

Hankuk Carbon Co., Ltd. and its subsidiaries

Consolidated financial statements

For the years ended December 31, 2023 and 2022

The accompanying consolidated financial statements, including all footnote disclosures, were prepared by, and are the responsibility of, the Company.

Mr. Moon-Soo Cho and Myung-Hwa Lee,
Chief Executive Officer
Hankuk Carbon Co., Ltd.

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Hankuk Carbon Co., Ltd. and its subsidiaries
Consolidated statements of financial position
As of December 31, 2023 and 2022
(Korean won in units)

	Note	2023	2022
Assets			
Current assets:			
Cash and cash equivalents	3,4,38	₩ 66,697,909,049	₩ 53,576,755,408
Short-term financial instruments	3,35,38	13,022,445,360	13,165,043,679
Trade receivables	3,5,26,35,37,38	101,111,566,071	39,272,301,140
Short-term loans and other receivables	3,5,35,38	14,662,647,566	11,986,348,631
Financial assets at fair value through profit or loss	3,6,38	9,881,414,294	7,446,242,585
Financial assets measured at amortized cost	3,8,38	-	4,610,000
Income tax receivable	31	2,906,270	1,488,040
Inventories	12	180,213,736,902	156,268,224,890
Other current assets	13	12,638,846,182	7,442,529,842
Total current assets		398,231,471,694	289,163,544,215
Non-current assets held-for-sale and assets related to disposal groups held-for-sale	19,39	4,466,240	17,983,473
Non-current assets:			
Long-term financial instruments	3,37,38	352,000,000	-
Long-term loans and other receivables	3,5,37,38	23,597,788,325	23,777,462,600
Financial assets at fair value through profit or loss	3,6,38	32,099,939,311	37,445,147,452
Financial assets at fair value through other comprehensive income	3,7,38	153,734,997	81,455,086
Financial assets measured at amortized cost	3,8,38	120,000,000	6,929,939,981
Investments in associates	14	416,783,474	1,020,955,441
Property, plant and equipment	15,36,37	271,300,752,275	212,463,841,607
Investment properties	17	15,730,937,735	-
Right-of-use assets	16	6,090,912,094	5,837,235,891
Intangible assets	18,37	39,710,474,951	2,254,493,468
Net employee defined benefit asset	20	1,961,879,045	2,617,232,258
Deferred tax assets	31	1,768,478,613	2,866,796,705
Other non-current assets	13	888,522,919	857,547,233
Total non-current assets		394,192,203,739	296,152,107,722
Total assets		₩ 792,428,141,673	₩ 585,333,635,410
Liabilities and equity			
Current liabilities:			
Trade payables	3,35,38	₩ 42,472,700,431	₩ 37,376,161,800
Other payables	3,35,38	44,015,348,876	24,294,886,039
Accrued expenses	3,38	15,008,126,535	9,732,910,875
Other long-term employee benefit liabilities	20	1,479,079	-
Leasehold deposits received	3,35,38	803,900,000	69,048,820
Short-term borrowings	3,10,38	89,232,018,232	44,318,000,000
Current portion of long-term borrowings	3,10,38	15,250,356,500	853,420,000
Financial liabilities at fair value through profit or loss	3,9,38	1,059,056,837	1,801,079,182
Income tax payable	31	3,077,945,491	5,749,727,307
Lease liabilities	3,16,38	1,560,804,096	1,524,443,670
Other current liabilities	21	84,883,344,404	30,617,165,275
Total current liabilities		297,365,080,481	156,336,842,968
Liabilities related to disposal groups held-for-sale	19	6,602,401	6,502,000
Non-current liabilities:			
Long-term other payables	3,35,38	255,068,990	165,347,352
Long-term accrued expenses	3,38	18,959,504	-
Long-term borrowings	3,10,38	21,104,800,000	15,953,495,200
Long-term financial liabilities at fair value through profit or loss	3,9,38	-	271,052,086
Bonds	3,11	10,000,000,000	-
Bonds with warrant	11	200,000,000	-
Lease liabilities	3,16,38	991,664,859	1,243,675,315
Net employee defined benefit liability	20	692,242,534	404,811,333
Other long-term employee benefit liabilities	20	45,157,246	-
Deferred tax liabilities	31	4,981,121,241	-
Other non-current liabilities	21	2,113,338,902	6,784,074,793
Total non-current liabilities		40,402,353,276	24,822,456,079
Total liabilities		337,774,036,158	181,165,801,047
Equity:			
Equity attributable to owners of the parent company			
Issued capital	1,22	25,954,226,000	21,980,378,500
Share premium	22	166,835,461,434	74,960,107,234
Retained earnings	25	278,294,987,874	299,947,161,270
Accumulated other comprehensive income	24	(719,910,099)	(1,257,941,232)
Other components of equity	21	(15,710,659,694)	8,538,128,591
		454,654,105,515	404,167,834,363
Non-controlling interests		-	-
Total equity		454,654,105,515	404,167,834,363
Total liabilities and equity		₩ 792,428,141,673	₩ 585,333,635,410

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

Hankuk Carbon Co., Ltd. and its subsidiaries
Consolidated Statements of Comprehensive Income
For the years ended December 31, 2023 and 2022
(Korean won in units)

	Note	2023	2022
Revenue	26,35,37	₩ 594,417,384,371	₩ 369,270,866,021
Cost of sales	27,32,37	531,263,336,300	313,197,560,069
Gross profit		63,154,048,071	56,073,305,952
Selling and general administrative expenses	28,31		
Bad debt expenses	5	(23,349,604)	(285,110,164)
Other selling and general administrative expenses	28	46,711,673,161	31,560,357,049
		46,688,323,557	31,275,246,885
Operating profit		16,465,724,514	24,798,059,067
Other income	29	21,725,122,026	8,104,323,152
Other expenses	29	44,213,024,671	150,983,748
Share of loss of associates and joint ventures	14	(597,833,404)	(19,357,441)
Finance income	3,30	17,196,427,104	16,505,125,730
Finance cost	3,30	17,639,834,741	20,337,064,826
Profit before income tax		(7,063,419,172)	28,900,101,934
Income tax expense	31	6,382,880,003	8,639,211,756
Profit of continuing operation		(13,446,299,175)	20,260,890,178
Profit (loss) of discontinued operation		(3,128,961)	(18,917)
Profit for the year		(13,449,428,136)	20,260,871,261
Profit attributable to owners of the parent company		(13,449,428,136)	20,260,871,261
Profit attributable to non-controlling interests		-	-
Other comprehensive income (loss)			
Other comprehensive income (loss) to be reclassified to profit or loss in subsequent periods (net of tax):			
Changes in equity adjustments	14	(175,318,594)	(147,260,047)
Exchange differences on translation of foreign operations		(455,474,164)	219,577,545
Other comprehensive income (loss) not to be reclassified to profit or loss in subsequent periods (net of tax):			
Gain (Loss) on valuation of financial assets at fair value through other comprehensive income	7	1,168,823,891	(136,787,328)
Re-measurement gain (loss) of net defined benefit liabilities	20	(2,609,863,810)	1,425,415,931
		(2,071,832,677)	1,360,946,101
Total comprehensive income		₩ (15,521,260,813)	₩ 21,621,817,362
Total comprehensive income attributable to owners of the parent company		(15,521,260,813)	21,621,817,362
Total comprehensive income attributable to non-controlling interests		-	-
Earnings per share, basic & diluted	33	₩ (305)	₩ 471

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

Hankuk Carbon Co., Ltd. and its subsidiaries
Consolidated statements of changes in equity
For the years ended December 31, 2023 and 2022
(Korean won in units)

	Attributable to owners of the parent				Non-controlling interests	Total equity
	Issued capital & share premium	Retained earnings	Accumulated other comprehensive income	Other components of equity		
Balance as of January 1, 2022	₩ 96,940,485,734	284,714,198,828	(1,193,471,402)	8,538,128,591	-	388,999,341,751
Comprehensive income						
Profit for the year	-	20,260,871,261	-	-	-	20,260,871,261
Loss on valuation of financial assets	-	-	-	-	-	-
at fair value through other comprehensive income	-	-	(136,787,328)	-	-	(136,787,328)
Re-measurement gains (loss) of net defined benefit liabilities	-	1,425,415,931	-	-	-	1,425,415,931
Share of other comprehensive loss of associates	-	-	(147,260,047)	-	-	(147,260,047)
Exchange differences on translation of foreign operations	-	-	219,577,545	-	-	219,577,545
Transactions with owners of the parent company						
Dividends	-	-	-	-	-	-
Balance as of December 31, 2022	₩ 96,940,485,734	299,947,161,270	(1,257,941,232)	8,538,128,591	-	404,167,834,363
Balance as of January 1, 2023	₩ 96,940,485,734	299,947,161,270	(1,257,941,232)	8,538,128,591	-	404,167,834,363
Comprehensive income						
Profit for the year	-	(13,449,428,136)	-	-	-	(13,449,428,136)
Loss on valuation of financial assets at fair value through other comprehensive income	-	-	1,168,823,891	-	-	1,168,823,891
Re-measurement gains (loss) of net defined benefit liabilities	-	(2,609,863,810)	-	-	-	(2,609,863,810)
Share of other comprehensive loss of associates	-	-	(175,318,594)	-	-	(175,318,594)
Exchange differences on translation of foreign operations	-	-	(455,474,164)	-	-	(455,474,164)
Loss on valuation of derecognized financial assets at fair value through other comprehensive income	-	-	-	(1,175,224,250)	-	(1,175,224,250)
Transactions with owners of the parent company						
Dividends	-	(5,592,881,450)	-	-	-	(5,592,881,450)
Acquisition of treasury shares	-	-	-	(15,936,896,960)	-	(15,936,896,960)
Issuance of ordinary shares arising from merger	95,849,201,700	-	-	95,849,201,700	-	95,849,201,700
Reclassification of treasury shares arising from merger	-	-	-	(5,209,831,300)	-	(5,209,831,300)
Changes in ownership interests in subsidiaries after control obtaining	-	-	-	(1,926,835,775)	-	(1,926,835,775)
Balance as of December 31, 2023	₩ 192,789,687,434	278,294,987,874	(719,910,099)	(15,710,659,694)	-	454,654,105,515

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

Hankuk Carbon Co., Ltd. and its subsidiaries
Consolidated statements of cash flows
For the years ended December 31, 2023 and 2022
(Korean won in units)

	Note	2023	2022
Cash flows from operating activities of continuing operation:			
Cash generated from operations	32	₩ 66,743,451,400	₩ 4,873,235,591
Interest received		3,865,748,447	2,937,160,887
Interest paid		(4,638,466,457)	(1,076,915,403)
Dividends received		1,178,073,178	962,334,410
Income tax paid		(10,625,662,809)	(15,495,129,292)
		56,523,143,759	(7,799,313,807)
Cash flows from operating activities of discontinued operation:		(3,274,570)	464,622
Net cash inflow from operating activities		56,519,869,189	(7,798,849,185)
Cash flows from investing activities of continuing operation:			
Decrease in short-term financial instruments		17,007,645,026	15,557,885,312
Decrease in short-term loans		9,382,174	874,666
Decrease in financial assets at fair value through profit or loss		23,420,463,358	54,848,653,749
Decrease in financial assets measured at amortized cost		6,507,170,929	12,215,572,576
Decrease in leasehold deposits and other deposits		393,000,000	468,500,000
Receipt of government grants		1,545,738,350	84,866,500
Disposal of property, plant and equipment		40,406,981	48,645,216
Disposal of non-current assets held for sale		10,647,700	-
Increase in short-term financial instruments		(15,594,961,707)	(13,370,070,000)
Increase in long-term loans		-	(20,000,000,000)
Increase in long-term financial instruments		(822,000,000)	-
Increase in financial assets at fair value through profit or loss		(21,295,145,400)	(23,103,618,326)
Decrease in financial liabilities at fair value through profit or loss		(1,801,079,182)	(391,378,144)
Increase in financial assets measured at amortized cost		(3,650,000)	(405,685,825)
Increase in financial assets at fair value through other comprehensive income		(1,814,800)	(1,939,689,443)
Increase in investments in associates		-	-
Cash outflow from business combination		-	(104,000,000)
Increase in leasehold deposit and other deposits		(1,901,325,961)	(2,975,565,239)
Acquisition of property, plant and equipment		(51,350,508,881)	(32,354,674,173)
Acquisition of investment properties		(362,018,940)	-
Acquisition of intangible assets		(230,571,673)	(105,283,106)
		(44,428,622,026)	(11,524,966,237)
Cash flows from investing activities of discontinued operation:		-	-
Net cash outflow from investing activities		(44,428,622,026)	(11,524,966,237)
Cash flows from financing activities of continuing operation:			
Increase in leasehold deposits received		190,051,180	-
Increase in short-term borrowings		95,940,061,721	43,545,000,000
Increase in long-term borrowings		7,605,911,300	14,525,822,600
Decrease in leasehold deposits received		(200,000)	(650,000)
Repayment of current portion of long-term borrowings		(1,249,710,000)	(15,948,570,000)
Repayment of short-term borrowings		(83,240,688,927)	(6,325,000,000)
Repayment of long-term borrowings		(976,550,000)	-
Repayment of lease liabilities		(1,940,442,440)	(1,102,106,843)
Repayment of redeemable preferred shares liabilities		-	(3,167,553,770)
Payment of share issue cost		(62,543,200)	-
Acquisition of treasury shares		(15,936,896,960)	-
Payment of dividend		(5,592,881,450)	(6,453,324,750)
		(5,263,888,776)	25,073,617,237
Cash flows from financing activities of discontinued operation:		-	-
Net cash inflow (outflow) from financing activities		(5,263,888,776)	25,073,617,237
Effects of exchange rate changes on cash and cash equivalents		(203,955,499)	(1,221,072,649)
Increase in cash and cash equivalent arising from change in consolidated entities		636,814,641	-
Increase in cash and cash equivalent arising from merger		5,860,936,112	-
Net increase (decrease) in cash and cash equivalents		13,121,153,641	4,528,729,166
Cash and cash equivalents at the beginning of the year		53,576,755,408	49,048,026,242
Cash and cash equivalents at the end of the year		₩ 66,697,909,049	₩ 53,576,755,408

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

1. General information

General information of Hankuk Carbon Co., Ltd. (the "Company") and its subsidiaries (collectively, the "Group") are as follows.

1.1 Corporate information

The Company was incorporated on September 17, 1984 under the laws of the Republic of Korea to engage in the manufacturing and selling of carbon fiber products, synthetic resin products, glass paper products and insulation panels for LNG cargos.

The Company's head office is located at 85, Chunhwa-ro, Bubuk-myeon, Miryang-si, Gyeongsangnam-do, in the Republic of Korea.

The Company listed its ordinary shares on the Korea Exchange on July 8, 1995.

As of December 31, 2023 and 2022, the issued capital of the Company is ₩25,954,225 thousand and ₩21,980,379 thousand, respectively and major shareholders of the Company are as follows:

	2023		2022	
	Number of shares	Ownership interest	Number of shares	Ownership interest
Mr. Moon-Soo Cho, CEO	7,886,235 shares	15.19%	7,886,235 shares	17.94%
Mr. Yunho Cho	7,196,828 shares	13.86%	-	-
National Pension Service	2,884,962 shares	5.56%	2,852,617 shares	6.49%
Mitsui & Co., Ltd.	-	-	1,318,822 shares	3.00%
Korea Investment Value Asset Management Co., Ltd.	2,199,523 shares	4.24%	-	-
Treasury shares	2,690,706 shares	5.18%	938,592 shares	2.14%
			30,964,491 shares	70.43%
Others	29,050,198 shares	55.97%	43,960,757 shares	100.00%
	51,908,452 shares	100.00%		

1. General information (cont'd)

1.2 Consolidated subsidiaries

Information about consolidated subsidiaries as of December 31, 2023 is as follows (Korea won in thousands, US Dollar, Hong Kong Dollar and Pound sterling in units):

	Issued capital	Ownership interest	Principal operation	Country of incorporation	Ground of control
HC Networks Co., Ltd.(*1)	₩ 7,000,000	100%	Resources exploration /trading	Republic of Korea	A majority of voting shares
HC Networks Hong Kong Co., Ltd.(*1)	HKD 1/ USD 5,500,000	100%	Trading/ investment/ export agency	Hong Kong	A majority of voting shares
HCM VINA Co., Ltd.	USD 36,687,685	100%	Manufacturing	Vietnam	A majority of voting shares
HANKUK COMPOSITE UK LTD	GBP 640,000	100%	Trading, wholesaling and retailing	The United Kingdom	A majority of voting shares
Korea Aviation Technologies Co., Ltd.	6,807,901	100%	Manufacturing	Republic of Korea	A majority of voting shares
Korea Composites Inc.	12,433,460	100%	Aircraft parts manufacturing	Republic of Korea	A majority of voting shares
c2i s.r.o.	EUR 20,052,920	100%	Manufacturing	Slovakia	A majority of voting shares
Hankuk Global Solution Co., Ltd.(*2)	1,039,500	100%	Manufacturing of sections for ships and Manufacturing of metal frameworks or skeletons for marine structure and parts	Republic of Korea	A majority of voting shares
HANKUK COMPOSITE US INC.(*3)	USD 250,000	100%	Trading, wholesaling and retailing	US	A majority of voting shares
Leaps Co., Ltd.(*4)	10,650,000	100%	Manufacturing	Republic of Korea	A majority of voting shares
HAM VINA Company Ltd.(*4)	USD 5,000,000	100%	Manufacturing	Vietnam	A majority of voting shares

(*1) The Company wholly owns HC Networks Co., Ltd. and HC Networks Co., Ltd. wholly owns HC Networks Hong Kong Co., Ltd. The Company controls HC Networks Hong Kong Co., Ltd. by controlling HC Networks Co., Ltd.

(*2) Reclassified to a subsidiary from an associate as the Group acquires additional shares and merges in 2023

(*3) Newly included in subsidiaries as incorporated in 2023.

(*4) Subsidiaries of Hankuk Advanced Materials Co., Ltd. at the time of the merger, which was merged in 2023.

Hankuk Carbon Co., Ltd. and its subsidiaries
Notes to the consolidated financial statements
As of December 31, 2023 and 2022

1. General information (cont'd)

1.2 Consolidated subsidiaries (cont'd)

Summary of financial information based on the subsidiaries' separate financial statements are as follows (Korean won in thousands):

	2023					
	Assets	Liabilities	Net assets	Sales	Loss	Total comprehensive loss
HC Networks Co., Ltd.	₩ 2,022,798	31,942,142	(29,919,345)	2,404,590	371,740	371,740
HC Networks Hong Kong Co., Ltd.	4,466	39,594,026	(39,589,560)	-	(3,129)	(605,072)
HCM VINA Co., Ltd.	37,194,064	1,250,964	35,943,100	7,740,869	(2,174,404)	(4,189,769)
HANKUK COMPOSITE UK LTD	216,085	58,348	157,737	293,059	(148,012)	(128,252)
Korea Aviation Technologies Co., Ltd.	2,170,779	1,200,854	969,925	478,000	(1,256,296)	(1,256,296)
Korea Composites Inc.	15,537,823	3,690,073	11,847,750	7,899,374	(2,373,708)	(2,457,313)
c2i s.r.o.	18,650,102	2,229,398	16,420,704	11,514,222	(3,009,097)	(2,554,664)
Hankuk Global Solution Co., Ltd.	12,228,177	24,133,146	(11,904,969)	4,712,089	(2,208,003)	(2,208,003)
HANKUK COMPOSITE US INC.(*1)	198,906	14,248	184,658		(141,368)	(145,917)
Leaps Co., Ltd.(*1)	12,399,619	7,992,174	4,407,445	1,850,614	(129,683)	(129,683)
HAM VINA Company Ltd.(*1)	11,011,854	6,237,751	4,774,103	1,271,681	204,517	890,437

(*1) Financial information recognized since entities were included in subsidiaries.

	2022					
	Assets	Liabilities	Net assets	Sales	Loss	Total comprehensive loss
HC Networks Co., Ltd.	₩ 1,944,706	32,235,791	(30,291,085)	2,142,861	(627,281)	(627,281)
HC Networks Hong Kong Co., Ltd.	7,488	38,991,936	(38,984,448)	-	(19)	(2,523,037)
HCM VINA Co., Ltd.	40,014,922	32,524,111	7,490,811	17,060,282	(2,099,615)	(1,746,932)
HANKUK COMPOSITE UK LTD	292,344	6,356	285,988	151,134	(352,556)	(365,048)
Korea Aviation Technologies Co., Ltd.	2,069,744	1,393,523	676,221	-	(1,549,180)	(1,549,180)
Korea Composites Inc.	15,633,393	13,358,004	2,275,389	7,074,932	(516,837)	(98,213)
c2i s.r.o. (*1)	14,748,128	2,772,760	11,975,368	5,720,049	(1,938,959)	(1,903,193)

(*1) Financial information recognized since entity was included in subsidiaries.

2. Basis of preparation and summary of significant accounting policies

The Group prepares consolidated financial statements in the Korean language in accordance with Korean International Financial Reporting Standards (KIFRS) enacted by the Act on External Audit of Stock of Companies. The accompanying consolidated financial statements have been translated into English from the Korean language consolidated financial statements. In the event of any differences in interpreting the consolidated financial statements or the independent auditors' report thereon, the Korean version, which is used for regulatory reporting purposes, shall prevail.

The accounting policies applied by the Group in these consolidated financial statements are the same as those applied by the Group in its consolidated financial statements as of and for the year ended December 31, 2021, except for the changes due to the application of amendment and enactments of standards described in Note 2.1.

These consolidated financial statements were approved by the Board of Directors on March 13, 2023 and will be finally approved by the Shareholder's meeting on March 29, 2023.

2.1 Changes in accounting policies and disclosures

2.1.1 New and amended standards and interpretations

The Group applied for the first time certain standards and amendments, which are effective for annual periods beginning on or after January 1, 2023. The Group has not early adopted any other standard, interpretation or amendment that has been issued but is not yet effective.

The nature and the effect of these changes are disclosed below.

Amendments to KIFRS 1001 Presentation of Financial Statements and IFRS Practice Statement 2 Making Materiality Judgements - Disclosure of Accounting Policies

The amendments change the requirements in *KIFRS 1001* with regard to disclosure of accounting policies. The amendments replace all instances of the term 'significant accounting policies' with 'material accounting policy information'. Accounting policy information is material if, when considered together with other information included in an entity's financial statements, it can reasonably be expected to influence decisions that the primary users of general purpose financial statements make on the basis of those financial statements.

The amendment does not have a significant impact on the consolidated financial statements.

Amendments to KIFRS 1001 Presentation of Financial Statements - Disclosure of financial liabilities with condition to adjust exercise price

The amendments require disclosure of valuation gains or losses (limited to those recognized in the profit or loss) of the conversion options or warrants (or financial liabilities including them), if all or part of the financial instrument with exercise price that is adjusted depending on the issuer's share price change is classified as financial liability as defined in paragraph 11 (2) of *KIFRS 1032*

The amendment does not have a significant impact on the consolidated financial statements.

Amendments to KIFRS 1008 Accounting Policies, Changes in Accounting Estimates and Errors - Definition of Accounting Estimates

The amendments replace the definition of a change in accounting estimates with a definition of accounting estimates. Under the new definition, accounting estimates are "monetary amounts in financial statements that are subject to measurement uncertainty". The definition of a change in accounting estimates was deleted.

The amendment does not have a significant impact on the consolidated financial statements.

2. Basis of preparation and summary of significant accounting policies (cont'd)

2.1 Changes in accounting policies and disclosures (cont'd)

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

The amendments introduce a further exception from the initial recognition exemption. Under the amendments, an entity does not apply the initial recognition exemption for transactions that give rise to equal taxable and deductible temporary differences. Depending on the applicable tax law, equal taxable and deductible temporary differences may arise on initial recognition of an asset and liability in a transaction that is not a business combination and affects neither accounting nor taxable profit. Following the amendments to KIFRS 1012, an entity is required to recognize the related deferred tax asset and liability, with the recognition of any deferred tax asset being subject to the recoverability criteria in KIFRS 1012.

The amendment does not have a significant impact on the consolidated financial statements.

Adoption of KIFRS 1117 Insurance Contract

KIFRS 1117, which supersedes KIFRS 1104 Insurance Contracts, establishes principles for recognition, measurement, and disclosure of insurance contracts and its main features include the measurement of insurance liabilities at present value of the fulfilment cash flows, recognition of insurance revenue based on accruals-based accounting, and separate presentation of insurance revenue, insurance service expenses, and insurance finance income or expenses.

The amendment does not have a significant impact on the consolidated financial statements.

Amendments to KIFRS 1012 Income Taxes - International Tax Reform: Pillar Two Model Rules

The IASB amends the scope of IAS 12 to clarify that the Standard applies to income taxes arising from tax law enacted or substantively enacted to implement the Pillar Two model rules published by the OECD, including tax law that implements qualified domestic minimum top-up taxes described in those rules. The amendments introduce a temporary exception to the accounting requirements for deferred taxes in IAS 12, so that an entity would neither recognize nor disclose information about deferred tax assets and liabilities related to Pillar Two income taxes. Following the amendments, the Company is required to disclose that it has applied the exception and to disclose separately its current tax expense (income) related to Pillar Two income taxes. There is no significant impact of the amendments listed above on consolidated financial statements.

The amendment does not have a significant impact on the consolidated financial statements.

2. Basis of preparation and summary of significant accounting policies (cont'd)

2.1 Changes in accounting policies and disclosures (cont'd)

2.1.2 Standards issued but not yet effective

The standards and interpretations that are issued as of December 31, 2023, but not yet effective for annual periods beginning on January 1, 2023, are disclosed below.

Amendments to KIFRS 1001 Presentation of Financial Statements - Classification of Liabilities as Current or Non-current, Non-current Liabilities with Covenants

The amendments clarify that the classification of liabilities as current and non-current is based on rights that are existing at the end of the reporting period, specify that classification is unaffected by expectations about whether an entity will exercise its right to defer settlement of a liability, explain that rights are in existence if covenants are complied with at the end of the reporting period, and introduce a definition of 'settlement' to make clear that settlement refers to the transfer to the counterparty of cash, equity instruments, other assets or services.

The amendments specify that only covenants that an entity is required to comply with on or before the end of the reporting period affect the entity's right to defer settlement of a liability for at least twelve months after the reporting date. Such covenants affect whether the right exists at the end of the reporting period, even if compliance with the covenant is assessed only after the reporting date. The amendments also specifies that the right to defer settlement of a liability for at least twelve months after the reporting date is not affected if an entity only has to comply with a covenant after the reporting period. However, if the entity's right to defer settlement of a liability is subject to the entity complying with covenants within twelve months after the reporting period, an entity discloses information that enables users of financial statements to understand the risk of the liabilities becoming repayable within twelve months after the reporting period. This would include information about the covenants (including the nature of the covenants and when the entity is required to comply with them), the carrying amount of related liabilities and facts and circumstances, if any, that indicate that the entity may have difficulties complying with the covenants.

The amendments are applied retrospectively for annual reporting periods beginning on or after 1 January 2024. Earlier application of the amendments is permitted.

The impact on the consolidated financial statements through the amendments are under review.

Amendments to KIFRS 1007 Cash Flow Statement and KIFRS 1107 Financial Instruments Disclosure - Supplier finance agreements

The amendments add a disclosure objective in *KIFRS 1007 Cash Flow Statement* stating that an entity is required to disclose information about supplier finance agreements that enables users of financial statements to assess the effect of those arrangements on the Group's liabilities and cash flows. In addition, *KIFRS 1117* was amended to add supplier finance arrangements as an example within the requirements to disclose information about an entity's exposure to concentration of liquidity risk.

The impact on the consolidated financial statements through the amendments are under review.

Amendments to KIFRS 1116 Lease - Lease Liabilities in a Sale and Leaseback

The amendments add subsequent measurement requirements for sale and leaseback transactions that satisfy the requirements in *KIFRS 1115 Revenue from contracts with customers*. The amendments require the seller-lessee to determine 'lease payments' or 'revised lease payments' in such a way that the seller-lessee does not recognize a gain or loss that relates to the right of use asset retained by the seller-lessee after the lease commencement date. The above amendments are applicable for annual reporting periods beginning on or after 1 January 2024, with early application permitted.

The impact on the consolidated financial statements through the amendments are under review.

2. Basis of preparation and summary of significant accounting policies (cont'd)

2.2 Basis of preparation

2.2.1 Measurement basis

The consolidated financial statements have been prepared on a historical cost basis, except when otherwise indicated.

2.2.2 Functional currency

The Group's consolidated financial statements are presented in Korean won which is the Company's functional currency.

2.3 Basis of consolidation

The consolidated financial statements comprise the financial statements of the Group and its subsidiaries as at December 31, 2022. Control is achieved when the Group is exposed, or has rights, to variable returns from its involvement with the investee and has the ability to affect those returns through its power over the investee. Specifically, the Group controls an investee if and only if the Group has:

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

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

- The contractual arrangement with the other vote holders of the investee
- Rights arising from other contractual arrangements
- The Group's voting rights and potential voting rights

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

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

A change in the ownership interest of a subsidiary, without a loss of control, is accounted for as an equity transaction.

If the Group loses control over a subsidiary, it derecognizes the related assets (including goodwill), liabilities, non-controlling interest and other components of equity while any resultant gain or loss is recognized in profit or loss. Any investment is recognized at fair value.

The financial statements of the parent and its subsidiaries used in the preparation of the consolidated financial statements shall have the same reporting date. When the end of the reporting period of the parent is different from that of a subsidiary, the subsidiary prepares, for consolidation purposes, additional financial information as of the same date as the financial statements of the parent to enable the parent to consolidate the financial information of the subsidiary, unless it is impracticable to do so.

2. Basis of preparation and summary of significant accounting policies (cont'd)

2.3 Basis of consolidation (cont'd)

If it is impracticable to do so, the parent shall consolidate the financial information of the subsidiary using the most recent financial statements of the subsidiary adjusted for the effects of significant transactions or events that occur between the date of those financial statements and the date of the consolidated financial statements. In any case, the difference between the date of the subsidiary's financial statements and that of the consolidated financial statements shall be no more than three months, and the length of the reporting periods and any difference between the dates of the financial statements shall be the same from period to period.

2.4 Business combinations

The Group accounts for business combinations using the acquisition method when the acquired set of activities and assets meets the definition of a business and control is transferred to the Group. In determining whether a particular set of activities and assets is a business, the Group assesses whether the set of assets and activities acquired includes, at a minimum, an input and substantive process and whether the acquired set has the ability to produce outputs.

The Group has an option to apply a 'concentration test' that permits a simplified assessment of whether an acquired set of activities and assets is not a business. The optional concentration test is met if substantially all of the fair value of the gross assets acquired is concentrated in a single identifiable asset or group of similar identifiable assets.

Identifiable assets acquired and liabilities and contingent liabilities assumed in a business combination are initially measured at their fair values at the acquisition date. Acquisition-related costs are expensed as incurred. In case that acquiree's shares are held by non-selling shareholders that entitle them to a proportionate share of the acquiree's net assets in the event of liquidation, the Group has an option to measure non-controlling interest that are present ownership interests either at fair value or at the non-controlling interest's proportionate interest in recognized net assets. Other types of non-controlling interest are measured at fair value unless KIFRS has specific guidance on how some items are measured.

Certain assets and liabilities are recognized and measured applying exceptions to both the recognition and measurement principles. Those assets and liabilities are as follows:

➤ Income taxes

a deferred tax asset or liability arising from the assets acquired and liabilities assumed in a business combination in accordance with *KIFRS 1012 Income Taxes*.

➤ Employee benefits

a liability (or asset, if any) related to the acquiree's employee benefit arrangements in accordance with *KIFRS 1019 Employee Benefits*.

➤ Share-based payment transaction

A liability or an equity instrument related to share-based payment transaction of the acquiree or the replacement of an acquiree's share-based payment transaction with share-based payment transactions of the acquirer in accordance with *KIFRS 1102 Share-based Payment*.

➤ Assets held for sale

an acquired non-current asset (or disposal group) that is classified as held for sale at the acquisition date in accordance with *KIFRS 1105 Non-current Assets Held for Sale and Discontinued Operations*.

The consideration the acquirer transfers in exchange for the acquiree includes any asset or liability resulting from a contingent consideration arrangement. The acquirer shall recognize the acquisition-date fair value of contingent consideration as part of the consideration transferred in exchange for the acquiree.

2. Basis of preparation and summary of significant accounting policies (cont'd)

2.4 Business combinations (cont'd)

The acquirer shall account for changes in the fair value of contingent consideration that are not measurement period adjustments as follows:

- (a) Contingent consideration classified as equity shall not be remeasured and its subsequent settlement shall be accounted for within equity.
- (b) Other contingent consideration that:
 - (i) is within the scope of *KIFRS 1039* shall be measured at fair value at each reporting date and changes in fair value shall be recognized in profit or loss or other comprehensive income in accordance with *KIFRS 1039*.
 - (ii) is not within the scope of *KIFRS 1039* shall be accounted in accordance with *KIFRS 1037* or other relevant KIFRS.

The excess of consideration transferred, amount of any non-controlling interest in the acquired entity and acquisition-date fair value of any previous equity interest in the acquired entity over the fair value of the net identifiable assets acquired is recorded as goodwill. If those amounts are less than the fair value of the net identifiable assets of the business acquired, the Group review whether all of the assets acquired and liabilities assumed have been identified and then the difference is recognized directly in the profit or loss as a bargain purchase.

When a business combination is achieved in stages, the Group's previously held equity interest in the acquiree is remeasured at its fair value at the acquisition date and the resulting gain or loss, if any, is recognized in profit or loss. Prior to the acquisition date, the amount resulting from changes in the value of its equity interest in the acquiree that have previously been recognized in other comprehensive income are reclassified to profit or loss where such treatment would be appropriate if that interest were directly disposed of.

In circumstances that initial accounting for the business combination is incomplete at the reporting date, the Group initially reports the business combination using provisional amounts. During the measurement period, if there is new information obtained about facts and circumstances that existed at the acquisition date, the Group retrospectively adjusts the provisional amounts and/or recognizes additional assets and liabilities by increasing or decreasing the amount of goodwill to reflect new information.

2.5 Joint arrangements.

The Group shall determine the type of joint arrangement in which it is involved. The classification of a joint arrangement as a joint operation or a joint venture depends upon the rights and obligations of the parties to the arrangement. The Group assesses its rights and obligations by considering the structure and legal form of the arrangement, the terms agreed by the parties in the contractual arrangement and, when relevant, other facts and circumstances.

A joint operation is a joint arrangement whereby the parties that have joint control of the arrangement have rights to the assets, and obligations for the liabilities, relating to the arrangement. A joint venture is a joint arrangement whereby the parties that have joint control of the arrangement have rights to the net assets of the arrangement.

A joint operator shall account for the assets, liabilities, revenues and expenses relating to its interest in a joint operation in accordance with the IFRSs applicable to the particular assets, liabilities, revenues and expenses. A joint venturer shall recognise its interest in a joint venture as an investment and shall account for that investment using the equity method in accordance with *KIFRS 1028 Investments in Associates and Joint Ventures* unless the entity is exempted from applying the equity method as specified in that standard.

2. Basis of preparation and summary of significant accounting policies (cont'd)

2.6 Investment in associates and joint ventures

An associate is an entity over which the Group has significant influence. Significant influence is the power to participate in the financial and operating policy decisions of the investee, but is not control or joint control over those policies.

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

The considerations made in determining significant influence or joint control is similar to those necessary to determine control over subsidiaries. The Group's investments in its associate and joint venture are accounted for using the equity method. Under the equity method, the investment in an associate or a joint venture is initially recognized at cost. The carrying amount of the investment is adjusted to recognize changes in the Group's share of net assets of the associate or joint venture since the acquisition date. Goodwill relating to the associate or joint venture is included in the carrying amount of the investment and is not tested for impairment separately.

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

If the Group's share of losses of an associate or a joint venture equals or exceeds its interest in the associate or joint venture, the Group discontinues recognising its share of further losses. The interest in an associate or a joint venture is the carrying amount of the investment in the associate or joint venture determined using the equity method together with any long-term interests that, in substance, form part of the Group's net investment in the associate or joint venture. After the Group's interest is reduced to zero, additional losses are provided for, and a liability is recognised, only to the extent that the entity has incurred legal or constructive obligations or made payments on behalf of the associate or joint venture. If the associate or joint venture subsequently reports profits, the Group resumes recognising its share of those profits only after its share of the profits equals the share of losses not recognised.

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

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

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

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

2. Basis of preparation and summary of significant accounting policies (cont'd)

2.7 Transactions and balances

Transactions in foreign currencies are initially recorded by the Group at their respective functional currency spot rates at the date the transaction first qualifies for recognition.

Monetary assets and liabilities denominated in foreign currencies are retranslated at the functional currency spot rate of exchange at the reporting date.

Differences arising on settlement or translation of monetary items are recognized in profit or loss with the exception of monetary items that are designated as part of the hedge of the Group's net investment of a foreign operation. These are recognized in other comprehensive income until the net investment is disposed, at which time, the cumulative amount is reclassified to the consolidated income statement. Tax charges and credits attributable to exchange differences on those monetary items are also recorded in other comprehensive income.

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

The Group has a monetary item that is receivable from or payable to a foreign operation. An item for which settlement is neither planned nor likely to occur in the foreseeable future is, in substance, a part of the Group's net investment in that foreign operation. In the consolidated financial statements when the foreign operation is a subsidiary, such exchange differences shall be recognised initially in other comprehensive income and reclassified from equity to profit or loss on disposal of the net investment.

When a gain or loss on a non-monetary item is recognised in other comprehensive income, any exchange component of that gain or loss shall be recognised in other comprehensive income. Conversely, when gain or loss on a non-monetary item is recognised in profit or loss, any exchange component of that gain or loss shall be recognised in profit or loss.

An entity may present its financial statements in any currency (or currencies).

If the presentation currency differs from the entity's functional currency, it translates its results and financial position into the presentation currency.

As the Group contains subsidiaries with different functional currencies, the results and financial position of each subsidiary are translated into the Company's presentation currency so that consolidated financial statements may be presented.

The results and financial position of an entity whose functional currency is not the currency of a hyperinflationary economy shall be translated into a different presentation currency using the following procedures:

- assets and liabilities for each statement of financial position presented (ie including comparatives) shall be translated at the closing rate at the date of that statement of financial position.
- income and expenses for each statement presenting profit or loss and other comprehensive income (ie including comparatives) shall be translated at the average exchange rate for the period; and
- all resulting exchange differences shall be recognised in other comprehensive income.

The cumulative amount of the exchange differences is presented in a separate component of equity until disposal of the foreign operation. When the exchange differences relate to a foreign operation that is consolidated but not wholly-owned, accumulated exchange differences arising from translation and attributable to non-controlling interests are allocated to, and recognised as part of, non-controlling interests in the consolidated statement of financial position.

2. Basis of preparation and summary of significant accounting policies (cont'd)

2.7 Transactions and balances (cont'd)

Any goodwill arising on the acquisition of a foreign operation and any fair value adjustments to the carrying amounts of assets and liabilities arising on the acquisition of that foreign operation shall be treated as assets and liabilities of the foreign operation. Thus they shall be expressed in the functional currency of the foreign operation and shall be translated at the closing rate. On the disposal of a foreign operation, the cumulative amount of the exchange differences relating to that foreign operation, recognised in other comprehensive income and accumulated in the separate component of equity, shall be reclassified from equity to profit or loss (as a reclassification adjustment) when the gain or loss on disposal is recognised.

In addition to the disposal of an entity's entire interest in a foreign operation, the following partial disposals are accounted for as disposals:

- when the partial disposal involves the loss of control of a subsidiary that includes a foreign operation, regardless of whether the entity retains a non-controlling interest in its former subsidiary after the partial disposal; and
- when the retained interest after the partial disposal of an interest in a joint arrangement or a partial disposal of an interest in an associate that includes a foreign operation is a financial asset that includes a foreign operation.

On disposal of a subsidiary that include a foreign operation, the cumulative amount of the exchange difference relating to that foreign operation that have been attributed to the non-controlling interest shall be derecognized, but shall not be reclassified to profit or loss.

On the partial disposal of a subsidiary that includes a foreign operation, the entity shall re-attribute the proportionate share of the cumulative amount of the exchange differences recognised in other comprehensive income to the non-controlling interests in that foreign operation. In any other partial disposal of a foreign operation the entity shall reclassify to profit or loss only the proportionate share of the cumulative amount of the exchange differences recognised in other comprehensive income.

On disposal of a subsidiary that includes a foreign operation, the cumulative amount of the exchange differences relating to that foreign operation that have been attributed to the non-controlling interests shall be derecognised, but shall not be reclassified to profit or loss.

2.8 Cash and cash equivalents

Cash and cash equivalents comprise cash on hand, demand deposits, and short-term investments in highly liquid securities that are readily convertible to known amounts of cash which are subject to an insignificant risk of changes in value. Equity investments are excluded from cash equivalents unless they are, in substance, cash equivalents, for example in the case of preferred shares acquired within a short period of their maturity and with a specified redemption date. Bank overdrafts which are repayable on demand are included as a component of cash and cash equivalents.

2. Basis of preparation and summary of significant accounting policies (cont'd)

2.9 Financial instruments

2.9.1 Financial assets

The classification of a financial asset is made at the time it is initially recognized, namely when the entity becomes a party to the contractual provisions of the instrument.

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

- Those to be measured subsequently at fair value through other comprehensive income
- Those to be measured subsequently at fair value through profit or loss
- 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.

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

Financial assets at fair value through profit or loss

Assets held-for-trading or 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 designation at fair value through profit or loss is allowed only if such designation mitigates an accounting mismatch (irrevocable).

Dividends and interest income from financial assets measured at fair value through profit or loss are also presented within finance income in the year in which they arise.

Financial assets at 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 and never reclassified 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 Finance income and expenses and impairment losses are also presented in finance income and expenses.

2. Basis of preparation and summary of significant accounting policies (cont'd)

2.9 Financial instruments (cont'd)

2.9.1 Financial assets (cont'd)

Financial assets measured at amortized cost

A financial asset is measured at amortized cost if it meets both of the following conditions and is not designated as at fair value through profit or loss.

- it is held within a business model whose objective is to hold assets to collect contractual cash flows, and
- its contractual terms give rise on specified dates to cash flows that are solely payments of principal and interest on the principal amount outstanding.

Financial assets measured at amortized cost are subsequently measured at amortized cost using the effective interest method.

Derecognition

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.

2.9.2 Impairment of financial assets: debt instruments

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. The Group recognizes (at a minimum) 12-month expected credit losses in profit or loss. Lifetime expected losses will be recognized on assets for which there is a significant increase in credit risk after initial recognition.

Stage	Loss allowance
Stage 1: No significant increase in credit risk after initial recognition(*1)	12-month expected credit losses (expected credit losses that result from those default events on the financial instruments that are possible within 12 months after the reporting date)
Stage 2: Significant increase in credit risk after initial recognition	Lifetime expected credit losses (expected credit losses that result from all possible default events over the life of the financial instruments)
Stage 3: Objective evidence of credit impaired	
(*1) If the financial instrument has low credit risk at the reporting date, the Group may assume that the credit risk has not increased significantly since initial recognition.	

The asset that is credit-impaired at initial recognition would recognize all changes in lifetime expected credit losses since the initial recognition as a loss allowance with any changes recognized in profit or loss.

For trade receivables, contract assets and lease receivables, the Group applies the simplified approach, which requires expected lifetime losses to be recognized from initial recognition of the receivables.

Expected credit losses are a probability-weighted estimate of credit losses. When measuring expected credit losses, the Group considers the time value of money, a result of past events at the end of reporting period, present conditions and reasonable and supportable information about forecast on future economic conditions which are relevant and available without undue cost or effort.

2. Basis of preparation and summary of significant accounting policies (cont'd)

2.9 Financial instruments (cont'd)

2.9.3 Financial liabilities

The classification of a financial liability is made at the time it is initially recognised, namely when the entity becomes a party to the contractual provisions of the instrument. At initial recognition, the financial liabilities are classified as financial liabilities at fair value through profit or loss or other financial liabilities and measured at fair value plus transaction costs that are directly attributable to the issuance of the financial liabilities.

Financial liabilities at fair value through profit or loss

A financial liability is classified as at fair value through profit or loss if it is classified as held for-trading, it is a derivative or it is designated as such on initial recognition. Subsequent to initial recognition, financial liabilities at fair value through profit or loss are measured at fair value, and changes therein are recognized in profit or loss. Upon initial recognition, transaction costs that are directly attributable to the acquisition are recognized in profit or loss as incurred.

Financial liabilities other than financial liabilities measured at fair value through profit or loss

Financial liabilities other than financial liabilities measured at fair value through profit or loss are measured at amortized cost using the effective interest method subsequently to initial recognition, except for:

- Financial liabilities that arise when a transfer of a financial asset does not qualify for derecognition or when the continuing involvement approach applies. The associated liability is measured in such a way that the net carrying amount of the transferred asset and the associated liability is:
 - the amortised cost of the rights and obligations retained by the entity, if the transferred asset is measured at amortised cost, or
 - equal to the fair value of the rights and obligations retained by the entity when measured on a stand-alone basis, if the transferred asset is measured at fair value.
- Financial guarantee contracts and commitments to provide a loan at a below-market interest rate. After initial recognition an issuer of such a contract shall (unless the above paragraph applies) subsequently measure it at the higher of:
 - the amount of the loss allowance determined in accordance with expected credit loss approach and
 - the amount initially recognised less, when appropriate, the cumulative amount of income recognized.

Derecognition of financial liabilities

The Group derecognizes a financial liability when its contractual obligations are discharged or cancelled, or expire. The Group also derecognizes a financial liability when its terms are modified and the cash flows of the modified liability are substantially different, in which case a new financial liability based on the modified terms is recognized at fair value. On derecognition of a financial liability, the difference between the carrying amount extinguished and the consideration paid (including any non-cash assets transferred or liabilities assumed) is recognized in profit or loss.

2.9.4 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.

2.9.5 Classification of financial liabilities and equity

Debt instruments and equity instruments are classified as financial liabilities or equity in accordance with the substance of contracts and the definition of financial liabilities and equity instruments.

2. Basis of preparation and summary of significant accounting policies (cont'd)

2.9. Financial instrument (cont'd)

2.9.6 Derivatives

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.

Embedded derivatives

An embedded derivative is a component of a hybrid contract that also includes a non-derivative host, with the effect that some of the cash flows of the combined instrument vary in a way similar to a stand-alone derivative.

- Hybrid contracts with financial asset hosts

If a hybrid contract contains a host that is an asset within the scope of *KIFRS 1109*, the Group considers the entire hybrid contract and does not separate embedded derivatives from the host in classifying financial assets. Also, when judging that the contractual terms of the financial asset give rise to cash flows that are solely payments of principal and interest on the principal amount outstanding, the Group considers the entire hybrid contract.

- Other hybrid contracts

If a hybrid contract contains a host that is not an asset within the scope of *KIFRS 1109*, an embedded derivative is separated from the host and accounted for as a derivative under *KIFRS 1109* if, and only if:

- the economic characteristics and risks of the embedded derivative are not closely related to the economic characteristics and risks of the host
- a separate instrument with the same terms as the embedded derivative would meet the definition of a derivative and
- the hybrid contract is not measured at fair value with changes in fair value recognised in profit or loss (ie a derivative that is embedded in a financial liability at fair value through profit or loss is not separated).

Fair value hedge

For a fair value hedge, the gain or loss on the hedging instrument is recognized in profit or loss (or other comprehensive income, if hedging an equity instrument at fair value through other comprehensive income and the hedging gain or loss on the hedged item adjusts the carrying amount of the hedged item and is recognized in profit or loss. However, if the hedged item is an equity instrument at fair value through other comprehensive income, those amounts remain in other comprehensive income. When a hedged item is an unrecognized firm commitment the cumulative hedging gain or loss is recognized as an asset or a liability with a corresponding gain or loss recognized in profit or loss.

If the hedged item is a debt instrument measured at amortized cost or fair value through other comprehensive income, any hedge adjustment is amortized to profit or loss based on a recalculated effective interest rate. Amortization may begin as soon as an adjustment exists and shall begin no later than when the hedged item ceases to be adjusted for hedging gains and losses.

2. Basis of preparation and summary of significant accounting policies (cont'd)

2.9. Financial instrument (cont'd)

2.9.6 Derivatives (cont'd)

Cash flow hedge

For a cash flow hedge the cash flow hedge reserve in equity is adjusted to the lower of the following (in absolute amounts):

- the cumulative gain or loss on the hedging instrument from inception of the hedge; and
- the cumulative change in fair value of the hedged item from inception of the hedge.

The portion of the gain or loss on the hedging instrument that is determined to be an effective hedge is recognized in other comprehensive income and any remaining gain or loss is hedge ineffectiveness that is recognized in profit or loss.

If a hedged forecast transaction subsequently results in the recognition of a non-financial item or becomes a firm commitment for which fair value hedge accounting is applied, the amount that has been accumulated in the cash flow hedge reserve is removed and included directly in the initial cost or other carrying amount of the asset or the liability. In other cases the amount that has been accumulated in the cash flow hedge reserve is reclassified to profit or loss in the same period(s) as the hedged cash flows affect profit or loss.

When an entity discontinues hedge accounting for a cash flow hedge, if the hedged future cash flows are still expected to occur, the amount that has been accumulated in the cash flow hedge reserve remains there until the future cash flows occur; if the hedged future cash flows are no longer expected to occur, that amount is immediately reclassified to profit or loss.

A hedge of the foreign currency risk of a firm commitment may be accounted for as a fair value hedge or a cash flow hedge.

Hedge of a net investment in a foreign operation

The portion of the gain or loss on the hedging instrument that is determined to be an effective hedge is recognized in other comprehensive income and the ineffective portion is recognized in profit or loss.

The cumulative gain or loss on the hedging instrument relating to the effective portion of the hedge is reclassified to profit or loss on the disposal or partial disposal of the foreign operation in accordance with *KIFRS 1021 The Effects of Changes in Foreign Exchange Rates*.

2.10 Inventories

The cost of inventories is determined using the periodic average method (specific identification method for raw materials in transit), and includes expenditures for acquiring the inventories, production or conversion costs and other costs incurred in bringing them to their existing location and condition.

Inventories are measured at the lower of cost and net realizable value. The amount of any write-down of inventories to net realizable value and all losses of inventories are recognized as an expense in the period the write-down or loss occurs.

The amount of any reversal of any write-down of inventories, arising from an increase in net realizable value, are recognized as a reduction in the amount of inventories recognized as an expense in the period in which the reversal occurs.

2. Basis of preparation and summary of significant accounting policies (cont'd)

2.11 Investment properties

Investment properties are held to earn rentals or for capital appreciation or both. Investment properties are measured initially at its cost including transaction costs incurred in acquiring the asset. After recognition as an asset, investment properties are carried at cost less accumulated depreciation and impairment losses.

Subsequent costs are recognized in the carrying amount of investment property at cost or, if appropriate, as separate items if it is probable that future economic benefits associated with the item will flow to the Company and the cost of the item can be measured reliably. The carrying amount of the replaced part is derecognized. The costs of the day-to-day servicing are recognized in profit or loss as incurred.

Investment properties, except for land, are depreciated using straight-line method over their useful lives of 40 years. Depreciation methods, useful lives and residual values are reviewed at the end of each reporting date and adjusted, if appropriate. The change is accounted for as a change in an accounting estimate.

The Group transfers a property to, or from, investment property, when and only when there is evidence of the change in use and transfers between investment property, owner-occupied property and inventories do not change the carrying amount of the property transferred.

An investment property is derecognised (eliminated from the consolidated statement of financial position) on disposal or when the investment property is permanently withdrawn from use and no future economic benefits are expected from its disposal. Net disposal proceeds are measured initially at fair value and gains or losses arising from the retirement or disposal of investment property is recognised in profit or loss in the period of the retirement or disposal.

2.12 Property, plant and equipment

Property, plant and equipment is stated at cost, net of accumulated depreciation and accumulated impairment losses, if any. Such cost includes the cost of replacing part of the property, plant and equipment and borrowing costs for long-term construction projects if the recognition criteria are met. When significant parts of property, plant and equipment are required to be replaced at intervals, the Group recognizes such parts as individual assets with specific useful lives and depreciates them accordingly. Likewise, when a major inspection is performed, its cost is recognized in the carrying amount of the plant and equipment as a replacement if the recognition criteria are satisfied. All other repair and maintenance costs are recognized in profit or loss as incurred.

Depreciation is calculated on a straight-line basis over the following estimated useful lives.

	Useful life
Buildings	40 years
Structures	20 years
Machinery	5 ~ 10 years
Others	4 ~ 5 years

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

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

2. Basis of preparation and summary of significant accounting policies (cont'd)

2.13 Intangible assets

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

In relation to business combination, the excess of consideration transferred, amount of any non-controlling interest in the acquired entity and acquisition-date fair value of any previous equity interest in the acquired entity over the fair value of the net identifiable assets acquired is recorded as goodwill.

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

Expenditures on research activities, undertaken with the prospect of gaining new scientific or technical knowledge and understanding, are recognized in profit or loss as incurred. Development expenditures are capitalized only if development costs can be measured reliably, the product or process is technically and commercially feasible, future economic benefits are probable, and the Company intends to and has sufficient resources to complete development and to use or sell the asset. Other development expenditures are recognized in profit or loss as incurred.

The cost of an internally generated intangible asset is the sum of expenditure incurred from the date when the intangible asset first meets the recognition criteria. The cost of an internally generated intangible asset comprises all directly attributable costs necessary to create, produce, and prepare the asset to be capable of operating in the manner intended by management. Expenditures on internally generated goodwill are recognized in profit or loss as incurred.

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

Gains or losses arising from de-recognition of an intangible asset are measured as the difference between the net disposal proceeds and the carrying amount of the asset and are recognized in the consolidated statement of profit or loss and other comprehensive income when the asset is derecognized.

Amortization method and the estimated useful lives of intangible assets are as follows.

	Useful life	Amortization method
Industrial property rights, trademarks and development cost	10 years	straight line
Goodwill	indefinite	-
Memberships	indefinite	-
Know-how and customer relationship	5 years	straight line
Other intangible assets	5 years	straight line

2. Basis of preparation and summary of significant accounting policies (cont'd)

2.14 Non-current assets held for sale and discontinued operations

When a non-current asset or disposal group will be recovered principally through sale rather than through continuing use, the Group classifies the asset or disposal group as 'assets (or disposal groups) held for sale'. Assets (or disposal groups) held for sale are not depreciated, are measured at the lower of carrying amount and fair value less costs to sell and are presented separately in the statement of financial position.

The following conditions must be met for an asset (or 'disposal group') to be classified as held for sale:

- management is committed to a plan to sell
- the asset is available for immediate sale
- actions required to complete the plan indicate that it is unlikely that plan will be significantly changed or withdrawn
- the sale is highly probable, within 12 months of classification as held for sale

A discontinued operation is a component of an entity that either has been disposed of or is classified as held for sale, and:

- represents either a separate major line of business or a geographical area of operations
- is part of a single coordinated plan to dispose of a separate major line of business or geographical area of operations, or
- is a subsidiary acquired exclusively with a view to resale and the disposal involves loss of control.

The sum of the profit before income tax or loss of the discontinued operation is presented as a single amount on the face of the statement of comprehensive income.

2.15 Borrowing costs

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

To the extent that the Company borrows funds specifically for the purpose of obtaining a qualifying asset, the Group determines the amount of borrowing costs eligible for capitalization as the actual borrowing costs incurred on that borrowing during the period less any investment income on the temporary investment of those borrowings. The Group immediately recognizes other borrowing costs as an expense. To the extent that the Group borrows funds generally and uses them for the purpose of obtaining a qualifying asset, the Group shall determine the amount of borrowing costs eligible for capitalization by applying a capitalization rate to the expenditures on that asset. The capitalization rate shall be the weighted average of the borrowing costs applicable to the borrowings of the Group that are outstanding during the period, other than borrowings made specifically for the purpose of obtaining a qualifying asset. The amount of borrowing costs that the Group capitalizes during a period shall not exceed the amount of borrowing costs incurred during that period.

2.16 Government grants

Government grants are recognized where there is reasonable assurance that the grant will be received and all attached conditions will be complied with. When the grant relates to an expense item, it is recognized as income on a systematic basis over the periods that the related costs, for which it is intended to compensate, are expensed. When the grant relates to an asset, it is recognized as income in equal amounts over the expected useful life of the related asset.

When the Group receives grants of non-monetary assets, the asset and the grant are recorded at nominal amounts and released to profit or loss over the expected useful life in a pattern of consumption of the benefit of the underlying asset by equal annual instalments. When loans or similar assistance are provided by governments or related institutions, with an interest rate below the current applicable market rate, the effect of this favorable interest is regarded as a government grant. The loan or assistance is initially recognized and measured at fair value and the government grant is measured as the difference between the initial carrying value of the loan and the proceeds received.

A government grant that becomes repayable shall be accounted for as a change in accounting estimate.

2. Basis of preparation and summary of significant accounting policies (cont'd)

2.17 Lease

A lease is a contract, whereby the lessor conveys to the lessee, the right to control the use of an identified asset for a period of time in exchange for consideration. At inception of a contract, the Group assesses whether the contract is, or contains, a lease.

For a contract that is, or contains, a lease, both lessee and lessor account for each lease component within the contract as a lease separately from non-lease components of the contract. In lessee accounting, however, the Group does not account them separately but instead applies the practical expedient to account for each lease component and any associated non-lease components as a single lease component.

The Group recognizes a right-of-use asset representing its right to use the underlying leased asset and a lease liability representing its obligation to make lease payments at the commencement date of the lease.

The Group has elected not to recognize right-of-use assets and lease liabilities for leases of low-value assets and short-term leases.

The right-of-use asset is measured at its cost less subsequent accumulated depreciation and accumulated impairment loss with adjustments reflected arising from remeasurements of the lease liability. 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 from the commencement date of the lease.

The lease liability is initially measured at the present value of the lease payments that are not paid at the commencement date, discounted using the interest rate implicit in the lease or, if that rate cannot be readily determined the Group's incremental borrowing rate.

The lease liability is subsequently increased by the amount of interest expenses recognized on the lease liability and reduced by the lease payments made. Lease liabilities are remeasured when the future lease payments are changed due to the following:

- Changes in an index or a rate
- Changes in amounts expected to be payable by the lessee under residual value guarantees
- Changes in the assessment of whether a purchase option or an option to renew is reasonably certain to be exercised, or
- Changes in the assessment of whether it is reasonably certain that an option to terminate the lease will not be exercised.

Lease liabilities are classified as 'lease liabilities' in current liabilities or 'lease liabilities' in non-current liabilities in the consolidated financial statements.

The Group elected not to apply the requirements to short-term leases (i.e., a lease term of 12 months or less at the commencement date) and low value assets. In these cases, lease payments are charged to profit or loss on a straight-line basis over the period of lease as a practical expedient.

2. Basis of preparation and summary of significant accounting policies (cont'd)

2.18 Provisions

Provisions are recognized when the Group has a present obligation (legal or constructive) as a result of a past event, it is probable that an outflow of resources embodying economic benefits will be required to settle the obligation and a reliable estimate can be made of the amount of the obligation.

The risks and uncertainties that inevitably surround many events and circumstances are taken into account in reaching the best estimate of a provision. Where the effect of the time value of money is material, provisions are determined at the present value of the expected future cash flows.

The discount rate shall be a pre-tax rate that reflects current market assessments of the time value of money and the risks specific to the liability. The discount rate shall not reflect risks for which future cash flow estimates have been adjusted. Future events that may affect the amount required to settle an obligation shall be reflected in the amount of a provision where there is sufficient objective evidence that they will occur. Gains from the expected disposal of assets shall not be taken into account in measuring a provision.

Where some or all of the expenditures required to settle a provision are expected to be reimbursed by another party, the reimbursement shall be recognized when, and only when, it is virtually certain that reimbursement will be received if the entity settles the obligation. The reimbursement shall be treated as a separate asset and the amount of the asset shall not exceed the amount of the related provision.

Provisions are reviewed at the end of each reporting period and adjusted to reflect the current best estimates. If it is no longer probable that an outflow of resources embodying economic benefits will be required to settle the obligation, the provision is reversed. A provision is used only for expenditures for which the provision was originally recognized.

2.19 Treasury shares

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

2. Basis of preparation and summary of significant accounting policies (cont'd)

2.20 Revenue recognition

The Group applied *KIFRS 1115* to the annual period beginning January 1, 2018. The Group shall recognize revenue in accordance with *KIFRS 1115* by applying the following 5 steps: ① Identify the contracts with the customers, ② Identify the separate performance obligations, ③ Determine the transaction price of the contract, ④ Allocate the transaction price to each of the separate performance obligations, and ⑤ Recognize the revenue as each performance obligation is satisfied.

Identification of performance obligations

The Group identifies distinct performance obligation if both of the following criteria are met:

- the customer can benefit from the good or services on its own or in conjunction with other readily available resources; and
- the entity's promise to transfer the good or service to the customer is separately identifiable from other promises in the contract

The Group exports various products and merchandise in accordance with Incoterms Group C trading conditions (Incoterms CIF, etc.). According to *KIFRS 1115*, since the seller provides the shipping service after control of the product or merchandise has been transferred to the customer, the shipping service (including insurance) is recognized as a separate performance obligation.

The Group recognizes revenue when (or as) the Group transfers control of goods to a customer. The Group refers to the following factors that may indicate the point in time at which control passes to the customer.

- the entity has a present right to payment for the asset;
- the customer has legal title to the asset;
- the entity has transferred physical possession of the asset;
- the customer has the significant risks and rewards related to the ownership of the asset; and
- the customer has accepted the asset.

Significant financing components

The Group receives advance payments from some customers. There are some contracts under which the gap between the notional cash sales price and the effect of advance payment terms can be significant and the timing difference between receipt of advance payment and transference of goods to the customers is longer than 1 year. Accordingly, these contracts are regarded to have significant financing components. For these contracts, the amount allocated to the significant financing component is presented separately from revenue recognized from contracts with customers, which will lead to increase in advance received. The advance will be transferred to revenue when the performance obligations are satisfied.

However, for the contracts under which the timing difference between receipt of advance payment and transference of goods to the customers is within 1 year, the Group does not present the amount allocated to the significant financing component separately from revenue recognized from contracts with customers.

Contract assets and contract liabilities

Contract assets are rights to consideration in exchange for goods or services that the entity has transferred to the customer when the right is conditional on something other than the passage of time. Contract liabilities are obligation to transfer goods or services to the customer for which the entity has received consideration, or for which an amount of consideration is due from the customer.

The Group presents either a net contract asset or a net contract liability when a contract asset and a contract liability originate from a single contract.

2. Basis of preparation and summary of significant accounting policies (cont'd)

2.21 Employee benefits

Short-term employee benefits

Short-term employee benefits are employee benefits that are due to be settled within 12 months after the end of the period in which the employees render the related service. When an employee has rendered service to the Group during an accounting period, the Group recognizes the undiscounted amount of short-term employee benefits expected to be paid in exchange for that service.

Retirement benefits: defined contribution plans

The Group operates defined contribution plans for some executives. For defined contribution plans, the amount recognized in the period is the contribution payable in exchange for service rendered by employees during the period.

Contributions to a defined contribution plan which are not expected to be wholly settled within 12 months after the end of the annual reporting period in which the employee renders the related service are discounted to their present value.

Retirement benefits: defined benefit plans

The Group operates defined benefit plans for most of employees. The Group's net obligation in respect of defined benefit plans is calculated separately for each plan by estimating the amount of future benefit that employees have earned in the current and prior periods, discounting that amount and deducting the fair value of any plan assets.

The calculation of defined benefit obligations is performed annually by a qualified actuary using the projected unit credit method. When the calculation results in a potential asset for the Group, the recognized asset is limited to the present value of economic benefits available in the form of any future refunds from the plan or reductions in future contributions to the plan.

Remeasurements of the net defined benefit liability, which comprise actuarial gains and losses, the return on plan assets (excluding interest) and the effect of the asset ceiling (if any, excluding interest), are recognized immediately in OCI. The Group determines the net interest expense (income) on the net defined benefit liability (asset) for the period by applying the discount rate used to measure the defined benefit obligation at the beginning of the annual period to the then-net defined benefit liability (asset), taking into account any changes in the net defined benefit liability (asset) during the period as a result of contributions and benefit payments. Net interest expense and other expenses related to defined benefit plans are recognized in profit or loss.

When the benefits of a plan are changed or when a plan is curtailed, the resulting change in benefit that relates to past service or the gain or loss on curtailment is recognized immediately in profit or loss. The Group recognizes gains and losses on the settlement of a defined benefit plan when the settlement occurs.

Other long-term employee benefits

Other long-term employee benefits include employee benefits that are expected to be settled beyond 12 months after the end of the annual reporting period in which the employees render the related service.

The Group's net obligation in respect of long-term employee benefits is the amount of future benefit that employees have earned in return for their service in the current and prior periods.

Termination benefits

Termination benefits are expensed at the earlier of when the Group can no longer withdraw the offer of those benefits and when the Group recognizes costs for a restructuring. If benefits are not expected to be settled wholly within 12 months of the reporting date, then they are discounted.

2. Basis of preparation and summary of significant accounting policies (cont'd)

2.22 Impairment of non-financial assets

The carrying amounts of the Group's non-financial assets, other than assets arising from contract assets recognized in accordance with revenue from contracts with customers, employee benefits, financial assets, investment property measured at fair value, inventories, deferred tax assets and non-current assets held for sale, are reviewed at the end of the reporting period to determine whether there is any indication of impairment. If any such indication exists, then the asset's recoverable amount is estimated.

Goodwill and intangible assets that have indefinite useful lives or that are not yet available for use, irrespective of whether there is any indication of impairment, are tested for impairment annually by comparing their recoverable amount to their carrying amount.

The Group estimates the recoverable amount of an individual asset. If it is impossible to measure the individual recoverable amount of an asset, then the Group estimates the recoverable amount of cash-generating unit ("CGU"). A CGU is the smallest identifiable group of assets that generates cash inflows that are largely independent of the cash inflows from other assets or groups of assets. The Group determined that individual operating entities are CGUs.

The recoverable amount of an asset or CGU is the greater of its value-in-use and its fair value less costs to sell. An impairment loss is recognized if the carrying amount of an asset or a CGU exceeds its recoverable amount. Impairment losses are recognized in profit or loss.

Goodwill acquired in a business combination is allocated to each CGU that is expected to benefit from the synergies arising from the goodwill acquired. Any impairment identified at the CGU level will first reduce the carrying amount of goodwill and then be used to reduce the carrying amount of the other assets in the CGU on a pro rata basis. Except for impairment losses in respect of goodwill which are never reversed, an impairment loss is reversed if there has been a change in the estimates used to determine the recoverable amount. An impairment loss is reversed only to the extent that the asset's carrying amount does not exceed the carrying amount that would have been determined, net of depreciation or amortization, if no impairment loss had been recognized.

2.23 Taxes

Current income tax

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

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

2. Basis of preparation and summary of significant accounting policies (cont'd)

2.23 Taxes (cont'd)

Deferred tax

Deferred tax is provided using the liability method on temporary differences between the tax bases of assets and liabilities and their carrying amounts for financial reporting purposes at the reporting date.

Deferred tax liabilities are recognized for all taxable temporary differences, except:

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

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

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

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

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

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

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

Income tax expense for the period is recognized based on management's best estimate of the weighted average annual income tax rate expected for the full financial year. The estimated average annual tax rate is applied to the pre-tax income.

2.24 Earnings per share

The Group presents earnings per share (EPS) data for its ordinary shares. Basic EPS is calculated by dividing the profit or loss attributable to ordinary shareholders of the parent company by the weighted average number of ordinary shares outstanding during the period, adjusted for own shares held. Diluted EPS is determined by adjusting the profit or loss attributable to ordinary shareholders and the weighted average number of ordinary shares outstanding, adjusted for own shares held, for the effects of all dilutive potential ordinary shares, which comprise convertible notes and share options granted to employees.

2. Basis of preparation and summary of significant accounting policies (cont'd)

2.25 Estimates and assumptions

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

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. Those techniques include the method using recent market transactions between knowledgeable, willing parties in an arm's length transaction, the method using current fair value of the other financial instruments that are substantially the same, discounted cash flow method, option pricing method, etc. The Group periodically adjusts its valuation techniques and uses its judgment to select a variety of methods and make assumptions using the price of observable recent market transaction and reviewing its relevance based on observable market data.

Defined benefit plans

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

Impairment of investment in associates

The Group assesses whether objective evidence exists that investment in associates are impaired at the end of the each reporting period.

In case that carrying amount of investment in associates exceeds its recoverable amount as a result of impairment test, the Group recognizes impairment loss. The recoverable amount is determined based on the independent external expert's report on value-in-use. The recoverable amount is estimated by discounting the future cash flows expected to generate from the investment in associates.

In estimating the recoverable amount, the Group used key assumptions such as expected growth rate of revenue, perpetual growth rate, weighted average cost of capital, etc.

3. Classification and fair value of financial instruments

(1) The components of financial assets as of December 31, 2023 and 2022 are as follows (Korean won in thousands):

	2023			
	Financial assets at fair value through profit or loss	Financial assets measured at amortized cost	Financial assets at fair value through other comprehensive income	Total
Cash and cash equivalents	₩ -	66,697,909	-	66,697,909
Short-term financial instruments (*1)	-	13,022,445	-	13,022,445
Trade receivables	-	101,111,566	-	101,111,566
Short-term loans and other receivables	-	14,662,648	-	14,662,648
Short-term financial assets at fair value through profit or loss	9,881,414	-	-	9,881,414
Short-term financial assets measured at amortized cost	-	-	-	-
Long-term financial instruments (*1)	-	352,000	-	352,000
Long-term loans and other receivables	-	23,597,788	-	23,597,788
Long-term financial assets at fair value through profit or loss	32,099,939	-	-	32,099,939
Long-term financial assets measured at amortized cost	-	120,000	-	120,000
Long-term financial assets at fair value through OCI	-	-	153,735	153,735
	₩ 41,981,353	219,564,356	153,735	261,699,444

(*1) Short-term financial instruments of ₩10,020,000 thousand and long-term financial instruments of ₩350,000 thousand are provided as collateral as of December 31, 2023 (see Note 34 (1)).

	2022			
	Financial assets at fair value through profit or loss	Financial assets measured at amortized cost	Financial assets at fair value through other comprehensive income	Total
Cash and cash equivalents	₩ -	53,576,755	-	53,576,755
Short-term financial instruments (*1)	-	13,165,044	-	13,165,044
Trade receivables	-	39,272,301	-	39,272,301
Short-term loans and other receivables	-	11,986,349	-	11,986,349
Short-term financial assets at fair value through profit or loss	7,446,243	-	-	7,446,243
Short-term financial assets measured at amortized cost	-	4,610	-	4,610
Long-term financial instruments	-	2,617,232	-	2,617,232
Long-term loans and other receivables	-	23,777,463	-	23,777,463
Long-term financial assets at fair value through profit or loss	37,445,147	-	-	37,445,147
Long-term financial assets measured at amortized cost	-	6,929,940	-	6,929,940
Long-term financial assets at fair value through OCI	-	-	81,455	81,455
	₩ 44,891,390	151,329,694	81,455	196,302,539

(*1) Short-term financial instruments of ₩13,150,110 thousand are provided as collateral as of December 31, 2022 (see Note 34 (1))

3. Classification of financial instruments (cont'd)

(2) The components of financial liabilities as of December 31, 2023 and 2022 are as follows (Korean won in thousands):

		2023	
		Financial liabilities at fair value through profit or loss	Financial liabilities measured at amortized cost
			Total
Trade payables	₩	-	42,472,700
Other payables		-	44,015,349
Accrued expenses		-	15,008,127
Leasehold deposits received		-	803,900
Short-term financial liabilities at fair value through profit or loss		1,059,057	-
Short-term lease liabilities		-	1,560,804
Short-term borrowings		-	89,232,018
Current portion of long-term borrowings		-	15,250,356
Long-term other payables			255,069
Long-term accrued expenses			18,960
Bonds			10,000,000
Bonds with warrant			200,000
Long-term borrowings		-	21,104,800
Long-term financial liabilities at fair value through profit or loss			
Long-term lease liabilities		-	991,665
	₩	1,059,057	240,913,748
			241,972,805

		2022	
		Financial liabilities at fair value through profit or loss	Financial liabilities measured at amortized cost
			Total
Trade payables	₩	-	37,377,265
Other payables		-	24,294,886
Accrued expenses		-	9,732,911
Leasehold deposits received		-	69,049
Short-term financial liabilities at fair value through profit or loss		1,801,079	-
Short-term lease liabilities		-	1,524,444
Short-term borrowings		-	44,318,000
Current portion of long-term borrowings		-	853,420
Long-term other payables			165,347
Long-term borrowings		-	15,953,495
Long-term financial liabilities at fair value through profit or loss		271,052	
Long-term lease liabilities		-	1,243,675
	₩	2,072,131	135,532,492
			137,604,623

3. Classification of financial instruments (cont'd)

(3) Net income (loss) for financial instruments by categories for the years ended December 31, 2023 and 2022 are as follows (Korean won in thousands):

2023					
	Gain (Loss) on foreign currency translation/ transactions	Interest income (expense)	Other financial income (expense)	Other compre- hensive income (expense)	Total
Cash and cash equivalents	₩ 1,279,301	1,864,877	-	-	3,144,178
Trade receivables	(1,175,171)	-	-	-	(1,175,171)
Loans and other receivables	108,024	1,031,805	-	-	1,139,829
Financial instruments	-	124,999	-	-	124,999
Financial assets at fair value through profit or loss	(98,492)	93,447	(394,650)	-	(399,695)
Financial assets measured at amortized cost	-	121,212	(311,029)	-	(189,817)
Financial assets at fair value through OCI	-	-	(1,449)	1,168,824	1,167,375
Trade and other payables, accrued expenses and leasehold deposits received	375,478	-	-	-	375,478
Borrowings	(3,453)	(3,519,694)	-	-	(3,523,147)
Lease liabilities	-	61,387	-	-	61,387
	₩ 485,687	(221,967)	(707,128)	1,168,824	725,416

2022					
	Gain (Loss) on foreign currency translation/ transactions	Interest income (expense)	Other financial income (expense)	Other compre- hensive income (expense)	Total
Cash and cash equivalents	₩ (644,614)	742,764	-	-	98,150
Trade receivables	896,051	-	-	-	896,051
Loans and other receivables	118,377	675,878	-	-	794,255
Long-term financial instruments	-	166,615	-	-	166,615
Financial assets at fair value through profit or loss	14,345	5,819	(4,545,953)	-	(4,525,789)
Financial assets measured at amortized cost	695,695	354,314	(404,576)	-	645,433
Financial assets at fair value through OCI	-	-	649	(136,787)	(136,138)
Trade and other payables, accrued expenses and leasehold deposits received	(993,774)	-	-	-	(993,774)
Borrowings	-	(840,567)	-	-	(840,567)
Lease liabilities	-	(72,962)	-	-	(72,962)
	₩ 86,080	1,031,861	(4,949,880)	(136,787)	(3,968,726)

3. Classification of financial instruments (cont'd)

(4) Fair value measurement

a) Fair value hierarchy and measurement

Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. The fair value measurement is based on the presumption that the transaction to sell the asset or transfer the liability takes place either in the principal market for the asset or liability, or in the absence of a principal market, in the most advantageous market for the asset or liability. All assets and liabilities for which fair value is measured or disclosed in the consolidated financial statements are categorized within the fair value hierarchy, described as follows, based on the lowest level input that is significant to the fair value measurement as a whole:

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

There are no quoted market prices in active markets for non-marketable equity securities. Carrying amount is considered to be a reasonable approximation of fair value.

b) Fair value hierarchy classification

Fair value hierarchy classifications of the financial assets and financial liabilities that are measured at fair value as of December 31, 2023 and 2022 are as follows (Korean won in thousands):

		2023				
		Book value	Level 1	Level 2	Level 3	Total
Assets						
Financial assets at fair value through profit or loss	₩	26,967,163	1,531,701	2,319,562	23,115,900	26,967,163
Liabilities						
Financial liabilities at fair value through profit or loss	₩	1,059,057	-	1,059,057	-	1,059,057

Non-marketable equity securities which are classified as financial assets at fair value but measured at cost are not included in fair value hierarchy classification.

		2022				
		Book value	Level 1	Level 2	Level 3	Total
Assets						
Financial assets at fair value through profit or loss	₩	31,169,376	2,361,183	2,913,400	25,894,793	31,169,376
Liabilities						
Financial liabilities at fair value through profit or loss	₩	2,072,131	-	2,072,131	-	2,072,131

Non-marketable equity securities which are classified as financial assets at fair value but measured at cost are not included in fair value hierarchy classification.

3. Classification of financial instruments (cont'd)

Information on valuation techniques and input in fair value hierarchy level 2 as of December 31, 2023 and 2022 are as follows (Korean won in thousands):

	2023		
	Fair value as of Dec. 31, 2023	Valuation techniques	Major inputs
(Assets)			
Financial assets at fair value through profit or loss			
Foreign exchange forward contracts	₩ 2,319,562	DCF model	Forward price, discount rate and others
TRF		Option pricing model	Foreign currency exchange rate, inherent volatility, maturity and others
Equity funds and others		Conversion of base price and number of holding accounts	
	₩ 2,319,562		
(Liabilities)			
Financial liabilities at fair value through profit or loss			
Foreign exchange forward contracts	₩ 1,059,057	DCF model	Forward price, discount rate and others
TRF		Option pricing model	Foreign currency exchange rate, inherent volatility, maturity and others
	₩ 1,059,057		
	2022		
	Fair value as of Dec. 31, 2022	Valuation techniques	Major inputs
(Assets)			
Financial assets at fair value through profit or loss			
Foreign exchange forward contracts	2,900,172	DCF model	Forward price, discount rate and others
TRF	13,228	Option pricing model	Foreign currency exchange rate, inherent volatility, maturity and others
Equity funds and others		Conversion of base price and number of holding accounts	
	₩ 2,913,400		
(Liabilities)			
Financial liabilities at fair value through profit or loss			
Foreign exchange forward contracts	1,835,311	DCF model	Forward price, discount rate and others
TRF	236,820	Option pricing model	Foreign currency exchange rate, inherent volatility, maturity and others
	₩ 2,072,131		

3. Classification of financial instruments (cont'd)

Information on valuation techniques and input in fair value hierarchy level 3 as of December 31, 2023 and 2022 are as follows (Korean won in thousands):

		2023	
(Assets)	Fair value as of Dec. 31, 2023	Valuation techniques	Major inputs
Equity funds and others	₩ 23,115,900	Conversion of base price and number of holding accounts	
		2022	
(Assets)	Fair value as of Dec. 31, 2022	Valuation techniques	Major inputs
Equity funds and others	₩ 25,894,793	Conversion of base price and number of holding accounts	

Information on changes in fair value hierarchy level 3 as of December 31, 2023 and 2022 are as follows (Korean won in thousands)

	2023	2022
Beginning balance	₩ 25,894,792	₩ 40,124,795
Newly included	14,306,500	5,204,600
Gain (loss) valuation	(177,899)	(2,342,024)
Other comprehensive income	-	-
Disposal	(16,907,493)	(17,092,579)
Ending balance	₩ 23,115,900	₩ 25,894,792

3. Classification of financial instruments (cont'd)

Carrying amount and fair value of financial instruments by category as of December 31, 2023 and 2022 are as follows (Korean won in thousands):

	2023		2022	
	Book value	Fair value	Book value	Fair value
(Financial assets at fair value) (*1)				
Equity securities	₩ 1,685,436	1,685,436	₩ 2,442,638	2,442,638
Equity funds	38,130,091	38,130,091	39,616,808	39,616,808
Foreign exchange forward contracts and TRF contracts	2,319,562	2,319,562	2,913,399	2,913,399
	₩ 42,135,089	42,135,089	₩ 44,972,845	44,972,845
(Assets measured at amortized cost) (*2)				
Cash and cash equivalents	₩ 66,697,909	66,697,909	₩ 53,576,755	53,576,755
Short-term deposits	13,022,445	13,022,445	13,165,044	13,165,044
Long-term deposits	352,000	352,000	2,617,232	2,617,232
Trade receivables	101,111,566	101,111,566	39,272,301	39,272,301
Loans and other receivables	38,260,436	38,260,436	35,763,812	35,763,812
Government bonds and corporate bonds	120,000	120,000	6,934,550	6,934,550
	₩ 219,564,356	219,564,356	₩ 151,329,694	151,329,694
(Liabilities at fair value) (*3)				
TRF contracts	₩ 1,059,057	1,059,057	₩ 2,072,131	2,072,131
(Liabilities measured at amortized cost) (*2)				
Trade payables	₩ 42,472,700	42,472,700	₩ 37,377,265	37,377,265
Other payables	44,270,418	44,270,418	24,460,233	24,460,233
Accrued expenses	15,027,087	15,027,087	9,732,911	9,732,911
Leasehold deposits received	803,900	803,900	69,049	69,049
Bonds	10,000,000	10,000,000	-	-
Bonds with warrant	200,000	200,000	-	-
Borrowings	125,587,175	125,587,175	61,124,915	61,124,915
Lease liabilities	2,552,469	2,552,469	2,768,119	2,768,119
	₩ 240,913,749	240,913,749	₩ 135,532,492	135,532,492

Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants. In estimating the fair value of an asset or a liability, the fair value is estimated based on some techniques and assumptions.

Principal techniques and key assumptions used for the above fair value measurement are as follows:

(*1) Marketable equity securities:

Marketable equity securities are measured at fair value based on quoted market prices in active markets. There is no significant difference between carrying amount and fair value.

(*2) Financial assets and liabilities measured at amortization cost except for borrowing:

Carrying amount is considered to be a reasonable approximation of fair value.

(*3) Derivatives:

Derivatives such as forward contracts and TRF contracts are measured based on valuation techniques for which input that is significant to the fair value measurement is directly or indirectly observable.

4. Cash and cash equivalents

Cash and cash equivalents as of December 31, 2023 and 2022 are as follows (Korean won in thousands):

	2023	2022
Cash on hand	₩ 7,721	₩ 14,838
Demand deposits	25,470,888	32,889,165
Other cash equivalents (*1)	41,219,300	20,672,752
	<u>₩ 66,697,909</u>	<u>₩ 53,576,755</u>

(*1) Consists of electronic short-term bonds, repurchase agreements and others.

5. Trade receivables, loans and other receivables

(1) Trade receivables, loans and other receivables as of December 31, 2023 and 2022 are as follows (Korean won in thousands):

	2023		2022	
	Current assets	Non-current assets	Current assets	Non-current assets
Trade receivables	₩ 101,165,422	-	₩ 39,323,337	-
Less: allowance for doubtful accounts	(53,856)	-	(51,036)	-
	<u>₩ 101,111,566</u>	<u>-</u>	<u>₩ 39,272,301</u>	<u>-</u>
Loans and other receivables	₩ 14,663,241	23,597,788	₩ 11,986,911	23,777,463
Less: allowance for doubtful accounts	594	-	562	-
	<u>14,662,647</u>	<u>23,597,788</u>	<u>11,986,349</u>	<u>23,777,463</u>
	<u>₩ 115,774,213</u>	<u>23,597,788</u>	<u>₩ 51,258,650</u>	<u>23,777,463</u>

(2) Details of loans and other receivables as of December 31, 2023 and 2022 are as follows (Korean won in thousands):

	2023		2022	
	Current assets	Non-current assets	Current assets	Non-current assets
Loans	₩ -	18,398,605	₩ 7,093	20,000,000
Non-trade receivables	12,037,144	3,884	7,937,759	3,920
Accrued income	211,391	97,358	206,515	-
Leasehold deposits	2,414,112	5,097,941	2,087,786	3,773,543
Others	-	-	1,747,196	-
	<u>₩ 14,662,647</u>	<u>23,597,788</u>	<u>₩ 11,986,349</u>	<u>23,777,463</u>

5. Trade receivables, loans and other receivables (cont'd)

(3) Aging analysis of trade receivables, loans and other receivables as of December 31, 2023 and 2022 are as follows (Korean won in thousands):

	2023		
	Trade receivables	Short-term loans and other receivables	Long-term loans and other receivables
Not past due:	₩ 101,111,566	14,662,647	23,597,788
Past due but not impaired:			
- Less than 3 months		-	-
- 4 ~ 6 months	-	-	-
- 7 ~ 12 months	-	-	-
- Over 12 months	-	-	-
Impaired:	53,856	594	-
	₩ 101,165,422	14,663,241	23,597,788

	2022		
	Trade receivables	Short-term loans and other receivables	Long-term loans and other receivables
Not past due:	₩ 39,272,301	11,986,349	23,777,463
Past due but not impaired:			
- Less than 3 months		-	-
- 4 ~ 6 months	-	-	-
- 7 ~ 12 months	-	-	-
- Over 12 months	-	-	-
Impaired:	51,036	562	-
	₩ 39,323,337	11,986,911	23,777,463

(4) Changes in allowance for doubtful accounts for the years ended December 31, 2023 and 2022 are as follows (Korean won in thousands):

	2023		
	Trade receivables	Short-term loans and other receivables	Long-term loans and other receivables
Beginning balance:	₩ 51,036	562	-
Bad debt expenses:	2,820		-
Write-off:		-	-
Reversal of allowance for doubtful accounts:			-
Others (*1)		32	
Ending balance	₩ 53,856	594	-

(*1) Change in consolidated entities

	2022		
	Trade receivables	Short-term loans and other receivables	Long-term loans and other receivables
Beginning balance:	₩ 336,267	-	-
Bad debt expenses:		562	-
Write-off:	(121)	-	-
Reversal of allowance for doubtful accounts:	(285,110)	-	-
Ending balance	₩ 51,036	562	-

5. Trade receivables, loans and other receivables (cont'd)

(5) The Group's policy of establishing allowance for doubtful accounts is as follows.

For trade receivables, the Group applies 'loss provision table' to provide for expected credit losses.

Loss provision table is based on the overdue days of group of customers who have similar default features (i.e. types of goods transferred, credit grade, mortgaged amount or insurance coverage amount).

Loss provision table is prepared on the past default rate. The Group tunes the factors of the loss provision table reflecting economic status forecast. For example, when it is expected that the future economic status (i.e. GDP forecast) is worse, the past default rate is tuned into a higher level. The past default rate is tuned on the every reporting date reflecting economic forecast.

Although scale of expected credit losses is sensitive to the future economic status, the scale of expected credit losses does not represent the actual default rate in the future.

(6) Details of impaired trade receivables as of December 31, 2023 and 2022 are as follows (Korean won in thousands):

		Value before impaired	Allowance for doubtful accounts	Mortgage and other credit back-ups	
				description	Fair value
2023	Trade receivables	₩ 6,201,107	53,856	Properties	-
	Shor-term loans and other receivables	49,476	594	-	-
		Value before impaired	Allowance for doubtful accounts	Mortgage and other credit back-ups	
				description	Fair value
2022	Trade receivables	₩ 2,183,725	51,036	-	-
	Shor-term loans and other receivables	108,772	562	-	-

6. Financial assets at fair value through profit or loss

Financial assets at fair value through profit or loss as of December 31, 2023 and 2022 are as follows (Korean won in thousands):

		2023	2022
(current)			
Foreign exchange forward contracts and TRF contracts	₩	630,346	₩ 13,227
Equity funds		9,251,068	7,433,016
	₩	9,881,414	₩ 7,446,243
(non-current)			
Foreign exchange forward contracts	₩	1,689,217-	₩ 2,900,172-
Equity funds		30,410,722	35,544,975
	₩	32,099,939	₩ 37,455,147
	₩	41,981,353	₩ 44,891,390

7. Financial assets at fair value through other comprehensive income

Financial assets at fair value through other comprehensive income as of December 31, 2023 are as follows (Korean won in thousands):

	2023	
	Fair value	Carrying amount
<Marketable equity securities>		
SK Innovation Co., Ltd.	₩ 27,218	27,218
	₩ 27,218	27,218
<Non-marketable equity securities>		
FRP Service & Company	₩ 52,822	52,822
Hanmag Securities Co., Ltd.	-	-
MOS Facilities Co., Ltd.	-	-
Dongbang Hitech Inc.	8,550	8,550
U-Hyun Electronics Co., Ltd.	30	30
Nexcom Co., Ltd.	6,078	6,078
ELK Co., Ltd.	2,001	2,001
Korea Surface Treatment Co., Ltd.	9,525	9,525
	₩ 79,006	79,006
<Others>		
Kyongnam Aviation Industry Cooperative	1,000	1,000
CI GUARANTEE Cooperative	46,111	46,111
Kyongnam Textile Industry Cooperative	400	400
	₩ 47,511	47,511
	₩ 153,735	153,735

1) Details of marketable equity securities as of December 31, 2023 are as follows (Korean won in thousands):

2023						
	Number of shares	Ownership interest	Purchase cost	Fair value	Carrying amount	Unrealized gain (loss)
SK Innovation Co., Ltd.	194 shares	0.000002%	₩ 28,748	27,218	27,218	(1,530)

2) Details of non-marketable equity securities as of December 31, 2023 are as follows (Korean won in thousands):

2023						
	Number of shares	Ownership interest	Purchase cost	Fair value	Carrying amount	Unrealized gain (loss)
FRP Service & Company	10,000 shares	3.47%	₩ 52,822	52,822	52,822	-
Hanmag Securities Co., Ltd.	200,000 shares	4.19%	2,000,000	-	-	(2,000,000)
Narasum Co., Ltd.	141,400 shares	10.10%	728,210	-	-	(728,210)
Dongbang Hitech Inc.	50,000 shares	2.06%	8,550	8,550	8,550	-
ELK Co., Ltd.	171 shares	0.16%	180,110	2,001	2,001	(178,109)
U-Hyun Electronics Co., Ltd.	6 shares	0.03%	180	30	30	(150)
Nexcom Co., Ltd.	4,052 shares	0.25%	6,078	6,078	6,078	-
Korea Surface Treatment Co., Ltd.	2,500 shares	2.05%	100,000	9,525	9,525	-
	<u>408,129 shares</u>		<u>₩3,075,950</u>	<u>79,006</u>	<u>79,006</u>	<u>(2,906,469)</u>

There are no quoted market prices in active markets for non-marketable equity securities. Carrying amount is considered to be a reasonable approximation of fair value.

7. Financial assets at fair value through other comprehensive income (cont'd)

3) Details of other equity investments as of December 31, 2023 are as follows (Korean won in thousands):

	2023			Unrealized gains (loss)
	Purchase cost	Fair value	Book value	
Kyongnam Aviation Industry Cooperative	₩ 1,000	1,000	1,000	-
CI GUARANTEE Cooperative	46,111	46,111	46,111	-
Kyongnam Textile Industry Cooperative	400	400	400	-

There are no quoted market prices in active markets for other equity investments. Carrying amount is considered to be a reasonable approximation of fair value.

4) Changes in accumulated unrealized gain (loss) for the year ended December 31, 2023 are as follows (Korean won in thousands):

	2023				
	Beginning balance	valuation	Purchase/ disposal	Others	Ending balance
Marketable equity securities	₩ -	(1,530)	-	-	(1,530)
(-) Tax effect	-	354	-	-	354
Non-marketable equity securities	(4,406,470)			1,500,000	(2,906,470)
(-) Tax effect	971,562			(330,000)	641,562
	₩ (3,434,908)	(1,176)	-	1,170,000	(2,266,084)

Financial assets at fair value through other comprehensive income as of December 31, 2022 are as follows (Korean won in thousands):

	2022	
	Fair value	Carrying amount
<Non-marketable equity securities>		
FRP Service & Company	₩ 52,822	52,822
Hanmag Securities Co., Ltd	-	-
Narasum Co.,Ltd	-	-
MOS Facilities Co., Ltd.	-	-
Dongbang Hitech Inc.	8,550	8,550
U-Hyun Electronics Co., Ltd.	30	30
Nexcom Co., Ltd.	6,078	6,078
ELK Co., Ltd.	2,001	2,001
Korea Surface Treatment Co., Ltd.	10,974	10,974
	₩ 80,455	80,455
<Others>		
Kyongnam Aviation Industry Cooperative	1,000	1,000
	1,000	1,000
	₩ 81,455	81,455

7. Financial assets at fair value through other comprehensive income (cont'd)

1) Details of non-marketable equity securities as of December 31, 2022 are as follows (Korean won in thousands):

	2022					
	Number of shares	Ownership interest	Purchase cost	Fair value	Carrying amount	Unrealized gain (loss)
FRP Service & Company	10,000 shares	3.47%	₩ 52,822	52,822	52,822	-
Hanmag Securities Co., Ltd.	200,000 shares	4.19%	2,000,000	-	-	(2,000,000)
Narasum Co., Ltd.	141,400 shares	10.10%	728,210	-	-	(728,210)
MOS Facilities Co., Ltd.	60,000 shares	4.78%	1,500,000	-	-	(1,500,000)
Dongbang Hitech Inc.	50,000 shares	2.06%	8,550	8,550	8,550	-
ELK Co., Ltd.	171 shares	0.16%	180,110	2,001	2,001	(178,109)
U-Hyun Electronics Co., Ltd.	6 shares	0.03%	180	30	30	(150)
Nexcom Co., Ltd.	4,052 shares	0.25%	6,078	6,078	6,078	-
Korea Surface Treatment Co., Ltd.	2,500 shares	2.05%	100,000	10,974	10,974	(89,026)
	<u>468,129 shares</u>		<u>₩4,575,950</u>	<u>80,455</u>	<u>80,455</u>	<u>(4,495,495)</u>

There are no quoted market prices in active markets for non-marketable equity securities. Carrying amount is considered to be a reasonable approximation of fair value.

2) Details of other equity investments as of December 31, 2022 are as follows (Korean won in thousands):

	2022			
	Purchase cost	Fair value	Book value	Unrealized gains (loss)
Kyongnam Aviation Industry Cooperative	₩ 1,000	1,000	1,000	-

There are no quoted market prices in active markets for other equity investments. Carrying amount is considered to be a reasonable approximation of fair value.

3) Changes in accumulated unrealized gain (loss) for the year ended December 31, 2022 are as follows (Korean won in thousands):

	2022				
	Beginning balance	valuation	Purchase/disposal	Others	Ending balance
Marketable equity securities	₩ -	-	-	-	-
(-) Tax effect	-	-	-	-	-
Non-marketable equity securities	(4,228,361)	(178,109)			(4,406,470)
(-) Tax effect	930,240	41,322			971,562
	<u>₩ (3,298,121)</u>	<u>(136,787)</u>	<u>-</u>	<u>-</u>	<u>(3,434,908)</u>

8. Financial assets measured at amortized cost

Financial assets measured at amortized cost as of December 31, 2023 and 2022 are as follows (Korean won in thousands):

	2023		2022	
(Current)				
Corporate bonds and others	₩	-	₩	4,610
		-	₩	4,610
(Non-current)				
Korea Gov. public bonds		120,000	₩	858,780
Local Gov. public bonds		-		40,100
Corporate bonds and others		-		6,031,060
		120,000	₩	6,929,940
	₩	120,000	₩	6,934,550

9. Financial liabilities at fair value through profit or loss

Financial liabilities at fair value through profit or loss as of December 31, 2023 and 2022 are as follows (Korean won in thousands):

	2023		2022	
	Current	Non-current	Current	Non-current
Forward contracts and TRF contracts	₩ 1,059,057	-	₩ 1,801,079	271,052

10. Borrowings

(1) Details of short-term borrowings as of December 31, 2023 and 2022 are as follows (Korean won in thousands):

Description	Lender	Interest rate as of Dec. 31, 2023	2023	2022
Facility loan	Korea Development Bank	-	₩ -	₩ 9,000,000
	Korea Development Bank	4.51%~4.92%	15,900,000	10,000,000
	Woori Bank	4.60%~4.86%	8,000,000	8,000,000
Operating loan	Korea Exim Bank	4.38%~4.74%	20,000,000	10,000,000
	Suhyup Bank	3.02%	5,000,000	4,500,000
	Kyongnam Bank	1.7%~2.2%	6,109,000	2,818,000
	Shinhan Bank	4.02%~5.10%	29,571,716	-
	KEB Hana Bank	4.15%~6.13%	4,545,391	-
	IBK Capital Corp.	6.12%	105,911	-
			₩ 89,232,018	₩ 7,098,000

With respect to the assets provided as collateral for the borrowings and restricted deposits, see Note 36 (1) and 36 (2).

10. Borrowings (cont'd)

(2) Details of long-term borrowings as of December 31, 2023 and 2022 are as follows (Korean won in thousands):

Description	Lender	Interest rate as of Dec. 31, 2023	2023	2022
Korea Energy Agency : energy efficient machinery investment loan	Kyongnam Bank	2.25%~2.50%	₩ 799,200	₩ 746,950
Facility loan	Korea Development Bank	3.93%~4.65%	21,600,000	14,100,000
Facility loan	IBK Capital Corp.	5.94%	529,557	423,645
Korea Energy Agency : energy efficient machinery investment loan	KEB Hana Bank	2.50%~6.25%	11,000,000	214,000
N.F.C.F.(*1) : overseas forest development loan	N.F.C.F.	1.50%	557,000	1,322,320
Operating loan	Woori Bank	5.11%~5.23%	1,800,000	-
Operating loan	Korea SMEs and Startups Agency	2.75%	69,400	-
			₩ 36,355,157	₩ 16,806,915
Less: current portion			(15,250,357)	(853,420)
			₩ 21,104,800	₩ 15,953,495

(*1) National Forestry Cooperative Federation

With respect to the assets provided as collateral for the borrowings and restricted deposits, see Note 36 (1) and 36 (2).

Repayment schedule of long-term borrowings as of December 31, 2023 is as follows (Korean won in thousands):

Period	Repayment amount(*1)
Jan. 1, 2025 ~ Dec. 31, 2025	₩ 6,030,950
Jan. 1, 2026 ~ Dec. 31, 2026	6,812,200
Jan. 1, 2027 ~ Dec. 31, 2027	4,187,200
Jan. 1, 2028 ~ Dec. 31, 2028	2,868,400
Jan. 1, 2029 and thereafter	1,206,050
	₩ 21,104,800

(*1) Undiscounted contractual amount

11. Bonds and bonds with warrant

Bonds originally issued by Hankuk Advanced Materials Co., Ltd were assumed as Hankuk Carbon Co., Ltd. merges Hankuk Advanced Materials Co., Ltd. in 2023 (See Note 42).

Details of bonds are as follows:

	Description
Type	Registered uninsured private bonds (Private ESG P-CBO)
Issue price (issued at par)	KRW 10,000,000,000
Issue date	November 4, 2022
Maturity	November 4, 2025
Stated rate	CD 91days+1.40%
Repayment method	Term bonds

Bonds with warrant originally issued by Hankuk Global Solution Co., Ltd. were assumed as Hankuk Global Solution Co., Ltd. was included in the Group by the Group's additional acquisition of shares (See Note 42).

Details of bonds with warrant are as follows (Korean won in thousands):

	Description
Type	Uninsured private bonds with warrant
Issue price (issued at par)	KRW 200,000,000
Issue date	April 9, 2022
Maturity	April 28, 2027
Stated rate	Treasury bonds 3years+0.5%
Repayment method	Term bonds

12. Inventories

Inventories as of December 31, 2023 and 2022 are as follows (Korean won in thousands):

2023				
	Cost	Net realizable value	Valuation allowance	
			Current allowance	Accumulated allowance
Finished goods	₩ 63,720,358	58,807,177	4,286,295	4,913,181
Work-in-process	45,078,072	43,406,840	160,812	1,671,232
Merchandise	470,255	470,255	-	-
Raw materials	63,121,881	61,778,874	700,897	1,343,007
Sub-materials	11,849,853	11,778,614	71,239	71,239
Raw materials in transit	2,676,277	2,676,277	-	-
Supplies	1,295,700	1,295,700	-	-
₩	188,212,396	180,213,737	5,219,243	7,998,659

2022				
	Cost	Net realizable value	Valuation allowance	
			Current allowance	Accumulated allowance
Finished goods	₩ 88,555,037	81,535,628	626,886	4,019,409
Work-in-process	25,591,149	24,080,729	1,510,420	1,510,420
Raw materials	39,832,695	38,656,780	642,110	1,175,915
Sub-materials	7,097,189	7,097,189	-	-
Raw materials in transit	3,541,631	3,541,631	-	-
Supplies	1,356,268	1,356,268	-	-
₩	162,973,969	156,268,225	2,779,416	6,705,744

13. Other assets

Other assets as of December 31, 2023 and 2022 are as follows (Korean won in thousands):

	2023		2022	
(current)				
Advanced payments	₩	7,039,644	₩	4,860,931
Prepaid expenses		3,293,997		2,581,599
Prepaid V.A.T.		2,305,206		-
	₩	12,638,847	₩	7,442,530
(non-current)				
Advanced payments	₩	716,370	₩	716,370
Prepaid expenses		172,153		141,177
	₩	888,523	₩	857,547
	₩	13,527,370	₩	8,300,077

14. Investments in associates

(1) Information about investee as of December 31, 2023 is as follows (Korea won in thousands):

	Issued capital	Ownership interest	Principal operation	Country of incorporation
(Associates)				
Grid Space Co., Ltd.	327,275	38.89%	Manufacturing and selling of simulators and training equipment	Republic of Korea
YONGBEE Aerospace Technology INC.	76,660	34.78%	Manufacturing of autonomous aircrafts and simulator	Republic of Korea

(2) Investments in joint ventures and associates as of December 31, 2023 and 2022 are as follows (Korea won in thousands):

	2023		
	Purchase cost	Proportionate net asset value of associates	Book value
(Associates)			
Grid Space Co., Ltd.	₩ 700,013	(197,226)	84,150
YONGBEE Aerospace Technology INC.	399,900	214,493	332,633
Hankuk Global Solution Co., Ltd.(*1)	-	-	-
	₩ 1,099,913		416,783

(*1) Reclassified to a subsidiary from an associate as the Group acquires additional shares and merges in 2023.

Proportionate net asset value of associates is calculated based on the figures of associate's the separate financial statements.

	2022		
	Purchase cost	Proportionate net asset value of associates	Book value
(Associates)			
Grid Space Co., Ltd.	₩ 700,013	(180,931)	157,444
YONGBEE Aerospace Technology INC.	399,900	211,656	329,778
Hankuk Global Solution Co., Ltd.	444,000	373,193	533,733
	₩ 1,543,913		1,020,955

Proportionate net asset value of associates is calculated based on the figures of associate's the separate financial statements.

14. Investments in associates (cont'd)

(3) Changes in investments in associates for the years ended December 31, 2023 and 2022 are as follows
(Korea won in thousands):

	2023						
	Beginning balance	acquisition	disposal	share of profit (loss) of associates	share of other comprehensive income of associates	Reclassifi- cation	Ending balance
Grid Space Co., Ltd	₩ 157,444	-	-	(64,100)	(9,194)	-	84,150
YONGBEE Aerospace Technology INC.	329,778	-	-		2,855	-	332,633
Hankuk Global Solution Co., Ltd. (*1)	533,733		-	(533,733)			
	<u>₩ 1,020,955</u>			<u>(597,833)</u>	<u>(6,339)</u>		<u>416,783</u>

(*1) As share of loss of the associate is in excess of carrying amount of investments in associates, application of the equity method is ceased. Share of loss which was not recognized due to cessation of the equity method amounts to ₩ 3,981 million.

Hankuk Global Solution Co., Ltd. was reclassified to a subsidiary from an associate as the Group acquires additional shares and merges in 2023

	2022						
	Beginning balance	acquisition	disposal	share of profit (loss) of associates	share of other comprehensive income of associates	Reclassifi- cation	Ending balance
Grid Space Co., Ltd	₩ 306,048	-	-	4,129	(152,733)	-	157,444
YONGBEE Aerospace Technology INC.	437,524	-	-	(113,219)	5,473	-	329,778
Hankuk Global Solution Co., Ltd. (*1) (*2)	40,000	104,000	-	89,733		300,000	533,733
	<u>₩ 783,572</u>	<u>104,000</u>		<u>(19,357)</u>	<u>(147,260)</u>	<u>300,000</u>	<u>1,020,955</u>

(*1) Acquired additional voting equity interests by increasing paid-in-capital in 2022.

(*2) Reclassified from financial assets at fair value through profit or loss by exercising stock warrant in 2022.

15. Property, plant and equipment

(1) Details of property, plant and equipment as of December 31, 2023 and 2022 are as follows (Korean won in thousands):

2023					
	Acquisition Cost	Accumulated Depreciation	Accumulated Impairment	Government grants	Net book value
Land	₩ 67,278,452	-	(752,158)	-	66,526,294
Buildings	128,767,821	(23,790,339)	(1,573,639)	(83,603)	103,320,240
Structures	19,859,813	(4,390,640)	(341,512)	(1,342,383)	13,785,278
Machinery	168,853,655	(88,173,584)	(11,596,739)	(876,697)	68,206,635
Others	25,498,629	(17,160,663)	(2,690,970)	(366,331)	5,280,665
Construction-in-progress	25,186,799	-	(11,005,159)	-	14,181,640
	<u>₩ 435,445,169</u>	<u>(133,515,226)</u>	<u>(27,960,177)</u>	<u>(2,669,014)</u>	<u>271,300,752</u>

2022					
	Acquisition Cost	Accumulated Depreciation	Accumulated Impairment	Government grants	Net book value
Land	₩ 57,738,349	-	-	-	57,738,349
Buildings	92,239,773	(21,043,420)	(694,402)	(55,060)	70,446,891
Structures	11,115,743	(3,664,248)	(2,549)	(347,339)	7,101,607
Machinery	131,010,225	(80,431,381)	(1,194,958)	(322,136)	49,061,750
Others	21,434,556	(14,785,949)	(558,977)	(189,815)	5,899,815
Construction-in-progress	32,202,232	-	(9,986,802)	-	22,215,430
	<u>₩ 345,740,878</u>	<u>(119,924,998)</u>	<u>(12,437,688)</u>	<u>(914,350)</u>	<u>212,463,842</u>

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

(2) Changes in the net book value of property, plant and equipment for the years ended December 31, 2023 and 2022 are as follows (Korean won in thousands):

2023						
	Land	Buildings	Structures	Machinery	Others	Construction-in-progress
Beginning balance	₩ 57,738,349	70,446,891	7,101,607	49,061,750	5,899,815	22,215,431
Additions	1,957,417	702,144	4,024,239	6,254,742	2,249,099	36,162,868
Transfers	9,000	23,647,198	3,301,232	21,192,565	927,560	(49,077,555)
Disposals	-	-	(3,905)	(42,339)	(23,203)	-
Depreciation	-	(2,750,793)	(615,695)	(9,038,387)	(2,128,352)	-
Impairment(*1)	(752,158)	(2,109,711)	(338,963)	(13,593,012)	(2,161,878)	(1,111,345)
Change in consolidated entities			-		105,977	
Changes arising from merger	7,452,803	13,253,181	928,067	14,640,369	536,368	4,643,659
Others(*2)	120,883	131,330	(611,304)	(269,053)	(124,721)	1,348,582
	₩ 66,526,294	103,320,240	13,785,278	68,206,635	5,280,665	14,181,640

(*1) With respect to impairment, see Note 43.

(*2) Others consist of receipt of government grants, offset to government grants, transfer from other payables and changes in exchange rate for foreign currency translation.

2022						
	Land	Buildings	Structures	Machinery	Others	Construction-in-progress
Beginning balance	₩ 46,935,800	65,960,458	4,324,488	45,957,335	4,677,894	16,788,800
Additions	1,247,005	3,128,599	3,147,671	3,135,050	2,160,038	17,097,594
Transfers	7,476,533	778,661	-	4,313,457	345,543	(12,914,194)
Disposals	-	-	-	(33,035)	(13)	-
Depreciation	-	(2,400,933)	(392,380)	(7,542,629)	(1,866,669)	-
Impairment(*2) (*3)	-	-	-	(9,484)	-	-
Change in consolidated entities	2,007,167	2,834,767	-	3,161,156	543,490	183,119
Others(*1)	1,844	145,339	21,828	79,900	39,532	1,060,111
	₩ 57,738,349	70,446,891	7,101,607	49,061,750	5,899,815	22,215,430

(*1) Others consist of receipt of government grants, offset to government grants, reclassification from investment properties, transfer from other payables and changes in exchange rate for foreign currency translation.

(3) Some of property, plant and equipment are provided as collateral for the Group's liabilities (See Note 37 (2)).

(4) Borrowing cost capitalized for the years ended December 31, 2023 and 2022 are as follows (Korean won in thousands):

	2023	2022
Borrowing cost capitalized	₩ 708,516	₩ 274,095
Weighted average cost of capital	4.40%	3.67%

Capitalized borrowing cost is accounted as cost of construction-in-progress.

16. Lease

(1) Details of right-of-use assets by underlying assets as of December 31, 2023 and 2022 are as follows (Korean won in thousands):

	2023		2022	
Land	₩	3,621,232	₩	2,921,473
Buildings		1,828,441		2,474,593
Vehicles		641,239		441,170
	₩	6,090,912	₩	5,837,236

(2) Changes in right-of-use assets for the years ended December 31, 2023 and 2022 are as follows (Korean won in thousands):

	2023			
	Land	Buildings	Vehicles	Total
Beginning balance	₩ 2,921,473	2,474,593	441,170	5,837,236
Increase	-	1,226,979	534,487	1,761,466
Decrease	-	(220,182)	-	(220,182)
Depreciation	(75,028)	(1,691,197)	(324,442)	(2,090,667)
Impairment(*1)		(87,293)	(41,060)	(128,353)
Change in consolidated entities				
Changes arising from merger	828,417	111,133	28,563	968,113
Change in exchange rate for foreign currency translation and Others	(53,630)	14,408	2,521	(36,701)
Ending balance	₩ 3,621,232	1,828,441	641,239	6,090,912

(*1) With respect to impairment, see Note 43.

	2022			
	Land	Buildings	Vehicles	Total
Beginning balance	₩ 2,901,120	1,106,504	638,262	4,645,886
Increase	-	2,293,792	113,095	2,406,887
Decrease	-	(2,171)	-	(2,171)
Depreciation	(70,533)	(923,532)	(310,187)	(1,304,252)
Change in exchange rate for foreign currency translation and Others	90,886	-	-	90,886
Ending balance	₩ 2,921,473	2,474,593	441,170	5,837,236

(3) Components of net cost from lease for the years ended December 31, 2023 and 2022 are as follows (Korean won in thousands):

	2023		2022	
Depreciation of right-of-use assets				
Land	₩	75,028	₩	70,533
Buildings		1,691,197		929,788
Vehicles		324,442		310,187
	₩	2,090,667	₩	1,310,508
Lease expenses on short-term lease over which application exemption is applied	₩	2,999,266	₩	1,327,426
Lease expenses on low value assets over which application exemption is applied		174,830		293,777
Interest expenses on lease liabilities		112,292		73,154

16. Lease (cont'd)

- (4) For the years ended December 31, 2023 and 2022, cash outflows from principal repayment (financial activities) in relation to the lease liabilities amount to ₩ 1,940,442 thousand and ₩ 2,796,464 thousand, respectively.

17. Investment properties

- (1) There are no investment properties as of December 31, 2022. Details of investment properties as of December 31, 2023 are as follows (Korean won in thousands):

		2023		
	Acquisition cost	Accumulated depreciation	Accumulated impairment loss	Net book value
Land	₩ 13,948,585	-	-	13,948,585
Buildings	1,793,563	(11,210)	-	1,782,353
	₩ 15,742,148	(11,210)	-	15,730,938

- (2) Changes in the net book value of investment properties for the year ended December 31, 2023 are as follows (Korean won in thousands):

		2023			
	Beginning balance	Additions/ (disposals)	Increase arising from merger	Depreciation	Ending balance
Land	₩ -	320,785	13,627,800	-	13,948,585
Buildings	-	41,234	1,752,329	(11,210)	1,782,353
	₩ -	362,019	15,380,129	(11,210)	15,730,938

- (3) Income and expenses arising from investment properties for the years ended December 31, 2023 and 2022 are as follows (Korean won in thousands):

	2023		2022	
Rental income arising from investment properties	₩	179,940	₩	-
Direct operating expenses generating rental income		2,704		-

- (4) There are no investment properties restricted for the use and some of investment properties are provided as collateral for the Group's liabilities (See Note 36 (2)).

- (5) Fair values of the properties as of December 31, 2023 are as follows (Korean won in millions):

	Net book value	Fair value
Land and buildings	₩ 15,731	15,380

The Group measures investment properties at fair value by considering reference to the prices on an arm's length basis, DCF model and reference to the prices in substantially similar transactions.

18. Intangible assets

(1) Details of intangible assets as of December 31, 2023 and 2022 are as follows (Korean won in thousands):

	Acquisition Cost	2023			Net book value
		Accumulated amortization	Accumulated impairment loss	Government grants	
Industrial property rights	₩ 9,832,603	(9,571,920)	(20,560)	-	240,122
Trademarks	22,194	(9,687)	(920)	-	11,587
Development cost	2,112,391	(106,205)	(1,210,647)	-	795,539
Goodwill	31,925,898	-	(12,535,264)	-	19,390,634
Know-how	6,344,019	(364,055)	-	-	5,979,964
Customer relationship	12,348,640	(317,946)	-	-	12,030,694
Memberships(*1)	1,278,464	-	-	-	1,278,464
Other intangible assets	404,546	(149,261)	(95,348)	(176,467)	(16,530)
	₩ 64,268,755	(10,519,075)	(13,862,739)	(176,467)	39,710,474

(*1) Memberships are regarded as having an indefinite useful life as there is no foreseeable limit to the period over which the assets are expected to generate net cash inflows. Accordingly, the Group does not amortize memberships.

	Acquisition Cost	2022			Net book value
		Accumulated amortization	Accumulated impairment loss	Government grants	
Industrial property rights	₩ 9,676,888	(9,542,872)	(2,354)	-	131,662
Trademarks	13,497	(8,534)	-	-	4,963
Development cost	2,112,391	(85,312)	(1,210,647)	-	816,432
Goodwill	4,513,790	-	(4,513,790)	-	-
Memberships(*1)	1,203,138	-	-	-	1,203,138
Other intangible assets	326,285	(89,724)	(6,696)	(131,567)	98,298
	₩ 17,845,989	(9,726,442)	(5,733,487)	(131,567)	2,254,493

(*1) Memberships are regarded as having an indefinite useful life as there is no foreseeable limit to the period over which the assets are expected to generate net cash inflows. Accordingly, the Group does not amortize memberships.

18. Intangible assets (cont'd)

(2) Changes in the net book value of intangible assets for the years ended December 31, 2023 and 2022 are as follows (Korean won in thousands):

	2023							
	Beginning balance	Change in consolidated entities	Addition	Amortization	Changes arising from merger	Impairment	Other changes	Ending balance
Industrial property rights	₩ 131,217	6,143	119,488	(27,825)	29,306	(18,206)	-	240,122
Trademarks	4,963	-	1,984	(1,153)	6,713	(920)	-	11,587
Development cost	816,432	-	-	(20,893)	-	-	-	795,539
Goodwill	-	8,021,474	-	-	19,390,634	(8,021,474)	-	19,390,634
Know-how	-	-	-	(364,055)	6,344,019	-	-	5,979,964
Customer relationship	-	-	-	(317,946)	12,348,640	-	-	12,030,694
Memberships	1,203,138	-	75,326	-	-	-	-	1,278,464
Other intangible assets	98,743	44,043	33,773	(59,537)	-	(88,652)	(44,900)	(16,530)
	<u>₩2,254,493</u>	<u>8,071,660</u>	<u>230,571</u>	<u>(791,410)</u>	<u>38,119,312</u>	<u>(8,129,252)</u>	<u>(44,900)</u>	<u>39,710,474</u>

(*1) With respect to impairment, see Note 43.

	2022						
	Beginning balance	Additions	Disposals	Change in consolidated entities	Amortization	Other changes	Ending balance
Industrial property rights	₩ 139,626	16,621	-	-	(24,585)	-	131,662
Trademarks	5,951	-	-	-	(988)	-	4,963
Development cost	835,500	1,825	-	-	(20,893)	-	816,432
Goodwill	-	-	-	-	-	-	-
Memberships	1,203,138	-	-	-	-	-	1,203,138
Other intangible assets	104,173	86,838	-	-	(60,403)	(32,310)	98,298
	<u>₩2,288,388</u>	<u>105,284</u>	<u>-</u>	<u>-</u>	<u>(106,869)</u>	<u>(32,310)</u>	<u>2,254,493</u>

(3) Amortization cost of intangibles in consolidated statements of profit or loss and other comprehensive income for the years ended December 31, 2023 and 2022 are as follows (Korean won in thousands):

	2023	2022
Selling and general administrative expenses	₩ 787,592	₩ 106,256
Manufacturing cost	3,819	613

(4) The Group has performed impairment test on intangible assets with indefinite useful lives, i.e. memberships. As a result of the test, there are no impairment losses recognized on memberships for the years ended December 31, 2023 and 2022.

19. Non-current assets held for sale and assets and liabilities related to disposal groups held for sale

(1) Non-current assets held for sale and assets and liabilities related to disposal groups held for sale as of December 31, 2023 and 2022 are as follows (Korean won in thousands):

	2023	2022
Non-current assets held for sale	₩ -	₩ 10,535
Assets related to disposal groups held for sale	4,466	7,448
	₩ 4,466	₩ 17,983
Liabilities related to disposal groups held for sale	₩ 6,602	₩ 6,502

(2) The Group management has decided to cease manufacturing some products in June 2018 and classified machinery used solely for the manufacturing as non-current assets held for sale. Some of the machinery was disposed of in 2023.

(3) Assets and liabilities related to disposal groups held for sale

The Group management has decided to shut down rubber tree plantation operation of Horizon Agriculture Development Co., Ltd. in Cambodia. In line with this shut-down of operation, the Group set up plan to dispose of assets and related liabilities of G.B.I.(H.K) International Ltd. and HC Networks Hong Kong Co., Ltd. which wholly own Horizon Agriculture Development Co., Ltd.

As G.B.I.(H.K) International Ltd. was liquidated in 2019, assets and liabilities owned by G.B.I.(H.K.) International Ltd. and its 100% subsidiary, Horizon Agriculture Development Co., Ltd. were disposed of. The Group management initiated active program to locate a buyer. Accordingly, disposal groups of the subsidiaries are classified as assets and liabilities related to disposal groups held for sale.

1) Details of assets and liabilities related to disposal groups held for sale as of December 31, 2022 and 2021 are as follows (Korean won in thousands):

	2023	2022
	HC Networks Hong Kong Co., Ltd.	HC Networks Hong Kong Co., Ltd.
Assets related to disposal groups held for sale		
Current	₩ 4,466	₩ 7,448
Non-current	-	-
	₩ 4,466	₩ 7,448
Liabilities related to disposal groups held for sale		
Current	₩ 6,602	₩ 6,502
Non-current	-	-
	₩ 6,602	₩ 6,502

2) Non-current assets held for sale and assets related to disposal groups held for sale are measured at the lower of carrying amount and fair value less costs to sell.

20. Net employee defined benefit liability (asset)

(1) Net employee defined benefit liability as of December 31, 2023 and 2022 are as follows (Korean won in thousands):

	2023	2022
Present value of the defined benefit obligation	₩ 23,634,726	₩ 18,203,051
Fair value of plan assets (*1)	(24,904,362)	(20,415,473)
	₩ (1,269,636)	₩ (2,212,422)

(*1) Plan assets of ₩1,961,879 (₩2,617,233 as of December 31, 2022) which is in excess of defined benefit liability as of December 31, 2023 are recorded as net employee benefit asset.

(2) Changes in the present value of the defined benefit obligation for the years ended December 31, 2023 and 2022 are as follows (Korean won in thousands):

	2023	2022
Defined benefit obligation at January 1	₩ 18,203,051	₩ 19,383,171
Change in consolidated entities	122,915	-
Current service cost	971,682	900,423
Interest cost	781,652	549,523
Remeasurement gain(loss) in OCI		
-Actuarial changes arising from changes in demographic assumptions	-	-
-Actuarial changes arising from changes in financial assumptions	4,086,483	(2,539,956)
-Actuarial changes arising from others		(45,408)
Benefits paid	(531,057)	(90,110)
Defined benefit obligation at December. 31	₩ 23,634,726	₩ 18,203,051

(3) Changes in the fair value of plan assets for the years ended December 31, 2023 and 2022 are as follows (Korean won in thousands):

	2023	2022
Plan assets at January 1	₩ 20,415,473	₩ 16,646,161
Interest income on assets	896,912	500,818
Remeasurement gain(loss) in OCI		
- Return on plan assets (excluding amounts in interest income)	743,823	(810,405)
Contributions	3,000,000	4,078,899
Change in consolidated entities	-	-
Benefit payments from plan assets	(151,846)	-
Defined benefit obligation at December. 31	₩ 24,904,362	₩ 20,415,473

Reasonable estimation of additional contributions by the Group in 2024 amounts to ₩622 million.

The components of plan assets as of December 31, 2023 and 2022 are as follows (Korea won in thousands):

	2023	2022
Deposits	₩ 4,072,840	₩ 7,397,170
Debt securities	14,227,467	10,232,120
Equity funds	5,185,417	744,819
Insurance instruments	1,418,638	1,550,070
Others		491,294
	₩ 24,904,362	₩ 20,415,473

As of December 31, 2023, the weighted average maturity of defined benefit obligation is 3.08 years and expected benefit payments (undiscounted values) are as follows (Korean won in thousands):

	Less than 1 year	1~3 years	3~6 years	6~10 years	Over 10 years	Total
Expected benefit payments (undiscounted values)	₩ 4,932,825	7,397,027	11,411,414	1,656,359		25,397,625

20. Net employee defined benefit liability (asset) (cont'd)

(4) Components of net cost from defined benefit plan and defined contribution plan for the years ended December 31, 2023 and 2022 are as follows (Korean won in thousands):

	2023	2022
Net benefit cost from defined benefit plan		
Current service cost	₩ 971,682	₩ 900,423
Net interest expense	(115,260)	48,705
	₩ 856,422	₩ 949,128
Net cost from defined contribution plan	2,747,702	2,210,638
	₩ 3,604,124	₩ 3,159,766

Net cost from defined benefit plan and defined contribution plan for the years ended December 31, 2023 and 2022 are as follows (Korean won in thousands):

	2023	2022
Manufacturing cost	₩ 2,346,897	₩ 1,923,144
Selling and general administrative expenses	1,257,227	1,236,622
	₩ 3,604,124	₩ 3,159,766

(5) Re-measurement gain (loss) in other comprehensive income ("OCI") for the years ended December 31, 2023 and 2022 are as follows (Korean won in thousands):

	2023	2022
Re-measurement gain (loss)	₩ (3,342,660)	₩ 1,729,551
(-) Tax effect	732,796	(304,135)
	₩ (2,609,864)	₩ 1,425,416

(6) The principal assumptions used in determining net employee defined benefit liability as of December 31, 2023 and 2022 are as follows:

	2023	2022
Discount rate	3.77%	5.06%
Expected rate of return on plan assets	3.77%	5.06%
Expected wage increase rate	2.40%	2.40%

(7) A quantitative sensitivity analysis for significant assumptions as of December 31, 2023 is as follows (Korean won in thousands):

	Change in the present value of defined benefit obligation	
	Increase(decrease)	Rate of change
Discount rate		
Increase by 1%	₩ (653,703)	2.98%
Decrease by 1%	689,442	2.96%
Salary increase rate		
Increase by 1%	₩ 695,853	2.99%
Decrease by 1%	(671,830)	3.06%

20. Net employee defined benefit liability (asset) (cont'd)

(8) Other long-term employee benefit liabilities

Changes in the present value of other long-term employee benefit liabilities for the year ended December 31, 2023 are as follows (Korean won in thousands):

	2023
Defined benefit obligation at January 1	₩ -
Current service cost	46,636
Benefits paid	-
Defined benefit obligation at December. 31	₩ 46,636
(Current)	1,479
(Non-current)	45,157

The principal assumptions used in determining other long-term employee benefit liabilities as of December 31, 2023 are as follows:

	2023
Inflation rate of gold	4.38%

21. Other liabilities

Other current liabilities as of December 31, 2023 and 2022 are as follows (Korean won in thousands):

	2023	2022
(current)		
Advances	₩ 84,028,096	₩ 29,424,668
Government grants	455,176	455,176
Others	400,073	737,321
	₩ 84,883,345	₩ 30,617,165
(non-current)		
Advances	2,113,339	6,784,075
	₩ 86,996,684	₩ 37,401,240

22. Issued capital and share premium

(1) Issued capital as of December 31, 2023 and 2022 are as follows:

	2023	2022
Authorized shares:		
Ordinary shares	100,000,000 shares	60,000,000 shares
Par value per share(Korean won in units)	₩ 500	₩ 500
Issued shares	51,908,452 shares	43,960,757 shares
Issued capital(Korean won in thousands)	₩ 25,954,226	₩ 21,980,379

There are no changes in issued capital in 2022 and changes in issued capital in 2023 arise from issue of new shares (7,947,697 shares) due to the merger (See Note 40).

(2) Share premium as of December 31, 2023 and 2022 are as follows (Korean won in thousands):

	2023	2022
Share premium	₩ 166,835,461	₩ 74,960,107

There are no changes in share premium in 2022 and changes in share premium in 2023 arise from issue of new shares (7,947,697 shares) due to the merger (See Note 40).

23. Other components of equity

Other components of equity as of December 31, 2023 and 2022 are as follows (Korean won in thousands):

	2023	2022
Asset revaluation reserve	₩ 6,839,721	₩ 6,839,721
Treasury shares	(27,151,855)	(6,005,127)
Gain on disposal of treasury shares	8,011,260	8,011,260
Loss on valuation of derecognized financial assets at fair value through other comprehensive loss	(1,482,949)	(307,725)
Changes in ownership interests in subsidiaries after control obtaining	(1,926,836)	-
	₩ (15,710,660)	₩ 8,538,129

24. Accumulated other comprehensive income (loss)

(1) Accumulated other comprehensive income (loss) net of tax as of December 31, 2023 and 2022 are as follows (Korean won in thousands):

	2023	2022
Loss on valuation of financial assets at fair value through other comprehensive income	₩ (2,266,084)	₩ (3,434,908)
Share of investee's other comprehensive loss	(462,394)	(287,075)
Exchange differences on translation of foreign operations	2,008,568	2,464,042
	₩ (719,910)	₩ (1,257,941)

(2) Changes in gain (loss) on valuation of financial assets at fair value through other comprehensive income for the years ended December 31, 2023 and 2022 are as follows (Korean won in thousands):

2023					
	Beginning balance	Valuation	Additions/ (disposals)	Others	Ending balance
Loss on valuation of financial assets at fair value through OCI	₩ (4,406,470)	(1,530)	-	1,500,000	(2,908,000)
(-) Tax effect	971,562	354	-	(330,000)	641,916
	₩ (3,434,908)	(1,176)	-	1,170,000	(2,266,084)

2022					
	Beginning balance	Valuation	Additions/ (disposals)	Others	Ending balance
Loss on valuation of financial assets at fair value through OCI	₩ (4,228,539)	(178,109)	-	-	(4,406,468)
(-) Tax effect	930,238	41,322	-	-	971,560
	₩ (3,298,121)	(136,787)	-	-	(3,434,908)

25. Retained earnings

(1) Retained earnings as of December 31, 2023 and 2022 are as follows (Korean won in thousands):

	2023	2022
Appropriated:	₩ 19,075,960	₩ 19,075,960
Unappropriated	259,219,028	280,871,201
	₩ 278,294,988	₩ 299,947,161

(2) Changes in retained earnings for the years ended December 31, 2023 and 2022 are as follows (Korean won in thousands):

	2023	2022
Retained earnings at January 1	₩ 299,947,161	₩ 284,714,199
Cumulative effect of changes in accounting policy	-	-
Profit for the period	(13,449,428)	20,260,871
Remeasurement gain (loss) on net defined benefit liability	(2,609,864)	1,425,416
Cash dividends	(5,592,881)	(6,453,325)
Change in consolidated entities	-	-
Retained earnings at December 31	₩ 278,294,988	₩ 299,947,161

26. Revenue from contracts with customers

(1) Sources of revenue for the years ended December 31, 2023 and 2022 are as follows (Korean won in thousands):

	2023	2022
Revenue from contracts with customers	₩ 594,417,384	₩ 369,270,866

(2) Details of disaggregation of revenue for the years ended December 31, 2023 and 2022 are as follows (Korean won in thousands):

	2023	2022
Types of revenue		
Revenue from sales of goods	₩ 593,633,512	₩ 368,417,260
Revenue from services	783,872	853,606
	₩ 594,417,384	₩ 369,270,866
Timing of revenue recognition		
Revenue recognized at a point in time	₩ 590,236,901	₩ 369,270,866
Revenue recognized over time	4,180,483	-
	₩ 594,417,384	₩ 369,270,866
Revenue by geographical region		
China	₩ 19,109,034	₩ 12,786,317
Europe	12,010,072	6,166,811
Japan	431,219	1,222,405
Korea	547,848,188	325,729,516
The Middle East	981,175	-
U.S.A.	3,991,796	5,445,567
South east Asia and Pacific region	9,964,436	17,854,387
others	81,464	65,863
	₩ 594,417,384	₩ 369,270,866

(3) Details of contract assets and liabilities from contracts with customers as of December 31, 2023 and 2022 are as follows (Korean won in thousands):

	2023	2022
Receivable	₩ 101,111,566	₩ 39,272,301
Contract liability		
Trade receivables	79,081,064	26,188,228
Advances (current)	2,113,339	6,784,075
Advances (non-current)		

26. Revenue from contracts with customers (cont'd)

(4) Details of single external customers who represent 10% or more of the Group's revenue for the years ended December 31, 2023 and 2022 are as follows (Korean won in thousands):

	2023	2022
Customer A	₩ 117,244,386	₩ 59,032,740
Customer B	152,755,570	146,904,639
Customer C	97,120,713	34,707,528

27. Cost of sales

Details of cost of sales for the years ended December 31, 2023 and 2022 are as follows (Korean won in thousands):

	2023	2022
Cost of sales of finished goods		
Beginning inventory	₩ 81,535,628	₩ 41,565,181
Changes arising from merger	4,250,828	-
Manufacturing cost	606,793,121	352,491,049
Transfer to other accounts	(15,605,022)	(195,120)
Transfer to other process	(87,496,408)	-
Ending inventory	(58,807,177)	(81,535,628)
	₩ 530,670,970	₩ 312,325,482
Cost of sales of merchandise		
Beginning inventory	₩ -	₩ 11,858
Changes arising from merger	334,164	-
Purchasing cost	395,838	53,835
Ending inventory	(470,255)	-
	₩ 259,747	₩ 65,693
Cost of sales of raw materials and others	₩ 332,619	₩ 806,385
	₩ 531,263,336	₩ 313,197,560

28. Selling and general administrative expenses

Details of other selling and general administrative expenses for the years ended December 31, 2023 and 2022 are as follows (Korean won in thousands):

	2023	2022
Salaries	₩ 13,671,535	₩ 11,103,132
Travel	827,968	679,299
Employee benefits	2,252,441	1,772,107
Taxes and dues	701,708	524,576
Service fees	6,435,669	4,031,648
Vehicles maintenance	322,866	329,719
Export expenses	1,038,352	1,254,104
Entertainments	552,997	559,695
Freights	8,085,782	3,104,066
Rent	2,321,879	1,233,321
Amortization	787,592	106,257
Severance benefits	1,257,227	1,236,622
Samples	69,319	34,267
Packaging	1,622,467	1,562,198
Depreciation of property, plant and equipment	1,067,331	1,204,580
Depreciation of right-of-use assets	1,935,049	892,737
Others	3,761,491	1,932,029
	₩ 46,711,673	₩ 31,560,357

29. Other income and other expense

(1) Details of other income for the years ended December 31, 2023 and 2022 are as follows (Korean won in thousands):

	2023	2022
Rental income	₩ 296,354	₩ 122,453
Gain on disposal of property, plant and equipment	22,478	15,603
Gain on disposal of investment properties	-	-
Gain on disposal of investments in associates	-	-
Gain from bargain purchase of subsidiaries		6,743,080
Gain on redemption of bonds		691,077
Gain on disposal of assets held for sale	113	-
Insurance gain	20,444,066	-
Others	962,111	532,110
	<u>₩ 21,725,122</u>	<u>₩ 8,104,323</u>

(2) Details of other expense for the years ended December 31, 2023 and 2022 are as follows (Korean won in thousands):

	2023	2022
Depreciation	₩ 105,866	₩ 98,160
Loss on disposal of property, plant and equipment	51,518	6
Impairment loss on property, plant and equipment	20,067,067	9,484
Impairment loss on inventory	13,652,347	-
Impairment loss on intangible assets	8,129,252	-
Impairment loss on right-of-use assets	128,353	-
Utilities	17,113	-
Donations	57,400	21,650
Consumables and supplies	44	-
Repairs and maintenance	561	-
Service fees	1,246,710	-
Others	756,795	21,684
	<u>₩ 44,213,025</u>	<u>₩ 150,984</u>

30. Finance income and finance cost

(1) Details of finance income for the years ended December 31, 2023 and 2022 are as follows (Korean won in thousands):

	2023	2022
Interest income	₩ 4,304,345	₩ 1,945,390
Gain on foreign currency translation	193,381	394,028
Gain on foreign currency transaction	6,502,246	7,356,140
Gain on valuation of financial assets at fair value through profit or loss	3,006,724	5,114,853
Gain on disposal of financial assets at fair value through profit or loss	2,011,658	732,381
Dividends income	1,178,073	962,334
Other	-	-
	<u>₩ 17,196,427</u>	<u>₩ 16,505,126</u>

30. Finance income and finance cost (cont'd)

(2) Details of finance cost for the years ended December 31, 2023 and 2022 are as follows (Korean won in thousands):

	2023	2022
Interest expense	₩ 4,526,311	₩ 913,530
Loss on foreign currency translation	686,993	1,704,639
Loss on foreign currency transaction	5,522,948	5,959,449
Impairment loss on financial assets at fair value through profit or loss		3,659,983
Loss on valuation of financial assets at fair value through profit or loss	4,658,474	5,899,365
Loss on disposal of financial assets at fair value through profit or loss	1,932,631	1,788,598
Impairment loss on financial assets at fair value through OCI	1,449	6,925
Loss on disposal of financial assets measured at amortized cost	311,029	404,576
	<u>₩ 17,639,835</u>	<u>₩ 20,337,065</u>

31. Income tax

(1) The major components of income tax for the years ended December 31, 2023 and 2022 are as follows (Korean won in thousands):

	2023	2022
Current income tax charge	₩ 6,960,084	₩ 9,404,241
Adjustments recognised in the period for current tax of prior periods (*1)		4,948,805
Deferred income tax		
Relating to origination and reversal of temporary differences	6,079,439	(5,451,020)
Relating to accumulated tax deficit	-	-
Change in deferred income tax arising from merger	(7,412,817)	-
Income tax charged directly to equity	756,174	(262,814)
Income tax expense	<u>₩ 6,382,880</u>	<u>₩ 8,639,212</u>

(*1) Income tax paid in addition due to tax audit by tax authority in 2022

(2) Details of income tax charged directly to equity for the years ended December 31, 2023 and 2022 are as follows (Korean won in thousands):

	2023	2022
Gain on valuation of financial assets at fair value through other comprehensive income	₩ (63,405)	₩ 41,321
Remeasurement gain on net defined benefit liability	819,579	(304,135)
Gain on disposals of treasury shares	-	-
	<u>₩ 756,174</u>	<u>₩ (262,814)</u>

31. Income tax (cont'd)

(3) A reconciliation of income tax expense and profit before tax for the years ended December 31, 2023 and 2022 are as follows (Korean won in thousands):

	2023	2022
Profit (Loss) before tax	₩ (7,063,419)	₩ 28,900,102
Income tax using Korea's statutory income tax rate (*1)	(1,631,650)	6,531,825
Adjustments:		
Non-taxable income for tax purposes	(1,124,693)	(43,102)
Non-deductible expenses for tax purposes	17,074,085	1,674,183
Tax credits	(1,428,080)	(494,570)
Tax effect arising from tax audit by tax authority		(2,175,688)
Temporary differences not recognized as deferred tax assets	(204,417)	2,408,337
Income tax charged directly to equity	756,174	(262,814)
Tax paid in addition in the current period for tax of prior periods	397,326	5,028,891
Tax effect arising from consolidation profit adjustments	23,751	(4,066,734)
Change in deferred income tax arising from merger	(7,412,817)	-
Others	(66,798)	38,884
Income tax expense	₩ 6,382,881	₩ 8,639,212
Effective income tax rate	(*2)	29.89%

(*1) The weighted average of statutory tax rates is applied to the respective profits of the Company and subsidiaries applicable to each tax authority as of December 31, 2023 and 2022.

(*2) Effective income tax rate is not applicable in 2023 due to loss before income taxes.

31. Income tax (cont'd)

(4) Changes in deferred income tax assets and liabilities for the years ended December 31, 2023 and 2022 are as follows (Korean won in thousands):

	2023			
	Beginning balance	Charged to income tax expense	Charged directly to equity	Ending balance
Accrued income	₩ (86,004)	83,583	-	(169,587)
Loss on foreign currency translation	1,461,096	209,820	-	1,251,276
Gain on foreign currency translation	(1,174,894)	(184,552)	-	(990,342)
Financial assets at fair value	2,463,687	727,210	63,405	1,673,072
Inventory valuation allowance	907,834	(333,617)	-	1,241,451
Accrued employee benefits	251,147	(181,034)	-	432,181
Write-off of receivables	1,579	(433)	-	2,012
Defined benefit obligation	4,534,705	(1,405,118)	-	5,939,823
Plan assets	(4,058,796)	1,976,333	(819,579)	(5,215,550)
Land revaluation reserve	(930,384)	(4,010)	-	(926,374)
Depreciation	(4,683,621)	59,223	-	(4,742,844)
Impairment loss on other deposits	46,400	200	-	46,200
Right-of-use assets	(676,457)	(115,431)	-	(561,026)
Lease liabilities	642,204	90,660	-	551,544
Discount on leasehold deposits	40,628	21,348	-	19,280
Investment in subsidiaries	2,937,067	13,253	-	2,923,814
Others	1,190,606	(1,572,023)	-	2,762,629
Change in deferred income tax arising from merger	-	7,450,201	-	(7,450,201)
Unused tax losses	-	-	-	-
	₩ 2,866,797	6,835,613	(756,174)	(3,212,642)
Deferred tax assets	₩ 2,866,797			1,768,479
Deferred tax liabilities	-			(4,981,121)

Deferred tax assets and liabilities are measured at the tax rates that are expected to apply in the year when the asset is realized or the liability is settled.

31. Income tax (cont'd)

	2022			
	Beginning balance	Charged to income tax expense	Charged directly to equity	Ending balance
Accrued income	₩ (2,002,114)	(1,916,110)	-	(86,004)
Loss on foreign currency translation	1,061,291	(399,805)	-	1,461,096
Gain on foreign currency translation	(1,582,792)	(407,898)	-	(1,174,894)
Financial assets at fair value	961,722	(1,460,644)	(41,321)	2,463,687
Inventory valuation allowance	946,834	39,000	-	907,834
Accrued employee benefits	264,155	13,008	-	251,147
Write-off of receivables	39,632	38,053	-	1,579
Defined benefit obligation	4,714,058	179,353	-	4,534,705
Plan assets	(4,023,988)	(269,327)	304,135	(4,058,796)
Land revaluation reserve	(970,487)	(40,103)	-	(930,384)
Depreciation	(4,720,763)	(37,142)	-	(4,683,621)
Impairment loss on other deposits	48,400	2,000	-	46,400
Right-of-use assets	(419,332)	257,125	-	(676,457)
Lease liabilities	380,138	(262,066)	-	642,204
Discount on leasehold deposits	31,078	(9,550)	-	40,628
Investment in subsidiaries	1,375,594	(1,561,473)	-	2,937,067
Others	1,312,351	121,745	-	1,190,606
Unused tax losses	-	-	-	-
	₩ (2,584,223)	(5,713,834)	262,814	2,866,797
Deferred tax assets	₩ 1,569,610			2,866,797
Deferred tax liabilities	(4,153,833)			-

Deferred tax assets and liabilities are measured at the tax rates that are expected to apply in the year when the asset is realized or the liability is settled.

- (5) Certain deferred tax assets relating to the deductible temporary difference are not recognized as it is not probable that the temporary differences will reverse in the foreseeable future or the temporary differences can be utilized against taxable profit. Deferred tax assets that are not recognized as of December 31, 2023 and 2022 are as follows (Korean won in thousands):

	2023		2022	
	Temporary differences	Tax effects	Temporary differences	Tax effects
Investments in subsidiaries	₩ 50,674,755	11,705,868	₩ 32,244,270	7,480,671
Bad debt allowance	74,699,636	16,383,430	72,942,020	16,065,325
Goodwill	(21,469,804)	(4,959,525)	-	-
-	₩ 103,904,588	23,129,774	₩ 105,186,290	23,545,996

32. Expenses classified by nature

Expenses classified by nature for the years ended December 31, 2023 and 2022 are as follows (Korean won in thousands):

	2023	2022
Change in raw materials and sub-materials	₩ 402,182,878	₩ 237,516,340
Change in finished goods	7,123,429	(40,165,567)
Change in work-in-process	(19,347,088)	(11,550,556)
Change in other inventories	582,607	872,077
Salaries and severance benefits	47,954,453	38,128,017
Depreciation	15,849,842	12,862,056
Amortization	787,592	106,257
Bad debt expenses	(23,350)	(285,110)
Employee benefits	6,236,851	4,717,441
Others	116,604,446	102,271,852
	<u>₩ 577,951,660</u>	<u>₩ 344,472,807</u>

Total amount of expenses classified by nature includes cost of sales and selling and general administrative expenses.

33. Earnings per share

(1) Basic Earnings per share

Basic Earnings per share for the years ended December 31, 2023 and 2022 are calculated as follows (Korean won in units, except for share data):

	2023	
	Continuing operation	Discontinued operation
Profit (loss) attributable to ordinary equity holders	₩ (13,446,299,175)	(3,128,961)
Weighted average number of ordinary shares for basic EPS (in shares)	44,146,594	44,146,594
Basic Earnings per share	<u>₩ (305)</u>	<u>-</u>

	2022	
	Continuing operation	Discontinued operation
Profit attributable to ordinary equity holders	₩ 20,260,890,178	(18,917)
Weighted average number of ordinary shares for basic EPS (in shares)	43,022,165	43,022,165
Basic Earnings per share	<u>₩ 471</u>	<u>-</u>

33. Earnings per share (cont'd)

Profit attributable to ordinary equity holders for the years ended December 31, 2023 and 2022 are calculated as follows (Korean won in units):

	2023	
	Continuing operation	Discontinued operation
Profit (loss) for the year	₩ (13,446,299,175)	(3,128,961)
Less: Dividends to preferred equity holders	-	-
Profit (loss) attributable to ordinary equity holders	₩ (13,446,299,175)	(3,128,961)

	2022	
	Continuing operation	Discontinued operation
Profit for the year	₩ 20,260,890,178	(18,917)
Less: Dividends to preferred equity holders	-	-
Profit attributable to ordinary equity holders	₩ 20,260,890,178	(18,917)

Weighted average number of ordinary shares for basic EPS for the years ended December 31, 2023 and 2022 are calculated as follows (shares):

	2023	2022
Number of ordinary shares at January. 1.	43,960,757	43,960,757
Issuing ordinary shares at October 18	7,947,695	
Weighted average number of issued ordinary shares	45,593,845	
Less: Weighted average number of treasury shares	(1,447,251)	(938,592)
Weighted average number of ordinary shares	44,146,594	43,022,165

(2) Diluted Earnings per share

The Group does not have dilutive potentially ordinary shares and as a result, basic earnings per share and diluted earnings per share are the same for the years ended December 31, 2023 and 2022.

34. Supplementary cash flow information

(1) Details of cash generated from operations for the years ended December 31, 2023 and 2022 are as follows
(Korean won in units):

	2023	2022
Profit of continuing operation	₩ (13,446,299,175)	₩ 20,260,890
Adjustments to reconcile profit to net cash flows		
Depreciation	₩ 16,470,534	₩ 13,402,035
Bad debt expenses	(23,349)	(285,111)
Loss on disposal of property, plant and equipment	51,518	6
Interest expense	4,526,311	913,530
Loss on foreign currency translation	686,993	1,704,639
Income tax expenses	6,382,880	8,639,212
Amortization	791,411	106,870
Severance benefits	856,422	949,128
Loss on disposal of financial assets at fair value through profit or loss	1,932,631	1,788,598
Loss on valuation of financial assets at fair value through profit or loss	4,658,474	5,899,365
Impairment loss on financial assets at fair value through profit or loss		3,659,983
Loss on disposal of financial assets measured at amortized cost	311,029	404,576
Impairment loss on financial assets at fair value through OCI	1,449	6,925
Impairment loss on right-of-use assets	128,353	-
Impairment loss on intangible assets	8,129,252	-
Impairment loss on assets held-for-sale	-	-
Share of loss of associates and joint ventures	597,833	19,357
Impairment loss on inventory	13,652,347	-
Loss on disposal of property, plant and equipment	20,067,066	9,484
Loss on disposal of investment properties	-	-
Gain on disposal of property plant, and equipment	(22,478)	(15,603)
Dividends income	(1,178,073)	(962,334)
Gain on foreign currency translation	(193,381)	(394,028)
Interest income	(4,304,346)	(1,945,389)
Gain on disposal of investment properties	-	-
Gain on disposal of investments in associates	-	-
Gain on disposal of financial assets at fair value through profit or loss	(2,011,657)	(732,381)
Gain on valuation of financial assets at fair value through profit or loss	(3,006,724)	(5,114,853)
Gain on disposal of financial assets at fair value through other comprehensive income	-	-
Gain on disposal of financial assets measured at amortized cost	-	-
Gain on redemption of bonds		(691,076)
Gain from bargain purchase		(6,743,080)
Others	(208,989)	(35,959)
	₩ 68,295,506	₩ 20,583,894
Working capital adjustments		
Other receivables	₩ (2,685,228)	₩ (4,394,076)
Advanced payments	(1,894,013)	420,715
Prepaid expenses	1,139,999	(1,338,658)
Trade receivables	(35,123,517)	(3,375,345)
Accrued income		(1,093,151)
Inventories	(10,730,049)	(64,797,233)
Valuation allowance on inventories	934,895	908,422
Long-term prepaid expenses	37,495	26,901
Long-term other receivables		(3,786)
Trade payables	(3,950,468)	8,846,587
Other payables	15,898,489	7,267,556
Advances received	49,705,023	24,448,246
Withholdings	(462,988)	(10,781)
V.A.T. withholdings	(5,987)	-
Accrued expenses	2,527,119	68,905
Long-term other payables	82,648	37,518
Other long-term employee benefit liabilities	46,636	-
Allowance for doubtful accounts		(510)
Payment of severance benefit	(531,057)	(90,110)
Prepaid V.A.T.	(246,598)	1,186,151
Plan assets	(2,848,154)	(4,078,899)
	₩ 11,894,245	₩ (35,971,548)
	₩ (13,366,109,424)	₩ 4,873,236

34. Supplementary cash flow information (cont'd)

(2) Significant transactions not involving cash flows for the years ended December 31, 2023 and 2022 are as follows (Korean won in thousands):

	2023	2022
Transfer to current portion of long-term borrowings	₩ 14,207,907	₩ 88,100
Reclassification of investment properties to property, plant and equipment		
Reclassification of construction-in-progress	49,077,555	12,914,194
Transfer to current portion of financial assets measured at amortized cost		4,610
Transfer to current portion of financial assets at fair value through profit or loss	5,913,229	1,008,457

(3) Changes in liabilities arising from financing activities for the years ended December 31, 2023 and 2022 are as follows (Korean won in thousands):

2023						
	Beginning balance	Cash flows from financing activities	Non-cash transactions			Ending balance
			Reclassification	Changes arising from merger and consolidated entities	others	
Government grants	₩ 455,176	-	-	-	-	455,176
Leasehold deposit	69,049	189,851	-	545,500	(500)	803,900
Short-term borrowings	44,318,000	12,965,373	-	31,460,000	754,645	89,498,018
Current portion of long-term borrowings	853,420	(1,249,710)	14,204,907	1,441,740	-	15,250,357
Long-term borrowings	15,953,495	6,629,361	(14,204,907)	22,165,127	(9,438,277)	21,104,799
Lease liabilities	2,768,119	(1,940,442)	-	140,664	1,579,407	2,547,748
2022						
	Beginning balance	Cash flows from financing activities	Non-cash transactions		Ending balance	
			Reclassification	others		
Government grants	₩ 455,176	-	-	-	455,176	
Leasehold deposit	69,374	(650)	-	325	69,049	
Short-term borrowings	7,098,000	37,220,000	-	-	44,318,000	
Current portion of long-term borrowings	15,948,570	(15,948,570)	853,420	-	853,420	
Long-term borrowings	2,281,093	14,525,823	(853,420)	-	15,953,496	
Lease liabilities	1,583,477	(1,102,107)	-	2,286,749	2,768,119	

35. Related party transactions

(1) Related parties of the Group and nature of their relationship with the Group as of December 31, 2023 and 2022 are as follows:

Nature of relationship	December 31, 2023	December 31, 2022
Joint ventures	-	-
Associates	Grid Space Co., Ltd. YONGBEE Aerospace Technology Inc.	Grid Space Co., Ltd. YONGBEE Aerospace Technology Inc., Hankuk Global Solution Co., Ltd.
Entities over which a close family member of the Group's CEO exerts significant influence	GCM Corp., Ilsan Carbon Co., Ltd., Gold Stone, YHL, SHANGHAI BC TRADING	Hankuk Advanced Materials Co., Ltd.(*1) GCM Corp., Ilsan Carbon Co., Ltd., Leaps Co., Ltd.(*1), Gold Stone, YHL, HAM VINA Co., Ltd.(*1)

(*1) Excluded from related party and included in subsidiaries in 2023

35. Related party transactions (cont'd)

(2) Significant transactions with related parties for the years ended December 31, 2023 and 2022 are as follows
(Korean won in thousands):

	2023			
	Sales	Purchase	Other income	Other expense
Korea Aviation Technologies Co., Ltd.	₩ -	-	-	-
Korea Composites Inc.	-	-	-	-
HAM VINA Co., Ltd.	-	-	-	-
Hankuk Advanced Materials Co., Ltd.(*1)	4,249,033	31,247,340	503,550	769,109
Techbaba Co., Ltd.	-	-	-	-
Leaps Co., Ltd.(*1)	-	-	18,513	-
Gold Stone	-	-	-	-
Ilsan Carbon Co., Ltd.	2,600	-	-	30,945
YHL	-	-	-	318,800
Hankuk Global Solution Co. Ltd.(*1)	7,564,646	-	93,968	-
	₩ 11,816,279	31,247,340	616,031	1,118,854

(*1) As it was reclassified to a subsidiary in 2023, the transactions with related party are transactions occurred while related party relationships are maintained.

	2022			
	Sales	Purchase	Other income	Other expense
Korea Aviation Technologies Co., Ltd.(*1)	₩ -	-	-	-
Korea Composites Inc.(*1)	-	-	-	-
HAM VINA Co., Ltd.	-	77,359	-	-
Hankuk Advanced Materials Co., Ltd.	6,071,741	33,916,962	476,930	767,531
Techbaba Co., Ltd.	-	-	-	-
Leaps Co., Ltd.	-	-	34,085	-
Gold Stone	-	-	-	-
Ilsan Carbon Co., Ltd.	10,680	-	-	-
YHL	-	-	-	264,000
Hankuk Global Solution Co. Ltd.	-	-	5,819	-
	₩ 6,082,421	33,994,321	516,834	1,031,531

(*1) As it was reclassified to a subsidiary in 2022, the transactions with related party are transactions occurred while related party relationships are maintained.

35. Related party transactions (cont'd)

(3) Outstanding balances of trade receivables and trade payables arising from the transactions with related parties as of December 31, 2023 and 2022 are as follows (Korean won in thousands):

	2023		2022	
	Trade receivables	Trade payables	Trade receivables	Trade payables
HAM VINA Co., Ltd.	₩ -	-	₩ -	18,022
Hankuk Advanced Materials Co., Ltd.	-	-	2,105,055	3,115,561
Ilsan Carbon Co., Ltd.	-	-	2,860	-
	₩ -	-	₩ 2,107,915	3,133,583

None of trade receivables are impaired as of December 31, 2023 and 2022.

(4) Outstanding balances of loans and other receivables arising from the transactions with related parties as of December 31, 2023 and 2022 are as follows (Korean won in thousands):

	2023			
	Short-term loans and other receivables	Long-term loans and other receivables	Financial assets at fair value through profit or loss	Leasehold deposits
Hankuk Advanced Materials Co., Ltd.	₩ -	-	-	₩ -
Leaps Co., Ltd.	-	-	-	-
YHL	-	-	-	2,000,000
Hankuk Global Solution Co. Ltd.	-	-	-	-
	₩ -	-	-	₩ 2,000,000

	2022			
	Short-term loans and other receivables	Long-term loans and other receivables	Financial assets at fair value through profit or loss	Leasehold deposits
Hankuk Advanced Materials Co., Ltd.	₩ 415,384	-	-	₩ 400,000
Leaps Co., Ltd.	33,660	-	-	-
YHL	-	-	-	2,000,000
Hankuk Global Solution Co. Ltd.	-	-	-	-
	₩ 449,044	-	-	₩ 2,400,000

Outstanding balances of other liabilities arising from the transactions with related parties as of December 31, 2023 and 2022 are as follows (Korean won in thousands):

	2023		2022	
	Other payables	Leasehold deposits received	Other payables	Leasehold deposits received
Hankuk Advanced Materials Co., Ltd.	₩ -	-	₩ 38,537	64,500

35. Related party transactions (cont'd)

(5) Assets provided as collateral and guarantees

None of the Group's assets are provided as collateral for the related parties as of December 31, 2023.

None of the related parties' assets are provided as collateral for the Group as of December 31, 2023.

No guarantees are provided by the Group for the related parties as of December 31, 2023.

No guarantees are provided by the related parties for the Group as of December 31, 2023.

(6) There is no loans to related parties for the year ended December 31, 2023 and 2022.

(7) Compensation of key management personnel

The Group defines key management personnel as registered officers, non-registered officers, an officer in charge of internal audit and officers of each operating segments who have important authorities and responsibilities in planning, operating and controlling the Group's business.

Compensation of key management personnel of the Group for the years ended December 31, 2023 and 2022 are as follows (Korean won in thousands):

	2023	2022
Short-term employee benefits	₩ 1,919,195	₩ 1,870,512
Severance benefits	483,032	631,656
	<u>₩ 2,402,227</u>	<u>₩ 2,502,168</u>

36. Commitments and contingencies

(1) Restricted deposits as of December 31, 2023 and 2022 are as follows (Korea won in thousands):

Accounts	Deposits	Financial companies	2023	2022	Withdrawal restriction for
	Time deposits	KEB Hana Bank	₩ 286,000	₩ 24,850	Borrowings
Short-term financial instruments	Time deposits	KEB Hana Bank		300,000	Borrowings collateralized by receivables
	Time deposits	Suhyup Bank	5,000,000	5,000,000	Borrowings
	Time deposits	Kyongnam Bank	4,400,000	6,047,490	Borrowings
	Time deposits	Woori Bank	334,000	1,777,770	Borrowings
			₩ 10,020,000	₩ 13,150,110	
Long-term financial instruments	Time deposits	KEB Hana Bank	350,000	-	
			₩ 10,370,000	₩ 13,150,110	

(2) The Group's assets provided as collateral as of December 31, 2023 are as follows (Korean won in thousands):

Assets provided as collateral	Accounts	Book value	Pledged amount	Beneficiary	Pledge for
Land, buildings and others	Property, plant and equipment		223,280	M.O.E.L. (*1)	Gov. grants
		₩ 36,685,162	8,978,400	Kyongnam Bank	Borrowings
			30,000,000	Korea Development Bank	Borrowings
	Investment properties	₩ 36,685,162	39,201,680	KEB Hana Bank	
		15,730,938	12,000,000		
		₩ 52,416,100	51,201,680		

(*1) Ministry of Employment and Labor

(3) None of the Group's assets are provided as collateral for the others as of December 31, 2023.

(4) Assets provided as collateral and guarantees

None of the others' assets are provided as collateral for the Group as of December 31, 2023.

Details of guarantee contracts which the Group has as of December 31, 2023 are as follows (Korean won in thousands):

Beneficiary of Guarantees	Guarantee providers	Guarantees provided	Guarantee amount
Hyundai Heavy Industries Co., Ltd. and others	Seoul Guarantee Insurance Company	Maintenance and repair and others	₩ 52,650,559
		Execution of contracts	96,923,795
Hyundai Heavy Industries Co., Ltd. and others	Machinery Financial Cooperative	Maintenance and repair and others	₩ -
		Execution of contracts	23,678,781

36. Commitments and contingencies (cont'd)

(5) Insurance coverage under major insurance policies carried by the Group as of December 31, 2023 is as follows (Korean won in thousands):

Policy	Insured assets	Coverage amount	Insurance company
Fire Insurance (*1)	Buildings, inventories and others	₩ 442,284,686	Meritz Fire & Marine Insurance Co., Ltd.
House fire insurance	Buildings	4,607,785	Hyundai Marine & Fire Insurance Co., Ltd.
Compensation for gas accidents insurance	Buildings and others	4,180,000	Lotte Insurance Co., Ltd.
Environmental Liability Insurance	Machinery and others	25,000,000	DB Insurance Co., Ltd.
		₩ 476,072,471	

(*1) Coverage amount of ₩35,508,523 thousand is provided as collateral for Kyongnam Bank in relation to borrowings.

In addition, the Group carries comprehensive loss insurance and accident liability insurance for its vehicles.

(6) Credit lines provided by financial companies as of December 31, 2023 are as follows (US Dollar in units and Korean won in thousands):

	Description	Limit	Executed	Non executed
Kyongnam Bank	Public finance loan	₩ 799,200	799,200	-
	General term loan	6,000,000	6,000,000	-
	Revolving loan	3,700,000	109,000	3,591,000
Korea Development Bank	Facility loan	₩ 56,600,000	36,600,000	20,000,000
	Other acceptance of foreign currency payment	USD 11,000,000.00	USD 2,000,000.00	USD 9,000,000.00
Suhyup Bank	General term loan	₩ 4,500,000	4,500,000	-
	Open-end loan	500,000	500,000	-
KEB Hana Bank	L/C mortgaged loan	₩ 6,000,000	309,570	5,690,430
	Receivables mortgaged loan	12,500,000	5,056,158	7,443,842
	Facility loan	10,000,000	10,000,000	-
	General term loan	3,000,000	3,000,000	-
	L/C open	8,000,000	7,127,538	872,462
		USD 4,000,000.00	USD 3,014,259.43	USD 985,740.57
Shinhan Bank		₩ 29,000,000	29,000,000	-
Woori Bank	Operating loan	₩ 9,800,000	9,800,000	-
Korea Exim Bank	Export promotion loan	₩ 20,000,000	20,000,000	-
National Forestry Cooperative Federation	Overseas forest development loan	₩ 879,330	879,330	-
IBK Capital	General term loan	₩ 635,468	635,468	-
		₩ 171,913,998	134,316,264	37,597,734
		USD 15,000,000.00	USD 5,014,259.43	USD 9,985,740.57

36. Commitments and contingencies (cont'd)

- (7) The Group entered into currency forward contracts and TRF contracts with Woori Bank and other financial companies to hedge the risk of fluctuation in foreign currency exchange rate relating to trade receivables and trade payables which are denominated in foreign currencies.

Details of the unsettled contracts as of December 31, 2023 are as follows (US Dollar in units and Korean won in thousands):

Financial companies	The Group's position	Contractual amount	Fair value
Woori Bank	USD sell	USD 72,000,000	₩ 1,732,833
Citibank	USD buy	USD 3,000,000	126,831
Kyongnam Bank	USD sell	USD 28,000,000	237,787
		USD 103,000,000	₩ 2,097,451

In connection with the above currency forward contracts, the Group recognized gain on valuation of financial assets at fair value through profit and loss amounting to ₩883,847 thousand in finance income and loss on valuation of financial assets at fair value through profit and loss amounting to ₩2,252,461 thousand in finance cost for the year ended December 31, 2022.

- (8) As of December 31, 2023, there is a pending lawsuit (claim of wage of ₩1,848 million) in which the Group is involved as a defendant. As the result of the lawsuit cannot be reasonably forecast as of December 31, 2023, no provision for the lawsuit is recognized.

37. Segment information

- (1) For management purposes, the Group is organized into business units based on its products and services and has four reportable segments, as follows:

Segment	Principal operation
General products	This segment produces and sells general goods such as carbon prepreg and others.
Industry materials and products	This segment produces and sells industrial materials and products such as dry film, glass paper, electronics, HP, insulation panels for LNG cargos and others.
Trading and export agency	This segment mainly operates in trading, export agency and others.
Resource development(*1)	This segment mainly operates in rubber tree plantation and related projects

(*1) The Group management decided to shut down rubber tree plantation operation in 2018 and the operations has been classified as discontinued operation since then.

37. Segment information (cont'd)

(2) Financial performance by segment for the years ended December 31, 2023 and 2022 are as follows (Korean won in thousands):

	2023				
	General products	Industry materials and products	Trading and export agency	Discontinued operation	Total
Sales	₩ 28,663,648	564,404,638	1,349,098	-	594,417,384
Operating profit (loss)	(1,602,467)	16,758,664	1,309,528	(10,350)	16,455,375
Profit(loss)	(9,574,152)	(4,343,815)	471,668	(3,129)	(13,449,428)

	2021				
	General products	Industry materials and products	Trading and export agency	Discontinued operation	Total
Sales	₩ 38,574,845	330,161,111	534,910	-	369,270,866
Operating profit (loss)	1,473,811	22,818,223	506,044	(19)	24,798,059
Profit(loss)	(1,847,461)	23,363,443	(1,255,092)	(19)	20,260,871

(3) Financial positions by segment as of December 31, 2023 and 2022 are as follows (Korean won in thousands):

	2023				
	General products	Industry materials and products	Trading and export agency	Discontinued operation	Total
Trade receivables	₩ 14,862,137	86,249,429		-	101,111,566
Property, plant and equipment	56,627,394	224,567,172	-	-	281,194,566
Intangible assets	18,027,411	21,683,064	-	-	39,710,475
Inventories and others	64,259,001	311,443,911	1,771,800	4,466	377,479,178
Total assets	₩ 153,775,943	643,943,576	1,771,800	4,466	799,495,785
Total liabilities	₩ 23,340,047	306,249,605	8,184,384	-	337,774,036

	2022				
	General products	Industry materials and products	Trading and export agency	Discontinued operation	Total
Trade receivables	₩ 5,584,869	33,627,236	60,196	-	39,272,301
Property, plant and equipment	32,459,751	180,004,091	-	-	212,463,842
Intangible assets	-	2,254,493	-	-	2,254,493
Inventories and others	40,880,333	288,818,588	1,636,630	7,448	331,342,999
Total assets	₩ 78,924,953	504,704,408	1,696,826	7,448	585,333,635
Total liabilities	₩ 10,696,844	161,855,579	8,613,378	-	181,165,801

37. Segment information (cont'd)

(4) Financial performance by geographic segment for the years ended December 31, 2023 and 2022 are as follows (Korean won in thousands):

2023				
	Domestic	Asia	Discontinued operation	Total
Sales	₩ 586,676,515	7,740,869	-	594,417,384
Operating profit (loss)	18,512,217	(2,046,492)	(10,350)	16,455,375
Profit (loss)	(4,460,015)	(8,986,284)	(3,129)	(13,449,428)

2022				
	Domestic	Asia	Discontinued operation	Total
Sales	₩ 352,210,584	17,060,282	-	369,270,866
Operating profit (loss)	25,166,337	(368,259)	(19)	24,798,059
Profit (loss)	22,360,505	(2,099,615)	(19)	20,260,871

(5) Financial positions by geographic segment as of December 31, 2023 and 2022 are as follows (Korean won in thousands):

2023				
	Domestic	Asia	Discontinued operation	Total
Trade receivables	₩ 99,865,062	1,246,504	-	101,111,566
Property, plant and equipment.	252,429,769	28,764,797	-	281,194,566
Intangible assets	39,710,475	-	-	39,710,475
Inventories and others	359,280,095	18,194,617	4,466	377,479,178
Total assets	₩ 751,285,401	48,205,918	4,466	799,495,785
Total liabilities	₩ 330,285,321	7,488,715	-	337,774,036

2022				
	Domestic	Asia	Discontinued operation	Total
Trade receivables	₩ 37,008,827	2,263,474	-	39,272,301
Property, plant and equipment.	188,437,091	24,026,751	-	212,463,842
Intangible assets	2,254,493	-	-	2,254,493
Inventories and others	317,610,854	13,724,697	7,448	331,342,999
Total assets	₩ 545,311,265	40,014,922	7,448	585,333,635
Total liabilities	₩ 178,219,294	2,946,507	-	181,165,801

38. Risk management

(1) Financial risk management

The Group's activities are exposed to a variety of financial risks: market risk (including currency risk, interest rate risk and price risk), credit risk and liquidity risk. The Group's overall risk management program focuses to minimize potential adverse effects on the Group's operation by monitoring periodical financial risk and rearranging the financial risk management policy. The Group uses derivatives to address specific financial risk.

a) Credit risk management

The Group deals with the customers with higher credit level and receive sufficient mortgage and guarantee to minimize financial loss resulting from the customers' default.

To manage the credit risk, the Group evaluates the credit of customers periodically, considering past experience and other factors, sets individual credit limit considering the credit quality of customer and rearrange the mortgage level provided by the customers.

Details of maximum exposure to credit risk as of December 31, 2023 and 2022 are as follows (Korean won in thousands):

	2023		2022	
	Book value	Maximum exposure to credit risk	Book value	Maximum exposure to credit risk
Short-term financial instruments	₩ 13,022,445	13,022,445	₩ 13,165,044	13,165,044
Trade receivables	101,111,566	101,111,566	39,272,301	39,272,301
Short-term loans and other receivables	14,662,648	14,662,648	11,986,349	11,986,349
Short-term financial assets at fair value through profit or loss	9,881,414	9,881,414	7,446,243	7,446,243
Short-term financial assets measured at amortized cost			4,610	4,610
Long-term financial instruments	352,000	352,000	-	-
Long-term loans and other receivables	23,597,788	23,597,788	23,777,463	23,777,463
Long-term financial assets at fair value through profit or loss	32,099,939	32,099,939	37,445,147	37,445,147
Long-term financial assets measured at amortized cost	120,000	120,000	6,929,940	6,929,940
Long-term financial assets at fair value through OCI	153,735	153,735	81,455	81,455
	<u>₩ 195,001,535</u>	<u>195,001,535</u>	<u>₩ 140,108,552</u>	<u>140,108,552</u>

As cash and cash equivalents' exposure to credit risk is extremely immaterial, their maximum exposure to credit risk is not presented (See Note 3).

38. Risk management (cont'd)

b) Liquidity risk management

The Group manages possible liquidity risk in advance through monitoring forecasts of the Group's liquidity requirements.

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

2023							
	Short-term/ Long-term borrowings	Trade payables and others(*1)	Lease liabilities	Financial liabilities at fair value through profit or loss	Bonds	Bonds with warrant	Total
Book value	₩125,587,175	102,574,105	2,552,469	1,059,057	10,000,000	200,000	241,972,806
Contractual undiscounted cash flow							
- Less than 6 months	₩ 47,019,957	102,300,076	910,325	874,460	260,284	4,041	151,369,143
- 6 ~ 12 months	61,123,847	-	960,376	184,597	261,715	4,041	62,534,576
- 1 ~ 2 years	14,161,745	274,029	715,755	-	10,390,427	16,120	25,558,076
- 3 ~ 5 years	7,441,478	-	497,353	-	-	204,637	8,143,468
- Over 5 years	1,231,220	-	-	-	-	-	1,231,220
	₩130,978,247	102,574,105	3,083,809	1,059,057	10,912,426	228,839	248,836,483

(*1) Other payables, accrued expenses and leasehold received.

2022						
	Short-term/ Long-term borrowings	Trade payables and others(*1)	Lease liabilities	Financial liabilities at fair value through profit or loss	Total	
Book value	₩ 61,124,915	71,638,355	2,768,119	2,072,131	137,603,520	
Contractual undiscounted cash flow						
- Less than 6 months	₩ 17,848,844	71,474,111	804,696	929,046	91,056,697	
- 6 ~ 12 months	29,073,639	-	748,073	872,033	30,693,745	
- 1 ~ 2 years	8,652,185	165,347	843,410	271,052	9,931,994	
- 3 ~ 5 years	6,868,373	-	494,189	-	7,362,562	
- Over 5 years	1,880,647	-	-	-	1,880,647	
	₩ 64,323,688	71,639,458	2,890,368	2,072,131	140,925,645	

(*1) Other payables, accrued expenses and leasehold received.

38. Risk management (cont'd)

c) Market risk

The Group is exposed to market risk arising from fluctuation of foreign currency exchange rate and interest rate.

i) Foreign exchange risk

The Group operates internationally and is exposed to foreign exchange risk arising from various currency exposures.

For the years ended December 31, 2023 and 2022, if the Group's functional currency had weakened/strengthened by 1% against foreign currencies with all other variables held constant, profit for the period and equity would have been affected as follows (Korean won in thousands):

	2023		2022	
	Change in equity	Change in profit before tax for the period	Change in equity	Change in profit before tax for the period
USD				
- Increase by 1%	₩ 974,121	974,121	₩ 716,631	716,631
- Decrease by 1%	(974,121)	(974,121)	(716,631)	(716,631)
JPY				
- Increase by 1%	₩ 20,222	20,222	₩ 15,398	15,398
- Decrease by 1%	(20,222)	(20,222)	(15,398)	(15,398)
EUR				
- Increase by 1%	₩ (19,499)	(19,499)	₩ (20,436)	(20,436)
- Decrease by 1%	19,499	19,499	20,436	20,436
CNY				
- Increase by 1%	₩ 0.05	0.05	₩ 0.04	0.04
- Decrease by 1%	(0.05)	(0.05)	(0.04)	(0.04)
GBP				
- Increase by 1%	₩ -	-	₩ 82	82
- Decrease by 1%	-	-	(82)	(82)

ii) Interest rate risk

The Group's exposure to the risk of changes in market interest rates relates primarily to the Group's short-term and long-term debt obligations with fixed interest rates.

The Group manages its interest rate risk by having a balanced portfolio of fixed and variable rate loans and borrowings.

The Group's borrowings exposed to the risk of changes in market interest rates are as follows (Korean won in thousands):

	2023	2022
Fixed rate		
Short-term borrowings	₩ 89,232,018	₩ 44,318,000
Current portion of long-term borrowings	15,250,356	853,420
Long-term borrowings	21,104,800	15,953,495
Bonds	10,000,000	-
Bonds with warrant	200,000	-
	₩ 135,787,174	₩ 61,124,915

38. Risk management (cont'd)

As the Group has more interest bearing financial assets than interest bearing financial liabilities, equity and profit for the year ended December 31, 2023 are expected to increase when interest rate rises.

As of December 31, 2023 and 2022, if interest rates had been fluctuated by 100bp with all other variables held constant, equity and profit for the period would have been affected as follows (Korean won in thousands):

	2023		2022	
	Change in equity	Change in profit before tax for the period	Change in equity	Change in profit before tax for the period
Interest rate				
- Increase by 100bp	₩ 41,293	54,476	₩ 622,336	821,023
- Decrease by 100bp	(41,293)	(54,476)	(622,336)	(821,023)

iii) Price risk

The Group is exposed to the price risk arising from marketable securities, other financial assets and other financial liabilities.

Marketable securities, other financial assets and financial liabilities measured at fair value as of December 31, 2023 and 2022 are as follows (Korean won in thousands):

	2023	
	Fair value	Book value
Financial assets at fair value through profit and loss	₩ 41,981,353	41,981,353
Financial assets at fair value through other comprehensive income	153,735	153,735
Financial liabilities at fair value through profit and loss	1,059,057	1,059,057

As of December 31, 2023, if the prices of above marketable securities, other financial assets and other financial liabilities had risen (fallen) by 10%, with all other variables held constant, equity would have increased (decreased) by ₩3,113,563 thousand as of December 31, 2023.

	2022	
	Fair value	Book value
Financial assets at fair value through profit and loss	₩ 44,479,087	44,479,087
Financial assets at fair value through other comprehensive income	81,455	81,455
Financial liabilities at fair value through profit and loss	2,072,131	2,072,131

As of December 31, 2022, if the prices of above marketable securities, other financial assets and other financial liabilities had risen (fallen) by 10%, with all other variables held constant, equity would have increased (decreased) by ₩3,220,622 thousand as of December 31, 2022.

38. Risk management (cont'd)

(2) Capital risk management

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

There are no significant changes in the Group's capital risk management policies compared to those applied for the year ended December 31, 2022.

The gearing ratios as of December 31, 2023 and 2021 are as follows (Korean won in thousands):

	2023		2022	
Total liabilities (A)	₩	337,774,036	₩	181,165,801
Less: Cash and cash equivalents (B)		(66,697,909)		(53,576,755)
Liabilities, net (A-B)	₩	271,076,127	₩	127,589,046
Total equity (C)	₩	454,654,106	₩	404,167,834
Debt-to-equity ratio ((A-B)/C)		59.6%		31.6%

39. Discontinued operation

(1) Details of discontinued operation

In 2010, the Group finalized to enter into a land concession license agreement with Kratie Provincial Office in the Kingdom of Cambodia which entitled the Group to use the land of approximately 10,000 hectares for 70 years starting from July, 2008. The Group established Horizon Agriculture Development Co., Ltd to start rubber tree plantation project on the land.

However, some part of land on which the Group acquired concession right was occupied by the villagers and the Group was denied to access to the area of land. Accordingly, the Group had been in trouble managing rubber tree plantation project and executing land concession right.

The Group continued to negotiate with Ministry of Land Management of Cambodia, Kratie Provincial Office and the Korean Embassy to Cambodia for the compensation for the damages. In addition, the Group pursued ISD (Investor-state dispute) settlement against Cambodian Government for the land occupied by the villagers. Cambodian Government, however, had not reacted to the Group's request of ISD settlement.

Accordingly, the Group management decided to shut down rubber tree plantation operation of Horizon Agriculture Development Co., Ltd. in Cambodia in December, 2018. In line to this shut-down of operation, the Group set up plan to dispose assets and related liabilities of G.B.I.(H.K) International Ltd. and HC Networks Hong Kong Co., Ltd. which wholly own Horizon Agriculture Development Co., Ltd. The Group management initiated active program to locate a buyer. Disposal groups (assets and liabilities) of the subsidiaries are classified as assets and related liabilities held for sale (See Note 18) and operations of the subsidiaries are classified as discontinued operation in 2018.

Meanwhile, the Group was informed that G.B.I.(H.K) International Ltd. was liquidated as of July 12, 2019 by Company Registry in Hong Kong. Accordingly, G.B.I.(H.K.) International Ltd. and its 100 % subsidiary, Horizon Agriculture Development Co., Ltd. were excluded from the Group.

39. Discontinued operation (cont'd)

(2) Details of profit of discontinued operation for the years ended December 31, 2023 and 2022 are as follows
(Korean won in thousands):

	HC Networks Hong Kong Co., Ltd.	
	2023	2022
Revenue	₩ -	₩ -
Cost of sales	-	-
Gross profit	-	-
Selling and general administrative expenses	(10,351)	(9,008)
Operating loss	(10,351)	(9,008)
Other income	7,255	8,989
Other expenses	(33)-	-
Finance income	-	-
Finance cost	-	-
Profit (loss) of discontinued operation before income tax	(3,129)	(19)
Income tax expense	-	-
Consolidation adjustments	-	-
Profit of discontinued operation	₩ (3,129)	₩ (19)

39. Discontinued operation (cont'd)

(3) Details of cash flows of discontinued operation for the years ended December 31, 2023 and 2022 are as follows (Korean won in thousands):

	HC Networks Hong Kong Co., Ltd.	
	2023	2022
Operating activities	₩ (3,274)	₩ 465
Investing activities	-	-
Financing activities	-	-
	₩ (3,274)	₩ 465

40. A fire in the factory

There was a fire in the factory 2 of the Controlling Company (Hankuk Carbon Co., Ltd.) on April 21, 2023 and the Controlling Company's inventories and PP&E were damaged.

The Controlling Company's assets including damaged inventories and PP&E were insured for ₩298,074 million. The amount of damage from the fire was approximately ₩18,000 million and it was recognized as other expense (see Note 30).

The Controlling Company received approximately ₩20,400 million as insurance benefit in accordance with insurance policy and it was recognized as other income (see Note 30).

41. Merger

The Group entered the contract to merge Hankuk Advanced Materials Co., Ltd. on July 12, 2023. The legal entity of merging company is the Controlling Company (Hankuk Carbon Co., Ltd.). A shareholder's meeting to approve the merger contract was held on August 18, 2023 and the effective date of the merger is September 30, 2023.

Through the merger, the Group expect to create synergy by integrating management resources, enhance business competitiveness and maximize corporate value by strengthening management efficiency.

As a result of the merger, Leaps Co., Ltd. and HAM VINA Co., Ltd. which were formerly Hankuk Advanced Materials Co., Ltd.'s subsidiaries were included in the Group.

Hankuk Carbon Co., Ltd. and its subsidiaries
Notes to the consolidated financial statements
As of December 31, 2023 and 2022

41. Merger (cont'd)

Details of accounting for merger with Hankuk Advanced Materials Co., Ltd. and its subsidiaries are as follows (Korean won in thousands):

Description	Carrying amount			Adjustment in fair value	Fair value
	Hankuk Advanced Materials Co., Ltd.	Leaps Co., Ltd.	HAM VINA Co., Ltd.		
Consideration transferred (A)					
Ordinary shares				₩	95,849,202
Identifiable assets acquired and liabilities assumed					
Assets	₩ 92,199,722	₩ 12,840,847	₩ 10,901,959	₩9,297,125	₩ 125,239,653
Current assets					
Cash and cash equivalents	5,501,827	48,423	310,687		5,860,937
Short-term financial instruments			551,000		551,000
Trade receivables	10,572,997	458,600	653,230		11,684,827
Short-term loans and other receivables	5,910,597	2,234	17,996		5,930,827
Inventories	20,754,229	5,127,248	1,497,062		27,378,539
Income tax receivable		320			320
Other current assets	891,243	41,270	381,058		1,313,571
Non-current assets					
Long-term financial instruments	150,000	-			150,000
Financial assets at fair value through OCI	5,417,664	46,111			5,463,775
Long-term loans and other receivables	8,824,186	-			8,824,186
Property, plant and equipment	19,918,371	7,069,447	6,590,592	7,876,037	41,454,447
Investment properties	13,959,041	-		1,421,088	15,380,129
Right-of-use assets	121,193	18,504	828,417		968,114
Intangible assets	17,329	18,690			36,019
Other non-current assets	161,046	10,000	71,916		242,962
Liabilities	₩ 46,514,506	₩ 8,303,720	₩ 6,189,877		₩ 61,008,103
Current liabilities					
Trade payables	4,689,588	263,763	35,037		4,988,388
Other payables	3,696,089	538,350	371,687		4,606,126
Short-term borrowings and current portion of long-term borrowings	13,400,100	2,699,640			16,099,740
Lease liabilities	26,773	6,545			33,318
Income tax payable	992,699				992,699
Other current liabilities	149,603	8,972	875		159,450
Non-current liabilities					
Long-term borrowings	11,657,450	4,725,400	5,782,277		22,165,127
Bonds	10,000,000				10,000,000
Other payables	860,000	48,731			908,732
Lease liabilities	95,028	12,318			107,346
Deferred tax liabilities	947,177				947,177
Net of the identifiable assets and liabilities(B)				₩	64,231,550
Intangible assets recognized (C)				₩	18,692,659
Know-how					6,344,019
Customer relationship					12,348,640
Tax effect arising from adjustments in fair value and recognition of intangible assets (D)				₩	6,465,641
Goodwill (A-B-C+D)				₩	19,390,634

42. Business Combination

The Group additionally acquired 42.71% of share of Hankuk Global Solution Co., Ltd. and Hankuk Global Solution Co., Ltd., which was an associate, is included in subsidiaries in 2023.

Through the business combination, the Group expect to create synergy by integrating management resources, enhance business competitiveness and maximize corporate value by strengthening management efficiency.

Details of accounting for business combination are as follows (Korean won in thousands):

Description	Carrying amount		Adjustment in fair value		Fair value	
Consideration transferred (A)						
Cash and cash equivalents	₩	8,300	₩	-	₩	8,300
Identifiable assets acquired and liabilities assumed						
Assets	₩	20,828,542	₩	-	₩	20,828,542
Current assets						
Cash and cash equivalents		636,815		-		636,815
Trade receivables		19,172,148		-		19,172,148
Short-term loans and other receivables		548,293		-		548,293
Inventories		33,663		-		33,663
Other current assets		125,459		-		125,459
Non-current assets						
Long-term loans and other receivables		156,000		-		156,000
Property, plant and equipment		105,977		-		105,977
Intangible assets		50,187		-		50,187
Liabilities	₩	30,525,508	₩	-	₩	30,525,508
Current liabilities						
Trade payables		11,157,559		-		11,157,559
Other payables		447,068		-		447,068
Short-term borrowings and current portion of long-term borrowings		18,560,000		-		18,560,000
Other current liabilities		30,892		-		30,892
Non-current liabilities						
Bonds with warrant		200,000		-		200,000
Other payables		7,074		-		7,074
Employee defined benefit liability		122,915		-		122,915
Net of the identifiable assets and liabilities (B)	₩	(9,696,966)	₩	-	₩	(9,696,966)
Non-controlling interests (C)						(1,683,793)
Goodwill (A-B+C)						8,021,474

43. Impairment test

The Group regarded the situation as an indication of impairment that operating loss consistently occurs in each cash-generating unit of HCM VINA Co., Ltd., C2i s.r.o., Hankuk Global Solution Co., Ltd., Leaps Co., Ltd., Korea Composites Inc. and Korea Aviation Technologies Co., Ltd.

Asset's value in use applied in impairment test was calculated based on independent valuers' valuation report. Details of impairment test are as follows (Korean won in thousands):

Description	HCM VINA Co., Ltd	C2i s.r.o	Hankuk Global Solution Co. Ltd.	Leaps Co., Ltd.	Korea Composites Inc.	Korea Aviation Technologies Co., Ltd.
I. Carrying amount	₩ 36,643,919	₩ 12,038,255	₩ 9,960,736	₩ 11,253,884	₩ 9,156,631	₩ 1,520,966
Carrying amount of net asset	36,643,919	12,038,255	1,939,262	11,253,884	11,607,083	1,520,966
Carrying amount of goodwill	-	-	8,021,474	-	4,513,790	-
Impairment loss recognized in prior years	-	-	-	-	(6,964,242)	-
II. Recoverable value (=value in use)	18,764,020	2,586,354	-	7,256,745	9,392,186	-
III. Impairment loss	6,608,576	3,699,018	8,162,431	3,997,138	4,451,589	1,405,919
Allocated to PP&E	6,608,576	3,541,222	95,947	3,983,656	4,451,589	1,386,077
Allocated to intangible assets	-	29,443	8,066,484	13,482	-	19,842
Allocated to right-of-use assets	-	128,353	-	-	-	-