

**Hankook Tire & Technology Co., Ltd.
and Subsidiaries**

Consolidated financial statements

As of and for the years ended

December 31, 2022 and 2021

Attachment: Independent Auditor's Report

Hankook Tire & Technology Co., Ltd

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Independent auditor's report

(English Translation of a Report Originally Issued in Korean)

To the Shareholders and Board of Directors of

Hankook Tire & Technology Co., Ltd.

Opinion

We have audited the accompanying consolidated financial statements of Hankook Tire & Technology Co., Ltd. and Subsidiaries (collectively referred to as the "Group"), which comprise the consolidated statements of financial position as of December 31, 2022, and the consolidated statements of comprehensive income, consolidated statements of changes in equity and consolidated statements of cash flows for the year then ended, and the notes to the consolidated financial statements, including a summary of significant accounting policies.

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

Basis for opinion

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

Emphasis of Matter

Without qualifying our opinion, we draw attention to the following matters.

A. Significant event after the reporting period

As discussed in Note 44, on March 12, 2023, a fire broke out in the curing process of the Group's Daejeon plant, causing damage to some buildings, machinery, and inventory assets in the plant. Manufacturing at the plant has been completely suspended for safety reasons since March 13, 2023, and the Group is confirming the amount of damaged caused by the fire and considering about dealing with the damage through a property comprehensive insurance.

B. Emphasis of matter in regard to the adjustment of prior period errors

As discussed in Note 45, in the Consolidated statements of financial position as of December 31, 2021, in which the adjustments are not applied, the Group did not recognize impairment loss on Property, plant and equipment, and as a result, the net income was overstated by KRW 12,633 million. The comparative financial statements as of December 31, 2021 was restated by reflecting this error.

In obtaining the audit evidence relevant to the opening balances, we found the adjustment discussed in Note 45 and we conducted the following procedures to conclude that there were the adjustment of prior period errors that required adjustment of the prior financial statements.

- We reviewed whether the facts related to the restatement of the Group's prior financial statements are appropriate.
- If it is existed that detailed relevant evidences supporting the accounting treatment of the Group, we conducted additional audit procedures for the evidences.

We communicated with the Group and predecessor auditor regarding the adjustment. The predecessor auditor concluded that the impairment loss on Property, plant and equipment was immaterial error and decided not to reissue their auditor's report.

Key audit matters

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

Estimation of net realizable value for the finished goods

As described in the Note 2, the Group measures inventories at the lower of cost and net realizable value and recognized inventory valuation allowance of KRW 12,306 million. (See Note 10) Net realizable value is the estimated selling price in the ordinary course of business less the estimated costs of completion and the estimated costs necessary to make the sale. Accordingly, net realizable value of finished goods is calculated by various assumptions, such as estimating the expected selling price and the additional cost of selling the product. Considering that these estimates require significant level of management's judgements and the impact of the finished goods' valuation loss on profit or loss for the year ended December 31, 2022 and subsequent years, may be significant, we determined the estimation of net realizable value for the finished goods as a key audit matter.

We have performed the following audit procedures in relation to the above key audit matter.

- We obtained an understanding of the accounting policy and internal control relevant to the valuation of finished goods inventories.
- We assessed design and effectiveness of major internal controls on net realizable value and valuation process of obsolescence of finished goods.
- We confirmed the basic information data used to estimate net realizable value of finished goods such as aging data for finished goods through sampling.
- We conducted sampling from finished goods sold after the year ended December 31, 2022 and compared the Group's actual selling price of the samples with the estimated selling price used in calculation of net realizable value of finished goods.
- We recalculated valuation allowance of finished goods prepared by the Group.

Other Matter

The Consolidated financial statements of the Group as of December 31, 2021, were audited by Samil PWC, whose report dated March 22, 2022 expressed an unqualified opinion thereon. The predecessor auditor expressed an unqualified opinion thereon on the financial statements, which were not applied the adjustments described in Note 45, and the comparative financial statements as of December 31, 2021 are the financial statements in which the adjustments are applied.

Responsibilities of management and those charged with governance for the Consolidated Financial statements

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

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

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

Auditor's responsibilities for the audit of the Consolidated Financial statements

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

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

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

statements. We are responsible for the direction, supervision, and performance of the Group audit. We remain solely responsible for our audit opinion.

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

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

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

The engagement partner on the audit resulting in this independent auditor's report is Gil Jae Lee.

Seoul, Korea

March 24, 2023

This report is effective as of March 24, 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 consolidated financial statements and notes thereto. Accordingly, the readers of the audit report should understand that there is a possibility that the above audit report may have to be revised to reflect the impact of such subsequent events or circumstances, if any.

Hankook Tire & Technology Co., Ltd.
Consolidated Statements of Financial Position
December 31, 2022 and 2021

(in thousands of Korean won)

	Notes	2022	2021
Assets			
Current assets			
Cash and cash equivalents	6	₩ 1,139,442,351	₩ 1,062,042,416
Short-term financial assets	6	594,766,222	480,020,612
Financial assets at fair value through profit or loss	5,6,7	252,793,629	458,986,405
Trade and other receivables	6,9,42	1,710,111,272	1,507,331,360
Inventories	10	2,449,545,168	1,896,588,732
Other financial assets	5,6,8,11	126,156,619	10,800,198
Other current assets	12	131,214,209	28,887,595
Current tax assets	36	32,274,952	26,849,798
Assets held for sale	13	-	37,734,720
		<u>6,436,304,423</u>	<u>5,509,241,837</u>
Non-current assets			
Long-term financial assets	6	114,904,679	114,001,639
Long-term trade and other receivables	6,9	56,040,676	43,767,768
Other financial assets	5,6,8,11	109,758,283	181,228,516
Financial assets at fair value through other comprehensive income	5,6,7	166,538,583	87,229,257
Financial assets at fair value through profit or loss	5,6,7	110,501,621	89,231,325
Investments in associates and joint ventures	17	1,177,113,112	1,186,644,598
Property, plant and equipment	13,40	3,687,477,399	3,821,452,959
Investment properties	14,40	113,388,865	120,028,847
Intangible assets	16,40	254,483,011	263,637,549
Other non-current assets	12,40	32,425,866	35,561,816
Net defined benefit assets	21	89,706,924	46,706,578
Deferred tax assets	36	232,720,717	195,563,899
		<u>6,145,059,736</u>	<u>6,185,054,751</u>
Total assets		<u>₩ 12,581,364,159</u>	<u>₩ 11,694,296,588</u>
Liabilities			
Current liabilities			
Trade and other payables	6,19,42	₩ 1,210,829,036	₩ 1,152,501,042
Borrowings	6,20	1,351,443,155	457,294,467
Current tax liabilities	36	120,391,662	20,035,169
Provisions	22	16,857,757	10,017,417
Other financial liabilities	5,6,8,23	5,856,851	24,744,991
Other current liabilities	24	181,697,046	204,584,403
		<u>2,887,075,507</u>	<u>1,869,177,489</u>
Non-current liabilities			
Borrowings	6,20	585,073,028	1,363,090,829
Net defined benefit liabilities	21	7,326,855	7,507,521
Provisions	22	29,366,722	71,691,731
Other financial liabilities	5,6,8,23	22,685,510	23,142,640
Other non-current liabilities	24	117,049,810	116,538,949
Deferred tax liabilities	36	57,077,479	47,633,138
		<u>818,579,404</u>	<u>1,629,604,809</u>
Total liabilities		<u>3,705,654,911</u>	<u>3,498,782,298</u>
Equity			
Equity attributable to owners of the Parent Company			
Share capital	25	8,807,110,452	8,158,148,201
Other paid-in capital	26	61,937,535	61,937,535
Other components of equity	27	2,962,186,308	2,927,985,080
Retained earnings	28	(61,811,586)	(12,766,416)
		<u>5,844,798,195</u>	<u>5,180,992,003</u>
Non-controlling interests		<u>68,598,796</u>	<u>37,366,089</u>
Total equity		<u>8,875,709,248</u>	<u>8,195,514,290</u>
Total liabilities and equity		<u>₩ 12,581,364,159</u>	<u>₩ 11,694,296,588</u>

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

Hankook Tire & Technology Co., Ltd.
Consolidated Statements of Comprehensive Income
Year Ended December 31, 2022 and 2021

(in thousands of Korean won, except per share data)

	Notes	2022	2021
Sales	29,30,40,42	₩ 8,394,203,037	₩ 7,141,136,828
Cost of sales	29,37,42	(6,291,656,294)	(5,193,837,390)
Gross profit		2,102,546,743	1,947,299,438
Selling and distribution expenses	31,37	(1,208,466,113)	(1,125,821,550)
Research and development expenses	37	(188,262,541)	(179,284,982)
Operating profit		705,818,089	642,192,906
Finance income	32	144,685,379	82,946,535
Finance costs	33	(146,434,464)	(87,378,112)
Other non-operating income	34	483,081,997	206,470,410
Other non-operating expense	35	(314,180,626)	(174,842,972)
Gain on investments in associates, net	17	(11,553,141)	43,464,339
Loss on net monetary position		(3,063,408)	-
Profit before income tax		858,353,826	712,853,107
Income tax expenses	36	(152,579,300)	(118,139,106)
Profit for the year		₩ 705,774,526	₩ 594,714,001
Other comprehensive income (loss)			
<i>Items that may be subsequently reclassified to profit or loss</i>			
Cash flow hedges	8,27	(4,920,557)	(488,535)
Share of other comprehensive income of associates	27	4,138,988	16,190,169
Exchange differences on translating foreign operations	27	(53,611,624)	238,889,690
<i>Items that will not be reclassified to profit or loss</i>			
Financial assets at fair value through other comprehensive income	27	(3,906,898)	12,999,922
Remeasurements of net defined benefit liabilities		61,225,140	4,048,107
Remeasurements of net defined benefit liabilities of associates		6,651,186	1,260,290
Other comprehensive income (loss) for the year, net of tax		9,576,236	272,899,644
Total comprehensive income for the year		₩ 715,350,762	₩ 867,613,645
Profit for the year is attributable to:			
Owners of the Parent Company		₩ 690,248,872	₩ 588,191,994
Non-controlling interests		15,525,654	6,522,007
Total comprehensive income for the year is attributable to:			
Owners of the Parent Company		₩ 700,153,149	₩ 859,945,987
Non-controlling interests		15,197,613	7,667,658
Earnings per share			
Basic and diluted earning per shares	39	₩ 5,658	₩ 4,822

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

Hankook Tire & Technology Co., Ltd.
Consolidated Statements of Changes in Equity
Year Ended December 31, 2022 and 2021

(in thousands of Korean won, except per share data)

	Notes	Share capital	Other paid-in capital	Other components of equity	Retained earnings	Controlling interest	Non-controlling interest	Total Equity
Balance at January 1, 2021		₩ 61,937,535	₩ 2,927,985,080	₩ (277,692,786)	₩ 4,665,265,076	₩ 7,377,494,904	₩ 34,652,618	₩ 7,412,147,522
Total comprehensive income for the year								
Profit for the year		-	-	-	588,191,994	588,191,994	6,522,007	594,714,001
Cash flow hedges	8,27	-	-	(488,535)	-	(488,535)	-	(488,535)
Gain (loss) on valuation and disposal of equity instruments at fair value through other comprehensive income	27	-	-	11,479,411	1,519,225	12,998,637	1,285	12,999,922
Remeasurements of net defined benefit liabilities		-	-	-	4,048,107	4,048,107	-	4,048,107
Remeasurements of net defined benefit liabilities of associates		-	-	-	1,260,290	1,260,290	-	1,260,290
Changes in equity method capital	27	-	-	16,190,169	-	16,190,169	-	16,190,169
Foreign business translation gains and losses	27	-	-	237,745,324	-	237,745,324	1,144,366	238,889,690
Deal with Owner: annual dividend		-	-	-	(79,292,689)	(79,292,689)	(4,954,188)	(84,246,877)
Balance at December 31, 2021		₩ 61,937,535	₩ 2,927,985,080	₩ (12,766,416)	₩ 5,180,992,003	₩ 8,158,148,201	₩ 37,366,089	₩ 8,195,514,290
Balance at January 1, 2022		₩ 61,937,535	₩ 2,927,985,080	₩ (12,766,416)	₩ 5,180,992,003	₩ 8,158,148,201	₩ 37,366,089	₩ 8,195,514,290
Total comprehensive income for the year								
Profit for the year		-	-	-	690,248,872	690,248,872	15,525,654	705,774,526
Cash flow hedges	8,27	-	-	(4,920,557)	-	(4,920,557)	-	(4,920,557)
Gain (loss) on valuation of equity instruments at fair value through other comprehensive income	27	-	-	5,021,714	(8,926,879)	(3,905,164)	(1,733)	(3,906,898)
Remeasurements of net defined benefit liabilities		-	-	-	61,225,140	61,225,140	-	61,225,140
Remeasurements of net defined benefit liabilities of associates		-	-	-	6,651,186	6,651,186	-	6,651,186
Changes in equity method capital	27	-	-	4,138,988	-	4,138,988	-	4,138,988
Foreign business translation gains and losses	27	-	-	(53,285,315)	-	(53,285,315)	(326,309)	(53,611,624)
Deal with Owner: annual dividend	28	-	-	-	(85,392,127)	(85,392,127)	-	(85,392,127)
Capital surplus directly reflected in capital		-	22,875,136	-	-	22,875,136	-	22,875,136
Capital Transactions with Non-Controlling Interests		-	11,326,093	-	-	11,326,093	16,035,094	27,361,187
Balance at December 31, 2022		₩ 61,937,535	₩ 2,962,186,308	₩ (61,811,586)	₩ 5,844,798,195	₩ 8,807,110,452	₩ 68,598,796	₩ 8,875,709,248

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

Hankook Tire & Technology Co., Ltd.
Consolidated Statements of Cash Flows
Year Ended December 31, 2022 and 2021

(in thousands of Korean won)

	Notes	2022	2021
Cash flows from operating activities			
Cash generated from operating activities			
Profit for the year		₩ 705,774,526	₩ 594,714,001
Adjustments	38	708,217,882	808,562,634
Changes in operating assets and liabilities	38	(792,291,369)	(420,351,390)
		621,701,039	982,925,245
Interest income received		30,033,448	14,746,985
Interest expense paid		(62,275,449)	(46,050,670)
Dividends received		40,095,140	41,825,431
Income tax paid		(124,983,477)	(151,918,850)
Net Cash inflow from operating activities		504,570,700	841,528,140
Cash flows from investing activities			
Net change in short-term financial assets		(88,152,907)	(214,886,866)
Net change in long-term financial assets		(160,000)	(114,621,023)
Payments for financial instruments measured at fair value through profit or loss		(545,822,311)	(741,409,706)
Proceeds from disposal of financial instruments measured at fair value through profit or loss		727,019,618	750,349,292
Payments for financial instruments at fair value through other comprehensive income		(73,977,588)	(56,862,953)
Proceeds from disposal of financial instruments at fair value through other comprehensive income		1,751,814	23,191,365
Payments for property, plant and equipment	13	(294,810,754)	(327,532,065)
Proceeds from disposal of property, plant and equipment	13	45,509,421	23,780,254
Payments for intangible assets	16	(12,902,411)	(11,334,052)
Proceeds from disposal of intangible assets	16	123,827	142,876
Proceeds from disposal of Investment Property	14	4,587,533	-
Settlement of derivatives		(33,313,914)	1,404,450
Net change in other financial assets		(42,832,886)	1,184,331
Collection of finance lease receivables		2,315,892	4,383,911
Payments for investments in associates and joint ventures	17	(68,150,292)	(90,100,000)
Proceeds from disposal of investments in associates and joint ventures	17	50,101,920	-
Payment of rental deposit		(3,408,910)	(15,978,844)
Collection of rental deposit		120,475	1,720,400
Net Cash outflow from investing activities		(332,001,473)	(766,568,630)
Cash flows from financing activities	38		
Net changes in short-term borrowings		26,553,596	(23,245,628)
Net changes in long-term borrowings		2,865,376	127,388,956
Refund of bond issuance cost		-	34,024
Repayments of lease liabilities		(62,537,727)	(57,839,742)
Repayments of current portion of long-term borrowings		-	(45,776,800)
Collection of leasehold deposits received		750,687	4,103,305
Payments of leasehold deposits received		(141,658)	(313,366)
Dividends paid to the owners of the parent company		(85,388,677)	(79,289,481)
Increase (decrease) in financial liabilities to non-controlling interests		452,727	804,997
Dividends paid to non-controlling Interests		-	(4,954,188)
Paid-in capital increase		27,106,503	-
Net Cash outflow from financing activities		(90,339,172)	(79,087,923)
Net increase(decrease) in cash and cash equivalents		82,230,055	(4,128,413)
The effects of applying financial reporting in a hyperinflationary economy		2,635,070	-
Cash and cash equivalents at the beginning of the financial year		1,062,042,416	1,060,864,709
Effects of exchange rate changes on cash and cash equivalents		(7,465,190)	5,306,119
Cash and cash equivalents at the end of the year		₩ 1,139,442,351	₩ 1,062,042,416

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

1. General Information

General information of Hankook Tire & Technology Co., Ltd. (the Company), that is a controlling company in accordance with Korea IFRS 1110 Consolidated Financial Statements. And its subsidiaries (collectively referred to as the "Group") is as follows:

1.1 The Company

The Group was spun off from the tire business division of Hankook Tire & Technology Co., Ltd. (formerly Hankook Technology Co., Ltd.) on September 1, 2012 to manufacture and sell tires, tubes and alloy wheels. The Group's headquarters is located at Bundang-Gu, Seongnam-si, Gyeonggi-do and eight manufacturing factories are located in Korea, China, Hungary, Indonesia and USA, including its subsidiaries. On October 4, 2012, the Group was relisted on the Korea Stock exchange.

On February 28, 2019, the Board of Directors resolved to change its corporate name from Hankook Tire Co., Ltd. To Hankook Tire & Technology Co., Ltd. The Company changes its name on May 8, 2019, according to the approval of general meeting of stockholders on March 28, 2019

As of December 31, 2022 and 2021, the Group's shareholders are as follows:

	2022		2021	
	Number of shares	Percentage of ownership (%)	Number of shares	Percentage of ownership (%)
Hankook & Company Co., Ltd.	37,995,959	30.67	37,995,959	30.67
Yang Rai Cho	-	-	7,019,903	5.67
Hyun Bum Cho	9,581,144	7.74	2,561,241	2.07
Hyun Shick Cho	799,241	0.65	799,241	0.65
Others ¹	75,498,725	60.94	75,498,725	60.94
Total	123,875,069	100.00	123,875,069	100.00

¹ Including 1,886,316 treasury shares as of December 31, 2022

Hankook Tire & Technology Co., Ltd.
Notes to the Consolidated Financial Statements
Year Ended December 31, 2022 and 2021

1.2 Consolidated Subsidiaries

Details of the consolidated subsidiaries as of December 31, 2022 and 2021, are as follows:

Name of entity	Location	Main business	Ownership interest held by the Group(%)		Closing month
			2022	2021	
Hankook Engineering Works Co., Ltd.	Korea	Manufacture of tire and tube manufacturing machine	95.0	95.0	December
Hankook Tire America Corp.	USA	Sales of tires	100.0	100.0	December
Hankook Tyre U.K. Ltd.	United Kingdom	Sales of tires	100.0	100.0	December
Jiangsu Hankook Tire Co., Ltd.	China	Manufacture and sales of tires	100.0	100.0	December
Hankook Tire China Co., Ltd.	China	Manufacture and sales of tires	100.0	100.0	December
Shanghai Hankook Tire Sales Co., Ltd.	China	Sales of tires	100.0	100.0	December
Hankook Tire Netherlands B.V.	Netherlands	Sales of tires	100.0	100.0	December
Hankook Tire Japan Corp.	Japan	Sales of tires	100.0	100.0	December
Hankook Tire Canada Corp.	Canada	Sales of tires	100.0	100.0	December
Hankook Reifen Deutschland GmbH	Germany	Sales of tires	100.0	100.0	December
Hankook Tire France SARL	France	Sales of tires	100.0	100.0	December
Hankook Espana S. A.	Spain	Sales of tires	100.0	100.0	December
Hankook Tyre Australia Pty., Ltd.	Australia	Sales of tires	100.0	100.0	December
Hankook Tire Europe Holdings B.V.	Netherlands	Building European governance	100.0	100.0	December
Hankook Tire Hungary Ltd.	Hungary	Manufacture and sales of tires	100.0	100.0	December
Hankook Tire Budapest Kereskedelmi Kft	Hungary	Sales of tires	100.0	100.0	December
Hankook Tire Italia S.R.L.	Italy	Sales of tires	100.0	100.0	December
Hankook Tire Europe GmbH	Germany	Support to sales of tires	100.0	100.0	December
Hankook Tire Rus LLC	Russia	Sales of tires	100.0	100.0	December
Hankook Tire DE Mexico, S.A. DE C.V.	Mexico	Sales of tires	100.0	100.0	December
Chongqing Hankooktire Co., Ltd.	China	Manufacture and sales of tires	100.0	100.0	December
PT. HANKOOK TIRE INDONESIA	Indonesia	Manufacture and sales of tires	99.9	99.9	December
MK Mold (Jiaxing) Co., LTD.	China	Manufacture and sales of tire mold	50.1	50.1	December
Hankook Precision Works Co.,LTD.	Korea	Manufacture and sales of tire mold	50.1	50.1	December
Hankook Tire Singapore PTE., Ltd.	Singapore	Trade and consulting	100.0	100.0	December
Hankook Tire Malaysia SDN.BHD.	Malaysia	Sales of tires	100.0	100.0	December
Hankook Tires India llp.	India	Sales of tires	100.0	100.0	December
Hankook Tire Sweden AB	Sweden	Sales of tires	100.0	100.0	December
Beijing Jielun Trading Company Co., Ltd.	China	Sales of tires	100.0	100.0	December
Qingdao Jieluntong Trading Co., LTD	China	Sales of tires	100.0	100.0	December
Xiamen Jieluntong Trading Co., LTD	China	Sales of tires	100.0	100.0	December
Hankook Lastikler A.S.	Turkey	Sales of tires	100.0	100.0	December
Hankook Tire Polska Sp. z o.o.	Poland	Sales of tires	100.0	100.0	December
Hankook Tire Thailand Co., Ltd.	Thailand	Sales of tires	100.0	100.0	December
Hankook Tire de Colombia Ltda.	Colombia	Sales of tires	100.0	100.0	December
Hankook Tire Manufacturing Tennessee LP	USA	Manufacture and sales of tires	100.0	100.0	December
Hankook Tire America Holdings I, LLC	USA	Building American governance	100.0	100.0	December
Hankook Tire America Holdings II, LLC	USA	Building American governance	100.0	100.0	December
MK Technology (CHONGQING) Mould Co., Ltd.	China	Manufacture and sales of tire mold	50.1	50.1	December
Hankook Tire Ceska Republika s.r.o.	Czech	Sales of tires	100.0	100.0	December
Hankook Donggeurami Partners Co., Ltd.	Korea	Facilities management service, baking	100.0	100.0	December
Hankook Tyre Australia Retail Pty., Ltd.	Australia	Distribution of tires	100.0	100.0	December
JAX Quickfit Franchising Systems Unit Trust.	Australia	Distribution of tires	100.0	100.0	December
JAX Quickfit Franchising Systems Pty Ltd.	Australia	Distribution of tires	100.0	100.0	December
JAX Quickfit Properties Pty Ltd.	Australia	Distribution of tires	100.0	100.0	December
JAX Quickfit Retailing Pty Ltd	Australia	Distribution of tires	100.0	100.0	December
JAX Property Investments Pty Ltd	Australia	Distribution of tires	100.0	100.0	December
JAX Property Investments Trust	Australia	Distribution of tires	100.0	100.0	December
Hankook Tire Latam, S.A.	Panama	Trade and consulting	100.0	100.0	December
Hankook Tire Latin America Distribution Center, S.A	Panama	Sales of tires	100.0	100.0	December
Hankook Tire Ukraine LLC	Ukraine	Sales of tires	100.0	100.0	December

Hankook Tire & Technology Co., Ltd.
Notes to the Consolidated Financial Statements
Year Ended December 31, 2022 and 2021

Model Solution Co., Ltd. ¹	Korea	Manufacture of injection molds	62.9	75.0	December
ModelSolution Inc. ¹	USA	Computer printing	62.9	75.0	December
Reifen-Muller KG	Germany	Distribution of tires	100.0	100.0	December
Reifen-Muller GmbH & Co.	Germany	Distribution of tires	100.0	100.0	December
Runderneuerungswerk KG	Germany	Building European governance	100.0	100.0	December
RM Verwaltungs GmbH	Germany	Building European governance	100.0	100.0	December
RU Verwaltungs GmbH	Germany	Building European governance	100.0	100.0	December
Hankook Tire D.O.O. Beograd	Serbia	Sales of tires	100.0	100.0	December
Hankook Tire Middle East and Africa FZE	United Arab Emirates	Sales of tires	100.0	100.0	December
Hankook Tire Vietnam. Co., Ltd.	Vietnam	Sales of tires	100.0	100.0	December
PT. HANKOOK TIRE SALES INDONESIA	Indonesia	Sales of tires	100.0	100.0	December
Hankook Tire Austria GmbH	Austria	Sales of tires	100.0	100.0	December
TNACo., Ltd.	Korea	Sales of tires	100.0	100.0	December
Mirae Asset OCIO Best Solution Privately Place Investment Trust 1	Korea	Specialized investment type private collective investment vehicle	99.7	99.7	December
TIGER CONSTANT 1 Hedge Fund	Korea	Specialized investment type private collective investment vehicle	98.0	98.0	December
CNT Tech Mobility Startups Investment Fund	Korea	Specialized investment type private collective investment vehicle	66.7	66.7	December
Hankook Tire &Technology Egypt LLC	Egypt	Support to sales of tires	100.0	-	December

¹ The ownership ratio has changed due to the unequal capital increase of Model Solution Co., Ltd. for the year ended December 31, 2022.

1.3 Changes in Scope for Consolidation.

Subsidiaries newly included in the consolidation for the year ended December 31, 2022, are as follow, and there are no subsidiaries excluded from consolidation:

Subsidiary	Reason
Hankook Tire &Technology Egypt LLC	Newly established

2. Significant Accounting Policies

2.1 Basis of preparation

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

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

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

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

- Certain financial assets and liabilities (including derivative instruments)
- assets held for sale - measured at fair value less costs to sell, and
- defined benefit pension plans - plan assets measured at fair value.

The preparation of financial statements requires the use of critical accounting estimates. Management also needs to exercise judgement in applying the Group's accounting policies. The areas involving a higher degree of judgment or complexity, or areas where assumptions and estimates are significant to the consolidated financial statements are disclosed in Note 3.

2.2 Changes in Accounting Policies and Disclosures

2.2.1 New and amended standards adopted by the Group

The Group has applied the following standards and amendments for the first time for their annual reporting period commencing January 1, 2022. The Group have not adopted the amended accounting standards issued that are not mandatory.

(a) Amendments to Korean IFRS 1037 Provisions, Contingent Liabilities and Contingent Assets Onerous Contracts - Cost of Fulfilling a Contract

An onerous contract is a contract in which the unavoidable costs of meeting the obligations under the contract exceed the economic benefits expected to be received under it. The amendments clarify that when assessing whether a contract is onerous, the cost of fulfilling the contract includes both the incremental costs of fulfilling that contract (for example, direct labor and materials) and an allocation of other costs that relate directly to fulfilling contracts (for example, an allocation of the depreciation charge for an item of property, plant and equipment used in fulfilling that contract among others, the costs of management and supervision of contracts). General administrative costs are not directly related to the contract and are excluded unless the contract clearly allows the counterparty to be claimed.

As the Group has no provisions, contingent liabilities, and contingent assets within the scope of the amendments for the year ended December 31, 2022, the amendments have no effect on its financial statements.

(b) Amendments to Korean IFRS 1103 Business Combination - Reference to the Conceptual Framework

The amendments are intended to prevent significant changes in requirements when the previous reference to conceptual framework of the International Accounting Standards Board(IASB) is changed to that of the 'Conceptual Framework for Financial Reporting' published in March 2018. An exception was added to the recognition principle in to Korean IFRS 1103 to prevent Day 2 gains or losses from liabilities and contingent liabilities within the scope of Korean IFRS 1037 Provisions, Contingent Liabilities, Contingent Assets or Korean IFRS 2121 Levies. The exception requires the application of Korean IFRS 1037 Provisions, Contingent Liabilities, Contingent Assets or Korean IFRS 2121 Levies instead of conceptual framework to determine whether the present obligation exists at the acquisition date.

In addition, new paragraph is added to Korean IFRS 1103 Business Combination to clarify that contingent assets should not be recognized at the acquisition date. The Group applies the amendments prospectively. In other words, the amendments shall be applied prospectively to business combinations for which the acquisition date is on or after the beginning of the first annual reporting period in which the amendments are initially applied. As the Group has no provisions, contingent liabilities, and contingent assets within the scope of the amendments for the year ended December 31,2022, the amendments have no effect on its financial statements.

(c) Amendments to Korean IFRS 1016 Property, Plant and Equipment- Proceeds before intended use

The amendments prohibit an entity from deducting from the cost of an item of property, plant and equipment any proceeds from selling items produced while the entity is preparing the asset for its intended use. Instead, the entity will recognize the proceeds from selling such items, and the costs of producing those items, in profit or loss.

The Group shall apply those amendments retrospectively, but only to items of property, plant and equipment that are capable of operating on or after the beginning of the earliest period presented in the consolidated financial statements in which the Group first applies the amendments.

The amendments has no effect on the consolidated financial statements as the Group has not sold items produced from property, plant and equipment available on or after the beginning of the earliest period presented in the consolidated financial statements in which the Group first applies the amendments.

(d) Korean IFRS1101 'First-time Adoption of International Financial Reporting Standards'- Subsidiary as a first-time adopter

The amendment permits a subsidiary that elects to apply paragraph D16(1) of KIFRS1101 to measure cumulative translation differences using the amounts reported in the parent's consolidated financial statements, based on the parent's date of transition to KIFRS, if no adjustments were made for consolidation procedures and for the effects of the business combination in which the parent acquired the subsidiary. This amendment is also applied to an associate or joint venture that elects to apply paragraph D16(1) of KIFRS 1101. These amendments had no impact on the consolidated financial statements of the Group as it is not a first-time adopter.

(e) Korean IFRS 1109 'Financial Instruments' - Fees in the '10 percent' test for derecognition of financial liabilities

The amendment clarifies the fees that an entity includes when assessing whether the terms of a new or modified financial liability are substantially different from the terms of the original financial liability. These fees include only those paid or received between the borrower and the lender, including fees paid or received by either the borrower or lender on the other's behalf. There is no similar amendment proposed for KIFRS 1039 Financial Instruments: Recognition and Measurement.

In accordance with the transitional provisions, the Group applies the amendments to financial liabilities that are changed or exchanged on or after the start of the annual reporting period in which the amendments are first applied (date of initial application). These amendments had no impact on the consolidated financial statements of the Group as there were no modifications of the Group's financial instruments during the period.

(f) Korean IFRS 1041 'Agriculture'- Taxation in fair value measurements

The amendment removes the requirement in paragraph 22 of KIFRS 1041 that entities exclude cash flows for taxation when measuring the fair value of assets within the scope of KIFRS 1041. These amendments had no impact on the consolidated financial statements of the Group as it did not have assets in scope of KIFRS 1041 as of the reporting date.

2.2.2 New and amended standards not yet adopted by the Group

The following new accounting standards and interpretations have been published that are not mandatory for December 31, 2022 reporting periods and have not been early adopted by the Group.

(a) Korean IFRS 1117 Insurance Contract

In 2021, KIFRS 1117 'Insurance Contracts', a comprehensive new accounting standard for insurance contracts covering recognition and measurement, presentation and disclosure. Once effective, KIFRS 1117 will replace KIFRS 1104 Insurance Contracts that was issued in 2007.

KIFRS 1117 applies to all types of insurance contracts (i.e., life, non-life, direct insurance and re-insurance), regardless of the type of entities that issue them, as well as to certain guarantees and financial instruments with discretionary participation features. A few scope exceptions will apply. The overall objective of KIFRS 1117 is to provide an accounting model for insurance contracts that is more useful and consistent for insurers.

In contrast to the requirements in KIFRS 1104, which are largely based on grandfathering previous local accounting policies, KIFRS 1117 provides a comprehensive model for insurance contracts, covering all relevant accounting aspects. The core of KIFRS 1117 is the general model, supplemented by:

- A specific adaptation for contracts with direct participation features (the variable fee approach); and
- A simplified approach (the premium allocation approach) mainly for short-duration contracts.

This standard is effective for annual periods beginning on or after January 1, 2023, with comparative figures required. Early application is permitted, provided the entity also applies KIFRS 1109 and KIFRS 1115 on or before the date it first applies KIFRS 1117. This standard is not applicable to the Group.

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

The amendments to Paragraphs 69–76 of Korean IFRS 1001 clarify the following requirements for the classification of liabilities as current and non-current.

- The definition of right to defer settlement of a liability
- The right to defer settlement of a liability must exist at the end of the reporting period
- Classification of a liability is unaffected by the likelihood that the entity will exercise its right to defer settlement of the liability
- Classification of a liability is unaffected by the terms of the liability only if the embedded derivative of the convertible liability is an equity instrument

The amendments shall be applied for annual periods beginning on or after 1 January 2023 and applied retrospectively. The Group performs evaluation of the impact of the amendments on accounting practices and whether existing loan agreements need to be renegotiated.

(c) Amendments to Korean IFRS 1008 Accounting policies, changes in accounting estimates and errors - Definition of Accounting Estimates

The amendments clearly distinguish between changes in accounting estimates, changes in accounting policies and corrections of errors. The amendments also clarify how to use measurement techniques and inputs to develop accounting estimates.

The amendments should be applied to changes in accounting policies and accounting estimates that occur for annual reporting periods beginning on or after January 1, 2023, and earlier application is permitted. The Group expect that the amendments do not have a significant impact on the consolidated financial statements.

(d) Amendments to Korean IFRS 1001 Presentation of Financial Statements - Disclosure of Accounting Policies

The amendments provide requirements and guidelines to help disclosures of the Group's accounting policy more effective. Korean IFRS 1001 requires disclosure of significant accounting policies of the Group. The amendments replace the significant accounting policies with the material accounting policies and include additional description regarding material accounting policy information. The Group provides more useful accounting policy information when determining about accounting policy disclosures.

The amendments should be applied for annual periods beginning on or after January 1, 2023, and earlier application is permitted. The Group reviews disclosure of disclosures of the Group's accounting policy accounting policy information to ensure that it is consistent with the requirements of this amendment.

(e) Amendments to Korean IFRS 1012 Income Taxes - Deferred Tax related to Assets and Liabilities arising from a Single Transaction

The amendments narrowed the scope of the recognition exemption in Korean IFRS 1012 so that it no longer applies to transactions that, on initial recognition, give rise to equal taxable and deductible temporary differences.

The amendments shall be applied to transactions occur after the beginning of the earliest comparative period presented. In addition, deferred tax assets (to the extent that it is probable that taxable profit will be available against which the deductible temporary difference can be utilized) and deferred tax liabilities for all deductible and taxable temporary differences, associated with lease and restoration and similar liabilities, should be recognized at the beginning of the earliest comparative period presented. The Group performs evaluation of the impact of the amendments on the consolidated financial statements.

2.2.3 Application of Financial Reporting in Hyperinflationary Economy of Turkiye

(a) In applying Korean IFRS 1029 Financial Reporting in Hyperinflationary Economies in accordance with the hyperinflationary situation in Turkiye in 2022, the Consumer Price Index (CPI) announced by the Turkish Statistical Institute was used. The CPI as of the end of each quarters of 2022 and 2021 announced by the Turkish Statistical Institute is as follows:

	1Q	2Q	3Q	4Q
2021	523.53	547.48	570.66	686.95
2022	843.64	977.90	1,046.89	1,128.45

(b) The Group restated the financial statements of Hankook Lastikleri A.S., a subsidiary located in Türkiye, in accordance with Korean IFRS 1029. The Group reflected the effects of initial application of Korean IFRS 1029 as other components of equity, and the standards of restating consolidated financial statements are as follows:

- The consolidated financial statements are presented based on historical cost.
- Monetary assets and liabilities are not remeasured since those amounts are already presented in the measurement unit at the end of the reporting period.
- Non-monetary assets and liabilities are remeasured by considering the inflation rate at the end of the reporting period from the time of acquisition.
- Effects of increase or decrease in purchasing power due to retention of net monetary assets in hyperinflationary economies are presented as loss incurred from net monetary assets in the consolidated statement of comprehensive income.
- For the exchange rate for translation to the presentation currency, the exchange rate at the end of reporting period is applied in accordance with Korean IFRS 1021 The Effects of Changes in Foreign Exchange Rates.

2.3 Consolidation

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

(a) Subsidiaries

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

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

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

Intercompany transactions, balances and unrealized gains on transactions between group companies are eliminated. Unrealized losses are also eliminated unless the transaction provides evidence of an impairment of the transferred asset. Accounting policies of subsidiaries have been changed where necessary to ensure consistency with the policies adopted by the Group.

Non-controlling interests at the acquisition date are measured at the present ownership instruments' proportionate share in the recognized amounts of the acquiree's identifiable net assets. Changes in a parent's ownership interest that do not result in a loss of control are accounted for as equity transactions.

The Group treats transactions with non-controlling interests that do not result in a loss of control as transactions with equity owners of the Group. A changed in ownership interest results in an adjustment between the carrying amounts of the controlling and non- controlling interest to reflect their relative interest in the subsidiary. Any difference between the amount of the adjustment to non-controlling interest and any consideration paid or received is recognized in a separate reserve with equity attributable to owners of the Parent Company.

When the Group ceases to consolidate for a subsidiary because of a loss of control, any retained interest in the subsidiary is remeasured to its fair value with the changed in carrying amount recognized in profit or loss.

(b) Associates

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

(c) Joint Arrangements

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

2.4 Foreign Currency Translation

(a) Functional and presentation currency

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

(b) Transactions and balances

Foreign currency transactions are translated into the functional currency using the exchange rates at the dates of the transactions. Foreign exchange gains and losses resulting from the settlement of such transactions and from the translation of monetary assets and liabilities denominated in foreign currencies at year end exchange rates are generally recognized in profit or loss. They are deferred in other comprehensive income if they relate to qualifying cash flow hedges and qualifying effective portion of net investment hedges or are attributable to monetary part of the net investment in a foreign operation.

Foreign exchange gains and losses that relate to borrowings are presented in the statement of profit or loss, within finance costs. All other foreign exchange gains and losses are presented in the statement of profit or loss within 'other income or other expenses'.

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

(c) Transactions to the presentation currency

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

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

When the Group ceases to control a subsidiary, exchange differences that were recorded in equity are recognized in the consolidated statements of comprehensive income as part of the gain or loss on sale.

Goodwill and fair value adjustments arising on the acquisition of a foreign operation are treated as assets and liabilities of the Group and translated at the closing rate at the end of the reporting period.

2.5 Financial Assets

(a) Classification

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

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

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

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

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

(b) Measurement

At initial recognition, the Group measures a financial asset at its fair value plus, in the case of a financial asset not at fair value through profit or loss, transaction costs that are directly attributable to the acquisition of the financial asset. Transaction costs of financial assets carried at fair value through profit or loss are expensed in profit or loss.

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

A. Debt instruments

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

- **Amortized cost:** Assets that are held for collection of contractual cash flows where those cash flows represent solely payments of principal and interest are measured at amortized cost. A gain or loss on a debt investment that is subsequently measured at amortized cost and is not part of a hedging relationship is recognized in profit or loss when the asset is derecognized or impaired. Interest income from these financial assets is included in 'finance income' using the effective interest rate method.
- **Fair value through other comprehensive income:** Assets that are held for collection of contractual cash flows and for selling the financial assets, where the assets' cash flows represent solely payments of principal and interest, are measured at fair value through other comprehensive income. Movements in the carrying amount are taken through other comprehensive income, except for the recognition of impairment loss (reversal of impairment loss), interest income and foreign exchange gains and losses which are recognized in profit or loss. When the financial asset is derecognized, the cumulative gain or loss previously recognized in other comprehensive income is reclassified from equity to profit or loss. Interest income from these financial assets is included in 'finance income' using the effective interest rate method. Foreign exchange gains and losses are presented in 'other non-operating income or expenses' and impairment losses are presented in 'other non-operating expenses'.
- **Fair value through profit or loss:** Assets that do not meet the criteria for amortized cost or fair value through other comprehensive income are measured at fair value through profit or loss. A gain or loss on a debt investment that is subsequently measured at fair value through profit or loss and is not part of a hedging relationship is recognized in profit or loss and presented net in the statement of profit or loss within 'other non-operating income or expenses' in the year in which it arises.

B. Equity instruments

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

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

(c) Impairment

The Group assesses on a forward looking basis the expected credit losses associated with its debt instruments carried at amortized cost and fair value through other comprehensive income. The impairment methodology applied depends on whether there has been a significant increase in credit risk. For trade receivables, the Group applies the simplified approach, which requires expected lifetime credit losses to be recognized from initial recognition of the receivables. (Note 43 provides more detail of how the Group determines there has been a significant increase in credit risk.)

(d) Recognition and Derecognition

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

If a transfer does not result in derecognition because the Group has retained substantially all the risks and rewards of ownership of the transferred asset, the Group continues to recognize the transferred asset in its entirety and recognizes a financial liability for the consideration received. The Group classified the financial liability as "borrowings" in the statement of financial position.

(e) Offsetting of financial instruments

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

2.6 Derivative Instruments and Hedge Accounting

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

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 inception of a hedge relationship, the Group formally designates and documents the hedge relationship to which the Group wishes to apply hedge accounting and the risk management objective and strategy for undertaking the hedge.

The documentation includes identification of the hedging instrument, the hedged item, the nature of the risk being hedged and how the Group 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 Group actually hedges and the quantity of the hedging instrument that the Group actually uses to hedge that quantity of hedged item.

Hedges that meet the strict criteria for hedge accounting are accounted for, as described below:

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 amounts accumulated in OCI are accounted for, depending on the nature of the underlying hedged transaction.

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

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

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

2.7 Trade Receivables

Trade receivables are recognized initially at the amount of consideration that is unconditional, unless they contain significant financing components when they are recognized at fair value. Trade receivables are subsequently measured at amortized cost using the effective interest method, less loss allowance. (Note 9)

2.8 Inventories

Inventories are stated at the lower of cost and net realizable value. Cost is determined using the following method:

Type of inventories	Costing method
Finished goods and work in process	Weighted-average method
Raw materials, merchandise and supplies	Moving-weighted average method
Materials in transit	Specific identification method

In addition, if the actual level of production is below the normal capacity, the allocation of fixed manufacturing overheads to each unit of product is based on the normal capacity, and the unallocated fixed manufacturing overheads (loss of capacity) are recognized as an expense in the period in which they are incurred.

2.9 Non-current Assets (or Disposal Group) Held for sale

Non-current assets (or disposal group) are classified as held for sale when their carrying amount will be recovered principally through a sale transaction rather than through continuing use and a sale is considered highly probable. The assets are measured at the lower amount between their carrying amount and the fair value less costs to sell.

2.10 Property, Plant and Equipment

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

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

	Useful lives
Buildings	13 – 60 years
Structures	2 - 50
Machinery	2 - 18
Vehicles	2 - 10
Tools, furniture and fixtures	2 - 30
Molds	8
Right-of-use assets	1 - 32

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

2.11 Borrowing Costs

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

2.12 Government Grants

Grants from the government are recognized at their fair value where there is a reasonable assurance that the grant will be received, and the Group will comply with all attached conditions. Government grants related to assets are presented in the statement of financial position either by deducting the grant in arriving at the carrying amount of the asset, and government grants related to costs are deferred and recognized in the profit or loss over the period necessary to match them with the costs that they are intended to compensate

2.13 Intangible Assets

Goodwill is measured as described in Note 2.3.(a), and carried at cost less accumulated impairment losses.

Intangible assets are initially recognized at its historical cost and carried at cost less accumulated amortization and accumulated impairment losses.

Software development costs that are internally generated by the Group are recognized as intangible assets when the criteria including technical feasibility and probability of generating future economic benefits are met. Membership rights are regarded as intangible assets with indefinite useful life and not amortized because there is no foreseeable limit to the period over which the assets are expected to be utilized. The Group amortizes intangible assets with a limited useful life using the straight-line method over the following periods:

	Useful lives
Industrial property rights	5 – 10 years
Other intangible assets	3 – 50
Brand and customer relationship	5 – 20

2.14 Investment Property

Investment property(including right-of-use assets) is property held to earn rentals or for capital appreciation or both. An investment property is measured initially at its cost. An investment property is measured after initial measurement at depreciated cost (less any accumulated impairment losses). After recognition as an asset, investment property is carried at cost less accumulated depreciation and impairment losses. The Group depreciates investment properties, except for land, using the straight-line method and estimated useful lives are 40 years

2.15 Impairment of Non-financial Assets

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

2.16 Trade and Other Payables

These amounts represent liabilities for goods and services provided to the Group prior to the end of reporting period which are unpaid. The amounts are unsecured and are usually paid within 30 days of recognition. Trade and other payables are presented as current liabilities unless payment is not due within 12 months after the reporting period. They are recognized initially at their fair value and subsequently measured at amortized cost using the effective interest method.

2.17 Financial Liabilities

(a) Classification and measurement

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

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

Preferred shares that require mandatory redemption at a particular date are classified as liabilities. Interest expenses on these preferred shares using the effective interest method are recognized in the statement of profit or loss as 'finance costs', together with interest expenses recognized from other financial liabilities.

(b) Derecognition

Financial liabilities are removed from the statement of financial position when it is extinguished; for example, when the obligation specified in the contract is discharged or cancelled or expired or when the terms of an existing financial liability are substantially modified. The difference between the carrying amount of a financial liability extinguished or transferred to another party and the consideration paid (including any non-cash assets transferred or liabilities assumed) is recognized in profit or loss.

2.18 Financial Guarantee Contracts

Financial guarantee contracts are recognized as a financial liability at the time the guarantee is issued. The liability is initially measured at fair value, subsequently at the higher of following:

- the amount determined in accordance with the expected credit loss model under Korean IFRS 1109 Financial Instruments and
- the amount initially recognized less, where appropriate, the cumulative amount of income recognized in accordance with Korean IFRS 1115 Revenue from Contracts with Customers

The liability is recognized in the statement of financial position within 'other financial liabilities'.

2.19 Provisions

Provisions are recognized when the Group has a present legal or constructive obligation as a result of past events, it is probable that an outflow of resources will be required to settle the obligation and the amount can be reliably estimated. Provisions are measured at the present value of management's best estimate of the expenditure required to settle the present obligation at the end of the reporting period, and the increase in the provision due to the passage of time is recognized as interest expense.

2.20 Current and Deferred Tax

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

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

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

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

Deferred tax assets are recognized only if it is probable that future taxable amounts will be available to utilize those temporary differences and losses.

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

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

2.21 Employee Benefits

(a) Post-employment benefits

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

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

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

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

(b) Other long-term employee benefits

Certain entities within the Group provide long-term employee benefits that are entitled to employees with service period for ten years and above. The expected costs of these benefits are accrued over the period of employment using the same accounting methodology as used for defined benefit pension plans. The Group recognizes service cost, net interest on other long-term employee benefits and remeasurements as profit or loss for the year. These liabilities are valued annually by an independent qualified actuary.

2.22 Revenue Recognition

(a) Identifying the performance obligations

With regard to the contract of selling products to the customer, the Group identifies the services rendered separately to the customer as a different performance obligation. When entering into contracts with customers for the sales of products, The Group determines standard warranty coverage periods per product and customer considering warranty periods required by law and others when entering into contracts with customers for the sales of products. If the Group provides an extended warranty beyond the standard warranty coverage period or a customer has the option to purchase an additional warranty separately, the warranty is considered as a separate performance obligation when revenue is recognized.

(b) A performance obligation satisfied at a point in time

The revenue from the sale of goods is recognized when the products have been delivered to the customer. Delivery occurs when the products have been shipped to the specific location, the risks of obsolescence and loss have been transferred to the customer, and either the customer has accepted the products in accordance with the sales contract, the acceptance provisions have lapsed, or the Group has objective evidence that all criteria for acceptance have been satisfied.

The goods are often sold with volume discounts, and it is the Group's policy to sell its products to the customer with a right of return. Accumulated experience is used to estimate for the discounts and the refund, and the volume discounts is calculated based on the periodical forecast sales. The warranty provision for the sales and refund is reasonably estimated and recognized properly.

(c) Significant financing component

As a practical expedient, the Group need not adjust the promised amount of consideration for the effects of a significant financing component as the period between when the entity transfers a promised good or service to a customer and when the customer pays for that good or service is generally one year or less.

(d) Interest income

Interest income is recognized using the effective interest method according to the time passed. When a loan and receivable is impaired, the Group reduces the carrying amount to its recoverable amount and continues unwinding the discount as interest income. Interest income on impaired loans and receivables is recognized using the original effective interest rate.

(e) Dividend income

Dividend income is recognized when the right to receive payment is established.

2.23 Leases

(a) Lessor

A lessor shall classify each of its leases as either an operating lease or a finance lease in inception of lease.

For the purposes of classifying the lease, the Group generally determines whether it transfers substantially all the risks and rewards incidental to ownership of an underlying asset. A lease is classified as a finance lease if it transfers substantially all the risks and rewards incidental to ownership of an underlying asset, and if not, it is classified as an operating lease.

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

(b) Lessee

The Group leases various warehouses, equipment, cars and others. Lease contracts are typically made for fixed periods but may have extension options as described below.

Contracts may contain both lease and non-lease components. The Group allocates the consideration in the contract to the lease and non-lease components based on their relative stand-alone prices. However, for leases of real estate for which the Group is lessee, the Group applies the practical expedient which has elected not to separate lease and non-lease components and instead accounts for these as a single lease component.

Lease terms are negotiated on an individual basis and contain a wide range of different terms and conditions. The lease agreements do not impose any covenants, but leased assets may not be used as security for borrowing purposes.

The Group determines the lease term as the non-cancellable period of a lease, together with both (a) periods covered by an option to extend the lease if the lessee is reasonably certain to exercise that option; and (b) periods covered by an option to terminate the lease if the lessee is reasonably certain not to exercise that option. When the lessee and the lessor each has the right to terminate the lease without permission from the other party, the Group should consider a termination penalty in determining the period for which the contract is enforceable.

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

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

Measurement of lease liability also includes payments to be made in optional periods if the lessee is reasonably certain to exercise an option to extend the lease.

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

To determine the incremental borrowing rate, the Group:

- where possible, uses recent third-party financing received by the individual lessee as a starting point, adjusted to reflect changes in financing conditions since third party financing was received
- uses a build-up approach that starts with a risk-free interest rate adjusted for credit risk for leases held by corporation which does not have recent third-party financing, and
- makes adjustments specific to the lease, for example term, country, currency and security.

When an individual lessee can readily observe (through recent financial or market data) the interest rate on an amortizing loan with a similar payment schedule to the lease, the Group refers to the rate as a starting point when determining its incremental borrowing rate for a lease.

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

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

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

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

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

2.24 Greenhouse Gas Emission Permits and Obligations

(a) Emission permits and emission obligations for compliance

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

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

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

(b) Emission permits held for trading

Emission permits held for trading are classified as current assets and measured at fair value, and changes in fair value are recognized as profit or loss for the year. Changes in fair value and gain (loss) on disposal are recognized as other income and other expenses, respectively.

2.25 Segment Reporting

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

2.26 Approval of Issuance of the Financial Statements

The consolidated financial statements 2022 were approved for issue by the Board of Directors on February 27, 2023 and are subject to change with the approval of shareholders at their Annual General Meeting.

3. Critical Accounting Estimates and Assumptions

The preparation of financial statements requires the Group to make estimates and assumptions concerning the future. Management also needs to exercise judgement in applying the Group's accounting policies. Estimates and assumptions are continually evaluated and are based on historical experience and other factors, including expectations of future events that are believed to be reasonable under the circumstances. As the resulting accounting estimates will, by definition, seldom equal the related actual results, it can contain a significant risk of causing a material adjustment.

The estimates and assumptions that have a significant risk of causing a material adjustment to the carrying amounts of assets and liabilities within the next financial year are discussed below. Additional information of significant judgement and assumptions of certain items are included in relevant notes.

(a) Estimated goodwill impairment

The Group tests whether goodwill has suffered any impairment on an annual basis. The recoverable amount of a cash generating unit (CGU) is determined based on value-in-use calculations (Note 16).

(b) Income taxes

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

When a certain amount of taxable income has not been used for investment, wage increase and so on, for a certain period, the Group will bear the additional corporate tax calculated according to the method specified by the tax law. Therefore, when measuring the current and deferred tax for the current period, the effect of the tax should be reflected. As the Group's income tax is dependent on the investments, increase in wages and dividends, there is an uncertainty measuring the final tax effects (Note 36).

(c) Fair value of financial instruments

The fair value of financial instruments that are not traded in an active market is determined by using valuation techniques. The Group uses its judgment to select a variety of methods and make assumptions that are mainly based on market conditions existing at the end of each reporting period (Note 5).

(d) Impairment of financial assets

The provision for impairment for financial assets is based on assumptions about risk of default and expected loss rates. The Group uses judgement in making these assumptions and selecting the inputs to the impairment calculation based on the Group's history, existing market conditions as well as forward looking estimates at the end of each reporting period (Note 43).

(e) Net defined benefit liability

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

(f) Provisions

The Group recognizes provision for warranty on products sold. The Group accrues provision for warranty based on the best estimate of amounts necessary to settle future and existing claims. The amounts are estimated based on past experience (Note 22).

(g) Valuation of inventories

Inventories are stated at the lower of cost and net realizable value. Estimates of net realizable value are based on the most reliable evidence available at the time the estimates are made, of the amount the inventories are expected to realize. These estimates take into consideration fluctuations of price or cost directly relating to past experience, current market conditions and events occurring after the end of the period to the extent that such events confirm conditions existing at the end of the period (Note 10).

(h) Leases

In determining the lease term, management considers all facts and circumstances that create an economic incentive to exercise an extension option, or not exercise a termination option. Extension options (or periods after termination options) are only included in the lease term if the lease is reasonably certain to be extended (or not terminated) (Note 15).

(i) Impact of Coronavirus disease 2019 ("COVID-19")

The spread of Coronavirus disease 2019 ("COVID-19") has a material impact on the global economy. It may have a negative impact, such as, decrease in productivity, decrease or delay in sales, collection of existing receivables and others. Accordingly, it may have a negative impact on the financial position and financial performance of the Group.

Significant accounting estimates and assumptions applied in the preparation of the financial statements can be adjusted depending on changes in the uncertainty from COVID-19. Also, the ultimate effect of COVID-19 to the Group's business, financial position and financial performance cannot presently be determined.

(j) Uncertainty of the impact of the situation in Ukraine

In February 2022, a dispute broke out between Russia and Ukraine, and international sanctions have been imposed in Russia. Due to measures such as restrictions on access to the SWIFT payment system of Russian banks, shortage of liquidity in the Russian foreign exchange market, the depreciation of ruble, and the decline in the share value of Russian companies and others are in progress. This may lead to a decrease in the value of financial assets or operating assets held by the Group in relation to the disputed country, an increase in the payback period, restrictions on transfer of funds, and a decrease in profits. The ultimate impact of these disputes and sanctions on the financial position and operating performance of the Group is cannot presently be determined.

(k) Introduction and Impact of the Global Minimum Tax

The Organization for Economic Co-operation and Development (OECD)/G20 Inclusive Framework on Base Erosion and Profit Shifting (BEPS) addresses the tax challenges arising from the digitalization of the global economy. Global Minimum Tax (Pillar Two) were released and they apply to Multinational Enterprises (MNEs) with revenue in excess of EUR 750 million per their consolidated financial statements.

National Assembly of South Korea passed into law new Global Minimum Tax rules to align with the OECD BEPS Pillar Two in December 2022. The regulation will be included in the Adjustment of International Taxes Act and will be effective for fiscal years beginning on or after January 1, 2024. However, the Enforcement Decrees that provide further detail on the application of the legislation is not yet finalized as of December 31, 2022.

In South Korea, Pillar Two legislation is not yet considered substantively enacted as of December 31, 2022 for financial reporting purposes. The Group therefore has not recognized any tax effect arising from the Global Minimum Tax in its consolidated financial statements as of December 31, 2022 and for the year then ended.

4. Financial Risk Management

(a) Capital management

The Group manages its capital to ensure that entities under the Group will be able to continue while maximizing the return to shareholders through the optimization of its debt and equity balance. The Group's overall strategy remains unchanged from that of the prior periods. The Group utilizes the debt ratio as capital management index, which is the total liabilities divided by the total equity. Total liabilities and total equity are based on the amounts stated in the consolidated financial statements. The Group is not subject to any externally imposed capital requirements.

The debt ratios as of December 31, 2022 and 2021, are as follows:

<i>(in thousands of Korean won)</i>		2022		2021
Total liabilities	₩	3,705,654,911	₩	3,498,782,298
Total equity		8,875,709,248		8,195,514,290
Debt ratio		41.75%		42.69%

(b) The significant accounting policies and methods (including recognition, measurement and related gain and loss recognition) adopted for the Group's financial assets, financial liabilities and equity are detailed in Note 2. Financial instrument category for financial assets and financial liabilities at the end of the reporting period are detailed in Note 6

(c) Financial risk management

1) Purpose of financial risk management

The Group is exposed to various risks related to its financial instruments, such as market risk (currency risk, fair value interest rate risk and price risk), credit risk, liquidity risk and cash flow interest rate risk. The finance department of the Group manages operations, organizes the approach to financial market and controls the financial risks related to operations of the Group through internal risk reports, which analyze the scope and degree of each risk factor.

The Group uses derivative financial instruments to hedge these risks. The use of derivatives is decided in the observance of the Group's policies approved by the Board of Directors. They provide the documented principles of currency risk, interest rate risk, credit risk, use of derivatives/non-derivatives and excessive liquidity investments. The audit committee constantly oversees the observance of the policies and the degree of risk exposure. The Group does not trade the financial instruments, including derivatives for the purpose of speculation.

2) Market risk

The Group's activities are mainly exposed to financial risks of changes in currency and interest rates. The Group makes derivative contracts to manage the interest rate risk and foreign currency rate risk.

a) Foreign currency risk management

The Group undertakes transactions denominated in foreign currencies; consequently, exposures to exchange rate fluctuations arise. Subsidiaries of the Group mainly conduct transactions in each company's functional currency, and the parent company, exposed to foreign currency risk, manages exchange rate exposures within approved policy parameters utilizing forward foreign exchange contracts. In result, the Group manages mainly the foreign currency risk of the parent company. The sensitivity analysis includes outstanding monetary items denominated in foreign currencies, and foreign exchange translations are adjusted based on assumption that Korean won has weakened/strengthened by 10% at the end of the reporting period.

The table below summarizes the impact of weakened/strengthened Korean won on the Group's profit before tax for the year. The analysis is based on the assumption that Korean won has weakened/strengthened by 10% with all other variables held constant.

(in thousands of Korean won)

		2022		2021
10% Strengthened	₩	(39,405,806)	₩	66,849,292
10% weakened		39,405,806	₩	(66,849,292)

In order to reduce the impact of changes in exchange rates on future cash flows, the Group entered into foreign currency forward contracts. The outstanding forward contracts as of December 31, 2022 are as follows:

(in thousands of USD, EUR, MYR, AUD, GBP, JPY, CAD, SEK, THB)

	Maturity date	Selling currency	Selling amount	Contract exchange rate	Buying Currency	Contractual inflow amount
CA	2023-01-30	EUR	2,000	1383.700	KRW	2,767,400
MIZUHO and others	2023-03-31 and others	THB	29,003	36.834	USD	787
JPM-MY and others	2023-06-16 and others	MYR	23,412	4.496	USD	5,207
CITI and others	2023-02-24 and others	AUD	9,937	0.213	CNY	46,706
CITI and others	2023-02-24 and others	CAD	6,242	0.192	CNY	32,440
JPM and others	2023-02-24 and others	EUR	7,124	0.135	CNY	52,584
ICBC and others	2023-02-10 and others	GBP	7,212	0.121	CNY	59,357
ICBC and others	2023-04-28 and others	JPY	167,194	19.834	CNY	8,430
JPM and others	2023-02-24 and others	SEK	6,532	1.508	CNY	4,332

b) Interest rate risk

Interest rate risk is defined as the risk that the interest income or expenses arising from the Group's investing and financing activities will fluctuate because of changes in market interest rate. In order to minimizing uncertainty caused by fluctuations in interest rates and minimizing finance costs, the Group monitors a fluctuation of domestic and foreign interest rates and establishes alternatives

When the interest rate of floating rate borrowings changes by 10bp while all other variables are constant, the effect on the Group's Profit before income tax as of December 31, 2022 and 2021, are as follows:

(in thousands of Korean won)

		2022	2021
10 bp	Increase	₩ (717,303)	₩ (100,091)
	Decrease	717,303	100,091

In order to reduce the impact of changes in exchange rates on future cash flows of long-term debentures in foreign currency, the Group entered into currency swap contracts. A summary of derivative contracts as of December 31, 2022 is as follows:

(in thousands of USD)	Contract amount	Contract exchange rate (KRW/USD)	KRW interest rate_pay (%)	Foreign currency interest rate_receive (%)	Contract commencement date	Contract end date
Korea Develop Bank	USD 300,000 (total principal)	1061.50 ~ 1071.90	2.61 ~ 2.64	3.50	2018-01-25 ~ 2018-01-30	2023-01-30
SMBC	USD 100,000 (total principal)	1226.00	1.17	3M Libor+1.17	2020-05-15	2023-05-15

For currency swap contract, losses on valuation after tax of derivatives recognized in other comprehensive income amount to ₩ 4,920,557 thousand (2021: ₩ 488,535 thousand) (Note 8), and gains on valuation of derivatives amount to ₩ 1,260,859 thousand (2021: ₩ 671,546 thousand) are recognized in profit or loss for the year ended December 31, 2022.

In addition, the Group entered into an interest rate swap contract to hedge the risk of interest rate fluctuations related to borrowings from overseas subsidiaries, and the details of the derivative contract are as follows:

(in thousands of USD)	Contract date	Expiration date	Contacted amount (USD)	Interest rate (received) (%)	Interest rate (paid) (%)
Credit Agricole	2022-07-01	2023-04-17	80,000	Libor (3M) + 0.92	1.25

c) Other price risks

The Group is exposed to equity price risks arising from its equity investments. The below sensitivity analysis was performed based on stock price fluctuation risk at the end of the reporting period.

If the equity securities price has increased/decreased by 5%, the Group's other comprehensive income would be increased/decreased by ₩ 5,892,135 thousand (2021: ₩ 4,335,610 thousand) due to changes in financial assets at fair value and no change in profit or loss due to changes in fair value through profit or loss (2021: ₩ 1,484,509 thousand).

3) Credit risk management

Credit risk refers to risk of financial losses to the Group when the counterpart defaults on the obligations of the contracts. The Group has adopted a policy of only dealing with creditworthy counterparties and obtaining sufficient collateral, where appropriate, as a means of mitigating the risk of financial loss from defaults. The Group only deals with the customers rated higher than investment grade by the independent credit rating agencies. If those grades are not available, customers' credit is evaluated upon their other financial information, sales figures and other factors posted publicly. The Group regularly monitors customers' credit ratings, checks on the credit risk exposure and readjusts deposit or aggregate amount of transactions. The aggregate risks are allocated to total portfolio of approved customers for diversification effect that are reviewed and approved annually by Foreign Exchange Risk Management Committee.

Credit ratings of trade receivables are evaluated constantly and credit guarantee contracts are made, if necessary. The maximum exposure to credit risk is not disclosed as the book amount of financial assets exposed to credit risk are the best presentation of the maximum exposure to credit risk.

4) Liquidity risk management

The Group has established an appropriate liquidity risk management framework for the management of the Group's short-, medium- and long-term funding and liquidity management requirements. The Board of Directors has a full responsibility of the liquidity risk management. The Group manages liquidity risk by maintaining adequate reserves and credit facilities by continuously monitoring forecast and actual cash flows, and by matching the maturity profiles of financial assets and liabilities. 'Financing Arrangements' (Note 41) explains details of unused balances of credit facility agreements entered through the Group's discretion to reduce the liquidity risk.

The table below illustrates remaining contractual maturity of non-derivative financial liabilities in detail. Contractual maturity is based on the earliest day when the payment can be claimed to the Group. Maturity analysis of non-derivative financial liabilities according to their remaining maturity at the end of the reporting period, are as follows:

			2022					
			Contractual Cash		Residual value			
			Book amount	flows	Within 1 year	1 to 2 years	2 to 5 years	Over 5 years
Trade payables	₩	503,121,053	₩	503,121,053	₩	503,121,053	₩	-
Non-trade payables		239,836,049		239,836,049		239,836,049		-
Accrued expenses ¹		381,214,393		381,214,393		381,214,393		-
Dividends payable		14,297		14,297		14,297		-
Leasehold deposits received		24,392,467		36,587,545		4,448,145		843,400
Short-term borrowings		437,810,564		438,953,230		438,953,230		-
Long-term borrowings		332,517,050		345,678,282		199,282,852		146,395,430
Debentures		806,644,858		819,808,821		667,043,196		2,212,500
Lease liabilities		359,543,711		420,693,780		66,331,737		55,039,464
Total	₩	3,085,094,442	₩	3,185,907,450	₩	2,500,244,952	₩	204,490,794
								270,860,182
								₩ 210,311,522

¹Payables related to employee benefits are excluded.

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		2021					
		Contractual Cash		Residual value			
		Book amount	flows	Within 1 year	1 to 2 years	2 to 5 years	Over 5 years
Trade payables	₩	399,595,981	₩ 399,595,981	₩ 399,595,981	₩	- ₩	- ₩
Non-trade payables ¹		333,818,679	333,818,679	333,818,679	-	-	-
Accrued expenses ¹		347,418,620	347,418,620	347,418,620	-	-	-
Dividends payable		26,508	26,508	26,508	-	-	-
Leasehold deposits received		23,185,426	37,322,016	4,073,308	237,200	100,000	32,911,508
Short-term borrowings		395,765,525	395,856,377	395,856,377	-	-	-
Long-term borrowings		309,321,002	317,957,907	-	185,487,405	132,470,502	-
Debentures		773,043,198	804,938,415	18,255,027	633,917,763	152,765,625	-
Lease liabilities		342,255,571	408,851,132	64,180,228	48,577,919	102,892,125	193,200,861
Total	₩	2,924,430,510	₩ 3,045,785,635	₩ 1,563,224,728	₩ 868,220,287	₩ 388,228,252	₩ 226,112,369

¹Payables related to employee benefits are excluded.

As of December 31, 2022, gross settlement contracts consist of currency forward contract, which will be settled within 6 months. This contract is not included in above table and non-discounted contractual cash inflow/outflow from the contract is as follows:

(in thousands of Korean won)

	2022	2021
Contractual cash inflow	₩ 615,556,606	₩ 151,785,506
Contractual cash outflow	617,131,540	150,851,334

5. Fair value

For the year ended December 31, 2022, there were no changes in business environment and economic environment that have significant impacts on the fair value of assets and liabilities of the Group.

5.1 Fair Value of Financial Instruments by Category

Carrying amount and fair value of financial instruments by category as of December 31, 2022 and 2021, are as follows:

(in thousands of Korean won)		2022		2021	
		Carrying amount	Fair value	Carrying amount	Fair value
Financial assets					
Financial assets at fair value through other comprehensive income					
	₩	166,538,583	₩ 166,538,583	₩ 87,229,257	₩ 87,229,257
Financial assets at fair value through profit or loss					
		363,295,250	363,295,250	548,217,731	548,217,731
Financial derivative assets					
		91,585,290	91,585,290	43,545,296	43,545,296
Financial liabilities					
Debentures					
		806,644,858	790,375,333	773,043,198	776,594,910
Long-term borrowings					
		332,517,050	329,979,309	309,321,002	311,457,747
Financial derivative liabilities					
		2,397,170	2,397,170	2,783,469	2,783,469

Financial assets including trade and non-trade receivables, and financial liabilities at amortized cost except for debentures and long-term borrowings whose carrying amount is a reasonable approximation of fair value are excluded from the fair value disclosures.

5.2 Fair value Hierarchy

Items that are measured at fair value or for which the fair value is disclosed are categorized by the fair value hierarchy levels, and the defined levels are as follows:

- Quoted prices (unadjusted) in active markets for identical assets or liabilities (Level 1).
- All inputs other than quoted prices included in level 1 that are observable (either directly that is, prices, or indirectly that is, derived from prices) for the asset or liability (Level 2).
- Unobservable inputs for the asset or liability (Level 3).

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Fair value hierarchy classifications of the financial instruments that are measured at fair value as of December 31, 2022 and 2021, are as follows:

(in thousands of Korean won)

2022				
	Level 1	Level 2	Level 3	Total
Recurring fair value measurements				
Financial assets at fair value through other comprehensive Income	₩ 129,904,376	₩ -	₩ 36,634,207	₩ 166,538,583
Financial assets at fair value through profit or loss	6,843,985	218,569,766	137,881,499	363,295,250
Financial derivative assets	-	91,585,290	-	91,585,290
Financial derivative liabilities	-	1,408,706	988,464	2,397,170
Debentures	-	790,375,333	-	790,375,333
Long-term borrowings	-	329,979,309	-	329,979,309

(in thousands of Korean won)

2021				
	Level 1	Level 2	Level 3	Total
Recurring fair value measurements				
Financial assets at fair value through other comprehensive Income	₩ 86,712,702	₩ -	₩ 516,555	₩ 87,229,257
Financial assets at fair value through profit or loss	29,690,188	404,764,454	113,763,089	548,217,731
Financial derivative assets	-	43,545,296	-	43,545,296
Financial derivative liabilities	-	2,783,469	-	2,783,469
Debentures	-	776,594,910	-	776,594,910
Long-term borrowings	-	311,457,747	-	311,457,747

5.3 Transfers Between Fair Value Hierarchy Levels of Recurring Fair Value Measurements

Details of transfers between levels of each fair value hierarchy of financial instruments are as follows:

There were no transfers between levels 1 and 2 for recurring fair value measurements for the year ended December 31, 2022.

Changes in level 3 for recurring fair value measurements for the years ended December 31, 2022 and 2021, are as follows:

(in thousands of Korean won)

	2022					Ending balance
	Beginning balance	Purchase	Sales	Profit or loss	Others	
Financial assets						
Financial assets at fair value through profit or loss (excluding financial derivative assets)	₩113,763,089	₩ 32,163,901	₩ (5,988,938)	₩ (488,253)	₩ (1,568,300)	₩137,881,499
Financial assets at fair value through other comprehensive Income	516,555	-	-	-	36,117,652	36,634,207
Financial liabilities						
Financial derivative liabilities (put options)	-	876,982	-	111,482	-	988,464

(in thousands of Korean won)

	2021					Ending balance
	Beginning balance	Purchase	Sales	Profit or loss		
Financial assets						
Financial assets at fair value through profit or loss (excluding financial derivative assets)	₩ 12,431,000	₩ 101,044,791	₩ (150,000)	₩ 437,298		₩ 113,763,089
Financial assets at fair value through other comprehensive Income	516,555	-	-	-	-	516,555

5.4 Valuation Technique and the Inputs

Valuation techniques and inputs used in levels 2 or 3 fair value measurements are as follows:

(in thousands of Korean won)

2022				
	Fair values	Level	Valuation techniques	Inputs
Financial derivative assets				
Currency swap	77,484,328	2	Discounted cash flow model	Discount rate, exchange rate
Interest rate swap	9,661,715	2	Discounted cash flow model	Discount rate derived from yield curve, interest rate
Forward exchange	4,439,247	2	Discounted cash flow model	Discount rate, exchange rate
Financial derivative liabilities				
Currency swap	1,157,207	2	Discounted cash flow model	Discount rate, exchange rate
Put options	988,464	3	Option pricing model	Underlying asset price, credit risk adjusted discount rate, underlying asset variability
Forward exchange	251,499	2	Discounted cash flow model	Discount rate, exchange rate
Financial assets at fair value through other comprehensive income				
Investment instruments and others	36,117,152	3	Net asset valuation	Net asset value
Unlisted shares	517,055	3	Transaction costs	-
Financial assets at fair value through profit or loss				
Investment instruments and others	218,569,766	2	Discounted cash flow model	Discount rate, exchange rate
Investment instruments and others	104,059,603	3	Net asset valuation	Net asset value
Investment instruments and others	19,132,953	3	Transaction costs	-
Beneficiary certificates	11,580,980	3	Net asset valuation	Net asset value
Convertible notes	3,107,963	3	TF model	Underlying asset, exercise price per share
Borrowings				
Debentures	790,375,333	2	Discounted cash flow model	Credit risk adjusted discount rate
Long-term borrowings	329,979,309	2	Discounted cash flow model	Credit risk adjusted discount rate

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	Fair values	Level	Valuation techniques	Inputs
Financial derivative assets				
Currency swap	42,640,697	2	Discounted cash flow model	Discount rate, exchange rate
Forward exchange	904,599	2	Discounted cash flow model	Discount rate, exchange rate
Financial derivative liabilities				
Currency swap	2,372,259	2	Discounted cash flow model	Discount rate, exchange rate
Forward exchange	39,744	2	Discounted cash flow model	Discount rate, exchange rate
Interest rate swap	371,466	2	Discounted cash flow model	Discount rate derived from yield curve, interest rate
Financial assets at fair value through other comprehensive income				
Unlisted shares	516,555	3	Transaction costs	-
Financial assets at fair value through profit or loss				
Investment instruments and others	404,764,454	2	Discounted cash flow model	Discount rate, exchange rate
Beneficiary certificates	11,657,411	3	Net asset valuation	Net asset value
Beneficiary certificates	300,000	3	Transaction costs	-
Investment instruments and others	98,754,653	3	Net asset valuation	Net asset value
Convertible notes	3,051,025	3	TF model	Underlying asset, exercise price per share
Borrowings				
Debentures	776,594,910	2	Discounted cash flow model	Credit risk adjusted discount rate
Long-term borrowings	311,457,747	2	Discounted cash flow model	Credit risk adjusted discount rate

6. Financial Instrument by Category

6.1 Carrying Amounts of Financial Instruments by Category

Categorizations of financial assets and liabilities as of December 31, 2022 and 2021, are as follows:

(in thousands of Korean won)

		2022	2021
Financial assets			
Other financial assets	Financial derivative assets	₩ 91,585,290	₩ 43,545,296
Financial assets at fair value through other comprehensive income	Financial assets at fair value through other comprehensive income	166,538,583	87,229,257
Financial assets at fair value through profit or loss	Financial assets at fair value through profit or loss	363,295,250	548,217,730
Financial assets at amortized cost	Cash and cash equivalents	1,139,442,351	1,062,042,416
	Short-term financial assets	594,766,222	480,020,612
	Trade receivables (current)	1,623,344,006	1,395,341,862
	Trade receivables (non-current)	3,949,630	6,339,062
	Non-trade receivables (current) ¹	62,832,620	102,395,832
	Non-trade receivables (non-current)	69,006	36,585
	Accrued income	14,269,375	9,108,186
	Lease receivables (current) ²	8,601,802	5,440,480
	Lease receivables (non-current) ²	51,642,242	45,363,385
	Deposits provided (current)	2,143,057	4,035,466
	Deposits provided (non-current)	95,250,525	89,442,615
	Short-term loans	44,728,327	501,491
	Long-term loans	2,207,702	3,699,980
	Long-term financial assets	114,904,679	114,001,639
Total		₩ 4,379,570,667	₩ 3,996,761,894

¹ Receivables related to employee benefits are excluded.

² Lease receivables are reclassified from other financial assets to trade and other receivables for the year ended December 31, 2022.

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		2022		2021	
Financial liabilities					
Other financial liabilities	Financial derivative liabilities	₩	2,397,170	₩	2,783,469
Financial liabilities	Trade payables		503,121,053		399,595,981
at amortized cost	Non-trade payables ¹		239,836,049		333,818,679
	Accrued expenses ¹		381,214,393		347,418,620
	Dividends payable		14,297		26,508
	Borrowings (current)		520,314,967		205,661,214
	Borrowings (non-current)		435,252,813		590,047,631
	Borrowings				
	(current- debentures)		656,824,643		-
	Borrowings				
	(non-current- debentures)		149,820,215		773,043,198
	Collateral loan				
	on trade receivables ²		174,303,545		251,633,253
	Leasehold deposits received				
	(current)		4,448,145		4,073,308
	Leasehold deposits received				
	(non-current)		19,944,322		19,112,119
	Deposits for facility guarantee		495,000		481,800
	Non-controlling interests		1,257,724		804,997
	Other financial liabilities		-		20,631,939
	Total	₩	3,089,244,336	₩	2,949,132,716

¹ Payables related to employee benefits are excluded.

² The associated liability is measured in such a way that the net carrying amount of the transferred asset and the associated liability is the amortized cost of the rights and obligations retained by the transferor as the transferred asset is measured at amortized cost.

6.2 Net Gains or Losses by Category of Financial Instruments

Net gains or losses on each category of financial instruments for the years ended December 31, 2022 and 2021, are as follows:

(in thousands of Korean won)

	2022	2021
Financial derivatives assets/liabilities		
Gains on valuation of derivatives	₩ 17,450,293	₩ 1,809,627
Gains (losses) on transaction of derivatives	(28,748,731)	1,853,647
Cash flow hedges (after tax other comprehensive income)	(4,920,557)	(488,535)
Financial instruments at fair value through other comprehensive income		
Gains (losses) on valuation (after tax other comprehensive income)	(3,906,898)	12,999,922
Losses on disposal	-	(1,135)
Financial instruments at fair value through profit or loss		
Gains (losses) on valuation	(2,953,448)	3,283,750
Losses on disposal	(3,646,703)	(1,117,554)
Financial assets at amortized cost		
Interest income	35,518,089	18,223,189
Gains on foreign currency transaction	87,594,215	48,699,602
Gains (losses) on foreign currency translation	(29,021,336)	12,359,940
Reversal of impairment loss	2,401,535	2,680,522
Financial liabilities at amortized cost		
Interest expense	(61,658,027)	(43,762,089)
Gains (losses) on foreign currency transaction	33,750,698	(25,138,156)
Gains on foreign currency translation	6,524,883	7,652,909
Total	₩ 48,384,013	₩ 39,055,639

7. Financial Assets

7.1 Financial Assets at Fair Value through Profit or Loss

(a) Equity instruments at fair value through profit or loss

Equity instruments at fair value through profit or loss as of December 31, 2022 and 2021, are as follows:

<i>(in thousands of Korean won)</i>	2022	2021
Current		
Investment instruments and others	₩ 8,795,249	₩ 19,783,213
Non-current		
Investment instruments and others	14,214,604	10,615,576
Total	₩ 23,009,853	₩ 30,398,789

(b) Debt instruments at fair value through profit or loss

Debt instruments at fair value through profit or loss as of December 31, 2022 and 2021, are as follows:

<i>(in thousands of Korean won)</i>	2022	2021
Current		
Investment instruments and others	₩ 241,914,686	₩ 439,203,192
Convertible bonds	2,083,693	-
Non-current		
Beneficiary certificates	11,580,980	11,957,411
Investment instruments and others	83,681,768	63,607,314
Convertible bonds	1,024,270	3,051,025
Total	₩ 340,285,397	₩ 517,818,942

7.2 Financial Assets at Fair Value through Other Comprehensive Income

(a) Equity instruments at fair value through other comprehensive income

Equity instruments at fair value through other comprehensive income as of December 31, 2022 and 2021, are as follows:

(in thousands of Korean won)

	2022		2021	
Non-current				
Listed securities and others ¹	₩	166,021,528	₩	86,712,702
Unlisted securities and others ¹		517,055		516,555
Total	₩	166,538,583	₩	87,229,257

¹ Upon disposal of these listed securities and others, the accumulated other comprehensive income for these equity investments is reclassified to retained earnings and is not reclassified to profit or loss.

(b) Debt instruments at fair value through other comprehensive income

There are no debt instruments at fair value through other comprehensive income held by the Group as of December 31, 2022. Upon disposal of the debt instruments, the accumulated other comprehensive income is reclassified to profit or loss.

8. Derivative Financial Instruments

(a) Details of derivative financial instruments not applying hedge accounting as of December 31, 2022 and 2021, are as follows:

(in thousands of Korean won)

	2022		2021	
	Assets	Liabilities	Assets	Liabilities
Interest rate swap	₩ 9,661,715	₩ -	₩ -	₩ 371,466
Put options	-	988,464	-	-
Forward exchange	4,439,247	251,499	904,599	39,744
Currency swap	8,531,852	1,157,207	-	-
Total	₩ 22,632,814	₩ 2,397,170	₩ 904,599	₩ 411,210

(b) Details of derivative financial instruments applying cash flow hedge accounting as of December 31, 2022 and 2021, are as follows:

(in thousands of
Korean won)

	2022		2021	
	Assets	Liabilities	Assets	Liabilities
Cash flow hedges (currency swap) ¹	₩ 68,952,476	₩ -	₩ 42,640,697	₩ 2,372,259

¹As a result of applying cash flow hedge accounting, other comprehensive income after tax recognized for the years ended December 31, 2022 and 2021 is as follows:

(in thousands of Korean won)

Change in value of derivatives (after tax)	Line items recognized in profit or loss	2022	
		Reclassified amount in profit or loss (after tax)	Recognized amount in other comprehensive income (after tax)
₩ 20,860,963	Interest expense and differences on foreign currency (translation)	₩ (25,781,520)	₩ (4,920,557)

(in thousands of Korean won)

Change in value of derivatives (after tax)	Line items recognized in profit or loss	2021	
		Reclassified amount in profit or loss (after tax)	Recognized amount in other comprehensive income (after tax)
₩ 25,221,292	Interest expense and differences on foreign currency (translation)	₩ (25,709,827)	₩ (488,535)

9. Trade and Other Receivables

(a) Details of trade and other receivables as of December 31, 2022 and 2021, are as follows:

(in thousands of Korean won)

		2022		
		Gross amount	Less: Provision for impairment	Net amount
Current				
Trade receivables	₩	1,630,139,243	₩ (6,795,237)	₩ 1,623,344,006
Non-trade receivables		64,952,501	(1,056,413)	63,896,088
Accrued income		14,269,375	-	14,269,375
Financial lease receivables ¹		8,601,803	-	8,601,803
Total	₩	<u>1,717,962,922</u>	<u>₩ (7,851,650)</u>	<u>₩ 1,710,111,272</u>
Non-current				
Trade receivables	₩	5,875,294	₩ (1,925,664)	₩ 3,949,630
Non-trade receivables		448,804	-	448,804
Financial lease receivables ¹		51,642,242	-	51,642,242
Total	₩	<u>57,966,340</u>	<u>₩ (1,925,664)</u>	<u>₩ 56,040,676</u>

(in thousands of Korean won)

		2021		
		Gross amount	Less: Provision for impairment	Net amount
Current				
Trade receivables	₩	1,404,794,730	₩ (9,452,869)	₩ 1,395,341,861
Non-trade receivables		103,153,629	(272,316)	102,881,313
Accrued income		9,108,186	-	9,108,186
Financial lease receivables ¹		-	-	-
Total	₩	<u>1,517,056,545</u>	<u>₩ (9,725,185)</u>	<u>₩ 1,507,331,360</u>
Non-current				
Trade receivables	₩	8,887,892	₩ (2,548,830)	₩ 6,339,062
Non-trade receivables		37,428,706	-	37,428,706
Financial lease receivables ¹		-	-	-
Total	₩	<u>46,316,598</u>	<u>₩ (2,548,830)</u>	<u>₩ 43,767,768</u>

¹ For the year ended December 31, 2022, financial lease receivables were reclassified from other financial assets into trade and other receivables.

(b) Movements on the provision for impairment of trade receivables and other receivables for the years ended December 31, 2022 and 2021, are as follows:

(in thousands of Korean won)

	2022		
	Trade receivables	Non-trade receivables	Total
Beginning balance	₩ 12,001,699	₩ 272,316	₩ 12,274,015
Net impairment loss(reversal)	(1,185,831)	784,295	(401,536)
Write-offs	(1,330,521)	-	(1,330,521)
Exchange differences	(764,446)	(198)	(764,644)
Ending balance	₩ 8,720,901	₩ 1,056,413	₩ 9,777,314

(in thousands of Korean won)

	2021		
	Trade receivables	Non-trade receivables	Total
Beginning balance	₩ 16,504,022	₩ 409,033	₩ 16,913,055
Net impairment loss(reversal)	(3,042,499)	361,977	(2,680,522)
Write-offs	(2,150,079)	3,135	(2,146,944)
Exchange differences	690,255	(501,829)	188,426
Ending balance	₩ 12,001,699	₩ 272,316	₩ 12,274,015

(c) Credit risk and provision for impairment

The above trade receivables and other receivables are classified as financial assets measured at amortized cost. The Group considers a change of credit grade about trade receivables from starting date for granting credit to the end of reporting period to judge recoverability of trade receivables and others.

10. Inventories

Details of inventories as of December 31, 2022 and 2021, are as follows:

(in thousands of
Korean won)

	2022				
	Acquisition Cost	Inventory valuation	Inventory valuation allowance	Exchange differences	Valuation loss(reversal)
Finished goods	₩ 1,683,648,549	₩ 1,655,332,517	₩ 28,316,032	₩ 3,482,366	₩ (20,889,345)
Merchandise	44,880,246	44,880,246	-	-	-
Work in process	57,046,221	57,046,221	-	-	-
Raw materials	509,439,453	509,439,453	-	-	(24,892)
Supplies	52,122,570	52,122,570	-	-	-
Materials in transit	130,724,161	130,724,161	-	-	-
Total	₩ 2,477,861,200	₩ 2,449,545,168	₩ 28,316,032	₩ 3,482,366	₩ (20,914,237)

(in thousands of
Korean won)

	2021				
	Acquisition Cost	Inventory valuation	Inventory valuation allowance	Exchange differences	Valuation loss(reversal)
Finished goods	₩ 1,277,663,781	₩ 1,231,940,770	₩ 45,723,011	₩ 2,750,076	₩ 24,449,916
Merchandise	37,375,320	37,375,320	-	-	-
Work in process	47,181,729	47,181,729	-	-	-
Raw materials	417,815,355	417,790,463	24,892	24,892	-
Supplies	44,442,777	44,442,777	-	-	-
Materials in transit	117,857,673	117,857,673	-	-	-
Total	₩ 1,942,336,635	₩ 1,896,588,732	₩ 45,747,903	₩ 2,774,968	₩ 24,449,916

The Group recognizes loss from inventory valuation and inventory shrinkage as expenses in the period in which the loss occurs. In addition, reversal of inventory write-downs due to an increase in the net realizable value of inventory assets is deducted from cost of sales recognized as an expense in the period in which the reversal occurs.

11. Other Financial Assets

(a) Details of other financial assets as of December 31, 2022 and 2021, are as follows:

*(in thousands of
Korean won)*

	2022		2021	
	Current	Non-Current	Current	Non-Current
Loans	₩ 44,728,327	₩ 2,207,702	₩ 501,491	₩ 3,699,980
Guarantee deposits provided	2,143,057	95,250,525	4,035,466	89,442,615
Financial derivative assets	79,285,234	12,300,056	822,761	42,722,535
Financial lease receivables ¹	-	-	5,440,480	45,363,385
Total	₩ 126,156,618	₩ 109,758,283	₩ 10,800,198	₩ 181,228,515

¹ For the year ended December 31, 2022, financial lease receivables were reclassified from other financial assets into trade and other receivables.

(b) Movement on the provision for impairment of loans for the years ended December 31, 2022 and 2021, are as follows:

(in thousands of Korean won)

	2022	2021
Beginning Balance	₩ 2,000,000	₩ 2,000,000
Additional provisions (reversed)	(2,000,000)	-
Ending Balance	₩ -	₩ 2,000,000

12. Other Assets

Details of other assets as of December 31, 2022 and 2021, are as follows:

*(in thousands of
Korean won)*

	2022		2021	
	Current	Non-Current	Current	Non-Current
Advance payments	₩ 30,185,116	₩ 21,707,245	₩ 5,541,338	₩ 20,296,049
Prepaid expenses	27,784,227	10,590,706	19,031,490	15,137,857
Others	73,244,866	127,915	4,314,767	127,912
Total	₩ 131,214,209	₩ 32,425,866	₩ 28,887,595	₩ 35,561,818

13. Property, Plant and Equipment

(a) Detailed of the book amount of property, plant and equipment as of December 31, 2022 and 2021, are as follows:

(in thousands of Korean won)

		2022			
	Acquisition cost	Accumulated depreciation	Accumulated impairment losses	Book amount	
Land	₩ 433,481,950	₩ -	₩ -	₩ 433,481,950	
Buildings	2,231,951,360	(737,825,367)	(8,674,094)	1,485,451,899	
Structures	243,517,509	(79,871,028)	(7,626,499)	156,019,982	
Machinery	5,216,784,507	(4,629,866,271)	(12,412,671)	574,505,565	
Vehicles	122,052,010	(92,875,689)	-	29,176,321	
Tools, furniture and fixtures	1,480,344,775	(1,023,868,579)	(1,683,617)	454,792,579	
Machinery in transit	32,109,406	-	-	32,109,406	
Construction in progress	129,741,963	-	-	129,741,963	
Operating lease assets	61,877	(42,313)	-	19,564	
Right-of-use assets	632,811,172	(240,633,002)	-	392,178,170	
Total	₩ 10,522,856,529	₩ (6,804,982,249)	₩ (30,396,881)	₩ 3,687,477,399	

(in thousands of Korean won)

		2021			
	Acquisition cost	Accumulated depreciation	Accumulated impairment losses	Book amount	
Land	₩ 427,956,064	₩ -	₩ -	₩ 427,956,064	
Buildings	2,178,299,100	(692,003,336)	(8,440,307)	1,477,855,457	
Structures	128,240,067	(77,193,016)	(220,647)	50,826,404	
Machinery	5,231,468,459	(4,465,703,720)	(12,412,671)	753,352,068	
Vehicles	116,864,986	(82,916,028)	-	33,948,958	
Tools, furniture and fixtures	1,437,330,710	(985,209,880)	(1,728,350)	450,392,480	
Machinery in transit	10,497,113	-	-	10,497,113	
Construction in progress	239,461,554	-	-	239,461,554	
Operating lease assets	47,055	(26,083)	-	20,972	
Right-of-use assets	541,769,181	(164,627,292)	-	377,141,889	
Total	₩ 10,311,934,289	₩ (6,467,679,355)	₩ (22,801,975)	₩ 3,821,452,959	

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(b) Changes in property, plant and equipment for the years ended December 31, 2022 and 2021, are as follows:

(in thousands of
Korean won)

	2022							
	Opening net book amount	Acquisition	Disposal	Depreciation	Impairment	Others ¹	Exchange differences ²	Closing net book amount
Land	₩ 427,956,064	₩ 2,373,759	₩ (56,859)	₩ -	₩ -	₩ (2,125,297)	₩ 5,334,283	₩ 433,481,950
Buildings	1,477,855,457	16,538,904	(4,641,796)	(62,477,887)	(268,604)	58,308,458	137,367	1,485,451,899
Structures	50,826,404	17,854,204	(30)	(6,198,320)	(7,405,852)	101,895,811	(952,235)	156,019,982
Machinery and equipment	753,352,068	18,531,853	(1,014,710)	(257,474,810)	-	49,588,678	11,522,486	574,505,565
Vehicles	33,948,959	2,694,343	(118,005)	(11,676,826)	-	3,090,899	1,236,952	29,176,322
Tools, furniture and fixtures	450,392,481	68,066,229	(8,760,428)	(114,040,187)	-	59,996,509	(862,026)	454,792,578
Machinery in transit	10,497,113	30,171,510	-	-	-	(8,176,100)	(383,117)	32,109,406
Construction in progress	239,461,554	166,696,843	(2,009,722)	-	-	(272,784,431)	(1,622,281)	129,741,963
Operating lease assets	20,971	19,105	-	(20,511)	-	-	-	19,565
Right-of-use assets	377,141,889	82,382,391	(4,394,802)	(63,350,995)	-	-	399,686	392,178,169
Total	₩ 3,821,452,960	₩ 405,329,141	₩ (20,996,352)	₩ (515,239,536)	₩ (7,674,456)	₩ (10,205,473)	₩ 14,811,115	₩ 3,687,477,399

¹ Includes transfers between property, plant and equipment and financial lease receivables and transfers between property, plant and equipment and investment properties.

² Includes the effect of applying financial reporting in hyperinflationary economy of Türkiye

(in thousands of
Korean won)

	2021							
	Opening net book amount	Acquisition	Disposal	Depreciation	Impairment	Others ¹	Exchange differences ²	Closing net book amount
Land	₩ 414,008,721	₩ 1,036,888	₩ (1,714,150)	₩ -	₩ -	₩ 8,141,478	₩ 6,483,127	₩ 427,956,064
Buildings	1,478,877,626	12,326,740	(3,466,529)	(61,427,344)	(1,859,007)	(13,781,735)	67,185,706	1,477,855,457
Structures	52,479,693	293	(36,158)	(4,793,551)	(220,647)	534,291	2,862,483	50,826,404
Machinery and equipment	925,272,835	25,154,555	(704,777)	(325,390,879)	(12,412,671)	67,641,803	73,791,202	753,352,068
Vehicles	39,767,234	2,770,011	(74,692)	(11,359,583)	-	884,817	1,961,171	33,948,958
Tools, furniture and fixtures	440,863,462	54,964,251	(18,179,371)	(109,238,865)	-	64,114,445	17,868,558	450,392,480
Machinery in transit	7,301,846	14,840,963	-	-	-	(11,986,156)	340,460	10,497,113
Construction in progress	146,962,339	217,976,499	(54,340)	-	-	(128,334,837)	2,911,893	239,461,554
Operating lease assets	15,477	21,273	-	(15,778)	-	-	-	20,972
Right-of-use assets	396,057,957	47,909,673	(14,934,331)	(57,636,270)	-	(2,386,533)	8,131,393	377,141,889
Total	₩ 3,901,607,190	₩ 377,001,146	₩ (39,164,348)	₩ (569,862,270)	₩ (14,492,325)	₩ (15,172,427)	₩ 181,535,993	₩ 3,821,452,959

(c) The amount of each account item including depreciation of property, plant and equipment for the years ended December 31, 2022 and 2021 is as follows.

(in thousands of Korean won)

	2022		2021	
Cost of sales	₩	410,541,458	₩	468,258,510
Selling and administrative expenses (including ordinary R&D expenses)		104,698,078		101,603,760
Total	₩	515,239,536	₩	569,862,270

(d) Assets held for sale.

On December 18, 2020, The Group decided to sell the Busan Logistics Center by approval of management, and as a result, the assets for sale are recorded as held for sale. The sales transaction was expected to be completed by December 2021, but the sale was completed in May 2022 by agreement between the parties.

(in thousands of Korean won)

	2022		2021	
Disposal group				
Land	₩	-	₩	37,734,720

14. Investment Properties

(a) Details of investment properties as of December 31, 2022 and 2021, are as follows:

(in thousands of Korean won)

	2022			
	Acquisition cost	Accumulated depreciation	Accumulated impairment losses	Balance
Land	₩ 86,349,556	₩ -	₩ -	₩ 86,349,556
Buildings	57,206,924	(29,890,000)	(365,545)	26,951,379
Right-of-use assets	596,688	(508,758)	-	87,930
Total	₩ 144,153,168	₩ (30,398,758)	₩ (365,545)	₩ 113,388,865

(in thousands of Korean won)

	2021			
	Acquisition cost	Accumulated depreciation	Accumulated impairment losses	Balance
Land	₩ 80,482,909	₩ -	₩ -	₩ 80,482,909
Buildings	66,903,846	(27,242,884)	(332,432)	39,328,530
Right-of-use assets	596,688	(379,280)	-	217,408
Total	₩ 147,983,443	₩ (27,622,164)	₩ (332,432)	₩ 120,028,847

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(b) Changes in investment properties for the years ended December 31, 2022 and 2021, are as follows:

(in thousands of
Korean won)

		2022				
		Beginning balance	Disposal	Depreciation	Transfer	Ending balance
Land	₩	80,482,909	₩ (946,799)	₩ -	₩ 6,813,446	₩ 86,349,556
Buildings		39,328,530	(944,245)	(1,547,178)	(9,885,728)	26,951,379
Right-of-use assets		217,408	-	(129,478)	-	87,930
Total	₩	120,028,847	₩ (1,891,044)	₩ (1,676,656)	₩ (3,072,282)	₩ 113,388,865

(in thousands of
Korean won)

		2021					
	Beginning balance	Acquisition	Depreciation	Others	Impairment	Ending balance	
Land	₩ 88,620,040	₩ -	₩ -	₩ (8,137,131)	₩ -	₩ 80,482,909	
Buildings	24,867,751	-	(1,500,138)	16,293,349	(332,432)	39,328,530	
Right-of-use assets	448,932	99,716	(163,864)	(167,376)	-	217,408	
Total	₩ 113,936,723	₩ 99,716	₩ (1,664,002)	₩ 7,988,842	₩ (332,432)	₩ 120,028,847	

(c) As of December 31, 2022, the fair value of investment property is ₩ 235,546,670 thousand (2021: ₩ 288,319,930 thousand).

(d) Rental income from investment property for the year ended December 31, 2022 was ₩ 4,644,460 thousand (2021: ₩ 4,382,734 thousand), and rental cost was ₩ 1,221,489 thousand (2021: ₩ 1,413,382 thousand).

15. Lease

(a) Amounts recognized in the statement of financial position

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

<i>(in thousands of Korean won)</i>	2022	2021
Right-of-use assets ¹		
Land	₩ 43,140,120	₩ 45,362,516
Buildings	330,520,103	315,177,647
Machinery and equipment	3,550,392	3,799,999
Tools, furniture and fixtures	5,202,953	5,051,578
Vehicles	9,852,533	7,967,557
Total	₩ 392,266,101	₩ 377,359,297

¹Included in 'property, plant and equipment' and 'investment property' in the statement of financial position (Note 13,14). Increased right-of-use assets amounted to ₩ 82,382,391 thousand for the year ended December 31, 2022. (2021: ₩ 48,009,389 thousand)

<i>(in thousands of Korean won)</i>	2022	2021
Lease liabilities ¹		
Current	₩ 66,712,948	₩ 61,528,942
Non-current	292,830,763	280,726,629
Total	₩ 359,543,711	₩ 342,255,571

¹Included in 'borrowings' in the statement of financial position.

(b) Amounts recognized in the statement of profit or loss

The statement of profit or loss shows the following amounts relating to leases:

<i>(in thousands of Korean won)</i>	2022	2021
Depreciation of right-of-use assets		
Land	₩ 1,410,434	₩ 1,327,584
Buildings	55,144,150	49,631,823
Machinery and equipment	1,046,553	1,260,115
Tools, furniture and fixtures	332,157	112,966
Vehicles	5,547,179	5,467,648
Total	₩ 63,480,473	₩ 57,800,134
Interest expense relating to lease liabilities (included in finance costs) ¹	₩ 9,863,460	₩ 9,667,156
Expense relating to short-term leases	3,695,965	1,284,361
Expense relating to low-value leases	1,104,351	1,285,086
Expense relating to variable lease payments not included in lease liabilities	73,846,641	71,383,008

¹Excluded borrowing costs capitalized amount of ₩ 247,262 thousand.

The total cash outflow from leases for the year ended December 31, 2022 is ₩ 151,295,406 thousand (2021: ₩ 131,792,198 thousand).

(c) The total of future minimum lease payments to the lessor at the end of the reporting period areas follows:

<i>(in thousands of Korean won)</i>	2022	2021
Total minimum lease payments		
Within one year	₩ 66,331,737	₩ 64,180,228
Later than one year but not later than five years	175,346,521	151,470,043
Later than five years	179,015,522	193,200,861
Total	₩ 420,693,780	₩ 408,851,132

(d) As of December 31, 2022, total future minimum sublease receipts under non-cancellable subleases amount to ₩ 53,807,731 thousand. The lease agreements do not include terms of renewal or purchase options. Meanwhile, there are no other restrictions imposed under lease arrangements relating to dividends, additional debt and further leasing.

(e) Details of financial lease receivables as of December 31, 2022 are as follows:

<i>(in thousands of Korean won)</i>	2022	2021
Financial lease receivables-buildings	₩ 60,244,043	₩ 50,803,865

(f) The present value of the minimum lease payment and the gross investment amount of the financial lease receivables provided as of December 31, 2022, are as follows:

(in thousands of Korean won)

	2022		2021	
	Gross investment		Gross investment	
Within one years	₩	11,189,520	₩	8,405,458
Within two years		10,665,295		8,288,502
Within three years		9,214,738		7,859,860
Within four years		7,674,871		6,485,110
Within five years		6,190,981		5,042,968
Later than five years		48,956,340		25,160,209
Total	₩	93,891,745	₩	61,242,107

16. Intangible Assets

(a) Details of intangible assets as of December 31, 2022 and 2021, are as follows:

(in thousands of Korean won)

	2022			
	Acquisition cost	Accumulated amortization	Accumulated impairment losses	Book amount
Industrial rights	₩ 19,463,909	₩ (16,293,232)	₩ -	₩ 3,170,677
Other intangible assets	153,820,615	(132,177,114)	(25,819)	21,617,682
Goodwill	158,291,684	-	(6,699,810)	151,591,874
Brand and customer relationship	112,250,009	(44,225,132)	-	68,024,877
Construction in progress	10,077,901	-	-	10,077,901
Total	₩ 453,904,118	₩ (192,695,478)	₩ (6,725,629)	₩ 254,483,011

(in thousands of Korean won)

	2021			
	Acquisition cost	Accumulated amortization	Accumulated impairment losses	Book amount
Industrial rights	₩ 18,369,498	₩ (14,960,799)	₩ -	₩ 3,408,699
Other intangible assets	145,785,937	(125,168,112)	(27,906)	20,589,919
Goodwill	157,014,723	-	(6,698,640)	150,316,083
Brand and customer relationship	111,903,025	(34,306,656)	-	77,596,369
Construction in progress	11,726,479	-	-	11,726,479
Total	₩ 444,799,662	₩ (174,435,567)	₩ (6,726,546)	₩ 263,637,549

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(b) Changes in intangible assets for the years ended December 31, 2022 and 2021, are as follows:

(in thousands
of Korean won)

	2022						
	Beginning balance	Acquisition	Disposal	Amortization	Others	Exchange differences ¹	Ending balance
Industrial rights	₩ 3,408,699	₩ 511,289	₩ -	₩ (1,341,751)	₩ 593,462	₩ (1,023)	₩ 3,170,676
Other intangible assets	20,589,919	1,400,390	(123,827)	(7,747,713)	7,324,291	174,623	21,617,683
Goodwill	150,316,083	715,332	-	-	343,158	217,300	151,591,873
Brand and customer relationship	77,596,369	-	-	(9,867,033)	-	295,542	68,024,878
Construction in progress	11,726,479	10,275,400	(138,411)	-	(11,860,177)	74,610	10,077,901
Total	₩ 263,637,549	₩ 12,902,411	₩ (262,238)	₩ (18,956,497)	₩ (3,599,266)	₩ 761,052	₩ 254,483,011

¹ Includes the effect of applying financial reporting in hyperinflationary economy of Türkiye.

(in thousands of
Korean won)

	2021						
	Beginning balance	Acquisition	Disposal	Amortization	Others	Exchange differences	Ending balance
Industrial rights	₩ 3,674,343	₩ 463,303	₩ -	₩ (1,394,404)	₩ 665,776	₩ (319)	₩ 3,408,699
Other intangible assets	26,468,891	1,646,956	(147,566)	(9,468,348)	1,526,569	563,416	20,589,919
Goodwill	149,476,684	114,987	-	-	-	724,412	150,316,083
Brand and customer relationship	86,548,878	-	-	(9,792,044)	-	839,535	77,596,369
Construction in progress	4,975,679	9,108,806	(152,472)	-	(2,232,865)	27,331	11,726,479
Total	₩ 271,144,475	₩ 11,334,052	₩ (300,038)	₩ (20,654,796)	₩ (40,520)	₩ 2,154,376	₩ 263,637,549

(c) Impairment Tests for Goodwill

1) Goodwill is allocated to each of the CGUs identified for each consolidated entity. Details of goodwill of each consolidated entity as of December 31, 2022 and 2021, are as follows:

<i>(in thousands of Korean won)</i>		2022		2021
Manufacturing and sales of tires	₩	27,632,207	₩	27,632,207
Distribution of tires		81,632,438		80,356,648
None-tire business		42,327,228		42,327,228
Total	₩	151,591,873	₩	150,316,083

Goodwill impairment reviews are undertaken annually. As a result of impairment test, it is considered that the carrying value of cash generating units does not exceed the recoverable amount.

2) The recoverable amounts of all cash-generating units have been determined based on value-in-use calculations. These calculations use pre-tax cash flow projections based on a business plan approved by management covering five-years. Also, when measuring value in use, The Group estimated the cash flows assuming that COVID-19 would end within the estimated period. Cash flows beyond the five-years of the business plan are extrapolated using the estimated long-term growth rates stated below. The growth rate does not exceed the long-term average growth rate include in the related industry report.

3) Management determined the estimated pre-tax cash flow based on past performance and its expectations of market development. Value in use is measured by applying the discount rates reflecting specific risks relating to the relevant industry in which they operate. The key assumptions used as of December 31, 2022 are as follows:

<i>(in percentage. %)</i>	Annual growth rate for sales	Discount rate	Long-term growth rate
Manufacturing and sales of tires	3.02	9.00	1.00
Distribution of tires	4.22~5.76	7.76~12.80	1.50~2.00
None-tire business	16.63	11.75	1.00

4) The results of the sensitivity analysis for impairment assessment according to changes in discount rate and long-term growth rate are as follows:

<i>(in thousands of Korean won)</i>		Amount of impairment		
		Manufacturing and sales of tires	Distribution of tires	None-tire business
0.5% increase of discount rate	₩	-	₩	-
0.5% decrease of long-term growth rate		-	-	-

17. Investment in Associates and Joint Ventures

(a) Details of the Group's investment in associates and joint ventures as of December 31, 2022 and 2021, are as follows:

(in thousands of Korean won)

	Closing month	Location	Percentage of ownership (%)	2022	
				Acquisition cost	Book amount
Hanon Systems Co., Ltd. 1, 2	December	Korea	19.49	₩ 1,061,740,386	₩ 1,059,375,373
Peaches Group Korea Co. Ltd. 2, 3	December	Korea	7.79	520,827	449,967
Daemyeong Tech Won Co., Ltd.	December	Korea	49.00	1,147,000	1,050,464
TOWNZ Corp. 2	December	Korea	14.00	220,000	-
DS Quattro H Kosdaq Venture Fund 4	December	Korea	31.14	6,000,000	5,638,493
TIMEFOLIO Kosdaq Venture Hedge-S No.2 4	December	Korea	30.88	8,000,000	8,016,524
Nexgen Food Partners 4	December	Korea	25.00	6,000,000	5,832,278
I&B Corporation Co., Ltd. 5	December	Korea	100.00	20,100,000	30,419,431
Mirae Asset Core Plus Privately Placed investment Trust 6	December	Korea	-	-	-
Preciseley Microtechnology Corporation 7	December	Canada	22.86	69,027,274	66,330,581
Total				₩ 1,172,755,487	₩ 1,177,113,111

¹ As of December 31, 2022, the fair value of marketable investment in associate is ₩ 841,610,790 thousand (2021: ₩ 1,399,216,950 thousand).

² Even though the Group's equity interest in this entity is less than 20%, the investment was classified as investment in associates as the Group has authority to most of the associate's business operation (election of directors, etc.) by contract between shareholders.

³ Peaches Group Korea Co. Ltd is classified as investment in associates because the Group could exercise significant influence, and redeemable convertible preference shares of the entity owned by the Group are excluded from equity method considering that the shares are debt instruments.

⁴ As a collective investment vehicle invested by the Group, the investment was classified as investment in associates according to the requirement for ownership (20% or more). Meanwhile, as the standard price in the trust contract is set at KRW 1 per share, the number of stocks the Group owned is equal to the investment amount.

⁵ For the year ended December 31, 2021, I&B Corporation Co., Ltd. was newly established. Although the Group's ownership interest in this entity is 100%, the investment was classified as investment in joint ventures as the investors who hold convertible notes issued by I&B Corporation Co., Ltd. Have authority to most of the associate's business operation (election of directors, etc.).

⁶ Excluded from investment in associates due to the repurchase of Mirae Asset Core Plus professional investment type private equity investment trust for the year ended December 31, 2022.

⁷ For the year ended December 31, 2022, the Group acquired 1,564,326 common stocks of Preciseley Microtechnology Corporation, a Canadian MEMS company, and classified it as an investment in associates according to the ownership requirement (20% or more).

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				2021	
				Percentage of ownership (%)	Book amount
	Closing month	Location		Acquisition cost	
Hanon Systems Co., Ltd. 1, 2	December	Korea	19.49	₩ 1,061,740,386	₩ 1,092,643,884
Peaches Group Korea Co. Ltd. 2, 3	December	Korea	8.42	520,827	488,898
Daemyeong Tech Won Co., Ltd.	December	Korea	49.00	1,147,000	1,057,833
TOWNZ Corp. 2	December	Korea	15.40	220,000	78,593
DS Quattro H Kosdaq Venture Fund 4	December	Korea	31.14	6,000,000	6,123,051
TIMEFOLIO Kosdaq Venture Hedge-S No.2 4	December	Korea	30.88	8,000,000	8,222,469
Nexgen Food Partners 4	December	Korea	25.00	6,000,000	5,798,047
I&B Corporatrn Co., Ltd. 5	December	Korea	100.00	20,100,000	22,205,023
Mirae Asset Core Plus Privately Placed investment Trust 6	December	Korea	22.83	50,000,000	50,026,800
Preciseley Microtechnology Corporation 7	December	Canada	-	-	-
	Total			₩ 1,153,728,213	₩ 1,186,644,598

Hankook Tire & Technology Co., Ltd.
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(b) The table below provides summarized financial information for those associates and joint ventures that are material to the Group and received dividends from the associates.

(in thousands
of Korean won)

of Korean won)	2022													
	Assets		Liabilities		Equity		Sales		Profit(loss) for the year	Total comprehensive income(loss)	Dividend received			
Hanon Systems Co., Ltd.	₩	9,116,797,898	₩	6,737,054,925	₩	2,379,742,973	₩	8,627,727,574	₩	35,088,937	₩	96,052,215	₩	37,451,160
Daemyeong Tech Won co., Ltd.		2,734,702		228,955		2,505,747		1,817,450		(6,548)		(6,548)		-
Peaches Group Korea Co. Ltd		6,915,920		4,591,654		2,324,266		7,926,229		(1,709,340)		(1,709,340)		-
TOWNZ Corp.		773,327		72,167		701,160		152,394		(1,245,961)		(1,245,961)		-
DS Quattro H Kosdaq Venture Fund		18,184,116		-		18,184,116		753,058		(1,251,096)		(1,251,096)		-
TIMEFOLIO Kosdaq Venture Hedge-S No.2		26,040,204		214		26,039,990		1,083,936		(892,096)		(892,096)		-
Nexgen Food Partners		23,335,711		6,600		23,329,111		10,204		(328,693)		(328,693)		-
I&B Corporation Co., Ltd.		37,281,597		5,159,395		32,122,202		-		1,182,724		6,530,248		-
Preciseley Microtechnology Corporation		153,414,144		16,191,825		137,222,319		20,412,567		(1,796,252)		(1,796,252)		-

(in thousands
of Korean won)

of Korean won)

	2021							
	Assets	Liabilities	Equity	Sales	Profit(loss) for the year	Total comprehensive income(loss)	Dividend received	
Hanon Systems Co., Ltd.	₩ 8,233,732,862	₩ 5,757,074,853	₩ 2,476,658,009	₩ 7,351,423,826	₩ 310,725,206	₩ 447,118,430	₩ 40,155,966	
Daemyeong Tech Won co., Ltd.	2,378,420	221,246	2,157,174	1,987,972	251,917	251,917	-	
Peaches Group Korea Co. Ltd	4,122,907	4,476,754	(353,847)	4,575,323	(819,340)	(819,340)	-	
TOWNZ Corp.	363,168	82,445	280,723	1,720	(926,116)	(926,116)	-	
DS Quattro H Kosdaq Venture Fund	19,721,565	59	19,721,506	677,889	581,965	581,965	-	
TIMEFOLIO Kosdaq Venture Hedge-S No.2	26,691,998	151	26,691,847	968,867	720,443	720,443	-	
Nexgen Food Partners	23,195,488	3,300	23,192,188	642	(807,812)	(807,812)	-	
Mirae Asset Core Plus Privately Placed investment Trust	223,182,267	4,041,532	219,140,735	519,914	145,556	145,556	-	
I&B Corporation Co., Ltd.	32,630,534	5,065,090	27,565,444	-	(507,264)	(507,264)	-	

Hankook Tire & Technology Co., Ltd.
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(c) Details of the valuation of equity-accounted investment of the Group as of December 31, 2022 and 2021, are as follows:

(in thousands
of Korean won)

	2022						
	Beginning balance	Acquisition	Disposal	Share of profit(loss) of associates and joint ventures accounted for using the equity method	Dividend	Changes in equity method capital, and others	Ending balance
Hanon Systems Co., Ltd.	₩ 1,092,643,884	₩ -	₩ -	₩ (10,490,103)	₩ (37,451,160)	₩ 14,672,752	₩ 1,059,375,373
Peaches Group Korea Co. Ltd	488,898	-	-	(38,931)	-	-	449,967
Daemyeong Tech Won co., Ltd.	1,057,833	-	-	(7,369)	-	-	1,050,464
TOWNZ Corp. ¹	78,593	-	-	(78,593)	-	-	-
DS Quattro H Kosdaq Venture Fund	6,123,051	-	-	(484,558)	-	-	5,638,493
TIMEFOLIO Kosdaq Venture Hedge-S No.2	8,222,469	-	-	(205,945)	-	-	8,016,524
Nexgen Food Partners	5,798,047	-	-	34,231	-	-	5,832,278
I&B Corporation Co., Ltd.	22,205,023	-	-	1,182,724	-	7,031,684	30,419,431
Mirae Asset Core Plus Privately Placed investment Trust	50,026,800	-	(50,052,861)	26,061	-	-	-
Preciseley Microtechnology Corporation	-	69,027,274	-	(1,539,717)	-	(1,156,976)	66,330,581
Total	₩ 1,186,644,598	₩ 69,027,274	₩ (50,052,861)	₩ (11,602,200)	₩ (37,451,160)	₩ 20,547,460	₩ 1,177,113,111

¹ The equity method evaluation was discontinued because the carrying amount of the investment in the associate was evaluated below "zero" in accordance with the IFRS. According to the criteria, the loss of the unreflected equity method is ₩ 84,309 thousand.

(in thousands of
Korean won)

	2021						
	Beginning balance	Acquisition	Disposal	Share of profit(loss) of associates and joint ventures accounted for using the equity method	Dividend	Changes in equity method capital, and others	Ending balance
Hanon Systems Co., Ltd.	₩ 1,069,108,719	₩ -	₩ -	₩ 43,844,522	₩ (40,155,966)	₩ 19,846,609	₩ 1,092,643,884
Peaches Group Korea Co. Ltd	520,827	-	-	(31,929)	-	-	488,898
Daemyeong Tech Won co., Ltd.	934,394	-	-	123,439	-	-	1,057,833
TOWNZ Corp. ¹	220,000	-	-	(141,407)	-	-	78,593
DS Quattro H Kosdaq Venture Fund	-	6,000,000	-	123,236	-	(185)	6,123,051
TIMEFOLIO Kosdaq Venture Hedge-S No.2	-	8,000,000	-	222,469	-	-	8,222,469
Nexgen Food Partners	-	6,000,000	-	(201,953)	-	-	5,798,047
I&B Corporation Co., Ltd.	-	20,100,000	-	(507,264)	-	2,612,287	22,205,023
Mirae Asset Core Plus Privately Placed investment Trust	-	50,000,000	-	33,226	-	(6,426)	50,026,800
Total	₩ 1,070,783,940	₩ 90,100,000	₩ -	₩ 43,464,339	₩ (40,155,966)	₩ 22,452,285	₩ 1,186,644,598

Hankook Tire & Technology Co., Ltd.
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(d) The tables below provide a reconciliation of the summarized financial information presented to the carrying amount of its interest in the joint venture or associates.

(in thousands of Korean won)

	2022					
	Net assets at the end of the year ¹	Group's share in %	Group's share in KRW	Goodwill	Accumulated equity method adjustment	Book amount
Hanon Systems Co., Ltd.	₩ 2,245,883,517	19.49%	₩ 437,722,697	₩ 540,921,568	₩ 80,731,108	₩ 1,059,375,373
I&B Corporation Co., Ltd.	34,095,693	100.00%	34,095,693	-	(3,676,262)	30,419,431
Preciseley Microtechnology Corporation	137,222,319	22.86%	31,363,529	55,549,744	(20,582,692)	66,330,581

¹ Amount of net assets excluding non-controlling interests.

(in thousands of Korean won)

	2021					
	Net assets at the end of the year ¹	Group's share in %	Group's share in KRW	Goodwill	Accumulated equity method adjustment	Book amount
Hanon Systems Co., Ltd.	₩ 2,343,235,177	19.49%	₩ 456,696,536	₩ 540,921,568	₩ 95,025,780	₩ 1,092,643,884
I&B Corporation Co., Ltd.	27,565,444	100.00%	27,565,444	-	(5,360,421)	22,205,023

¹ Amount of net assets excluding non-controlling interests.

18. Investment in Subsidiaries

The summarized financial information of the subsidiaries as of and for the years ended December 31, 2022 and 2021, are as follows:

(in thousands of Korean won)

		2022			
		Assets	Liabilities	Sales	Profit(loss) for the year
Hankook Tire America Corp.	₩	1,286,036,324	₩ 696,240,788	₩ 2,243,723,728	₩ 110,459,571
Hankook Tire Canada Corp.		70,746,559	40,348,330	146,755,630	3,551,655
Hankook Tire DE Mexico, S.A. DE C.V.		100,515,595	93,642,848	167,575,967	3,752,781
Hankook Tire de Colombia Ltda.		20,371,923	17,068,174	47,430,714	1,218,818
Hankook Tire Manufacturing Tennessee LP		695,600,462	604,339,951	438,318,222	10,026,116
Hankook Tire America Holdings I, LLC		1,893,069	-	-	(389)
Hankook Tire America Holdings II, LLC		186,438,241	-	-	(389)
Hankook Tire Latin America Distribution Center, S.A.		30,242,282	31,160,350	49,604,912	1,059,662
Hankook Tire Latam, S.A.		268,611	42,032	913,900	22,235
Hankook Tire Europe Holdings B.V.		999,754,113	877	635	1,117,334
Hankook Tire Netherlands B.V.		188,485,276	146,815,529	380,333,969	7,255,117
Hankook Tyre U.K. Ltd.		165,771,609	138,719,470	234,899,516	2,607,155
Hankook Reifen Deutschland GmbH		344,381,553	287,847,847	752,901,948	10,288,250
Hankook Tire France S.A.R.L.		167,915,605	145,814,458	332,062,242	3,308,154
Hankook Tire Italia S.R.L.		181,381,798	157,790,495	237,353,636	3,062,381
Hankook Espana S.A.		86,209,719	62,980,686	162,637,173	2,633,184
Hankook Tire Europe GmbH		557,416,102	371,056,457	27,762,791	15,296,973
Hankook Tire Hungary Ltd.		1,332,636,234	150,554,882	1,050,043,258	240,833,655
Hankook Tire Budapest Kereskedelmi Kft		71,328,682	54,178,163	128,306,663	3,906,547
Hankook Tire Rus LLC		35,105,774	21,522,519	62,864,826	6,119,437
Hankook Tire Sweden AB		58,186,977	54,271,030	110,786,027	570,949
Hankook Lastikleri A.S.		71,666,838	45,399,509	157,994,846	10,586,923
Hankook Tire Polska Sp. z o.o.		74,470,559	65,005,837	143,994,069	800,612
Hankook Tire Ceska Republika s.r.o.		37,808,532	31,324,407	68,425,287	860,464

Hankook Tire & Technology Co., Ltd.
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Hankook Tire Ukraine LLC	521,387	267,123	433,199	(433,559)
Hankook Tire Japan Corp.	25,404,622	23,391,999	36,783,260	633,002
Hankook Tyre Australia Pty. Ltd	48,058,490	38,262,427	73,178,817	(494,460)
PT. HANKOOK TIRE INDONESIA	845,829,273	119,853,393	740,547,097	85,650,955
Hankook Tire Thailand Co., Ltd.	8,854,108	7,039,648	17,746,816	(274,807)
Hankook Tires India llp.	100,052	2,708	-	-
Hankook Tire Malaysia SDN.BHD.	11,743,640	16,923,850	43,408,739	41,806
Hankook Tire & Technology Egypt LLC	61,631	70,244	92,309	(57,680)
Hankook Tire Singapore PTE., Ltd.	680,564,727	677,619,490	2,862,913	(10,590,343)
Hankook Tyre Australia Retail Pty., Ltd. ¹	130,705,698	62,529,085	37,548,292	4,161,876
Hankook Tire China Co., Ltd.	1,555,659,350	191,780,068	765,272,032	81,493,507
Jiangsu Hankook Tire Co., Ltd.	847,787,509	156,125,247	641,603,377	46,405,995
Shanghai Hankook Tire Sales Co., Ltd.	799,165,131	729,289,335	891,816,841	12,878,379
Chongqing Hankooktire Co., Ltd.	389,047,995	207,766,213	447,430,972	(542,059)
Beijing Jielun Trading Company Co., Ltd.	1,027,970	649,926	13,472,310	15,712
Qingdao Jieluntong Trading Co., LTD	385,012	431,556	9,979,679	34,432
Xiamen Jieluntong Trading Co., LTD	333,651	698,346	9,738,814	(42,396)
Hankook Precision Works Co., Ltd.	150,518,018	13,822,926	128,798,861	17,928,631
MK Mold (Jiaxing) Co., LTD.	22,549,981	4,972,242	23,475,964	5,373,705
MK Technology (CHONGQING) Mould Co., Ltd.	1,926,116	92,425	682,619	98,111
Model Solution Co., Ltd.	89,948,047	26,262,777	68,886,235	7,818,794
ModelSolution Inc.	2,089,310	1,736,121	5,798,687	(64,962)
Hankook Engineering Works Co., Ltd.	49,519,218	9,239,029	51,091,008	3,255,157
Hankook Donggeurami Partners	2,018,767	911,700	6,452,646	301,023
Reifen-Muller KG	221,056,010	163,597,706	383,700,518	7,991,029
Reifen-Muller Runderneuerung BV	28,141,414	1,785,769	28,264,967	6,535,333
RM Verwaltungs GmbH	423,542	198,211	980,023	70,299
RU Verwaltungs GmbH	224,107	80,366	384,136	42,059

Hankook Tire & Technology Co., Ltd.
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Hankook Tire D.O.O. Beograd	28,627,296	27,615,295	61,756,735	415,001
HANKOOK TIRE MIDDLE EAST AND AFRICA FZE	23,860,166	23,055,874	44,449,162	3,442,061
Hankook Tire Vietnam. Co., Ltd.	2,232,794	1,314,649	6,070,673	(39,950)
PT. HANKOOK TIRE SALES INDONESIA	12,726,489	10,954,167	40,971,952	821,625
Hankook Tire Austria GmbH	37,462,017	42,284,251	49,795,040	278,610
TNA Co., Ltd.	16,392,182	8,963,349	15,429,639	(381,385)
Mira Asset OCIO Best Solution Privately Placed Investment Trust 1	98,665,867	18,027	-	(3,742,018)
TIGER CONSTANT 1 Hedge	6,353,065	1,509,463	-	(367,206)
CNT Tech Mobility Startups	2,605,828	2,750	-	(77,571)

¹ Financial information including JAX Quickfit Franchising Systems Unit Trust., Jax Quickfit Franchising Systems Pty Ltd., JAX Quickfit Properties Pty Ltd., which are 100% owned by Hankook Tyre Australia Retail Pty., Ltd.

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(in thousands of Korean won)

2021

	Assets		Liabilities		Sales		Profit(loss) for the year
Hankook Tire America Corp.	₩	1,022,345,968	₩	559,133,839	₩	1,742,657,964	₩ 70,897,555
Hankook Tire Canada Corp.		71,192,450		44,338,809		134,076,215	2,597,408
Hankook Tire DE Mexico, S.A. DE C.V.		61,889,850		59,159,282		126,213,206	(1,029,453)
Hankook Tire de Colombia Ltda.		11,141,457		8,634,697		27,848,301	690,223
Hankook Tire Manufacturing Tennessee LP		723,732,137		647,554,990		346,253,591	27,937,886
Hankook Tire America Holdings I, LLC		1,892,783		-		-	(344)
Hankook Tire America Holdings II, LLC		186,437,955		-		-	(344)
Hankook Tire Latin America Distribution Center, S.A.		21,534,648		23,365,809		41,261,078	1,319,453
Hankook Tire Latam, S.A.		238,209		46,658		980,403	55,060
Hankook Tire Europe Holdings B.V.		1,008,291,589		13,545,204		-	202,622,069
Hankook Tire Netherlands B.V.		148,933,757		114,711,444		308,370,256	4,521,503
Hankook Tyre U.K. Ltd.		131,277,600		105,560,329		198,751,133	2,410,040
Hankook Reifen Deutschland GmbH		284,496,498		238,332,677		639,732,617	7,378,566
Hankook Tire France S.A.R.L.		132,778,049		114,093,081		263,379,157	3,123,339
Hankook Tire Italia S.R.L.		148,421,652		128,013,267		193,832,040	3,340,526
Hankook Espana S.A.		65,045,318		44,572,417		117,346,229	1,456,770
Hankook Tire Europe GmbH		415,224,210		244,298,240		25,996,970	15,070,493
Hankook Tire Hungary Ltd.		1,181,243,153		160,138,932		942,445,586	209,596,915
Hankook Tire Budapest Kereskedelmi Kft		51,198,337		36,814,706		102,110,029	3,232,786
Hankook Tire Rus LLC		68,831,064		60,559,772		108,028,999	3,697,989
Hankook Tire Sweden AB		58,645,865		54,996,915		91,432,819	1,187,822
Hankook Lastikleri A.S.		46,615,785		26,286,218		119,426,937	5,982,717
Hankook Tire Polska Sp. z o.o.		50,264,422		41,494,761		116,833,057	2,560,539
Hankook Tire Ceska Republika s.r.o.		18,678,701		13,091,958		48,885,863	814,573

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Hankook Tire Ukraine LLC	1,471,626	680,524	1,986,959	175,396
Hankook Tire Japan Corp.	15,313,812	13,991,782	31,323,658	529,107
Hankook Tyre Australia Pty. Ltd	35,873,140	24,948,696	80,216,962	2,152,237
PT. HANKOOK TIRE INDONESIA	700,965,883	98,343,458	488,949,025	14,699,555
Hankook Tire Thailand Co., Ltd.	7,669,881	5,643,964	21,136,341	24,747
Hankook Tires India llp.	104,104	2,817	731,388	(39,025)
Hankook Tire Malaysia SDN.BHD.	10,777,653	15,946,679	26,242,755	1,070,348
Hankook Tire Singapore PTE., Ltd.	329,812,111	317,339,217	3,422,586	3,392,724
Hankook Tyre Australia Retail Pty., Ltd. ¹	127,943,482	63,720,784	31,941,894	2,548,298
Hankook Tire China Co., Ltd.	1,460,780,906	150,162,193	570,900,382	20,483,433
Jiangsu Hankook Tire Co., Ltd.	792,168,683	127,714,790	477,374,228	17,619,673
Shanghai Hankook Tire Sales Co., Ltd.	562,093,279	502,776,134	864,340,610	13,529,535
Chongqing Hankooktire Co., Ltd.	479,175,758	292,551,145	356,054,252	(1,088,561)
Beijing Jielun Trading Company Co., Ltd.	1,022,559	649,748	12,327,445	11,509
Qingdao Jieluntong Trading Co., LTD	320,444	401,702	9,505,437	98,656
Xiamen Jieluntong Trading Co., LTD	311,064	644,226	7,038,358	2,727
Hankook Precision Works Co., Ltd.	130,737,170	12,988,237	121,193,613	10,958,781
MK Mold (Jiaxing) Co., LTD.	22,406,355	2,633,570	16,002,492	3,352,213
MK Technology (CHONGQING) Mould Co., Ltd.	1,850,749	63,738	730,637	54,841
Model Solution Co., Ltd.	49,163,498	21,181,785	60,078,878	7,158,312
ModelSolution Inc.	1,849,251	1,459,249	7,169,997	369,812
Hankook Engineering Works Co., Ltd.	46,317,978	11,739,305	46,146,311	1,824,446
Hankook Donggeurami Partners	1,522,613	947,071	5,398,878	152,518
Reifen-Muller KG	210,011,131	160,855,181	355,139,602	9,669,716
Reifen-Muller	23,804,594	1,545,004	21,906,915	4,728,899

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Runderneuerung BV				
RM Verwaltungs GmbH	333,668	168,241	923,950	67,272
RU Verwaltungs GmbH	167,149	60,646	396,307	32,152
Hankook Tire D.O.O. Beograd	21,018,110	20,424,869	22,327,044	718,249
HANKOOK TIRE MIDDLE EAST AND AFRICA FZE	10,465,588	12,848,684	28,465,782	1,405,629
Hankook Tire Vietnam. Co., Ltd.	1,624,559	695,996	4,039,518	64,715
PT. HANKOOK TIRE SALES INDONESIA	14,109,089	13,074,266	36,517,010	431,942
Hankook Tire Austria GmbH	26,150,353	31,216,471	32,770,553	(1,379,351)
TNA Co., Ltd.	16,537,249	8,800,331	12,065,279	(101,142)
Mira Asset OCIO Best Solution Privately Placed Investment Trust 1	102,473,670	18,787	-	667,807
TIGER CONSTANT 1 Hedge	5,910,296	699,489	-	(41,217)
CNT Tech Mobility Startups	1,189,136	-	-	(7,243)

¹ Financial information including JAX Quickfit Franchising Systems Unit Trust., Jax Quickfit Franchising Systems Pty Ltd., JAX Quickfit Properties Pty Ltd., which are 100% owned by Hankook Tyre Australia Retail Pty., Ltd.

19. Trade and other payables

Details of trade and other payables as of December 31, 2022 and 2021 are as follows:

<i>(in thousands of Korean won)</i>	2022		2021	
Trade payables	₩	503,121,053	₩	399,595,981
Non-trade payables		277,108,500		354,595,986
Accrued expenses		430,585,186		398,282,567
Dividends payable		14,297		26,508
Total	₩	1,210,829,036	₩	1,152,501,042

20. Borrowings

(a) Details of borrowings as of December 31, 2022 and 2021, are as follows:

<i>(in thousands of Korean won)</i>				
	2022		2021	
	Current	Non-current	Current	Non-current
Short-term borrowings	₩ 437,810,564	₩ -	₩ 395,765,525	₩ -
Long-term borrowings	190,095,000	142,422,050	-	309,321,002
Lease liabilities	66,712,948	292,830,763	61,528,942	280,726,629
Debentures	656,824,643	149,820,215	-	773,043,198
Total	₩ 1,351,443,155	₩ 585,073,028	₩ 457,294,467	₩ 1,363,090,829

(b) Details of short-term borrowings as of December 31, 2022 and 2021, are as follows:

<i>(in thousands of Korean won)</i>	Lender	Annual Interest rate(%) (2022.12.31)		
			2022	2021
General loans	BMG and others	5.48	₩ 201,543,112	₩ 98,312,544
Transfer of trade receivables ¹	Woori Bank and others	10.18 ²	174,303,545	251,633,253
Usance	SMBC and others	4.70	61,963,907	45,819,728
	Total		₩ 437,810,564	₩ 395,765,525

¹ As transfer of trade receivables does not meet derecognition criteria, financial liabilities are recognized and secured by the Group's trade receivables (Note 41 (5)).

² The weighted average borrowing interest rate on financial liabilities recognized in connection with the transfer of trade receivables.

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(c) Details of long-term borrowings as of December 31, 2022 and 2021, are as follows:

(in thousands of Korean won)				2022		2021	
	Lender	Maturity date	Annual interest rate(%) (2022.12.31)	Current	Non-current	Current	Non-current
Long-term borrowings in local currency	KEB Hana Bank and others	2024.05.17	2.12~2.15	₩ -	₩ 11,400,000	₩ -	₩ 11,400,000
Long-term borrowings in foreign currency	CitiBank and others	2024.11.19	1.66~5.87	190,095,000	131,022,050	-	297,921,002
	Total			₩ 190,095,000	₩ 142,422,050	₩ -	₩ 309,321,002

(d) Details of debentures as of December 31, 2022 and 2021, are as follows:

(in thousands of Korean won)				2022		2021	
	Issue date	Maturity date	Annual interest rate(%) (2022.12.31)	Current	Non-current	Current	Non-current
The 84-1 st debentures	2020.03.05	2023.03.05	1.38	₩ 150,000,000	₩ -	₩ -	₩ 150,000,000
The 84-2 nd debentures	2020.03.05	2025.03.05	1.48	-	150,000,000	-	150,000,000
Long-term debentures in foreign currency ¹	2018.01.30	2023.01.30	3.50	380,190,000	-	-	355,650,000
Shogun bond ¹	2020.05.15	2023.05.15	5.78	126,730,000	-	-	118,550,000
	Less: Discount on debentures			(95,357)	(179,785)	-	(1,156,802)
	Total			₩ 656,824,643	₩ 149,820,215	₩ -	₩ 773,043,198

¹ The Group entered into currency swap contracts to hedge cash flow risks related to floating interest rates and foreign exchange rates of the above borrowings (Note 8).

21. Net Defined Benefit Liabilities

21.1 Defined Benefit Plan

(a) Amounts recognized in statements of comprehensive income regarding defined benefit pension plans for the years ended December 31, 2022 and 2021, are as follows:

(in thousands of Korean won)		2022	2021
Current service cost	₩	53,809,240	₩ 51,819,615
Net interest cost		(745,218)	1,008,835
Total	₩	53,064,022	₩ 52,828,450

(b) Details of net defined benefit liabilities (assets) recognized in the statements of financial position as of December 31, 2022 and 2021, are as follows:

(in thousands of Korean won)		2022	2021
Present value of defined benefit obligations	₩	428,722,795	₩ 489,695,339
Fair value of plan assets ¹		(511,102,864)	(528,894,394)
Net defined benefit liabilities (assets)	₩	(82,380,069)	₩ (39,199,055)

¹ The contributions to the National Pension Fund of ₩ 5,232 thousand are included in the fair value of plan assets as of December 31, 2022 (2021: ₩ 5,232 thousand).

(c) Movements in the defined benefit liabilities and the fair value of plan assets for the years ended December 31, 2022 and 2021, are as follows:

(in thousands of Korean won)

	2022		
	Present value of defined benefit obligations	Fair value of plan assets	Total
Beginning balance	₩ 489,695,339	₩ (528,894,394)	₩ (39,199,055)
Current service cost	53,809,240	-	53,809,240
Interest expense (income)	17,073,355	(17,818,573)	(745,218)
	<u>70,882,595</u>	<u>(17,818,573)</u>	<u>53,064,022</u>
Remeasurements:			
Return on plan assets (excluding amounts included in net interest)	-	9,742,407	9,742,407
Actuarial gain from change in demographic assumptions	(365,939)	-	(365,939)
Actuarial loss from change in financial assumptions	(98,707,232)	-	(98,707,232)
Actuarial gain from experience adjustments	6,837,484	-	6,837,484
	<u>(92,235,687)</u>	<u>9,742,407</u>	<u>(82,493,280)</u>
Employers' contributions	-	(14,187,983)	(14,187,983)
Benefit payments	(37,154,288)	35,039,543	(2,114,745)
Others (affiliate transfer effect included)	(2,465,164)	5,016,136	2,550,972
Ending balance	<u>₩ 428,722,795</u>	<u>₩ (511,102,864)</u>	<u>₩ (82,380,069)</u>

(in thousands of Korean won)

	2021		
	Present value of defined benefit obligations	Fair value of plan assets	Total
Beginning balance	₩ 476,188,762	₩ (471,840,065)	₩ 4,348,697
Current service cost	51,819,615	-	51,819,615
Interest expense (income)	16,204,453	(15,195,618)	1,008,835
	<u>68,024,068</u>	<u>(15,195,618)</u>	<u>52,828,450</u>
Remeasurements:			
Return on plan assets (excluding amounts included in net interest)	-	6,138,949	6,138,949
Actuarial gain from change in demographic assumptions	(3,163,788)	-	(3,163,788)
Actuarial loss from change in financial assumptions	3,328,988	-	3,328,988
Actuarial gain from experience adjustments	(12,006,169)	-	(12,006,169)
	<u>(11,840,969)</u>	<u>6,138,949</u>	<u>(5,702,020)</u>
Employers' contributions	-	(88,199,642)	(88,199,642)
Benefit payments	(42,308,642)	39,603,791	(2,704,851)
Others (affiliate transfer effect included)	(367,880)	598,191	230,311
Ending balance	<u>₩ 489,695,339</u>	<u>₩ (528,894,394)</u>	<u>₩ (39,199,055)</u>

(d) The significant actuarial assumptions used in defined benefit obligations assessment as of December 31, 2022 and 2021, are as follows:

<i>(In percentage, %)</i>	2022	2021
Discount rate	5.30 ~ 7.25	2.91 ~ 7.50
Salary growth rate	3.00 ~ 9.00	3.00 ~ 9.00

(e) While holding all other assumptions constant, if significant actuarial assumptions vary within a reasonable range, the effects on the defined benefit obligations are as follows:

<i>(in thousands of Korean won)</i>	2022		2021	
	Increase		Decrease	
1% change of discount rate	₩	(33,734,318)	₩	39,548,965
1% change of salary growth rate		39,901,039		(34,613,378)
<i>(in thousands of Korean won)</i>	2021		2021	
	Increase		Decrease	
1% change of discount rate	₩	(42,940,405)	₩	58,040,483
1% change of salary growth rate		57,250,061		(43,186,326)

(f) Plan assets as of December 31, 2022 and 2021, consist of:

<i>(in thousands of Korean won)</i>	2022		2021	
	Amount	Composition	Amount	Composition
Debt instruments	₩ 460,825,145	90.16%	₩ 512,781,056	96.95%
Cash and cash equivalents	50,272,487	9.84%	16,108,106	3.05%
Others	5,232	0.00%	5,232	0.00%
Total	₩ 511,102,864	100.00%	₩ 528,894,394	100.00%

(g) The effects of the defined benefit obligation on future cash flow are:

The Group reviews the funding level on an annual basis and has a policy of eliminating deficit from the fund. Expected contributions to post-employment benefit plans for the year ending December 31, 2023 are ₩ 5,948,186 thousand (2021: ₩ 10,535,827 thousand).

The expected maturity analysis of undiscounted pension benefits as of December 31, 2022, are as follows (in thousands of Korean won):

<i>(in thousands of Korean won)</i>	2022				
	Less than 1 year	Between 1 and 2 years	Between 2 and 5 years	Over 5 years	Total
Pension benefits	₩ 15,040,599	₩ 38,809,490	₩ 94,289,899	₩ 623,924,887	₩ 772,064,875

The weighted average duration of the defined benefit obligation is 9.33 years (2021: 10.56 years).

21.2 Defined Contribution Plan

The expense recognized for the year ended December 31, 2022 in relation to defined contribution plan was ₩ 6,528,075 thousand (2021: ₩ 7,061,485 thousand).

22. Provisions

(a) Changes in provisions for the years ended December 31, 2022 and 2021, are as follows:

(in thousands of Korean won)	2022					
	Beginning balance	Recognized in profit or loss	Used during the year	Others	Exchange differences	Ending balance
Provision for product liabilities	₩ 6,126,584	₩ (1,865,159)	₩ (354,877)	₩ -	₩ -	₩ 3,906,548
Provision for product warranties	68,588,987	12,342,546	(13,735,800)	(36,510,719)	(316,836)	30,368,178
Provision for litigation	834,801	1,517,973	-	-	6,892	2,359,666
Other provisions	6,158,775	11,744,436	(8,324,521)	-	11,397	9,590,087
Total	₩ 81,709,147	₩ 23,739,796	₩ (22,415,198)	₩ (36,510,719)	₩ (298,547)	₩ 46,224,479

(in thousands of Korean won)	2021					
	Beginning balance	Recognized in profit or loss	Used during the year	Others		Ending balance
Provision for product Liabilities	₩ 7,382,407	₩ (1,250,532)	₩ (5,291)	₩ -	₩ -	₩ 6,126,584
Provision for product warranties	62,799,737	20,373,303	(15,817,782)	1,233,729		68,588,987
Provision for litigation	499,634	475,213	(137,485)	(2,561)		834,801
Other provisions	188,238	6,108,050	(12,134)	(125,379)		6,158,775
Total	₩ 70,870,016	₩ 25,706,034	₩ (15,972,692)	₩ 1,105,789	₩ -	₩ 81,709,147

(b) Greenhouse Gas Emission Permits and Obligations

1) The quantities of emission permits which are allocated free of charge for the 3rd planning period (2021~2025) are as follows:

(in tCO2-eq)	2021	2022	2023	2024	2025	Total
Allocation of emission Allowances free of charge	467,218	466,467	466,467	466,467	462,099	2,324,350

2) Details of emission rights received free of charge for each reporting period and greenhouse gas emission estimated by the Parent Company as of December 31, 2022 and 2021, are as follows:

(in tCO2-eq)	2020	2021 ²	2022 ³
At January 1	-	25,000	36,315
Free allocation	494,319	467,218	466,467
Cancelled allocation	-	(805)	-
Disposal	(10,000)	(18,110)	(5,000)
Purchase	4,350	-	-
Carried from	(425)	-	-
Surrendered to the government ¹	(463,244)	(436,988)	(462,978)
Carry forward	25,000	36,315	34,804
At December 31	25,000	36,315	34,804

¹ The quantity of surrendered to the government for the year ended December 31, 2021 is actual and settled, and for 2022 is an estimation.

² The quantity of surrendered to the government for the year ended December 31, 2021 was 436,988 tCO2eq in May 2022. And the residual amount compared to the allocated amount of emissions was carried over 2022.

³ Considering that the quantity of surrendered to the government for 2022 is the same as 2021, it is expected that the allocation will not be exceeded.

23. Other Financial Liabilities

Details of other financial liabilities as of December 31, 2022 and 2021, are as follows

(in thousands of
Korean won)

	2022		2021	
	Current	Non-current	Current	Non-current
Leasehold deposits received	₩ 4,448,145	₩ 19,944,322	₩ 4,073,308	₩ 19,112,119
Financial derivative liabilities	1,408,707	988,464	39,744	2,743,725
Financial liabilities to non-controlling interests ¹	-	1,257,724	-	804,997
Other financial liabilities	-	-	20,631,940	-
Others	-	495,000	-	481,800
Total	₩ 5,856,852	₩ 22,685,510	₩ 24,744,992	₩ 23,142,641

¹ As the term of Mirae Asset OCIO Best Solution Privately Placed Investment Trust 1, TIGER CONSTANT 1 Hedge Fund, CNT Tech Mobility Startups Investment Fund acquired in 2021, the Group invested in is limited, non-controlling interests were classified as financial liabilities.

24. Other Liabilities

(a) Details of other liabilities as of December 31, 2022 and 2021, are as follows:

(in thousands of
Korean won)

	2022		2021	
	Current	Non-current	Current	Non-current
Advance received	₩ 27,290,151	₩ -	₩ 149,223,449	₩ -
Withholdings	45,125,098	-	42,787,499	-
Unearned revenues ¹	9,132,321	73,716,302	11,036,958	70,745,961
Long-term employee liabilities	-	42,599,003	-	45,212,355
Others	100,149,476	734,505	1,536,497	580,633
Total	₩ 181,697,046	₩ 117,049,810	₩ 204,584,403	₩ 116,538,949

¹ Chongqing Hankooktire Co., Ltd. and Hankook Tire Manufacturing Tennessee LP of the Group received government grants from state and local governments for the purpose of providing land free-of charge and subsidies for acquisition of property, plant and equipment and recognized the grants as deferred revenue.

(b) Changes in long-term employee benefits for the years ended December 31, 2022 and 2021, are as follows:

(in thousands of Korean won)

	2022			
	Beginning balance	Additional provisions	Payment	Ending balance
Long-term employee benefits	₩ 45,212,356	₩ 1,666,410	₩ (4,279,763)	₩ 42,599,003

(in thousands of Korean won)

	2021			
	Beginning balance	Additional provisions	Payment	Ending balance
Long-term employee benefits	₩ 24,535,487	₩ 24,669,878	₩ (3,993,009)	₩ 45,212,356

25. Share Capital

Details of share capital as of December 31, 2022 and 2021, are as follows:

(in Korean won)

	2022	2021
Authorized (shares)	250,000,000	250,000,000
Par value	₩ 500	₩ 500
Outstanding (shares):		
Ordinary shares	123,875,069	123,875,069
Share capital:		
Ordinary shares	₩ 61,937,534,500	₩ 61,937,534,500

26. Other Paid-in Capital

Details of other paid-in capital as of December 31, 2022 and 2021, are as follows:

<i>(in thousands of Korean won)</i>	2022		2021	
Share premium	₩	2,993,465,738	₩	2,993,465,738
Other capital surplus		13,569,289		(20,631,939)
Treasury shares ¹		(44,848,719)		(44,848,719)
Total	₩	2,962,186,308	₩	2,927,985,080

¹ After acquiring 22,388 treasury shares through a spin-off in 2012, the Group additionally acquired 1,863,928 shares in 2020. Further appropriation of them is not determined.

27. Other Components of Equity

Changes in other components of equity for the years ended December 31, 2022 and 2021, are as follows:

<i>(in thousands of Korean won)</i>	2022				
	Beginning balance	Increase (decrease)¹	Reclassification to profit or loss	Reclassification to non-controlling interests	Ending balance
Gain (loss) on valuation of financial assets at fair value through other comprehensive income	₩ 1,815,049	₩ 5,023,448	₩ -	₩ (1,733)	₩ 6,836,764
Cash flow hedge	5,863,925	20,860,963	(25,781,520)	-	943,368
Exchange differences on translating foreign operations	(29,668,497)	(52,959,007)	-	(326,309)	(82,953,813)
Share of other comprehensive income of associates	9,223,106	4,138,988	-	-	13,362,094
Total	₩ (12,766,417)	₩ (22,935,608)	₩ (25,781,520)	₩ (328,042)	₩ (61,811,587)

¹ The amount of tax effect is deducted.

<i>(in thousands of Korean won)</i>	2021				
	Beginning balance	Increase (decrease)¹	Reclassification to profit or loss	Reclassification to non-controlling interests	Ending balance
Gain (loss) on valuation of financial assets at fair value through other comprehensive income	₩ (9,664,362)	₩ 11,480,696	₩ -	₩ (1,285)	₩ 1,815,049
Cash flow hedge	6,352,460	25,221,292	(25,709,827)	-	5,863,925
Exchange differences on translating foreign operations	(267,413,821)	238,889,690	-	(1,144,366)	(29,668,497)
Share of other comprehensive income of associates	(6,967,063)	16,190,169	-	-	9,223,106
Total	₩ (277,692,786)	₩ 291,781,847	₩ (25,709,827)	₩ (1,145,651)	₩ (12,766,417)

¹ The amount of tax effect is deducted.

28. Retained Earnings

(a) Details of retained earnings as of December 31, 2022 and 2021, are as follows:

<i>(in thousands of Korean won)</i>	2022	2021
Legal reserve:		
Surplus reserve	₩ 35,298,014	₩ 35,298,014
	35,298,014	35,298,014
Discretionary reserve:		
Dividend equalization reserve	90,000,000	90,000,000
Director's retirement bonus reserve	5,000,000	5,000,000
Voluntary reserve	94,000,000	94,000,000
	189,000,000	189,000,000
Unappropriated retained earnings	5,620,500,181	4,956,693,989
Total	₩ 5,844,798,195	₩ 5,180,992,003

(b) Dividend distributed to the Group's ordinary shareholders amounted to ₩ 85,392,127 thousand (2021: ₩ 79,292,689 thousand) for the year ended December 31, 2021, was paid in April 2022. Dividend distributed to non-controlling interests is none. (2021: ₩ 4,954,188 thousand).

29. Sales and Cost of Sales

(a) Details of sales for the years ended December 31, 2022 and 2021, are as follows:

<i>(in thousands of Korean won)</i>	2022	2021
Sales of goods	₩ 8,240,848,307	₩ 6,995,230,496
Sale of finished goods	8,678,875,760	7,379,686,345
Sale discount	(75,365,293)	(61,893,530)
Sales incentive	(362,662,160)	(322,562,319)
Rendering of services	153,354,730	145,906,332
Rental sales	3,149,022	2,430,481
Service sales	150,205,708	143,475,851
Total	₩ 8,394,203,037	₩ 7,141,136,828

(b) Details of cost of sales for the years ended December 31, 2022 and 2021, are as follows:

<i>(in thousands of Korean won)</i>	2022	2021
Cost of finished goods sold	₩ 6,064,519,509	₩ 5,063,493,330
Cost of service sales	249,099,360	108,302,099
Custom duties reimbursed	(3,497,142)	(3,412,527)
Loss (reversal) on valuation of inventories and others	(18,465,433)	25,454,488
Total	₩ 6,291,656,294	₩ 5,193,837,390

30. Revenue from contracts with customers

(a) Details of revenue for the years ended December 31, 2022 and 2021, are as follows:

<i>(in thousands of Korean won)</i>	<u>2022</u>	<u>2021</u>
Revenue recognized at a point in time		
Revenue from contracts with customers	₩ 8,389,427,240	₩ 7,135,963,839
Others	3,149,022	2,430,481
Revenue recognized over time		
Revenue from contracts with customers	1,626,775	2,742,508
Total	<u>₩ 8,394,203,037</u>	<u>₩ 7,141,136,828</u>

(b) Details of revenue from contracts with customers for the years ended December 31, 2022 and 2021, are as follows:

<i>(in thousands of Korean won)</i>	<u>2022</u>		
	Tire	Non-tire	Total
Types of goods or services			
Sales of goods	₩ 8,016,268,304	₩ 224,580,003	₩ 8,240,848,307
Rendering of services	149,350,256	855,452	150,205,708
Total	<u>₩ 8,165,618,560</u>	<u>₩ 225,435,455</u>	<u>₩ 8,391,054,015</u>

<i>(in thousands of Korean won)</i>	<u>2021</u>		
	Tire	Non-tire	Total
Types of goods or services			
Sales of goods	₩ 6,843,317,031	₩ 180,245,597	₩ 7,023,562,628
Rendering of services	114,234,632	909,087	115,143,719
Total	<u>₩ 6,957,551,663</u>	<u>₩ 181,154,684</u>	<u>₩ 7,138,706,347</u>

(c) Trade Receivables and contract liabilities from contracts with customers for the years ended December 31, 2022 and 2021, are as follows:

<i>(in thousands of Korean won)</i>	<u>2022</u>	<u>2021</u>
Trade Receivables ¹	₩ 1,627,293,636	₩ 1,401,680,923
Contract liabilities ²	20,425,171	18,199,794

¹ The amount after the provision for impairment.

² The amount includes advance related to the tire sales.

31. Selling and Administrative Expenses

Details of selling and administrative expenses for the years ended December 31, 2022 and 2021 are as follows:

(In thousands of Korean won)

	2022	2021
Payroll	₩ 272,242,346	₩ 259,156,971
Post-employment benefits	13,010,082	11,962,070
Service expenses	38,191,708	41,614,796
Employee benefits	44,599,014	50,924,383
Utility expenses	6,311,133	5,488,294
Supplies expenses	2,138,149	2,129,457
Repairs expenses	5,277,909	7,789,554
Test expenses	21,129,594	16,821,546
Overseas branch maintenance expenses	8,209,104	7,157,963
Travel expenses	10,625,735	6,837,377
Training expenses	1,281,842	1,195,626
Communication expenses	3,786,127	3,595,508
Entertainment expenses	2,398,371	2,138,027
Vehicles maintenance expenses	5,912,465	4,784,305
Publication expenses	1,179,073	842,811
Commission expenses	80,409,967	73,783,195
Rental expenses	10,600,607	9,247,244
Depreciation of property, plant and equipment	85,707,537	82,779,537
Depreciation of investment property	1,240,668	1,286,011
Amortization of intangible assets	16,542,766	18,147,869
Insurance	12,237,720	11,141,826
Taxes and dues	25,152,809	27,670,101
Impairment loss on receivables	(1,185,830)	(3,042,499)
Conference expenses	355,809	814,997
Brand loyalty expenses	41,787,722	35,729,925
SSC service fee	6,857,363	6,723,646
Travel and transportation expenses	182,459,179	155,481,610
Advertising	182,767,660	153,692,646
Other export expenses	12,801,313	12,215,008
Packing charges	7,733,151	8,158,276
Sales damage expenses	10,477,386	19,122,771
Foreign market development expenses	70,014	1,129
Warehouse fees	92,431,207	87,161,447
Other expenses	3,726,413	3,268,123
Total	₩ 1,208,466,113	₩ 1,125,821,550

32. Finance Income

Details of finance income for the years ended December 31, 2022 and 2021, are as follows:

<i>(In thousands of Korean won)</i>	2022	2021
Interest income	₩ 35,518,089	₩ 18,223,189
Gains on valuation of derivatives	12,194,029	1,238,647
Gains on transaction of derivatives	10,050,110	3,191,136
Gains on foreign currency translation	28,281,990	31,619,790
Gains on foreign currency transaction	56,653,143	23,717,075
Gains on valuation of instruments at fair value through profit or loss	222,104	4,528,434
Gains on disposal of instruments at fair value through profit or loss	1,765,914	428,264
Total	₩ 144,685,379	₩ 82,946,535

33. Finance Costs

Details of finance costs for the years ended December 31, 2022 and 2021, are as follows:

<i>(In thousands of Korean won)</i>	2022	2021
Interest expense	₩ 61,658,027	₩ 43,762,089
Losses on valuation of derivatives	1,642,659	184,904
Losses on transaction of derivatives	10,580,564	3,930,258
Losses on foreign currency translation	57,079,435	27,964,310
Losses on foreign currency transaction	6,885,610	8,744,914
Losses on disposal of debt instruments at fair value through other comprehensive income	-	1,135
Losses on disposal of debt instruments at fair value through profit or loss	5,412,617	1,545,818
Losses on valuation of debt instruments at fair value through profit or loss	3,175,552	1,244,684
Total	₩ 146,434,464	₩ 87,378,112

34. Other Non-operating Income

Details of other non-operating income for the years ended December 31, 2022 and 2021, are as follows:

<i>(In thousands of Korean won)</i>	2022	2021
Dividend income	₩ 3,557,933	₩ 2,166,587
Commission income	5,690,581	3,893,174
Rental income	1,692,632	1,221,321
Gains on foreign currency translation	40,856,069	25,336,827
Gains on foreign currency transaction	274,268,670	136,257,119
Gains on disposal of property, plant and equipment	118,422,896	6,294,326
Gains on disposal of investments in associates	2,840,401	-
Gains on insurance settlements	207,955	347,144
Gains on transaction of derivatives	7,871,167	3,642,681
Gains on valuation of derivatives	8,335,030	794,250
Gains on disposal of right-of-use assets	2,648,009	3,466,688
Miscellaneous Profits	10,476,664	9,943,125
Others	6,213,990	13,107,168
Total	₩ 483,081,997	₩ 206,470,410

35. Other Non-operating Expenses

Details of other non-operating expenses for the years ended December 31, 2022 and 2021, are as follows:

<i>(In thousands of Korean won)</i>	2022	2021
Donation	₩ 2,632,913	₩ 5,032,531
Losses on foreign currency transaction	151,791,162	108,083,187
Losses on foreign currency translation	84,748,902	28,198,854
Losses on disposal of trade receivables	1,249	1,694
Losses on disposal of investment properties	143,913	-
Losses on impairment of investment properties	-	332,432
Losses on disposal of property, plant and equipment	3,410,804	4,915,851
Losses on impairment of property, plant and equipment	7,674,457	14,492,324
Losses on abandonment of of property, plant and equipment	15,373	4
Losses on disposal of intangible assets	138,411	157,162
Losses on valuation of derivatives	1,436,107	38,367
Losses on transaction of derivatives	36,089,443	1,049,912
Losses on disposal of right-of-use assets	2,315,104	4,248,412
Other impairment loss	784,295	361,977
Miscellaneous losses	16,094,504	3,634,743
Others	6,903,989	4,295,522
Total	₩ 314,180,626	₩ 174,842,972

36. Tax Expense and Deferred Tax

(a) Income tax expenses for the years ended December 31, 2022 and 2021 are as follows:

<i>(In thousands of Korean won)</i>	2022	2021
Current tax:		
Current tax on profits for the year	₩ 207,998,235	₩ 102,329,068
Deferred tax:		
Changes in temporary differences	(32,647,471)	13,153,593
Changes in tax credit	(22,771,464)	2,656,445
Income tax expenses	₩ 152,579,300	₩ 118,139,106

(b) The tax on the Group's profit before tax differs from the theoretical amount that would arise using the weighted average tax rate applicable to profits of the Group as follows:

<i>(In thousands of Korean won)</i>	2022	2021
Profit before income tax expense	₩ 858,353,826	₩ 712,853,106
Tax calculated at statutory tax rates of each country applicable to profits	168,044,917	147,181,993
Tax effects of:		
Income not subject to tax	(18,032,029)	(12,850,842)
Expenses not deductible for tax purposes	5,741,437	4,836,481
Effect of tax credit and tax reduction	(17,820,333)	(12,928,572)
Additional payment (refunds) of income taxes	(4,348,498)	(11,556,374)
Others	18,993,807	3,456,419
Adjustments	(15,465,616)	(29,042,888)
Income tax expense	₩ 152,579,300	₩ 118,139,105
Effective tax rate	17.80%	16.57%

(c) The tax effect relating to components of other comprehensive income (expenses) for the years ended December 31, 2022 and 2021, is as follows:

<i>(In thousands of Korean won)</i>	2022			2021		
	Before tax	Tax effect	After tax	Before tax	Tax effect	After tax
Remeasurements of net defined benefit liabilities	₩ 79,710,319	₩ (18,485,179)	₩ 61,225,140	₩ 5,679,783	₩ (1,631,676)	₩ 4,048,107
Remeasurements of net defined benefit liabilities of associates	8,801,290	(2,150,104)	6,651,186	1,662,652	(402,362)	1,260,290
Gains (losses) on valuation of financial assets at fair value through other comprehensive income	(5,169,866)	1,262,968	(3,906,898)	16,490,505	(3,490,583)	12,999,922
Cash flow hedges Gains (losses)	(6,468,413)	1,547,856	(4,920,557)	(749,062)	260,527	(488,535)
Exchange differences on translation foreign operations	(53,611,624)	-	(53,611,624)	238,889,690	-	238,889,690
Share of other comprehensive income of associates	5,476,983	(1,337,995)	4,138,988	21,253,437	(5,063,268)	16,190,169
Total	₩ 28,738,689	₩ (19,162,455)	₩ 9,576,235	₩ 283,227,005	₩ (10,327,362)	₩ 272,899,643

(d) The analysis of deferred tax assets and liabilities as of December 31, 2022 and 2021, is as follows:

(In thousands of Korean won)

	2022		2021	
Deferred tax asset(liabilities) to be settled within 12 months	₩	1,353,728	₩	29,330,629
Deferred tax asset(liabilities) to be settled after more than 12 months		174,289,510		118,600,131
Total	₩	<u>175,643,238</u>	₩	<u>147,930,760</u>

(e) The movement in deferred tax assets and liabilities for the year ended December 31, 2022, without taking into consideration the offsetting of balances within the same tax jurisdiction, is as follows:

(In thousands of Korean won)

	2022			
	Beginning balance	profit or loss	Other comprehensive income	Ending balance
Property, plant and equipment	₩ 35,022,420	₩ (997,430)	₩ -	₩ 34,024,990
Inventories	3,834,807	(425,677)	-	3,409,130
Accrued income	(1,491)	(33,351)	-	(34,842)
Financial derivative assets and liabilities	(1,328,913)	(2,115,591)	1,547,856	(1,896,648)
Long term employee benefits	10,020,435	(745,290)	-	9,275,145
Other provisions	14,622,890	(7,855,053)	-	6,767,837
Net defined benefit liabilities	(13,002,406)	10,172,090	(18,485,179)	(21,315,495)
Accrued expenses	14,693,678	(4,917,096)	-	9,776,582
Advanced depreciation provision for non- depreciable assets	(13,076,296)	685,243	-	(12,391,053)
Advanced depreciation provision for depreciable assets	(159,713)	28,798	-	(130,915)
Others	7,187,496	961,607	(1,038,374)	7,110,729
Deferred tax asset(liabilities) of subsidiaries	44,405,171	(32,668,678)	(1,544,856)	10,191,637
Deferred tax asset(liabilities) related with consolidation adjustment	<u>37,691,952</u>	<u>70,557,899</u>	<u>(8,304,865)</u>	<u>99,944,986</u>
	₩ 139,910,030	₩ 32,647,471	₩ (27,825,418)	₩ 144,732,083
Tax credit and tax reduction	<u>8,020,730</u>	<u>22,771,464</u>	<u>118,961</u>	<u>30,911,155</u>
Total	<u>₩ 147,930,760</u>	<u>₩ 55,418,935</u>	<u>₩ (27,706,457)</u>	<u>₩ 175,643,238</u>

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(In thousands of Korean won)

	2021			
	Beginning balance	profit or loss	Other comprehensive income	Ending balance
Property, plant and equipment	₩ 30,506,557	₩ 4,515,863	₩ -	₩ 35,022,420
Inventories	1,629,783	2,205,024	-	3,834,807
Accrued income	(207,002)	205,511	-	(1,491)
Financial derivative assets and liabilities	(1,691,872)	102,432	260,527	(1,328,913)
Long term employee benefits	5,279,714	4,740,721	-	10,020,435
Other provisions	15,124,289	(501,399)	-	14,622,890
Net defined benefit liabilities	(4,476,412)	(6,894,318)	(1,631,676)	(13,002,406)
Accrued expenses	13,490,664	1,203,014	-	14,693,678
Advanced depreciation provision for non- depreciable assets	(13,950,771)	874,475	-	(13,076,296)
Advanced depreciation provision for depreciable assets	(193,442)	33,729	-	(159,713)
Others	10,399,972	(526,622)	(2,685,854)	7,187,496
Deferred tax asset(liabilities) of subsidiaries	33,439,766	7,274,609	3,690,796	44,405,171
Deferred tax asset(liabilities) related with consolidation adjustment	63,338,963	(26,386,632)	739,621	37,691,952
	₩ 152,690,209	₩ (13,153,593)	₩ 373,414	₩ 139,910,030
Tax credit and tax reduction	9,886,557	(2,656,445)	790,618	8,020,730
Total	₩ 162,576,766	₩ (15,810,038)	₩ 1,164,032	₩ 147,930,760

(f) Details of unrecognized taxable temporary differences as deferred tax liabilities as of December 31, 2022 and 2021, are as follows:

(In thousands of Korean won)	2022	2021	Remarks
Investments in subsidiaries	₩ 3,211,498,734	₩ 2,552,771,135	Permanent reinvestment plan of undistributed profit
	786,754,417	932,625,368	No Plan to dispose the investments

37. Expenses by Nature

Expenses by nature for the years ended December 31, 2022 and 2021, are as follows:

(In thousands of Korean won)

	2022	2021
Changes in inventories		
Finished goods	₩ (423,391,747)	₩ (149,570,788)
Merchandise	(7,504,926)	(82,945)
Work in process	(9,864,492)	(7,632,910)
Supplies	(7,679,793)	(3,191,602)
Raw materials	(91,648,990)	(181,501,413)
Purchase of raw materials and others	3,862,590,793	2,803,230,080
Payroll	1,238,473,496	1,157,737,201
Depreciation ¹	516,916,192	571,526,272
Amortization	18,956,497	20,654,796
Commission fees	151,357,759	137,616,878
Others	2,440,180,158	2,150,158,352
Total	₩ 7,688,384,947	₩ 6,498,943,921

¹ Includes depreciation of investment property.

38. Cash Flow Information

- (a) Details of adjustments of cash generated from operations for the years ended December 31, 2022 and 2021, are as follows:

(In thousands of Korean won)

	2022	2021
Adjustments:		
Income tax expense	₩ 152,579,300	118,139,106
Interest income	(35,518,089)	(18,223,189)
Interest expense	61,658,027	43,762,089
Dividend income	(3,557,933)	(2,166,587)
Gains on foreign currency translation	(69,138,059)	(56,956,617)
Losses on foreign currency translation	91,634,513	36,943,769
Losses on disposal of financial assets at fair value through other comprehensive income	-	10,076
Losses on disposal of financial assets at fair value through profit or loss	5,412,617	-
Gains on disposal of financial assets at fair value through profit or loss	(1,765,914)	(110)
Gains on valuation of financial assets at fair value through profit or loss	(222,104)	(4,528,434)
Losses on valuation of financial assets at fair value through profit or loss	3,175,552	1,244,684
Gains on disposal of property, plant and equipment	(118,422,896)	(6,294,326)
Losses on disposal of property, plant and equipment	3,410,804	4,915,851
Losses on impairment of property, plant and equipment	7,674,457	14,492,324
Losses on abandonment of property, plant and equipment	15,373	4
Gains on disposal of investment properties	(2,840,401)	-
Losses on disposal of investment properties	143,913	-
Losses on impairment of investment properties	-	332,432
Gains on disposal of right-of-use assets	(2,648,009)	(3,466,688)
Losses on disposal of right-of-use assets	2,315,104	4,248,412
Losses on disposal of intangible assets	138,411	157,162
Depreciation of property, plant and equipment	515,239,536	569,862,271
Depreciation of investment properties	1,676,656	1,664,003

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Amortization of intangible assets	18,956,497	20,654,796
Losses on valuation of inventories	(20,914,237)	24,449,916
Losses on abandonment of inventories	2,587,258	827,193
Impairment loss(Gain) on trade receivables	1,249	1,694
Impairment loss on receivables	(1,185,831)	(3,042,499)
Other impairment loss	784,295	361,977
Sales damage expense	10,477,387	19,122,771
Employee welfare benefits	1,594,400	24,586,054
Post-employment benefit	53,064,022	54,119,131
Increase in other provisions	2,997,146	4,721,700
Gains and losses on investment in associates	11,553,141	(43,464,339)
Gains on valuation of derivatives	(20,529,058)	(2,032,897)
Losses on valuation of derivatives	3,078,765	223,270
Gains on transaction of derivatives	(17,921,276)	(6,833,817)
Losses on transaction of derivatives	46,670,007	4,980,170
Gains on foreign currency transaction	(16,743,179)	6,781,682
Losses on foreign currency transaction	22,567,069	(361,657)
Other	219,368	(668,743)
	<u>708,217,881</u>	<u>808,562,634</u>
Total	<u>₩ 708,217,881</u>	<u>808,562,634</u>

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(In thousands of Korean won)

	2022	2021
Changes in operating assets and liabilities:		
Increase in trade receivables	₩ (251,057,951)	₩ (114,183,772)
Increase in other receivables	258,370,092	96,772,902
Decrease (increase) in inventories	(512,451,286)	(282,117,777)
Increase in other financial assets	1,972,483	(280,427)
Increase in other assets	(62,828,737)	(14,995,305)
Increase (decrease) in trade payables	25,220,701	(22,372,291)
Increase in other payables	(82,928,845)	119,741,000
Increase (decrease) in provision	(8,358,909)	(15,946,148)
Increase (decrease) in other liabilities	(146,423,065)	(95,761,316)
Payment of post-employment benefits	(40,215,893)	(43,672,894)
Increase (decrease) in plan assets	26,410,042	(47,535,361)
Total	₩ (792,291,368)	₩ (420,351,389)

(b) The principal non-cash transaction for the years ended December 31, 2022 and 2021, are as follows:

(In thousands of Korean won)

	2022	2021
Transfer of construction in progress and others to intangible assets and property, plant and equipment	₩ 272,784,431	₩ 128,334,837
Changes in non-trade payables due to acquisition of property, plant and equipment	24,193,123	1,538,135
Capitalized borrowing costs	3,923,768	3,561,825
Dividend receivable	143,128	-
Increase in right-of-use assets	82,382,391	48,009,389
Increase in lease liabilities	81,678,217	51,722,731
Reclassification of current portion of long-term borrowings	193,792,500	-
Reclassification of current portion of bond	648,045,581	-
Replacement of advance payment due to disposal of assets scheduled for sale	123,360,000	-
Distribution of non-cash assets of subsidiaries	-	3,879,502

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(c) Changes in liabilities arising from financial activities for the year ended December 31, 2022 are as follows:

(In thousands of Korean won)	2022									
	Short-term borrowings ¹	Long-term borrowings	Debentures (current)	Debentures (Non-current)	Lease liabilities (current)	Lease liabilities (Non-current)	Leasehold deposits received	Non- controlling interest	Dividend payables	Total
At January 1, 2022	₩ 395,765,525	₩ 309,321,002	₩ -	₩773,043,198	₩ 61,528,942	₩280,726,629	₩ 23,185,426	₩ 804,997	₩ 26,508	₩1,844,402,227
Exchange differences	11,793,943	24,028,172	8,180,000	24,540,000	177,266	1,406,249	(46,665)	-	-	70,078,965
Cash flows	26,553,596	2,865,376	-	-	(72,648,449)	-	609,029	452,727	(85,388,678)	(127,556,399)
Amortization cost for debentures	-	-	599,062	282,598	-	10,110,721	644,677	-	-	11,637,058
Lease contract	-	-	-	-	-	81,678,217	-	-	-	81,678,217
Others (dividend declaration and others)	-	-	-	-	14,531,041	(17,966,905)	-	-	85,376,467	81,940,603
Transfer	193,792,500	(193,792,500)	648,045,581	(648,045,581)	63,124,148	(63,124,148)	-	-	-	-
At December 31, 2022	₩ 627,905,564	₩ 142,422,050	₩ 656,824,643	₩149,820,215	₩ 66,712,948	₩292,830,763	₩ 24,392,467	₩ 1,257,724	₩ 14,297	₩1,962,180,671
(In thousands of Korean won)	2021									
	Short-term borrowings ¹	Long-term borrowings	Debentures (Non-current)	Lease liabilities (current)	Lease liabilities (Non-current)	Leasehold deposits received	Non- controlling interest	Dividend payables	Total	
At January 1, 2021	₩ 473,600,182	₩ 163,200,000	₩ 733,071,261	₩ 54,729,683	₩ 294,410,383	₩ 30,786,439	₩ 3,518,026	₩ 23,299	₩ 1,753,339,273	
Exchange differences	(8,812,229)	18,732,046	39,238,436	1,702,703	3,814,942	594,399	-	-	55,270,297	
Cash flows	(69,022,428)	127,388,956	34,024	(57,839,742)	-	3,789,939	804,996	(84,243,668)	(79,087,923)	
Amortization cost for debentures	-	-	699,477	-	9,671,516	(11,985,351)	-	-	(1,614,358)	
Lease contract	-	-	-	-	51,722,731	-	-	-	51,722,731	
Others (dividend declaration and others)	-	-	-	1,407,356	(17,364,001)	-	(3,518,025)	84,246,877	64,772,207	
Transfer	-	-	-	61,528,942	(61,528,942)	-	-	-	-	
At December 31, 2021	₩ 395,765,525	₩ 309,321,002	₩ 773,043,198	₩ 61,528,942	₩280,726,629	₩ 23,185,426	₩ 804,997	₩ 26,508	₩ 1,844,402,227	

¹ Includes current portion of long-term borrowings

39. Earning per Share

The basic and diluted earnings per share for the years ended December 31, 2022 and 2021, are computed as follows:

<i>(In Korean won)</i>		2022		2021
Profit for the year	₩	690,248,871,529	₩	588,191,994,161
Weighted-average number of ordinary shares outstanding (in shares) ¹		121,988,753		121,988,753
Basic and diluted earnings per share ²	₩	5,658	₩	4,822

¹Weighted average number of ordinary shares outstanding is calculated considering outstanding ordinary shares divided by outstanding period, excluding number of treasury shares.

²Basic and diluted earnings per share are the same because there is no potentially dilutive ordinary share issued by the Group.

40. Operating Segment Information

(a) The Group has a single operating segment subject to Korean IFRS 1108 Segment Reporting; therefore, no operating segment information is disclosed.

(b) Information by region

The Group is mainly operating in five geographical regions. Net sales information by geographical region for the years ended December 31, 2022 and 2021, are as follows:

<i>(In thousands of Korean won)</i>		2022		2021	
		Amount	Ratio	Amount	Ratio
North America	₩	2,458,244,599	29.29%	₩ 2,034,053,179	28.48%
South and Central America		360,099,197	4.29%	277,060,669	3.88%
Asia, except Korea		1,334,350,230	15.90%	1,314,786,942	18.41%
Europe		3,281,847,319	39.10%	2,626,580,386	36.78%
Korea		959,661,692	11.42%	888,655,652	12.44%
Total	₩	8,394,203,037	100.00%	₩ 7,141,136,828	100.00%

(c) There is no external customer, who contributes more than 10% of the Group's total revenue for the years ended December 31, 2022 and 2021.

(d) At the end of the reporting period, non-current assets broken by location of the assets are shown as follows:

<i>(In thousands of Korean won)</i>		2022¹		2021¹
North America	₩	530,562,061	₩	519,499,532
South and Central America		1,327,764		1,926,252
Asia, except Korea		1,143,030,131		1,275,442,627
Europe		566,718,301		582,873,228
Korea		1,846,136,885		1,920,279,427
Total	₩	4,087,775,142	₩	4,300,021,066

¹Financial assets, deferred tax assets and investment in associates are excluded from non-current assets.

41. Contingencies and Commitments

(a) Pledged assets as collaterals

As of December 31, 2022, a certain portion of the Group's land, buildings, machinery and equipment and financial instruments is pledged as collaterals for borrowings as follows:

<i>(In thousands of Korean won, RUB, EUR and USD)</i>	Pledged assets	Pledged amounts	
The Korea Development Bank and others	land, buildings	KRW	13,880,000
		RUB	60,000
CitiBank	Financial instruments	EUR	83,864
ING Bank	Financial instruments	USD	80,000

(b) Buildings, inventories, machinery and others are insured against a general liability insurance policy.

The Group is insured against potential future claims that may occur under the Product Liability Act in the Republic of Korea that was effective since July 1, 2002, which penalizes a manufacturer or seller when a product is defective and causes injury or damage to a person or property. The Group recognizes the best estimate amounting to ₩ 3,906,548 thousand, which is expected to be paid, as provision for product liabilities (Note 22).

(c) For the purpose of providing tires, in India, the Group provided a payment guarantee to Bureau of Indian Standards through Shinhan Bank New Delhi branch for up to USD 70,000. Also, for the purpose of providing tires to UN Corp., the Group provided a payment guarantee to UN Corp. through Shinhan Bank GS Tower branch for up to USD 57,969.

(d) The Group receives grants from the Hungarian government and provides Direct Suretyship as follows:

	Agreement
Guarantee provided	HUF 9,214,435,200 + interest incurred
The term of guarantee	From February 27, 2014, to September 30, 2023
Summary of agreements	To certify that the Group should sincerely carry out the investment plan according to the investment contract; otherwise, the Group should return some or whole amount of the subsidy provided by the Hungarian government.

(e) Transfer of trade receivables

Trade receivables with recourse that are transferred to financial institutions, but not matured, at the end of the reporting period, are as follows:

<i>(In thousands of Korean won)</i>		2022		2021
Collateralized borrowing of trade receivable	₩	174,303,545	₩	251,633,253

The Group recognized trade receivables with recourse which were transferred to financial institutions, but not yet matured as short-term borrowings (Note 20).

(f) Purchase agreement

At the end of the reporting period, The Group has purchase agreements on raw rubber materials with several suppliers, including Southland, which are usually renewed annually. In addition, the Group has supply contracts with Hankook & Group Co., Ltd., one of its related parties, to be provided trademark license and supporting work and to provide administrative work including finance, accounting, and legal affairs. Moreover, at the end of the reporting period, the Group has a long-term contract with Hankook Networks Co., Ltd., one of its related parties, to be provided with maintenance service for the Group's information system.

(g) Financing arrangements

Details of the Group's financing arrangements at the end of the reporting period, are as follows:

(In thousands of Korean won)

		2022		2021	
Credit line agreements such as collateralized borrowing	Used	₩	1,002,088,594	₩	840,202,198
	Unused		2,911,554,677		3,090,887,128
	Total	₩	3,913,643,271	₩	3,931,089,326

(h) Seoul Guarantee Insurance Co., Ltd has provided guarantee amount to ₩3,077,331 thousand (2021: ₩15,034,074 thousand) for Performance guarantee and others.

(i) The Group enters into cash pooling contract between the consolidated subsidiaries. According to this contract, a subsidiary, which needs funds, can finance within the balance of the deposit without restriction.

(j) Pending litigations

The Group has been litigated from an employee (or retiree) for additional wages such as weekly holiday pay, and is in the process of appealing in the second instance due to the Group has lost in the first instance as of December 31, 2022. In this regard, the total amount of principal owed by the Group according to the amount of judgment of the lower court is ₩1,478,683 thousand recognized as provisions, and the amount of final debt attributable to the outcome of the lawsuit may differ from the amount estimated by the Group (Note 22).

The Group has been litigated due to alleging the QR code laser-engraved tires infringed the German utility model DE 20 2017 103 420 U1 (right holder: 4JET Technologies GmbH), and the Group recognized EUR 250,000 as provisions in accordance with the judgment of the District Court of the District Court of Dusseldorf, Germany on December 6, 2022. The Group filed an appeal on January 5, 2023 and is currently appealing to the High Court in Dusseldorf, Germany (Note 22).

The Group has filed a complaint with the International Chamber of Commerce (ICC) about the termination of the contract and damages related to motorsport competitions (a total of EUR 11,586,143 and claims for the fulfillment of obligations).

In addition to the above, there are a number of pending litigations as of December 31, 2022. The final outcome and impact of the lawsuit cannot be reasonably predicted and the Group's management does not believe that it will materially affect the Group's financial condition.

(k) Co-investment agreement of shares acquisition

The Group acquired 104,031,000 shares of Hanon Systems Co., Ltd. (19.49% of ownership) from VIHI LLC, which is the largest shareholder.

1) Details of Shares Purchase Agreement

- Seller: Visteon Corp. and VIHI LLC
- Purchaser: Hahn & Co. Auto Holdings LLC and Hankook Tire & Technology Co., Ltd. (formerly, Hankook Tire Co., Ltd.)
- Contract date: 2014.12.17
- Closing date of deal: 2015.06.10
- Number of shares purchased per purchaser
 - (i) Hahn & Co. Auto Holdings LLC: 269,569,000 shares (50.50% of ownership)
 - (ii) Hankook Tire & Technology Co., Ltd. (formerly, Hankook Tire Co., Ltd.): 104,031,000 shares (19.49% of ownership)

2) Contract between shareholders

The purchasers above, the Group and Hahn & Co. Auto Holdings LLC entered into a contract between shareholders that includes the followings:

- Hahn & Co. Auto Holdings LLC's drag-along right
- Group's right of first refusal
- Group's tag-along right

(l) Agreements related to shares acquisition

The Group purchased 2,059,539 shares (22.86%) of Preciseley Microtechnology Corporation from Tiansheng Zhou Family Trust, ACE Optical Ltd., and BDC Capital Inc. In connection with purchasing, the Group has entered into a shareholder agreement with the Tiansheng Zhou Family Trust, ACE Optical Ltd. and BDC Capital Inc. The Group recognized derivative financial liabilities measured as a fair value of the granted put option amounting to ₩ 988,464,000.

1) Details of Shares of Purchase Agreement

- Seller: Tiansheng Zhou Family Trust, ACE Optical Ltd., BDC Capital Inc.
- Purchaser: Hahn & Co. Auto Holdings LLC and Hankook Tire & Technology Co., Ltd. (formerly, Hankook Tire Co., Ltd.)
- Contract date: 2022.02.18

2) Contract between shareholders

Type	Name of related parties
Put option ¹	The seller has a put option to sell all or part of the shares held by the seller to the party if the IPO is not made within the agreed period of the two companies.
Tag-along right	If a shareholder transfers his shares to a third party, the other shareholders also have the right to sell their shares under the same conditions and at the same share ratio.
ROFR(Right of first refusal) ²	Hankook Tire & Technology Co., Ltd. has the right to purchase preferentially if the seller or buyer sells the shares to a third party.

¹ The parties to the put option are Hankook Tire & Technology Co., Ltd. and Hankook & Company Co., Ltd. or Preciseley Microtechnology Corporation, and seller can designate among Hankook Tire & Technology Co., Ltd. and Hankook & Company Co., Ltd.

² Hankook Tire & Technology Co., Ltd. may decide whether to acquire the stake for one month, and can sell them to third parties within six months if all shareholders of Preciseley Microtechnology Corporation refuse.

42. Related Party Transactions

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

Type	Name of related parties
Individuals	Hyun-Shick Cho, Hyun-Bum Cho
Holding Group ¹	Hankook & Group Co., Ltd.
Holding Group's Subsidiaries and associates ²	Atlas BX Motorsports Co., Ltd., Hankook & Group ES America Corporation, Hankook Car & Life Co., Ltd., Sonic Motors Co., Ltd., Han Automobile Co., Ltd., Hankook Networks Co., Ltd., Hankook Networks America, Inc., Hankook & Group ES Deutschland GmbH ³ , Smart Stream-WE Untact Fund No. 3
Associates and Joint Ventures ⁴	Daemyong Tech One Co., Ltd., I&B Corporation Co., Ltd, Hanon Systems Co., Ltd., Peaches Group Korea Co., Ltd., TOWNZ Corp., DS Quattro H Kosdaq Venture Fund, TIMEFOLIO Kosdaq Venture Hedge-S No.2, Nexgen Food Partners, Preciseley Microtechnology Corporation ⁵
Other related parties ⁵	Daehwa Eng' & Machinery Jiaxing Co., Ltd., Shin-Yang Tourist Development, ShinYang World Leisure, Janji Co., Ltd., MW & Group, MW Holding, Seil Hwangyeong Co., Ltd., Arum Electronics Co., Ltd., FWS Investment Advisory, Arum Holdings Co., Ltd., ARUM Dentistry Co., Ltd., Hakushi Co., Ltd., Korea Asset General Private Equity Trust No.1

¹ The entity has a significant influence on the Group

² Wavers Co., Ltd. was excluded from related parties as the holding company sold shares of Wavers Co., Ltd. for the year ended December 31, 2022.

³ Hankook & Company ES Deutschland GmbH was newly established as a subsidiary of the holding company for the year ended December 31, 2022 and incorporated into related parties.

⁴ Preciseley Microtechnology Corporation was incorporated into related parties as the Company acquired shares of Preciseley Microtechnology Corporation for the year ended December 31, 2022.

⁵ Although the entity is not the related party of the Group in accordance with Korean IFRS 1024, the entity belongs to an identical large enterprise group with the Group in accordance with the Monopoly Regulation and FairTrade Act.

Hankook Tire & Technology Co., Ltd.
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Transactions between the Group and related parties for the years ended December 31, 2022 and 2021, are as follows:

a) Sales and others

(In thousands of Korean won)

		2022			
	Name of entity	Sales	Others ¹	Total	
Holding Group	Hankook&Group Co., Ltd. ²	₩ 2,513,733	₩ 3,372,194	₩	5,885,927
Holding Group's subsidiaries	Atlas BX Motorsports Co., Ltd.	912,972	3,533		916,505
	Sonic Motors Co., Ltd., (Formerly, HK Motors Co., Ltd.)	22,544	-		22,544
	Hankook Car & Life Co., Ltd.	-	46,503		46,503
Holding Group's associates	Hankook Networks Co., Ltd.	23,404	470,122		493,526
Associates and joint ventures	Hanon System Co., Ltd.	22,624	-		22,624
	I&B Corporation Co., Ltd	-	12,129		12,129
Individuals	Individual shareholder	-	54,578		54,578
Other related parties	Daehwa Eng'& Machinery Jiaxing Co., Ltd.	79,574	257,683		337,257
	ARUM Dentistry Co., Ltd.	-	418		418
	ARUM Holdings Co., Ltd.	-	-		0
Total		₩ 3,574,851	₩ 4,217,160	₩	7,792,011

¹ Royalty income, commission income, interest income from loan is included. Dividend income is not included.

² On April 1, 2021, Hankook & Group Co., Ltd. merged with Hankook Atlas BX Co., Ltd., and the transaction amount of Hankook Atlas BX Co., Ltd for the years ended December 31, 2022 and 2021 is included in the amount of Hankook & Group Co., Ltd.

(In thousands of Korean won)

		2021			
	Name of entity	Sales	Others ¹	Total	
Holding Group	Hankook&Group Co., Ltd. ²	₩ 587,873	4,778,651		5,366,524
Holding Group's subsidiaries	Atlas BX Motorsports Co., Ltd.	529,814	-		529,814
	Sonic Motors Co., Ltd., (Formerly, HK Motors Co., Ltd.)	7,301	26,326		33,627
	Hankook Car & Life Co., Ltd.	21,154	47,339		68,493
Holding Group's associates	Hankook Networks Co., Ltd.	7,396	410,816		418,212
Associates and joint ventures	Hanon System Co., Ltd.	13,891	-		13,891
	I&B Corporation Co., Ltd	-	7,341		7,341
Individuals	Individual shareholder	-	72,049		72,049
Other related parties	Daehwa Eng'& Machinery Jiaxing Co., Ltd.	-	338,031		338,031
	ARUM Dentistry Co., Ltd.	-	2,757		2,757
	ARUM Holdings Co., Ltd.	-	800		800
Total		₩ 1,167,429	5,684,110		6,851,539

¹ Royalty income, commission income, interest income from loan is included. Dividend income is not included.

² On April 1, 2021, Hankook & Group Co., Ltd. merged with Hankook Atlas BX Co., Ltd., and the transaction amount of Hankook Atlas BX Co., Ltd for the years ended December 31, 2022 and 2021 is included in the amount of Hankook & Group Co., Ltd.

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b) Purchases and others

(In thousands of Korean won)

		2022			
	Name of entity	Purchases	Others ¹	Total	
Holding Group ²	Hankook & Group Co., Ltd. ³	₩ 3,784,263	₩ 47,976,301	₩	51,760,564
Holding Group's subsidiaries	Atlas BX Motorsports Co., Ltd.	-	1,858,195		1,858,195
	Sonic Motors Co., Ltd., (Formerly, HK Motors Co., Ltd.)	-	125,596		125,596
	Wavers Corp	-	-		0
Holding Group's associates	Hankook Networks Co., Ltd., Hankook Networks America, Inc.	8,680,248	14,916,841		23,597,089
		-	1,056,550		1,056,550
Associates and joint ventures	Peaches Group Korea Co., Ltd.	-	404,938		404,938
	Daemyeong Tech Won Co., Ltd	-	962,413		962,413
	Individual shareholder	-	259,851		259,851
Other related parties	Daehwa Eng' & Machinery Jiaxing Co., Ltd.	2,386,990	10,729,774		13,116,764
	ShinYang Tourist Development Co., Ltd.	-	-		0
Total		₩ 14,851,501	₩ 78,290,459	₩	93,141,960

¹ Sales rebates and other paid to related parties, which are sales deductible items, are presented as purchases and others.

² The Group entered into contracts of Shared service provided by its holding Group, and using trademark license of Hankook & Group Co., Ltd.

³ On April 1, 2021, Hankook & Group Co., Ltd. merged with Hankook Atlas BX Co., Ltd., and the transaction amount of Hankook Atlas BX Co., Ltd for the years ended December 31, 2022 and 2021 is included in the amount of Hankook & Group Co., Ltd.

(In thousands of Korean won)

		2021			
	Name of entity	Purchases	Others ¹	Total	
Holding Group ²	Hankook & Group Co., Ltd. ³	₩ 4,139,143	₩ 41,694,545	₩	45,833,688
Holding Group's subsidiaries	Atlas BX Motorsports Co., Ltd.	-	1,741,762		1,741,762
	Sonic Motors Co., Ltd., (Formerly, HK Motors Co., Ltd.)	37,909	48,965		86,874
	Wavers Corp	-	269,499		269,499
Holding Group's associates	Hankook Networks Co., Ltd., Hankook Networks America, Inc.	12,098,926	12,596,345		24,695,271
		-	1,148,840		1,148,840
Associates and joint ventures	Peaches Group Korea Co., Ltd.	-	302,646		302,646
	Daemyeong Tech Won Co., Ltd	-	894,950		894,950
	Individual shareholder	-	277,617		277,617
Other related parties	Daehwa Eng' & Machinery Jiaxing Co., Ltd.	-	14,393,582		14,393,582
	ShinYang Tourist Development Co., Ltd.	3,770,945	50,612		3,821,557
Total		₩ 20,046,923	₩ 73,419,363	₩	93,466,286

¹ Sales rebates and other paid to related parties, which are sales deductible items, are presented as purchases and others.

² The Group entered into contracts of Shared service provided by its holding Group, and using trademark license of Hankook & Group Co., Ltd.

³ On April 1, 2021, Hankook & Group Co., Ltd. merged with Hankook Atlas BX Co., Ltd., and the transaction amount of Hankook Atlas BX Co., Ltd for the years ended December 31, 2022 and 2021 is included in the amount of Hankook & Group Co., Ltd.

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Outstanding balances of receivables and payables as of December 31, 2022 and 2021, are as follows:

a) Receivables and others

(In thousands of Korean won)

		2022			
				Non-trade receivables and others	Total
	Name of entity	Trade receivables			
Holding Group	Hankook & Group Co., Ltd. ¹	₩	290,945	₩	16,939,310
Holding Group's subsidiaries	Atlas BX Motorsports Co., Ltd.		4,488		-
	Hankook & Company ES America Corporation		-		32,949,800
	Sonic Motors Co., Ltd., (Formerly, HK Motors Co., Ltd.)		2,174		-
	Hankook Car & Life Co., Ltd.		-		4,512
Holding Group's associates	Hankook Networks Co., Ltd.,		678		3,897,260
Associates and joint ventures	Hanon System Co., Ltd.		2,469		-
Individuals	Individual shareholder		-		577,986
Other related parties	Daehwa Eng' & Machinery				
	Jiaying Co., Ltd.		13,328		232,023
	ARUM Dentistry Co., Ltd.		-		460
Total		₩	314,082	₩	54,601,351
					₩
					54,915,433

¹ On April 1, 2021, Hankook & Group Co., Ltd. merged with Hankook Atlas BX Co., Ltd., and the transaction amount of Hankook Atlas BX Co., Ltd. for the years ended December 31, 2022 and 2021 is included in the amount of Hankook & Group Co., Ltd.

(In thousands of Korean won)

		2021			
				Non-trade receivables and others	Total
	Name of entity	Trade receivables			
Holding Group	Hankook & Group Co., Ltd. ¹	₩	264,213	₩	18,444,091
Holding Group's subsidiaries	Atlas BX Motorsports Co., Ltd.		-		-
	Hankook & Company ES America Corporation		-		-
	Sonic Motors Co., Ltd., (Formerly, HK Motors Co., Ltd.)		-		-
	Hankook Car & Life Co., Ltd.		-		29,008
Holding Group's associates	Hankook Networks Co., Ltd.,		678		3,971,910
Associates and joint ventures	Hanon System Co., Ltd.		1,981		-
Individuals	Individual shareholder		-		847,658
Other related parties	Daehwa Eng' & Machinery				
	Jiaying Co., Ltd.		-		265,727
	ARUM Dentistry Co., Ltd.		-		3,033
Total		₩	266,872	₩	23,561,427
					₩
					23,828,299

¹ On April 1, 2021, Hankook & Group Co., Ltd. merged with Hankook Atlas BX Co., Ltd., and the transaction amount of Hankook Atlas BX Co., Ltd. for the years ended December 31, 2022 and 2021 is included in the amount of Hankook & Group Co., Ltd.

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b) Payables and others

(In thousands of Korean won)

(In thousands of Korean won)		2022				
	Name of entity	Trade payable		Non-trade payable and others		Total
Holding Group	Hankook & Group Co.,Ltd. ¹	₩	1,797,995	₩	46,597,126	₩ 48,395,121
Holding Group's subsidiaries	Atlas BX Motorsports Co., Ltd.		-		290,157	290,157
	Sonic Motors Co., Ltd., (Formerly, HK Motors Co., Ltd.)		-		29,626	29,626
Holding Group's associates	Hankook Networks Co., Ltd., Hankook Networks America, Inc.		145,488		10,893,717	11,039,205
			-		70,335	70,335
Associates and Joint ventures	I&B Corporation Co., Ltd Peaches Group Korea Co., Ltd.		-		5,700	5,700
			-		17,192	17,192
Individuals	Individual shareholder		-		7,945,048	7,945,048
Other related parties	Daehwa Eng'& Machinery Jiaxing Co., Ltd.		-		1,376,817	1,376,817
	Total	₩	1,943,483	₩	67,225,718	₩ 69,169,201

¹On April 1, 2021, Hankook & Group Co., Ltd. merged with Hankook Atlas BX Co., Ltd., and the transaction amount of Hankook Atlas BX Co., Ltd for the years ended December 31, 2022 and 2021 is included in the amount of Hankook & Group Co., Ltd.

(In thousands of Korean won)

(In thousands of Korean won)		2021					
	Name of entity	Trade payable		Non-trade payable and others		Total	
Holding Group	Hankook & Group Co.,Ltd. ¹	₩	1,987,200	₩	32,308,428	₩	34,295,628
Holding Group's subsidiaries	Atlas BX Motorsports Co., Ltd.		-		454,260		454,260
	Sonic Motors Co., Ltd., (Formerly, HK Motors Co., Ltd.)		-		1,210		1,210
Holding Group's associates	Hankook Networks Co., Ltd., Hankook Networks America, Inc.		143,888		8,319,116		8,463,004
			-		186,482		186,482
Associates and Joint ventures	I&B Corporation Co., Ltd Peaches Group Korea Co., Ltd.		-		5,700		5,700
			-		-		-
Individuals	Individual shareholder		-		8,493,757		8,493,757
Other related parties	Daehwa Eng'& Machinery Jiaxing Co., Ltd.		-		1,585,211		1,585,211
	Total	₩	2,131,088	₩	51,354,164	₩	53,485,252

¹On April 1, 2021, Hankook & Group Co., Ltd. merged with Hankook Atlas BX Co., Ltd., and the transaction amount of Hankook Atlas BX Co., Ltd for the years ended December 31, 2022 and 2021 is included in the amount of Hankook & Group Co., Ltd.

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Fund transactions with related parties for the years ended December 31, 2022 and 2021, are as follows:

a) Loans to related parties for the year ended December 31, 2022 are as follows:

(in thousands of
Korean won)

		2022			
		Beginning balance	Increase	Ending Balance ¹	
Holdings's Subsidiaries					
Hankook & Company ES America Corporation					
	₩	-	₩ 32,949,800	₩	32,949,800
Total	₩	-	₩ 32,949,800	₩	32,949,800

¹ There is no loans to related parties for the year ended December 31, 2021.

b) Dividend income and contributions in cash from/to related parties for the years ended December 31, 2022 and 2021, are as follows:

(In thousands of Korean won)

		2022			
Name of entity		Dividend income	Payment of dividend	Collection of lease receivables	Repayments of lease liabilities
Holding Group ¹	Hankook & Group Co., Ltd.	₩ -	₩ 26,597,171	₩ 1,266,000	₩ 40,280
Holding Group's Subsidiaries and Associates	Hankook Networks Co., Ltd.	-	-	297,600	-
Joint ventures	Hanon Systems Co., Ltd.	37,451,160	-	-	-
Individuals	Individual shareholder	-	7,266,270	-	423,000
Others related parties	ShinYang Tourist Development Co., Ltd.	-	555,465	-	-
	Korea Asset General Private Equity Trust No.1	500,000	-	-	-
Total		₩ 37,951,160	₩ 34,418,906	₩ 1,563,600	₩ 463,280

(In thousands of Korean won)

		2021				
Name of entity		Dividend income	Payment of dividend	Collection of lease receivables	Repayments of lease liabilities	Contribution is cash and others
Holding Group ¹	Hankook & Group Co., Ltd.	₩ -	₩ 24,697,373	₩ 1,075,200	78,100	₩ -
Holding Group's Subsidiaries and Associates	Hankook Networks Co., Ltd.	-	-	24,800	-	-
Associates and Joint ventures	Hanon Systems Co., Ltd.	40,155,966	-	-	-	-
	DS Quattro H Kosdaq Venture Fund	-	-	-	-	6,000,000
	TIMEFOLIO Kosdaq Venture Hedge-S No.2	-	-	-	-	8,000,000
	Nexgen Food Partners	-	-	-	-	6,000,000
	I&B Corporation Co., Ltd ¹	-	-	-	-	20,100,000
	Mirae Asset Core Plus Privately Placed Investment Trust	-	-	-	-	50,000,000
Individuals	Individual shareholder	-	6,747,250	-	443,115	-
Others related parties	Shin-Yang Tourist Development Co., Ltd.	-	515,789	-	33,600	-
	Korea Asset General Private Equity Trust No.1	-	-	-	-	50,000,000
Total		₩ 40,155,966	₩ 31,960,412	₩ 1,100,000	₩ 554,815	₩ 140,100,000

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- c) Receipt of leasehold deposits and others, for the years ended December 31, 2022 and 2021, are as follows:

(In thousands of Korean won)

		2022		2021	
	Name of entity	Receipt/ collection	Repayment/ payment	Receipt/ collection	Repayment/ payment
Holding Group	Hankook & Group Co., Ltd. ¹	₩ 38,295	₩ -	₩ 3,300,000	₩ -
Holding Group's associates	Hankook Networks Co., Ltd.	-	-	757,000	-
Associates and Joint ventures	I&B Corporation Co., Ltd	-	-	5,700	-
Other related parties	Shin-Yang Tourist Development	-	-	400,000	-
	Total	₩ 38,295	₩ -	₩ 4,462,700	₩ -

¹On April 1, 2021, Hankook & Group Co., Ltd. merged with Hankook Atlas BX Co., Ltd., and the transaction amount of Hankook Atlas BX Co., Ltd for the years ended December 31, 2022 and 2021 is included in the amount of Hankook & Group Co., Ltd.

Compensations for key management personnel for the years ended December 31, 2022 and 2021, are as follows:

(In thousands of Korean won)

	2022	2021
Salaries	₩ 14,945,028	₩ 15,007,350
Post-employment benefits	2,415,454	2,389,926
Long-term employee benefits	16,463	1,778,126
Total	₩ 17,376,945	₩ 19,175,402

43. Credit Risk

The Group is exposed to credit risk when the following payments are not made from the counterparty by the payment date.

- Payment of trade receivables within the payment terms by customer
- Contractual flows of debt instruments measured at amortized cost
- Contractual flows of debt instruments measured at fair value through other comprehensive income

(a) Trade receivables

The Group applies the simplified approach to measuring expected credit losses which uses a lifetime expected loss allowance for all trade receivables. To measure the expected credit losses, trade receivables have been grouped based on shared credit risk characteristics and the days past due.

(b) Other financial assets measured at amortized cost

All of the other financial assets at amortized costs are considered to have low credit risk, and the loss allowance recognized for the year ended December 31, 2022 was, therefore, limited to 12 months expected loss. Management considers 'low credit risk' for government bonds. Other instruments are considered to be low credit risk when they have a low risk of default and the issuer has a strong capacity to meet its contractual cash flow obligations in the near term.

44. Events After the Reporting Period

On March 12, 2023, a fire broke out in the curing process of the Group's Daejeon plant, causing damage to some buildings, machinery, and inventory assets in the plant. Manufacturing at the plant has been completely suspended for safety reasons since March 13, 2023, and the Group is confirming the amount of damaged caused by the fire and considering about dealing with the damage through a property comprehensive insurance.

45. Financial adjustments shown in comparison

In January 2022, the Group recognized an impairment loss of ₩ 2,633,318 thousand on property, plant and equipment. However, in accordance with KIFRS 1010 "Events After Reporting Period", when the Group was aware the information indicating that impairment losses on assets have already occurred at the end of the reporting period, it is a case an entity should adjust its financial statements to reflecting events after the reporting period, so the impairment loss on property, plant and equipment was the case an entity should adjust its financial statements for events after the reporting period. Therefore, the Group has restated the error to reflect it in its 2021 consolidated financial statements.

(a) Adjustment of the consolidated balance sheet

(In thousands of Korean won)

	2021		
	Before Adjustment	Amount of Adjustment	After Adjustment
Assets	₩ 11,703,918,123	₩ (9,621,535)	₩ 11,694,296,588
Non-current assets	6,194,676,286	(9,621,535)	6,185,054,751
Property, plant and equipment	3,834,086,277	(12,633,318)	3,821,452,959
Deferred tax assets	192,552,116	3,011,783	195,563,899
Liabilities	3,498,782,298	-	3,498,782,298
Equity	8,205,135,825	(9,621,535)	8,195,514,290
Equity attributable to owners of the Parent Group	8,167,769,736	(9,621,535)	8,158,148,201
Retained earnings	5,190,613,538	(9,621,535)	5,180,992,003

(b) Adjustment of the consolidated income statement

	2021		
	Before Adjustment	Amount of Adjustment	After Adjustment
(In thousands of Korean won, Basic earning per share Korean won)			
Sales	₩ 7,141,136,828	₩ -	₩ 7,141,136,828
Cost of sales	(5,193,837,390)	-	(5,193,837,390)
Gross profit	1,947,299,438	-	1,947,299,438
Selling and administrative expenses	(1,125,821,550)	-	(1,125,821,550)
Research and development expenses	(179,284,982)	-	(179,284,982)
Operating profit (loss)	₩ 642,192,906	₩ -	₩ 642,192,906
Other non-operating income and expense	83,293,518	(12,633,318)	70,660,200
Profit before income tax	725,486,424	(12,633,318)	712,853,106
Income tax expense	(121,150,889)	3,011,783	(118,139,106)
Profit for the year	₩ 604,335,535	₩ (9,621,535)	₩ 594,714,000
Profit for the year is attributable to:			
Owners of the Parent Group	597,813,529	(9,621,535)	588,191,994
Non-controlling interests	6,522,006	-	6,522,006
Basic and diluted Earnings per share	₩ 4,901	₩ (79)	₩ 4,822

(c) Adjustment of consolidated changes in equity statement

a) Before adjustment

(In thousands of Korean won)	2021		
	Retained earnings	Owners of the Parent Group	Total
Balance as of January 1, 2021	₩ 4,665,265,076	₩ 7,377,494,904	₩ 7,412,147,523
Annual dividends	(79,292,689)	(79,292,689)	(84,246,877)
Profit for the year	597,813,529	597,813,529	604,335,536
Remeasurements of net defined benefit liabilities of associates	1,260,290	1,260,290	1,260,290
Cash flow hedges	-	(488,535)	(488,535)
Gain on valuation and disposal of equity instruments at fair value through other comprehensive income	1,519,225	12,998,637	12,999,922
Share of other comprehensive income	-	16,190,169	16,190,169
Exchange differences on translating foreign operations	-	237,745,324	238,889,690
Remeasurements of net defined benefit liabilities	4,048,107	4,048,107	4,048,107
Balance as of December 31, 2021	₩ 5,190,613,538	₩ 8,167,769,736	₩ 8,205,135,825

b) Adjustment

(In thousands of Korean won)	2021		
	Retained earnings	Owners of the Parent Group	Total
Balance as of January 1, 2021	₩ -	₩ -	₩ -
Annual dividends	-	-	-
Profit for the year	(9,621,535)	(9,621,535)	(9,621,535)
Remeasurements of net defined benefit liabilities of associates	-	-	-
Cash flow hedges	-	-	-
Gain on valuation and disposal of equity instruments at fair value through other comprehensive income	-	-	-
Share of other comprehensive income	-	-	-
Exchange differences on translating foreign operations	-	-	-
Remeasurements of net defined benefit liabilities	-	-	-
Balance as of December 31, 2021	₩ (9,621,535)	₩ (9,621,535)	₩ (9,621,535)

c) After Adjustment

(In thousands of Korean won)	2021		
	Retained earnings	Owners of the Parent Group	Total
Balance as of January 1, 2021	₩ 4,665,265,076	₩ 7,377,494,904	₩ 7,412,147,523
Annual dividends	(79,292,689)	(79,292,689)	(84,246,877)
Profit for the year	588,191,994	588,191,994	594,714,001
Remeasurements of net defined benefit liabilities of associates	1,260,290	1,260,290	1,260,290
Cash flow hedges	-	(488,535)	(488,535)
Gain on valuation and disposal of equity instruments at fair value through other comprehensive income	1,519,225	12,998,637	12,999,922
Share of other comprehensive income	-	16,190,169	16,190,169
Exchange differences on translating foreign operations	-	237,745,324	238,889,690
Remeasurements of net defined benefit liabilities	4,048,107	4,048,107	4,048,107
Balance as of December 31, 2021	<u>₩ 5,180,992,003</u>	<u>₩ 8,158,148,201</u>	<u>₩ 8,195,514,290</u>

(d) Adjustment of consolidated cash flow statement

(In thousands of Korean won)	2021		
	Before Adjustment	Amount of Adjustment	After Adjustment
Cash flows from operating activities	₩ 841,528,140	₩ -	₩ 841,528,140
Cash flows generated from operating activities	982,925,244	-	982,925,244
Profit for the year	604,335,536	(9,621,535)	594,714,001
Adjustments	798,941,099	9,621,535	808,562,634
Changes in operating assets and liabilities	(420,351,391)	-	(420,351,391)
Interest received	14,746,985	-	14,746,985
Interest paid	(46,050,670)	-	(46,050,670)
Dividends received	41,825,431	-	41,825,431
Income tax paid	(151,918,850)	-	(151,918,850)
Cash flows from investing activities	<u>(766,568,630)</u>	<u>-</u>	<u>(766,568,630)</u>
Cash flows from financing activities	<u>(79,087,923)</u>	<u>-</u>	<u>(79,087,923)</u>
Net Decrease in cash and cash equivalents	<u>(4,128,413)</u>	<u>-</u>	<u>(4,128,413)</u>
Cash and cash equivalents at the beginning of the financial year	1,060,864,709	-	1,060,864,709
Effects of exchange rate changes on cash and cash equivalents	5,306,119	-	5,306,119
Cash and cash equivalents at the end of the year	<u>₩ 1,062,042,415</u>	<u>₩ -</u>	<u>₩ 1,062,042,415</u>