korean won in thousands, except per share amounts):

	_	2022		2021
Cash dividends (interim)				
(2021: ₩1,000 per share)	₩	-	₩	8,975,046
Cash dividends (year end)				
(2022: ₩5,500, 2021: ₩5,100 per share)		49,362,753		45,772,735
Total	₩	49,362,753	₩	54,747,781

24. Share-based payments

Stock option

In accordance with the special resolution of the general meeting of shareholders, the Company has granted stock options to employees of the Company. Major terms are as follows.

	1-1	1-2	1-3	1-4	1-5	1-6	1-7
The grant date of the right Types of shares to be issued	2018-	03-26	2019- Re	03-05 egistered commo	2019-03-27 n stock	2020-03-03	2022-03-24
Method of grant	 Issuance of n Transfer of ov If the exercise 	ew shares wn shares			olution of the boa t the event, the di	rd of directors. fference or differe	nce Grant
Number of shares granted	15,000 shares	15,000 shares	20,000 shares	20,000 shares	10,000 shares	24,000 shares	43,500 shares
Exercise price	95,290 won	102,910 won	81,270 won	87,770 won	90,490 won	78,510 won	118,670 won
Available period	2020.3.27~ 2025.3.26	2021.3.27~ 2025.3.26	2021.3.6~ 2026.3.5	2022.3.6~ 2026.3.5	2021.3.28~ 2026.3.27	2022.3.4~ 2027.3.3	2025.3.25~ 2029.3.24
Vesting condition	More than 2 years of employment period after grant date	More than 3 years of employment period after grant date	More than 2 years of employment period after grant date	More than 3 years of employment period after grant date	More than 2 years of employment period after grant date	More than 2 years of employment period after grant date	Employment period after grant date - More than 2 years (29,000 shares) - More than 3 years (14,500 shares)

Stock Appreciation Rights

The Company has granted cash-settled stock appreciation rights to executives of the Company. Major terms are as follows.

	Detail
The grant date of the right	March 1, 2020
Vesting condition	More than 3 years of employment period after grant date ((Maintain its condition in case of involuntary resignation (moving out of affiliated companies, etc.))
Compensate amount	Calculation of payout rate and payment amount based on the stock price increase rate after 3 years and the minimum required rate of return by year
Method of payment	Installment payment over 3 years from 3 years after the grant date

In relation to the stock appreciation right, the Company recognizes #260,081 thousand of other current financial liabilities and #260,081 thousand of other non-current financial liabilities in the statement of financial position.

The compensation cost of stock options and cash-settled stock appreciation rights are calculated using the fair value approach using the binomial model. The assumptions and variables used to calculate compensation cost are as follows.

						Equity	-set	tled stoc	к ор	otions					ap	Stock preciation rights
		1-1		1-2		1-3		1-4		1-5		1-6	_	1-7		
Risk-free rate of return		2.58%		2.58%		2.02%		2.02%		1.89%		1.32%		2.76%		3.68%
Share price of grant day (previous day closing price)	₩	92,500	₩	92,500	₩	82,700	₩	82,700	₩	91,900	₩	77,500	₩	111,500	₩	78,490
Price volatility Discount rate		15.90% 3.52%		15.90% 3.52%		16.25% 3.01%		16.25% 3.01%		17.01% 2.88%		22.72% 3.87%		46.18% 4.57%		10.45% 4.21%
Exercise price (*1)	₩	95,290	₩	102,910	₩	81,270	₩	87,770	₩	90,490	₩	78,510	₩	118,670	₩	78,490
Fair value per share	₩	11,759	₩	9,347	₩	10,713	₩	8,432	₩	13,084	₩	13,925	₩	45,985	₩	42,458

(*1) The exercise price of the stock appreciation rights is equal to the base price on the date of grant. The Company re-measures the liability for the stock appreciation rights at the end of each reporting period until settled, at the fair value of the stock appreciation rights.

24. Share-based payments (Cont'd)

Share-based payments

The Company has recognized # 851,923 thousand and # 660,742 thousand as stock compensation expense for the years ended December 31, 2022 and 2021, respectively, and the remaining compensation expenses amounted to # 1,315,193 thousand.

25. Revenue form contracts with customers

Classification of revenue information

	(Korean won in thousands)	
	2022`	2021 ′
Revenue from contracts with customers:		
LPG sales	₩ 6,700,155,447	₩ 4,806,445,393
Service revenue and others	233,863,752	147,770,089
Subtotal	6,934,019,199	4,954,215,482
Revenue from other sources:		
Rental income	16,805,724	15,411,535
Consignment storage income	28,112,526	28,654,089
Subtotal	44,918,250	44,065,624
Total	₩ 6,978,937,449	₩ 4,998,281,106

The following are the disaggregation of revenue from contracts with customers of a separate group (Korean won in thousands):

	2022	2021
Types of goods or services:		
LPG sales	₩ 6,700,155,447	₩ 4,806,445,393
Other sales	22,135,200	18,978,784
Transportation service	211,728,552	128,791,305
Total revenue from contracts with customers	₩ 6,934,019,199	₩ 4,954,215,482
Geographical market:		
Korea	₩ 4,618,816,656	₩ 3,327,079,150
Overseas	2,315,202,543	1,627,136,332
Total revenue from contracts with customers	₩ 6,934,019,199	₩ 4,954,215,482
The time of transfer of goods or services:		
Goods transferred at one time	₩ 6,720,864,975	₩ 4,823,614,762
Services transferred over time	213,154,224	130,600,720
Total revenue from contracts with customers	₩ 6,934,019,199	₩ 4,954,215,482

Considering the goods or services that generate operating profits, the Company has determined the entire Company as a single reporting sector. Therefore, the notes on the gross amount of operating income, net profit before tax expense deduction, and assets/liabilities by reporting sector were omitted.

There are two major customers that accounted for more than 10% of the Company's revenue during the year ended December 31, 2022 (2021: two customers) and the amount of revenue from the major customers were W 1,509,183,943 thousand. (2021: W 1,216,287,979 thousand).

25. Revenue form contracts with customers (Cont'd)

Contract balance

		(Korean won in thousands)				
	2022			2021		
Trade receivables	\mathbb{W}	903,625,541	₩	773,934,184		
Contract liabilities (*1)		9,282,869		3,242,306		

(*1) It is short-term advances received from customers in relation to LPG sales, and the Company recognizes contract liabilities as revenue when performance obligations under the contract are satisfied. Among the contract liabilities balance at the year end December 31, 2021, the income recognized in the current period was # 3,242 million.

26. Operating expense

Classification of expenses by nature

Details of cost of sales and operating expenses for the years ended December 31, 2022 and 2021 are as follows (Korean won in thousands):

		2022	2021
Changes in goods	₩	61,019,399	₩ (126,737,273)
Purchase of goods		6,128,650,531	4,683,915,737
Salaries and wages		79,501,535	71,905,255
Provision for pension benefits		4,686,801	5,301,409
Transport and storage of oil expenses		27,113,320	24,690,229
Rental fees and service fees		42,304,258	36,668,280
Taxes and dues		19,228,962	16,224,581
Depreciation of property, plant and equipment		98,193,983	100,272,327
Amortization of intangible assets		9,175,310	6,944,716
Others		81,172,960	80,497,918
Total	₩	6,551,047,059	₩ 4,899,683,179

26. Operating expense (Cont'd)

Selling and administrative expenses

Details of selling and administrative expenses for the years ended December 31, 2022 and 2021 are as follows (Korean won in thousands):

		2022		2021
Salaries and wages	₩	75,219,641	₩	67,336,767
Retirement benefits		4,259,073		5,048,512
Employee welfare benefits		12,943,992		15,838,785
Training		4,508,018		3,623,474
Entertainment		2,415,184		2,173,326
Travel		2,713,824		1,476,357
Utilities		9,636,653		7,844,183
Supplies		1,174,058		847,400
Repairs		8,876,764		9,318,671
Office supplies and management		4,788,578		4,880,799
Technical service fees		17,059,139		16,091,760
Transport and storage of oil		7,313,437		7,822,061
Communication		437,537		389,122
Advertising and marketing		8,044,466		7,613,672
Rental fees and service fees		40,792,112		34,538,719
Taxes and dues		18,627,960		15,664,332
Insurance		1,716,403		1,793,692
Depreciation of property, plant and equipment		24,103,995		24,094,008
Amortization of intangible assets		8,889,387		6,642,810
Bad debt expenses (reverse)		(42,326)		3,083,000
Stock compensation expense		851,923		660,742
Miscellaneous		822,616		661,249
Total	₩	255,152,434	₩	237,443,441

27. Finance income and costs and other non-operating revenue and expense

Finance income and costs

Finance income and finance costs for the years ended December 31, 2022 and 2021 are as follows (Korean won in thousands):

	2022			2021
Finance income:				
Interest income	₩	2,844,367	₩	3,351,563
Dividends income		1,779,575		10,197,380
Gain on transaction of derivatives		303,743,747		197,862,046
Gain on valuation of derivatives		93,378,714		97,581,119
Gain on foreign currency translation		68,846,886		2,228,926
Gain on foreign currency transaction		152,619,468		61,956,044
Gain on valuation of financial assets at fair value through profit or loss		2,822,299		775,317
Gain on transaction of financial assets at fair value through profit or loss		25,558,611		10,617,374
Financial guarantee income		885,940		354,949
Total	₩	652,479,607	₩	384,924,718
Finance costs:				
Interest expenses	₩	56,448,124	₩	40,397,570
Loss on transaction of derivatives		168,529,387		86,015,488
Loss on valuation of derivatives		203,903,689		16,253,939
Loss on foreign currency translation		20,110,058		3,681,848
Loss on foreign currency transaction		281,588,759		129,804,248
Financial guarantee cost		162,174		46,402
Total	₩	730,742,191	₩	276,199,495

Other non-operating income and expenses

Other non-operating income and expenses for the years ended December 31, 2022 and 2021 are as follows (Korean won in thousands):

	2022			2021
Other non-operating income:				
Rental income	₩	8,483,940	₩	6,186,540
Gain on disposal of property, plant, and equipment		55,358		5,991,545
Gain on disposal of intangible assets		-		140,390
Reversal of impairment loss on intangible assets		-		1,461,695
Gain on disposal of investments in joint ventures (*1)		-		80,285,334
Gain on exemption of debt		-		127,203
Miscellaneous revenue		11,136,807		12,430,994
Total	₩	19,676,105	₩	106,623,701
Other non-operating expenses:				
Donations	₩	8,101,233	₩	3,664,021
Loss on disposal of property, plant and equipment		698,672		1,640,535
Loss on disposal of intangible assets		11,656		6,868
Loss on impairment of intangible assets		-		348,600
Miscellaneous expenses		5,460,498		7,574,712
Total	₩	14,272,059	₩	13,234,736

(*1) During the previous period, the Company disposed shares on SK D&D Co., Ltd. were to SK Discovery Co., Ltd. (see Note 22).

28. Income tax

The major components of income tax expense for the years ended December 31, 2022 and 2021 are as follows (Korean won in thousands):

		2022		2021
Current income tax	₩	100,148,838	₩	70,113,363
Changes in deferred tax assets and liabilities		(19,342,142)		(3,223,134)
Income tax expense directly recognized to equity		5,320,772		6,597,411
Income tax expense	₩	86,127,468	₩	73,487,640

A reconciliation of profit before income taxes at the Korea statutory tax rate to income tax expense at the effective tax rate of the Company is summarized as follows (Korean won in thousands):

	2022	2021
Profit before income tax	₩ 355,031,852	₩ 300,712,114
Tax at the statutory income tax rate (*1)	87,271,759	72,310,332
Adjustments:		
Non-deductible expenses and tax exemption	447,951	(470,571)
Income tax refund and reflux tax	(1,918,923)	-
Tax credit	-	2,146,613
Deferred tax unrecognized effect	(918,217)	(854,032)
Others	1,244,898	355,298
Income tax expense	₩ 86,127,468	₩ 73,487,640
Effective income tax rate	24.26%	24.44 %

(*1) The taxable income of income tax rate includes corporate income tax (10% on taxable income of less than #200 million, 20% on taxable income of more than #200 million and less than #20,000 million, 22% on taxable income of more than #300,000 million, 25% on taxable income of more than #300,000 million) and resident surtax (10% of corporate income tax).

Significant changes in cumulative temporary differences and deferred income tax assets and liabilities for the years ended December 31, 2022 and 2021 are as follows (Korean won in thousands):

	2022							
			Re	ecognized	Re	cognized		
		Jan. 1	to p	orofit or loss	direc	tly to equity		Dec. 31
Revaluation surplus	₩	(35,538,943)	₩	2,050,291	₩	-	₩	(33,488,652)
Allowance doubtful accounts		3,699,346		(152,866)		-		3,546,480
Defined benefit liability		-		(2,278,826)		75,847		(2,202,979)
Financial assets at fair value								
through other comprehensive								
income		269,296		(955,354)		639,076		(46,982)
Gain (loss) on valuation of								
derivative instruments		(23,288,785)		19,121,397		-		(4,167,388)
Depreciable assets		14,392,551		654,482		-		15,047,033
Investment assets		32,664,168		(1,195,050)		-		31,469,118
Lease assets and liabilities		(7,246,481)		(2,932,259)		4,605,849		(5,572,891)
Others		5,488,479		(1,526,026)		-		3,962,453
Sub-total		(9,560,369)		12,785,789		5,320,772		8,546,192
Less: Unrecognized deferred tax								
assets (liabilities)		29,901,070		(1,235,581)		_		28,665,489
Total	₩	(39,461,439)	₩	14,021,370	₩	5,320,772	₩	(20,119,297)

SK Gas Co., Ltd. Notes to the separate financial statements December 31, 2022 and 2021

28. Income tax (cont'd)

	2021						
			R	lecognized	Recognized		
		Jan. 1	to	profit or loss	directly to equity		Dec. 31
Revaluation surplus	₩	(36,588,439)	₩	1,049,496	₩ -	₩	(35,538,943)
Allowance doubtful accounts		5,455,472		(1,756,126)	-		3,699,346
Defined benefit liability		230,489		(533,846)	303,357		-
Financial assets at fair value							
through other comprehensive							
income		1,177,659		-	(908,363)		269,296
Gain (loss) on valuation of		(0.000.000)					
derivative instruments		(9,826,090)		(13,462,695)	-		(23,288,785)
Depreciable assets		15,076,206		(683,655)	-		14,392,551
Investment assets		19,136,124		13,528,044	-		32,664,168
Lease assets and liabilities		(11,708,133)		(2,740,765)	7,202,417		(7,246,481)
Others		4,263,209		1,225,270			5,488,479
Sub-total		(12,783,503)		(3,374,277)	6,597,411		(9,560,369)
Less: Unrecognized deferred tax							
assets (liabilities)		29,901,070		-	-		29,901,070
Total	₩	(42,684,573)	₩	(3,374,277)	₩ 6,597,411	₩	(39,461,439)

Unrecognized temporary difference for the years ended December 31, 2022 and 2021 are as follows (Korean won in thousands):

		2022		2021
Investment in subsidiaries, associates and joint ventures	₩	123,558,140	₩	123,558,140
Deferred tax assets		(61,202,745)		(61,202,745)
Deferred tax liabilities		184,760,885		184,760,885

The future realizability deferred tax assets depends on a number of factors, including the Company's ability to generate taxable income during the period in which the temporary difference are to be realized, the overall economic environment and industry prospects. The Company periodically reviews these matters and recognized deferred tax assets for deductible temporary differences that are expected to be realized in the future as of December 31, 2022. In addition, the Company has control over the extinguishment of temporary differences to be added to the foreseeable future for subsidiaries and the deferred tax liabilities are not recognized for the part where the temporary difference to be added in the foreseeable future is not extinguished.

29. Earnings per share

Basic earnings per share

The Company's basic earnings per share for the years ended December 31, 2022 and 2021 are computed as follows (Korean won in thousands, except per share amounts):

		2022		2021
Profit for the year attributable to ordinary stock	₩	268,904,384	₩	227,224,474
Weighted-average number of ordinary shares outstanding (in shares)		8,975,046		8,975,046
Basic earnings per share (in won)	₩	29,961	₩	25,317

The weighted average number of ordinary shares outstanding as at December 31, 2022 and 2021 are computed as follows:

		2022		
				Accumulated
Period	Description	Number of shares	Number of days	number of shares
1.1~12.31	Ordinary stock	9,230,244	365	3,369,039,060
1.1~12.31	Treasury stock	(255,198)	365	(93,147,270)
Total	-			3,275,891,790

Weighted-average number of shares of ordinary stock outstanding as at December 31, 2022: 3,275,891,790/365 = 8,975,046 (in shares)

		2021		
Period	Description	Number of shares	Number of days	Accumulated number of shares
1.1~12.31	Ordinary stock	9,230,244	365	3,369,039,060
1.1~12.31	Treasury stock	(255,198)	365	(93,147,270)
Total				3,275,891,790

Weighted-average number of shares of ordinary stock outstanding as at December 31, 2021: 3,275,891,790/365 = 8,975,046 (in shares)

Diluted earnings per share

The Company's diluted earnings per share for the years ended December 31, 2022 and 2021 are computed as follows (Korean won in thousands, except per share amounts):

		2022		2021
Profit for the year adjusted for the effect of dilution	₩	268,904,384	₩	227,224,474
Weighted average number of ordinary shares adjusted for				
the effect of dilution (in shares)		9,001,776		9,001,219
Diluted earnings per share (in won)	₩	29,872	₩_	25,244

The diluted weighted-average number of ordinary shares outstanding for diluted earnings per share as of December 31, 2022 and 2021 are computed as follows (shares):

	2022	2021
Weighted-average number of shares of ordinary stock outstanding	8,975,046	8,975,046
Effect of dilution from exercise share options	26,730	26,173
Diluted weighted-average number of shares of ordinary stock outstanding	9,001,776	9,001,219

30. Statements of cash flows

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

Adjustments in cash flows generated from operations for the years ended December 31, 2022 and 2021 are as follows (Korean won in thousands):

		2022		2021
Retirement benefits	₩	4,311,537	₩	4,739,397
Depreciation		51,375,260		53,340,629
Depreciation expenses of right-of-use assets		46,818,724		46,931,698
Amortization of intangible assets		9,175,310		6,944,716
Share-based payments		851,923		660,742
Bad debt expenses (reversal)		(42,326)		3,083,000
Interest income		(2,844,367)		(3,351,563)
Interest expense		56,448,124		40,397,570
Dividend income		(1,779,575)		(10,197,380)
Gain on valuation of derivative instruments		(93,378,714)		(97,581,119)
Gain on transaction of derivative instruments		(303,743,747)		(197,862,046)
Gain on valuation of financial assets at FVTPL		(2,822,299)		(775,317)
Gain on transaction of financial assets at FVTPL		(25,558,611)		(10,617,374)
Loss on valuation of derivative instruments		203,903,689		16,253,939
Loss on transaction of derivative instruments		168,529,387		86,015,488
Financial guarantee income		(885,940)		(354,949)
Financial guarantee cost		162,174		46,402
Gain on foreign currency translation		(68,846,886)		(2,228,926)
Gain on disposal of property, plant, and equipment		(55,358)		(5,991,545)
Gain on disposal of intangible assets		-		(140,390)
Loss on foreign currency translation		20,110,058		3,681,848
Gain on disposal of investments in joint ventures		-		(80,285,334)
Loss on disposal of property, plant, and equipment		698,672		1,640,535
Loss on disposal of intangible assets		11,656		6,868
Loss on impairment of intangible assets		-		348,600
Reversal of loss on impairment of intangible assets		-		(1,461,695)
Gain on exemption of debt		-		(127,203)
Income tax expense		86,127,468		73,487,640
Other		2,532,813		3,225,725
Total	₩	151,098,972	₩	(70,170,044)

30. Statements of cash flows (cont'd)

Changes in assets and liabilities arising from operating activities for the years ended December 31, 2022 and 2021 are as follows (Korean won in thousands):

	2022	2021
Trade receivables	₩ (139,340,769)	₩ (201,380,699)
Other receivables	(42,625,588)	(16,783,985)
Inventories	61,737,513	(127,600,550)
Other current assets	23,564,668	(14,117,431)
Other non-current financial assets	1,110,000	(2,504,031)
Accounts and notes payable	41,089,877	(129,139,991)
Other payables	(74,002,515)	18,173,276
Other current liabilities	6,101,389	(5,267,545)
Other non-current financial liabilities	438,959	402,996
Other non-current liabilities	(10,031)	(10,301)
Pension benefits paid	(1,408,479)	(743,505)
Plan assets	(14,900,108)	(5,479,893)
Total	₩ (138,245,084)	₩ (484,451,659)

The statements of cash flows of the Company are prepared using the indirect method and significant non-cash transactions for the years ended December 31, 2022 and 2021 are as follows (Korean won in thousands):

		2022		2021
Transfer of long-term loans to current portion	₩	6,843,319	₩	13,720,485
Changes in payments due to acquisition of tangible				
and intangible assets		2,656,932		15,138
Transfer of construction-in-progress to respective asset		15,970,710		10,690,825
Valuation of financial assets at fair value through				
other comprehensive income		2,115,559		2,845,200
Transfer of long-term lease liabilities to current portion		64,254,180		63,556,861
Transfer of long-term bonds payable to current portion		149,793,927		199,875,684
Transfer to non-current assets held for sale		75,095,163		-
Increase in newly contracted lease assets and liabilities		50,252,532		4,542,654

30. Statements of cash flows (cont'd)

Changes in liabilities arising from financing activities share for the years ended December 31, 2022 and 2021 are as follows (Korean won in thousands):

						2022				
		Jan. 1		Financing activities cash flows	F	Reclassification to current portion	Others (*1)			Dec. 31
Accrued expenses	₩	30,134,379	₩	(49,951,975)	₩	-	₩	57,651,441	₩	37,833,845
Dividends payable		-		(54,747,781)		-		54,747,781		-
Short-term borrowings Current portion of long-term borrowings		796,493,518		169,281,058		-		(66,093,178)		899,681,398
		199,953,852		(200,000,000)		149,793,927		172,870		149,920,649
Current portion of lease liabilities		60,424,866		(62,042,159)		64,254,180		532,896		63,169,783
Bonds payable		1,066,657,697		-		(149,793,927)		838,271		917,702,041
Lease liabilities		338,452,201		-		(64,254,180)		75,060,247		349,258,268
Treasury stock		(7,418,439)		-		-		-		(7,418,439)
Total	₩	2,484,698,074	₩	(197,460,857)	₩		₩	122,910,328	₩2	2,410,147,545

(*1) It includes accrued interest on interest-bearing borrowings and others, dividends payable, foreign currency valuation gains or losses, and changes in lease liabilities.

			Fi	nancing activities	2021 Reclassification to		0.1. (1.1)			
		Jan. 1		cash flows	current portion		Others (*1)		Dec. 31	
Accrued expenses	₩	24,538,613	₩	(37,054,476)	₩ -	₩	42,650,242	₩	30,134,379	
Dividends payable		-		(35,900,184)	-		35,900,184		-	
Short-term borrowings Current portion of		631,739,647		162,717,000	-		2,036,871		796,493,518	
long-term borrowings		-		-	199,875,684		78,168		199,953,852	
Current portion of lease liabilities		55,039,325		(58,171,320)	63,556,861		-		60,424,866	
Long-term borrowings		188,071		(60,867)	-		(127,204)		-	
Bonds payable		817,562,172		448,073,100	(199,875,684)		898,109	1	,066,657,697	
Lease liabilities		363,462,476		-	(63,556,861)		38,546,586		338,452,201	
Treasury stock Total		(7,418,439)		-	-		-		(7,418,439)	
	₩	1,885,111,865	₩	479,603,253	₩ -	₩	119,982,956	₩2	,484,698,074	

(*1) It includes accrued interest on interest-bearing borrowings and others, dividends payable, foreign currency valuation gains or losses, and changes in lease liabilities.

The Company's principal financial liabilities comprise trade and other payables, loans, and bonds. The main purpose of these financial liabilities is to finance the Company's operations and to provide guarantees to support its operations. Also, the Company has various financial assets incurred from operating activity including trade and other receivables, cash and cash equivalents, loans, and financial assets such as financial assets at fair value through other comprehensive income incurred from investing activity.

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

Market risk

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

The sensitivity analyses in the following sections relate to the position as at December 31, 2022 and 2021.

Interest rate risk

Interest rate risk is the risk that the fair value or future cash flows of a financial instrument will fluctuate because of changes in market interest rates. The Company's exposure to the risk of changes in market interest rates relates primarily to the Company's long-term debt liability with floating interest rates. The Company manages its interest rate risk by having a balanced portfolio of fixed and variable rate loans and borrowings.

Borrowings with floating interest rates amount to #288,650,916 thousand and #233,010,745 thousand as at December 31, 2022 and 2021, respectively. With all other variables held constant, the Compnay's profit before tax is affected through the impact on floating rate borrowings, as follows (Korean won in thousands):

		2022				2021			
		+1%		-1%		+1%		-1%	
Profit before tax	₩	(2,886,509)	₩	2,886,509	₩	(2,330,107)	₩	2,330,107	

Foreign currency risk

Foreign currency risk is the risk that the fair value or future cash flows of a financial instrument will fluctuate because of changes in foreign exchange rates. The Company's exposure to the risk of changes in foreign exchange rates relates primarily to the Company's operating activities and the Company's net investments in foreign subsidiaries. The book values of monetary assets and liabilities which are not presented in functional currency as at December 31, 2022 and 2021 are as follows (Korean won in thousands):

		20			2021				
		Assets	Liab	oilities (*1)		Assets	Li	iabilities (*1)	
USD	₩	455,988,603	₩ 1,1	79,337,566	₩	399,477,252	₩	982,461,487	
EUR	₩	-	₩	57,104	₩	-	₩	-	

(*1) The Company applies non-financial items as hedge items using the lease liabilities denominated in foreign currency. The amount was excluded because it was determined to be effective in avoiding the risk of exchange rate fluctuations, the amount was excluded. (See Note 14)

If the exchange rate of the functional currency fluctuates by 5% for each foreign currency as of December 31, 2022 and 2021, the impact on current and prior profit and loss are as follows (Korean won in thousands). The Company internally measures the exchange risk of won exchange rate fluctuations regularly and effectively manages exchange risk through currency futures trading, which has a limited impact on profit and loss.

		20	22			2021			
	+5%			-5%	+5%			-5%	
USD	₩	(36,167,448)	₩	36,167,448	₩	(29,149,212)	₩	29,149,212	
EUR	₩	(2,855)	₩	2,855	₩	-	₩	-	

Other price risk

Other price risk is the risk that the fair value or future cash flows of financial instruments will fluctuate due to fluctuations in market prices other than interest rate risk or foreign exchange risk. Listed equity securities of \mathbb{W} 11,081,839 thousand among the Company's financial assets at FVOCI are susceptible to market price risk arising from the fluctuation in the price of the securities. The following table demonstrates the sensitivity analyses of a reasonably possible change in the price of listed equity securities by 5% on the financial statements of the Company as of December 31, 2022 and 2021, respectively (Korean won in thousands):

		20)22	
		-5%		
Other comprehensive income before income tax	₩	554,092	₩	(554,092)
Income tax expense		(128,549)		128,549
Other comprehensive income for the year, net of tax	₩	425,543	₩	(425,543)

	2021				
	+5% -5%			-5%	
Other comprehensive income before income tax	₩	676,567	₩	(676,567)	
Income tax expense		(163,729)		163,729	
Other comprehensive income for the year, net of tax	₩	512,838	₩	(512,838)	

Credit risk

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

Trade receivables and other receivables

Customer credit risk is managed by each business unit under the terms of our established policies, procedures and controls related to customer credit risk management. The creditworthiness of the customer is assessed based on a broad credit rating scale and the individual credit limits are defined according to this assessment.

Outstanding customer deposits and contract assets are regularly monitored and shipments to major customers are usually compensated by letters of credit or other forms of credit insurance obtained from reputable banks and other financial institutions.

An impairment analysis is performed at the end of the reporting period using provisions to measure expected credit losses. The provisioning rate is based on maturity by grouping various customer segments according to similar loss patterns (i.e., region, product type, customer type and rating, letter of credit or other forms of credit insurance coverage).

The calculation reflects reasonable and supportable information at the reporting date about probability-weighted results, time values, and past events, current conditions and forecasts of future economic conditions. Typically, sales bonds are amortized if they are more than one year overdue or are not subject to enforcement activities. The maximum exposure to credit risk as of the end of the reporting period is the carrying value of each class of financial assets described in Note 5. the Company does not have collateralized collateral. L/C and other forms of credit insurance are considered an integral part of trade receivables and are considered for impairment calculations. The Company considers the risk relating to trade receivables and other receivables to be low as the customer is located in multiple jurisdictions and industries and operates mostly in an independent markets.

Other assets

Credit risks associated with the Company's other assets which consist of cash, short-term deposits and short-term and long-term loans arise from the default by the counterparties. Maximum exposure to credit risks will be the book value of the related other assets.

The Company deposits its surplus funds with Woori Bank and other financial institutions whose credit ratings are high. Accordingly, credit risk related to financial institutions is considered limited.

Meanwhile, the Company provides payment guarantees to others for its subsidiaries, and related financial guarantee liabilities are recorded. As of December 31, 2022, the Company does not expect the counterparty to default and expects that all payment guarantees provided by the Company will expire with the expiry of the guarantee period. Accordingly, the Company's maximum cash outflow and maturity analysis related to the execution of financial guarantee contracts were excluded from the risk analysis above (see Note 21).

Liquidity risk

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

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

The table below summarizes the maturity profile of the Company's financial liabilities based on contractual undiscounted payments as of December 31, 2022 and 2021. The amount related to liquidity risk includes interest payments is as follows (Korean won in thousands):

	2022							
					ľ	More than 4		
		1 year		1 to 4 years		years		Total
Trade and other payables	₩	196,642,718	₩	-	₩	-	₩	196,642,718
Short-term borrowings		910,134,915		-		-		910,134,915
Derivative liabilities		202,022,753		113,607		-		202,136,360
Current portion of lease								
liabilities		74,803,568		-		-		74,803,568
Other current financial liabilities		260,081		-		-		260,081
Bonds payable		167,677,550		636,020,950		326,549,175		1,130,247,675
Non-current lease liabilities		-		173,349,296		290,028,471		463,377,767
Other non-current financial								
liabilities		-		38,507,957		-		38,507,957
Total	₩ŕ	1,551,541,585	₩	847,991,810	₩	616,577,646	₩:	3,016,111,041

Other than the above financial liabilities, the maximum amount of liquidity risk exposed to payment guarantees and performance guarantees for subsidiaries for the year ended December 31, 2022 is ₩300,000,000 thousand and USD 126,976,055.

	2021						
			More than 4				
	1 year	1 to 4 years	years	Total			
Trade and other payables	₩ 190,173,738	₩ -	₩ -	₩ 190,173,738			
Short-term borrowings	796,493,518	-	-	796,493,518			
Derivative liabilities	16,260,897	-	-	16,260,897			
Current portion of lease							
liabilities	70,259,002	-	-	70,259,002			
Bonds payable	220,776,300	565,274,525	564,973,150	1,351,023,975			
Non-current lease liabilities	-	171,900,840	206,654,618	378,555,458			
Other non-current financial							
liabilities	-	37,808,917	-	37,808,917			
Total	₩ 1,293,963,455	₩ 774,984,282	₩ 771,627,768	₩2,840,575,505			

Capital management

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

The Company manages its capital structure and makes adjustments to it in light of changes in economic conditions. To maintain the sound capital structure, the Company may adjust the dividend payment to shareholders, reduce capital stock, or issue new shares. No changes were made in the objectives, policies or processes for managing capital during the year ended December 31, 2022.

The Company monitors its debt ratio which is total liabilities divided by shareholder's equity. Debt ratios as of December 31, 2022 and 2021 are as follows (Korean won in thousands):

	2022	2021
Total liabilities	₩ 2,920,774,145	₩ 2,809,125,116
Shareholder's equity	2,066,329,229	1,868,451,253
Debt ratio	141.35%	150.35%

32. Fair value

Fair value hierarchy

The Company uses the following hierarchy for determining and disclosing of the fair value of financial instruments by valuation technique:

Level 1:	Quoted (unadjusted) prices in active markets for identical assets or liabilities
Level 2:	Other techniques for which all inputs which have a significant effect on the recorded fair
	value are observable, either directly or indirectly
Level 3:	Techniques which use inputs that have a significant effect on the recorded fair value, and
	those inputs are not based on observable market data

Fair value on the statement of financial position

As of December 31, 2022 and 2021, the fair value of financial instruments by fair value hierarchy is as follows (Korean won in thousands):

	202				22	22		
		Level 1		Level 2		Level 3		Total
Financial assets:								
Trade and other receivables	₩	-	₩	19,296,638	₩	-	₩	19,296,638
Short-term financial instruments		-		315,168,804		-		315,168,804
Current derivative assets		-		44,681,881		-		44,681,881
Long-term financial instruments		11,081,839		-		26,607,608		37,689,447
Non-current derivative assets	_	-		18,256,092		78,712,000		96,968,092
Total	₩	11,081,839	₩	397,403,415	₩	105,319,608	₩	513,804,862
Financial liabilities:								
Trade and other payables	₩	-	₩	57,282,069	₩	-	₩	57,282,069
Other current financial liabilities		-		-		260,081		260,081
Current derivative liabilities		-		201,243,289		779,464		202,022,753
Non-current derivative liabilities		-		113,607		-		113,607
Other non-current financial								
liabilities		-		-		260,081		260,081
Total	₩	-	₩	258,638,965	₩	1,299,626	₩	259,938,591
			2021					
		Level 1		Level 2		Level 3		Total
Financial assets:								
Short-term financial instruments	₩	-	₩	557,091,074	₩	-	₩	557,091,074
Current derivative assets		-		65,325,132		-		65,325,132
Long-term financial instruments		13,531,336		-		10,254,572		23,785,908
Non-current derivative assets		-		13,351,587		36,687,000		50,038,587
Total	₩	13,531,336	₩	635,767,793	₩	46,941,572	₩	696,240,701
Financial liabilities:								
Trade and other payables	₩	-	₩	21,856,563	₩	-	₩	21,856,563
Current derivative liabilities		-		16,253,939		-		16,253,939
Other non-current financial				, ,				, ,
liabilities		-		-		392,192		392,192
Total	₩	-	₩	38,110,502	₩	392,192	₩	38,502,694

The fair value of cash and cash equivalents, trade receivables, other receivables, other financial assets, trade payables, other payables, and long- and short-term interest-bearing borrowings were excluded from the fair value disclosure because the discount impact was not significant.

32. Fair value (cont'd)

Valuation technique and input variables

As of December 31, 2022, the correlations between valuation techniques, input variables classified as Level 2 in the fair value hierarchy among assets and liabilities measured at fair value in the separate financial statements are as follows (Korean won in thousands):

	Book value		Valuation technique	Input variables
Trade and other receivables		40,000,000		
Trade receivables	₩	19,296,638	Market approach	Fair value of underlying assets
Short-term financial instruments				
MMW and others		315,168,804	Market approach	Fair value of underlying assets
Derivative assets (current and non-	-curren	t)		
Currency forward		11,164,839		
LPG forward		46,205,238	Market approach	Fair value of underlying assets
ZCC option		5,567,896		
Subtotal		62,937,973		
Total financial assets	₩	397,403,415		
Trade and other payables				
Trade payables	₩	57,282,069	Market approach	Fair value of underlying assets
Derivative liabilities (current and no	on-curr	ent)		
Currency forward		84,265,224		F · · · · · · · · ·
LPG forward		117,091,672	Market approach	Fair value of underlying assets
Subtotal		201,356,896		
Total financial liabilities	₩	258,638,965		

As of December 31, 2022, the correlations between valuation techniques, input variables classified as Level 3 in the fair value hierarchy among assets and liabilities measured at fair value in the separate financial statements are as follows. There has been no material change in significant but unobservable input variables used for measuring level 3 fair value since the year ended December 31, 2021 (Korean won in thousands):

	Book value	Valuation technique	Input variables
Long-term financial assets			
Korea Business Finance Co., Ltd.	₩ 4,980,600	Market comparable companies	Price-to-book ratio
SK TIC	2,298,337	Net asset value	Fair value of net assets
Gridwiz Co., Ltd – RCPS	11,496,191	Discounted cash flow, Binomial model	Expected cash flow and discount rate, Volatility of the underlying asset
EverBest Medellian Private Equity Investment Limited	5,161,983	Net asset value	Fair value of net assets
Subtotal	23,937,111		
Derivative assets (non-current)			
TRS	78,712,000	Net asset value	Fair value of net assets
Other financial liabilities (current and	, ,		
Stock appreciation rights	520,163	Binomial model	Volatility of the underlying asset
Derivative liabilities (current)	,		, , , ,
Gridwiz Co., Ltd – RCPS sales of call option		Discounted cash flow,	Expected cash flow and discount rate,
	779,464	Binomial model	Volatility of the underlying asset
Total financial liabilities	₩ 103,948,738		, , , , ,

From the level 3 inputs, if the price-to-book ratio of similar companies increases, the fair value of Korea Business Finance Co., Ltd. increases. In addition, if the expected cash flow is increased or discount rate is decreased, the fair value of the Gridwiz Co., Ltd.'s RCPS and Gridwiz Co., Ltd.'s RCPS sales of call option are increased.

32. Fair value (cont'd)

The Company believes that the difference between the fair value and the carrying amount of financial instruments that have not been subsequently measured at fair value in the separate financial statements as of the year ended December 31, 2022 and 2021 are not material. As of December 31, 2022 and 2021, the carrying amounts of financial instruments not subsequently measured at fair value are as follows (Korean won in thousand):

	2022			2021
Long-term financial assets				
Conatus Co., Ltd Convertible preferred stock	₩	1,000,053	₩	1,000,053
Ipseong Co., Ltd.		299,992		299,992
Korea LPG Association		70,000		70,000
Schoolbus Co., Ltd. – RCPS		300,001		300,001
Hylium Industries Inc. – RCPS		1,000,054		1,000,054
Others		398		398
Total	₩	2,670,498	₩	2,670,498

There is no replacement between level 1, level 2 and level 3 during the current year, and the details of changes in items classified as level 3 fair value measurement during the current year are as follows (Korean won in thousands):

	Jan. 1	Purchase (Issue)	Valuation	Others	Dec. 31
Long-term financial assets (Financial assets at FVOCI) Long-term financial assets (Financial	₩ 7,584,074	₩ -	₩ (305,137)	₩ -	₩ 7,278,937
assets at FVPL)	-	5,000,000	3,156,913	8,501,260	16,658,173
Derivative assets (Non-current) Other financial liabilities (Current and	36,687,000	-	42,025,000	-	78,712,000
non-current)	392,192	-	127,971	-	520,163
Derivative liabilities (Current)			779,464		779,464

33. Non-current assets held for sale

As of December 31, 2022, non-current assets held for sale is as follows (Korean won in thousands):

		2022
Investment in associates	₩	59,593,096
Construction-in-progress		15,502,067
· -	W	75,095,163

SK Holdco Pte. Ltd. stocks were classified as non-current assets held for sale as the Company entered into a stock trade contract during the current period.

In addition, as KD Eco Hub Co., Ltd. was established during the current period, the assets agreed to be sold according to the joint venture contract were classified as non-current assets held for sale.

The proceeds from the sales of non-current assets held for sale are expected to exceed the net assets value, and the Company does not recognize impairment loss on non-current assets held for sale.

34. Approval of financial statements

These separate financial statements were approved by the board of directors on February 7, 2023 and will receive final approval at the shareholders' meeting on March 23, 2023.

35. Events after the reporting period

Issuing public bonds

On January 30, 2023, the Company issued \oplus 220 billion of public bonds to repayment of borrowings and for operating funds.

Payment guarantees for SK Gas International Pte. Ltd.

On February 28, 2023, the Company decided to provide parent company payment guarantee (guarantee amount: USD 700,000,000) for the credit enhancement of its subsidiary, SK Gas International Pte. Ltd to enter into the derivatives transactions.

Payment guarantees for SK Gas International Pte. Ltd.

On February 28, 2023, the Company decided to provide parent company payment guarantee (guarantee amount: ₩ 550,000 million) for possible monetary borrowings in a fuel supply contract signed by its subsidiary SK Gas International Pte. Ltd with creditors.



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Independent Auditors' Report on Internal Control over Financial Reporting

Based on a report originally issued in Korean

To the Shareholders and Board of Directors of SK Gas Co., Ltd.

Opinion on Internal Control over Financial Reporting

We have audited SK Gas Co., Ltd. (the Company) internal control over financial reporting ("ICFR") as of December 31, 2022 based on the criteria established in the Conceptual Framework for Designing and Operating ICFR ("ICFR Design and Operation Framework") issued by the Operating Committee of Internal Control over Financial Reporting in the Republic of Korea (the "ICFR Committee").

In our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2022 based on ICFR Design and Operation Framework.

We also have audited, in accordance with Korean Standards on Auditing (KSAs), the separate financial statements of the Company, which comprise the separate statement of financial position as of December 31, 2022, the separate statements of comprehensive income, changes in equity and cash flows for the year then ended, and notes, comprising significant accounting policies and other explanatory information, and our report dated March 15, 2023, expressed an unmodified opinion on those separate financial statements.

Basis for Opinion

We conducted our audit in accordance with KSAs. Our responsibilities under those standards are further described in the Auditors' Responsibilities for the Audit of the Internal Control over Financial Reporting section of our report. We are independent of the Company in accordance with the ethical requirements that are relevant to our audit of the internal control over financial reporting in Republic of Korea, and we have fulfilled our other ethical responsibilities in accordance with these requirements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Responsibilities of Management and Those Charged with Governance for the Internal Control over Financial Reporting

The Company's management is responsible for designing, operating and maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying *Report on the Operations of Internal Accounting Control System*.

Those charged with governance are responsible for overseeing the Company's internal control over financial reporting.

Auditors' Responsibilities for the Audit of the Internal Control over Financial Reporting

Our responsibility is to express an opinion on the Company's internal control over financial reporting based on our audit. We conducted our audit in accordance with KSAs. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects.

Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk.



Definition and Limitations of Internal Control over Financial Reporting

A Company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with Korean International Financial Reporting Standards ("K-IFRS"). A Company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the Company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with K-IFRS, and that receipts and expenditures of the Company are being made only in accordance with authorizations of management and directors of the Company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the Company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation 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 auditors' report is Cho, Seung Hee.

KPMG Samjory Accounting Corp.

Seoul, Korea March 15, 2023

This report is effective as of March 15, 2023, 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 internal control over financial reporting. Accordingly, the readers of the audit report should understand that the above audit report has not been updated to reflect the impact of such subsequent events or circumstances, if any.

ICFR Operating Status Report by CEO

To the Shareholders, Board of Directors, and Audit Committee of SK Gas Co., Ltd.

We, as the Chief Executive Officer and the Internal Accounting Manager of SK Gas Co., Ltd. ("the Company"), assessed operating status of the Company's Internal Control over Financial Reporting ("ICFR") for the year ending December 31, 2022.

Design and operation of ICFR is the responsibility of the Company's management, including the Chief Executive Officer and the Internal Accounting Manager (collectively, "We", "Our" or "Us").

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

We used the 'Conceptual Framework for Designing and Operating Internal Control over Financial Reporting' established by the Operating Committee of Internal Control over Financial Reporting in Korea (the "ICFR Committee")' as the criteria for design and operation of the Company's ICFR. And we conducted an evaluation of ICFR based on the 'Management Guideline for Evaluating and Reporting Effectiveness of Internal Control over Financial Reporting' established by the ICFR Committee.

Based on our assessment, we concluded that the Company's ICFR is designed and operated effectively as of December 31, 2022, in all material respects, in accordance with the 'Conceptual Framework for Designing and Operating Internal Control over Financial Reporting.

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

February 24, 2023

Chief Executive Officer

YOON BYUNG SUK

Internal Accounting Manager