

HD HYUNDAI CO., LTD. (formerly known as HYUNDAI HEAVY
INDUSTRIES HOLDINGS CO., LTD.) AND SUBSIDIARIES

Consolidated Financial Statements

December 31, 2022 and 2021

(With Independent Auditors' Report Thereon)

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Independent Auditors' Report

Based on a report originally issued in Korean

To the Shareholders and Board of Directors of

HD HYUNDAI CO., LTD.

Opinion

We have audited the consolidated financial statements of HD HYUNDAI CO., LTD. (formerly known as Hyundai Heavy Industries Holdings Co., Ltd.) and its subsidiaries ("the Group"), which comprise the consolidated statements of financial position as of December 31, 2022 and 2021 the consolidated statements of comprehensive income, changes in equity and cash flows for the years then ended, and notes, comprising significant accounting policies and other explanatory information.

In our opinion, the accompanying consolidated financial statements present fairly, in all material respects, the consolidated financial position of the Group as of December 31, 2022 and 2021, and its consolidated financial performance and its consolidated cash flows for the years then ended in accordance with Korean International Financial Reporting Standards ("K-IFRS").

Basis for Opinion

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

Key Audit Matter

Key audit matter is a matter that, in our professional judgment, was of most significance in our audit of the consolidated financial statements as of and for the year ended December 31, 2022. This matter was addressed in the context of our audit of the consolidated financial statements as a whole, and in forming our opinion thereon, and we do not provide a separate opinion on this matter.



Assessment of impairment on cash-generating unit (CGU)

The management performed impairment test for the CGU by estimating the recoverable amount of CGU at the end of each reporting period. However, for cash-generating units that include operating rights, impairment evaluations are performed annually based on estimated recoverable amounts regardless of indications of asset impairment. As described in *Note 4(12)* to the consolidated financial statements, an impairment loss is recognized for a CGU if the carrying amount of the CGU exceeds its recoverable amount.

As described in *Note 16 and 18 to the consolidated financial statements*, the carrying amount of investments in property, plant and equipment and goodwill as of December 31, 2022 is ₩25,852,366 million and amounts for 40% of total assets. In addition, estimation of the recoverable amount requires the management's estimate and judgment including future cash flow and discount rate, and there is considerable uncertainty in the estimation and judgement. Therefore, we identified the assessment of impairment of investments in CGU that included goodwill as a key audit matter.

The primary procedures we performed to address this key audit matter included the following:

- Testing the effectiveness of the design, implementation and operation of the management review control over the Group's impairment assessment process.
- Assessing the qualification and independence of the external valuation specialist engaged by the Group for the impairment assessment.
- Engaging our valuation specialists to assist us in evaluating the key assumptions used to determine the value-in-use which included the discount rate the valuation methodology and others.
- Comparing and analyzing the financial data used for impairment assessment and mid- to long-term business plans approved by the management.
- Comparing and analyzing the future cash flows forecasts prepared in prior year with the current year's performance to assess the Group's ability to accurately forecast.
- Evaluating the reliability of key assumptions used to estimate net fair value and the accuracy of calculations.

Other Matter

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

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

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

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

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



Auditors' Responsibilities for the Audit of the Consolidated Financial Statements

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

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

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

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

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



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

The engagement partner on the audit resulting in this independent auditors' report is Yong-Jae Cha.

KPMG Samjong Accounting Corp.

Seoul, Korea

March 20, 2023

This report is effective as of March 20, 2023, the audit report date. Certain subsequent events or circumstances, which may occur between the audit report date and the time of reading this report, could have a material impact on the accompanying consolidated financial statements and notes thereto. Accordingly, the readers of the audit report should understand that the above audit report has not been updated to reflect the impact of such subsequent events or circumstances, if any.

HD HYUNDAI CO., LTD. AND SUBSIDIARIES
Consolidated Statements of Financial Position
As of December 31, 2022 and 2021

(In thousands of won)

	<u>Note</u>	<u>2022</u>	<u>2021</u>
Assets			
Cash and cash equivalents	4,5,7,43,44,45 ₩	3,994,767,866	2,137,064,211
Short-term financial assets	5,6,7,44,45	1,560,185,929	263,912,075
Trade and other receivables	8,9,20,44,45,48	5,923,430,205	4,618,500,416
Contract assets	8,35,44,45	6,647,001,194	228,672,816
Inventories	4,10,20,37	9,470,742,395	6,031,871,903
Derivative assets	27,44,45	287,909,655	38,830,711
Firm commitment assets	27	344,839,505	-
Current tax assets		57,206,856	6,308,905
Other current assets	11	1,841,774,389	224,581,070
Assets held for sale	49	2,951,651	5,294,866
Total current assets		<u>30,130,809,645</u>	<u>13,555,036,973</u>
Investments in associates and joint ventures	12,13,48	463,638,152	3,322,358,926
Long-term financial assets	5,6,7,44,45	342,069,016	150,357,657
Long-term trade and other receivables	8,9,20,44,45,48	674,420,255	517,082,010
Investment property	15,37	293,260,165	10,184,069
Property, plant and equipment	4,16,20,37	24,219,899,472	13,268,914,223
Right-of-use assets	17,37	1,671,464,172	1,458,034,610
Intangible assets	18,33,37	4,374,207,422	3,064,296,656
Derivative assets	27,44,45	392,249,892	680,653
Firm commitment assets	27	292,751,459	-
Deferred tax assets	41	1,916,335,155	393,397,271
Other non-current assets	11,25	799,756,271	38,304,875
Total non-current assets		<u>35,440,051,431</u>	<u>22,223,610,950</u>
Total assets		<u>₩ 65,570,861,076</u>	<u>35,778,647,923</u>

See accompanying notes to the consolidated financial statements.

HD HYUNDAI CO., LTD. AND SUBSIDIARIES
Consolidated Statements of Financial Position, Continued
As of December 31, 2022 and 2021

(In thousands of won)

	<u>Note</u>	<u>2022</u>	<u>2021</u>
Liabilities			
Short-term financial liabilities	5,20,21,24,27,44,45 ₩	6,608,404,027	4,254,060,831
Current lease liabilities	17,44,45	339,063,132	257,735,033
Trade and other payables	22,44,45,48	7,864,549,381	5,469,811,318
Contract liability	35	8,211,692,735	662,268,235
Derivative liabilities	27,44,45	600,485,236	53,389,903
Firm commitment liabilities	27	92,548,274	-
Income tax payable		589,204,970	391,508,540
Current provisions	19,26	1,919,949,568	509,573,714
Other current liabilities	23	48,696,442	87,547,440
Total current liabilities		<u>26,274,593,765</u>	<u>11,685,895,014</u>
Long-term financial liabilities	5,20,21,24,27,44,45	11,445,027,947	9,414,520,184
Non-current lease liabilities	17,44,45	1,468,691,336	1,257,891,787
Long-term trade and other payables	22,44,45,48	799,552,855	752,678,198
Non-current contract liabilities	35	108,862,394	82,258,475
Liabilities for defined benefit plans	25	72,241,392	43,952,518
Non-current provisions	26	499,406,326	143,973,416
Derivative liabilities	27,44,45	296,707,242	2,996,544
Firm commitment liabilities	27	324,974,480	-
Deferred tax liabilities	41	1,014,449,040	540,030,785
Other non-current liabilities	23	2,690,260	2,387,925
Total non-current liabilities		<u>16,032,603,272</u>	<u>12,240,689,832</u>
Total liabilities		<u>42,307,197,037</u>	<u>23,926,584,846</u>
Equity			
Common stock	28	81,433,085	81,433,085
Capital surplus	28	5,253,322,452	5,233,237,943
Capital adjustments	30	(900,279,730)	(938,442,631)
Accumulated other comprehensive income	31	396,071,752	240,473,152
Retained earnings	32	2,654,698,596	1,686,527,044
Equity attributable to owners of the Company		<u>7,485,246,155</u>	<u>6,303,228,593</u>
Non-controlling interests	1,4,29	<u>15,778,417,884</u>	<u>5,548,834,484</u>
Total equity		<u>23,263,664,039</u>	<u>11,852,063,077</u>
Total liabilities and equity		<u>₩ 65,570,861,076</u>	<u>35,778,647,923</u>

See accompanying notes to the consolidated financial statements.

HD HYUNDAI CO., LTD. AND SUBSIDIARIES
Consolidated Statements of Comprehensive Income
For the years ended December 31, 2022 and 2021

<i>(In thousands of won, except per share information)</i>	<u>Note</u>	<u>2022</u>	<u>2021</u>
Revenue	12,13,27,35,48	₩ 60,849,668,073	28,353,671,478
Cost of sales	38,48	54,883,097,648	25,736,296,657
Gross profit		<u>5,966,570,425</u>	<u>2,617,374,821</u>
Selling, general and administrative expenses	36,38,44,48	2,579,562,161	1,580,786,444
Operating profit	5,37	<u>3,387,008,264</u>	<u>1,036,588,377</u>
Finance income	27,39,44	3,805,881,226	468,618,831
Finance costs	27,39,44	5,113,661,948	969,406,340
Other non-operating income	40,44	3,007,172,313	130,964,697
Other non-operating expenses	40,44	2,126,621,381	150,256,627
Share of profit of equity accounted investees	12,13	(63,373,971)	(51,336,575)
Profit before income taxes		<u>2,896,404,503</u>	<u>465,172,363</u>
Income tax expense	41	661,449,490	314,596,540
Profit for the year		<u>2,234,955,013</u>	<u>150,575,823</u>
Other comprehensive income (loss)	25,27,31,44		
Items that are or may be reclassified subsequently to profit or loss:			
Gain (loss) on valuation of cash flow hedges		56,417,194	(10,864,277)
Exchange differences on translating foreign operations		(18,937,435)	152,134,003
Change in equity of equity method Investments		6,551,233	(28,376,364)
		<u>44,030,992</u>	<u>112,893,362</u>
Items that will not be reclassified to profit or loss:			
Gain (loss) on valuation financial instruments at FVOCI		(42,546,837)	3,837,324
Actuarial gains and losses		82,433,909	(6,748,780)
Gain on revaluation of property, plant and equipment		13,827,773	403,442
Changes in retained earnings of equity method investments		10,000,014	(8,212,663)
		<u>63,714,859</u>	<u>(10,720,677)</u>
Other comprehensive income for the year, net of income tax		107,745,851	102,172,685
Total comprehensive income for the year		<u>₩ 2,342,700,864</u>	<u>252,748,508</u>

See accompanying notes to the consolidated financial statements.

HD HYUNDAI CO., LTD. AND SUBSIDIARIES
 Consolidated Statements of Comprehensive Income, Continued
 For the years ended December 31, 2022 and 2021

<i>(In thousands of won, except per share information)</i>	<u>Note</u>	<u>2022</u>	<u>2021</u>
Profit (loss) attributable to:			
Owners of the Company	₩	1,408,623,310	(147,123,719)
Non-controlling interests		826,331,703	297,699,542
		<u>2,234,955,013</u>	<u>150,575,823</u>
Total comprehensive income (loss) attributable to:			
Owners of the Company		1,466,056,788	(143,926,683)
Non-controlling interests		876,644,076	396,675,191
		<u>2,342,700,864</u>	<u>252,748,508</u>
Earnings (loss) per share			
Basic earnings (loss) per share (in won)	42	₩ <u>19,933</u>	<u>(2,082)</u>

See accompanying notes to the consolidated financial statements.

HD HYUNDAI CO., LTD. AND SUBSIDIARIES
Consolidated Statements of Changes in Equity
For the years ended December 31, 2022 and 2021

(In thousands of won)

	Attributable to owners of the Company						Total equity
	Common stock	Capital surplus	Capital adjustments	Accumulated other comprehensive income	Retained earnings	Non-controlling interests	
Balance on January 1, 2021	₩ 81,433,085	5,192,703,064	(722,349,134)	250,180,442	2,212,956,223	4,082,930,555	11,097,854,235
Total comprehensive income (loss) for the year	-	-	-	-	(147,123,719)	297,699,542	150,575,823
Profit (loss) for the year	-	-	-	-	-	-	-
Gain on valuation of financial instruments at FVOCI	-	-	-	2,793,090	-	1,044,234	3,837,324
Effective portion of changes in fair value of cash flow hedges	-	-	-	(3,699,194)	-	(7,165,083)	(10,864,277)
Exchange differences on translating foreign operations	-	-	-	44,884,888	-	107,249,115	152,134,003
Gain (loss) on revaluation of property, plant, equipment	-	-	-	(1,775,228)	-	2,178,670	403,442
Change in equity of equity method investments	-	-	-	(28,448,914)	-	72,550	(28,376,364)
Actuarial gains (losses)	-	-	-	-	(2,344,943)	(4,403,837)	(6,748,780)
Change in retained earnings of equity method investments	-	-	-	-	(8,212,663)	-	(8,212,663)
Transactions with owners of the Company, recognized directly in equity	-	3,055,612	-	-	-	573,989,950	577,045,562
Paid-in capital increase of subsidiaries	-	-	-	-	(392,209,786)	(147,490,344)	(539,700,130)
Dividends	-	-	-	(22,247,662)	22,247,662	-	-
Revaluation surplus reclassification	-	-	-	-	-	(15,275,000)	(15,275,000)
Repayment of hybrid bonds by subsidiaries	-	23,296,264	-	-	-	(17,169,206)	6,127,058
Exercise of preemptive right of subsidiaries	-	10,372,927	-	-	-	(46,040,639)	(35,667,712)
Claims for stock purchase of subsidiaries	-	-	-	-	-	1,060,928,218	1,060,928,218
Changes in scope of consolidation	-	3,810,014	(216,093,497)	-	-	(348,395,335)	(560,678,818)
Capital transactions in the Group	-	62	-	(1,214,270)	1,214,270	8,681,094	8,681,156
Others	-	5,233,237,943	(938,442,631)	240,473,152	1,686,527,044	5,548,834,484	11,852,063,077
Balance on December 31, 2021	₩ 81,433,085	5,233,237,943	(938,442,631)	240,473,152	1,686,527,044	5,548,834,484	11,852,063,077

See accompanying notes to the consolidated financial statements.

HD HYUNDAI CO., LTD. AND SUBSIDIARIES
Consolidated Statements of Changes in Equity, Continued
For the years ended December 31, 2022 and 2021

(In thousands of won)

	Attributable to owners of the Company						Total equity
	Common stock	Capital surplus	Capital adjustments	Accumulated other comprehensive income	Retained earnings	Non-controlling interests	
Balance on January 1, 2022	₩ 81,433,085	5,233,237,943	(938,442,631)	240,473,152	1,686,527,044	5,548,834,484	11,852,063,077
Total comprehensive income (loss) for the year	-	-	-	-	1,408,623,310	826,331,703	2,234,955,013
Profit for the year	-	-	-	-	1,408,623,310	826,331,703	2,234,955,013
Gain (loss) on valuation of financial instruments at FVOCI	-	-	-	(14,830,400)	-	(27,716,437)	(42,546,837)
Effective portion of changes in fair value of cash flow hedges	-	-	-	25,764,352	-	30,652,842	56,417,194
Exchange differences on translating foreign operations	-	-	-	(8,504,267)	-	(10,433,168)	(18,937,435)
Revaluation of property, plant, equipment	-	-	-	6,627,340	-	7,200,433	13,827,773
Change in equity of equity method investments	-	-	-	4,766,288	-	1,784,945	6,551,233
Actuarial gains	-	-	-	-	33,646,629	48,787,280	82,433,909
Change in retained earnings of equity method investments	-	-	-	-	9,963,536	36,478	10,000,014
Transactions with owners of the Company, recognized directly in equity							
Dividends	-	-	-	-	(325,074,778)	(208,759,154)	(533,833,932)
Revaluation surplus reclassification	-	-	-	(2,127,116)	2,127,116	-	-
Reclassification of gain/loss on valuation of financial instruments at FVOCI	-	-	-	1,240	(1,240)	-	-
Repayment of hybrid bonds by subsidiaries	-	-	-	-	-	(15,275,000)	(15,275,000)
Exercise of preemptive right of subsidiaries	-	-	-	-	-	1,843,540	1,843,540
Changes in scope of consolidation	-	19,879,862	44,662,205	143,901,163	(168,254,403)	9,533,734,439	9,554,043,404
Capital transactions in the Group	-	204,647	(5,542,410)	-	(15,188)	44,321,019	58,643,283
Others	-	-	(956,894)	-	7,156,570	(2,925,520)	3,478,803
Balance on December 31, 2022	₩ 81,433,085	5,253,322,452	(900,279,730)	396,071,752	2,654,698,596	15,778,417,884	23,263,664,039

See accompanying notes to the consolidated financial statements.

HD HYUNDAI CO., LTD. AND SUBSIDIARIES

Consolidated Statements of Cash Flows

For the years ended December 31, 2022 and 2021

(In thousands of won)

	<i>Note</i>	2022	2021
Cash flows from operating activities			
Profit for the year	₩	2,234,955,013	150,575,823
Adjustments		849,435,747	433,711,320
Cash generated from operations	43	3,084,390,760	584,287,143
Interest received		196,932,814	56,317,429
Interest paid		(663,091,287)	(357,576,809)
Dividends received		12,393,994	3,399,106
Income taxes paid		(496,848,111)	(282,132,507)
Net cash provided by operating activities		2,133,778,170	4,294,362
Cash flows from investing activities			
Proceeds from sale of short-term financial assets		1,241,487,270	527,812,399
Proceeds from collection of short-term other receivables		5,767,901	5,702,307
Proceeds from sale of long-term financial assets		2,610,587	9,557,268
Proceeds from collection of long-term other receivables		89,471,217	51,835,786
Decrease of derivative liabilities		1,424,181	-
Proceeds from sale of investments in associates and joint ventures		36,637,170	-
Proceeds from sale of property, plant and equipment		36,187,149	50,796,468
Proceeds from sale of investment property		109,608	6,532,883
Proceeds from sale of intangible assets		5,623,270	1,311,000
Receipt of land compensation		-	7,981,177
Receipt of government subsidies		2,491,242	-
Proceeds from collection of other non-current assets		17,252,763	9,101,467
Proceeds from sale of assets held for sale		16,635,030	4,810,559
Changes in scope of consolidation (loss of control)		(1,215,018)	171,941,006
Acquisition of short-term financial assets		(649,958,631)	(439,367,138)
Acquisition of short-term other receivables		(5,418,024)	(4,807,795)
Acquisition of long-term financial assets		(21,224,658)	(61,599,595)
Acquisition of long-term other receivables		(61,290,287)	(44,397,868)
Increase of derivative liabilities		(1,021,065)	-
Acquisition of investments in associates and joint ventures		(142,435,657)	(13,104,000)
Acquisition of property, plant and equipment		(1,965,906,295)	(1,951,449,071)
Acquisition of investment property		(2,658,464)	-
Acquisition of intangible assets		(100,859,309)	(36,395,996)
Acquisition of other non-current assets		(9,825,000)	-
Changes in scope of consolidation (acquisition of control)		2,741,522,191	42,756,212
Net cash provided by (used in) investing activities		1,235,407,171	(1,660,982,931)
Cash flows from financing activities			
Proceeds from short-term financial liabilities		19,919,881,975	10,459,507,341
Proceeds from long-term financial liabilities		3,765,928,356	3,533,863,657
Capital contribution from non-controlling interests		181,326,791	1,254,103,997
Repayment of short-term financial liabilities		(24,411,680,905)	(11,983,888,295)
Dividends paid		(325,050,453)	(392,176,186)
Payment of lease liabilities		(283,239,106)	(255,562,554)
Repayment of long-term financial liabilities		(124,864,089)	(290,787,519)
Dividends and distribution to non-controlling interests		(259,700,175)	(616,642,868)
Net cash provided by (used in) financing activities	₩	(1,537,397,606)	1,708,417,573

HD HYUNDAI CO., LTD. AND SUBSIDIARIES
 Consolidated Statements of Cash Flows, Continued
 For the years ended December 31, 2022 and 2021

(In thousands of won)

	Note	2022	2021
Effects of movement in exchange rates on cash and cash equivalents		<u>25,915,920</u>	<u>46,834,382</u>
Net increase in cash and cash equivalents	₩	<u>1,857,703,655</u>	<u>98,563,386</u>
Cash and cash equivalents on January 1		<u>2,137,064,211</u>	<u>2,038,500,825</u>
Cash and cash equivalents on December 31	₩	<u><u>3,994,767,866</u></u>	<u><u>2,137,064,211</u></u>

See accompanying notes to the consolidated financial statements.

HD HYUNDAI CO., LTD. AND SUBSIDIARIES

Notes to the Consolidated Financial Statements

For the years ended December 31, 2022 and 2021

1. Reporting Entity

(1) Description of the Parent company

HD Hyundai Co., Ltd. (formerly known as Hyundai Heavy Industries Holdings Co., Ltd.) (the "Parent Company") was incorporated on April 1, 2017 through a split-off from Korea Shipbuilding & Offshore Engineering Co., Ltd. and is engaged in investing business and others. The head office of the Company is located in Seoul, Republic of Korea.

As of December 31, 2022, the Parent Company's major shareholders consist of Mong-Joon Chung (26.60%), National Pension Service Investment Management (7.78%), Ki-Sun Chung (5.26%), etc.

(2) Consolidated subsidiaries

Subsidiaries as of December 31, 2022 and 2021 are summarized as follows:

Company	Main business	Location	Fiscal year end	Ownership (%)	
				2022	2021
Korea Shipbuilding & Offshore Engineering Co., Ltd.(*1,3)	Non-Financial Holding Company	Korea	December	35.05	30.95
Hyundai Heavy Industries Co., Ltd.(*1,2)	Shipbuilding Industry	Korea	December	78.02	-
Hyundai Samho Heavy Industries Co., Ltd.(*1,2)	Shipbuilding Industry	Korea	December	80.54	-
Hyundai Mipo Dockyard Co., Ltd.(*1,2,3)	Shipbuilding Industry	Korea	December	42.40	-
Komas Corporation(*1,2,4)	Marine Transportation Industry	Korea	December	-	-
Hyundai Engineering & Technology(*1,2)	Other Engineering Services	Korea	December	100.00	-
Ulsan Hyundai Football Club Co., Ltd.(*1,2)	Professional Football Team Management Business	Korea	December	100.00	-
Hyundai Heavy Industries Mos Co.,Ltd.(*1,2)	Facilities Management Services	Korea	December	100.00	-
Hyundai Energy Solutions Co., Ltd.(*1,2)	Renewable Energy Related Businesses such as Solar Energy	Korea	December	53.57	-
Hyundai Infra Solutions Co., Ltd.(*1,2,6)	Loading/Unloading Equipment Manufacturing	Korea	December	-	-
Hyundai Engine Company Ltd.(*1,2)	Internal Combustion Engine Manufacturing	Korea	December	100.00	-
Hyundai Vietnam Shipbuilding Co., Ltd.(*1,2)	Shipbuilding Industry	Vietnam	December	65.00	-
Hyundai Transformers And Engineering India- Private Limited(*1,2)	Manufacture and sale of transformers	India	March	100.00	-
Hyundai Heavy Industries Miraflores Power Plant Inc(*1,2)	Other manufacturing industries	Panama	December	100.00	-
HHI Mauritius Limited(*1,2)	Other manufacturing industries	Mauritius	December	100.00	-
Hyundai West Africa Limited(*1,2,4)	Manufacture of other transportation equipment	Nigeria	December	-	-
Hyundai Arabia Company L.L.C(*1,2)	Industrial plant construction	Saudi Arabia	December	100.00	-
Hyundai Samho Heavy Industries Panama, Inc.(*1,2)	Construction - Industrial Facility Construction	Panama	December	100.00	-
Hyundai Energy Solutions America Inc.(*1,2)	Solar Module Sales	USA	December	100.00	-
Hyundai Heavy Industries Technology Center India Private Limited(*1,2)	Research and Development	India	March	100.00	-
Hyundai Heavy Industries Free Zone Enterprise(*1,2,4)	Industrial Plant Construction	Nigeria	December	-	-

HD HYUNDAI CO., LTD. AND SUBSIDIARIES
Notes to the Consolidated Financial Statements, Continued
For the years ended December 31, 2022 and 2021

1. Reporting Entity, Continued

(2) Consolidated subsidiaries, continued

Company	Main business	Location	Fiscal year end	Ownership (%)	
				2022	2021
Pontos Investment LLC(*2,7)	Investment	USA	December	100.00	-
Hyundai Oilbank Co., Ltd.	Manufacturing of petroleum products	Korea	December	73.85	73.85
Hyundai and Shell Base Oil Co., Ltd.(*2)	Manufacturing and sale of base oil	Korea	December	60.00	60.00
Hyundai Chemical Co., Ltd.(*2)	Crude oil refining business	Korea	December	60.00	60.00
Hyundai Oilbank (Shanghai) Co., Ltd.(*2)	Trading in petrochemical products	China	December	100.00	100.00
Hyundai Oil Singapore Pte. Ltd.(*2)	Trading in crude oil and petrochemical products, chartering	Singapore	December	100.00	100.00
MS Dandy Ltd.(*2)	Ship rental service	Marshall Islands	December	100.00	100.00
Grande Ltd.(*2)	Ship rental service	Marshall island	December	100.00	100.00
Hyundai OCI Co., Ltd.(*2)	Other based chemicals manufacture business	Korea	December	51.00	51.00
Hyundai E&F Co., Ltd.(*2)	Energy Business	Korea	December	100.00	100.00
Hyundai Global Service	Engineering service	Korea	December	62.00	62.00
Hyundai Global Service Tech Co., Ltd.(*2,7)	Engineering service	Korea	December	100.00	-
Hyundai Global Service Europe B.V.(*2)	Engine warranty repairs	Netherlands	December	100.00	100.00
Hyundai Global Service Americas Co., Ltd.(*2)	Engine warranty repairs	USA	December	100.00	100.00
Hyundai Global Service Singapore Pte. Ltd.(*2)	Engine warranty repairs	Singapore	December	100.00	100.00
Hyundai Global Service Colombia S.A.S.(*2)	Other Engineering services	Colombia	December	100.00	100.00
Hyundai Global Service Middle East FZE(*2,7)	Engineering service	UAE	December	100.00	-
Hyundai Electric & Energy Systems Co., Ltd.(*3)	Manufacture and sale of electronic and electric products	Korea	December	37.22	37.22
Hyundai Plaspo Co., Ltd.(*2,8)	Manufacture of electric motors, generators, and transformers.	Korea	December	61.84	-
Yeocheon Energy INC.(*2,8)	Electric power generation, solar power generation business	Korea	December	100.00	-
Hyundai Technologies Center Hungary Kft.(*2)	Research and development of technology	Hungary	December	100.00	100.00
Hyundai Electric Switzerland AG(*2)	Research and development of technology	Switzerland	December	100.00	100.00
Hdene Power Solution India Private Ltd.(*2)	Electric construction and power equipment manufacturing	India	March	100.00	100.00
Hyundai Heavy Industries (China) Electric Co., Ltd.(*2)	Manufacture and sale of voltage switchboard	China	December	100.00	100.00
Hyundai Heavy Industries (Shanghai) R&D Co., Ltd.(*2)	Research and development of technology	China	December	100.00	100.00
Hyundai Power Transformers USA Inc.(*2)	Manufacture and sale of electronic and electric products	USA	December	100.00	100.00
Hyundai Electric America Corporation (*2)	Sale of transformers	USA	December	100.00	100.00
Hyundai Electric Arabia L.L.C(*2)	Customer support services	Saudi Arabia	December	100.00	100.00

HD HYUNDAI CO., LTD. AND SUBSIDIARIES
Notes to the Consolidated Financial Statements, Continued
For the years ended December 31, 2022 and 2021

1. Reporting Entity, Continued

(2) Consolidated subsidiaries, continued

Company	Main business	Location	Fiscal year end	Ownership (%)	
				2022	2021
Hyundai Genuine Co., Ltd	Manufacture of machinery equipment for construction and mining	Korea	December	100.00	100.00
Changzhou Hyundai Hydraulic Machinery Co., Ltd.(*2)	Production and sale of hydraulic cylinder	China	December	100.00	100.00
MingHe (Changzhou) Machinery Co., Ltd.(*2,5)	Manufacture and sale of machinery equipment for construction	China	December	-	100.00
Hyundai Construction Equipment Co., Ltd.(*2,3)	Manufacture and sale of machinery equipment for construction	Korea	December	33.12	33.12
HHI China Investment Co., Ltd.(*2)	Holding company	China	December	100.00	100.00
Hyundai Financial Leasing Co., Ltd. (*2)	Financing business	China	December	88.02	46.76
Hyundai (Jiangsu) Construction Machinery Co., Ltd. (*2)	Manufacture and sale of machinery equipment for construction	China	December	60.00	60.00
Weihai Hyundai Wind Power Technology Co., Ltd. (*2,4)	Sale and manufacture of facilities for wind power generation	China	December	-	100.00
Hyundai Construction Equipment Americas, Inc. (*2)	Sale of machinery equipment for construction	USA	December	100.00	100.00
Hyundai Construction Equipment Europe N.V. (*2)	Sale of machinery equipment for construction	Belgium	December	100.00	100.00
Hyundai Construction Equipment India Private Ltd. (*2)	Manufacture and sale of machinery equipment for construction	India	March	100.00	100.00
PT. Hyundai Construction Equipment Asia (*2)	Sale of machinery equipment for construction	Indonesia	December	69.44	69.44
Hyundai Construction Equipment Brasil - Manufacturing and Trading of Construction Equipment S.A(*2,9)	Manufacture, trade and repair of heavy equipment	Brasil	December	100.00	100.00
Hyundai Doosan Infracore Co., Ltd.(*2,3)	Manufacture of machinery equipment	Korea	December	33.29	33.35
Doosan Infracore China Co., Ltd.(*2)	Sale and manufacturing of machinery equipment	China	December	100.00	100.00
Doosan Infracore Hunan Corp.(*2)	Sale of machinery equipment	China	December	100.00	100.00
Doosan Infracore Beijing Corp.(*2)	Sale of machinery equipment	China	December	100.00	100.00
Doosan Infracore (Shandong) Co., Ltd.(*2)	Sale of machinery equipment	China	December	100.00	100.00
Doosan Infracore (China) Investment Co., Ltd.(*2)	Holding company	China	December	100.00	100.00
Doosan (China) Financial Leasing Corp.(*2)	Financing business	China	December	100.00	100.00
Doosan Infracore North America LLC.(*2)	Manufacture and sale of machinery equipment for construction	USA	December	100.00	100.00
Doosan Infracore Japan Corp.(*2,4)	Oversea procurement	Japan	December	-	100.00
Hyundai Doosan Infracore Chile S.A.(*2,9)	Sale of machinery equipment	Chile	December	100.00	100.00
Doosan Infracore South America Industria E Comercio De Maquinas De Construcao LTDA(*2)	Sale of machinery equipment	Brasil	December	99.99	99.99
Doosan Infracore Norway AS.(*2)	Manufacture and sale of machinery equipment for construction	Norway	December	100.00	100.00

HD HYUNDAI CO., LTD. AND SUBSIDIARIES
Notes to the Consolidated Financial Statements, Continued
For the years ended December 31, 2022 and 2021

1. Reporting Entity, Continued

(2) Consolidated subsidiaries, continued

Company	Main business	Location	Fiscal year end	Ownership (%)	
				2022	2021
Doosan Infracore Construction Equipment India Private Ltd.(*2)	Sale of machinery equipment	India	March	100.00	100.00
Doosan Infracore Europe s.r.o.(*2)	Sale of machinery equipment	Czech	December	100.00	100.00
ECUBE Solution Co., Ltd.(*2)	Manufacture and sale of Engine after treatment device	Korea	December	60.00	60.00
Clue Insight Inc.(*2)	Software development and sales	USA	December	72.21	72.21
Doosan Infracore Deutschland GmbH(*2,7)	Sale of machinery equipment	Germany	December	100.00	-
Tianjin Hyundai Doosan Engine Co., Ltd.(*2,8)	Production and sale of engines, etc	China	December	100.00	50.00
Hyundai Robotics Co., Ltd.	Manufacturing of industrial robots	Korea	December	90.00	90.00
Hyundai LNS Co., Ltd.(*2)	Other engineering services	Korea	December	100.00	80.10
Hyundai Robotics Investment (Shanghai) Co., Ltd. (*2)	Robot sales and after-sales service	China	December	100.00	100.00
Hyundai Robotics (Jiangsu) Co., Ltd(*2,7)	Wholesale of other industrial machinery and equipment	China	December	100.00	-
Hyundai Robotics Europe GmbH(*2)	Wholesale of other industrial machinery and equipment	Germany	December	100.00	100.00
Hyundai Robotics USA Inc.(*2,7)	Wholesale of other industrial machinery and equipment	USA	December	100.00	-
Hyundai Future Partners Co., Ltd.	Management consulting business	Korea	December	100.00	100.00
AMC Bio Co., Ltd.(*2)	Research and development business of drug	Korea	December	100.00	100.00
Medi Plus Solution Co., Ltd(*2)	Healthcare solution development and service	Korea	December	76.76	76.76
Avikus Co., Ltd.	Development and sale of software for maritime autonomous surface ships	Korea	December	100.00	100.00

(*1) Reclassified from associates to subsidiaries by acquiring additional shares for the year ended December 31, 2022.

(*2) The percentage of ownership includes indirect ownership.

(*3) Even though the Group has under 50% shares of the investee, it is determined that the Group has a control over the investee, since the Group has substantive power to exercise a majority of voting rights considering the circumstance in the previous shareholders' meeting (e.g. voting pattern), the dispersion of the other shareholders, etc.

(*4) Excluded from subsidiaries due to liquidation for the year ended December 31, 2022.

(*5) Extinguished by merger with Changzhou Hyundai Precision & Ind. Co., Ltd. for the year ended December 31, 2022.

(*6) Extinguished by merger with Hyundai Samho Heavy Industries Co., Ltd. for the year ended December 31, 2022.

(*7) Newly established and included in the consolidated subsidiaries for the year ended December 31, 2022.

(*8) Included in the consolidated subsidiaries by acquiring shares for the year ended December 31, 2022.

(*9) Doosan Bobcat Chile S.A. and Hyundai Heavy Industries Brasil - Manufacturing and Trading of Construction Equipment changed their names to Hyundai Doosan Infracore Chile S.A. and Hyundai Construction Equipment Brasil - Manufacturing and Trading of Construction Equipment S.A., respectively, for the year ended December 31, 2022.

HD HYUNDAI CO., LTD. AND SUBSIDIARIES
Notes to the Consolidated Financial Statements, Continued
For the years ended December 31, 2022 and 2021

1. Reporting Entity, Continued

(3) Changes in scope of consolidation

(i) Subsidiaries newly subject to consolidation for the year ended December 31, 2022 are as follows:

Company	Reason
Hyundai Global Service Tech Co., Ltd.	Establishment
Hyundai Robotics USA Inc.	Establishment
Hyundai Robotics(Jiansu) Co., Ltd	Establishment
Hyundai Global Service Middle East FZE	Establishment
Pontos Investment LLC	Establishment
Doosan Infracore Deutschland GmbH	Establishment
Hyundai Plaspo Co., Ltd.	Newly Acquisition
Yeocheon Energy Inc.	Newly Acquisition
Korea Shipbuilding & Offshore Engineering Co., Ltd.	Additional Acquisition
Hyundai Heavy Industries Co., Ltd.	Additional Acquisition
Hyundai Samho Heavy Industries Co., Ltd.	Additional Acquisition
Hyundai Mipo Dockyard Co., Ltd.	Additional Acquisition
Komas Corporation	Additional Acquisition
Hyundai Engineering & Technology	Additional Acquisition
Ulsan Hyundai Football Club Co., Ltd.	Additional Acquisition
Hyundai Heavy Industries Mos Co., Ltd.	Additional Acquisition
Hyundai Energy Solutions Co., Ltd.	Additional Acquisition
Hyundai Infra Solutions Co., Ltd.	Additional Acquisition
Hyundai Engine Company Ltd.	Additional Acquisition
Hyundai Vietnam Shipbuilding Co., Ltd.	Additional Acquisition
Hyundai Transformers And Engineering India Private Limited	Additional Acquisition
Hyundai Heavy Industries Miraflores Power Plant Inc.	Additional Acquisition
HHI Mauritius Limited	Additional Acquisition
Hyundai West Africa Limited	Additional Acquisition
Hyundai Arabia Company L.L.C	Additional Acquisition
Hyundai Samho Heavy Industries Panama, Inc.	Additional Acquisition
Hyundai Energy Solutions America, Inc.	Additional Acquisition
Hyundai Heavy Industries Technology Center India Private Limited	Additional Acquisition
Hyundai Heavy Industries Free Zone Enterprise	Additional Acquisition
Tianjin Lovol Doosan Engine Co., Ltd.	Additional Acquisition

(ii) Subsidiaries excluded from consolidation for the year ended December 31, 2022 are as follows:

Company	Reason
Weihai Hyundai Wind Power Technology Co., Ltd.	Liquidation
Komas Corporation	Liquidation
Hyundai West Africa Limited	Liquidation
Hyundai Heavy Industries Free Zone Enterprise	Liquidation
Doosan Infracore Japan Corp.	Liquidation
MingHe(Changzhou) Machinery Co., Ltd.	Merger
Hyundai Infra Solutions Co., Ltd.	Merger

HD HYUNDAI CO., LTD. AND SUBSIDIARIES
Notes to the Consolidated Financial Statements, Continued
For the years ended December 31, 2022 and 2021

1. Reporting Entity, Continued

(4) Condensed financial information of consolidated subsidiaries

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

(In millions of won)

Company	2022					
	Assets	Liabilities	Equity	Revenue	Profit (loss)	Total comprehensive income (loss)
Korea Shipbuilding & Offshore Engineering Co., Ltd.(*)	₩ 11,430,170	305,681	11,124,489	154,487	333,656	301,169
Hyundai Heavy Industries Co., Ltd.(*)	16,283,095	10,992,977	5,290,118	7,803,987	(191,917)	(177,587)
Hyundai Samho Heavy Industries Co., Ltd.(*)	5,589,596	3,927,364	1,662,232	4,051,503	85,790	75,242
Hyundai Mipo Dockyard Co., Ltd.(*)	4,780,699	2,659,554	2,121,145	3,138,442	(627)	1,874
Hyundai Energy Solutions Co., Ltd.(*)	654,806	269,731	385,075	911,727	60,136	60,797
Hyundai Vietnam Shipbuilding Co., Ltd.(*)	574,659	484,769	89,890	615,430	(3,901)	626
Hyundai Oilbank Co., Ltd.	13,973,057	8,619,115	5,353,942	32,599,794	1,137,803	1,164,897
Hyundai and Shell Base Oil Co., Ltd.	471,959	165,154	306,805	1,266,833	81,935	82,015
Hyundai Chemical Co., Ltd.	6,268,594	4,205,577	2,063,017	8,111,204	201,971	203,875
Hyundai Oil Singapore Pte. Ltd.	1,204,150	1,091,227	112,923	6,233,604	65,271	65,271
Hyundai OCI Co., Ltd.	336,230	75,703	260,527	384,694	70,572	71,195
Hyundai Global Service	483,500	281,220	202,280	1,080,845	113,600	115,046
Hyundai Electric & Energy Systems Co., Ltd.	2,048,149	1,254,011	794,138	1,829,775	136,271	147,380
Hyundai Power Transformers USA Inc.	292,983	182,878	110,105	242,304	38,737	42,093
Hyundai Electric America Corporation	300,348	292,394	7,954	351,087	2,825	3,107
Hyundai Genuine Co., Ltd.	1,871,665	1,043,769	827,896	700,442	(7,260)	(1,869)
Hyundai Construction Equipment Co., Ltd.	2,418,818	1,108,403	1,310,415	2,571,209	107,160	125,413
HHI China Investment Co., Ltd.	353,393	73,463	279,930	33,705	1,631	(9,544)
Hyundai Financial Leasing Co., Ltd.	442,710	180,107	262,603	52,670	9,545	13,812
Hyundai (Jiangsu) Construction Machinery Co., Ltd.	307,946	175,073	132,873	379,242	(44,590)	(43,635)
Hyundai Construction Equipment Europe N.V.	236,476	140,256	96,220	449,780	9,607	13,812
Hyundai Construction Equipment Americas., Inc.	332,999	238,537	94,462	659,103	36,237	49,805
Hyundai Construction Equipment Brasil - Manufacturing and Trading of Construction Equipment	259,591	177,560	82,031	287,213	7,614	15,687
Hyundai Doosan Infracore Co., Ltd.	3,731,594	2,378,226	1,353,368	4,204,908	207,607	260,519
Doosan Infracore China Co., Ltd.	1,288,688	545,049	743,639	975,660	25,481	5,020
Doosan (China) Financial Leasing Corp.	618,213	381,049	237,164	60,386	18,914	10,788
Doosan Infracore North America LLC.	317,230	241,925	75,305	512,977	13,161	16,937
Doosan Infracore Europe s.r.o.	342,610	312,642	29,968	794,850	7,308	7,420
Hyundai Robotics Co., Ltd.	415,708	122,038	293,670	178,315	10,904	13,000

(*) Financial information after acquisition of control in February 2022.

HD HYUNDAI CO., LTD. AND SUBSIDIARIES
Notes to the Consolidated Financial Statements, Continued
For the years ended December 31, 2022 and 2021

1. Reporting Entity, Continued

(4) Condensed financial information of consolidated subsidiaries, continued

Condensed financial information of significant consolidated subsidiaries as of and for the years ended December 31, 2022 and 2021 are summarized as follows, continued:

(In millions of won)

Company	2021						Total comprehensive income (loss)
	Assets	Liabilities	Equity	Revenue	Profit (loss)		
Hyundai Oilbank Co., Ltd.	₩ 13,049,276	8,460,667	4,588,609	20,318,855	449,619	455,377	
Hyundai and Shell Base Oil Co., Ltd.	590,087	215,296	374,791	1,135,926	228,356	228,421	
Hyundai Chemical Co., Ltd.(*1)	5,731,197	3,872,054	1,859,143	3,899,999	97,132	99,978	
Hyundai Oil Singapore Pte. Ltd.	1,027,158	981,416	45,742	4,622,116	10,574	10,574	
Hyundai OCI Co., Ltd.	326,276	130,946	195,330	246,755	41,029	41,029	
Hyundai Global Service Co., Ltd	407,324	240,089	167,235	891,540	91,082	90,033	
Hyundai Electric & Energy Systems Co., Ltd	1,938,946	1,292,187	646,759	1,554,243	(32,960)	(43,799)	
Hyundai Heavy Industries (China) Electric Co., Ltd.	145,981	89,855	56,126	90,985	1,206	6,962	
Hyundai Power Transformers USA Inc.	238,731	171,288	67,443	209,191	8,675	13,794	
Hyundai Electric America Corporation	148,344	143,497	4,847	106,227	(7,611)	(7,420)	
Hyundai Genuine Co., Ltd.	1,657,475	810,731	846,744	76,835	(25,333)	(25,546)	
Changzhou Hyundai Hydraulic Machinery Co., Ltd.	81,375	23,523	57,852	70,920	17,443	22,311	
Hyundai Construction Equipment Co., Ltd.	2,353,816	1,171,790	1,182,026	2,619,537	111,285	98,949	
HHI China Investment Co., Ltd.	320,394	30,454	289,940	42,803	9,117	40,684	
Hyundai Financial Leasing Co., Ltd.	575,785	315,487	260,298	38,807	5,103	31,738	
Hyundai (Jiangsu) Construction Machinery Co., Ltd.	471,342	280,231	191,111	632,156	12,247	31,362	
Hyundai Construction Equipment Americas, Inc.	212,748	157,634	55,114	442,493	13,286	17,164	
Hyundai Construction Equipment Europe N.V.	172,891	86,803	86,088	401,151	7,477	7,659	
Hyundai Construction Equipment India Private Ltd.	189,558	148,165	41,393	308,409	2,414	4,947	
Hyundai Heavy Industries Brasil - Manufacturing and Trading of Construction Equipment(*2)	227,197	160,852	66,345	-	-	-	
Hyundai Doosan Infracore Co., Ltd.(*3)	3,503,272	2,412,266	1,091,006	1,455,426	(35,362)	(30,579)	
Doosan Infracore China Co., Ltd.(*3)	1,495,941	757,322	738,619	290,342	(27,769)	(27,769)	
Doosan Infracore (China) Investment Co., Ltd. (*3)	130,287	2,966	127,321	6,055	(80,877)	(80,877)	
Doosan (China) Financial Leasing Corp. (*3)	830,223	554,858	275,365	27,684	11,652	11,652	
Doosan Infracore North America LLC. (*3)	192,991	134,623	58,368	152,438	3,118	3,118	
Doosan Infracore Europe s.r.o.(*3)	312,315	289,830	22,485	294,058	(1,479)	(1,441)	
Hyundai Robotics Co., Ltd.	426,835	145,192	281,643	173,559	(22,598)	(22,940)	

(*1) As a result of revisions in *K-IFRS No. 1036*, the financial statements for the previous year were restated.

(*2) Financial information after acquisition of control in December 2021.

(*3) Financial information after acquisition of control in August 2021.

HD HYUNDAI CO., LTD. AND SUBSIDIARIES
Notes to the Consolidated Financial Statements, Continued
For the years ended December 31, 2022 and 2021

1. Reporting Entity, Continued

(5) Non-controlling interests

The information about non-controlling interests of significant consolidated subsidiaries as of December 31, 2022 and 2021 are summarized as follows:

(In millions of won)

	Korea Shipbuilding & Offshore Engineering Co., Ltd. and subsidiaries (*1,4)		Hyundai Oilbank Co., Ltd. and subsidiaries (*2,5)		Hyundai Genuine Co., Ltd. and subsidiaries		Hyundai Electric & Energy Systems Co., Ltd. and subsidiaries (*3)	
	2022	2021	2022	2021	2022	2021	2022	2021
Ownership for non-controlling interests	64.87%	-	26.15%	26.15%	-	-	62.63%	62.63%
Net assets	₩ 12,312,130	-	6,926,823	5,760,809	3,624,232	3,300,652	831,169	646,222
Book value of non-controlling interests	9,495,808	-	3,058,758	2,695,808	2,595,462	2,372,118	571,702	454,139
Net income (loss)	2,678	-	1,632,702	528,078	271,369	(69,259)	162,018	(33,687)
The profit (loss) attributable to non-controlling interests	(53,960)	-	550,651	257,949	190,256	(44,645)	99,805	(21,129)
Cash flows from operating activities	462,246	-	1,622,690	463,190	235,738	(133,408)	(124,138)	109,777
Cash flows from investing activities	(1,339,471)	-	(1,135,895)	(1,763,314)	(207,366)	606,614	(57,613)	(42,393)
Cash flows from financing activities	(977,270)	-	(679,032)	1,314,100	(467,116)	622,503	(1,941)	(240,872)
Net increase (decrease) of cash and cash equivalents	(1,854,495)	-	(192,237)	13,976	(438,744)	1,095,709	(183,692)	(173,488)
Dividends paid to non-controlling interests	2,825	-	160,495	88,605	15,039	-	-	-

(*1) Financial information after acquisition of Korea Shipbuilding & Offshore Engineering Co., Ltd. as a subsidiary for the year ended December 31, 2022.

(*2) Non-controlling interest in Hyundai Oilbank Co., Ltd. includes hybrid bonds amounted to ₩428,924 million issued by Hyundai Oilbank Co., Ltd. as of December 31, 2022 and 2021.

(*3) Ownership for non-controlling interest adjusted for treasury stock of Hyundai Electric & Energy Systems Co., Ltd., are 62.72% as of December 31, 2022 and 2021.

(*4) Ownership for non-controlling interest adjusted for treasury stock of Korea Shipbuilding & Offshore Engineering Co., Ltd. are 64.92% as of December 31, 2022.

(*5) As a result of revisions in *K-IFRS No. 1016 'property, plant and equipment'*, the financial statements for the previous year were restated.

HD HYUNDAI CO., LTD. AND SUBSIDIARIES
Notes to the Consolidated Financial Statements, Continued
For the years ended December 31, 2022 and 2021

2. Basis of Preparation

The consolidated financial statements of Hyundai Heavy Industries Holdings Co., Ltd. and its subsidiaries (the "Group") have been prepared in accordance with Korean International Financial Reporting Standards ("K-IFRS"), as prescribed in the Act on External Audits of Stock Companies in the Republic of Korea.

The consolidated financial statements were authorized for issue by the Board of Directors on February 7, 2023 and submitted for approval to the shareholders' meeting to be held on March 28, 2023.

(1) Basis of measurement

The consolidated financial statements have been prepared on a historical cost basis, except for the following material items in the consolidated statements of financial position:

- Derivative financial instruments measured at fair value;
- Financial assets measured at fair value through profit or loss ("FVTPL");
- Financial assets measured at fair value through other comprehensive income ("FVOCI");
- Contingent consideration payable for business combination measured at fair value;
- Land measured at fair value; and
- Liabilities for defined benefit plans recognized at the net of the total present value of defined benefit obligations less the fair value of plan assets

(2) Functional and presentation currency

These consolidated financial statements are presented in Korean won, which is the Group's functional currency and the currency of the primary economic environment in which the Group operates.

(3) Use of estimates and judgments

The preparation of the consolidated financial statements in conformity with K-IFRS requires management to make judgments, estimates and assumptions that affect the application of accounting policies and the reported amounts of assets, liabilities, income and expenses. Actual results may differ from these estimates.

Estimates and underlying assumptions are reviewed on an ongoing basis. Revisions to accounting estimates are recognized in the period in which the estimates are revised and in any future periods affected.

The potential financial impact of the ongoing armed conflict in Ukraine and international sanctions against Russia on the Group cannot be reasonably estimated at this time.

(i) Judgments

Information about critical judgments in applying accounting policies that have the most significant effect on the amounts recognized in the consolidated financial statements is included in the following notes:

- Note 1 – Scope of Consolidation: Whether the Group has de facto control over an investee;
- Note 12 – Investments in Associates: Whether the Group has significant influence over an associate
- Note 13,14 – Classification of joint ventures
- Note 15 – Classification of investment property
- Note 17 – Lease term: whether the Group is reasonably certain to exercise extension options

HD HYUNDAI CO., LTD. AND SUBSIDIARIES
Notes to the Consolidated Financial Statements, Continued
For the years ended December 31, 2022 and 2021

2. Basis of Preparation, Continued

(3) Use of estimates and judgments, continued

(ii) Assumptions and estimation uncertainties

Information about assumptions and estimation uncertainties that have a significant risk of resulting in a material adjustment within the next financial year are included in the following notes:

- Notes 16, 18 – Impairment test: key assumptions underlying recoverable amounts, including the recoverability of property, plant and equipment and intangible assets;
- Note 25 – Measurement of defined benefit obligations: key actual assumptions;
- Notes 26, 46 – Recognition and measurement of provisions and contingencies: key assumptions about the likelihood and magnitude of an outflow of resources;
- Note 33 – Acquisition of subsidiary: measurement of fair value;
- Note 35 – Revenue recognition in proportion to stage of completion, the estimates of total contract costs;
- Note 41 – Measurement of deferred tax; and
- Note 45 – Measurement of account receivable and contract asset's expected credit loss: key assumptions about weighted average loss rate

(iii) Measurement of fair value

A number of the Group's accounting policies and disclosures require the measurement of fair values, for both financial and non-financial assets and liabilities. The Group has an established control framework with respect to the measurement of fair values. This includes a valuation team that has overall responsibility for overseeing all significant fair value measurements, including Level 3 fair values, and reports directly to the CFO.

The valuation team regularly reviews significant unobservable inputs and valuation adjustments. If third party information, such as broker quotes or pricing services, is used to measure fair values, then the valuation team assesses the evidence obtained from the third parties to support the conclusion that such valuations meet the requirements of K-IFRS, including the level in the fair value hierarchy in which such valuations should be classified.

Significant valuation issues are reported to the Group's Audit Committee.

When measuring the fair value of an asset or a liability, the Group uses market observable data as far as possible. Fair values are categorized into different levels in a fair value hierarchy based on the inputs used in the valuation techniques as follows:

- Level 1: Quoted prices (unadjusted) in active markets for identical assets or liabilities.
- Level 2: Inputs other than quoted prices included in Level 1 that are observable for the asset or liability, either directly (i.e. as prices) or indirectly (i.e. derived from prices).
- Level 3: Inputs for the asset or liability that are not based on observable market data (unobservable inputs).

If the inputs used to measure the fair value of an asset or a liability might be categorized in different levels of the fair value hierarchy, then the fair value measurement is categorized in its entirety in the same level of the fair value hierarchy as the lowest level input that is significant to the entire measurement. The Group recognizes transfers between levels of the fair value hierarchy at the end of the reporting period during which the change has occurred.

Further information about the assumptions made in measuring fair values is included in the following notes:

- Note 16 – Property, plant, and equipment;
- Note 33 – Acquisition and disposal of Subsidiary and Business; and
- Note 45 – Financial instruments

HD HYUNDAI CO., LTD. AND SUBSIDIARIES
Notes to the Consolidated Financial Statements, Continued
For the years ended December 31, 2022 and 2021

3. Changes in Accounting Policies

The Group has initially adopted *Onerous Contracts – Cost of Fulfilling a Contract (Amendments to K-IFRS No. 1037)*, *Proceeds before Intended Use (Amendments to K-IFRS No. 1016)*, and *Reference to the Conceptual Framework (Amendments to K-IFRS No. 1103)* standards and amendments from January 1, 2022. These amendments which are effective from January 1, 2022, have no significant effect on the Group's Consolidated financial statements.

- *Onerous Contracts – Cost of Fulfilling a Contract (Amendments to K-IFRS No. 1037)*

The revised standard stipulates that an onerous contract is a contract that exceeds the expected economic benefits that the contract party would receive from the contract, and that the unavoidable cost of performing the contractual obligation is related to the provision of goods or services. When determining whether a contract is an onerous contract, all incremental costs directly related to performing the contract (such as material and labor costs) and other cost allocations directly related to performing the contract (such as allocated depreciation expense for tangible assets used to perform the contract or cost allocations for managing and supervising the contract) are included. General administrative costs that are not directly related to the contract and cannot be explicitly imposed on the counterparty under the contract are excluded.

Before applying this revised provision, the Group included all incremental costs directly related to performing the contract (such as material and labor costs) and other cost allocations directly related to performing the contract (such as allocated depreciation expense for tangible assets used to perform the contract or cost allocations for managing and supervising the contract) when determining whether a contract is an onerous contract. Therefore, it is expected that this revision will not have a significant impact on the consolidated financial statements of the Group.

- *Proceeds before Intended Use (Amendments to K-IFRS No. 1016)*

The revised standard prohibits deducting the net realizable value of inventory during the period when the assets are brought to the location and condition necessary for the assets to be operated in the manner intended by management. Instead, companies recognize revenue from the sale of such items and the cost of producing the items separately in the income statements.

The Group has applied the amendment retrospectively only to property, plant, and equipment that had reached the intended location and condition to be operated in the manner intended by management as of the earliest period presented in the consolidated financial statements in which the amendment is initially applied, following the transitional provisions. The comparative consolidated financial statement as of December 31, 2021 have been restated.

HD HYUNDAI CO., LTD. AND SUBSIDIARIES
Notes to the Consolidated Financial Statements, Continued
For the years ended December 31, 2022 and 2021

3. Changes in Accounting Policies, Continued

The impact of the amendment to *K-IFRS No. 1016* on the consolidated financial statement as of December 31, 2021 is as follows:

- 1) Consolidated statement of financial position
(In thousands of won)

	<u>Before</u>	<u>Impact of amendment</u>	<u>After</u>
Current assets			
Inventories ₩	5,879,188,146	152,683,757	6,031,871,903
Other assets	7,523,165,070	-	7,523,165,070
	<u>13,402,353,216</u>	<u>152,683,757</u>	<u>13,555,036,973</u>
Non-current assets			
Property, plant, and equipment	13,470,421,179	(201,506,956)	13,268,914,223
Accrued tax assets	381,582,057	11,815,214	393,397,271
Other assets	8,561,299,456	-	8,561,299,456
	<u>22,413,302,692</u>	<u>(189,691,742)</u>	<u>22,223,610,950</u>
Total assets	<u>35,815,655,908</u>	<u>(37,007,985)</u>	<u>35,778,647,923</u>
Current liabilities	11,685,895,014	-	11,685,895,014
Non-current liabilities			
Accrued tax liabilities	541,602,329	(1,571,544)	540,030,785
Other liabilities	11,700,659,047	-	11,700,659,047
	<u>12,242,261,376</u>	<u>(1,571,544)</u>	<u>12,240,689,832</u>
Total liabilities	<u>23,928,156,390</u>	<u>(1,571,544)</u>	<u>23,926,584,846</u>
Owners of the Company			
Retained earnings	1,701,353,534	(14,826,490)	1,686,527,044
Other capital	4,616,701,549	-	4,616,701,549
	<u>6,318,055,083</u>	<u>(14,826,490)</u>	<u>6,303,228,593</u>
Non-controlling interests	5,569,444,435	(20,609,951)	5,548,834,484
Total equity	<u>11,887,499,518</u>	<u>(35,436,441)</u>	<u>11,852,063,077</u>
Total liabilities and equity ₩	<u>35,815,655,908</u>	<u>(37,007,985)</u>	<u>35,778,647,923</u>

HD HYUNDAI CO., LTD. AND SUBSIDIARIES
Notes to the Consolidated Financial Statements, Continued
For the years ended December 31, 2022 and 2021

3. Changes in Accounting Policies, Continued

2) Consolidated statement of comprehensive income (loss)
(In thousands of won)

	<u>Before</u>	<u>Impact of amendment</u>	<u>After</u>
Revenue	₩ 28,158,746,399	194,925,079	28,353,671,478
Cost of sales	25,492,548,379	243,748,278	25,736,296,657
Gross profit (loss)	<u>2,666,198,020</u>	<u>(48,823,199)</u>	<u>2,617,374,821</u>
Selling, general and administrative expenses	1,580,786,444	-	1,580,786,444
Operating profit (loss)	<u>1,085,411,576</u>	<u>(48,823,199)</u>	<u>1,036,588,377</u>
Finance income	468,618,831	-	468,618,831
Finance costs	969,406,340	-	969,406,340
Other non-operating income	130,964,697	-	130,964,697
Other non-operating expenses	150,256,627	-	150,256,627
Share of profit of equity accounted investees	(51,336,575)	-	(51,336,575)
Profit (loss) before income taxes	<u>513,995,562</u>	<u>(48,823,199)</u>	<u>465,172,363</u>
Income tax expense (benefit)	327,983,298	(13,386,758)	314,596,540
Profit (loss) for the year	<u>₩ 186,012,264</u>	<u>(35,436,441)</u>	<u>150,575,823</u>
Profit (loss) attributable to:			
Owners of the Company	(132,297,229)	(14,826,490)	(147,123,719)
Non-controlling interests	318,309,493	(20,609,951)	297,699,542

HD HYUNDAI CO., LTD. AND SUBSIDIARIES
Notes to the Consolidated Financial Statements, Continued
For the years ended December 31, 2022 and 2021

3. Changes in Accounting Policies, Continued

2) Consolidated statement of comprehensive income (loss), continued
(In thousands of won)

	<u>Before</u>	<u>Impact of amendment</u>	<u>After</u>
Other comprehensive income for the year, net of income tax	₩ 102,172,685	-	102,172,685
Total comprehensive income (loss) for the year	<u>288,184,949</u>	<u>(35,436,441)</u>	<u>252,748,508</u>
Total comprehensive income (loss) attributable to:			
Owners of the Company	(129,100,193)	(14,826,490)	(143,926,683)
Non-controlling interests	417,285,142	(20,609,951)	396,675,191
Earnings (loss) per share			
Basic earnings (loss) per share (in won)	<u>₩ (1,872)</u>	<u>(210)</u>	<u>(2,082)</u>

3) Consolidated statement of change in equity
(In thousands of won)

	<u>Before</u>	<u>Impact of amendment</u>	<u>After</u>
Common stock	₩ 81,433,085	-	81,433,085
Capital surplus	5,233,237,943	-	5,233,237,943
Capital adjustment	(938,442,631)	-	(938,442,631)
Accumulated other comprehensive income	240,473,152	-	240,473,152
Retained earnings	1,701,353,534	(14,826,490)	1,686,527,044
Non-controlling interests	5,569,444,435	(20,609,951)	5,548,834,484
Total equity	<u>₩ 11,887,499,518</u>	<u>(35,436,441)</u>	<u>11,852,063,077</u>

HD HYUNDAI CO., LTD. AND SUBSIDIARIES
Notes to the Consolidated Financial Statements, Continued
For the years ended December 31, 2022 and 2021

3. Changes in Accounting Policies, Continued

4) Consolidated statement of cash flow
(In thousands of won)

	<u>Before</u>	<u>Impact of amendment</u>	<u>After</u>
Cash flows from operating activities	₩ 205,801,317	(201,506,955)	4,294,362
Cash flows from investing activities	(1,862,489,886)	201,506,955	(1,660,982,931)
Cash flows from financing activities	1,708,417,573	-	1,708,417,573
Effects of exchange rate changes on cash and cash equivalents	46,834,382	-	46,834,382
Net increase in cash and cash equivalents	98,563,386	-	98,563,386
Cash and cash equivalents at January 1	<u>2,038,500,825</u>	<u>-</u>	<u>2,038,500,825</u>
Cash and cash equivalents at December 31	₩ <u><u>2,137,064,211</u></u>	<u><u>-</u></u>	<u><u>2,137,064,211</u></u>

- Reference to the Conceptual Framework (*Amendments to K-IFRS No. 1103*)

The amendment ensures that there are no significant changes in the requirements despite changing the reference from the previously published "Conceptual Framework for Financial Statements" to the "Conceptual Framework for Financial Reporting" released in March 2018.

To prevent day 2 gains and losses from arising in liabilities and contingent liabilities falling within the scope of *K-IFRS No. 1037, "Provisions, Contingent Liabilities and Contingent Assets"* or *K-IFRIC 2121, "Levies,"* an exception was added to the recognition principle of *K-IFRS No. 1103, "Business Combinations."* This exception requires the application of the criteria of *K-IFRS No. 1037* or *K-IFRIC 2121* instead of the conceptual framework to determine the existence of a present obligation on the acquisition date.

Furthermore, to clarify that contingent assets cannot be recognized on the acquisition date, a new paragraph was added to *K-IFRS No. 1103 "Business Combinations"*. It is expected that this revision will not have a significant impact on the consolidated financial statements of the Group.

- Fees related to the 10% test for derecognition of financial liabilities (*Amendments to K-IFRS No. 1019*)

This amendment clarifies that in determining those fees paid net of fees received, a borrower includes only fees paid or received between the borrower and the lender, including fees paid or received by either the borrower or lender on the other's behalf. There are no similar limited amendments to *K-IFRS No. 1039, 'Financial Instruments: Recognition and Measurement'*. It is expected that this revision will not have a significant impact on the consolidated financial statements of the Group.

- Tax effect on fair value measurement (*Amendments to K-IFRS No. 1041*)

The revision removes the requirement in paragraph 22 of the *K-IFRS No. 1041 "Agriculture"* that excludes tax-related cash flows when measuring the fair value of assets within the scope of application of *K-IFRS No. 1041*. As the consolidated entity does not hold any assets within the scope of application of this standard at the end of the reporting period, it is expected that this revision will not have a significant impact on the consolidated financial statements of the Group.

HD HYUNDAI CO., LTD. AND SUBSIDIARIES
Notes to the Consolidated Financial Statements, Continued
For the years ended December 31, 2022 and 2021

4. Significant Accounting Policies

The significant accounting policies applied by the Group in the preparation of its consolidated financial statements are included below and the Group has consistently applied the accounting policies to all periods presented in these consolidated financial statements, except changes in accounting policies described in *Note 3*.

(1) Operating segments

An operating segment is a component of the Group that engages in business activities from which it may earn revenues and incur expenses, including revenues and expenses that relate to transactions with any of the Group's other components. All operating segment operating results are reviewed regularly by the Group's chief operating decision maker (CODM) to make decisions about resources to be allocated to the segment and assess its performance, and for which discrete financial information is available. As discussed in *Note 37* the Group has six reportable segments which are the Group's strategic business units. The strategic business units offer different products and services and are managed separately because they require different technology and marketing strategies.

Segment results that are reported to the CEO include items directly attributable to a segment as well as those that can be allocated on a reasonable basis.

(2) Basis of consolidation

1) Business combinations

A business combination is accounted for by applying the acquisition method, unless it is a combination involving entities or business under common control.

The consideration transferred in the acquisition is generally measured at fair value, as are the identifiable net assets acquired. Any goodwill that arises is tested annually for impairment. Any gain on a bargain purchase is recognized in profit or loss immediately. Transaction costs are expensed as incurred, except if related to the issue of debt or equity securities. The costs to issue debt or equity securities are recognized in accordance with K-IFRS No. 1032, '*Financial Instruments: Presentation*' and K-IFRS No. 1109, '*Financial Instruments: Recognition and Measurement*'.

The consideration transferred does not include amounts related to the settlement of pre-existing relationships. Such amounts are generally recognized in profit or loss.

Any contingent consideration payable is measured at fair value at the acquisition date. If the contingent consideration is classified as equity, then it is not remeasured and settlement is accounted for within equity. Otherwise, subsequent changes in the fair value of the contingent consideration are recognized in profit or loss.

If share-based payment awards (replacement awards) are required to be exchanged for awards held by the acquiree's employees (acquiree's awards), then all or a portion of the amount of the acquirer's replacement awards is included in measuring the consideration transferred in the business combination. This determination is based on the market-based measure of the replacement awards compared with the market-based measure of the acquiree's awards and the extent to which the replacement awards relate to pre-combination service.

2) Non-controlling interests

Non-controlling interests are measured at their proportionate share of the acquiree's identifiable net assets on the acquisition date.

Changes in the Group's interest in a subsidiary that do not result in a loss of control are accounted for as equity transactions.

HD HYUNDAI CO., LTD. AND SUBSIDIARIES
Notes to the Consolidated Financial Statements, Continued
For the years ended December 31, 2022 and 2021

4. Significant Accounting Policies, Continued

(2) Basis of consolidation, continued

3) Subsidiaries

Subsidiaries are entities controlled by the Group. The Group controls an entity when it is exposed to, or has rights to, variable returns from its involvement with the entity and has the ability to affect those returns through its power over the entity. The financial statements of subsidiaries are included in the consolidated financial statements from the date on which control commences until the date on which control ceases.

4) Loss of control

When the Group loses control over a subsidiary, it derecognizes the assets and liabilities of the subsidiary, and any related NCI and other components of equity. Any resulting gain or loss is recognized in profit or loss. Any interest retained in the former subsidiary is measured at fair value when control is lost.

5) Interests in equity-accounted investees

The Group's interests in equity-accounted investees comprise interests in associates and joint ventures.

Associates are those entities in which the Group has significant influence, but not control or joint control, over the financial and operating policies. A joint venture is an arrangement in which the Group has joint control, whereby the Group has rights to the net assets of the arrangement, rather than rights to its assets and obligations for its liabilities.

Interests in associates and the joint venture are accounted for using the equity method. They are recognized initially at cost, which includes transaction costs. Subsequent to initial recognition, the consolidated financial statements include the Group's share of the profit or loss and OCI of equity-accounted investees, until the date on which significant influence or joint control ceases.

6) Transactions eliminated on consolidation

Intra-group balances and transactions, and any unrealized income and expenses arising from intra-group transactions, are eliminated. Unrealized gains arising from transactions with equity-accounted investees are eliminated against the investment to the extent of the Group's interest in the investee. Unrealized losses are eliminated in the same way as unrealized gains, but only to the extent that there is no evidence of impairment.

7) Acquisitions from entities under common control

The assets and liabilities acquired under business combinations under common control are recognized at the carrying amounts recognized previously in the consolidated financial statements of the ultimate parent. The difference between consideration transferred and carrying amounts of net assets acquired is recognized as part of capital surplus.

HD HYUNDAI CO., LTD. AND SUBSIDIARIES
Notes to the Consolidated Financial Statements, Continued
For the years ended December 31, 2022 and 2021

4. Significant Accounting Policies, Continued

(3) Cash and cash equivalents

Cash and cash equivalents comprise cash balances and call deposits with maturities of three months or less from the acquisition date that are subject to an insignificant risk of changes in their fair value and are used by the Group in the management of its short-term commitments. Equity investments are excluded from cash equivalents unless they are, in substance, cash equivalents, for example in the case of preferred shares when it has a short maturity with a specified redemption date.

Cash and cash equivalents as of December 31, 2022 and 2021 are as follows:

<i>(In millions of won)</i>	<u>2022</u>	<u>2021</u>
Cash	₩ 6,236	3,875
Current deposit	159,791	162,875
MMDA and others	3,828,741	1,970,314
	<u>₩ 3,994,768</u>	<u>2,137,064</u>

(4) Inventories

The cost of inventories is based on the moving-average method with the exception of cost of materials-in-transit, which is determined on the specific identification method. Cost of inventories includes expenditures incurred in 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. Net realizable value is the estimated selling price in the ordinary course of business, less the estimated costs of completion and selling expenses. The amount of any write-down of inventories to net realizable value and all losses of inventories are recognized as an expense in cost of sales in the period in which 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 amounts of inventories recognized as an expense in cost of sales in the period in which the reversal occurs.

HD HYUNDAI CO., LTD. AND SUBSIDIARIES
Notes to the Consolidated Financial Statements, Continued
For the years ended December 31, 2022 and 2021

4. Significant Accounting Policies, Continued

(5) Non-derivative financial assets

1) Recognition and initial measurement

Trade receivables and debt securities issued are initially recognized when they are originated. All other financial assets and financial liabilities are initially recognized when the Group becomes a party to the contractual provisions of the instrument.

A financial asset (unless it is a trade receivable without a significant financing component) or financial liability is initially measured at fair value plus, for an item not at FVTPL, transaction costs that are directly attributable to its acquisition or issue. A trade receivable without a significant financing component is initially measured at the transaction price.

2) Classification and subsequent measurement

(i) Financial assets

On initial recognition, a financial asset is classified as measured at: amortized cost; FVOCI-debt investment; FVOCI – equity investment; or FVTPL.

Financial assets are not reclassified subsequent to their initial recognition unless the Group changes its business model for managing financial assets, in which case all affected financial assets are reclassified on the first day of the first reporting period following the change in the business model.

A financial asset is measured at amortized cost if it meets both of the following conditions and is not designated as at FVPL:

- 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.

A debt investment is measured at FVOCI if it meets both of the following conditions and is not designated as at FVTPL:

- It is held within a business model whose objective is achieved by both collecting contractual cash flows and selling financial assets; and
- Its contractual terms give rise on specified dates to cash flows that are solely payment of principal and interest on the principal amount outstanding.

On initial recognition of an equity investment that is not held for trading, the Group may irrevocably elect to present subsequent changes in the investment's fair value in OCI. This election is made on an investment-by-investment basis.

All financial assets not classified as measured at amortized cost or FVOCI as described above are measured at FVTPL. This includes all derivative financial assets. On initial recognition, the Group may irrevocably designate a financial asset that otherwise meets the requirements to be measured at amortized cost or at FVOCI as at FVTPL if doing so eliminates or significantly reduces an accounting mismatch that would otherwise arise.

HD HYUNDAI CO., LTD. AND SUBSIDIARIES
Notes to the Consolidated Financial Statements, Continued
For the years ended December 31, 2022 and 2021

4. Significant Accounting Policies, Continued

(5) Non-derivative financial assets, continued

2) Classification and subsequent measurement, continued

(ii) Financial assets – Business model assessment

The Group makes an assessment of the objective of the business model in which a financial asset is held at portfolio level because this best reflects the way the business is managed and information is provided to management. The information considered includes:

- The stated policies and objectives for the portfolio and the operation of those policies in practice. These include whether management's strategy focuses on earning contractual interest income, maintaining a particular interest rate profile, matching the duration of the financial assets to the duration of any related liabilities or expected cash outflows or realizing cash flows through the sale of the assets;
- How the performance of the portfolio is evaluated and reported to the Group's management;
- The risks that affect the performance of business model (and the financial assets held within that business model) and how those risks are managed;
- How managers of the business are compensated – e.g. whether compensation is based on the fair value of the assets managed or the contractual cash flows collected; and
- The frequency, volume and timing of sales of financial assets in prior periods, the reasons for such sales and expectations about future sales activity.

Transfers of financial assets to third parties in transactions that do not qualify for derecognition are not considered sales for this purpose, consistent with the Group's continuing recognition of the assets.

Financial assets that are held for trading or are managed and whose performance is evaluated on a fair value are measured at FVTPL.

(iii) Financial assets – Assessment whether contractual cash flows are solely payments of principal and interest

For the purposes of this assessment, 'principal' is defined as the fair value of the financial asset on initial recognition. 'Interest' is defined as consideration for the time value of money and for the credit risk associated with the principal amount outstanding during a particular period of time and for other basic lending risks and cost (e.g. liquidity risk and administrative costs), as well as a profit margin.

In assessing whether the contractual cash flows are solely payments of principal and interest, the Group considers the contractual terms of the instrument. This includes assessing whether the financial asset contains a contractual term that could change the timing or amount of contractual cash flows such that it would not meet this condition.

In making this assessment, the Group considers:

- Contingent events that would change the amount or timing of cash flow;
- Terms that may adjust the contractual coupon rate, including variable-rate features;
- Prepayment and extension features; and
- Terms that limit the Group's claim to cash flows from specified assets

A prepayment feature is consistent with the solely payments of principal and interest criterion if the prepayment amount substantially represents unpaid amounts of principal and interest on the principal amount outstanding, which may include reasonable additional compensation for early termination of the contract.

HD HYUNDAI CO., LTD. AND SUBSIDIARIES
Notes to the Consolidated Financial Statements, Continued
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4. Significant Accounting Policies, Continued

(5) Non-derivative financial assets, continued

2) Classification and subsequent measurement, continued

(iii) Financial assets – Assessment whether contractual cash flows are solely payments of principal and interest, continued

Additionally, for a financial asset acquired at a discount or premium to its contractual par amount, a feature that permits or requires prepayment at an amount that substantially represents the contractual par amount plus accrued (but unpaid) contractual interest (which may also include reasonable additional compensation for early termination) is treated as consistent with this criterion if the fair value of the prepayment feature is insignificant at initial recognition.

(iv) Financial assets: Subsequent measurement and gains and losses

Financial assets at FVTPL	These assets are subsequently measured at fair value. Net gains and losses, including any interest or dividend income, are recognized in profit or loss.
Financial assets at amortized cost	These assets are subsequently measured at amortized cost using the effective interest method. The amortized cost is reduced by impairment losses. Interest income, foreign exchange gains and losses and impairment are recognized in profit and loss. Any gain or loss on derecognition is recognized in profit or loss.
Debt investments at FVOCI	These assets are subsequently measured at fair value. Interest income is calculated using the effective interest method, foreign exchange gains and losses and impairment are recognized in profit and loss. Other net gain and losses are recognized in OCI. On derecognition, gains and losses accumulated in OCI are reclassified to profit or loss.
Equity investments at FVOCI	These assets are subsequently measured at fair value. Dividends are recognized as income in profit or loss unless the dividend clearly represents a recovery of part of the cost of the investment. Other net gains and losses are recognized in OCI and are never reclassified to profit or loss.

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4. Significant Accounting Policies, Continued

(5) Non-derivative financial assets, continued

3) Derecognition

The Group derecognizes a financial asset when the contractual rights to the cash flow from financial asset expire, or it transfers the rights to receive the contractual cash flows in a transaction in which substantially all of the risks and rewards of ownership of the financial asset are transferred or in which the Group neither transfers nor retains substantially all of the risks and rewards of ownership and it does not retain control of the financial asset.

The Group enters into transactions whereby it transfers assets recognized in its statement of financial position but retains either all or substantially all of the risks and rewards of the transferred assets. In these cases, the transferred assets are not derecognized.

Interest rate benchmark reform

When the basis for determining the contractual cash flows of a financial asset or financial liability measured at amortized cost changed as a result of interest rate benchmark reform, the Group updated the effective interest rate of the financial asset or financial liability to reflect the change that is required by the reform. A change in the basis for determining the contractual cash flows is required by interest rate benchmark reform if the following conditions are met:

- the change is necessary as a direct consequence of the reform; and
- the new basis for determining the contractual cash flows is economically equivalent to the previous basis - i. e. the basis immediately before the change.

When changes were made to a financial asset or financial liability in addition to changes to the basis for determining the contractual cash flows required by interest rate benchmark reform, the Group first updated the effective interest rate of the financial asset or financial liability to reflect the change that is required by interest rate benchmark reform. After that, the Group applied the policies on accounting for modifications to the additional changes.

4) Offsetting

Financial assets and financial liabilities are offset and the net amount presented in the statement of financial position when, and only when, the Group currently has a legally enforceable right to set off the amounts and it intends either to settle them on a net basis or to realize the asset and settle the liability simultaneously.

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4. Significant Accounting Policies, Continued

(6) Derivative financial instruments and hedge accounting

Derivatives are initially recognized at fair value. Subsequent to initial recognition, derivatives are measured at fair value, and changes therein are accounted for as described below.

A. Hedge accounting

The Group holds forward exchange contracts, interest rate swaps, product forward and other derivative contracts to manage interest rate risk, foreign exchange risk and oil price risk. The Group designated derivatives as hedging instruments to hedge the risk of changes in the fair value of assets, liabilities or firm commitments (a fair value hedge) and foreign currency risk of highly probable forecasted transactions or firm commitments (a cash flow hedge).

On initial designation of the hedge, the Group formally documents the relationship between the hedging instrument(s) and hedged item(s), including the risk management objectives and strategy in undertaking the hedge transaction, together with the methods that will be used to assess the effectiveness of the hedging relationship.

(i) Fair value hedge

Changes in the fair value of a derivative hedging instrument designated as a fair value hedge are recognized in profit or loss. The gain or loss from remeasuring the hedging instrument at fair value for a derivative hedging instrument and the gain or loss on the hedged item attributable to the hedged risk are recognized in profit or loss in the same line item of the consolidated statement of comprehensive income.

The Group discontinues fair value hedge accounting if the hedging instrument expires or is sold, terminated or exercised, or if the hedge no longer meets the criteria for hedge accounting. Any adjustment arising from gain or loss on the hedged item attributable to the hedged risk is amortized to profit or loss from the date the hedge accounting is discontinued.

(ii) Cash flow hedge

When a derivative is designated to hedge the variability in cash flows attributable to a particular risk associated with a recognized asset or liability or a highly probable forecasted transaction that could affect profit or loss, the effective portion of changes in the fair value of the derivative is recognized in other comprehensive income, net of tax, and presented in the hedging reserve in equity. Any ineffective portion of changes in the fair value of the derivative is recognized immediately in profit or loss.

If the hedging instrument no longer meets the criteria for hedge accounting, expires or is sold, terminated, exercised, or the designation is revoked, then hedge accounting is discontinued prospectively. The cumulative gain or loss on the hedging instrument that has been recognized in other comprehensive income is reclassified to profit or loss in the periods during which the forecasted transaction occurs. If the forecasted transaction is no longer expected to occur, then the balance in other comprehensive income is recognized immediately in profit or loss.

B. Embedded derivative

If an embedded derivative is not closely related to the economic characteristics and risks of the host contract and a separate instrument with the same terms would meet the definition of a derivative, the embedded derivative is accounted for separately from the host contract as long as the combined financial instrument is not measured at fair value through profit or loss. Changes in the fair value of the separated embedded derivative are recognized in profit or loss.

C. Other derivative financial instruments

Changes in the fair value of other derivative financial instrument not designated as a hedging instrument are recognized immediately in profit or loss.

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4. Significant Accounting Policies, Continued

(7) Impairment of financial assets

(i) Financial instruments and contract assets

The Group recognized loss allowances for expected credit losses (“ECL”) on;

- Financial assets measured at amortized cost;
- Contract assets defined in K-IFRS No.1115; and
- Debt investments measured at FVOCI

The Group measures loss allowances at an amount equal to lifetime ECLs, except for the following, which are measured at 12-month ECLs;

- Debt securities that are determined to have low credit risk at the reporting date; and
- Other debt securities and bank balances for which credit risk (i.e. the risk of default occurring over the expected life of the financial instrument) has not increased significantly since initial recognition

Loss allowances for trade receivables and contract assets are always measured at an amount equal to lifetime ECLs.

When determining whether the credit risk of a financial asset has increased significantly since initial recognition and when estimating ECLs, the Group considers reasonable and supportable information that is relevant and available without undue cost or effort. This includes both quantitative and qualitative information and analysis, based on the Group’s historical experience and informed credit assessment and including forward-looking information.

The Group considers a financial asset to be in default when:

- the borrower is unlikely to pay its credit obligations to the Group in full, without recourse by the Group to actions such as realizing security (if an is held); or
- past due of the financial asset is significantly increased

Lifetime ECLs are the ECLs that result from all possible default events over the expected life of a financial instrument.

12-month ECLs are the portion of ECLs that result from default events that are possible within the 12 months after the reporting date (or a shorter period if the expected life of the instrument is less than 12 months).

The longest period considered in measuring ELCs is the maximum contract period during which the group is exposed to credit risk.

HD HYUNDAI CO., LTD. AND SUBSIDIARIES
Notes to the Consolidated Financial Statements, Continued
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4. Significant Accounting Policies, Continued

(7) Impairment of financial assets, continued

(ii) Measurement of ECLs

ECLs are probability-weighted estimate of credit losses. Credit losses are measured as the present value of all cash shortfalls (i.e. the difference between the cash flows due to the entity in accordance with the contract and the cash flows that the Group expects to receive). ECLs are discounted at the effective interest rate of financial assets.

(iii) Credit-impaired financial assets

At each reporting date, the Group assesses whether financial assets carried at amortized cost and debt securities at FVOCI are credit-impaired. A financial asset is 'credit-impaired' when one or more events that have a detrimental impact on the estimated future cash flows of the financial asset have occurred.

Evidence that a financial asset is credit-impaired includes the following observable data:

- Significant financial difficulty of the borrower or issuer;
- A breach of contract such as a default or being past due;
- The restructuring of a loan or advance by the Group on terms that the Group would not consider otherwise;
- It is probable that the borrower will enter bankruptcy or other financial reorganization; or
- The disappearance of an active market for a security because of financial difficulties.

(iv) Presentation of allowance for ECL in the statement of financial position

Loss allowances for financial assets measured at amortized cost are deducted from the gross carrying amount of the assets. For debt securities at FVOCI, the loss allowance is charged to profit or loss and is recognized in OCI.

(v) Write-off

The gross carrying amount of a financial asset is written off when the Group has no reasonable expectation of recovering a financial asset in its entirety or a portion thereof. The Group expects no significant recovery from the amount written off. However, financial assets that are written off could still be subject to enforcement activities in order to comply with the Group's procedures for recovery of amounts due.

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Notes to the Consolidated Financial Statements, Continued
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4. Significant Accounting Policies, Continued

(8) Property, plant and equipment

Property, plant and equipment are initially measured at cost and after initial recognition, are carried at cost less accumulated depreciation and accumulated impairment losses. The cost of property, plant and equipment includes expenditures arising directly from the construction or acquisition of the asset, any costs directly attributable to bringing the asset to the location and condition necessary for it to be capable of operating in the manner intended by management and the initial estimate of the costs of dismantling and removing the item and restoring the site on which it is located. Subsequent to initial recognition, an item of property, plant and equipment shall be carried at its cost less any accumulated depreciation and any accumulated impairment losses.

Property, plant and equipment, except for land, are depreciated on a straight-line basis over estimated useful lives that appropriately reflect the pattern in which the asset's future economic benefits are expected to be consumed. A component that is significant compared to the total cost of property, plant and equipment is depreciated over its separate useful life. Gains and losses on disposal of an item of property, plant and equipment are determined by comparing the proceeds from disposal with the carrying amount of property, plant and equipment and are recognized in profit or loss.

The useful lives of property, plant and equipment are as follows:

	Useful lives (years)
Buildings	20~60
Structures	9~50
Heavy machinery	8~19
Machinery	2~42
Ships	15,25
Vehicles	5~14
Tools, furniture and fixtures	3~20
Other property, plant and equipment	3~13

Depreciation methods, useful lives and residual values are reviewed at the end of each reporting period and adjusted, if appropriate. The change is accounted for as a change in an accounting estimate.

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4. Significant Accounting Policies, Continued

(9) Intangible assets

Intangible assets are measured initially at cost and, subsequently, are carried at cost less accumulated amortization and accumulated impairment losses.

Amortization of intangible assets except for goodwill is calculated on a straight-line basis over the estimated useful lives of intangible assets from the date that they are available for use. The residual value of intangible assets is zero. However, as there are no foreseeable limits to the periods over which club memberships are expected to be available for use, this intangible asset is determined as having indefinite useful lives and not amortized.

	<u>Useful lives (years)</u>
Capitalized development costs	4~7
Distribution networks	20
Customer relationships	8~34
Brands, Membership, Goodwill	Indefinite
Know-how	16
Technology	5~11
Order backlog	10
Other intangible assets	3~50

Useful lives and the amortization methods for intangible assets with finite useful lives are reviewed at the end of each reporting period. The useful lives of intangible assets that are not being amortized are reviewed at the end of each reporting period to determine whether events and circumstances continue to support indefinite useful life assessments for those assets. Changes are accounted for as changes in accounting estimates.

(i) Research and development

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 Group 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.

(ii) Subsequent expenditures

Subsequent expenditures are capitalized only when they increase the future economic benefits embodied in the specific asset to which it relates. All other expenditures, including expenditures on internally generated goodwill and brands, are recognized in profit or loss as incurred.

(10) Government grants

Government grants are not recognized unless there is reasonable assurance that the Group will comply with the grant's conditions and that the grant will be received.

Government grants whose primary condition is that the Group purchase, construct or otherwise acquire long-term assets are deferred and recognized as deduction to depreciation expense over the useful life of the asset.

Government grants which are intended to compensate the Group for expenses incurred are recognized as other income (government grants) in profit or loss over the periods in which the Group recognizes the related costs as expenses.

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Notes to the Consolidated Financial Statements, Continued
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4. Significant Accounting Policies, Continued

(11) Investment property

Property held for the purpose of earning rentals or benefiting from capital appreciation is classified as investment property. Investment property is initially measured at its cost. Transaction costs are included in the initial measurement. Subsequently, investment property is carried at depreciated cost less any accumulated 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 Group 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.

The useful lives of property investment are as follows:

	<u>Useful lives (years)</u>
Buildings	25~50
Structures	20, indefinite

Depreciation methods, useful lives and residual values are reviewed at the end of each reporting period and adjusted, if appropriate. The change is accounted for as a change in an accounting estimate.

(12) Impairment of non-financial assets

The carrying amounts of the Group's non-financial assets, other than assets arising from contract assets recognized from revenue from customers, employee benefits, 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.

For impairment testing, assets are grouped together into the smallest group of assets that generates cash inflows that are largely independent of the cash inflows from other assets or groups of assets ("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. The value in use is estimated by applying a pre-tax discount rate that reflect current market assessments of the time value of money and the risks specific to the asset or CGU for which estimated future cash flows have not been adjusted, to the estimated future cash flows expected to be generated by the asset or CGU.

An impairment loss is recognized in profit or loss if the carrying amount of an asset or a CGU exceeds its recoverable amount.

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 value 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.

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4. Significant Accounting Policies, Continued

(13) Lease

A contract is, or contains, a lease if the contract conveys the right to control the use of an identified asset for a period of time in exchange for consideration.

(i) As a lessee

At commencement or on modification of a contract that contains a lease component, the Group allocates the consideration in the contract to each lease component on the basis of its relative stand-alone prices. However, for the leases of property the Group has elected not to separate non-lease components and account for the lease and non-lease components as a single lease component.

The Group recognizes a right-of-use asset and a lease liability at the lease commencement date. The right-of-use asset is initially measured at cost, which comprises the initial amount of the lease liability adjusted for any lease payments made at or before the commencement date, plus any initial direct costs incurred and an estimate of costs to dismantle and remove the underlying asset or to restore the underlying asset or the site on which it is located, less any lease incentives received.

The right-of-use asset is subsequently depreciated using the straight-line method from the commencement date to the end of the lease term, unless the lease transfers ownership of the underlying asset to the Group by the end of the lease term or the cost of the right-of-use asset reflects that the Group will exercise a purchase option. In that case the right-of-use asset will be depreciated over the useful life of the underlying asset, which is determined on the same basis as those of property and equipment. In addition, the right-of-use asset is periodically reduced by impairment losses, if any, and adjusted for certain remeasurements of the lease liability.

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 as the discount rate.

The Group determines its incremental borrowing rate by obtaining interest rates from various external financing sources and makes certain adjustments to reflect the terms of the lease and type of the asset leased.

Lease payments included in the measurement of the lease liability comprise the following:

- fixed payments, including in-substance fixed payments;
- variable lease payments that depend on an index or a rate, initially measured using the index or rate as at the commencement date;
- amounts expected to be payable under a residual value guarantee; and
- the exercise price under a purchase option that the Group is reasonably certain to exercise, lease payments in an optional renewal period if the Group is reasonably certain to exercise an extension option, and penalties for early termination of a lease unless the Group is reasonably certain not to terminate early.

The lease liability is measured at amortized cost using the effective interest method. It is remeasured when there is a change in future lease payments arising from a change in an index or rate, if there is a change in the Group's estimate of the amount expected to be payable under a residual value guarantee, if the Group changes its assessment of whether it will exercise a purchase, extension or termination option or if there is a revised in-substance fixed lease payment.

When the lease liability is remeasured in this way, a corresponding adjustment is made to the carrying amount of the right-of-use asset or is recorded in profit or loss if the carrying amount of the right-of-use asset has been reduced to zero.

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4. Significant Accounting Policies, Continued

(13) Lease, continued

(i) As a lessee, continued

- Short-term leases and lease of low-value assets

The Group has elected not to recognize right-of-use assets and lease liabilities for lease of low-value assets and short-term leases, including buildings and fixtures. The Group recognizes the lease payments associated with these leases as an expense on a straight-line basis over the lease term.

(ii) As a lessor

At inception or on modification of a contract that contains a lease component, the Group allocates the consideration in the contract to each lease component on the basis of their relative stand-alone prices.

When the Group acts as a lessor, it determines at lease inception whether each lease is a finance lease or an operating lease.

To classify each lease, the Group makes an overall assessment of whether the lease transfers substantially all of the risks and rewards incidental to ownership of the underlying asset. If this is the case, then the lease is a finance lease; if not, then it is an operating lease. As part of this assessment, the Group considers certain indicators such as whether the lease is for the major part of the economic life of the asset.

When the Group is an intermediate lessor, it accounts for its interests in the head lease and the sub-lease separately. It assesses the lease classification of a sub-lease with reference to the right-of-use asset arising from the head lease, not with reference to the underlying asset. If a head lease is a short-term lease to which the Group applies the exemption described above, then it classifies the sub-lease as an operating lease.

If an arrangement contains lease and non-lease components, then the Group applies K-IFRS No.1115 to allocate the consideration in the contract.

The Group applies the derecognition and impairment requirements in K-IFRS No.1109 to the net investment in the lease (See *Note 4(7)*). The Group further regularly reviews estimated unguaranteed residual values used in calculating the gross investment in the lease.

The Group recognizes lease payments received under operating leases as income on a straight-line basis over the lease term as part of 'other revenue'.

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4. Significant Accounting Policies, Continued

(14) Borrowing costs

The Group capitalizes borrowing costs directly attributable to the acquisition, construction or production of a qualifying asset as part of the cost of that asset. Other borrowing costs are recognized in expense as incurred. A qualifying asset is an asset that requires a substantial period of time to get ready for its intended use or sale. Financial assets and inventories that are manufactured or otherwise produced over a short period of time are not qualifying assets. Assets that are ready for their intended use or sale when acquired are not qualifying assets.

To the extent that the Group 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. 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.

(15) Contract assets and contract liabilities

Contract assets are the sum of unsolicited amount from the ongoing construction work to be received from the client and are calculated by subtracting the proceeds from the recognized amount and the recognized loss from the sum of profits recognized in accrued costs. Accrued costs include fixed and variable indirect costs allocated on the basis of normal operating costs, which are directly related to a specific contract and common costs that can be attributed to overall contract activities.

The total amount of contract assets in which the sum of the accrued costs and the recognized profits exceeds the proceeds is indicated as contract assets in the statement of financial position. If the proceeds of the claim exceed the sum of the accrued costs and the recognized profit, the total contract liabilities are presented as contract liabilities in the statement of financial position.

Under the contract categorized as a loss contract, which refers to a contract where the unavoidable costs for fulfilling contractual obligations exceed the expected economic benefits to be received from the contract, the anticipated losses are recognized as provisions for (liquidity) contingencies

(16) Non-current assets held for sale

If the carrying amount of a non-current asset or disposal group is expected to be recovered primarily through a sale transaction rather than continued use, it is classified as an asset held for sale. These conditions are considered to be met only if the asset (or disposal group) must be available for sale in its current condition and is very likely to be sold. Just before the initial classification of an asset (or group of disposal assets) for sale, it is measured as the lesser of the carrying amount and the net fair value of the asset (or assets and liabilities). At the time of initial classification, impairment loss is recognized in profit or loss immediately if the net fair value of the asset for which impairment has been recognized decreases. When net fair value increases, the impairment loss recognized in the past is recognized as profit or loss.

If a non-current asset is classified as held for sale or is part of a disposal group classified as held for sale, the asset is not amortized.

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4. Significant Accounting Policies, Continued

(17) Non-derivative financial liabilities

The Group classifies non-derivative financial liabilities into financial liabilities at fair value through profit or loss or other financial liabilities in accordance with the substance of the contractual arrangement and the definitions of financial liabilities. The Group recognizes financial liabilities in the consolidated statement of financial position when the Group becomes a party to the contractual provisions of the financial liability.

- (i) Financial liabilities at fair value through profit or loss
Financial liabilities at fair value through profit or loss include financial liabilities held for trading or designated as such upon initial recognition. Subsequent to initial recognition, financial liabilities at fair value through profit or loss are measured at fair value. Changes in the fair value of financial liabilities due to changes in credit risk of financial liabilities are expressed in other comprehensive income, and other changes in fair value 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.
- (ii) Other financial liabilities
Non-derivative financial liabilities other than financial liabilities at fair value through profit or loss are classified as other financial liabilities. At the date of initial recognition, other financial liabilities are measured at fair value minus transaction costs that are directly attributable to the acquisition. Subsequent to initial recognition, other financial liabilities are measured at amortized cost using the effective interest method.
- (iii) Elimination of financial liabilities
The Group derecognizes a financial liability from the consolidated statement of financial position when it is extinguished (i.e. when the obligation specified in the contract is discharged, cancelled or expires). The Group removes existing liabilities and recognizes new financial liabilities at fair value based on the new contracts when the cash flows have substantially changed due to changes in the terms and conditions of the financial liabilities.

When removing a financial liability, the difference between the carrying amount and the consideration paid (including transferred non-cash assets or liabilities owed) is recognized in profit or loss.

(18) Employee benefits

- (i) 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.
- (ii) Other long-term employee benefits
Other long-term employee benefits include employee benefits that are settled beyond 12 months after the end of the 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. That benefit is discounted to determine its present value. Remeasurements are recognized in profit or loss in the period in which they arise.

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Notes to the Consolidated Financial Statements, Continued
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4. Significant Accounting Policies, Continued

(18) Employee benefits, continued

(iii) Retirement benefits: defined benefit plans

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 period, 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. To calculate the present value of economic benefits, consideration is given to any applicable minimum funding requirements.

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.

(iv) Retirement benefits: defined contribution plans

When an employee has rendered service to the Group during a period, the Group recognizes the contribution payable to a defined contribution plan in exchange for that service as a liability (accrued expense), after deducting any contribution already paid. If the contribution already paid exceeds the contribution due for service before the end of the reporting period, the Group recognizes that excess as an asset (prepaid expense) to the extent that the prepayment will lead to a reduction in future payments or a cash refund.

(v) 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 end of the reporting period, then they are discounted.

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4. Significant Accounting Policies, Continued

(19) Provisions

Provisions are recognized when the Group has a present legal or constructive obligation 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.

Where some or all of the expenditures required to settle a provision are expected to be reimbursed by another party, the reimbursement is recognized when, and only when, it is virtually certain that reimbursement will be received if the entity settles the obligation. The reimbursement is treated as a separate asset.

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.

(i) Provision for construction losses

A provision for onerous contracts is measured at the lower of the expected cost of terminating the contract and the expected net cost of continuing with the contract, if unavoidable costs arising from the contractual obligations exceed the benefits expected to arise from the contract. Before a provision is established, the Group recognizes any impairment loss on the assets associated with that contract.

(ii) Provision for product warranty

The Group generally provides a warranty relating to product defects for a specified period of time after sales and accrues estimated costs as provision for product warranty, which may occur due to product liability suits.

(iii) Provision for construction warranty

The Group generally provides a warranty within the contract on rectification of defects after the contract's completion and accrues the rectification expense on defects based on actual claims history as provision for construction warranty.

(iv) Other provision

In accordance with the Group's published environmental policy and applicable legal requirements, a provision for site restoration is recognized.

A provision is used only for expenditures for which the provision was originally recognized.

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4. Significant Accounting Policies, Continued

(20) Convertible bonds

The liability component of compound financial instruments is initially recognized at the fair value of a similar liability that does not have an equity conversion option. The equity component is initially recognized at the difference between the fair value of the compound financial instrument as a whole and the fair value of the liability component. Any directly attributable transaction costs are allocated to the liability and equity components in proportion to their initial carrying amounts.

The convertible bonds issued by the Group are convertible into equity at the option of the holders and the number of shares to be issued may vary. Therefore, the conversion feature is classified as a liability and accounted for as a derivative.

The conversion feature, which is an inherent instrument, is recognized at fair value using a reasonable valuation model, and subsequent changes in fair value are recognized in profit or loss. The liability component is initially recognized at fair value of the entire convertible bond, less the fair value of the conversion feature, and subsequently measured at amortized cost using the effective interest rate method until the extinguishment or maturity through conversion.

If the number of shares to be issued upon conversion is fixed during the subsequent period in accordance with the contract terms, the conversion feature is reclassified as equity.

(21) Emissions rights

The Group accounts for greenhouse gases emission right and the relevant liability as below pursuant to the Act on Allocation and *Trading of Greenhouse Gas Emission* which became effective in 2015.

(i) Greenhouse Gases Emission Right

Greenhouse Gases Emission Right consists of emission allowances which are allocated from the government free of charge or purchased from the market. The cost includes any directly attributable costs incurred during the normal course of business.

Emission rights held for the purpose of performing the obligation are classified as an intangible asset and are initially measured at cost and after initial recognition, are carried at cost less accumulated impairment losses. Emission rights held for short-swing profits are classified as current asset and are measured at fair value with any changes in fair value recognized through profit or loss in the respective reporting period.

The Group derecognizes an emission right asset when the emission allowance is unusable, disposed or submitted to government in which the future economic benefits are no longer expected to be probable.

(ii) Emission liability

Emission liability is a present obligation of submitting emission rights to the government with regard to emission of greenhouse gas. Emission liability is recognized when there is a high possibility of outflows of resources in performing the obligation and the costs required to perform the obligation are reliably estimable. Emission liability is an amount of estimated obligations for emission rights to be submitted to the government for the performing period. The emission liability is measured based on the expected quantity of emission for the performing period in excess of emission allowance in possession and the unit price for such emission rights in the market at of the end of the reporting period.

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4. Significant Accounting Policies, Continued

(22) Foreign currency

(i) Foreign currency transactions

Transactions in foreign currencies are translated to the respective functional currencies of Group entities at exchange rates at the dates of the transactions. Monetary assets and liabilities denominated in foreign currencies are retranslated to the functional currency using the reporting date's exchange rate. Non-monetary assets and liabilities denominated in foreign currencies that are measured at fair value are retranslated to the functional currency at the exchange rate at the date that the fair value was determined.

Foreign currency differences arising on retranslation are recognized in profit or loss, except for differences arising on the retranslation of available-for-sale equity instruments, a financial liability designated as a hedge of the net investment in a foreign operation, or qualifying cash flow hedges, which are recognized in other comprehensive income. Non-monetary items that are measured in terms of historical cost in a foreign currency are translated using the exchange rate at the date of the transaction.

(ii) Foreign operations

If the presentation currency of the Group is different from a foreign operation's functional currency, the financial statements of the foreign operation are translated into the presentation currency using the following methods:

The assets and liabilities of foreign operations, whose functional currency is not the currency of a hyperinflationary economy, are translated to the presentation currency using the exchange rates at the reporting date. The income and expenses of foreign operations are translated to the functional currency using the exchange rates at the dates of the transaction. Foreign currency differences are recognized in other comprehensive income.

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 are treated as assets and liabilities of the foreign operation. Thus, they are expressed in the functional currency of the foreign operation and translated at the closing rate.

When a foreign operation is disposed of, the relevant amount in the translation is transferred to profit or loss as part of the profit or loss on disposal. On the partial disposal of a subsidiary that includes a foreign operation, the relevant proportion of such cumulative amount is reattributed to non-controlling interest. In any other partial disposal of a foreign operation, the relevant proportion is reclassified to profit or loss.

(iii) Translation of the net investment in foreign operations

A monetary item that is receivable from or payable to a foreign operation, for which settlement is neither planned nor likely to occur in the foreseeable future, is a part of the entity's net investment in that foreign operation. Exchange differences arising on such monetary item are recognized initially in other comprehensive income and reclassified from equity to profit or loss on disposal of the net investment.

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4. Significant Accounting Policies, Continued

(23) Equity capital

(i) Equity instruments

Ordinary shares are classified as equity. Incremental costs directly attributable to the issuance of ordinary shares and share options are recognized as a deduction from equity, net of any tax effects.

When the Group repurchases its share capital, the amount of the consideration paid is recognized as a deduction from equity and classified as treasury shares. The profits or losses from the purchase, disposal, reissue, or retirement of treasury shares are not recognized as current profit or loss. If the Group acquires and retains treasury shares, the consideration paid or received is directly recognized in equity.

(ii) Hybrid bonds

The Group classifies capital securities as financial liabilities or equity instruments in accordance with the substance of the contractual terms of capital securities. Hybrid bonds that have an unconditional right to avoid delivering cash or financial assets to pay a contractual obligation are classified as equity instrument and are presented in equity.

(24) Revenue from contracts with customers

(i) Characteristics of goods or services and timing of performance obligations

The Group is engaged in an oil refining segment that conducts business related to crude oil refining, an electric and electronic segment that manufactures and sells transformers, high-voltage circuit breakers, switchboards, rotating machines, power electronic control systems, and wind power generators, a construction equipment segment that manufactures and sells electronics, construction machinery and industrial transportation machinery, and a robot segment that manufactures and sells industrial and LCD robots.

1) In the oil refinery sector, oil products made by refining crude oil such as gasoline and diesel are used as main products and supplied to customers. Revenue is recognized in the case of a general contract because it does not correspond to the performance obligation to be fulfilled over a period of time. The time when performance obligations are fulfilled is the time when assets held by the relevant sector are transferred to the customer and controlled by the customer. We are determining when to fulfill our performance obligations. In general, export is mainly carried out under conditions such as CIF and FOB, and in case of domestic sales, it is judged that the performance obligation is fulfilled at the time when it is physically transferred to the customer.

2) The shipbuilding and offshore sector has the shipbuilding segment, which builds merchant ships and special vessels, the offshore, industrial plant and engineering segment that manufactures and installs offshore oil and gas fields, the engine segment that produces ships' engines and power generation facilities, and the green energy segment, which manufactures, sells and installs renewable energy-related products such as solar power modules.

The shipbuilding segment builds and sells ships from the owner of the order and takes at least one year from the date of the contract to the completion of the construction. Due to the nature of the order industry being customized according to the terms presented to the customer, the sector itself has no alternative use, and if the contract is terminated for the customer or other party reasons, it can claim the cost and expected profit it has already entered into and may claim a shortfall after reselling the asset in accordance with the contractual process. Consequently, if the assets that are created by the sector are not for alternative use by the sector itself and the sector has an enforceable right to payment for performance completed to date, the sector recognizes revenue over time in accordance with KIFRS 1115.

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4. Significant Accounting Policies, Continued

(24) Revenue from contracts with customers, continued

(i) Characteristics of goods or services and timing of performance obligations, continued

If the performance obligation is satisfied over time, the timing of the performance depends on how the sector measures its performance when control of the goods or services is transferred to the customer. If the performance is not measured rationally, the performance is measured within the scope of the incurred cost.

As the shipbuilding segment provides design, raw material purchase, production, and commissioning, it is difficult to obtain information for applying calculation method without incurring excessive cost due to the wide variety of shipbuilding processes. Therefore, the Group determines the timing of satisfaction of performance obligations when the timing of costs incurred because input methods, that recognize revenue on the basis of the Group's inputs to the satisfaction of a performance obligation relative to the total expected inputs to the satisfaction of that performance obligation, can faithfully depict the Group's performance.

The offshore, industrial plant and engineering segment is similar to the shipbuilding segment, but the facility specifications required are complicated and extensive depending on the installation area and the production conditions of crude oil or gas, so the construction and construction period are long and the construction amount is very large. Because of the nature of the customized order industry under the conditions presented to the customer, the Group itself has no alternative use, and if it terminates the contract for reasons of the customer or other party, it can claim the costs and expected profits it has already entered into for the completion of the contract, and recognizes revenue over time in accordance with KIFRS 1115.

If the performance obligation is satisfied over time, the timing of the performance depends on how the Group measures its performance when control of the goods or services is transferred to the customer. If the performance is not measured rationally, the performance is measured within the scope of the incurred cost. The offshore, industrial plant and engineering segment is a contract that provides design and raw materials purchase, production, and commissioning, and since the construction process is very diverse, it is difficult to obtain information to apply the calculation method without incurring excessive cost. Therefore, the timing of the cost injection is determined as the timing of implementation, as the input method can faithfully represent the performance of the Group.

The engine segment supplies the ship's propulsion/generation engines as its main products. For a typical contract, an entity recognizes revenue as it is satisfied at a point in time that is not a performance obligation satisfied over time.

The timing of satisfaction of performance obligations is when the assets held by the Group are transferred to and controlled by the customer, and the Group determines the point in time by indicators of the transfer of control, that include right to payment, legal title, physical possession, transfer of the significant risks and rewards, and the customer's acceptance of an asset. Generally, exports are transferred under the conditions like CIF and FOB, and domestic sales are determined to satisfy performance obligations when the Group transfers physical possession of the asset to the customer.

The green energy segment manufactures and sells products such as solar modules, inverters, and ESS related to renewable energy. The type of sales in the sector is largely classified as a standard product supply agreement consisting of a single performance obligation and a composite component order contract that includes a number of distinct performance obligations that provide various products and services within a single contract. Because of the nature of the contract being customized according to the terms presented to the customer, the Group recognizes revenue over time in accordance with KIFRS 1115 for contracts that state that there is no alternative use in the Group itself and that termination of the contract for the reason of the customer or another party can claim the cost and expected profit that has already been entered for the completion of the contract.

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4. Significant Accounting Policies, Continued

(24) Revenue from contracts with customers, continued

(i) Characteristics of goods or services and timing of performance obligations, continued

For a typical sales contract, revenue is recognized as a performance obligation satisfied at a point in time that is not a performance obligation satisfied over time, and for a contract that satisfies the performance obligation over time, the timing of the performance is determined in accordance with the method of measuring progress that indicates the performance of the segment when control of the goods or services is transferred to the customer. If the performance is not measured rationally, the performance is measured within the scope of the incurred cost

The timing of performance obligation fulfillment is when the assets held by the sector are transferred to the customer and are controlled by the customer, and the timing of performance obligation is determined by indicators of the transfer of control of the right to payment, ownership, physical possession, transfer of significant risks and rewards. In general, we believe that exports have met performance obligations at a time when they are physically transferred to the customer, primarily on terms such as CIF, FOB and DDP.

Orders contracts are contracts that provide the delivery, installation, and commissioning of components, and the process is so diverse that it is difficult to obtain information to apply the calculation method without incurring excessive cost. Therefore, the timing of the cost injection is determined as the timing of implementation, as the input method can faithfully represent the performance of the Group.

3) The electric and electronic sector manufactures and supplies various electric and electronic devices and The electric and electronic sector manufactures and supplies various electric devices and energy solutions for all phases of the power supply process, ranging from power generation→ transmission→ distribution→consumption. The types of revenue in the segment are three: standard product supply agreement, multiple-element arrangement and Turn-key contract.

While standard product supply agreement consists of one performance obligation, multiple-element arrangement and Turn-key contracts are one contract but contain multiple distinctive obligations.

As the electric and electronic sector manufactures and supplies various electric devices and energy solutions for all phases of the power supply process, for a general contract, revenue is recognized as a performance obligation is satisfied at a point in time.

The timing of satisfaction of performance obligations is when the goods are delivered to customers and the customers obtain control of the goods. The determination of the timing when the control is transferred to customer, is based on the entity's right to payment, the legal title, the physical possession, the significant risks and rewards of ownership, and the acceptance by the customer. Generally, the performance obligation is satisfied when the terms of trade such as CIF, FOB and DDP are met for transfer of the legal title in exports sales and when the product is delivered physically to customers in domestic sales respectively.

The contract to manufacture a highly customized product for a particular customer is supposed 'not to create an alternative use to the electric and electronic sector'. If the contract describes the electric and electronic sector would be compensated for an amount of recovery of the costs incurred plus a reasonable profit margin when terminated by the customer or another party, revenue from those contracts is recognized over time and is otherwise recognized at a point in time.

HD HYUNDAI CO., LTD. AND SUBSIDIARIES
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4. Significant Accounting Policies, Continued

(24) Revenue from contracts with customers, continued

(i) Characteristics of goods or services and timing of performance obligations, continued

If the performance obligation is satisfied over time, the timing of the performance obligation depends on how the electric and electronic sector measures its progress to indicate performance when control of the goods or services is transferred to the customer. If the performance is not measured rationally, the performance is measured within the scope of the incurred cost. The electric and electronic sector provides design, raw material purchase, production, and trial run, it is difficult to obtain information for applying calculation method without incurring excessive cost due to the wide variety of drying processes. Therefore, it is decided that the timing of the cost injection should be satisfied because the input method that recognizes revenue based on the electric and electronic sector's inputs compared to the total inputs expected to satisfy the performance obligation can faithfully represent the electric and electronic sector's performance.

4) The construction equipment sector produces and supplies construction equipment and industrial vehicles such as excavators, wheel loaders, backhoe loaders, skid steer loaders, and forklifts. Revenue is recognized in the case of a general contract because it does not correspond to the performance obligation to be fulfilled over a period of time.

When the performance obligation is fulfilled, the assets held by the relevant sector are transferred to the customer and controlled by the customer. In the case of domestic sales, sales are recognized at the time of delivery of goods and at the time of shipment for export.

Usually, the customer pays the price at the time of delivery of the goods, and there may be a difference between some delivery time and the time of payment, but in general, the difference is not long, and the relevant sector holds the right to claim by completing the obligation at the time of delivery. In some cases, there is a reservation provision for transfer of ownership in the contract, but this is a case where the customer has not paid the sales price at the product delivery point, so it does not affect the determination of transfer of control because it is a safeguard against default.

Export contract terms are usually FOB terms, and customers pay the full amount at the time of shipment. Differences may occur between the time of shipment and the time of payment, but generally the difference is not long, and the sector retains the claim for payment by completing the obligation at the time of shipment, and ownership and control of the asset is transferred to the customer.

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4. Significant Accounting Policies, Continued

(24) Revenue from contracts with customers, continued

(i) Characteristics of goods or services and timing of performance obligations, continued

5) The ship service sector is engaged in selling of components and providing technical services for ships, providing fuel oil for ships, plant business and eco-friendly ship remodeling and others. When the control of goods or service is transferred to a customer, the ship service sector recognizes revenue in an amount that reflects the expected amount of having the right to receive the goods or services.

The eco-friendly ship remodeling business of the ship service sector provides services for manufacturing, installation, and commissioning of eco-friendly facility equipment according to the customer's ship conditions at the request of the customer. Generally, the contract period is 1 year and due to the nature of the order-made production industry being customized according to the terms presented to the customer, the Group itself has no alternative use, and if the contract is terminated for the customer or other party reasons, it can claim the cost and expected profit it has already entered into. Consequently, the Group recognizes revenue over time in accordance with K-IFRS No.1115.

If the performance obligation is satisfied over time, the timing of the performance obligation depends on how the Group measures its progress to indicate performance when control of the goods or services is transferred to the customer.

If the performance is not measured rationally, the performance is measured within the scope of the incurred cost. As the eco-friendly ship remodeling business provides design, equipment purchase, installation, and commissioning, it is difficult to obtain information for applying calculation method without incurring excessive cost due to the wide variety of drying processes. Therefore, it is decided that the timing of the cost injection should be satisfied because the input method that recognizes revenue based on the Group's inputs compared to the total inputs expected to satisfy the performance obligation can faithfully represent the Group's performance.

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4. Significant Accounting Policies, Continued

(24) Revenue from contracts with customers, continued

(ii) Significant payment conditions

1) In the refining sector, the payment conditions for revenue recognized at the time of delivery differ depending on the content of the contract with the customer, and there is almost no significant change consideration.

2) The shipbuilding segment is collected by shipbuilding stage, and the collection time for general merchant ships is divided into contracts, Steel cutting, Keel Laying, Launching, Delivery, and in particular, the Heavy Tail method, which collects most of the contract price at the time of delivery of ships.

Special vessels will be charged up to 6 months for planned funds up to 180 days from the date of claim under the Rules for Start-up and Intermediate payments on the defense industry.

The offshore, industrial plant and engineering segment is charged according to the progress of the construction, including the advance payment, the achievement amount of Milestone, and the performance deposit, and the engine segment is collected separately by the advance payment, middle and balance according to the collection conditions stipulated in the contract.

The green energy segment typically receives payments within 60 to 180 days of the billing date for supply of standard goods, and in the case of installation contracts, the amount is collected according to progress, and in the case of multi-component order contracts, the amount is usually divided into advance payment, middle payment, and balance.

Depending on the terms of payment, a difference between when the Group receives the consideration for the goods or services from the customer and when it expects to transfer the promised goods or services to the customer may result in a significant financing component that adjusts the promised consideration to reflect the effect of the time value of money.

3) In the case of a standard product supply contract, the electric and electronics sector generally receives payment within 90 to 180 days from the billing date. In the case of the complex element order contract and the turn-key order contract, it is generally received in the form of advance payment, intermediate payment, and balance.

There is no significant financial factor in the case of a standard product supply contract, and in the case of a multi-element order contract and a turn-key order contract, the Group receives the payment of goods or services from the customer in accordance with the payment terms and the promise to the customer. There may be a significant financial component that adjusts the promised price to reflect the effect of the time value of money as differences occur between the time when you expect to transfer goods or services. However, if the expected period between the time when the Group transfers the goods or services promised to the customer and the time when the customer pays for it at the time of commencement of the contract, it reflects the effect of significant financial factors. Therefore, we apply a practical convenience method that does not adjust the promised price.

4) The construction equipment sector generally receives a price at the time of supply of goods. In the case of domestic sales contracts, there are provisions for the payment of the down payment in the contract, but in practice, it rarely occurs. In addition, there are terms of payment in installments in the domestic sales contract, but this is a transaction in which the buyer receives the loan from the financial institution, pays the purchase price, and repays the loan to the financial institution in installments in the future. This is not the case when selling products. Therefore, there is no significant difference between when the goods are transferred and when they are paid.

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Notes to the Consolidated Financial Statements, Continued
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4. Significant Accounting Policies, Continued

(24) Revenue from contracts with customers, continued

(ii) Significant payment conditions, continued

5) The ship service sector is charged according to the collection conditions specified in the contract or when goods are delivered and services are provided. Also, free AS business charges and collects monthly billed amount. The eco-friendly ship remodeling business is charged according to the progress of the construction, including the advance payment, the achievement amount of Milestone, and the performance deposit.

Depending on the terms of payment, a difference between when the Group receives the consideration for the goods or services from the customer and when it expects to transfer the promised goods or services to the customer may result in a significant financing component that adjusts the promised consideration to reflect the effect of the time value of money.

(iii) Nature and duration of guarantee

The shipbuilding segment typically provides a warranty of 12 months or 24 months depending on type of ship. The offshore, industrial plant and engineering segment provides a separate warranty period based on the nature of each object and the terms of the contract. The engine segment typically provides a warranty period of 24 months after delivery or 12 months after delivery, and the green energy sector provides a warranty of about 12 years after delivery. This is similar to the normal warranty period of the peer group. Usually, the term of warranty granted over a period of time will be transferred to a paid AS. The warranty provided is intended to provide assurance that the product complies with the agreed-upon specifications and is not subject to a separate performance obligation.

Although the period varies depending on the product and contract, in general, the electrical and electronics sector is 24 to 60 months after product delivery, the construction equipment sector is 12 to 24 months or 1,000 to 3,000 hours after product delivery, and the ship service sector is 6 to 12 or 12 to 36 months after product delivery. This is similar to the normal warranty period of the same company. These guarantees are converted to paid AS after the specified warranty period. The warranty provided is intended to provide confidence that the product conforms to the agreed specifications and does not constitute a separate performance obligation.

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4. Significant Accounting Policies, Continued

(24) Revenue from contracts with customers, continued

(iv) Transaction price calculation method, estimation of variable cost, input variables, information

Although there is no need to estimate the stand-alone selling price for the distribution of the transaction price because there is a single performance obligation for the supply of standard goods in the shipbuilding, offshore, industrial plant and engineering segment and green energy segment, but in the engine machinery segment, separate services such as installation and supervision exist within the contract. And, in the case of contracts for multi-component contracts in the green energy segment, each includes a number of such performance obligation to supply of services within one contract.

If the transaction price is allocated on a stand-alone selling price basis and the stand-alone selling price does not exist in the market, the expected cost of satisfying the performance obligation is predicted and the total contract amount is allocated to the performance obligation separately separated by the expected cost-benefit calculation approach, which adds an appropriate profit to the transaction price.

The consideration receivable from customers may be variable by change order due to design changes and additional work caused by requests from owners of the shipbuilding and the offshore, industrial plant and engineering segment, and delayed compensation due to delay in delivery and fail to achieve specifications. In the case of change order, variable consideration is included in the transaction price only to the extent it is highly probable that a significant revenue reversal will not occur. In the case of delayed compensation, the Group recognizes revenue by deducting the estimated amount incurred by the contract terms from the contract price.

In the case of contracts for supplying standard products in the electrical and electronics sector, and contracts in the refinery and construction equipment sector, there is no need to allocate the transaction price, but it is not necessary to allocate contracts for the order of complex elements and turn-key contracts in the robot and electrical and electronics sectors. In the case, the transaction price is allocated to each of these performance obligations because it includes a number of distinct performance obligations that supply various products and services within a single contract.

The electrical and electronics sector and ship service sector apply the adjusted market assessment approach which allocates the transaction price based on the estimated stand-alone selling price. If the stand-alone selling price is not directly observable, transaction price is determined by the expected cost-plus-a-margin approach by forecasting expected cost of satisfying a performance obligation and then adding an appropriate margin. Only if the above-mentioned two approaches are not available, the residual approach, by estimating the total transaction price less the sum of the observable stand-alone prices of other goods or services.

In the case of the electrical and electronics sector and ship service sector, due to design changes and additional work occurring due to reasons attributable to the sector or the request of the client, delayed compensation due to delay in delivery and failure to meet conditions, sales discount and sales incentives to encourage sales, etc. Due to this, the price to receive from the customer may change. In the case of sales discounts and sales incentives, the price of the change is included in the transaction price only up to a very high probability of not reversing the significant portion of the accumulated revenues already recognized, and in the case of delayed compensation, the expected price incurred by the terms of the contract is recognized by deducting from.

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4. Significant Accounting Policies, Continued

(25) Finance income and finance costs

The Group's finance income and finance costs are as follows;

- interest income, expense;
- dividend income;
- the net gain or loss on the disposal of investments in debt securities measured at FVOCI;
- the net gain or loss on financial assets at FVTPL;
- the foreign currency gain or loss on financial assets and financial liabilities;
- impairment loss (and reversals) on investments in debt securities carried at amortized cost or FVOCI; and
- hedge ineffectiveness recognized in profit or loss

Interest income or expense is recognized using the effective interest method. Dividend income is recognized in profit or loss on the date on which the Group's right to receive payment is established.

In calculating interest income and expense, the effective interest rate is applied to the gross carrying amount of the asset (when the asset is not credit-impaired) or to the amortized cost of the liability. However, for financial assets that have become credit-impaired subsequent to initial recognition, interest income is calculated by applying the effective interest rate to the amortized cost of the financial asset. If the asset is no longer credit-impaired, then the calculation of interest income reverts to the gross basis.

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4. Significant Accounting Policies, Continued

(26) Corporate income taxes

Corporate income tax expense comprises current and deferred tax. Current tax and deferred tax are recognized in profit or loss except to the extent that they relate to a business combination, or items recognized directly in equity or in other comprehensive income.

(i) Current tax

Current tax is the expected tax payable or receivable on the taxable profit or loss for the year, using tax rates enacted or substantively enacted at the end of the reporting period and any adjustment to tax payable in respect of previous years. The taxable profit is different from the accounting profit for the period since the taxable profit is calculated excluding the temporary differences, which will be taxable or deductible in determining taxable profit (tax loss) of future periods, and non-taxable or non-deductible items from the accounting profit.

Current tax assets and liabilities are offset only if certain criteria are met;

- there is a legally enforceable right to offset the recognized amount; and
- there is intends to settle in a net amount or to settle the debt while realizing the asset.

(ii) Deferred tax

Deferred tax is recognized, using the asset-liability method, in respect of temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and the amounts used for taxation purposes. A deferred tax liability is recognized for all taxable temporary differences. A deferred tax asset is recognized for all deductible temporary differences to the extent that it is probable that taxable profit will be available against which they can be utilized. However, deferred tax is not recognized for taxable temporary differences arising on the initial recognition of goodwill, or the initial recognition of assets or liabilities in a transaction that is not a business combination and that affects neither accounting profit or loss nor taxable income.

The measurement of deferred tax liabilities and deferred tax assets reflects the tax consequences that would follow from the manner in which the Group expects, at the end of the reporting period, to recover or settle the carrying amount of its assets and liabilities.

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

The carrying amount of a deferred tax asset is reviewed at the end of each reporting period and reduces the carrying amount to the extent that it is no longer probable that sufficient taxable profit will be available to allow the benefit of part or all of that deferred tax asset to be utilized.

Deferred tax assets and liabilities are measured at the tax rates that are expected to be applied to the period when the asset is realized or the liability is settled, based on tax rates (and tax laws) that have been enacted or substantively enacted by the end of the reporting period.

Deferred tax assets and liabilities are offset only if there is a legally enforceable right to offset the related current tax liabilities and assets, and they relate to income taxes levied by the same tax authority and they intend to settle current tax liabilities and assets on a net basis.

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4. Significant Accounting Policies, Continued

(27) Earnings (loss) per share

The Group presents basic 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 Group by the weighted average number of ordinary shares outstanding during the period, adjusted for own shares held.

(28) New standards and interpretations not yet adopted

A number of new standards are effective for annual periods beginning after January 1, 2022, and earlier application is permitted; however, the Group has not early adopted the new or amended standards in preparing these consolidated financial statements.

(i) K-IFRS No.1012 *'Income tax – Deferred Tax related to Assets and Liabilities arising from a Single Transaction*

The amendments narrow the scope of the initial recognition exemption to exclude transactions that give rise to equal and offsetting temporary differences- e. g. leases and decommissioning liabilities. The amendments apply for annual reporting periods beginning on or after January 1, 2023.

For leases and decommissioning liabilities, the associated deferred tax asset and liabilities will need to be recognized from the beginning of the earliest comparative period presented, with any cumulative effect recognized as an adjustment to retained earnings or other components of equity at that date. For all other transactions, the amendments apply to transactions that occur after the beginning of the earliest period presented.

The Group accounts for deferred tax on leases and decommissioning liabilities applying the " integrally linked" approach, resulting in a similar outcome to the amendments, except that the deferred tax asset or liability is recognized on a net basis. Under the amendments, the Group will recognize a separate deferred tax asset and a deferred tax liability.

(ii) K-IFRS No.1001 *'Presentation of financial statement' - Classification of Liabilities as Current or Non- Current*

The amendments, as issued in 2020, aim to clarify the requirements on determining whether a liability is current or non- current, and apply for annual reporting periods beginning on or after January 1,2023. However, the IASB has subsequently proposed further amendments to IAS 1 and the deferral of the effective date of the 2020 amendments to no earlier than January 1, 2024. Due to these ongoing developments, the Group is unable to determine the impact of these amendments on the consolidated financial statements in the period of initial application. The Group is closely monitoring the developments. amendments, except that the deferred tax impacts are presented net in the statements of financial position.

The following amended standards and interpretation are not expected to have a significant impact on the Group's consolidated financial statements:

- K-IFRS No.1117 Insurance Contracts and amendments to K-IFRS No.1117 Insurance Contracts
- Disclosure of Accounting Policies (Amendments to K-IFRS No.1001 *'Presentation of financial statement'*)
- Definition of Accounting Estimates (Amendments to K-IFRS No.1008 *'accounting policies changes in accounting estimates and error'*)

HD HYUNDAI CO., LTD. AND SUBSIDIARIES
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For the years ended December 31, 2022 and 2021

5. Risk Management

The Group has exposure to the following risks from its use of financial instruments:

- Credit risk;
- Liquidity risk; and
- Market risk

This note presents information about the Group's exposure to each of the above risks, the Group's objectives, policies and processes for measuring and managing risk, and the Group's management of capital. Further quantitative disclosures are included throughout these consolidated financial statements.

(1) Financial risk management

1) Risk management framework

The Board of Directors has overall responsibility for the establishment and oversight of the Group's risk management framework.

The Group's risk management policies are established to identify and analyze the risks faced by the Group, to set appropriate risk limits and controls, and to monitor risks and adherence to limits. Risk management policies and systems are reviewed regularly to reflect changes in market conditions and the Group's activities. The Group, through its training and management standards and procedures, aims to develop a disciplined and constructive control environment in which all employees understand their roles and obligations.

The Group's Audit Committee oversees how management monitors compliance with the Group's risk management policies and procedures and reviews the adequacy of the risk management framework in relation to the risks faced by the Group. The Group's Audit Committee is assisted in its oversight role by Internal Audit. Internal Audit undertakes both regular and ad hoc reviews of risk management controls and procedures, the results of which are reported to the Audit Committee

2) Credit risk

Credit risk is the risk of financial loss to the Group if a customer or counterparty to a financial instrument fails to meet its contractual obligations and arises principally from the Group's receivables from customers and investment securities.

(i) Trade and other receivables and contract assets

The Group's exposure to credit risk is influenced mainly by the individual characteristics of each customer.

The Group establishes credit limits for each customer and each new customer is analyzed quantitatively and qualitatively before determining whether to utilize third party guarantees, insurance or factoring as appropriate.

The Group accounts for expected credit losses and their changes at the end of each reporting period in order to reflect changes in the credit risk since initial recognition of the financial asset in accordance with the expected credit loss model in relation to the impairment of the financial asset.

(ii) Investments

The Group limits its exposure to credit risk by investing only in liquid securities and only with counterparties that have high credit ratings. Management actively monitors credit ratings and given that the Group only has invested in securities with high credit ratings, does not expect a significant risk that any counterparty fails to meet its obligations.

(iii) Guarantees

The Group provides financial guarantees to subsidiaries, associates and third parties if necessary.

HD HYUNDAI CO., LTD. AND SUBSIDIARIES
Notes to the Consolidated Financial Statements, Continued
For the years ended December 31, 2022 and 2021

5. Risk Management, Continued

(1) Financial risk management, continued

3) Liquidity risk

Liquidity risk is the risk that the Group will encounter difficulty in meeting the obligations associated with its financial liabilities that are settled by delivering cash or another financial asset. The Group's approach to managing liquidity is to ensure, as far as possible, that it will always have sufficient liquidity to meet its liabilities when due, under both normal and stressed conditions, without incurring unacceptable losses or risking damage to the Group's reputation.

The Group has historically been able to satisfy its cash requirements from cash flow from operations and debt and equity financing. To the extent that the Group does not generate sufficient cash flow from operations to meet its capital requirements, the Group may rely on other financing activities, such as external long-term borrowings and offerings of debt securities, equity-linked and other debt securities.

4) Market risk

Market risk is the risk that changes in market prices, such as foreign exchange rates, interest rates and equity prices will affect the Group's income or the value of its holdings of financial instruments. The objective of market risk management is to manage and control market risk exposures within acceptable parameters, while optimizing the return.

The Group buys and sells derivatives, and also incurs financial liabilities, in order to manage market risks. All such transactions are carried out within the guidelines set by the Group. Generally, the Group seeks to apply hedge accounting in order to manage volatility in profit or loss.

(i) Currency risk

The Group is exposed to currency risk on sales, purchases and borrowings that are denominated in a currency other than the functional currency of the Group, Korean won (KRW). The currencies in which these transactions primarily are denominated are USD, EUR, JPY and others.

The Group hedges trade receivables and trade payables denominated in a foreign currency in respect of forecasted sales and purchases. The Group uses forward exchange contracts to hedge its currency risk, most with a maturity of less than two years from the reporting date. When necessary, forward exchange contracts are rolled over at maturity. Trade receivables denominated in a foreign currency have been hedged using forward contracts that mature on the same dates that the receivables are due for collection. In respect of other monetary assets and liabilities denominated in foreign currencies, the Group ensures that its net exposure is kept to an acceptable level by buying or selling foreign currencies at spot rates when necessary to address short-term imbalances.

(ii) Interest rate risk

The Group hedges interest rate risk using interest rate swap for variable interest borrowings. As a result, the risk that changes in the value of variable interest-bearing bonds and loans will affect the Group's profit or loss is avoided.

HD HYUNDAI CO., LTD. AND SUBSIDIARIES
Notes to the Consolidated Financial Statements, Continued
For the years ended December 31, 2022 and 2021

5. Risk Management, Continued

(2) Capital management

The management's policy is to maintain a strong capital base so as to maintain investor, creditor and market confidence and to sustain future development of the business. The Group monitors the liability to equity ratio and net borrowing to equity ratio, which the Group defines as total liabilities divided by total equity and net borrowing divided by total equity.

The Group's liability to equity ratio and net borrowing to equity ratio as of December 31, 2022 and 2021 are as follows:

<i>(In millions of won, except equity ratio)</i>	<u>2022</u>	<u>2021</u>
Total liabilities	₩ 42,307,197	23,926,585
Total equity	23,263,664	11,852,063
Cash and deposits(*1)	5,347,819	2,417,490
Borrowings(*2)	17,982,985	13,664,774
Liability to equity ratio	181.86%	201.88%
Net borrowing to equity ratio(*3)	54.31%	94.90%

(*1) Cash and deposits consist of cash and cash equivalents and short-term and long-term financial instruments.

(*2) Discount on debentures is deducted from the par value of debentures.

(*3) Net borrowing represents borrowings net of cash and deposits.

The interest coverage ratio and basis of calculation for the years ended December 31, 2022 and 2021 are as follows:

<i>(In millions of won, except ratio)</i>	<u>2022</u>	<u>2021</u>
1. Operating profit	₩ 3,387,008	1,036,588
2. Interest expenses	640,541	293,369
3. Interest coverage ratio(1÷2)	5.29	3.53

6. Short-term and Long-term Financial Assets

Short-term and long-term financial assets as of December 31, 2022 and 2021 are summarized as follows:

<i>(In millions of won)</i>	<u>2022</u>		<u>2021</u>	
	<u>Current</u>	<u>Non-current</u>	<u>Current</u>	<u>Non-current</u>
Financial instruments	₩ 1,358,514	9,868	263,777	17,677
Financial assets measured at FVTPL	201,672	90,511	135	75,012
Financial assets measured at FVOCI	-	241,690	-	57,669
	<u>₩ 1,560,186</u>	<u>342,069</u>	<u>263,912</u>	<u>150,358</u>

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Notes to the Consolidated Financial Statements, Continued
For the years ended December 31, 2022 and 2021

7. Restricted Financial Instruments

Financial instruments, which are restricted in use, as of December 31, 2022 and 2021 are summarized as follows:

(In millions of won)

Description	2022	2021	Restrictions
Cash and cash equivalents	₩ 150	-	Etc
Short-term financial instruments	8,289	1,136	Pledging(*)
	2,879	6,754	Payment bill deposit
	2	7,176	Restricted deposit
	7,375	3,726	Bank deposit
	934	383	Etc
Other receivables	4,100	-	Security deposit
Long-term financial instruments	2,250	6,722	Pledging(*)
	831	831	Payment bill deposit
			Deposit pledge for license
	6	6	registration
			Guarantee deposits for
	85	42	checking accounts
	₩ 26,901	26,776	

(*) The Group has provided guarantees for other liabilities.

Separately, the Group deposits ₩254,500 million in financial institutions to provide financial support to cooperative companies as of December 31, 2022.

HD HYUNDAI CO., LTD. AND SUBSIDIARIES
Notes to the Consolidated Financial Statements, Continued
For the years ended December 31, 2022 and 2021

8. Trade and Other Receivables and Contract Assets

(1) Trade and other receivables as of December 31, 2022 and 2021 are summarized as follows:

(In millions of won)

	2022		2021	
	Current	Non-current	Current	Non-current
Trade receivables:				
Trade receivables(*)	₩ 5,026,697	403,201	3,348,604	9,735
Allowance for doubtful accounts	(1,248,092)	(177,736)	(366,832)	(9)
	<u>3,778,605</u>	<u>225,465</u>	<u>2,981,772</u>	<u>9,726</u>
Other receivables:				
Account receivable	1,625,319	18,533	679,087	4,484
Allowance for doubtful accounts	(309,491)	(4,747)	(126,304)	(4,213)
Accrued income	34,981	-	8,812	-
Allowance for doubtful accounts	(1,623)	-	(51)	-
Loans	19,435	57,083	8,664	63,500
Allowance for doubtful accounts	(8,470)	(787)	(8,470)	-
Guarantee deposits	20,826	245,173	4,720	234,271
Allowance for doubtful accounts	-	(152)	-	(156)
Finance lease receivables	780,831	134,910	1,083,599	210,921
Allowance for doubtful accounts	(16,983)	(1,058)	(13,329)	(1,451)
	<u>2,144,825</u>	<u>448,955</u>	<u>1,636,728</u>	<u>507,356</u>
	<u>₩ 5,923,430</u>	<u>674,420</u>	<u>4,618,500</u>	<u>517,082</u>

(*) As of December 31, 2022, the balance of trade receivables that the Group transferred but does not past are ₩534,913 million. The Group transferred the trade receivables to ING Bank and others and accounted for derecognition as all the risks and rewards of the assets are substantially transferred.

(2) Contract assets as of December 31, 2022 and 2021 are summarized as follows:

(In millions of won)

	2022	2021
Contract assets	₩ 6,688,598	263,308
Allowance for doubtful accounts	(41,597)	(34,635)
	<u>₩ 6,647,001</u>	<u>228,673</u>

HD HYUNDAI CO., LTD. AND SUBSIDIARIES
Notes to the Consolidated Financial Statements, Continued
For the years ended December 31, 2022 and 2021

9. Financial Lease

- (1) Gross investment in financial leases and their present value of minimum leases receipts as of December 31, 2022 and 2021 are summarized as follows:

<i>(In millions of won)</i>	<u>2022</u>	<u>2021</u>
Less than 1 year	₩ 695,917	870,732
More than 1 year, less than 5 years	231,711	443,643
More than 5 years	22,062	23,897
Gross investments in financial leases	<u>₩ 949,690</u>	<u>1,338,272</u>
Present value of minimum lease payment receivable	911,417	1,290,381

- (2) Unearned interest income of financial leases as of December 31, 2022 and 2021 as follows:

<i>(In millions of won)</i>	<u>2022</u>	<u>2021</u>
Gross investment in financial lease	₩ 949,690	1,338,272
Net lease investment(*)	915,741	1,294,520
Unearned interest income	<u>₩ 33,949</u>	<u>43,752</u>

(*) Present value of unguaranteed residual value ₩4,324 million is included as of December 31, 2022.

- (3) Interest income regarding lease receivable for the years ended December 31, 2022 and 2021 are summarized as follows:

<i>(In millions of won)</i>	<u>2022</u>	<u>2021</u>
Interest income	₩ 44,727	36,849
Commission revenue	37,255	59,204
	<u>₩ 81,982</u>	<u>96,053</u>

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10. Inventories

Inventories as of December 31, 2022 and 2021 are summarized as follows:

(In millions of won)

	2022			2021(*)		
	Acquisition cost	Provision for inventory valuation	Carrying amount	Acquisition cost	Provision for inventory valuation	Carrying amount
Merchandise	₩ 857,638	(50,780)	806,858	598,467	(47,549)	550,918
Finished goods	1,543,100	(56,087)	1,487,013	1,219,122	(23,750)	1,195,372
Work-in-progress	1,559,398	(43,809)	1,515,589	948,058	(26,961)	921,097
Raw materials	3,234,991	(168,259)	3,066,732	1,656,801	(19,562)	1,637,239
Materials-in-transit	2,594,550	-	2,594,550	1,727,246	-	1,727,246
	₩ 9,789,677	(318,935)	9,470,742	6,149,694	(117,822)	6,031,872

(*) As a result of revision of K-IFRS No. 1016, the carrying amount of inventories as of December 31, 2021, was restated.

Losses on valuation of inventory amounting to ₩179,283 million was added to the cost of sales for the year ended December 31, 2022 and reversal of loss on valuation of inventory amounting to ₩11,959 million was deducted from the cost of sales for the year ended December 31, 2021.

11. Other Assets

Other assets as of December 31, 2022 and 2021 are summarized as follows:

(In millions of won)

	2022		2021	
	Current	Non-current	Current	Non-current
Advance payments	₩ 1,379,632	-	162,958	-
Allowance for doubtful accounts	(9,411)	-	(9,409)	-
Prepaid expenses	472,929	10,345	50,837	10,360
Accumulated impairment loss(*1)	(48,323)	-	-	-
Plan assets(*3)	-	605,134	-	7,756
Emission right	98	-	1,792	-
Right of return product	3,961	-	3,231	-
Others(*2)	261,366	247,584	46,227	20,189
Accumulated impairment loss	(218,478)	(63,307)	(31,055)	-
	₩ 1,841,774	799,756	224,581	38,305

(*1) Prior to recognition of the provision for the onerous contract, the impairment loss on the related asset was recognized.

(*2) The Group has acquired vessels under construction due to cancellation of a shipbuilding contracts and recognized it by fair value which independent and expertise appraisal institution appraised and other assets.

(*3) As of December 31, 2022, plan assets of ₩605,134 million in excess of present value of defined benefit obligation was recorded as other non-current assets (see Note 25).

HD HYUNDAI CO., LTD. AND SUBSIDIARIES
Notes to the Consolidated Financial Statements, Continued

For the years ended December 31, 2022 and 2021

12. Investments in Associates

(1) Investments in associates as of December 31, 2022 and 2021 are summarized as follows:

(In millions of won, except percentage of ownership)

Associates	Location	Fiscal year end	Main business	2022		2021	
				Ownership (%)	Carrying amount	Ownership (%)	Carrying amount
Korea Shipbuilding & Offshore Engineering Co., Ltd.(*1)	Korea	December	Non-financial holding company	- ₩	-	30.95 ₩	3,054,860
KORAMCO Energy Plus Reit(*2,8)	Korea	May, November	Real estate investing company	9.04	42,138	11.49	41,896
KORAMCO Ocheon PFV Co., Ltd.(*3)	Korea	December	Real estate developing company	-	-	13.50	-
KORAMCO Banpo PFV Co., Ltd.(*2)	Korea	December	Real estate developing company	13.50	1,992	13.50	2,772
KORAMCO Dongjak PFV Co., Ltd.(*2)	Korea	December	Real estate developing company	13.16	1,072	13.16	1,123
KORAMCO Amsa PFV Co., Ltd.(*7)	Korea	December	Real estate developing company	-	-	14.15	799
Potenit Co., Ltd.(*2,4,8)	Korea	December	Manufacturing of robot	18.78	-	19.41	-
Eugene Special Growth Opportunity Securities Investment trust No.1(*8)	Korea	December	Other financing	28.57	30,037	33.33	7,501
STIC-Welcome Upcycling New technology Investment association(*9)	Korea	December	Other financing	31.45	4,924	-	-
New Korea country club(*6)	Korea	December	Golf courses and incidental business	29.00	28,273	-	-
Taebaek Wind Power Co., Ltd.(*3,6)	Korea	December	Wind power generation	-	-	-	-
Taebaek Guinemi Wind Power Co., Ltd.(*3,6)	Korea	December	Wind power generation	-	-	-	-

HD HYUNDAI CO., LTD. AND SUBSIDIARIES
Notes to the Consolidated Financial Statements, Continued
For the years ended December 31, 2022 and 2021

12. Investments in Associates, Continued

(1) Investments in associates as of December 31, 2022 and 2021 are summarized as follows, continued

(In millions of won, except percentage of ownership)

Associates	Location	Fiscal year end	Main business	2022		2021	
				Ownership (%)	Carrying amount	Ownership (%)	Carrying amount
PyeongChang Wind Power Co., Ltd.(*3,6)	Korea	December	Wind power generation	-	₩ -	-	₩ -
Changjuk Wind Power Co., Ltd. (*3,6)	Korea	December	Wind power generation	-	-	-	-
Hyundai Green Industries Co., W.L.L.(*6)	Kuwait	December	Education services	49.00	-	-	-
KC LNG Tech Co., Ltd.(*2,6)	Korea	December	Other engineering services	16.60	-	-	-
Zvezda-Hyundai LLC(*6)	Russia	December	Shipbuilding	49.00	1,676	-	-
International Maritime Industries Company(*6)	Saudi Arabia	December	Shipbuilding	20.00	73,203	-	-
Hyundai Hymys Co., Ltd.(*5,6)	Korea	December	Manufacture and sale of ship parts	25.00	39,477	-	-
Daehoji Solar Park Inc.(*6)	Korea	December	Solar power generation	35.50	224	-	-
Palantir Korea Co. Ltd.(*9)	Korea	December	Sale of software	25.10	703	-	-
				₩	<u>223,719</u>	₩	<u>3,108,951</u>

HD HYUNDAI CO., LTD. AND SUBSIDIARIES
Notes to the Consolidated Financial Statements, Continued
For the years ended December 31, 2022 and 2021

12. Investments in Associates, Continued

(1) Investments in associates as of December 31, 2022 and 2021 are summarized as follows, continued

(*1) For the year ended December 31, 2022, the Group acquired additionally 4.1% shares of Korea Shipbuilding & Offshore Engineering Co., Ltd, an associate, obtained substantial control, and switched from the associate to the subsidiary.

(*2) Although ownership is less than 20%, investments are classified as associates because the Group can appoint board of directors.

(*3) For the year ended December 31, 2022, the disposal of the associate was completed.

(*4) The entire carrying amount of the associate was recognized as impairment losses and no book values were stated currently.

(*5) As of December 31, 2022, the Group provide the security of Hyundai Hyms Co., Ltd as collateral for Hercules Holding LLC, the majority shareholder of Hyundai Hyms Co., Ltd.(See Note 46).

(*6) For the year ended December 31, 2022, it was newly incorporated due to change in scope of consolidation.

(*7) For the year ended December 31, 2022, it was liquidated.

(*8) For the year ended December 31, 2022, the ratio of ownership changed resulting from disproportionate equity capital increase of investee.

(*9) For the year ended December 31, 2022, the Group newly established.

HD HYUNDAI CO., LTD. AND SUBSIDIARIES
Notes to the Consolidated Financial Statements, Continued

For the years ended December 31, 2022 and 2021

12. Investments in Associates, Continued

(2) Condensed financial information of associates as of December 31, 2022 and 2021 and for the years ended December 31, 2022 and 2021 are summarized as follows:

(In millions of won)

Associates	2022									
	Current assets	Non-Current assets	Current liabilities	Non-Current liabilities	Equity	Revenue	Operating income (loss)	Profit (loss)	Other comprehensive income (loss)	Total comprehensive income (loss)
KORAMCO Energy Plus Reit ₩	64,354	1,217,040	16,717	798,347	466,330	56,926	39,854	22,583	-	22,583
KORAMCO Banpo PFV Co., Ltd	105,499	-	17,343	73,400	14,756	-	(5,795)	(5,779)	-	(5,779)
KORAMCO Dongjak PFV Co., Ltd	27,156	-	3,084	15,922	8,150	656	115	(388)	-	(388)
Eugene Special Growth Opportunity Securities Investment trust No.1	1,191	103,971	34	-	105,128	(69,453)	(69,759)	(69,759)	-	(69,759)
STIC-Welcome Upcycling New technology Investment association	598	15,123	64	-	15,657	1	(243)	(243)	-	(243)
New korea country club(*3)	29,947	18,586	2,166	5,550	40,817	18,015	4,143	3,844	-	3,844
Taebaek Wind Power Co., Ltd.(*1,3)	4,598	23,380	386	2,667	24,925	5,445	992	1,304	-	1,304
Taebaek Guinemi Wind Power Co., Ltd.(*1,3)	5,075	38,012	894	27,140	15,053	4,892	2,367	1,624	-	1,624
PyeongChang Wind Power Co., Ltd.(*1,3)	13,197	57,097	5,848	39,761	24,685	10,702	5,126	3,441	-	3,441
Changjuk Wind Power Co., Ltd.(*1,3)	6,201	21,475	470	1,388	25,818	6,756	3,220	3,241	-	3,241
Hyundai Green Industries Co., W.L.L.	-	-	-	-	-	-	-	-	-	-
KC LNG Tech Co., Ltd.	2,951	7,108	13,916	347	(4,204)	4,231	(3,275)	(8,699)	-	(8,699)
Zvezda-Hyundai LLC(*3)	3,555	2,275	399	1	5,430	3,262	556	491	(945)	(454)

HD HYUNDAI CO., LTD. AND SUBSIDIARIES
Notes to the Consolidated Financial Statements, Continued
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12. Investments in Associates, Continued

(2) Condensed financial information of associates as of December 31, 2022 and 2021 and for the years ended December 31, 2022 and 2021 are summarized as follows:

(In millions of won)

Associates	2022									
	Current assets	Non-Current assets	Current liabilities	Non-Current liabilities	Equity	Revenue	Operating income (loss)	Profit (loss)	Other comprehensive income (loss)	Total comprehensive income (loss)
International Maritime Industries Company(*3)	668,194	727,450	140,177	953,724	301,743	98,064	(180,600)	(169,297)	36,188	(133,109)
Hyundai HYMS Co., Ltd.(*2,3)	29,390	203,439	32,810	33,344	166,675	144,745	3,637	3,374	269	3,643
Daehoji Solar park Inc.	444	1,679	1,475	-	648	-	(124)	(170)	-	(170)
Palantir Korea Co. Ltd.	2,800	-	-	-	2,800	-	-	-	-	-
	<u>₩ 965,150</u>	<u>2,436,635</u>	<u>235,783</u>	<u>1,951,591</u>	<u>1,214,411</u>	<u>284,242</u>	<u>(199,786)</u>	<u>(214,433)</u>	<u>35,512</u>	<u>(178,921)</u>

(*1) Financial information as of the date of disposal.

(*2) Financial information of consolidated financial statement as of and for the year ended December 31, 2022.

(*3) For the year ended December 31, 2022, it was incorporated due to change in scope of consolidation and financial information since January 1, 2022.

HD HYUNDAI CO., LTD. AND SUBSIDIARIES
Notes to the Consolidated Financial Statements, Continued

For the years ended December 31, 2022 and 2021

12. Investments in Associates, Continued

(2) Condensed financial information of associates as of December 31, 2022 and 2021 and for the years ended December 31, 2022 and 2021 are summarized as follows, continued

(In millions of won)

Associates	2021									
	Current assets	Non-Current assets	Current liabilities	Non-Current liabilities	Equity	Revenue	Operating income (loss)	Profit (loss) (*)	Other comprehensive income	Total comprehensive income (loss) (*)
Korea Shipbuilding & Offshore Engineering Co., Ltd.	₩ 14,562,196	12,730,898	11,286,468	3,592,871	12,413,755	15,493,382	(1,384,816)	(1,141,204)	94,266	(1,046,938)
KORAMCO Energy Plus REIT	72,617	910,254	15,705	602,563	364,603	65,380	50,709	30,940	-	30,940
KORAMCO Ocheon PFV Co., Ltd.	88,238	-	4,046	56,284	27,908	2,046	649	(1,156)	-	(1,156)
KORAMCO Banpo PFV Co., Ltd.	84,046	-	512	63,000	20,534	1,840	356	(6,498)	-	(6,498)
KORAMCO Dongjak PFV Co., Ltd.	25,720	-	1,200	15,983	8,537	659	130	(373)	-	(373)
KORAMCO Amsa PFV Co., Ltd.	18,319	-	1,498	11,176	5,645	458	(62)	(409)	-	(409)
Eugene Special Growth Opportunity Securities Investment trust No.1.	22,509	-	6	-	22,503	9	3	3	-	3
	<u>₩ 14,873,645</u>	<u>13,641,152</u>	<u>11,309,435</u>	<u>4,341,877</u>	<u>12,863,485</u>	<u>15,563,774</u>	<u>(1,333,031)</u>	<u>(1,118,697)</u>	<u>94,266</u>	<u>(1,024,431)</u>

(*) For the year ended December 31, 2021, net loss and total comprehensive loss attributable to owners of the Parent Company were ₩929,319 million and ₩829,592 million.

HD HYUNDAI CO., LTD. AND SUBSIDIARIES
Notes to the Consolidated Financial Statements, Continued

For the years ended December 31, 2022 and 2021

12. Investments in Associates, Continued

(3) Changes in equity-method accounted investees for the years ended December 31, 2022 and 2021 are summarized as follows:

(In millions of won)

Associates	2022						
	Beginning balance	Change in scope of consolidation	Acquisition / Disposals	Equity Income (Losses) on Investments	Changes in equity of equity accounted investees	Dividends received	Ending balance
Korea Shipbuilding & Offshore Engineering Co., Ltd.	₩ 3,054,860	(2,990,655)	-	(74,485)	10,280	-	-
KORAMCO Energy Plus Reit	41,896	-	-	4,346	(136)	(3,968)	42,138
KORAMCO Banpo PFV Co., Ltd	2,772	-	-	(780)	-	-	1,992
KORAMCO Dongjak PFV Co., Ltd	1,123	-	-	(51)	-	-	1,072
KORAMCO Amsa PFV Co., Ltd.	799	-	(1,388)	589	-	-	-
Eugene Special Growth Opportunity Securities Investment trust No.1	7,501	-	42,500	(19,928)	(2)	(34)	30,037
STIC-Welcome Upcycling New technology Investment association	-	-	5,000	(76)	-	-	4,924
New korea country club	-	27,223	-	1,195	-	(145)	28,273
Taebaek Wind Power Co., Ltd	-	9,628	(8,506)	33	-	(1,155)	-
Taebaek Guinemi Wind Power Co., Ltd.	-	5,531	(5,645)	114	-	-	-
PyeongChang Wind Power Co., Ltd	-	5,551	(5,678)	219	-	(92)	-
Changjuk Wind Power Co., Ltd	-	12,527	(11,275)	683	-	(1,935)	-
Hyundai Green Industries Co., W.L.L.	-	-	-	-	-	-	-
KC LNG Tech Co., Ltd.	-	701	-	(701)	-	-	-
Zvezda-Hyundai LLC	-	219	2,706	(809)	(440)	-	1,676
International Maritime Industries Company	-	53,345	43,249	(30,036)	6,645	-	73,203
Hyundai Hymys Co., Ltd.	-	40,479	-	(1,078)	76	-	39,477
Daehoji Solar park Inc.	-	284	-	(60)	-	-	224
Palantir Korea Co. Ltd.	-	-	703	-	-	-	703
	₩ 3,108,951	(2,835,167)	61,666	(120,825)	16,423	(7,329)	223,719

HD HYUNDAI CO., LTD. AND SUBSIDIARIES
Notes to the Consolidated Financial Statements, Continued

For the years ended December 31, 2022 and 2021

12. Investments in Associates, Continued

(3) Changes in equity-method accounted investees for the years ended December 31, 2022 and 2021 are summarized as follows, continued:

(In millions of won)

Associates	2021						
	Beginning balance	Acquisition	Equity Income (Losses) on Investments	Changes in equity of equity method investments	Dividends received	Replacement to assets held for sale	Ending balance
Korea Shipbuilding & Offshore Engineering Co., Ltd.	₩ 3,391,028	-	(298,863)	(37,305)	-	-	3,054,860
KORAMCO Energy Plus REIT	40,729	-	3,555	-	(2,388)	-	41,896
KORAMCO Ocheon PFV Co., Ltd.	3,936	-	(155)	-	(13)	(3,768)	-
KORAMCO Banpo PFV Co., Ltd.	3,649	-	(877)	-	-	-	2,772
KORAMCO Dongjak PFV Co., Ltd.	1,173	-	(50)	-	-	-	1,123
KORAMCO Amsa PFV Co., Ltd.	857	-	(58)	-	-	-	799
Eugene Special Growth Opportunity Securities Investment trust No.1.	-	7,500	1	-	-	-	7,501
	₩ <u>3,441,372</u>	<u>7,500</u>	<u>(296,447)</u>	<u>(37,305)</u>	<u>(2,401)</u>	<u>(3,768)</u>	<u>3,108,951</u>

HD HYUNDAI CO., LTD. AND SUBSIDIARIES
Notes to the Consolidated Financial Statements, Continued

For the years ended December 31, 2022 and 2021

12. Investments in Associates, Continued

- (4) Reconciliation from net assets of the associates to the carrying amount of investments in associates in the Group's consolidated financial statements as of December 31, 2022 and 2021 are summarized as follows:

(In millions of won, except percentage of ownership)

Associates	2022						
	Ending net assets	Group's ownership (*1)	Group's share of net assets(*2)	Investment difference such as goodwill	Elimination of inter- segment transactions and unrealized profits and losses	Other	Ending carrying amount
KORAMCO Energy Plus Reit	₩ 466,330	9.04%	42,138	-	-	-	42,138
KORAMCO Banpo PFV Co., Ltd	14,756	13.50%	1,992	-	-	-	1,992
KORAMCO Dongjak PFV Co., Ltd	8,150	13.16%	1,072	-	-	-	1,072
Eugene Special Growth Opportunity Securities Investment trust No.1	105,128	28.57%	30,037	-	-	-	30,037
STIC-Welcome Upcycling New technology Investment association	15,657	31.45%	4,924	-	-	-	4,924
New korea country club	40,817	29.00%	11,837	16,436	-	-	28,273
Taebaek Wind Power Co., Ltd(*1)	24,925	-	-	-	-	-	-
Taebaek Guinemi Wind Power Co., Ltd. (*1)	15,053	-	-	-	-	-	-
PyeongChang Wind Power Co., Ltd(*1)	24,685	-	-	-	-	-	-
Changjuk Wind Power Co., Ltd(*1)	25,818	-	-	-	-	-	-
Hyundai Green Industries Co., W.L.L.	-	49.00%	-	-	-	-	-
KC LNG Tech Co., Ltd.	(4,204)	16.60%	(698)	-	-	698	-
Zvezda-Hyundai LLC(*2)	5,430	49.00%	2,661	-	(985)	-	1,676
International Maritime Industries Company	301,743	20.00%	60,348	12,855	-	-	73,203
Hyundai Hyms Co., Ltd.(*3,4)	157,906	25.00%	39,477	-	-	-	39,477
Daehoji Solar park Inc.	648	35.50%	230	-	(6)	-	224
Palantir Korea Co. Ltd.	2,800	25.10%	703	-	-	-	703
	₩ 1,205,642		194,721	29,291	(991)	698	223,719

HD HYUNDAI CO., LTD. AND SUBSIDIARIES
Notes to the Consolidated Financial Statements, Continued

For the years ended December 31, 2022 and 2021

12. Investments in Associates, Continued

- (4) Reconciliation from net assets of the associates to the carrying amount of investments in associates in the Group's consolidated financial statements as of December 31, 2022 and 2021 are summarized as follows, continued

(*1) Net asset values of the associate as of the date of disposal, where all of the holding interest was sold for the year ended December 31, 2022.

(*2) Equity method accounting was suspended due to a cumulative deficit that resulted in a book value of zero, and the unrecognized equity in net income of the associate due to the suspension of equity method accounting amounted to ₩698 million.

(*3) Proportionate share of the parent company in net assets of the associate on a consolidated financial statement basis as of December 31, 2022.

(*4) Hyundai Hymys Co., Ltd. issued cumulative preferred shares classified as equity, and adjusted the dividend amount for the cumulative preferred shares and calculated the share of the Group.

(In millions of won, except percentage of ownership)

Associates	Ending net assets	Group's ownership(*1)	Group's share of net assets(*2)	2021	
				Elimination of inter-segment transactions and unrealized profits and losses	Ending carrying amount
Korea Shipbuilding & Offshore Engineering Co., Ltd.	₩ 12,413,755	30.95%	3,053,525	1,335	3,054,860
KORAMCO Energy Plus REIT	364,603	11.49%	41,896	-	41,896
KORAMCO Ocheon PFV Co., Ltd.(*3)	27,908	13.50%	3,768	-	-
KORAMCO Banpo PFV Co., Ltd.	20,534	13.50%	2,772	-	2,772
KORAMCO Dongjak PFV Co., Ltd.	8,537	13.16%	1,123	-	1,123
KORAMCO Amsa PFV Co., Ltd.	5,645	14.15%	799	-	799
Eugene Special Growth Opportunity Securities Investment trust No.1	22,503	33.33%	7,501	-	7,501
	₩ 12,863,485		3,111,384	1,335	3,108,951

(*1) As of December 31, 2021, the ownerships adjusted for the treasury shares are 30.98%.

(*2) As of December 31, 2021, the Group's share of net assets of associates is the value after considering the difference between net asset amount and non-controlling interests.

(*3) As of December 31, 2021, the Group classified as non-current assets held for sale (See Note 49).

HD HYUNDAI CO., LTD. AND SUBSIDIARIES
Notes to the Consolidated Financial Statements, Continued
For the years ended December 31, 2022 and 2021

13. Investments in Joint Ventures

(1) Investments in joint ventures as of December 31, 2022 and 2021 are summarized as follows:

(In millions of won, except percentage of ownership)

Joint ventures	Location	Fiscal year end	Business	2022		2021	
				Ownership (%)	Carrying amount	Ownership (%)	Carrying amount
Hyundai Cosmo Petrochemical Co., Ltd. Asan Kakao Medical Data Co., Ltd.(*1)	Korea	December	Manufacturing of petrochemicals	50.00	₩ 227,570	50.00	₩ 201,392
	Korea	December	Development and supply of application software	-	-	45.00	3,864
Haining Hagong Hyundai Robotics Co., Ltd.(*2)	China	December	Sale of robot and service	24.00	-	30.00	5,791
Doosan Infracore Liaoning Machinery Sales Co., LTD.(*3)	China	December	Sale of Excavators	43.00	296	43.00	394
Tianjin Lovol Doosan Engine Co., LTD.(*6)	China	December	Manufacture and sale of Engine	100.00	-	50.00	-
Mirae asset-Hyundai Heavy Industries holdings Co., Ltd Growth Opportunity Securities Investment joint No.1(*3)	Korea	December	Investment of new technology business	29.85	1,781	29.85	1,967
Saudi Engines Manufacturing Company(*4,5)	Saudi Arabia	December	Manufacture of ship engine	30.00	10,273	-	-
					₩ 239,920		₩ 213,408

(*1) The Group owns less than half of voting rights, however, the right of decision-making in certain area to be exercised jointly by the Group and Kakao Investment Co., Ltd., a party to the joint venture is material for operating the joint venture. Accordingly, the investment has been classified into a joint venture. For the year ended December 31, 2022, liquidation procedures completed.

(*2) The Group signed a contract to sell a portion of our ownership stake in joint venture Haining Hagong Hyundai Robotics Co., Ltd. for the year ended December 31, 2022, and sold 6% of its 30% ownership stake (See Note 49).

(*3) The Group owns less than half of voting rights, however, the right of decision-making in certain area to be exercised jointly by the Group and a party to the joint venture is material for operating the joint venture. Accordingly, the investment has been classified into a joint venture.

(*4) The Group newly incorporated due to changes in the scope of consolidation for the year ended December 31, 2022.

(*5) Classified as a joint venture due to joint control with other investors regarding important financial and operational policies according to a shareholder agreement.

(*6) Excluded from joint ventures due to classification as a subsidiary through additional acquisition of ownership stake for the year ended December 31, 2022.

HD HYUNDAI CO., LTD. AND SUBSIDIARIES
Notes to the Consolidated Financial Statements, Continued
For the years ended December 31, 2022 and 2021

13. Investments in Joint Ventures, Continued

(2) Condensed financial information of joint ventures as of December 31, 2022 and 2021 and for the years ended December 31, 2022 and 2021 are summarized as follows:

1) Summary financial information

(In millions of won)

Joint ventures ⁴	2022									
	Condensed financial information of joint ventures									
	Current assets	Non-Current assets	Current liabilities	Non-Current liabilities	Equity	Revenue	Operating loss	Loss for the year	Other comprehensive income	Total comprehensive loss
Hyundai Cosmo Petrochemical Co., Ltd.	₩ 155,982	837,189	213,686	218,352	561,133	2,912,532	(105,986)	(155,343)	122	(155,221)
Doosan Infracore Liaoning Machinery Sales Co., Ltd.	3,479	40	2,713	-	806	8,060	(170)	(251)	-	(251)
Mirae asset-Hyundai Heavy Industries holdings Co., Ltd Growth Opportunity Securities Investment joint No.1	3,139	3,000	171	-	5,968	-	(699)	(622)	-	(622)
Saudi Engines Manufacturing Company(*)	35,776	3,828	4,871	488	34,245	-	(13,638)	(13,792)	3,359	(10,433)
	₩ 198,376	844,057	221,441	218,840	602,152	2,920,592	(120,493)	(170,008)	3,481	(166,527)

(*) For the year ended December 31, 2022, it was incorporated due to change in scope of consolidation and financial information since January 1, 2022.

HD HYUNDAI CO., LTD. AND SUBSIDIARIES
Notes to the Consolidated Financial Statements, Continued

For the years ended December 31, 2022 and 2021

13. Investments in Joint Ventures, Continued

(2) Condensed financial information of joint ventures as of December 31, 2022 and 2021 and for the years ended December 31, 2022 and 2021 are summarized as follows, continued:

1) Summary financial information, continued

(In millions of won)

Joint ventures	2021									
	Condensed financial information of joint ventures									
	Current assets	Non-Current assets	Current liabilities	Non-Current liabilities	Equity	Revenue	Operating loss	Loss for the year	Other comprehensive income	Total comprehensive loss
Hyundai Cosmo Petrochemical Co., Ltd.	₩ 199,500	910,739	267,446	265,745	577,048	2,482,505	(75,624)	(64,609)	23	(64,586)
AsanKakao Medical Data Co., Ltd.	8,589	2	6	-	8,585	102	(510)	(462)	-	(462)
Haining Hagong Hyundai Robotics. Co., Ltd.	22,132	3,735	5,688	133	20,046	13,209	(6,761)	(3,990)	-	(3,990)
Doosan Infracore Liaoning Machinery Sales Co., Ltd.	1,998	66	992	-	1,072	3,372	(114)	(117)	-	(117)
Tianjin Lovol Doosan Engine Co., Ltd.	13,402	35,446	7,386	695	40,767	3,578	(3,456)	(3,365)	-	(3,365)
Mirae asset-Hyundai Heavy Industries holdings Co., Ltd Growth Opportunity Securities Investment joint No.1	6,590	-	-	-	6,590	-	(114)	(110)	-	(110)
	₩ 252,211	949,988	281,518	266,573	654,108	2,502,766	(86,579)	(72,653)	23	(72,630)

HD HYUNDAI CO., LTD. AND SUBSIDIARIES
Notes to the Consolidated Financial Statements, Continued

For the years ended December 31, 2022 and 2021

13. Investments in Joint Ventures, Continued

(2) Condensed financial information of joint ventures as of December 31, 2022 and 2021 and for the years ended December 31, 2022 and 2021 are summarized as follows, continued:

2) Additional financial information

(In millions of won)

Joint ventures	2022						
	Cash and cash equivalents	Current financial liabilities	Non-current financial liabilities	Depreciation	Interest income	Interest expenses	Income tax benefit
Hyundai Cosmo Petrochemical Co., Ltd.	₩ 8,675	210,978	209,567	4	655	11,588	(45,830)
Doosan Infracore Liaoning Machinery Sales Co., Ltd.	138	835	-	25	-	27	-
Mirae asset-Hyundai Heavy Industries holdings Co., Ltd Growth Opportunity Securities Investment joint No.1	3,118	171	-	-	77	-	-
Saudi Engines Manufacturing Company(*)	31,083	663	410	623	36	97	94
	₩ 43,014	212,647	209,977	652	768	11,712	(45,736)

(*) For the year ended December 31, 2022, it was incorporated due to change in scope of consolidation and financial information since January 1, 2022.

(In millions of won)

Joint ventures	2021						
	Cash and cash equivalents	Current financial liabilities	Non-current financial liabilities	Depreciation	Interest income	Interest expenses	Income tax benefit
Hyundai Cosmo Petrochemical Co., Ltd.	₩ 1,471	57,779	256,043	55,039	209	8,534	(21,107)
AsanKakao Medical Data Co., Ltd.	333	-	-	1	48	-	-
Haining Hagong Hyundai Robotics. Co., Ltd.	1,850	-	-	102	5	37	-
Doosan Infracore Liaoning Machinery Sales Co., Ltd.	194	559	-	14	-	12	-
Tianjin Lovol Doosan Engine Co., Ltd.	7,686	-	-	1,318	67	-	-
Mirae asset-Hyundai Heavy Industries holdings Co., Ltd Growth Opportunity Securities Investment joint No.1	6,590	-	-	-	4	-	-
	₩ 18,124	58,338	256,043	56,474	333	8,583	(21,107)

HD HYUNDAI CO., LTD. AND SUBSIDIARIES
Notes to the Consolidated Financial Statements, Continued
For the years ended December 31, 2022 and 2021

13. Investments in Joint Ventures, Continued

(3) Changes in equity-method accounted joint ventures for the years ended December 31, 2022 and 2021 are summarized as follows:

(In millions of won)

Joint ventures	2022						
	Beginning balance	Change in scope of consolidation	Acquisition	Disposal / Replacement to assets held for sale	Share of profit (loss) of equity accounted investees	Changes in equity of equity accounted investees	Ending balance
Hyundai Cosmo Petrochemical Co., Ltd.	₩ 201,392	-	70,000	-	(43,536)	(286)	227,570
AsanKakao Medical Data Co., Ltd.	3,864	-	-	(3,741)	(128)	5	-
Haining Hagong Hyundai Robotics Co., Ltd.	5,791	-	-	(3,828)	(2,146)	183	-
Doosan Infracore Liaoning Machinery Sales Co., Ltd.	394	-	-	-	(93)	(5)	296
Mirae asset-Hyundai Heavy Industries holdings Co., Ltd Growth Opportunity Securities Investment joint No.1	1,967	-	-	-	(186)	-	1,781
Saudi Engines Manufacturing Company	-	13,291	-	-	(3,833)	815	10,273
	₩ 213,408	13,291	70,000	(7,569)	(49,922)	712	239,920

HD HYUNDAI CO., LTD. AND SUBSIDIARIES
Notes to the Consolidated Financial Statements, Continued
For the years ended December 31, 2022 and 2021

13. Investments in Joint Ventures, Continued

(3) Changes in equity-method accounted joint ventures for the years ended December 31, 2022 and 2021 are summarized as follows, continued:

(In millions of won)

Joint ventures	2021						
	Beginning balance	Change in scope of consolidation	Acquisition	Share of profit (loss) of equity accounted investees	Impairment	Changes in equity of equity accounted investees	Ending balance
Hyundai Cosmo Petrochemical Co., Ltd.	₩ 233,811	-	-	(32,430)	-	11	201,392
AsanKakao Medical Data Co., Ltd.	4,062	-	-	(208)	-	10	3,864
Haining Hagong Hyundai Robotics Co., Ltd.	6,189	-	-	(1,094)	-	696	5,791
Doosan Infracore Liaoning Machinery Sales Co., Ltd.	-	322	-	55	-	17	394
Tianjin Lovol Doosan Engine Co., Ltd.	-	15,480	3,604	(1,605)	(18,471)	992	-
Mirae asset-Hyundai Heavy Industries holdings Co., Ltd Growth Opportunity Securities Investment joint No.1	-	-	2,000	(33)	-	-	1,967
	₩ 244,062	15,802	5,604	(35,315)	(18,471)	1,726	213,408

HD HYUNDAI CO., LTD. AND SUBSIDIARIES
Notes to the Consolidated Financial Statements, Continued

For the years ended December 31, 2022 and 2021

13. Investments in Joint Ventures, Continued

- (4) Reconciliation from net assets to the carrying amount of investments in joint ventures in the Group's consolidated financial statements as of December 31, 2022 and 2021 are summarized as follows:

(In millions of won, except percentage of ownership)

Joint ventures	2022				
	Ending net assets	Group's ownership	Group's share of net asset	Elimination of inter-segment transactions and unrealized profits and losses	Ending carrying amount
Hyundai Cosmo Petrochemical Co., Ltd.	₩ 561,133	50.00%	280,567	(52,997)	227,570
Doosan Infracore Liaoning Machinery Sales Co., Ltd.	806	43.00%	347	(51)	296
Mirae asset-Hyundai Heavy Industries holdings Co., Ltd Growth Opportunity Securities Investment joint No.1	5,968	29.85%	1,781	-	1,781
Saudi Engines Manufacturing Company	34,245	30.00%	10,273	-	10,273
	₩ 602,152		292,968	(53,048)	239,920

(In millions of won, except percentage of ownership)

Joint ventures	2021				
	Ending net assets	Group's ownership	Group's share of net asset	Elimination of inter-segment transactions and unrealized profits and losses	Ending carrying amount
Hyundai Cosmo Petrochemical Co., Ltd.	₩ 577,048	50.00%	288,524	(87,132)	201,392
AsanKakao Medical Data Co., Ltd.	8,585	45.00%	3,863	1	3,864
Haining Hagong Hyundai Robotics. Co., Ltd.	20,046	30.00%	6,014	(223)	5,791
Doosan Infracore Liaoning Machinery Sales Co., Ltd.	1,072	43.00%	461	(67)	394
Tianjin Lovol Doosan Engine Co., Ltd.	40,767	50.00%	20,384	(20,384)	-
Mirae asset-Hyundai Heavy Industries holdings Co., Ltd Growth Opportunity Securities Investment joint No.1	6,590	29.85%	1,967	-	1,967
	₩ 654,108		321,213	(107,805)	213,408

HD HYUNDAI CO., LTD. AND SUBSIDIARIES
Notes to the Consolidated Financial Statements, Continued
For the years ended December 31, 2022 and 2021

14. Joint Operation

The joint operations as of December 31, 2022, are summarized as follows:

Joint operation	Location	Main business	2022 Ownership (%)
FDH JV(*1)	Kuwait	Chemical plant	33.33
FDH JV(*2)	Kuwait	Chemical plant	20.00

(*1) The Group holds a significant joint operation 'FDH JV' as of December 31, 2022. FDH JV is a joint operation that the main purpose of arrangement is construction of Clean Fuels Project MAB2 EPC PKG ordered by Kuwait National Petroleum Company. The Group recognizes the assets and liabilities relating to its interest in a joint operation and recognizes revenues and expenses relating to its interest in a joint operation.

(*2) The Group holds a significant joint operation 'FDH JV' as of December 31, 2022. FDH JV is a joint operation that the main purpose of arrangement is construction of Al Zour Refinery Project Package 2 & 3 EPC PKG ordered by Kuwait Integrated Petroleum Industries Company. The Group recognizes the assets and liabilities relating to its interest in a joint operation and recognizes revenues and expenses relating to its interest in a joint operation.

HD HYUNDAI CO., LTD. AND SUBSIDIARIES
Notes to the Consolidated Financial Statements, Continued
For the years ended December 31, 2022 and 2021

15. Investment Property

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

(In millions of won)

		2022			Total
		Land	Building	Structures	
Beginning balance	₩	8,174	2,010	-	10,184
Acquisition / Replacement		(6)	33,129	2,659	35,782
Disposals		-	(96)	-	(96)
Depreciation / Impairment loss		-	(5,532)	-	(5,532)
Effect of movements in exchange rates		44	(71)	-	(27)
Effects of changes in scope of consolidation		90,221	162,728	-	252,949
Ending balance	₩	98,433	192,168	2,659	293,260
Acquisition costs		116,253	258,957	2,659	377,869
Accumulated depreciation / impairment loss		(17,820)	(66,789)	-	(84,609)

(In millions of won)

		2021			Total
		Land	Building	Structures	
Beginning balance	₩	9,820	-	-	9,820
Disposals		(9,820)	-	-	(9,820)
Depreciation / Impairment loss		(734)	(1,020)	-	(1,754)
Effect of movements in exchange rates		(16)	-	-	(16)
Effects of changes in scope of consolidation		8,924	3,030	-	11,954
Ending balance	₩	8,174	2,010	-	10,184
Acquisition costs		25,752	4,542	-	30,294
Accumulated depreciation / impairment loss		(17,578)	(2,532)	-	(20,110)

(2) Income (expense) from investment property for the years ended December 31, 2022 and 2021 are as follows:

(In millions of won)

		2022	2021
Rental income	₩	9,355	567
Maintenance expense – income-generating property		(6,079)	(528)
Maintenance expense – vacant property		(128)	(11)

(3) Fair value of investment property as of December 31, 2022 and 2021 are as follows:

(In millions of won)

		2022	2021
Land	₩	105,273	8,994
Building		264,772	-

The Group determined the fair value of investment property on the basis of an assessment carried out by an independent valuation entity. The evaluation corporation has appropriate qualifications and experience in relation to the evaluation of real estate in Korea, and this assessment was conducted using comparison methods, which are methods of obtaining economic value based on the marketability of the target item. Meanwhile, the Group has determined taking into account changes in the benchmark market price, such as individual public land prices, for estimating the fair value of investment property at the year ended December 31, 2022.

HD HYUNDAI CO., LTD. AND SUBSIDIARIES
Notes to the Consolidated Financial Statements, Continued
For the years ended December 31, 2022 and 2021

16. Property, Plant and Equipment

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

(In millions of won)

	2022						
	Land(*)	Buildings(*)	Structures	Machinery	Construction in-progress	Others	Total
Beginning balance	₩ 2,747,873	943,534	1,380,823	4,096,400	3,627,728	472,556	13,268,914
Acquisitions / Classification	102,607	568,540	515,367	3,562,800	(3,196,394)	480,562	2,033,482
Disposals	(13,679)	(4,341)	(863)	(10,642)	(10,329)	(4,972)	(44,826)
Depreciation / Impairment loss	-	(105,569)	(109,766)	(554,094)	(47)	(283,236)	(1,052,712)
Effect of movements in exchange rates	1,202	8,991	4,553	1,575	1,129	2,886	20,336
Effects of changes in scope of consolidation	5,115,844	1,912,379	1,494,357	791,850	234,166	446,109	9,994,705
Ending balance	₩ 7,953,847	3,323,534	3,284,471	7,887,889	656,253	1,113,905	24,219,899
Acquisition cost	7,955,275	5,343,425	5,311,662	15,180,836	657,553	4,493,756	38,942,507
Government grants	(1,428)	(8,866)	(2,784)	(6,114)	(26)	(1,262)	(20,480)
Accumulated depreciation/ impairment loss	-	(2,011,025)	(2,024,407)	(7,286,833)	(1,274)	(3,378,589)	(14,702,128)

(*) It includes land and buildings that continue to be recognized as assets of the Group which do not meet the conditions for sale.

As of December 31, 2022, construction-in-progress are related to investment in Ehwa industrial park construction and others.

(In millions of won)

	2021						
	Land(*1)	Buildings(*1)	Structures	Machinery	Construction in-progress	Others	Total
Beginning balance	₩ 2,209,160	722,879	1,227,156	3,975,343	2,104,313	440,753	10,679,604
Acquisitions / Classification	6,590	28,059	219,774	220,695	1,712,898	103,738	2,291,754
Disposals	(44,904)	(3,934)	(1,895)	(3,765)	(813)	(1,758)	(57,069)
Depreciation / Impairment loss	(1,267)	(32,508)	(46,905)	(310,166)	(24)	(161,415)	(552,285)
Effect of movements in exchange rates	(1,213)	13,608	987	7,464	(894)	4,955	24,907
Effects of changes in scope of consolidation	579,507	215,430	(18,294)	206,829	13,755	86,283	1,083,510
Effects of revision of IFRS(*2)	-	-	-	-	(201,507)	-	(201,507)
Ending balance	₩ 2,747,873	943,534	1,380,823	4,096,400	3,627,728	472,556	13,268,914
Acquisition cost	2,749,255	1,524,232	2,124,855	7,469,102	3,628,978	1,774,136	19,270,558
Government grants	(1,382)	(6,444)	(2,884)	(4,881)	-	(306)	(15,897)
Accumulated depreciation/ impairment loss	-	(574,254)	(741,148)	(3,367,821)	(1,250)	(1,301,274)	(5,985,747)

(*1) It includes land and buildings that continue to be recognized as assets of the Group do not meet the conditions for sale.

(*2) As a result of revisions in K-IFRS No. 1016 'Property, Plant and Equipment', the financial statement for the previous year were restated.

As December 31, 2021, construction-in-progress are related to investment in petrochemical product facilities and others.

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16. Property, Plant and Equipment, Continued

(2) Impairment losses

The Group recognized impairment losses of ₩8,287 million on property, plant and equipment for the year ended December 31, 2022, resulting from impairment assessments performed on assets generating cash inflows, which indicated signs of impairment due to factors such as decrease of sale volume and deteriorating market conditions. The estimated recoverable amount based on the impairment assessments is the net fair value of each individual asset, which represents the expected sale price in discussions with potential buyers or the appraised value. The appraised value is based on the fair value, evaluated using the methods such as the real estate appraisal act and comparable transaction method.

The Group estimated the fair value of the recoverable amount of assets based on valuation methods including cost approach, and considered physical and technological obsolescence of the assets

- Valuation method and input variables which were used for measuring fair value

Based on the input variables used in valuation methods, the fair value measurements of assets without plans for use are classified as Level 3 fair value. The valuation methods and input variables used in measuring fair values are as follows:

Valuation method	Significant but unobservable input variables	Correlation between the main unobservable variable and fair value
Publicly assessed land price	Time adjustment (Rate of changes in land value)	If flexibility of land value increases (decreases), then fair value increases (decreases).
	Regional contribution	If regional contribution increases (decreases), then fair value increases (decreases).
	Individual contribution	If the adjusted value of terms of residential lot and others increases (decreases), then fair value increases (decreases).
	Other contributions	If the adjusted value of the level of land value and others increases (decreases), then fair value increases (decreases).
Cost method	Changes in prices of raw materials, other materials, wages, and others	If the prices of raw materials and others increases (decreases), then fair value increases (decreases).
	Status of maintenance, management and others	If the status of maintenance, management and others is good (bad), then fair value increases (decreases).
Sales comparison approach	Sales comparisons of the object same or similar value formation factors with the target object	The price of target object is calculated through the process of information normalization, time adjustment, and value formation factors comparison according to the status of the target object.

On the other hand, the Group conducts impairment tests on CGUs every year. The Group defines a CGU as an independent business unit in principle and assesses impairment by evaluating the CGU's recoverable amount based on its value in use. The recoverable amount of each CGU is estimated by the Group reasonably. Future cash flows are estimated based on past experiences, industry outlooks from external evaluation agencies, actual operating results, and business plans, and are estimated using the discounted cash flow method based on the pre-tax cash flow estimates derived from the five-year business plans approved by the management, reflecting inflation rates and investment plans.

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Notes to the Consolidated Financial Statements, Continued
For the years ended December 31, 2022 and 2021

16. Property, Plant and Equipment, Continued

(2) Impairment losses, continued

In conducting the impairment test for CGU, the discount rate used as a basic element was calculated by weighing the cost of equity and the cost of debt. The risk-free interest rate, which reflects the credit rating of the country as of the valuation date, and the cost of equity based on beta of peer companies in the same industry were estimated, considering the company's credit rating, the company's bond interest rate was applied. The terminal growth rate was determined based on the market environment, using the average value over a long-term observation period.

(In percent)

	2022	
	Discount rate	Terminal growth rate
Korea Shipbuilding & Offshore Engineering Co., Ltd. and subsidiaries	8.31~11.77	1.00
Hyundai Construction Equipment Co., Ltd. and subsidiaries	6.99~15.57	1.00
Hyundai Doosan Infracore Co., Ltd.	8.99	1.00

(3) Revaluation of Land

As of December 31, 2022, the Group was applying the revaluation model on land. The revaluation amount was determined by the independent appraisers, having professional qualifications. The appraisal procedures included calculating the revaluation amount based on the publicly assessed land price and studying whether the amount is reasonable comparing with prices used in the recent arm's length transaction.

Carrying amounts of land under the revaluation model and the cost model as of December 31, 2022 were as follows:

(In millions of won)

	2022	
	Revaluation model	Cost model
Land	₩ 7,902,451	5,215,377

HD HYUNDAI CO., LTD. AND SUBSIDIARIES
Notes to the Consolidated Financial Statements, Continued
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16. Property, Plant and Equipment, Continued

(4) Measurement of fair value

(i) Fair value hierarchy

Based on the input variables used in the valuation method, the fair value measurement of land is classified as level 3 fair value based on the input variables used in the valuation techniques.

(ii) The valuation method and input variables which were used for measuring fair value of land are as follows:

Valuation method	Significant but unobservable input variables	Correlation between the main unobservable variable and fair value
Publicly assessed land price method	Time adjustment (Rate of changes in land value)	If flexibility of land value increases (decreases), then fair value increases (decreases).
	Regional contribution	If regional contribution increases (decreases), then fair value increases (decreases).
	Individual contribution	If the adjusted value of terms of residential lot and others increases (decreases), then fair value increases (decreases).
	Other contributions	If the adjusted value of the level of land value and others increases (decreases), then fair value increases (decreases).

(5) Temporarily unused assets

As of December 31, 2022, the carrying amount of the assets not in use is ₩107,103 million.

(6) The capitalized borrowing cost for the qualifying assets such of property, plant and equipment and investment property for the year ended December 31, 2022, amounted to ₩64,707 million. The capitalization rate used to calculate the capitalized borrowing cost ranged from 3.05% to 3.51%.

HD HYUNDAI CO., LTD. AND SUBSIDIARIES
Notes to the Consolidated Financial Statements, Continued
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17. Right-of-Use Assets and lease liabilities

(1) Changes in right-of-use assets for the years ended December 31, 2022 and 2021 are as follows:

(In millions of won)

	2022						
	Land	Buildings	Structures	Machinery	Ships	Others	Total
Beginning balance	₩ 163,364	56,132	183,281	974	659,720	394,564	1,458,035
Additions / Adjustment	100,443	69,471	5,723	582	228,581	55,467	460,267
Depreciation	(14,730)	(54,771)	(31,302)	(451)	(168,032)	(58,766)	(328,052)
End/Transfer	1,527	1,256	8,655	136	37,053	(32,486)	16,141
Effect of changes in scope of consolidation	32,996	27,174	3,321	-	191	1,282	64,964
Effect of movements in exchange rates	270	(92)	(134)	57	(1)	9	109
Ending balance	₩ 283,870	99,170	169,544	1,298	757,512	360,070	1,671,464
Acquisition cost	310,706	200,494	232,828	2,112	1,251,024	506,503	2,503,667
Accumulated depreciation	(26,776)	(99,900)	(63,284)	(814)	(493,512)	(146,129)	(830,415)
Accumulated impairment loss	(60)	(1,424)	-	-	-	(304)	(1,788)

(In millions of won)

	2021						
	Land	Buildings	Structures	Machinery	Ships	Others	Total
Beginning balance	₩ 151,820	53,542	24,546	215	612,456	552,213	1,394,792
Additions	603	14,049	88,763	1,064	133,248	60,990	298,717
Depreciation	(5,455)	(32,373)	(18,655)	(316)	(139,771)	(61,600)	(258,170)
End/Transfer	2,379	(29,989)	88,440	(33)	53,787	(161,030)	(46,446)
Effect of changes in scope of consolidation	12,353	49,933	-	-	-	3,984	66,270
Effect of movements in exchange rates	1,664	970	187	44	-	7	2,872
Ending balance	₩ 163,364	56,132	183,281	974	659,720	394,564	1,458,035
Acquisition cost	174,663	141,028	218,494	1,339	985,195	498,806	2,019,525
Accumulated depreciation	(11,239)	(83,472)	(35,213)	(365)	(325,475)	(103,935)	(559,699)
Accumulated impairment loss	(60)	(1,424)	-	-	-	(307)	(1,791)

(2) The Group used incremental borrowing rate of interest to measure lease liability. The incremental borrowing rates applied are 1.16% ~ 11.45%.

HD HYUNDAI CO., LTD. AND SUBSIDIARIES
Notes to the Consolidated Financial Statements, Continued
For the years ended December 31, 2022 and 2021

17. Right-of-Use Assets and lease liabilities, Continued

(3) Gain and loss regarding lease for the years ended December 31, 2022 and 2021 are as follows:

(In millions of won)

	<u>2022</u>	<u>2021</u>
Depreciation		
Land	₩ 14,730	5,455
Building	54,771	32,373
Structure	31,302	18,655
Machinery	451	316
Ship	168,032	139,771
Other asset	58,766	61,600
	<u>₩ 328,052</u>	<u>258,170</u>
Interest expense	51,067	37,769
Short-term lease payments(*)	48,529	16,453
Payments for leases of low-value assets not short-term lease(*)	2,711	2,009
Variable lease payments not included in the measurement of the lease liabilities(*)	39,487	54,380
	<u>₩ 141,794</u>	<u>110,611</u>
	469,846	368,781

(*) Included in cost of sales and selling, general and administrative expenses.

The total cash outflow related to leases for the year ended December 31, 2022 is amounting to ₩408,676 million.

(4) Details of the timing of the cash outflow of the lease liabilities under contract as of December 31, 2022 is as follows:

(In millions of won)

	<u>Book value</u>	<u>Contractual cash flow</u>	<u>Less than 6 months</u>	<u>6~12 months</u>	<u>1~3 years</u>	<u>Over 3 years</u>
Lease Liabilities	₩ 1,807,754	2,462,691	214,180	182,540	619,984	1,445,987

(5) The Group has a sub-lease in relation to the operation of gas station and the revenue from the sub-lease amounts to ₩7,736 million for the year ended December 31, 2022.

(6) Option to extend the lease

Some property leases contain extension options exercisable by the Group up to one year before the end of the non-cancellable contract period. Where practicable, the Group seeks to include extension options in new leases to provide operational flexibility. The extension options held are exercisable only by the Group and not by the lessors. The Group assesses at the lease commencement date whether it is reasonably certain to exercise the extension options. The Group reassesses whether it is reasonably certain to exercise the options if there is a significant event or significant changes in circumstances within its control.

HD HYUNDAI CO., LTD. AND SUBSIDIARIES
Notes to the Consolidated Financial Statements, Continued
For the years ended December 31, 2022 and 2021

18. Intangible Assets

(1) Details of goodwill as of December 31, 2022 and 2021 are as follows:

(In millions of won)

		<u>2022</u>	<u>2021</u>
Hyundai Oilbank Co., Ltd.	₩	1,087,419	1,087,419
Hyundai Doosan Infracore Co., Ltd.		309,516	309,252
Hyundai Electric & Energy Systems Co., Ltd.		95,835	95,835
HHI China Investment Co., Ltd.		26,615	26,615
Hyundai Construction Equipment India Private Ltd.		20,396	20,396
Hyundai and Shell Base Oil Co., Ltd.		66,311	66,311
Medi Plus Solution Co., Ltd.		11,284	11,284
HYUNDAI PLASPO CO., LTD.		8,564	-
Others		6,527	18,288
	₩	<u>1,632,467</u>	<u>1,635,400</u>

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

(In millions of won)

		<u>2022</u>						
		<u>Goodwill</u>	<u>Customer relationships</u>	<u>Brands</u>	<u>Technologies</u>	<u>Development costs</u>	<u>Others</u>	<u>Total</u>
Beginning balance	₩	1,635,400	515,551	192,220	376,554	86,972	257,600	3,064,297
Acquisitions /								
Reclassification		-	-	-	-	97,736	35,875	133,611
Government grants		-	-	-	-	(1,014)	-	(1,014)
Amortization / Impairment								
loss(*)		(2,676)	(38,047)	-	(113,293)	(26,891)	(39,193)	(220,100)
Disposals		-	-	-	-	-	(7,728)	(7,728)
Effect of movements in								
exchange rates		(1,365)	-	-	-	(325)	(262)	(1,952)
Effects of changes in								
scope of consolidation		1,108	212,209	460	1,127,008	12,375	53,933	1,407,093
Ending balance	₩	<u>1,632,467</u>	<u>689,713</u>	<u>192,680</u>	<u>1,390,269</u>	<u>168,853</u>	<u>300,225</u>	<u>4,374,207</u>
Acquisition cost		1,726,212	1,014,156	192,680	1,770,024	907,199	858,868	6,469,139
Accumulated								
amortization/ impairment								
loss		(93,745)	(324,443)	-	(379,755)	(735,837)	(558,637)	(2,092,417)
Government grants		-	-	-	-	(2,509)	(6)	(2,515)

(*) The Group recognized impairment losses of ₩16,401 million for development costs and others that are unlikely to generate future economic benefits for the year ended December 31, 2022.

HD HYUNDAI CO., LTD. AND SUBSIDIARIES
Notes to the Consolidated Financial Statements, Continued
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18. Intangible Assets, Continued

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

(In millions of won)

	2021						
	Goodwill	Customer relationships	Brands	Technologies	Development costs	Others	Total
Beginning balance	₩ 1,307,117	146,185	192,220	58,573	88,453	216,166	2,008,714
Acquisitions / Reclassification	-	-	-	-	30,329	16,691	47,020
Amortization / Impairment loss(*)	-	(20,440)	-	(31,036)	(32,068)	(29,030)	(112,574)
Disposals	-	-	-	-	(882)	(503)	(1,385)
Effect of movements in exchange rates	2,715	-	-	-	436	1,168	4,319
Effects of changes in scope of consolidation	325,568	389,806	-	349,017	704	53,108	1,118,203
Ending balance	₩ 1,635,400	515,551	192,220	376,554	86,972	257,600	3,064,297
Acquisition cost	1,712,421	801,947	192,220	643,017	230,398	450,920	4,030,923
Accumulated amortization/ impairment loss	(77,021)	(286,396)	-	(266,463)	(143,426)	(193,320)	(966,626)

(*) The Group recognized impairment losses of ₩18,810 million for development costs and others that are unlikely to generate future economic benefits for the year ended December 31, 2021.

The carrying amount of intangible assets with indefinite useful lives, excluding goodwill, are ₩245,955 million and ₩217,936 million, respectively, as of December 31, 2022 and 2021.

(3) Details of major project in development costs for the year ended December 31, 2022 is as follows:

(In millions of won)

Description	Project	2022	
		Carrying amount	Residual Amortization period
Development Costs and technology	High-powered HiMSEN engine (H54DFV) development project and etc.	₩ 37,507	Development in progress
	LNG transport ship utilizing Korean Cargo Hold (KC-2B) development project and etc.	16,823	Development in progress
	Group financial ERP system	6,855	Development in progress
	Commercialization technology of bifacial PERC solar modules and etc.	6,292	Development in progress
	Development and testing of self-developed CO2 transport ships (CHS) and etc	6,011	Development in progress
	Stage5 construction equipment development project and etc.	41,015	0.9~5 years
	Stage5 engine development project and etc.	30,786	1.7~4.2 years
	Engine (construction equipment) development project and etc.	25,842	Development in progress
	Eco-friendly construction equipment and etc.	12,081	0.2~5 years
	Small construction equipment and etc.	9,513	Development in progress

HD HYUNDAI CO., LTD. AND SUBSIDIARIES
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18. Intangible Assets, Continued

(4) Recognition of impairment losses of goodwill

The Group tests goodwill for impairment annually by comparing the recoverable amount of CGU with its carrying amount.

1) Oil Refinery sector : Hyundai Oilbank Co., Ltd.

The recoverable amount of cash generating unit (CGU) as of December 31, 2022, was measured based on the calculation of the value in use. The value in use is measured by applying discount rate to future cash flow to be derived from continuing use of the asset. The recoverable amount of cash generating unit (CGU) is measured by the calculation of the value in use, and the value in use is calculated by estimating future cash flow based on 5-year business plan approved by the segment management.

Assumptions used in calculating the value in use as of December 31, 2022, are as follows:

	Hyundai Oilbank Co., Ltd.
Discount rate	7.6%
Period covered by cash flow forecast	5 years
Terminal value growth rate	1.00%

The value in use as of December 31, 2022, was calculated by the following key assumptions.

- (i) Discount rate is the weighted average of equity and debt and it is estimated by applying cost of equity using risk-free interest rate reflecting the credit quality of country at the assessment date and the beta of the company in the same industry and corporate bond rate considering the credit quality of the segment.
- (ii) Future cash flow is estimated based on experience, oil price estimate of external appraisers, material operational consequence and business plan, and reflected inflation rate and investment plan.

As of December 31, 2022, the Group evaluated impairment loss of the goodwill, so that no impairment loss was recognized as the book value of CGU didn't exceed the recoverable amount.

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18. Intangible Assets, Continued

(4) Recognition of impairment losses, continued

2) Electric and electronic sector : Hyundai Electric & Energy Systems Co., Ltd.

The recoverable amount of cash generating unit (CGU) as of December 31, 2022, was measured based on the calculation of the value in use. The value in use is measured by applying discount rate to future cash flow to be derived from continuing use of the asset. The recoverable amount of cash generating unit (CGU) is measured by the calculation of the value in use, and the value in use is calculated by estimating future cash flow based on 5-year business plan approved by the segment management.

Assumptions used in calculating the value in use as of December 31, 2022, are as follows:

	Hyundai Electric & Energy Systems Co., Ltd.
Discount rate	10.86%
Period covered by cash flow forecast	5 years
Terminal value growth rate	1.00%

The value in use as of December 31, 2022, was calculated by the following key assumptions.

- (i) Discount rate is the weighted average of equity and debt and estimated by applying cost of equity using risk-free interest rate reflecting the credit quality of country at the assessment date and the beta of the company in the same industry and weighted average borrowing rate of the segment.
- (ii) Future cash flow is estimated based on experience, material operational consequence and business plan, and reflected inflation rate and investment plan.

As of December 31, 2022, the Group evaluated impairment loss of the goodwill, so that no impairment loss was recognized as the book value of CGU didn't exceed the recoverable amount.

3) Construction Equipment sector : Hyundai Doosan Infracore Co., Ltd.

The recoverable amount of cash generating unit (CGU) as of December 31, 2022, was measured based on the calculation of the value in use. The value in use is measured by applying discount rate to future cash flow to be derived from continuing use of the asset. The recoverable amount of cash generating unit (CGU) is measured by the calculation of the value in use, and the value in use is calculated by estimating future cash flow based on 5-year business plan approved by the segment management.

Assumptions used in calculating the value in use as of December 31, 2022, are as follows:

	Hyundai Doosan Infracore Co., Ltd.
Discount rate	8.99%
Period covered by cash flow forecast	5 years
Terminal value growth rate	1.00%

The value in use as of December 31, 2022, was calculated by the following key assumptions.

- (i) Discount rate is the weighted average of equity and debt and estimated by applying cost of equity using risk-free interest rate reflecting the credit quality of country at the assessment date and the beta of the company in the same industry and corporate bond rate considering the credit quality of the segment.
- (ii) Future cash flow is estimated based on experience, forecast of external research institution, material operational consequence and business plan, and reflected inflation.

As of December 31, 2022, the Group evaluated impairment loss of the goodwill, so that no impairment loss was recognized as the book value of CGU didn't exceed the recoverable amount.

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Notes to the Consolidated Financial Statements, Continued
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18. Intangible Assets, Continued

(5) Impairment test for other assets except goodwill

Impairment losses were caused by other assets and details are follow:

(In millions of won)

		Acquisition cost	Impairment losses		Book value	Method
Individual assets	2022		Accumulated			
Others	Golf membership	₩ 11,054	(891)	(4,419)	6,635	Net fair value
Development costs	Foreign GIS and another project	3,119	(3,119)	(3,119)	-	Value in use
	HX235 and 12 projects	7,838	(6,590)	(6,590)	1,248	Value in use
	21ton electronic control MCV and 5 sorts	1,294	(1,294)	(1,294)	-	Value in use
	Fluorescent coating for visualizing thickness of coating and another project	43	(43)	(43)	-	Value in use
	Electrification and batter automation technology and 4 projects	1,877	(1,156)	(1,156)	721	Value in use

Impairment losses are classified as other non-operating expenses.

(6) Borrowing costs capitalized

As of the year ended December 31, 2022, included in development costs is amount of ₩535 million that represents borrowing costs capitalized using a capitalization rate of 4.13%.

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19. Greenhouse Gas Emission Rights and Emission Liabilities

- A. The estimate of the number of free allocation allowances for each implementation year for the 3rd planning periods (2021~2025) as of December 31, 2022 is as follows:

(In thousand tCO₂-eq)

	<u>2021</u>	<u>2022</u>	<u>2023</u>	<u>2024</u>	<u>2025</u>	<u>Total</u>
Emission allowances allocated free of charge	7,349	10,150	9,748	9,936	9,886	47,069

- B. Changes in the amount of emission right for the years ended December 31, 2022 and 2021, are as follows:

(In thousand tCO₂-eq)

	<u>2022</u>	<u>2021</u>
Beginning balance and free of charge(*1)	10,150	7,349
Carry-over from prior year	103	61
Purchases(Sales)(*2)	-	191
Government submission(*2)	(10,551)	(7,498)
Borrowing(Carry-over)(*2)	-	(103)
Others	152	-
	<u>(146)</u>	<u>-</u>

(*1) Amount considering additions and cancellations from the initial free allocation.

(*2) Emission right is estimate as of December 31, 2022 and is subject to change depending on the government's accreditation results.

- (3) The book value of emission allowances allocated free of charge is "0"won.
(4) As of December 31, 2022, there are no emission allowances provided as guarantees.
(5) Changes in emission liabilities for the years ended December 31, 2022 and 2021, are as follows:

(In millions of won)

		<u>2022</u>	<u>2021</u>
Beginning balance	₩	9,933	1,768
Transfer		4,312	10,069
Reversal		(1,625)	(1,596)
Offset		(38,265)	(308)
Change in scope of consolidation		31,706	-
Ending balance	₩	<u>6,061</u>	<u>9,933</u>

HD HYUNDAI CO., LTD. AND SUBSIDIARIES
Notes to the Consolidated Financial Statements, Continued
For the years ended December 31, 2022 and 2021

20. Pledged Assets

Assets pledged as collateral for the Group's borrowings as of December 31, 2022 is summarized as follows:

(In millions of won and in thousands of foreign currency)

<u>Asset</u>	<u>Carrying amount</u>	<u>Collateralized amount</u>	<u>Type of borrowings</u>	<u>Borrowings amount</u>	<u>Secured creditor</u>		
Property, plant and equipment(*)	₩	6,072,438	3,441,629	Long-term	₩	2,674,072	Korea Development Bank and others
			USD 95,025				
			DEM 84,000	Long-term			
		INR 1,184,447	INR 1,030,000			USD 2,813	Shinhan Bank
		USD 5,977	USD 8,000	-		-	Bank of Hope
		EUR 15,476	EUR 9,025	Long-term	EUR 9,025	BNP Paribas Fortis Bank,	
		NOK 357,341	NOK 437,479	Long/short term	NOK 11,726	Belgium Innovation Norge and other	
		USD 70,890	USD 5,000	Short-term	USD 5,000	Wells Fargo & Company	
		INR 9,010,411	INR 1,720,000	Short-term	USD 12,711	ICICI Bank	
				Short-term	INR 345,439	Shinhan bank, ICICI Bank	
Stocks	₩	-	740,427	Acquisition financing	₩	250,000	KB Securities Co., Ltd Korea Investment & Securities Co, Ltd.
Ship		USD 15,803	USD 9,097	Long-term		USD 9,097	HIHD Co., Ltd.
	₩	6,072,438	4,182,056		₩	2,924,072	
		USD 92,670	USD 117,122			USD 29,621	
		EUR 15,476	EUR 9,025			EUR 9,025	
		NOK 357,341	NOK 437,479			NOK 11,726	
		-	DEM 84,000			-	
		INR 10,194,858	INR 2,750,000			INR 345,439	

(*) The Group has investment plans for the establishment of new process and the amounts agreed or to be agreed are ₩502,900 million as of December 31, 2022. Hyundai Chemical Co., Ltd., a subsidiary, takes out comprehensive property insurance (insured amount of ₩6,257 billion) related to the HPC and MX processes, and the right to receive the insurance proceeds are provided to main creditors, Korea Development Bank, as collateral (pledged amount of ₩2,844 billion). In addition, the right to receive insurance proceeds for the comprehensive property insurance on the tangible assets of the subsidiary, Hyundai Doosan Infracore Co., Ltd., are provided to the Korea Development Bank as collateral.

Meanwhile, Hyundai Construction Equipment Co., Ltd., a subsidiary, provides subordinated bonds (carrying amount: ₩3,000 million) as collaterals to Kodit 2020 the 6th Securitization specialty Co., Ltd. for issuing debentures. Hyundai Doosan Infracore Co., Ltd., a subsidiary, provides subordinated bonds (carrying amount: ₩15,255 million) as collaterals to Kodit 2020 the 15th, 18th Securitization specialty Co., Ltd. for issuing debentures.

In addition, in relation to the ₩250,000 million borrowings of Hyundai genuine, a subsidiary, the entire stock of Hyundai construction equipment Co., Ltd and a part of the stock of Hyundai Doosan Infracore Co., Ltd.(41,824,369 shares) are provided as collateral to KB securities Co., Ltd. The Group provides collateral in the form of vessels under construction, construction materials, and export receivables related to a VND 1,200,000 million borrowing agreement.

HD HYUNDAI CO., LTD. AND SUBSIDIARIES
Notes to the Consolidated Financial Statements, Continued
For the years ended December 31, 2022 and 2021

21. Short-term and Long-term Financial Liabilities

Short-term and long-term financial liabilities as of December 31, 2022 and 2021 are summarized as follows:

(In millions of won)

		2022		2021	
		Current	Non-current	Current	Non-current
Borrowings	₩	4,289,053	6,415,062	2,782,952	4,455,405
Debentures		1,996,409	5,022,218	1,471,101	4,955,316
Financial liabilities measured at FVTPL		62,699	5,293	8	-
Convertible preference shares		260,243	-	-	-
Long-term financial guarantee liabilities		-	2,455	-	3,799
	₩	<u>6,608,404</u>	<u>11,445,028</u>	<u>4,254,061</u>	<u>9,414,520</u>

22. Trade and Other Payables

Trade and other payables as of December 31, 2022 and 2021 are summarized as follows:

(In millions of won)

		2022		2021	
		Current	Non-current	Current	Non-current
Trade payables	₩	4,305,459	-	2,822,795	-
Other accounts payable		2,458,311	754,996	2,165,579	702,281
Accrued expense		1,090,773	7,981	477,662	9,419
Deposits received		10,006	36,576	3,775	40,978
	₩	<u>7,864,549</u>	<u>799,553</u>	<u>5,469,811</u>	<u>752,678</u>

23. Other Liabilities

Other liabilities as of December 31, 2022 and 2021 are summarized as follows:

(In millions of won)

		2022		2021	
		Current	Non-current	Current	Non-current
Unearned revenues	₩	11,622	-	7,213	-
Deferred revenues		28,291	-	29,147	-
Others		8,783	2,690	51,187	2,388
	₩	<u>48,696</u>	<u>2,690</u>	<u>87,547</u>	<u>2,388</u>

HD HYUNDAI CO., LTD. AND SUBSIDIARIES
Notes to the Consolidated Financial Statements, Continued
For the years ended December 31, 2022 and 2021

24. Borrowings and Debentures

(1) Short-term borrowings as of December 31, 2022 and 2021 are summarized as follows:

(In millions of won)

Type of borrowing	Lender	Annual Interest rate (%)		2022	2021
Domestic consolidated subsidiaries:					
General loan	The Korea Development Bank and others	2.66~5.96	₩	536,000	221,000
General loan in foreign currency	Suhyup Bank and others	2.30~2.50		26,220	17,783
Commercial paper (CP)	NH Investment & Securities Co., Ltd.	3.93		50,000	170,000
Invoice loan	HSBC and others	1.92~6.43		175,888	298,949
Import loan	HSBC and others	2.49~4.56		1,395	-
Usance L/C	KEB Hana Bank and others	0.20~5.73		468,835	115,774
Transferred receivables(*)	Woori Bank and others	-		6,872	22,687
				1,265,210	846,193
Overseas consolidated subsidiaries:					
Foreign currency loan	Korea Eximbank and others	1.16~SONIA+9		812,157	978,795
				2,077,367	1,824,988
Current portion of long-term borrowings				2,211,741	958,254
Current portion of discount in long-term borrowings				(55)	(290)
			₩	4,289,053	2,782,952

(*) As of December 31, 2022, Included is an amount of ₩6,872 million that were transferred but have not qualified for derecognition, which is collateralized by the Group's trade receivables(See Note 20).

HD HYUNDAI CO., LTD. AND SUBSIDIARIES
Notes to the Consolidated Financial Statements, Continued
For the years ended December 31, 2022 and 2021

24. Borrowings and Debentures, Continued

(2) Long-term borrowings as of December 31, 2022 and 2021 are summarized as follows:

(In millions of won)

Type of borrowing	Lender	Annual Interest rate (%)	2022	2021
Domestic consolidated subsidiaries:				
General loan(*1)	KEB Hana Bank and others	1.75~6.82	₩ 4,478,762	2,291,945
Sale-leaseback(*2)	Korea Asset Management Corporation	4.23	30,440	30,440
General loan in foreign currency	KEB Hana Bank	1.72~5.58	644,136	-
General fund for equipment(*3)	The Korea Development Bank and others	2.13~6.46	3,162,355	2,899,979
Commercial paper (CP)	Korea Investment & Securities Co, Ltd. and others	2.80~3.37	150,000	-
Loan for petroleum development project(*4)	Korea Energy Agency	0.75~3.75	10,184	-
			<u>8,475,877</u>	<u>5,222,364</u>
Overseas consolidated subsidiaries:				
Foreign currency loan	The Korea Development Bank and others	2.20~5.50	171,130	211,146
			<u>8,647,007</u>	<u>5,433,510</u>
Discount in long-term borrowings			(20,259)	(20,141)
Current portion of long-term borrowings			(2,211,741)	(958,254)
Current portion of discount in long-term borrowings			55	290
			<u>₩ 6,415,062</u>	<u>4,455,405</u>

(*1) The entire stock of Hyundai construction equipment Co., Ltd and a part of the stock of Hyundai Doosan Infracore Co., Ltd. are provided as collateral to KB securities Co., Ltd (See Note 20).

(*2) The asset was transferred by the sale-leaseback but since the conditions for the sale of the asset were not, the transfer price was recognized as borrowings.

(*3) The equipment and others are collateralized.

(*4) The consortium in which the Group participated decided to withdraw from the Yemen Block 4 development project. The amount borrowed from the Korea Energy Agency was presented by liquidity classification according to the original repayment plan. However, the repayment plan for the borrowed amount cannot be determined by year based on the results of the supervisory authority's reduction review in the future (See Note 46).

HD HYUNDAI CO., LTD. AND SUBSIDIARIES
Notes to the Consolidated Financial Statements, Continued
For the years ended December 31, 2022 and 2021

24. Borrowings and Debentures, Continued

(3) Debentures as of December 31, 2022 and 2021 are summarized as follows:

(In millions of won)

Description	Issue	Maturity	Annual interest rate (%)	2022	2021	Guarantee
HD Hyundai Co., Ltd.						
1 st -2	2015-03-03	2022-03-03	-	₩ -	70,000	Debenture
4 th -2	2019-04-11	2022-04-11	-	-	160,000	Debenture
5 th	2019-06-04	2024-06-04	3.25	150,000	150,000	Debenture
6 th	2020-06-24	2023-06-23	3.70	45,000	45,000	Debenture
7 th	2020-10-16	2023-10-16	2.81	80,000	80,000	Debenture
8 th -1	2021-10-28	2023-10-27	3.19	50,000	50,000	Debenture
8 th -2	2021-10-28	2024-10-28	3.63	170,000	170,000	Debenture
9 th -1	2022-03-02	2024-02-29	3.64	50,000	-	Debenture
9 th -2	2022-03-02	2025-02-28	4.11	150,000	-	Debenture
10 th	2022-08-02	2025-08-01	4.49	33,000	-	Debenture
Hyundai Oilbank Co., Ltd.						
115 th -3	2015-03-27	2022-03-27	-	-	140,000	Debenture
116 th -1	2017-07-07	2022-07-07	-	-	180,000	Debenture
116 th -2	2017-07-07	2024-07-07	2.85	100,000	100,000	Debenture
117 th	2018-01-26	2023-01-26	2.89	150,000	150,000	Debenture
118 th -2	2018-08-28	2023-08-28	2.44	90,000	90,000	Debenture
118 th -3	2018-08-28	2025-08-28	2.63	40,000	40,000	Debenture
119 th -1	2019-01-28	2024-01-26	2.14	120,000	120,000	Debenture
119 th -2	2019-01-28	2026-01-28	2.41	80,000	80,000	Debenture
120 th -1	2019-07-09	2024-07-09	1.66	60,000	60,000	Debenture
120 th -2	2019-07-09	2026-07-09	1.81	120,000	120,000	Debenture
120 th -3	2019-07-09	2029-07-09	2.14	120,000	120,000	Debenture
121 th -1	2019-10-14	2024-10-14	1.68	160,000	160,000	Debenture
121 th -2	2019-10-14	2026-10-14	1.88	100,000	100,000	Debenture
121 th -3	2019-10-14	2029-10-14	2.11	140,000	140,000	Debenture
122 nd -1	2020-02-26	2023-02-26	1.49	80,000	80,000	Debenture
122 nd -2	2020-02-26	2025-02-26	1.60	200,000	200,000	Debenture
122 nd -3	2020-02-26	2027-02-26	1.83	80,000	80,000	Debenture
122 nd -4	2020-02-26	2030-02-26	2.11	140,000	140,000	Debenture
Foreign Currency	2020-05-06	2023-05-08	Libor 6M+1.30%	126,730	118,550	Debenture
123 rd -1	2020-07-06	2023-07-06	1.66	190,000	190,000	Debenture
123 rd -2	2020-07-06	2025-07-06	1.88	50,000	50,000	Debenture
123 rd -3	2020-07-06	2030-07-06	2.43	60,000	60,000	Debenture
124 th -1	2020-10-16	2025-10-16	1.83	70,000	70,000	Debenture
124 th -2	2020-10-16	2030-10-16	2.46	30,000	30,000	Debenture
125 th -1	2021-01-28	2024-01-28	1.21	90,000	90,000	Debenture
125 th -2	2021-01-28	2026-01-28	1.62	150,000	150,000	Debenture
125 th -3	2021-01-28	2028-01-28	1.91	90,000	90,000	Debenture
125 th -4	2021-01-28	2031-01-28	2.38	70,000	70,000	Debenture

HD HYUNDAI CO., LTD. AND SUBSIDIARIES
Notes to the Consolidated Financial Statements, Continued
For the years ended December 31, 2022 and 2021

24. Borrowings and Debentures, Continued

(3) Debentures as of December 31, 2022 and 2021 are summarized as follows, continued:

(In millions of won)

Description	Issue	Maturity	Annual interest rate (%)		2022	2021	Guarantee
Hyundai Chemical Co., Ltd.							
1 st -1	2019-08-13	2024-08-13	2.48	₩	130,000	130,000	Debenture
1 st -2	2019-08-14	2024-08-13	2.48		20,000	20,000	Debenture
2 nd -1	2021-05-26	2024-05-26	1.84		70,000	70,000	Debenture
2 rd -2	2021-05-26	2026-05-26	2.61		130,000	130,000	Debenture
3 rd	2021-07-30	2026-07-30	2.73		100,000	100,000	Debenture
4 th -1	2022-01-27	2025-01-27	3.21		208,000	-	Debenture
4 th -2	2022-01-27	2027-01-27	3.67		40,000	-	Debenture
Hyundai electric & energy system Co., Ltd.							
4 th -1	2020-07-20	2022-07-20	-		-	30,000	Debenture
4 th -2	2020-07-20	2023-07-20	4.00		45,000	45,000	Debenture
5 th -1	2020-07-23	2023-07-23	3.61		50,000	50,000	Debenture
7 th	2021-10-18	2024-10-18	3.34		50,000	50,000	Debenture
Hyundai construction equipment Co., Ltd.							
3 th (*1)	2018-08-29	2023-08-29	3.97		30,000	30,000	Debenture
6 th	2019-07-04	2022-07-04	-		-	100,000	Debenture
7 th -1	2020-05-28	2022-05-27	-		-	50,000	Debenture
7 th -2(*2)	2020-05-28	2023-05-26	3.20		100,000	100,000	Debenture
8 th (*1)	2020-05-28	2023-05-28	2.41		65,000	65,000	Debenture
9 th (*1)	2020-06-25	2023-06-25	2.92		35,000	35,000	Debenture
10 th (*2)	2021-04-08	2024-04-08	2.34		50,000	50,000	Debenture
Hyundai Heavy Industries Co., Ltd.							
4 th -1	2021-03-05	2023-03-03	1.92		60,000	-	Debenture
4 th -2	2021-03-05	2024-03-05	2.50		240,000	-	Debenture
Floating rate bond	2021-04-01	2024-03-28	4.69		253,460	-	Secured
Fixed rate bond	2022-03-28	2027-03-28	3.18		380,190	-	Secured
Hyundai Samho Heavy Industries Co., Ltd.							
12 th -1	2021-01-25	2023-01-25	3.50		35,000	-	Debenture
12 th -2	2021-01-25	2023-07-25	3.75		105,000	-	Debenture
12 th -3	2021-01-25	2024-01-25	3.90		25,000	-	Debenture
13 th	2021-02-10	2023-08-10	3.75		15,000	-	Debenture
14 th	2021-02-10	2023-02-09	3.47		20,000	-	Debenture
15 th -1	2021-02-25	2023-02-24	3.50		81,000	-	Debenture
15 th -2	2021-02-25	2023-08-25	3.75		11,000	-	Debenture
15 th -3	2021-02-25	2024-02-23	3.90		30,000	-	Debenture
16 th -1	2021-07-08	2023-07-08	2.80		34,000	-	Debenture
16 th -2	2021-07-08	2024-07-08	3.32		66,000	-	Debenture
17 th	2022-01-10	2023-07-10	2.80		90,000	-	Debenture
18 th -2	2022-05-20	2023-11-20	3.90		15,000	-	Debenture
18 th -4	2022-05-20	2024-05-20	4.20		35,000	-	Debenture
1 st	2022-05-04	2024-05-06	4.85		25,000	-	Collateralized

HD HYUNDAI CO., LTD. AND SUBSIDIARIES
Notes to the Consolidated Financial Statements, Continued
For the years ended December 31, 2022 and 2021

24. Borrowings and Debentures, Continued

(3) Debentures as of December 31, 2022 and 2021 are summarized as follows, continued:

(In millions of won)

Description	Issue	Maturity	Annual interest rate (%)	2022	2021	Guarantee
Hyundai Doosan Infracore Co., Ltd.						
31 th	2017-08-01	2022-08-01	-	₩	-	99,999 Debenture
52 th	2020-02-13	2022-02-14	-	-	5,000	Debenture
63 th	2020-02-27	2022-02-25	-	-	10,000	Debenture
64 th	2020-06-08	2022-06-08	-	-	21,600	Debenture
65 th (*3)	2020-06-08	2023-06-08	2.87	745	745	Debenture
66 th	2020-07-10	2022-07-11	-	-	10,000	Debenture
68 th	2020-08-03	2022-08-03	-	-	283,500	Debenture
69 th (*4)	2020-08-03	2023-08-03	2.81	9,781	9,781	Debenture
70 th	2020-08-10	2022-08-10	-	-	10,000	Debenture
71 th	2020-10-27	2022-10-27	-	-	130,000	Debenture
72 th	2020-12-11	2022-12-09	-	-	150,000	Debenture
73 th	2021-02-03	2023-02-03	4.30	150,000	150,000	Debenture
74 th	2021-02-26	2023-02-24	4.10	20,000	20,000	Debenture
75 th	2021-03-12	2023-03-10	3.70	176,000	176,000	Debenture
76 th	2021-04-23	2023-04-21	3.60	20,000	20,000	Debenture
78 th	2021-05-04	2024-05-03	3.30	60,000	60,000	Debenture
79 th	2021-07-29	2024-07-29	3.50	80,000	80,000	Debenture
			3M			
FRN	2022-04-06	2025-04-03	compounded SOFR + 0.95(*6)	38,019	-	Secured
Hyundai Genuine Co., Ltd						
1 st (*5)	2021-08-19	2028-08-19	4.35	400,000	400,000	Debenture
HYUNDAI PLASPO CO., LTD.						
Convertible bond(*7)	2019-06-28	2024-06-28	1.00	1,500	-	Debenture
				7,034,425	6,435,175	
Discount on bonds				(9,096)	(12,432)	
Redemption premium on bonds				886	12,559	
Adjustment on bonds				(7,588)	(8,885)	
Current portion of bonds				(1,997,006)	(1,460,625)	
Current portion of discount on bonds				1,103	1,497	
Current portion of redemption premium on bonds				(886)	(12,559)	
Current portion of adjustment on bonds				380	586	
				<u>₩ 5,022,218</u>	<u>4,955,316</u>	

HD HYUNDAI CO., LTD. AND SUBSIDIARIES
Notes to the Consolidated Financial Statements, Continued
For the years ended December 31, 2022 and 2021

24. Borrowings and Debentures, Continued

(3) Debentures as of December 31, 2022 and 2021 are summarized as follows, continued:

(*1) In the contract regarding the acquisition of the bonds, the creditor may forfeit their right to the interest if specific circumstances stated in the agreement occur or if the obligations under the contract are violated. Additionally, as of the year ended December 31, 2022, short-term financial assets of ₩3,000 million are provided as collateral for the 8th and 9th series bonds (See Note 20).

(*2) According to the agreement, there are restrictions such as maintaining a debt ratio of 500% or less and limitations on the establishment of collateral rights until the obligation to pay the principal and interest of the bonds is fulfilled (based on the consolidated financial statements of Hyundai Construction Equipment Co., Ltd.). If the Group violates the obligation to submit a report on the management of the bonds, the Group may lose their right to the interest on the bonds until the obligation is fulfilled. In such a case, the Group must notify the "bondholders" and "bond management company" who are aware of the relevant facts that a bondholders' meeting is necessary, and the interest on the bonds will be forfeited according to the resolution of the bondholders' meeting.

(*3) Details of change and issuance conditions of convertible bonds as of December 31, 2022, are as follow:

Type	Date of issue	Maturity date	Coupon Rate(%)	YTM(%)	Exercisable period	Initial exercise price	Exercise price after adjustments	Issuing price
The 65 th Private convertible bonds	2020-06-08	2023-06-08	2.87	4.82	From one year after date of issue to one month before maturity	₩6,291 per share	₩5,536 per share	₩745 million

1) Early redemption clause

The early redemption right is exercisable as a whole or in part against the par value of convertible bond on June 8, 2022, at the interest payment date in two years after the date of issuance of bonds.

2) Maturity redemption

106.2537% of the remaining principal amount will be paid on June 8, 2023, at maturity date.

3) Calculation of the exercise price

The exercise price will be adjusted when there is an increase in paid-in capital, issuance of shares without consideration through issuance of shares at a price lower than the market price, stock dividends, or capitalization of reserves, before exercising the stock warrants or convertible bonds. The exercise price of stock warrants was adjusted to ₩5,536 from December 16, 2022.

HD HYUNDAI CO., LTD. AND SUBSIDIARIES
Notes to the Consolidated Financial Statements, Continued
For the years ended December 31, 2022 and 2021

24. Borrowings and Debentures, Continued

(3) Debentures as of December 31, 2022 and 2021 are summarized as follows, continued:

(*4) Details of change and issuance conditions of convertible bonds as of December 31, 2022, are as follow:

Type	Date of issue	Maturity date	Coupon Rate(%)	YTM(%)	Exercisable period	Initial exercise price	Exercise price after adjustments	Issuing price
The 69 th Private convertible bonds	2020-08-03	2023-08-03	2.81	4.96	From one year after date of issue to one month before maturity	₩7,421 per share	₩5,735 per share	₩9,781 million

1) Early redemption clause

The early redemption right is exercisable as a whole or in part against the par value of convertible bond on August 3, 2022, at the interest payment date in two years after the date of issuance of bonds.

2) Maturity redemption

106.9085% of the remaining principal amount will be paid on August 3, 2023, at maturity date.

3) Calculation of the exercise price

The exercise price will be adjusted when there is an increase in paid- in capital, issuance of shares without consideration through issuance of shares at a price lower than the market price, stock dividends, or capitalization of reserves, before exercising the stock warrants or convertible bonds. The exercise price of stock warrants was adjusted to ₩5,735 from August 3, 2022.

HD HYUNDAI CO., LTD. AND SUBSIDIARIES
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For the years ended December 31, 2022 and 2021

24. Borrowings and Debentures, Continued

(3) Debentures as of December 31, 2022 and 2021 are summarized as follows, continued:

(*5) Details of change and issuance conditions of convertible bonds as of December 31, 2022, are as follow:

Type	Date of issue	Maturity date	Coupon Rate(%)	YTM(%)	Exercisable period	Exercise price	Issuing price
The 1 st Private convertible bonds	2021-08-19	2028-08-19	4.35	4.35	From one year after date of issue to one month before maturity	₩498,850 per share	₩400,000 million

1) Early redemption clause

The early redemption right is exercisable as a whole or in part against the par value of convertible bond on five of six years after the date of issuance of bonds. In addition, from the date of one year after the date of issuance of bond to before the maturity date, bonds can be converted into 801,844 convertible preferred stock. If the holder of convertible preference shares does not exercise their conversion rights until the expiration date of the conversion period, the convertible preference shares are automatically converted into ordinary shares.

2) Maturity redemption

Principal amount will be paid on August 19, 2028, at maturity date.

3) Calculation of the exercise price

The exercise price will be adjusted when there is an increase in paid- in capital, issuance of shares without consideration through issuance of shares at a price lower than the market price, stock dividends, or capitalization of reserves, before exercising the stock warrants or convertible bonds.

(*6) To avoid the risk of cash flow fluctuations due to exchange rate fluctuations, the Group entered into a contract to pay a fixed interest rate (3.63%) in Korean won on future interest and principal payment dates.

(*7) The details of conditions of issuing unsecured convertible bonds are as follow:

Type	1 st unsecured convertible bond
Par value	₩1,500 million
Issue price	₩1,500 million
Payment date	2019-06-28
Maturity date	2024-06-28
Coupon rate	1.00%
YTM	Annual Compound 3%
Exercise price	₩10,500 (par ₩500)
Type and numbers of shares to be issued upon conversion	Ordinary shares of Hyundai plaspo Co., Ltd
Right to claim early repayment by bondholders	Possible
exercise price control conditions	If the corresponding amount of 70% of the unit price of the public offering falls below the conversion price of the convertible bond, the conversion price is adjusted to the amount corresponding to 70% of the unit price of the public offering.

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Notes to the Consolidated Financial Statements, Continued
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24. Borrowings and Debentures, Continued

(4) Convertible preferred stock

1) Details of convertible preferred stock subsidiaries issued as of December 31, 2022, are as follows:
(In millions of won)

Type	Issue date	Interest rate(%)	2022
Convertible preferred stock	2017-07-27	2.00	₩ 260,243

2) Details of conditions of issuing convertible preferred stock are as follows:

Type	1 st unsecured convertible bond
Issuer	Hyundai Samho Heavy Industries Co., Ltd.
Type of shares issued	Dividend preference convertible Shares with voting rights
Amount and numbers of shares issued	At the time of initial issuance : ₩400,000 million / 7,142,858 shares At the period ended: ₩260,243 million / 4,647,201 shares
Issue date	2017-07-27
Voting rights	One share has one voting right
Dividend rights	Cumulative, participating and preferred share with voting rights. Ratio of preferred dividend is 2.00% per year of principal of investment and method of dividend is cash dividend.
Conversion	
Conversion conditions (including conversion ratio changes)	(a) During the conversion claim period, investors in the convertible preferred stock may submit a conversion claim form to Hyundai Samho Heavy Industries Co., Ltd. to convert all or part of the stock to common stock of Hyundai Samho Heavy Industries Co., Ltd. at the conversion price. (b) The number of shares subject to conversion rights exercised will be calculated by multiplying the conversion ratio (par value per share of target stock / conversion price per share) by the total number of shares subject to the conversion. (c) The conversion price per share of common stock to be issued as a result of the conversion of shares is equal to the par value per share of the stock. However, if adjustments to the conversion price are necessary due to a merger, division, stock split or merger, reduction of capital, etc., the conversion price will be adjusted so that the holder of the convertible preferred stock can acquire common stock with equivalent value based on the number of common shares that the holder could acquire if the conversion rights has been exercised immediately prior to the merger, division, stock split or merger, reduction of capital, etc.
Type of shares to be issued upon conversion	Common share
Number of shares to be issued upon conversion	At the time of initial issuance : 7,142,858 shares At the period ended : 4,647,201 shares
Shareholder agreements and financial agreements, etc	Korea Shipbuilding & Offshore Engineering Co., Ltd., a subsidiary, entered into a shareholder agreement with investors in the stock, and the key terms of which are as follows: (a) Right to nominate a director Investors could designate one non-executive director of Hyundai Samho Heavy Industries Co., Ltd. (b) Granted right to purchase shares (put option) If certain conditions specified in the shareholder agreement, such as the obligation to pay dividends, are not met, investors may require Korea Shipbuilding & Offshore Engineering Co., Ltd. or a third party designated by Korea Shipbuilding & Offshore Engineering Co., Ltd. to purchase all of their shares.

HD HYUNDAI CO., LTD. AND SUBSIDIARIES
Notes to the Consolidated Financial Statements, Continued
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24. Borrowings and Debentures, Continued

(5) Aggregate maturities of the Group's borrowings and debentures as of December 31, 2022 and 2021 are summarized as follows:

(In millions of won)

		2022			
Periods		Borrowings	Debentures	Convertible preferred stock	Total
Less than 1 year	₩	4,289,108	1,997,006	260,243	6,546,357
1 ~ 5 years		5,515,051	3,987,419	-	9,502,470
More than 5 years		920,215	1,050,000	-	1,970,215
	₩	<u>10,724,374</u>	<u>7,034,425</u>	<u>260,243</u>	<u>18,019,042</u>

(In millions of won)

		2021		
Periods		Borrowings	Debentures	Total
Less than 1 year	₩	2,783,242	1,460,625	4,243,867
1 ~ 5 years		2,307,947	3,844,550	6,152,497
More than 5 years		2,167,309	1,130,000	3,297,309
	₩	<u>7,258,498</u>	<u>6,435,175</u>	<u>13,693,673</u>

HD HYUNDAI CO., LTD. AND SUBSIDIARIES
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24. Borrowings and Debentures, Continued

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

(In millions of won)

		2022				
		Borrowings	Debentures	Convertible preferred stock	Lease liabilities	Total
Beginning balance		₩ 7,238,356	6,426,417	-	1,515,627	15,180,400
Cash flows from Borrowing financing activities		22,708,783	977,027	-	-	23,685,810
	Repayment	(22,675,283)	(1,861,262)	-	(283,239)	(24,819,784)
Non-cash flows	Effects of changes in foreign exchange rates	55,539	34,084	-	139	89,762
	Amortization of discounts on Long-term borrowings	7,309	-	-	-	7,309
	Amortization of discounts on debentures	-	10,199	-	-	10,199
	Effects of changes in scope of consolidation	3,411,962	1,430,579	260,243	58,796	5,161,580
Others		(42,551)	1,583	-	516,431	475,463
Ending balance		₩ <u>10,704,115</u>	<u>7,018,627</u>	<u>260,243</u>	<u>1,807,754</u>	<u>19,790,739</u>

(In millions of won)

		2021		
		Borrowings	Debentures	Total
Beginning balance		₩ 5,048,428	4,483,558	9,531,986
Cash flows from Borrowing financing activities		12,571,419	1,421,952	13,993,371
	Repayment	(11,373,301)	(901,375)	(12,274,676)
Non-cash flows	Effects of changes in foreign exchange rates	94,128	(10,188)	83,940
	Amortization of discounts on Long-term borrowings	5,591	-	5,591
	Amortization of discounts on debentures	-	2,675	2,675
	Effects of changes in scope of consolidation	892,091	1,429,795	2,321,886
Ending balance		₩ <u>7,238,356</u>	<u>6,426,417</u>	<u>13,664,773</u>

HD HYUNDAI CO., LTD. AND SUBSIDIARIES
Notes to the Consolidated Financial Statements, Continued
For the years ended December 31, 2022 and 2021

25. Employee Benefits

(1) Recognized liabilities for defined benefit obligations as of December 31, 2022 and 2021 are as follows:

(In millions of won)

	<u>2022</u>	<u>2021</u>
Present value of defined benefit obligations	₩ 1,836,146	749,737
Fair value of plan assets(*)	<u>(1,763,905)</u>	<u>(705,784)</u>
	<u>₩ 72,241</u>	<u>43,953</u>

(*) As of December 31, 2022 and 2021, the excess payments of retirement pension of ₩605,134 million and ₩7,756 million are recognized as plan assets in other non-current assets. The fair value of plan assets including excess payments are ₩2,369,039 million and ₩713,540 million, respectively.

(2) Plan assets as of December 31, 2022 and 2021 are as follows:

(In millions of won)

	<u>2022</u>	<u>2021</u>
Retirement pension	₩ 2,367,577	712,913
Transfer to National Pension Fund	<u>1,462</u>	<u>627</u>
	<u>₩ 2,369,039</u>	<u>713,540</u>

(3) Expenses recognized in profit or loss for the years ended December 31, 2022 and 2021 are as follows:

(In millions of won)

	<u>2022</u>	<u>2021</u>
Current service costs	₩ 190,951	64,924
Past service costs	(8,042)	(1,212)
Interest expenses on obligations	49,913	12,555
Expected return on plan assets	(53,242)	(11,767)
Contribution	<u>4,138</u>	<u>1,125</u>
	<u>₩ 183,718</u>	<u>65,625</u>

For the years ended December 31, 2022 and 2021, the Group executed the voluntary retirement program. As a result, the retirement bonus was incurred amounting to ₩12,137 million and ₩7,474 million recognized in selling, general and administrative expenses.

HD HYUNDAI CO., LTD. AND SUBSIDIARIES
Notes to the Consolidated Financial Statements, Continued
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25. Employee Benefits, Continued

(4) Changes in the defined benefit obligations for the years ended December 31, 2022 and 2021 are as follows:

(In millions of won)

	2022	2021
Beginning balance	₩ 749,737	477,000
Current service costs	190,951	64,924
Past service cost and gains or losses on settlements	(8,042)	(1,212)
Interest expenses on obligations	49,913	12,555
Benefits paid	(331,502)	(65,619)
Transfers from related parties	22,152	14,598
Effect of movements in exchange rates	252	(91)
Actuarial gains and losses in other comprehensive income		
Demographic assumptions	4,519	485
Financial assumptions	(275,811)	(25,424)
Experience adjustments	140,607	27,147
Effects of changes in scope of consolidation	1,294,401	240,691
Others	(1,031)	4,683
Ending balance	₩ <u>1,836,146</u>	<u>749,737</u>

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

(In millions of won)

	2022	2021
Beginning balance	₩ 713,540	451,263
Benefits paid	(256,564)	(43,698)
Contributions paid into the plan	552,713	115,115
Expected return on plan assets	53,242	11,767
Actuarial losses in other comprehensive income	(18,829)	(6,094)
Effects of changes in scope of consolidation	1,320,554	193,649
Other	4,383	(8,462)
Ending balance	₩ <u>2,369,039</u>	<u>713,540</u>

The Group are reviewing the level of the fund each year and taking the policy to preserve fund in the event of a loss to the fund. The estimated amount of contributions paid into the plan in next year as of December 31, 2022, is ₩175,717 million.

(6) Expected payment date of the defined benefit obligations as of December 31, 2022 is as follows:

(In millions of won)	Within 1 year	1 ~ 2 years	2 ~ 5 years	5 ~ 10 years	More than 10 years	Total
Expected payment	₩ 86,043	220,181	433,122	828,747	4,637,692	6,205,785

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Notes to the Consolidated Financial Statements, Continued
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25. Employee Benefits, Continued

(7) Principal actuarial assumptions as of December 31, 2022 and 2021 are as follows:

<i>(In percent)</i>	<u>2022</u>	<u>2021</u>
Discount rate	4.20~5.41	1.30~3.03
Future salary growth rate	1.20~4.62	1.06~3.71
Future mortality (Males, at age 45)	0.18	0.20

(8) Weighted average durations of defined benefit obligations as of December 31, 2022 and 2021 are as follows:

<i>(In years)</i>	<u>2022</u>	<u>2021</u>
Weighted average durations	9.92	11.03

(9) Reasonably possible changes as of December 31, 2022 and 2021 to the relevant actuarial assumption would have affected the defined benefit obligation by the amounts shown below:

<i>(In millions of won)</i>		<u>2022</u>	
		<u>Increase</u>	<u>Decrease</u>
Discount rate (1% movement)	₩	(143,038)	165,739
Future salary growth (1% movement)		152,417	(134,319)

<i>(In millions of won)</i>		<u>2021</u>	
		<u>Increase</u>	<u>Decrease</u>
Discount rate (1% movement)	₩	(62,613)	73,853
Future salary growth (1% movement)		71,188	(61,468)

Through the operation of the defined benefit pension plan, the Group is exposed to actuarial risks such as longevity risk, currency risk, interest rate risk, and market (investment) risk.

HD HYUNDAI CO., LTD. AND SUBSIDIARIES
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26. Provisions

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

(In millions of won)

		2022					
		Provision for construction loss	Provision for product warranty	Provision for construction warranty	Provision for emissions	Other provision(*2,3)	Total
Beginning balance	₩	28,753	384,803	8,967	9,933	221,091	653,547
Additions		44,942	228,915	39,806	4,312	179,261	497,236
Reversals		(613,737)	(44,887)	(37,067)	(1,625)	(8,987)	(706,303)
Utilization		-	(188,772)	(66,860)	(38,265)	(20,162)	(314,059)
Others(*1)		64,541	-	-	-	-	64,541
Changes in scope of consolidation		874,566	84,854	538,379	31,706	694,335	2,223,840
Effect of movements in exchange rates		524	(932)	399	-	563	554
Ending balance	₩	<u>399,589</u>	<u>463,981</u>	<u>483,624</u>	<u>6,061</u>	<u>1,066,101</u>	<u>2,419,356</u>
Current	₩	399,545	287,031	181,696	6,061	1,045,617	1,919,950
Non-current		44	176,950	301,928	-	20,484	499,406

(*1) Refers to fluctuations in the amount recognized before recognition of impairment losses on assets on related assets (See Note 11).

(*2) Consists of provisions for litigation-related liabilities, and the provision for litigation-related liabilities was recognized by estimating the expected payment amount based on a Supreme Court ruling related to ordinary wages for the year ended December 31, 2022 (See Note 47).

(*3) Includes provisions calculated based on a prior notification of fines by the Ministry of Environment, and whether fines will be imposed and the amount at the end of the current period wasn't determined as of December 31, 2022. Meanwhile, the increase in related provisions was recognized as other non-operating expenses.

(In millions of won)

		2021					
		Provision for construction loss	Provision for product warranty	Provision for construction warranty	Provision for emissions	Other provision(*)	Total
Beginning balance	₩	32,088	202,657	9,338	1,768	48,770	294,621
Additions		2,011	152,033	545	10,069	176,956	341,614
Reversals		(5,390)	(62,844)	-	(1,596)	-	(69,830)
Utilization		-	(73,686)	(916)	(308)	(9,471)	(84,381)
Changes in scope of consolidation		-	158,330	-	-	4,571	162,901
Effect of movements in exchange rates		44	8,313	-	-	265	8,622
Ending balance	₩	<u>28,753</u>	<u>384,803</u>	<u>8,967</u>	<u>9,933</u>	<u>221,091</u>	<u>653,547</u>
Current	₩	28,476	279,696	2,569	9,933	188,900	509,574
Non-current		277	105,107	6,398	-	32,191	143,973

(*) As of December 31, 2021, regarding lawsuit pending as a defendant, it includes expected amounts to be paid to workers if bonuses and others that were previously excluded from the ordinary wage are included.

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27. Derivative Financial Instruments

The Group has entered into derivative instrument contracts with various banks to hedge the risk related to changes in foreign exchange rates, interest rate risk, crude oil prices and others. Derivatives are measured at fair value by using the forward exchange rate presented by contract counterparty and others. The evaluation details as of December 31, 2022, are as follows:

(1) The description of derivative instrument and hedge accounting

Hedge accounting	Type	Description
Fair value hedge	Foreign currency forward	1. Hedges exchange rate risk for contracts that meet the requirements of a firm contract in foreign currency supply contracts 2. Hedges exchange rate risk for foreign currency purchases
Cash flow hedge	Foreign currency forward	Hedges the variability in cash flows attributable to foreign currency exposure in respect of forecasted sales and purchases
	Currency swap	Hedges cash flow risk on exchange rate fluctuation of borrowings in foreign currency
	Interest rate swap	Hedges cash flow risk on interest rate fluctuation
	Product forward	Hedges cash flow risk on refinery margin fluctuation
	Commodity futures	Hedges cash flow risk on raw materials price fluctuation

(2) Details of the derivatives entered into by the Group as of December 31, 2022 is as follows:

(In millions of won and in thousands of foreign currency)

Description	Type	Currency		Contract amount	Weighted average exchange rate (won)	Average maturities	Number of contracts
		Sell	Buy				
Fair value hedge	Foreign currency forward	EUR	KRW	13,885	1,344.81	2023-02-15	4
		USD	KRW	20,684,963	1,221.47	2024-05-06	7,029
For trading	Foreign currency forward	KRW	USD	5,129	1,282.30	2023-01-31	1
		USD	KRW	404,614	1,301.08	2023-04-11	47
	Call option(*)	KRW	KRW	36,000	-	-	1
	Interest rate swap	KRW	KRW	100,000	-	2024-03-08	1
	Crude oil forward	USD	USD	473,227	-	2023-05-20	12
Cash flow hedge	Foreign currency forward	KRW	GBP	1,620	1,521.30	2023-06-29	2
		USD	GBP	9,190	1.23	2023-12-29	1
		KRW	USD	10,007	1,256.72	2023-03-18	3
		USD	EUR	2,758	0.94	2023-02-28	1
		KRW	JPY	34,294	9.74	2023-03-27	18
		EUR	KRW	161,187	1,384.93	2023-04-02	28
		USD	KRW	939,064	1,323.97	2023-05-07	163
	Currency swap	USD	KRW	21,250	1,177.59	2023-11-14	2
		KRW	EUR	105,001	1,346.26	2025-03-05	3
		KRW	USD	1,204,237	1,169.62	2024-10-05	12
Interest rate swap	KRW	KRW	40,000	-	2024-06-11	1	
Commodity futures	KRW	USD	8,559	-	2023-05-10	9	
Product forward	USD	USD	967,501	-	2023-05-22	98	

(*) The Group granted investors with a put option for the non-voting convertible shares of Hyundai Heavy Industries Power Systems Co., Ltd. that the Group holds (See Note 46).

※ Terms of settlement: Settlement or collecting total

※ The contract amount: Denominated in the selling currency

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27. Derivative Financial Instruments, Continued

(3) Carrying amount related to derivatives as of December 31, 2022 is as follows:

(In millions of won)

Description	Category	Derivatives			
		Assets		Liabilities	
		Current	Non-current	Current	Non-current
Fair value hedge	Foreign currency forward	₩ 128,518	324,974	549,852	294,238
Cash flow hedge	Foreign currency forward	66,117	-	3,896	-
	Foreign currency swap	49,558	66,901	-	2,469
	Interest rate swap	856	375	-	-
	Commodity futures	232	-	621	-
	Product forward	42,629	-	46,116	-
		159,392	67,276	50,633	2,469
		₩ 287,910	392,250	600,485	296,707

(In millions of won)

Description	Category	Financial instruments measured at FVTPL			
		Assets		Liabilities	
		Current	Non-current	Current	Non-current
For trading	Foreign currency forward	₩ 15,333	-	105	-
	Interest rate swap	-	-	-	2,366
	Crude oil forward	-	-	62,436	1,133
	Others	-	-	158	1,794
		₩ 15,333	-	62,699	5,293

(In millions of won)

Description	Category	Firm Commitment			
		Assets		Liabilities	
		Current	Non-current	Current	Non-current
Fair value hedge	Foreign currency forward	₩ 344,840	292,751	92,548	324,974

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27. Derivative Financial Instruments, Continued

(4) Gain and loss on valuation and transaction of derivatives for the year ended December 31, 2022 is as follows:

Description	Category	Revenue	Cost of sales	Finance income	Finance costs	Other non-operating income	Other non-operating expenses	Accumulated other comprehensive income (loss)
Fair value hedge	Foreign currency forward	₩ (705,886)	-	601,125	1,328,525	1,163,190	595,730	-
For trading	Foreign currency forward	-	-	170,599	310,042	-	-	-
	Interest rate swap	-	-	-	2,366	-	-	-
	Crude oil forward	-	-	-	64,529	-	-	-
	Others	-	-	3,411	-	-	-	-
		-	-	174,010	376,937	-	-	-
Cash flow hedge	Foreign currency forward	(127,396)	440	-	-	-	-	70,008
	Foreign currency swap	-	-	74,444	-	-	-	935
	Interest rate swap	-	-	-	-	-	-	1,279
	Commodity futures	-	-	-	-	-	-	(491)
	Product forward	-	-	-	-	-	-	3,036
		(127,396)	440	74,444	-	-	-	74,767
		₩ (833,282)	440	849,579	1,705,462	1,163,190	595,730	74,767

For the year ended December 31, 2022, the Group applies cash flow hedge accounting, for which the Group accounted the effective portion of the hedge amounting to ₩56,417 million, after netting off deferred tax effect of ₩18,350 million as gain (loss) on valuation of derivatives in accumulated other comprehensive income (loss). It consists of non-controlling interest portion of ₩30,653 million and controlling interest portion of ₩25,764 million.

The expected period of exposure to cash flow risk, where cash flow hedge accounting is applied, is approximately 51 months.

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28. Capital and Capital Surplus

(1) Capital

The number of shares that the controlling company is authorized to issue, the number of shares that the Group issued, and the par value as of December 31, 2022 is 800,000,000 shares, 78,993,085 shares, and 1,000. For the year ended December 31, 2021, the controlling company split shares, and the number of shares that the controlling company is authorized to issue, the number of shares that the controlling company issued, and the par value changed from 160,000,000 shares, 15,798,617 shares, ₩5,000 to 800,000,000 shares, 78,993,085 shares, ₩1,000 respectively.

(2) Capital surplus

Capital surplus is comprised of paid-in capital in excess of par value, capital surplus related to acquisition or disposal of interests in subsidiaries and investments in associates, and other capital surplus of the controlling company.

(i) Capital surplus as of December 31, 2022 and 2021 are as follows:

<i>(In millions of won)</i>	2022	2021
Paid-in-capital in excess of par value	₩ 3,090,454	3,090,454
Other capital surplus(*)	2,162,868	2,142,784
	<u>₩ 5,253,322</u>	<u>5,233,238</u>

(*) The change in other capital surplus from 2021 to 2022 is the amount resulted from capital transactions in the Group etc.

(ii) Changes in capital surplus for the years ended December 31, 2022 and 2021 are as follows:

<i>(In millions of won)</i>	2022	2021
Beginning balance	₩ 5,233,238	5,192,703
Paid-in capital increase of subsidiaries	-	3,056
Exercise of preemptive right of subsidiaries	-	23,296
Stock option of subsidiaries	118	10,373
Capital transactions in the Group	19,880	-
Others	86	3,810
Ending balance	<u>₩ 5,253,322</u>	<u>5,233,238</u>

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29. Hybrid Bonds

(1) Hybrid bonds classified as non-controlling interests as of December 31, 2022 and 2021 issued by Hyundai Oilbank Co., Ltd., a subsidiary, are as follows:

(In millions of won)

Description	Issue	Maturity	Annual interest rate(%)		2022	2021
2 nd Hybrid bond	2020-03-30	2050-03-30	3.50	₩	280,000	280,000
3 rd Hybrid bond	2020-09-24	2050-09-24	3.65		130,000	130,000
4 th Hybrid bond	2020-10-26	2050-10-26	3.65		20,000	20,000
					430,000	430,000
					(1,076)	(1,076)
				₩	428,924	428,924

(2) Terms and conditions of the hybrid bonds issued by Hyundai Oilbank Co., Ltd. as of December 31, 2022 are as follows:

(In millions of won)

	2 nd Hybrid bond	3 rd Hybrid bond	4 th Hybrid bond
Amount issued ₩	280,000	130,000	20,000
Maturity	30 years (At maturity, it can be extended in accordance with the Group's decision)		
Interest rate	Issue date ~ 2025-03-30: Fixed rate, 3.50%	Issue date ~ 2025-09-24: Fixed rate, 3.65%	Issue date ~ 2025-10-26: Fixed rate, 3.65%
	Re-calculated and applied every 5 years, 5-year treasury bond yield + annual 2.215% + annual 2.00% (Step-up clauses)	Re-calculated and applied every 5 years, 5-year treasury bond yield + annual 2.473% + annual 2.00% (Step-up clauses)	Re-calculated and applied every 5 years, 5-year treasury bond yield + annual 2.441% + annual 2.00% (Step-up clauses)
Interest payment condition	3 months deferred payment, selective payment postpone is possible		
Other	Depending on the Group's choice, the Group can redeem at the date of 5th anniversary after issuance and every interest payment thereafter.		

The Group has an unconditional option to extend the maturity of hybrid bonds at maturity. Also, payment of interest on the bonds can be postponed at the discretion of the Group. If the payment of interest is postponed, the Group cannot pay any dividend on common stock until the deferred interest is paid in full. The Group classifies hybrid bonds as equity because the Group holds unconditional rights to avoid the contractual obligation to deliver cash or other financial assets to the holder. In case of liquidation, the hybrid bonds are subordinated bonds which have priority over common stocks.

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30. Capital Adjustment

(1) Capital adjustment as of December 31, 2022 and 2021 are summarized as follows:

<i>(In millions of won)</i>	<u>2022</u>	<u>2021</u>
Treasury stock(*)	₩ 489,547	489,547
Change in equity of equity method investments	-	43,296
Others	410,733	405,600
	<u>₩ 900,280</u>	<u>938,443</u>

(*) As of December 31, 2022 and 2021, the fair value of the treasury stock held by the parent is ₩475,338 million and ₩447,034 million, respectively.

(2) The Group's treasury stock as of December 31, 2022 and 2021 are summarized as follows:

(In millions of won, except shares data)

	<u>2022</u>		<u>2021</u>	
	<u>Number of shares</u>	<u>Carrying amount</u>	<u>Number of shares</u>	<u>Carrying amount</u>
Treasury stock(*)	8,324,655	₩ 489,547	8,324,655	₩ 489,547

(*) These are the proportional shares of treasury stock that the controlling company acquired from Korea Shipbuilding & Offshore Engineering Co., Ltd. before the split, and the additional proportional shares acquired during 2017.

31. Accumulated Other Comprehensive Income

(1) Accumulated other comprehensive income as of December 31, 2022 and 2021 are summarized as follows:

<i>(In millions of won)</i>	<u>2022</u>	<u>2021</u>
Changes in fair value of financial Instruments measured at FVOCI	₩ (1,463)	13,366
Effective portion of changes in fair value of cash flow hedges	23,687	(2,077)
Exchange differences on translating foreign operations	34,384	42,888
Changes in equity of equity method investments	9,394	(139,273)
Revaluation of property, plant and equipment	330,070	325,569
	<u>₩ 396,072</u>	<u>240,473</u>

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31. Accumulated Other Comprehensive Income, Continued

(2) Other comprehensive income (loss) for the years ended December 31, 2022 and 2021 are as follows:

(In millions of won)

		2022		
		Other comprehensive income (loss)	Owners of the Company	Non-controlling interests
Changes in fair value of financial instruments measured at FVOCI	₩	(42,547)	(14,830)	(27,717)
Effective portion of changes in fair value of cash flows hedges		56,417	25,764	30,653
Exchange differences on translating foreign operations		(18,937)	(8,504)	(10,433)
Change in equity of equity method investments		6,551	4,766	1,785
Actuarial gains and losses		82,434	33,647	48,787
Revaluation of property, plant and equipment		13,828	6,628	7,200
Retained earnings of equity method investments		10,000	9,964	36
	₩	<u>107,746</u>	<u>57,435</u>	<u>50,311</u>

(In millions of won)

		2021		
		Other comprehensive income (loss)	Owners of the Company	Non-controlling interests
Changes in fair value of financial instruments measured at FVOCI	₩	3,837	2,793	1,044
Effective portion of changes in fair value of cash flows hedges		(10,864)	(3,699)	(7,165)
Exchange differences on translating foreign operations		152,134	44,885	107,249
Change in equity of equity method investments		(28,376)	(28,449)	73
Actuarial gains and losses		(6,749)	(2,345)	(4,404)
Revaluation of property, plant and equipment		404	(1,775)	2,179
Retained earnings of equity method investments		(8,213)	(8,213)	-
	₩	<u>102,173</u>	<u>3,197</u>	<u>98,976</u>

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32. Retained Earnings

(1) Retained earnings as of December 31, 2022 and 2021 are summarized as follows:

<i>(In millions of won)</i>		<u>2022</u>	<u>2021</u>
Voluntary reserves	₩	641,625	358,881
Unappropriated retained earnings		2,013,074	1,327,646
	₩	<u>2,654,699</u>	<u>1,686,527</u>

(2) Changes in retained earnings for the years ended December 31, 2022 and 2021 are as follows:

<i>(In millions of won)</i>		<u>2022</u>	<u>2021</u>
Beginning balance	₩	1,686,527	2,212,956
Profit for the year		2,234,955	150,576
Less: non-controlling interests		(826,332)	(297,700)
Retained earnings of equity method investments		9,964	(8,213)
Actuarial gains and losses		33,647	(2,345)
Reclassification of revaluation surplus		2,127	22,248
Reclassification of gain/loss on valuation of financial instruments at FVOCI		(1)	-
Dividend		(325,075)	(392,210)
Capital transactions in the Group		(16)	-
Changes in scope of consolidation		(168,254)	-
Others		7,157	1,215
Ending balance	₩	<u>2,654,699</u>	<u>1,686,527</u>

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33. Acquisition and Disposal of Subsidiary

(1) Business combinations

1) General information

① Acquisition of Korea Shipbuilding & Offshore Engineering Co., Ltd.

For the year ended December 31, 2022, the Group acquired a 4.1% share in Korea Shipbuilding & Offshore Engineering Co., Ltd. from companies such as KCC Corporation, with the aim of securing stable management control over its subsidiary and strengthening its responsibility-based management.

② Acquisition of Hyundai Plaspo Co., Ltd.

For the year ended December 31, 2022, the Group acquired a 61.84% stake in Hyundai Plaspo Co., Ltd., with the aim of expanding its business opportunities in renewable energy through the addition of product lineups such as power conversion devices.

③ Acquisition of Tianjin Hyundai Doosan Engine Co., Ltd.

For the year ended December 31, 2022, the Group acquired additionally a 50% share in Tianjin Hyundai Doosan Engine Co., Ltd. from companies such as Arbos Technology Group Co., Ltd.

2) Consideration Transferred

The consideration transferred at the date of acquisition is as follows:

(In millions of won)

	Korea Shipbuilding & Offshore Engineering Co., Ltd.	Hyundai Plaspo Co., Ltd.	Tianjin Hyundai Doosan Engine Co., Ltd.
Cash	₩ 251,455	22,865	5,017
Fair value of holding shares before acquisition	1,899,538	-	5,017
	<u>₩ 2,150,993</u>	<u>22,865</u>	<u>10,034</u>

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33. Acquisition and Disposal of Subsidiary and Business, Continued

(1) Business combinations, continued

3) Identifiable assets acquired and liabilities assumed

Detail of fair value of the identifiable assets acquired and liabilities assumed at the acquisition date are as follows:

(In millions of won)

	Korea Shipbuilding & Offshore Engineering Co., Ltd.	Hyundai Plaspo Co., Ltd.	Tianjin Hyundai Doosan Engine Co., Ltd.
Assets			
Cash and cash equivalent	₩ 3,011,195	8,536	932
Short-term / long-term financial assets	2,105,077	-	-
Trade receivable and other receivable	1,076,134	4,626	1,933
Contract assets	5,939,988	170	-
Inventories	1,666,721	2,782	5,099
Property, Plant and Equipment	9,956,935	10,105	15,199
Right of use assets	45,313	1,541	18,110
Intangible assets	1,400,537	5,445	-
Investment property	252,949	-	-
Firm commitment assets	458,601	-	-
Derivatives assets	61,586	-	-
Accrued tax assets	1,515,890	772	-
Other assets	1,469,464	4,306	296
	₩ <u>28,960,390</u>	<u>38,283</u>	<u>41,569</u>
Liabilities			
Short-term / long-term financial liabilities	₩ 5,099,568	8,151	-
Trade payable and other payable	3,007,114	3,163	13,366
Contract liabilities	4,261,371	311	-
Firm commitment liabilities	6,966	-	-
Derivative liabilities	611,639	425	-
Lease liabilities	39,708	920	18,169
Provisions	2,223,590	250	-
Accrued tax liabilities	441,779	1,575	-
Other liabilities	92,624	4	-
	<u>15,784,359</u>	<u>14,799</u>	<u>31,535</u>
Net assets	₩ <u><u>13,176,031</u></u>	<u><u>23,484</u></u>	<u><u>10,034</u></u>

HD HYUNDAI CO., LTD. AND SUBSIDIARIES
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33. Acquisition and Disposal of Subsidiary and Business, Continued

(1) Business combinations, continued

4) Bargain purchase gain and goodwill from business combinations are as follow:

(In millions of won)

	Korea Shipbuilding & Offshore Engineering Co., Ltd.	Hyundai Plaspo Co., Ltd.	Tianjin Hyundai Doosan Engine Co., Ltd.(*)
Total consideration transferred ₩	2,150,993	22,865	10,034
Fair values of identifiable net assets	13,176,031	23,484	10,034
Non-controlling interest	9,524,552	9,183	-
Bargain purchase gain	1,500,486	-	-
Goodwill	-	8,564	-

(*) The fair values of the assets acquired and liabilities assumed by the Group at the date of the business combination are provisional amounts and are expected to be finalized within one year from the acquisition date. Additional assets and liabilities may be recognized during the measurement period, which could result in changes to the bargain purchase gain and the goodwill.

5) Valuation techniques used to measure fair value of acquired significant assets are as follows:

Acquisition assets	Valuation technique
Property, plant and equipment	Market approach or cost approach: fair value was determined considering the price generated from market transactions of similar available assets or the replacement cost taking appropriate depreciation into account.
Intangible assets	Multi-period excess profit approach or royalty deduction approach: Multi-period excess profit approach was determined in consideration of the present value of net cash flows expected to arise from customer relationships. Royalty deduction approach was determined in present value of royalty payments reduced by possession of technology.

(2) Liquidation

For the year ended December 31, 2022, liquidation procedures of subsidiaries such as Weihai Hyundai Wind Power Technology Co., Ltd., Komax Corporation, Hyundai West Africa Limited, and Hyundai Heavy Industries Free Zone Enterprise completed and they are excluded from subsidiaries.

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33. Acquisition and Disposal of Subsidiary and Business, Continued

(3) Merger

Changzhou Hyundai Hydraulic Machinery Co., Ltd., a subsidiary, merged MingHe (Changzhou) Machinery Co., Ltd., a subsidiary, by absorption as of March 1, 2022, merger date. Hyundai Samho Heavy Industries Co., Ltd., a subsidiary, merged Hyundai Infra Solutions Co., Ltd., a subsidiary, by absorption as of October 1, 2022, merger date. The Group applied the business combination under the common control to account for by carrying-amount method. Details of merger are as follows:

1) General information of merger

	Surviving corporation	Merged corporation
Company name	Changzhou Hyundai Hydraulic Machinery Co., Ltd.	MingHe (Changzhou) Machinery Co., Ltd.
Main Business	Production and sale of hydraulic cylinder	Manufacture and sale of machinery equipment for construction

Changzhou Hyundai Hydraulic Machinery Co., Ltd., a surviving company, holds 100% shares of MingHe (Changzhou) Machinery Co., Ltd., a merged company, and the merger ratio was calculated as 1:0 because the merger proceeds without issuing new shares.

	Surviving corporation	Merged corporation
Company name	Hyundai Samho Heavy Industries Co., Ltd.	Hyundai Infra Solutions Co., Ltd.
Main Business	Shipbuilding Industry	Loading/Unloading Equipment Manufacturing

Hyundai Samho Heavy Industries Co., Ltd., a surviving company, holds 100% shares of Hyundai Infra Solutions Co., Ltd., a merged company, and the merger ratio was calculated as 1:0 because the merger proceeds without issuing new shares.

2) Accounting for merger

Assets and liabilities of MingHe (Changzhou) Machinery Co., Ltd. and Hyundai Infra Solutions Co., Ltd. are acquired through merger under the common control and there is no change in control before and after the merger.

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34. Change in shares of subsidiaries

For the year ended December 31, 2022 the effect of change in shares of subsidiaries on the equity attributable to owners of the controlling company are as follows:

(1) Share increases

(In millions of won)

Subsidiary	Ownership before transaction (%)	Ownership after transaction (%)	Reason	Change of non-controlling interest	Change of controlling interest
Hyundai Financial Leasing Co., Ltd.	46.76	88.02	Increase percentage of ownership including indirect ownership through acquisition of shares of Korea Shipbuilding & Offshore Engineering Co., Ltd.	₩ (110,108)	13,092

(2) Share decreases

(In millions of won)

Subsidiary	Ownership before transaction (%)	Ownership after transaction (%)	Reason	Change of non-controlling interest	Change of controlling interest
Hyundai Heavy Industries Co., Ltd.	79.72	78.02	Korea Shipbuilding & Offshore Engineering Co., Ltd. disposed of shares of Hyundai Heavy Industries Co., Ltd.	₩ 138,048	23,488

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35. Revenue

(1) Revenue streams

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

<i>(In millions of won)</i>	<u>2022</u>	<u>2021</u>
Revenue from contracts with customers	₩ 61,790,323	28,666,569
Equity Income on Investments	(107,373)	(298,896)
Gain (loss) on valuation of hedging accounting	(833,282)	(14,002)
	<u>₩ 60,849,668</u>	<u>28,353,671</u>

(2) Disaggregation of revenue

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

<i>(In millions of won)</i>	<u>2022</u>	<u>2021</u>
Main products:		
Oil refining	₩ 49,155,655	30,585,745
Shipbuilding and offshore	17,643,093	-
Electrical electronics	2,540,746	1,972,599
Construction machinery	12,633,853	6,186,178
Ship service	1,596,008	1,262,449
Others	214,819	213,386
Consolidation adjustments(*)	(21,993,851)	(11,553,788)
	<u>61,790,323</u>	<u>28,666,569</u>
Region:		
Republic of Korea	25,826,963	15,744,003
North America	2,690,970	1,155,813
Asia	19,957,938	9,112,682
Europe	9,011,898	1,332,722
Others	4,302,554	1,321,349
	<u>61,790,323</u>	<u>28,666,569</u>
Revenue recognition period:		
Recognized when the goods are delivered	47,171,678	28,125,381
Recognized over time as services are provided	14,618,645	541,188
	<u>61,790,323</u>	<u>28,666,569</u>
Contract period:		
Short-term contract (within one year)	46,767,316	27,830,150
Long-term contract (more than one year)	15,023,007	836,419
	<u>₩ 61,790,323</u>	<u>28,666,569</u>

(*) The consolidation adjustments are the amount of intra-group transactions and others.

There is no single external customer whose revenue amounts more than 10% of the Group for the years ended December 31, 2022 and 2021.

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35. Revenue, Continued

(3) As of December 31, 2022, the information about significant construction contracts is as follows:

(In millions of won)

	Contract	Contract date	Contract due	Progress	Contract asset		Trade receivable	
					Total	Allowance for doubtful accounts	Total	Allowance for doubtful accounts
Shipbuilding and offshore	NASR 2	2014.07.08				(*)		

(*) As there are contractual confidentiality obligations and the clients disagree with disclosing this information, the Group omits the related disclosures after reporting it to audit committee. However, the date of contracts of NASR 2 are disclosed in securities registration statement, business report, investment prospectus, or important management matters, the Group has disclosed the related information.

(4) Contract balances

Receivables, contract assets and contract liabilities from contracts with customers as of December 31, 2022 and 2021 are as follows:

(In millions of won)

	₩	2022		2021	
		Current	Non-current	Current	Non-current
Trade receivables		3,778,605	225,465	2,981,772	9,726
Contract assets		6,647,001	-	228,673	-
Contract liabilities		8,211,693	108,862	662,268	82,258

(5) Performance obligations and revenue recognition policies

'Shipbuilding and offshore sector' is added to the Group's performance obligations and revenue recognition policies after incorporation of Korea Shipbuilding & Offshore Engineering Co., Ltd. (See Note 4(23)).

(6) Construction contracts

1) Changes in outstanding contracts for the year ended December 31, 2022 is as follows:

(In millions of won)

		2022
Beginning balance(*1)	₩	161,054
Change in scope of consolidation		42,395,017
New contracts		28,882,046
Recognized as revenue		(15,042,179)
Ending balance(*2)	₩	56,395,938

(*1) The beginning balance includes the impact from translation of the contract balance denominated in foreign currency to Korean Won using on the appropriate exchange rate.

(*2) The balance of contract related to joint operation (FDH JV) is not included.

In connection with the construction contract, the Group has provided certain amounts of deposits or letters to financial institutions for various guarantees (e.g. bid bond, performance bond, refund guarantee, maintenance bond, etc).

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35. Revenue, Continued

(6) Construction contracts, continued

1) Changes in outstanding contracts for the year ended December 31, 2022 is as follows, continued

Periods when the ending balance is expected to be recognized as revenues are as follows:

<i>(In millions of won)</i>		<u>2023</u>	<u>2024</u>	<u>After 2025</u>	<u>Total</u>
Expected amount	₩	21,304,390	20,374,026	14,717,522	56,395,938

2) Accumulated profit and loss of construction in progress as of December 31, 2022 is as follows:

(In millions of won)

		<u>2022</u>					
		<u>Accumulated revenue of construction</u>	<u>Accumulated cost of construction</u>	<u>Accumulated profit (loss) of construction</u>	<u>Receivables on construction contracts (*1)</u>		<u>Provisions for construction loss</u>
					<u>Billed receivables</u>	<u>Contracts assets</u>	
Shipbuilding and offshore(*2) ₩	17,350,793	18,085,893	(735,100)	178,431	6,435,206	6,902,460	332,970
Electrical electronics	268,715	307,699	(38,984)	14,223	4,557	7,143	7,122
Ship service	80,763	74,108	6,655	-	9,244	24,947	44
Others	8,734	8,026	708	-	-	-	-
₩	<u>17,709,005</u>	<u>18,475,726</u>	<u>(766,721)</u>	<u>192,654</u>	<u>6,449,007</u>	<u>6,934,550</u>	<u>340,136</u>

(*1) As of December 31, 2022, allowance for receivables on billed receivables and contract assets amounted to ₩2,356 million and ₩14,290 million, respectively. The balances of receivables on construction contracts are net of allowance for receivables. Among the receivables on construction contracts, the amount of retentions according to the contract terms is ₩113,793 million.

(*2) The accumulated revenue and cost of construction occurred before business combination is included. The accumulated revenue and cost of construction related to joint operation (FDH JV) is not included.

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Notes to the Consolidated Financial Statements, Continued
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35. Revenue, Continued

- (6) Construction contracts, continued
- 3) The effect of changes in estimated total contract costs
- (i) Effect of changes in estimated total contract costs

For the year ended December 31, 2022, due to the factors causing the change in estimated total contract costs, the estimated total contract costs for contracts in progress have changed. Details of change in profits or loss for the current year and the future period and the impact on contract assets and contract liabilities are as follows:

(In millions of won)

	Changes in total contract revenue(*1)	Changes in total estimated contract costs(*1)	Effect on profit (loss) of contract(*1)			Changes in contract assets	Changes in contract liabilities
			Current year	Future period	Total		
Shipbuilding and offshore(*2)	₩ 2,855,220	1,879,480	50,677	925,063	975,740	(4,734)	18,346
Ship service	2,292	6,538	(3,319)	(927)	(4,246)	(1,168)	(2,151)
Electrical electronics	1,891	4,800	(2,380)	(529)	(2,909)	(2,793)	579
	₩ <u>2,859,403</u>	<u>1,890,818</u>	<u>44,978</u>	<u>923,607</u>	<u>968,585</u>	<u>(8,695)</u>	<u>16,774</u>

(*1) Changes in entire contract revenue (including foreign currency fluctuation) are reflected because it is unable to distinguish total contract revenue changed directly by changes in total contract costs.

(*2) The accumulated revenue and cost of contract related to joint operation (FDH JV) is not included.

Effect on profit or loss for the current period and future period is calculated based on the total contract costs and total contract revenue estimated on the basis of situations generated in the current period. These estimations could be changed by variation of actual situations in the future.

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35. Revenue, Continued

(6) Construction contracts, continued

3) The effect of changes in estimated total contract costs, continued

(ii) Sensitivity analysis based on changes in the estimated total contract costs

The amount of contract assets and contract liabilities affected by the rate of progress which is determined by accumulated cost incurred divided by estimated total contract costs. Estimated total contract costs are calculated based on estimation on the materials cost, labour cost and construction period, and has a variance risk related to the fluctuation of exchange rate, changes in steel price, changes in production hours, changes in field installation cost, etc.

The Group has entered into foreign currency forward contracts to hedge the risk related to exchange rate fluctuation for reducing the short-term price risk and hedged the risk related to changes in steel price in short period of time by entering steel purchase agreement by periods.

The risk and uncertainty related to production hours have been managed by a department which is responsible for managing production hours. The impacts on profit or loss of current period and future periods, contract assets and contract liabilities in case production hour changes 10% are as follows.

The impacts on profit or loss of current period and future periods, contract assets and contract liabilities in case field installation cost changes 10% are as follows:

(In millions of won)

	Effect on profit or loss this year		Effect on profit or loss in the future		Changes in contract assets		Changes in contract liabilities	
	10%	10%	10%	10%	10%	10%	10%	10%
	increase	decrease	increase	decrease	increase	decrease	increase	decrease
Shipbuilding and offshore(*)	₩ (226,408)	157,432	(641,240)	744,184	(67,868)	69,179	16,634	(17,127)
Electrical electronics	(1,578)	1,853	(771)	496	(217)	391	809	(698)

(*) The accumulated revenue and cost of contract related to joint operation (FDH JV) is not included.

(7) Cost to fulfill a contract recognized as an asset

The Group pays commission fees on the contract, which is the incremental costs of obtaining a contract that it would not have incurred if the contract had not been entered into in accordance with *K-IFRS No. 1115*. Commission fees that are expected to be recovered from the customers are recognized as costs to fulfill contract assets and amortized to reflect the progress of the construction.

(In millions of won)

	2022
Beginning balance	₩ -
Change in scope of consolidation	162,247
Increase	145,375
Amortization(*)	(104,946)
Reversal (impairment loss)	56,302
Ending balance	₩ 258,978

(*) It is amortized to the same way that the involved goods or services are transferred to the customer.

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36. Selling, General and Administrative Expenses

Selling, general and administrative expenses for the years ended December 31, 2022 and 2021 are as follows:

<i>(In millions of won)</i>	<u>2022</u>	<u>2021</u>
Salaries	₩ 518,509	271,022
Bonus	146,694	69,477
Post-employment benefit costs	50,739	22,664
Employee welfare	151,803	66,209
Depreciation	123,794	77,631
Right-of-use assets depreciation	113,017	85,554
Bad debt expenses	(87,603)	20,456
Ordinary development costs	309,940	153,144
Advertising	67,358	63,449
Printing	5,160	2,108
Power cost	1,441	1,967
Warranty expenses	154,563	127,196
Insurance	21,937	11,443
Office supplies expenses	4,181	2,462
Supply expenses	7,398	3,517
Utility expenses	7,599	937
Repairs	16,444	10,919
Travel	34,586	12,127
Research	31,901	18,341
Training	9,925	2,403
Service charges	195,918	140,639
Transportation	209,279	135,179
Rent	34,902	22,969
IT service fee	15,504	5,903
Entertainment	11,083	6,012
Taxes and dues	37,102	23,460
Service contract expenses	239,106	138,728
Automobile maintenance	10,659	4,917
Sales commissions	81,388	48,800
Others	55,235	31,153
	₩ <u>2,579,562</u>	<u>1,580,786</u>

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37. Operating Segments

The Group has six reportable segments, as described below, which are its strategic business units, and After Korea Shipbuilding & Offshore Engineering Co., Ltd is reclassified from an associate to a subsidiary in February 2022, Shipbuilding and offshore segment is added in comparison to the year ended December 31, 2021.

- (i) Shipbuilding and offshore: Shipbuilding, Industrial Plant, Engine, Solar power and others
- (ii) Oil refining: Oil refining business
- (iii) Electrical electronics: Manufacturing and sale of transformers, low and medium voltage circuit breakers, switchgears, power electronics and control systems and wind turbine systems
- (iv) Construction equipment: Manufacturing and sale of construction equipment and wheel loaders
- (v) Ship maintenance service: Engineering service and engine A/S
- (vi) Others: Manufacturing of industrial and LCD robots, investment and others

Information about these reportable segments are as follows:

(1) The financial performance of each segment

(In millions of won)

	2022				
	Revenue	Inter-segment revenue	Operating profit (loss)	Profit (loss)	Depreciation (*2)
Shipbuilding and offshore	₩ 16,945,467	(2,191,303)	118,963	307,701	357,476
Oil refining	49,155,655	(14,857,885)	2,784,579	1,578,055	791,612
Electrical electronics	2,540,746	(590,850)	144,702	170,622	44,835
Construction equipment	12,508,919	(4,018,798)	536,536	323,064	235,727
Ship maintenance service	1,596,008	(344,233)	161,066	119,290	7,392
Others	548,213	(442,271)	313,500	206,964	11,906
Consolidation adjustments(*1)	<u>(22,445,340)</u>	<u>22,445,340</u>	<u>(672,338)</u>	<u>(470,741)</u>	<u>132,760</u>
	<u>₩ 60,849,668</u>	<u>-</u>	<u>3,387,008</u>	<u>2,234,955</u>	<u>1,581,708</u>

(*1) Consolidation adjustments are made by eliminating intra-group transactions and unrealized profits and losses, and valuations of joint venture and investments in associates using the equity method.

(*2) Depreciation consists of depreciation of property, plant and equipment and right-of-use asset, and amortization.

(In millions of won)

	2021				
	Revenue	Inter-segment revenue	Operating profit (loss)	Profit (loss)	Depreciation (*2)
Oil refining	₩ 30,585,745	(10,236,855)	1,091,447	831,611	664,318
Electrical electronics	1,970,422	(177,435)	13,470	(30,828)	42,815
Construction equipment	6,174,353	(945,007)	215,151	81,579	132,758
Ship maintenance service	1,262,449	(175,453)	120,331	92,225	5,412
Others	458,673	(563,221)	212,634	470,145	12,236
Consolidation adjustments(*1)	<u>(12,097,971)</u>	<u>12,097,971</u>	<u>(616,445)</u>	<u>(1,294,156)</u>	<u>44,027</u>
	<u>₩ 28,353,671</u>	<u>-</u>	<u>1,036,588</u>	<u>150,576</u>	<u>901,566</u>

(*1) Consolidation adjustments are made by eliminating intra-group transactions and unrealized profits and losses, and valuations of joint venture and investments in associates using the equity method.

(*2) Depreciation consists of depreciation of property, plant and equipment and right-of-use asset, and amortization.

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37. Operating Segments, Continued

(2) The assets (liabilities) of each segment

(In millions of won)

		2022	
		Assets	Liabilities
Shipbuilding and offshore	₩	39,554,055	19,023,016
Oil refining		22,387,360	14,198,908
Electrical electronics		2,834,953	1,843,685
Construction equipment		10,133,250	5,946,551
Ship maintenance service		692,186	450,726
Others		9,177,808	3,265,074
Consolidation adjustments(*)		(19,208,751)	(2,420,763)
	₩	<u>65,570,861</u>	<u>42,307,197</u>

(*) Consolidation adjustments are made by eliminating intra-group transactions and unrealized profits and losses, and valuations of joint venture and investments in associates using the equity method.

(In millions of won)

		2021	
		Assets	Liabilities
Oil refining	₩	20,806,900	13,708,459
Electrical electronics		2,487,760	1,698,746
Construction equipment		12,966,270	7,597,787
Ship maintenance service		531,306	343,322
Others		8,630,584	2,627,087
Consolidation adjustments(*)		(9,644,172)	(2,048,816)
	₩	<u>35,778,648</u>	<u>23,926,585</u>

(*) Consolidation adjustments are made by eliminating intra-group transactions and unrealized profits and losses, and valuations of joint venture and investments in associates using the equity method.

(3) Geographical information

(In millions of won)

		2022	
		Revenue	Inter-segment revenue
Korea	₩	69,587,915	(16,864,329)
North America		1,859,253	(657,987)
Asia		9,979,990	(4,300,872)
Europe		1,516,816	(517,428)
Others		351,034	(104,724)
Consolidation adjustments(*)		(22,445,340)	22,445,340
	₩	<u>60,849,668</u>	<u>-</u>

(*) Consolidation adjustments are made by eliminating intra-group transactions and unrealized profits and losses.

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37. Operating Segments, Continued

(3) Geographical information, continued

(In millions of won)

		2021	
		Revenue	Inter-segment revenue
Korea	₩	23,467,081	(8,035,976)
North America		1,428,938	(273,125)
Asia		12,666,232	(3,553,550)
Europe		1,568,042	(235,320)
Others		1,321,349	-
Consolidation adjustments(*)		(12,097,971)	12,097,971
	₩	<u>28,353,671</u>	<u>-</u>

(*) Consolidation adjustments are made by eliminating intra-group transactions and unrealized profits and losses, and valuations of joint venture and investments in associates using the equity method.

(4) Non-current assets

(In millions of won)

		2022	2021
Korea	₩	26,183,866	14,666,582
North America		160,748	138,019
Asia		543,912	285,784
Europe		70,620	75,819
Others		129,590	46,685
		<u>27,088,736</u>	<u>15,212,889</u>
Consolidation adjustments(*1)		3,470,095	2,588,541
(*2)	₩	<u>30,558,831</u>	<u>17,801,430</u>

(*1) Consolidation adjustments are made by eliminating intra-group transactions and unrealized profits and losses.

(*2) Total non-current assets consist of investment property, property, plant and equipment, intangible assets and right-of-use assets.

38. Nature of Expenses

The classification of expenses by nature for the years ended December 31, 2022 and 2021 are as follows:

(In millions of won)

		2022	2021
Changes in inventories	₩	(1,767,228)	(1,855,523)
Purchase of inventories		46,842,828	24,343,686
Depreciation		1,049,957	549,632
Right-of-use depreciation		328,052	258,170
Amortization		203,699	93,764
Labor cost		3,028,239	1,042,164
Other expenses		7,777,113	2,885,190
	₩	<u>57,462,660</u>	<u>27,317,083</u>

Total expenses consist of cost of sales and selling, general and administrative expenses.

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39. Finance Income and Finance Costs

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

(In millions of won)

	<u>2022</u>	<u>2021</u>
Finance income:		
Interest income	₩ 171,947	33,227
Dividend income	5,072	1,007
Gain on valuation of financial instruments measured at FVTPL	21,396	487
Gain on disposal of financial instruments assets measured at FVTPL	157,543	70,754
Gain on foreign currency translation	163,783	46,677
Gain on foreign currency transactions	2,557,364	314,709
Gain on valuation of derivatives	573,743	1,758
Gain on transaction of derivatives	102,094	-
Others	52,939	-
	<u>₩ 3,805,881</u>	<u>468,619</u>
Finance costs:		
Interest expense	₩ 640,541	293,369
Loss on valuation of financial instruments measured at FVTPL	73,892	1,039
Loss on disposal of financial instruments measured at FVTPL	314,268	90,814
Loss on foreign currency translation	627,957	94,507
Loss on foreign currency transactions	2,066,872	369,682
Loss on valuation of derivatives	664,701	-
Loss on transaction of derivatives	663,824	646
Loss on disposal of account receivable	22,262	3,261
Others	39,345	116,088
	<u>₩ 5,113,662</u>	<u>969,406</u>

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40. Other Non-operating Income and Other Non-operating Expenses

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

(In millions of won)

	2022	2021
Other non-operating income:		
Gain on disposal of non-current assets held for ₩ sale	14,488	64,703
Gain on disposal of investments in associates	3,043	-
Gain on disposal of investment property	14	2,209
Gain on disposal of property, plant and equipment	18,535	12,083
Gain on disposal of right-of-use assets	7,937	23,489
Gain on disposal of intangible assets	269	308
Gain on evaluation of firm commitment	1,163,190	-
Gain on disposal of other investment assets	6,769	938
Reversal of impairment loss on investment property	-	96
Reversal of other allowance doubtful accounts	4,466	5,273
Bargain purchase gain	1,500,486	-
Others	287,975	21,866
₩	<u>3,007,172</u>	<u>130,965</u>
Other non-operating expenses:		
Service charges	₩ 18,183	7,035
Loss on disposal of investments in associates	1,117,922	-
Loss on disposal of property, plant and equipment	25,421	6,652
Loss on disposal of right-of-use assets	6,762	27,720
Impairment loss on investment property	-	1,311
Impairment loss on property, plant and equipment	8,287	3,189
Loss on disposal of intangible assets	856	66
Impairment loss on intangible assets	16,401	18,810
Other bad debt expenses	5,242	5,628
Donation	29,042	17,162
Loss on evaluation of firm commitment	595,730	-
Impairment loss on other assets	23,540	-
Others	279,235	62,684
₩	<u>2,126,621</u>	<u>150,257</u>

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41. Income Tax Expense (Benefit)

(1) The components of income tax expense (benefit) for the years ended December 31, 2022 and 2021 are as follows:

<i>(In millions of won)</i>	<u>2022</u>	<u>2021(*)</u>
Current tax expense	₩ 727,953	408,205
Adjustment for prior periods	(60,333)	414
Origination and reversal of temporary differences	31,058	10,249
Income tax recognized in other comprehensive income	(24,213)	(109,787)
Others	(13,016)	5,516
	<u>₩ 661,449</u>	<u>314,597</u>

(*) As a result of revisions in *K-IFRS No. 1016*, temporary differences for the year ended December 31, 2021 is restated (See Note 3).

(2) Income tax recognized directly in other comprehensive income for the years ended December 31, 2022 and 2021 are as follows:

<i>(In millions of won)</i>	<u>2022</u>	<u>2021</u>
Gains on valuation of derivatives	₩ (16,059)	3,440
Exchange differences on translating foreign operations	35	535
Change in equity of equity method investments	(15,678)	1
Actuarial gains and losses	(26,562)	3,061
Revaluation of property, plant and equipment	14,616	(945)
Loss on valuation of financial instruments measured at FVOCI	12,278	(1,303)
Others	7,157	(114,576)
Income tax recognized directly in other comprehensive loss	<u>₩ (24,213)</u>	<u>(109,787)</u>

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41. Income Tax Expense (Benefit), Continued

(3) Reconciliation of effective tax rate for the years ended December 31, 2022 and 2021 are as follows:

<i>(In millions of won)</i>	<u>2022</u>	<u>2021(*)</u>
Profit (loss) before income tax	₩ 2,896,405	465,173
Income tax using each component's statutory tax rate	846,892	167,985
Adjustment for:		
- Tax effect of non-deductible expenses	69,572	9,474
- Tax effect of non-taxable income	(39,431)	(25,644)
- Tax credits	(23,501)	(1,677)
- Temporary differences of deferred tax not recognized	14,872	118,444
- Tax effect of tax rate change	(28,707)	6,093
- Others	(178,248)	39,922
Income tax expense (benefit)	₩ <u>661,449</u>	<u>314,597</u>
Effective tax rate	22.84%	67.63%

(*) As a result of revisions in *K-IFRS No. 1016*, profit (loss) before income tax and Income tax expense (benefit) for the year ended December 31, 2021 is restated (*See Note 3*).

(4) Deferred tax expenses by origination and reversal of deferred tax assets and liabilities and temporary differences for the years ended December 31, 2022 and 2021 are as follows:

<i>(In millions of won)</i>	<u>2022</u>	<u>2021</u>
Deferred tax assets (liabilities) at the end of the period	₩ 901,886	(146,634)
Deferred tax assets (liabilities) at the beginning of the period	(146,634)	(55,709)
Exchange differences on translating foreign operations	-	14,497
Others	<u>1,079,578</u>	<u>(95,173)</u>
Deferred tax effects by origination and reversal of temporary differences	₩ <u>31,058</u>	<u>10,249</u>

(5) As of December 31, 2022, the tax effects of temporary difference were calculated using the enacted statutory tax rate for the fiscal period when the temporary differences are expected to be reversed.

(6) The Group sets off a deferred tax asset against a deferred tax liability only if it relates to income taxes levied by the same taxation authority and has a legally enforceable right to set off current tax assets against current tax liabilities.

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41. Income Tax Expense (Benefit), Continued

(7) Deferred tax assets (liabilities) recovery and payment periods are as follows:

(In millions of won)

		<u>2022</u>	<u>2021(*)</u>
Deferred tax assets (liabilities) payment due in 12 months	₩	450,369	189,148
Deferred tax assets (liabilities) payment due after 12 months		451,517	(335,782)
	₩	<u>901,886</u>	<u>(146,634)</u>

(*) As a result of revisions in K-IFRS No. 1016, Deferred tax assets (liabilities) recovery due in 12 months and Deferred tax assets (liabilities) recovery due after 12 months for the year ended December 31, 2021 is restated (See Note 3).

(8) Changes in deferred tax assets (liabilities) for the years ended December 31, 2022 and 2021 are as follows:

(In millions of won)

		<u>2022</u>		
		<u>Beginning balance</u>	<u>Change</u>	<u>Ending balance</u>
Trade and other receivables	₩	110,421	283,079	393,500
Asset revaluation		(476,616)	(541,467)	(1,018,083)
Property, plant and equipment		70,828	(51,096)	19,732
Derivatives		4,128	(12,813)	(8,685)
Accrued expenses		14,230	32,869	47,099
Provisions		115,394	178,396	293,790
Financial assets measured at FVOCI		878	132	1,010
Others		(237,263)	137,390	(99,873)
		<u>(398,000)</u>	<u>26,490</u>	<u>(371,510)</u>
Tax losses carried forward		226,263	1,005,010	1,231,273
Tax incentives carried forward		25,103	17,020	42,123
	₩	<u>(146,634)</u>	<u>1,048,520</u>	<u>901,886</u>

(In millions of won)

		<u>2021</u>		
		<u>Beginning balance</u>	<u>Change</u>	<u>Ending balance(*)</u>
Trade and other receivables	₩	54,931	55,490	110,421
Asset revaluation		(336,080)	(140,536)	(476,616)
Property, plant and equipment		40,977	29,851	70,828
Derivatives		3,107	1,021	4,128
Accrued expenses		6,775	7,455	14,230
Provisions		44,319	71,075	115,394
Financial assets measured at FVOCI		48	830	878
Others		(157,201)	(80,062)	(237,263)
		<u>(343,124)</u>	<u>(54,876)</u>	<u>(398,000)</u>
Tax losses carried forward		274,150	(47,887)	226,263
Tax incentives carried forward		13,265	11,838	25,103
	₩	<u>(55,709)</u>	<u>(90,925)</u>	<u>(146,634)</u>

(*)As a result of revisions in K-IFRS No. 1016, the change of deferred tax assets (liabilities) for the year ended December 31, 2021 is restated (See Note 3).

(9) Since it is probable that future taxable profit will be available against which the unused tax losses can be utilized, the Group recognized the related deferred tax assets.

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41. Income Tax Expense (Benefit), Continued

(10) Expiration date of unrecognized tax loss as of December 31, 2022 is as follows:

(In millions of won)

	2022
2029	₩ 750,743
After 2030	455,456
Extinction period inexistent	3,351
	<u>₩ 1,209,550</u>

42. Earnings (loss) per Share

(1) Basic earnings (loss) per share for the years ended December 31, 2022 and 2021 are as follows:

(In won, except share data)

	2022	2021
Income (loss) for the year, attributable to the owner of the Company	₩ 1,408,623,309,943	(147,123,719,213)
Weighted average number of ordinary shares outstanding (In share)(*)	70,668,430	70,668,430
Earnings (loss) per share	<u>₩ 19,933</u>	<u>(2,082)</u>

(*) Weighted average number of ordinary shares

(In shares)

	2022		
	Number of shares outstanding	Weighted average	Weighted average number of shares outstanding
Beginning balance	70,668,430	365/365	70,668,430
Weighted average number of ordinary shares outstanding			<u>70,668,430</u>

(In shares)

	2021		
	Number of shares outstanding	Weighted average	Weighted average number of shares outstanding
Beginning balance	70,668,430	365/365	70,668,430
Weighted average number of ordinary shares outstanding			<u>70,668,430</u>

(2) As the Group has no dilutive securities for the years ended December 31, 2022 and 2021, diluted earnings per share have not been calculated.

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43. Cash Generated from Operations

(1) Cash generated from operations for the years ended December 31, 2022 and 2021 are as follows:

(In millions of won)

	<u>2022</u>	<u>2021</u>
Profit for the year	₩ 2,234,955	150,576
Adjustments for:		
Post-employment benefit costs	179,581	64,500
Depreciation	1,044,425	549,096
Investment property depreciation	5,532	538
Right-of-use assets depreciation	328,052	258,170
Amortization	203,699	93,764
Bad debt expenses	(87,603)	20,456
Finance income	(989,462)	(153,910)
Finance costs	2,072,493	600,264
Share of profit of equity accounted investees (revenue)	107,373	298,896
Other non-operating income	(2,830,526)	(110,610)
Other non-operating expenses	1,955,390	65,592
Share of profit of equity accounted investees	63,374	51,337
Income tax expense (benefit)	661,449	314,597
Finance income (revenue)	(53,852)	(31,333)
Finance costs (cost of sale)	27,580	15,262
Changes in assets and liabilities:		
Trade receivables	(79,937)	(644,247)
Other receivables	(516,388)	(66,103)
Contract assets	(646,480)	(5,291)
Inventories	(1,767,228)	(1,855,523)
Firm Commitment assets	799,026	-
Derivatives	(360,644)	(21,763)
Other current assets	(480,495)	23,601
Long-term trade receivables	12,511	866
Long-term other receivables	(3,810)	(458)
Other non-current assets	(161,473)	92
Trade payables	(406,348)	284,170
Other payables	(235,358)	579,074
Long-term other payables	(6,381)	(8,375)
Contract liabilities	3,254,739	67,100
Other current liabilities	48,969	(2,670)
Other non-current liabilities	(5,104)	547
Benefits paid	(328,867)	(65,619)
Succession of benefits	22,152	14,598
Plan assets	(296,149)	(71,302)
Provisions	(680,804)	168,395
	<u>₩ 849,436</u>	<u>433,711</u>

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43. Cash Generated from Operations, Continued

(2) Significant transactions that do not involve cash inflows and outflows operations for the years ended December 31, 2022 and 2021 are as follows:

<i>(In millions of won)</i>	<u>2022</u>	<u>2021</u>
Reclassification of construction-in-progress	₩ 5,051,852	457,248
Trade payable of plant, property and equipment acquisition	59,182	67,187
Reclassification of current portion of bond and borrowings	3,592,558	1,595,958
Recognition of right-of-use assets and lease liabilities	468,648	252,270
Reclassification of an associate to a subsidiary	3,713,038	-
Claims for stock purchase	-	35,668

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44. Categories of Financial Instruments and Income and Costs by Categories

(1) Categories of financial instruments as of December 31, 2022 and 2021 are summarized as follows:
(In millions of won)

	Carrying amounts				Fair values
	Fair value –hedging instruments	Financial instruments measured at FVTPL	Financial instruments measured at FVOCI	Financial instruments measured at amortized cost	
Assets carried at fair value:					
Financial instruments(*)	₩ -	292,183	241,690	-	533,873
Derivative assets	680,160	-	-	-	680,160
Trade and other receivables	-	-	25,949	-	25,949
	680,160	292,183	267,639	-	1,239,982
Assets carried at amortized cost:					
Cash and cash equivalents	-	-	-	3,994,768	3,994,768
Financial instruments	-	-	-	1,368,382	1,368,382
Trade and other receivables	-	-	-	6,571,901	6,571,901
Contract assets	-	-	-	6,647,001	6,647,001
	-	-	-	18,582,052	18,582,052
	680,160	292,183	267,639	18,582,052	19,822,034
Financial assets total					
Liabilities carried at fair value:					
Financial liabilities	-	67,991	-	-	67,991
Trade and other payables	-	198,260	-	-	198,260
Derivative liabilities	897,192	-	-	-	897,192
	897,192	266,251	-	-	1,163,443
Liabilities carried at amortized cost:					
Borrowings	-	-	-	10,704,115	10,704,115
Debentures	-	-	-	7,018,627	7,018,627
Trade and other payables	-	-	-	8,465,842	8,465,842
Lease liabilities	-	-	-	1,807,754	1,807,754
Convertible preferred stock	-	-	-	260,243	260,243
	-	-	-	28,256,581	28,256,581
	897,192	266,251	-	28,256,581	29,420,024
Financial liabilities total	₩ 897,192	266,251	-	28,256,581	1,163,443

(*) The financial instruments measured at acquisition price as they are not reliably measured at fair value amount to ₩95,127 million.

HD HYUNDAI CO., LTD. AND SUBSIDIARIES
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For the years ended December 31, 2022 and 2021

44. Categories of Financial Instruments and Income and Costs by Categories, Continued

(1) Categories of financial instruments as of December 31, 2022 and 2021 are summarized as follows, continued:
(In millions of won)

	Carrying amounts				Fair values
	Fair value – hedging instruments	Financial instruments measured at FVTPL	Financial instruments measured at FVOCI	Financial instruments measured at amortized cost	
Assets carried at fair value:					
Financial instruments(*)	₩ -	75,147	57,669	-	132,816
Derivative assets	39,392	120	-	-	39,512
Trade and other receivables	-	-	20,405	-	20,405
	39,392	75,267	78,074	-	192,733
Assets carried at amortized cost:					
Cash and cash equivalents	-	-	-	2,137,064	2,137,064
Financial instruments	-	-	-	281,453	281,453
Trade and other receivables	-	-	-	5,115,177	5,115,177
	-	-	-	7,533,694	7,533,694
Financial assets total	39,392	75,267	78,074	7,533,694	7,726,427
Liabilities carried at fair value:					
Financial liabilities	-	8	-	-	8
Trade and other payables	-	249,592	-	-	249,592
Derivative liabilities	56,386	-	-	-	56,386
	56,386	249,600	-	-	305,986
Liabilities carried at amortized cost:					
Borrowings	-	-	-	7,238,356	7,238,356
Debentures	-	-	-	6,426,417	6,426,417
Trade and other payables	-	-	-	5,972,898	5,972,898
Lease liabilities	-	-	-	1,515,627	1,515,627
	-	-	-	21,153,298	21,153,298
Financial liabilities total	₩ 56,386	249,600	-	21,153,298	21,459,284

(*) The financial instruments measured at acquisition price as they are not reliably measured at fair value amount to ₩64,418 million.

The Group did not present fair value for financial assets and financial liabilities whose carrying amount is deemed to be a reasonable approximation of fair value.

HD HYUNDAI CO., LTD. AND SUBSIDIARIES
Notes to the Consolidated Financial Statements, Continued
For the years ended December 31, 2022 and 2021

44. Categories of Financial Instruments and Income and Costs by Categories, Continued

(2) Financial instruments income and costs by categories for the years ended December 31, 2022 and 2021 are as follows:

(In millions of won)

	2022				Total
	Fair value – hedging instruments	Financial instruments measured at FVTPL	Financial instruments measured at FVOCI	Financial assets at amortized cost	
Selling, general and administrative expenses					
Reversal of allowance doubtful accounts	₩ -	-	-	87,603	87,603
Finance income					
Interest income	-	2,351	-	169,596	171,947
Dividend income	-	1,415	3,657	-	5,072
Gain on valuation of financial instruments measured at FVTPL	-	21,396	-	-	21,396
Gain on disposal of financial instruments measured at FVTPL	-	157,543	-	-	157,543
Gain on foreign currency translation	-	-	-	163,783	163,783
Gain on foreign currency transactions	-	-	-	2,557,364	2,557,364
Gain on valuation of derivatives	573,743	-	-	-	573,743
Gain on transaction of derivatives	102,094	-	-	-	102,094
Gain on redemption of debentures	-	-	-	27	27
Others	-	51,333	-	1,580	52,913
Finance cost					
Interest expense	-	-	-	(640,541)	(640,541)
Loss on valuation of financial instruments	-	(73,892)	-	-	(73,892)
Loss on disposal of financial instruments	-	(314,268)	-	-	(314,268)
Loss on foreign currency translation	-	-	-	(627,957)	(627,957)
Loss on foreign currency transaction	-	-	-	(2,066,872)	(2,066,872)
Loss on valuation of derivatives	(664,701)	-	-	-	(664,701)
Loss on transaction of derivatives	(663,824)	-	-	-	(663,824)
Loss on disposal of accounts receivables	-	-	-	(22,262)	(22,262)
Others	-	(38,247)	-	(1,098)	(39,345)
Other non- operating income (loss)					
Reversal of other allowance doubtful accounts	-	-	-	4,466	4,466
Other bad debt expenses	-	-	-	(5,242)	(5,242)
Other comprehensive income (loss)					
Gain(loss) on valuation of derivative	56,417	-	-	-	56,417
Losses on valuation of financial instruments measured at FVOCI	-	-	(42,547)	-	(42,547)
₩	(596,271)	(192,369)	(38,890)	(379,553)	(1,207,083)

HD HYUNDAI CO., LTD. AND SUBSIDIARIES
Notes to the Consolidated Financial Statements, Continued
For the years ended December 31, 2022 and 2021

44. Categories of Financial Instruments and Income and Costs by Categories, Continued

(2) Financial instruments income and costs by categories for the years ended December 31, 2022 and 2021 are as follows, continued:

(In millions of won)

	2021				
	Fair value – hedging instruments	Financial instruments measured at FVTPL	Financial instruments measured at FVOCI	Financial assets at amortized cost	Total
Selling, general and administrative expenses					
Bad debt expense	₩ -	-	-	(20,456)	(20,456)
Finance income					
Interest income	-	-	-	33,227	33,227
Dividend income	-	323	684	-	1,007
Gain on valuation of financial instruments measured at FVTPL	-	487	-	-	487
Gain on disposal of financial instruments measured at FVTPL	-	70,754	-	-	70,754
Gain on foreign currency translation	-	-	-	46,677	46,677
Gain on foreign currency transactions	-	-	-	314,709	314,709
Gain on valuation of derivatives	1,758	-	-	-	1,758
Finance cost					
Interest expense	(775)	-	-	(292,594)	(293,369)
Loss on valuation of financial instruments	-	(1,039)	-	-	(1,039)
Loss on disposal of financial instruments	-	(91,448)	-	-	(91,448)
Loss on foreign currency translation	-	-	-	(94,507)	(94,507)
Loss on foreign currency transaction	-	-	-	(369,682)	(369,682)
Loss on transaction of derivatives	(11)	-	-	-	(11)
Others	-	(115,262)	-	(4,088)	(119,350)
Other non- operating income (loss)					
Reversal of other allowance doubtful accounts	-	-	-	5,273	5,273
Other bad debt expenses	-	-	-	(5,628)	(5,628)
Other comprehensive income (loss)					
Gain (loss) on valuation of derivative	(10,864)	-	-	-	(10,864)
Losses on valuation of financial instruments measured at FVOCI	-	-	3,837	-	3,837
	₩ (9,892)	(136,185)	4,521	(387,069)	(528,625)

HD HYUNDAI CO., LTD. AND SUBSIDIARIES
Notes to the Consolidated Financial Statements, Continued
For the years ended December 31, 2022 and 2021

45. Financial Instruments

- (1) Credit risk
(i) Exposure to credit risk

The carrying amount of financial assets and contract assets represents the maximum credit exposure. The maximum exposure to credit risk as of December 31, 2022 and 2021 are as follows:

<i>(In millions of won)</i>	<u>2022</u>	<u>2021</u>
Cash and cash equivalents(*)	₩ 3,988,532	2,133,189
Fair value –hedging instruments	680,160	39,512
Financial instruments measured at FVTPL	292,183	75,147
Financial instruments measured at FVOCI	241,690	57,669
Financial instruments	1,368,382	281,453
Trade receivables and other receivables	6,597,850	5,135,582
Contract asset	6,647,001	228,673
	<u>₩ 19,815,798</u>	<u>7,951,225</u>

(*) Cash in hand were excluded.

The maximum exposure to credit risk for financial guarantees contracts is ₩215,229 million as of December 31, 2022 (See Notes 46).

The maximum exposure to credit risk for financial assets at amortized cost (including contract asset) at the reporting date by geographic region are as follows:

<i>(In millions of won)</i>	<u>2022</u>	<u>2021</u>
Korea	₩ 4,854,113	2,851,227
North America	832,582	303,503
Asia	3,942,165	1,926,462
Europe	4,316,856	396,069
Others	641,568	168,448
	<u>₩ 14,587,284</u>	<u>5,645,709</u>

- (ii) Impairment loss

The aging of financial assets at amortized cost (including contract asset) and the related allowance for impairment as of December 31, 2022 and 2021 are as follows:

<i>(In millions of won)</i>	<u>2022</u>		<u>2021</u>	
	<u>Gross</u>	<u>Impairment</u>	<u>Gross</u>	<u>Impairment</u>
Not past due	₩ 13,910,087	(241,918)	4,888,154	(9,407)
Past due up to 6 months	599,246	(15,355)	514,892	(16,419)
Past due 6~12 months	201,783	(21,057)	116,224	(13,071)
Past due 1~3 years	376,208	(269,181)	322,352	(206,570)
More than 3 years	1,310,696	(1,263,225)	359,537	(309,983)
	<u>₩ 16,398,020</u>	<u>(1,810,736)</u>	<u>6,201,159</u>	<u>(555,450)</u>

HD HYUNDAI CO., LTD. AND SUBSIDIARIES
Notes to the Consolidated Financial Statements, Continued
For the years ended December 31, 2022 and 2021

45. Financial Instruments, Continued

(1) Credit Risk, continued

(ii) Impairment loss, continued

The movement in the allowance for impairment in respect of financial assets at amortized cost (including contract asset) for the years ended December 31, 2022 and 2021 are as follows:

<i>(In millions of won)</i>	2022	2021
Beginning balance	₩ 555,450	332,510
Bad debt expenses (reversal of allowance accounts)	(87,603)	(23,613)
Write-offs	(9,453)	(16,267)
Effects of changes in scope of consolidation and other	1,352,342	262,820
Ending balance	₩ 1,810,736	555,450

The allowance accounts in respect of financial assets at amortized cost (including contract asset) are used to record impairment losses unless the Group is satisfied that all collection measures have been exhausted.

At that point, the amounts are considered irrecoverable and are written off against the financial asset directly.

For the years ended December 31, 2022 and 2021 impairment losses and impairment reversals that occur in financial assets at amortized cost (including contract asset) recorded as other non-operating income are as follows:

<i>(In millions of won)</i>	2022	2021
Other bad debt expense	₩ 5,242	5,628
Reversal of other allowance doubtful accounts	(4,466)	(5,273)
	₩ 776	355

HD HYUNDAI CO., LTD. AND SUBSIDIARIES
Notes to the Consolidated Financial Statements, Continued
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45. Financial Instruments, Continued

(2) Liquidity risk

- (i) The contractual maturities of financial liabilities, including estimated interest payments and excluding the impact of netting agreements for the years ended December 31, 2022 and 2021 are summarized as follows:

(In millions of won)

	2022					
	Carrying amount	Contractual cash flow	6 months or less	6~12 months	1~3 years	More than 3 years
Non-derivative financial liabilities:						
Borrowings	₩ 10,704,115	11,644,218	3,067,294	1,581,157	4,108,557	2,887,210
Debentures	7,018,627	7,517,045	1,261,270	894,800	3,012,906	2,348,069
Convertible preferred stock	260,243	260,243	260,243	-	-	-
Trade and other payables	8,664,102	8,981,347	7,236,244	628,536	15,081	1,101,486
Lease liabilities	1,807,754	2,322,446	184,774	182,540	509,145	1,445,987
Derivative financial liabilities:						
Derivative contracts used for hedging	897,192	926,715	365,759	244,325	315,029	1,602
Others	62,698	62,698	33,460	29,238	-	-
	₩ 29,414,731	31,714,712	12,409,044	3,560,596	7,960,718	7,784,354

As of December 31, 2022, the Group did not include payment amounting ₩5,293 million, which are recognized as financial liabilities measured at FVTPL due to uncertainty of estimated payment time. The maximum amount for financial guarantees contracts is ₩215,229 million as of December 31, 2022 (See Notes 46).

It is not expected that the cash flows included in the maturity analysis could occur significantly earlier, or at significantly different amounts.

(In millions of won)

	2021					
	Carrying amount	Contractual cash flow	6 months or less	6~12 months	1~3 years	More than 3 years
Non-derivative financial liabilities:						
Borrowings	₩ 7,238,357	7,853,599	2,105,612	903,202	2,295,170	2,549,615
Debentures	6,426,417	6,949,741	545,607	1,067,107	3,000,672	2,336,355
Trade and other payables	6,222,490	6,864,726	4,919,116	1,170,806	100,572	674,232
Lease liabilities	1,515,627	1,800,001	153,444	142,184	444,172	1,060,201
Derivative financial liabilities:						
Derivative contracts used for hedging	55,461	61,123	52,123	6,003	2,997	-
Others	934	934	934	-	-	-
	₩ 21,459,286	23,530,124	7,776,836	3,289,302	5,843,583	6,620,403

It is not expected that the cash flows included in the maturity analysis could occur significantly earlier, or at significantly different amounts.

HD HYUNDAI CO., LTD. AND SUBSIDIARIES
Notes to the Consolidated Financial Statements, Continued
For the years ended December 31, 2022 and 2021

45. Financial Instruments, Continued

(2) Liquidity risk, continued

(ii) The periods in which the cash flows associated with cash flow hedges are expected to occur as of December 31, 2022 and 2021 are summarized as follows:

(In millions of won)

		2022					
		Carrying amount	Contractual cash flow	6 months or less	6~12 months	1~3 years	More than 3 years
Currency forward							
Assets	₩	66,117	66,117	66,057	60	-	-
Liabilities		(3,896)	(3,896)	(3,896)	-	-	-
Currency swaps							
Assets		116,459	138,386	56,579	12,724	69,083	-
Liabilities		(2,469)	(2,470)	-	-	(2,470)	-
Interest rate swaps							
Assets		1,231	1,265	444	428	393	-
Liabilities		-	-	-	-	-	-
Product forward							
Assets		42,629	42,629	31,498	11,131	-	-
Liabilities		(46,116)	(46,116)	(34,512)	(11,604)	-	-
Commodity futures							
Assets		232	232	154	78	-	-
Liabilities		(621)	(621)	(614)	(7)	-	-
	₩	<u>173,566</u>	<u>195,526</u>	<u>115,710</u>	<u>12,810</u>	<u>67,006</u>	<u>-</u>

(In millions of won)

		2021					
		Carrying amount	Contractual cash flow	6 months or less	6~12 months	1~3 years	More than 3 years
Currency forward							
Assets	₩	3,546	3,767	2,983	784	-	-
Liabilities		(11,160)	(12,121)	(12,116)	(5)	-	-
Currency swaps							
Assets		1,271	1,441	655	-	786	-
Liabilities		(3,808)	(3,815)	(403)	(415)	(2,997)	-
Interest rate swaps							
Assets		65	67	-	-	67	-
Liabilities		(113)	(115)	(92)	(23)	-	-
Product forward							
Assets		34,408	34,408	27,335	6,541	532	-
Liabilities		(40,380)	(40,380)	(34,814)	(5,566)	-	-
Commodity futures							
Assets		102	102	-	102	-	-
	₩	<u>(16,069)</u>	<u>(16,646)</u>	<u>(16,452)</u>	<u>1,418</u>	<u>(1,612)</u>	<u>-</u>

HD HYUNDAI CO., LTD. AND SUBSIDIARIES
Notes to the Consolidated Financial Statements, Continued
For the years ended December 31, 2022 and 2021

45. Financial Instruments, Continued

(3) Currency risk

(i) Exposure to currency risk:

The Group's exposure to foreign currency risk based on notional amounts as of December 31, 2022 and 2021 are as follows:

(In millions of won)

		2022					
		USD	EUR	CNY	JPY	Others	Total
Cash and cash equivalents	₩	1,017,151	7,767	1,767	880	36,146	1,063,711
Trade and other receivables		3,907,875	435,351	32,897	696	301,053	4,677,872
Contract assets		6,386,433	13,469	-	-	113,854	6,513,756
Trade and other payables		(3,577,969)	(249,937)	(243,887)	(13,392)	(258,351)	(4,343,536)
Borrowings and debentures		(1,807,626)	(399,399)	-	(31,299)	(18,286)	(2,256,610)
Gross statement of financial position exposure		5,925,864	(192,749)	(209,223)	(43,115)	174,416	5,655,193
Derivative contracts		(1,676,525)	(218,873)	-	33,552	(118)	(1,861,964)
Net exposure	₩	4,249,339	(411,622)	(209,223)	(9,563)	174,298	3,793,229

(In millions of won)

		2021					
		USD	EUR	CNY	JPY	Others	Total
Cash and cash equivalents	₩	221,755	1,434	5,829	306	13,294	242,618
Trade and other receivables		1,594,891	254,095	69,771	97	19,249	1,938,103
Trade and other payables		(2,360,164)	(54,260)	(56,389)	(13,923)	(14,588)	(2,499,324)
Borrowings and debentures		(474,852)	(38,010)	(642)	(4,824)	(683)	(519,011)
Gross statement of financial position exposure		(1,018,370)	163,259	18,569	(18,344)	17,272	(837,614)
Derivative contracts		(801,198)	(31,302)	-	266	-	(832,234)
Net exposure	₩	(1,819,568)	131,957	18,569	(18,078)	17,272	(1,669,848)

Foreign currency risk is based on financial instruments presented in currencies other than the functional currency of the individual company in the Group. Derivative contracts, which contain derivative contracts to hedge the risk of exchange rate fluctuation, are the amount of exposure to currency risk before considering effectiveness of hedge.

Significant exchange rates applied for the years ended December 31, 2022 and 2021 are as follow:

(In won)

		Average rate		Spot rate	
		2022	2021	2022	2021
USD	₩	1,291.95	1,144.42	1,267.30	1,185.50
EUR		1,357.38	1,352.79	1,351.20	1,342.34
CNY		191.57	177.43	181.44	186.26
JPY (100)		983.44	1,041.45	953.18	1,030.24

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Notes to the Consolidated Financial Statements, Continued
For the years ended December 31, 2022 and 2021

45. Financial Instruments, Continued

(3) Currency risk, continued

(ii) Sensitivity analysis

A weakening of the won, as indicated below, against the USD, EUR, CNY, JPY and other currencies as of December 31, 2022 and 2021 would have increased (decreased) profit or loss by the amounts shown below.

This analysis is based on foreign currency exchange rate variances that the Group considered to be reasonably possible at the reporting date. The analysis assumes that all other variables, in particular interest rates, remain constant.

The changes in profit or loss are as follows:

(In millions of won)

		Profit or loss	
		2022	2021
USD (3 percent strengthening)	₩	127,480	(54,587)
EUR (3 percent strengthening)		(12,349)	3,959
CNY (3 percent strengthening)		(6,277)	557
JPY (3 percent strengthening)		(287)	(542)
Others (3 percent strengthening)		5,229	518

A strengthening of the won against the above currencies as of December 31, 2022 and 2021 would have had the equal but opposite effect on the above currencies to the amounts shown above assuming all other variables remain constant.

(4) Interest rate risk

(i) The interest rate profile of the Group's interest-bearing financial instruments as of December 31, 2022 and 2021 are as follows:

(In millions of won)

		2022	2021
Fixed rate instruments:			
Financial assets	₩	4,282,352	1,095,170
Financial liabilities		(11,482,089)	(8,783,346)
	₩	<u>(7,199,737)</u>	<u>(7,688,176)</u>
Variable rate instruments:			
Financial assets	₩	1,196,967	1,378,951
Financial liabilities		(6,510,876)	(4,513,924)
	₩	<u>(5,313,909)</u>	<u>(3,134,973)</u>

HD HYUNDAI CO., LTD. AND SUBSIDIARIES
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45. Financial Instruments, Continued

(4) Interest rate risk, continued

(ii) Interest rate risk arises from savings and borrowings with floating interest rates. The Group properly hedges the risk borrowings with floating interest rates through interest rate swaps. Interest rate swap contracts as of December 31, 2022 are as follows:

(In millions won)

Counterparties	Currency	Amount	Interest rate		Expiration date
Woori Bank	KRW	₩ 40,000	Receives floating interest rate	CD(3M) + 1.45%	2024.06.11
			Pays fixed interest rate	3.28%	
Shinhan Bank	EUR	26,000	Receives floating interest rate	EuLibor(3M) + 1.22%	2024.12.03
			Pays fixed interest rate	2.89%	
CA-CIB	USD	75,000	Receives floating interest rate	Libor(6M) + 1.30%	2023.05.08
			Pays fixed interest rate	1.53%	
Shinhan Bank	USD	25,000	Receives floating interest rate	Libor (6M) + 1.30%	2023.05.08
			Pays fixed interest rate	1.48%	
Kookmin Bank	KRW	100,000	Receives fixed interest rate	3.61%	2024.03.08
			Pays floating interest rate	CD(3M)+1.57%	
KEB Hana Bank	EUR	26,000	Receives fixed interest rate	1.73%	2025.05.27
			Pays fixed interest rate	3.45%	
The Korea Development bank	USD	100,000	Receives floating interest rate	US LIBOR(3M)+1.92%	2024.02.26
			Pays fixed interest rate	2.21%	
KEB Hana Bank	USD	50,000	Receives floating interest rate	US LIBOR(3M)+2.82%	2023.07.21
			Pays fixed interest rate	2.81%	
KEB Hana Bank and other	USD	200,000	Receives floating interest rate	US LIBOR(3M)+0.95%	2024.03.28
			Pays fixed interest rate	1.47%	
The Korea Development bank	USD	300,000	Receives fixed interest rate	3.18%	2027.03.28
			Pays fixed interest rate	2.97%	
KEB Hana Bank and other	USD	250,000	Receives floating interest rate	US LIBOR(3M)+1.9%	2023.03.29
			Pays fixed interest rate	2.10%	
Woori bank	USD	30,000	Receives floating interest rate	3M Compounded SOFR+0.95%	2025.04.03
			Pays fixed interest rate	3.63%	

(iii) Cash flow sensitivity analysis for variable rate instruments

A change of 100 basis points in interest rates as of December 31, 2022 and 2021 would have increased (decreased) equity and profit or loss by the amounts shown below. This analysis assumes that all other variables, in particular foreign currency rates, remain constant. The changes in equity and profit or loss are as follows:

(In millions of won)

		Profit or loss	
		100 bp increase	100 bp decrease
2022			
Variable rate instruments	₩	(53,139)	53,139
Interest rate swaps		14,389	(14,389)
Foreign currency swap		1,400	(1,400)
Net cash flow sensitivity	₩	(37,350)	37,350
2021			
Variable rate instruments	₩	(31,350)	32,187
Interest rate swaps		1,321	(1,321)
Foreign currency swap		653	(653)
Net cash flow sensitivity	₩	(29,376)	30,213

HD HYUNDAI CO., LTD. AND SUBSIDIARIES
Notes to the Consolidated Financial Statements, Continued
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45. Financial Instruments, Continued

(5) Fair values

(i) Fair value hierarchy

The Group classified fair value measurements in accordance with the fair value hierarchy which reflects the significance of the inputs used in fair value measurements.

- Level 1: Quoted prices (unadjusted) in active markets for identical assets or liabilities.
- Level 2: Inputs other than quoted prices included in Level 1 that are observable for the asset or liability, either directly (i.e. as prices) or indirectly (i.e. derived from prices).
- Level 3: Inputs for the asset or liability that are not based on observable market data (unobservable inputs).

The financial instruments carried at fair value, by fair value hierarchy as of December 31, 2022 and 2021 are as follows:

<i>(In millions of won)</i>	<u>Level 1</u>	<u>Level 2</u>	<u>Level 3</u>	<u>Total</u>
2022				
Financial assets measured at FVOCI ₩	96,606	177	123,354	220,137
Financial assets measured at FVTPL	-	198,824	92,361	291,185
Financial liabilities measured at FVTPL	-	66,199	1,793	67,992
Derivative assets	-	680,160	-	680,160
Derivative liabilities	-	897,192	-	897,192
Trade and other receivables	-	25,949	-	25,949
Trade and other payables	-	-	198,260	198,260
2021				
Financial assets measured at FVOCI ₩	19	-	57,650	57,669
Financial assets measured at FVTPL	8	122	75,017	75,147
Financial liabilities measured at FVTPL	-	8	-	8
Derivative assets	-	39,512	-	39,512
Derivative liabilities	-	56,386	-	56,386
Trade and other receivables	-	20,405	-	20,405
Trade and other payables	-	-	249,592	249,592

The fair value of financial instruments traded in active markets is based on quoted market prices at the end of reporting period. A market is regarded as active if quoted prices are readily and regularly available from an exchange, dealer, broker, industry group, pricing service, or regulatory agency, and those prices represent actual and regularly occurring market transactions on an arm's length basis. The quoted market price used for financial assets held by the Group is the current bid price. These instruments are included in level 1. Instruments included in level 1 are comprised primarily of listed equity investments.

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45. Financial Instruments, Continued

(5) Fair values, continued

(i) Fair value hierarchy, continued

The fair value of financial instruments that are not traded in an active market (for example, over-the-counter derivatives) is determined by using valuation techniques. These valuation techniques maximize the use of observable market data where it is available and rely as little as possible on entity specific estimates. If all significant inputs required to fairly value an instrument are observable, the instrument is included in level 2. If one or more of the significant inputs is not based on observable market data, the instrument is included in level 3.

Specific valuation techniques used to value financial instruments include:

- Quoted market prices or dealer quotes for similar instruments.
- The fair value of forward foreign exchange contracts is determined using forward exchange rates at the end of reporting period, with the resulting value discounted back to present value.
- Other techniques, such as discounted cash flow analysis, are used to determine fair value for the remaining financial instruments.

Unlisted equity securities, investments in capital and other investments in entities newly established or having no comparative entity are excluded from the fair value valuation because their fair value cannot be measured reliably.

(ii) The valuation of the fair value hierarchy Level 2 and inputs description

The valuation techniques and input variables used in measuring Level 2 fair values as of December 31, 2022 and 2021 are as follows:

(In millions of won)

	<u>2022</u>	<u>2021</u>	<u>Valuation techniques</u>	<u>Input variables</u>
Financial assets measured at FVOCI:				
Equity securities				Recent transactions and similar transactions and others
	₩ 177	-	Market approach	
Derivatives assets:				
Derivatives	680,160	39,512	Cash flow discount model and others	Currency forward price, discount rate and others
Financial assets measured at FVTPL:				
Short-term financial assets and others	198,824	122	Market approach, Net asset value, cash flow discount model and others	CFR Future price, Currency forward price, discount rate and other
Trade and other receivables:				
Trade receivable	25,949	20,405	Cash flow discount model and others	Currency forward price, discount rate and others
Derivatives liabilities:				
Derivatives	897,036	56,386	Cash flow discount model and others	Currency forward price, discount rate and others
Early redemption right of convertible bonds	156	-	LSMC (Least Square Monte-Carlo)	Stock price, discount rate and others
Financial liabilities measured at FVTPL:				
Derivatives	66,199	8	Cash flow discount model and others	Currency forward price, discount rate and others

HD HYUNDAI CO., LTD. AND SUBSIDIARIES
Notes to the Consolidated Financial Statements, Continued
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45. Financial Instruments, Continued

(5) Fair values, continued

(iii) Valuation techniques and significant unobservable inputs at fair value hierarchy Level 3

(a) Changes in financial asset classified as Level 3 in the fair value hierarchy of assets and liabilities measured at fair value for the years ended December 31, 2022 and 2021 are as follows:

(In millions of won)

	2022	2021
Financial assets at FVTPL:		
Beginning balance	₩ 75,017	64,749
Acquisition	551	60,884
Disposal	(289)	(54,250)
Profit or loss included in net income	2,417	(195)
Changes in scope of consolidation	14,665	3,829
Ending balance	₩ <u>92,361</u>	<u>75,017</u>
Financial assets at FVOCI:		
Beginning balance	₩ 57,650	32,199
Acquisition	2,646	18,888
Disposal	-	5,628
Profit or loss included in comprehensive income	(8,819)	-
Changes in scope of consolidation	71,877	935
Ending balance	₩ <u>123,354</u>	<u>57,650</u>
Financial liability at FVTPL:		
Beginning balance	₩ -	-
Profit or loss included in net income	(3,141)	-
Changes in scope of consolidation	4,934	-
Ending balance	₩ <u>1,793</u>	-
Trade and other payables		
Beginning balance	₩ 249,592	175,583
Profit or loss included in net income	(51,332)	74,009
Ending balance	₩ <u>198,260</u>	<u>249,592</u>

HD HYUNDAI CO., LTD. AND SUBSIDIARIES
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45. Financial Instruments, Continued

(5) Fair values, continued

(iii) Valuation techniques and significant unobservable inputs at fair value hierarchy Level 3, continued

(b) The valuation technique and inputs of assets and liabilities classified as level 3 in the fair value hierarchy of assets and liabilities measured at fair value as of December 31, 2022 is as follows:

(In millions of won)

	Amount	Valuation technique	Input valuables	Significant unobservable inputs	Range of significant unobservable inputs
Financial assets measured at FVTPL:					
Equity securities	₩	Net assets value model	-	-	-
		Market comparison on technique	PBR	PBR	0.51
Construction Guarantee Cooperation	15,263	Market comparison on technique	PBR	PBR	0.42
Machinery Financial Cooperation	3,033	Net asset value method	-	-	-
Long-term financial assets	2,231	Net asset value method	-	-	-
Others(*)	71,371	-	-	-	-
Financial assets measured at FVOCI:					
Equity instrument	122,107	Net assets value model	Discount rate,	Discount rate, PBR	13.09%
		Cash flow discount model, Guideline public company method	PBR		1.1%~1.4%
Equity instrument(*)	1,247	-	-	-	-
	<u>₩ 123,354</u>				
Financial liabilities measured at FVTPL:					
Put option for share	₩ 1,792	Binominal model	Volatility	Volatility	30.15%
Trade and other payables					
Other accounts payable	₩ 198,260	Cash flow discount model	Discount rate	Discount rate	8.70%

(*) The carrying amount was used as there would be no significant difference between the carrying amount and the fair value.

HD HYUNDAI CO., LTD. AND SUBSIDIARIES
Notes to the Consolidated Financial Statements, Continued
For the years ended December 31, 2022 and 2021

45. Financial Instruments, Continued

(5) Fair values, continued

(iii) Valuation techniques and significant unobservable inputs at fair value hierarchy Level 3, continued

(c) The effect of changes in unobservable inputs as of December 31, 2022 on the fair value measurement of financial assets and financial liabilities is as follows:

(In millions of won)

	Unobservable inputs	Effects of unobservable inputs on the measurement of fair value	Calculating the effects of variation	Variation effects of fair value		
				Profit (loss) for the year	Favorable change	Unfavorable change
Financial assets measured at FVTPL:						
Equity securities	Discount rate	Fair value change as increase (decrease) of discount rate	Fair value change as increase (decrease) of 1%p (discount rate)	-	5,489	(4,761)
	Share price multiple	Fair value increase by share price multiple increase	Fair value change as increase (decrease) of 1P (share price multiple)	-	404	(404)
Financial assets measured at FVTPL:						
Equity securities and others	Share price multiple	Fair value increase by share price multiple increase	Fair value change as increase (decrease) of 1P (share price multiple)	69	-	-
Construction Guarantee Cooperation	PBR	Fair value change as increase (decrease) of price-to-book ratio	Fair value change as increase (decrease) of 1P (price-to-book ratio)	7	(7)	-
Financial liabilities measured at FVTPL:						
Put option for share	Stock price	Fair value increase by stock price increase	Fair value change as increase (decrease) of 10% (stock price)	613	(516)	-
Trade and other payables						
Other accounts payable	Discount rate	Fair value change as increase (decrease) of discount rate	Fair value change as increase (decrease) of 0.5%p (discount rate)	15,623	(13,712)	-

HD HYUNDAI CO., LTD. AND SUBSIDIARIES
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45. **Financial Instruments, Continued**

(6) Offsetting of financial assets and financial liabilities
The details of financial assets or financial liabilities netting arrangements as of December 31, 2022 and 2021 are as follows:

(In millions of won)

	2022			
	Total recognized financial assets that will be setoff	Net financial assets presented in the statement of financial position	Related amount: won't be setoff in the statement of financial position	Received cash security Net amount
Financial assets				
Trade and other receivables	₩ 27,214	(20,422)	6,792	-
Financial liabilities				
Financial liabilities measured at amortized cost	111,495	(20,422)	91,073	-

(In millions of won)

	2021			
	Total recognized financial assets that will be setoff	Net financial assets presented in the statement of financial position	Related amount: won't be setoff in the statement of financial position	Received cash security Net amount
Financial assets				
Trade and other receivables	₩ 5,779	(3,276)	2,503	-
Financial liabilities				
Financial liabilities measured at amortized cost	89,043	(10,109)	78,934	-

The 'related amount that won't be setoff in the statement of financial position' is recognized up to the amount of 'Net financial assets presented in the consolidated statement of financial position'.

HD HYUNDAI CO., LTD. AND SUBSIDIARIES
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46. Commitments and Contingencies

- (1) As of December 31, 2022, the Group has entered into overdraft agreements with KEB Hana Bank and other financial institutions amounting to ₩50,000 million and general loan agreements with Korea Development Bank and others amounting to ₩9,055,200 million, USD 1,348,123 thousand, EUR 210,525 thousand, CNY 3,208,912 thousand, INR 1,860,000 thousand, VND 1,200,000 million and NOK 33,178 thousand.
- (2) As of December 31, 2022, the Group has entered into credit facilities agreements such as letters of credit with KEB Hana Bank and others for the Group's exports and imports totaling ₩301,650 million and USD 8,339,630 thousand.
- (3) As of December 31, 2022, the Group has entered into credit facilities agreements such as secured receivables loan with KEB Hana Bank and others totaling ₩1,055,170 million and USD 865,075 thousand and EUR 5,600 thousand. Meanwhile, the Group provides a letter of credit amounting to USD 3,000 thousand, issued by KEB Hana Bank, as a collateral for Atlantic Specialty Insurance Company.
- (4) In relation to the Group's contract performance guarantees of export and domestic construction, as of December 31, 2022, the Group has been provided with maximum guarantees amounting to ₩2,972,687 million, USD 24,223,132 thousand and CNY 700,000 thousand by various financial institutions. Among these guarantees, Export-Import Bank of Korea and others provide payment guarantees within the limit of USD 21,275,634 thousand to the Group for advances from customers for vessel building. For this payment guarantee, the Group pledges its ships under construction and materials for shipbuilding as collaterals.
- (5) As of December 31, 2022, three blank notes have been provided to relevant counterparty as collaterals for the Group's long-term borrowings.
- (6) The Group entered into a consortium agreement on a natural resource development project with various organizations including Korea National Oil Corporation. The Group obtained borrowings for a natural resource development project from the Korea Energy Agency.
- (7) As of December 31, 2022, the subsidiary, Korea shipbuilding and offshore engineering Co., Ltd has granted a right to sell shares to the financial investors involved in issuing convertible preferred shares from its subsidiary, Hyundai Samho Heavy Industries Co., Ltd.

Content

Buying company	Korea shipbuilding and offshore engineering Co., Ltd or third party designated by the Korea shipbuilding and offshore engineering Co., Ltd
Issue date	July 7, 2017
Type of shares to buy	Dividend preference convertible shares with voting rights of Hyundai Samho Heavy Industries Co., Ltd.
Quantity of shares / The principal of investment	4,647,201 shares / ₩260,243 million
The amount to buy	The principal of investment & the sum equivalent to dividends receivable If satisfied with one of the following reasons:
Reason to exercise put option	1) In case of the Korea shipbuilding and offshore engineering Co., Ltd exercise a right to postpone the listing as the initial public offering price of Hyundai Samho Heavy Industries fails to meet the standard condition
	2) In case of withdrawal of old shares sale as the initial public offering price of Hyundai Samho Heavy Industries fail to meet the criteria
	3) From the time investors would be available to sell the shares after the Korea shipbuilding and offshore engineering Co., Ltd and Hyundai Samho Heavy Industries became merged, until two years later
	4) In case the investor does not exercise the purchase priority when the Korea shipbuilding and offshore engineering Co., Ltd sells its shares in Hyundai Samho Heavy Industries
	5) In case the Korea shipbuilding and offshore engineering Co., Ltd does not exercise its purchase priority when Hyundai Samho Heavy Industries issues new shares at a price lower than the issue price
	6) In case the Korea shipbuilding and offshore engineering Co., Ltd is prohibited from buying shares due to the restriction under the decree as a result of spin-off and merger of Hyundai Samho Heavy Industries
	7) In case the standard financial conditions, such as the obligation to pay dividends, are not met

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46. Commitments and Contingencies, Continued

- (7) Korea shipbuilding and offshore engineering Co., Ltd absorbed the investment business from its subsidiary Hyundai Samho Heavy Industries Co., Ltd. on December 1, 2018. Korea shipbuilding and offshore engineering Co., Ltd has allocated 1,260,558 ordinary shares under the merger ratio for 2,495,656 convertible preferred shares of its subsidiary Hyundai Samho Heavy Industries Co., Ltd. and Korea shipbuilding and offshore engineering Co., Ltd reduced the number of convertible preferred shares of its subsidiary from 7,142,858 shares to 4,647,201 shares (₩260,243 million after transaction).

Korea shipbuilding and offshore engineering Co., Ltd granted the right to purchase 1,260,558 ordinary shares allocated to the financial investors holding the right to purchase the convertible preferred shares of the existing Hyundai Samho Heavy Industries Co., Ltd. Korea shipbuilding and offshore engineering Co., Ltd reclassified the present value of the redemption amount from equity to a liability because it believed that the new shares granted the right to purchase had no unconditional right to avoid the delivery of cash or other financial assets.

	Content
Buying company	Korea shipbuilding and offshore engineering Co., Ltd
Issue date	December 4, 2018
Type of shares to buy	Common share
Quantity of shares / The principal of investment	1,260,558 shares / ₩139,757 million
The amount to buy	₩110,869 per share
Reason to exercise put option	One event can be held until September 30, 2023
	If the Korea shipbuilding and offshore engineering Co., Ltd receives notice of exercise of the right to purchase, select (a) or (b) to notify the investor within one month of the date of notification of the event.
	(a) Specify a third party to buy the target shares
How to exercise put option	(b) Net settlement of the investor's proceeds from the sale and the purchase claim
	* If (a) is selected, Korea shipbuilding and offshore engineering Co., Ltd assumes joint liability with the third party buyer for all its obligations.
	* If, after selecting (b), all or part of the shares are not sold, Korea shipbuilding and offshore engineering Co., Ltd designates a third party and processes them according to (a).

- (8) The subsidiary, Korea shipbuilding and offshore engineering Co., Ltd provided joint debt guarantees for employee stock ownership acquisition loan regarding allocated quantity of paid-in capital increase to employee stock ownership association. That debt guarantee obligation has been terminated in March, 2022. The Group provides collateral amounting to 10% (₩4,100 million) of employee stock ownership acquisition loans.

HD HYUNDAI CO., LTD. AND SUBSIDIARIES
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46. Commitments and Contingencies, Continued

- (9) As of December 31, 2022, Hyundai Electric & Energy Systems Co., Ltd., a subsidiary, has granted a debt guarantee amounting to ₩44,973 million for the loan for treasury stock of employee stock ownership association based on the board of directors' decision on 2017. The amount of debt is ₩37,477 million at the time of guarantee and the amount of debt guarantee is based on 120% of the debt. Due to the repayment of debt from certain employees' stock ownership association, the remaining balance of debt is ₩8,290 million and debt guarantee is ₩32,683 million as of December 31, 2022.

In addition, Hyundai Electric & Energy Systems Co., Ltd., a subsidiary, has granted a debt guarantee amounting to ₩15,207 million for the loan for treasury stock of employee stock ownership association based on the board of directors' decision on September 16, 2019. The amount of debt is ₩15,207 million at the time of guarantee and the amount of debt guarantee is based on 100% of the debt. Due to the repayment of debt from certain employees' stock ownership association, the remaining balance of debt is ₩2,585 million and debt guarantee is ₩2,585 million as of December 31, 2022.

- (10) As of December 31, 2022, Hyundai Construction Equipment Co., Ltd., a subsidiary, provided a debt guarantee amounting to ₩70,250 million for the borrowing of treasury stock of the employee 'shareholders' equity in the amount of the amount allocated for treasury stock issuance on October 31, 2017 by resolution of the board of directors. Debt guarantees amounted to ₩58,542 million at the time of guarantee, and the guaranteed amount is based on 120% of the debt amount. As a result of repayment of loans to certain employees of the Group's employees, the Group's outstanding loan balance amounted to ₩20,428 million as of December 31, 2022, and the amount of the guaranteed guarantee amounted to ₩24,514 million.

- (11) For the year ended December 31, 2018, the Group sold its stake in Hi Investment & Securities Co., Ltd. held by Hyundai Mipo Dockyard Co., Ltd., a subsidiary of the Group, to DGB Financial Holding Co., Ltd. for ₩472 billion for the purpose of HD Hyundai Co., Ltd.'s compliance with the regulations governing the conduct of holding companies under the Fair Trade Act.

In the meantime, if a seller's statement or guarantee is false or does not conform to the facts, the seller is liable for damages. If the total amount of damages incurred to the buyer exceeds 1% of the sales amount (the total amount of damages the Group is liable for cannot exceed 5% of the sales amount), the Group shall be liable for compensation for the total damages.

Meanwhile, the Group was notified of the estimated damages of ₩13,300 million by DGB Financial Holding Co., Ltd. in October 2019, and the expected damages may change during future consultations. The Group did not count the provisions because it judged that the possibility of outflow of resources from the claim was not high.

- (12) Korea shipbuilding and offshore engineering Co., Ltd was spun-off to an existing entity, Hyundai Heavy Industries Co., Ltd. which engages in shipbuilding segment and others, and newly established entities, Hyundai Electric & Energy Systems Co., Ltd., Hyundai Construction Equipment Co., Ltd., and HD Hyundai (formerly, Hyundai Heavy Industries Holdings Co., Ltd.) which engage in electro electric systems segment, construction equipment segment, and robotics/financial services segment, respectively, on April 1, 2017. The newly established entities and the existing entity from the spin-off are jointly liable for the liability of the Parent Company before the spin-off in accordance with Article 530, paragraph 9.1 of the Commercial law.
- (13) In accordance with Article 530, paragraph 9.1 of the Commercial law, an existing entity, HD Hyundai (formerly, Hyundai Heavy Industries Holdings Co., Ltd.) and newly established entity, Hyundai Robotics Co., Ltd. are jointly liable for the liability of HD Hyundai (formerly, Hyundai Heavy Industries Holdings Co., Ltd.) prior to split-off.

HD HYUNDAI CO., LTD. AND SUBSIDIARIES
Notes to the Consolidated Financial Statements, Continued
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46. Commitments and Contingencies, Continued

- (14) For the year ended December 31, 2019, Korea shipbuilding and offshore engineering Co., Ltd., a subsidiary sold its stake in Hyundai Hymys Co., Ltd., which is a subsidiary, to Hercules Holdings for ₩97,500 million. In this regard, the buyer shall be liable for damages within 5% limit of the sales amount in the event of damages caused by violation of the seller's statement, guarantee, and other obligations. In addition, in order to secure the obligation to sell shares in accordance with Hercules Holdings' request for a joint sale, Hyundai Hymys Co., Ltd.'s equity securities held by Korea shipbuilding and offshore engineering Co., Ltd., a subsidiary are provided as collateral to Hercules Holdings. Meanwhile, Hercules Holdings is a participatory and cumulative preferred shareholder who holds the right to a priority dividend of up to 9% per year on the basis of the principal investment.
- (15) As of December 31, 2022, Korea shipbuilding and offshore engineering Co., Ltd., a subsidiary has provided performance guarantees for construction contracts (contract amount: USD 97,688 thousand) which is being built by Hyundai Heavy Industries Power Systems Co., Ltd.
- (16) Korea shipbuilding and offshore engineering Co., Ltd., a subsidiary was spun-off to an existing entity, 'Korea Shipbuilding & Offshore Engineering Co., Ltd.' which engages in segments such as investment and others, and newly established entity, 'Hyundai Heavy Industries Co., Ltd.' which engages in segments such as shipbuilding-related business, on June 1, 2019. In accordance with Article 530, paragraph 9.1 of the Commercial law, the Parent Company and Hyundai Heavy Industries Co., Ltd. are responsible for jointly repaying the debts of Hyundai Heavy Industries Co. prior to the split. In addition, Korea shipbuilding and offshore engineering Co., Ltd., a subsidiary split and merged the investment business of Hyundai Samho Heavy Industries Co., Ltd., a subsidiary, on December 1, 2018. In this regard, Korea shipbuilding and offshore engineering Co., Ltd., a subsidiary and Hyundai Samho Heavy Industries Co., Ltd. are responsible for reimbursement of debts owed by Hyundai Samho Heavy Industries Co., Ltd. prior to the merger of its divisions under the provisions of Article 530, paragraph 9.1 of the Commercial law.
- (17) In July 2021, Korea shipbuilding and offshore engineering Co., Ltd., a subsidiary sold 800,000 shares of Hyundai Heavy Industries Power systems Co., Ltd. to H Asset Management Co., Ltd. for ₩144,000 million. In this regard, the seller shall be liable for damages within 5% limit of the sales amount in the event of damage exceeding 1% of the sales amount caused by the violation of the seller's statement, guarantee, and other obligations. In addition, the shareholder's agreement includes drag-along and call options for the remaining equity securities of Hyundai Heavy Industries Power Systems Co., Ltd.

Details

Buying company	Korea shipbuilding and offshore engineering Co., Ltd
Issue date	July 30, 2021
Type of shares to buy	Ordinary shares of Hyundai Heavy Industries Power systems Co., Ltd
Number of shares	200,000 shares
When to exercise	One event can be held until July 31, 2024.
Exercise Price	Adding 5% of annual compound interest based on IRR from the closing date of the transaction to the payment date of the exercise of option

(*) In January 2022, the common stocks of Hyundai Heavy Industries Power System Co., Ltd. have been changed to non-voting stocks. The stocks can be converted into common stocks from just before the completion of the exercise of the largest shareholders' claim rights, the approval of preliminary listing investigation of Hyundai Heavy Industries Power System Co., Ltd. and the sale of shares accompanying the control change to the third party.

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46. Commitments and Contingencies, Continued

- (18) As of December 31, 2022, the Group has entered into a share option agreement with the Shell Petroleum Company Limited ("Shell"), a shareholder of Hyundai Shell Base Oil Co., Ltd. According to the agreement, Shell holds a put option to sell its 40% of shares to Hyundai Oilbank Co., Ltd. that evaluated by the external evaluation institution at that time (From August 2014 to August 2021: If the supply of raw materials from Hyundai Oilbank Co., Ltd. to Hyundai Shell Base Oil Co., Ltd. falls below a certain level, After August 2021: no condition). Also, Hyundai Oilbank Co., Ltd. holds a call option to purchase its 40% of shares from Shell that evaluated by the external evaluation institution at that time (From August 2021 to August 2029: If the volume of products purchased from Hyundai Shell Base Oil Co., Ltd. falls below a certain level, After August 2029: no condition).
- (19) For the year ended December 31, 2021, the Group disposed of 90% shares of Hyundai Oil Terminal Co., Ltd. which runs terminal business and storage business to Orion Terminal Limited and has entered into trading option agreement on the terminal business. According to the agreement, the Group holds a call option to purchase the terminal business from August 2026 to August 2031 if the operating profit of terminal business in each fiscal year since the transaction date exceeds 3 times of those in 2020. Also, Orion Terminal Limited holds a put option to sell the terminal business from August 2026 to August 2031 if the Group sells more than 3 oil storage places to 3rd party since the transaction date.
- (20) As of December 31, 2022, the Group has been provided guarantees for the borrowings from Lotte Chemical Co., Ltd. and Hyundai OCI Co., Ltd. amounting to ₩948,000 million and ₩19,600 million, respectively.
- (21) The Group has entered into consignment operation agreement of logistics centers with Hyundai Oil Terminal Co., Ltd. on August 11, 2021 and consigned operation of oil storage locations that Hyundai Oilbank Co., Ltd. holds from August 20, 2021 to December 31, 2030.
- (22) The Group has entered into arrangement agreement with respect to use of the trademark on August 11, 2021 that Hyundai Oil Terminal Co., Ltd. provides its trademark for 10 years since August 11, 2021 (Both parties hold rights to terminate at will).
- (23) As of December 31, 2022, the Group has entered into a contract with shareholders that grants call options to Aramco Overseas Company B.V., 2.9% of the interest in Hyundai Oilbank Co., Ltd.

Date of issue	December 17, 2019
Quantity	7,107,390 shares (2.9%)
Exercise period	Within 5 years from the date of issue (or before IPO)
Exercise price (In won)	₩33,000 per share

- (24) Hyundai Oilbank Co., Ltd., a subsidiary, has entered into LNG supply agreement that Hyundai Oilbank Co., Ltd. shall purchase fixed amount of LNG from KOGAS on October 31, 2021. According to the agreement, it comes into force in October 2025 and supply period is from March 2026 to December 31, 2034.
- (25) As of December 31, 2022, Hyundai Oilbank Co., Ltd., a subsidiary, has signed a long-term crude oil purchase contract and refinery product supply contract with Saudi Aramco and others, and the details of the contract are as follows:

	Contract for the sale of crude oil equipment		Refinery product supply contract
The counterparty to the contract	Saudi Arabian Oil Company	Aramco Trading Co	Aramco Trading Singapore Pte Ltd.
Contract period	2020.01.01 ~ 2039.12.31		2020.02.01 ~ 2039.12.31
Contracted product	Saudi crude oil	Saudi and others' crude oil	Gasoline, diesel, aviation oil

HD HYUNDAI CO., LTD. AND SUBSIDIARIES
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46. Commitments and Contingencies, Continued

(26) As of December 31, 2022, the Group has entered into a lease contract with Koramco Energy Plus Reit, and the contract period is 10 years from the commencement date of the contract, June 1, 2020. The Group has an option to extend the contract period by 5 years if requested by the Group before two and a half years from the closing date of the contract.

(27) As of December 31, 2022, the Company has entered into the contract with shareholders that compensates for the difference and grants put options to 38% of Hyundai Global Service Co., Ltd. shares that Global Vessel Solutions, L.P. holds.

1) Make-whole payment

Authorizer	HD Hyundai Co., Ltd.
Requirements	Offering price is less than entry price
Underlying asset	Hyundai Global Service Co., Ltd. stock
Exercise price	Offering price – entry price

2) Put option

Authorizer	HD Hyundai Co., Ltd.
Requirements	Failure of IPO
Maturity date	Within 5 years from the date of issue (eligible for a 1-year extension)
Exercise price	Max (entry price, price at exercise date)

(28) As of December 31, 2022, Hyundai Chemical Co., Ltd., a subsidiary has a long-term raw material supply contract with Lotte Chemical Co., Ltd. for 20 years from 2016 to 2036. In addition, Hyundai Chemical Co., Ltd. has entered into a debt offset agreement related to the toluene sales contract and the C9 sales contract with Hyundai Cosmo Co., Ltd., a joint venture, and the agreement is valid until December 31, 2022.

(29) As of December 31, 2022, the Group has entered into a business consignment agreement with Hyundai Cosmo Co., Ltd., a joint venture. Under the agreement, the Group has agreed to provide services such as dispatching personnel to provide services related to Hyundai Cosmo's business operations and receive compensation.

In addition, the Group has entered into a trademark usage agreement with Hyundai Cosmo Co., Ltd.

(30) As of December 31, 2022, the Group has entered into a trade receivables discounting agreement with Woori Bank for a credit limit of ₩30,000 million related to the payment of purchase funds to its subsidiaries and joint ventures.

(31) As of December 31, 2022, Hyundai Oilbank Co., Ltd., a subsidiary, is providing two blank promissory notes to Korea Petroleum Corporation as collateral for the lease of petroleum reserves.

(32) As of December 31, 2022, Hyundai OCI Co., Ltd., a subsidiary, has entered into a carbon black production technology design contract with OCI Co., Ltd. Under the contract, Hyundai OCI Co., Ltd is obligated to pay a certain percentage of the annual revenue of the carbon black product for five years, including the year in which the third anniversary of commercial operation falls.

In addition, As of December 31, 2022, Hyundai OCI is receiving the raw material, coal tar, from Hyundai Steel Co., Ltd. under a supply contract that is valid until December 31, 2036. The contract will be automatically renewed on an annual basis under the same conditions unless of its intention not to extend the contract.

(33) The Group has issued ₩25,000 million of unsecured corporate bonds with warrants in May 2022. The Group has granted a security interest in its construction payment collection account and reserve account to the bondholders and pledged its payment rights in connection with the Taeon 5-8 Low-Carbon Indoor Emissions Reduction Project.

HD HYUNDAI CO., LTD. AND SUBSIDIARIES
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47. Litigations

(1) Ordinary wage lawsuit

1) Ordinary wage lawsuit (Busan High Court 2022na29)

Date of filing	December 28, 2012.
Litigant	Plaintiff: Kyung-Hwan Jeong and nine others, Defendant: HD Hyundai Co., Ltd. took over the lawsuit
Litigation content	Plaintiff filed a suit claiming that total bonuses should be included in the ordinary wage category and recalculated.
Litigation value	₩630 million
The progress of litigation	Defendant partially lost the first trial (Ulsan District Court 2012 gahap 10108) on February 12, 2015. Defendant won the second trial (Busan High Court 2015 na 1888) on January 13, 2016. Defendant lost the third trial (Supreme Court 2016 da 7975) and the third trial remanded on December 16, 2022. Remand after reversal filed (Busan High Court 2022 na 29) on January 3, 2022. First adjustment on July 20, 2022. Second adjustment on August 17, 2022. Third adjustment on September 21, 2022. Fourth adjustment on December 3, 2022. Decision Superseding Adjustment (Compulsory Adjustment) on December 28, 2022. Termination of Compulsory Adjustment on January 12, 2023.
Future litigation schedule and countermeasures	The case was concluded by the finalization of the compulsory adjustment order, and the Group will compensate the workers for the amount they are owed which will include preparatory such as establishing a computer system.
The effect on the Group as a result of litigation	According to the judgement of supreme court, the Group estimated amount that workers should receive and accounted for other provisions.

2) Ordinary wage lawsuits (Busan High Court 2018na54524)

Date of filing	July 9, 2015
Litigant	Plaintiff: Dong-guk, Kim and 12,436 others, Defendant: Korea Shipbuilding & Offshore Engineering Co., Ltd.
Litigation content	Plaintiff filed a suit claiming that total bonuses should be included in the ordinary wage category and recalculated.
Litigation value	₩1,250 million
The progress of litigation	Filed a lawsuit on July 9, 2015 Defendant won the first trials (Ulsan District Court 2015 gahap 2351) on May 30, 2018 Plaintiff filled appeals and the second trial is in progress (Busan High Court 2018 na 54524) on June 20, 2018 First date of a sentence on November 7, 2018. Termination due to settlement on January 12, 2023.
The effect on the Group as a result of litigation	According to the judgement of Busan High Court 2022na29, the Group estimated amount that workers should receive and accounted for other provisions.

HD HYUNDAI CO., LTD. AND SUBSIDIARIES
Notes to the Consolidated Financial Statements, Continued
For the years ended December 31, 2022 and 2021

47. Litigations, Continued

(1) Ordinary wage lawsuit, continued

3) Claim for Ordinary wage (Busan High Court 2022na12)

Date of filing	December 12, 2012. (Remand after reversal filed to Supreme court : on January 3, 2022).
Litigant	Plaintiff: Jang and four others, Defendant: Hyundai Mipo Dockyard Co., Ltd.
Litigation content	Plaintiff filed a suit claiming that total bonuses, summer vacation subsidy, Holiday travel subsidy, birthday bonus, Individual pension subsidy should be included in the ordinary wage category and in recent 3 years (December 28, 2009 ~ December 27, 2012, now changed to May 31, 2014), wages based on ordinary wage such as various legal allowance, incentive, retirement pay have not been paid in full.
Litigation value	₩ 270 million
The progress of litigation	Plaintiff partially won (appeal from both parties) on February 12, 2015. Plaintiff lost appellate court(Defendant totally won) on January 13, 2016. Plaintiff filled appeals and the third trial(appellate court)is in progress on January 28, 2016. In discussion regarding the point of contention on October 18, 2016. Submission of an appeal statement of reasons on December 4, 2018. Submission of a defendant's response statement and submission of an opinion statement on May 14, 2019 ~ January 6, 2020. Submission of a labor union petition (requesting expedited verdict) on November 16, 2020. Judgment ruling (defendant's appeal rejected and decision returned for annulment) on December 16, 2021. Remand after reversal filed (Busan High Court 2022 na 29) on January 3, 2022. First adjustment on July 20, 2022. Second adjustment on August 17, 2022. Third adjustment on September 21, 2022. Fourth adjustment on December 3, 2022. Decision Superseding Adjustment (Compulsory Adjustment) on December 28, 2022. Termination of Compulsory Adjustment on January 12, 2023.
Future litigation schedule and countermeasures	The case was concluded by the finalization of the compulsory adjustment order, and the Group will compensate sequentially according to the order of submission of confirmation statement starting from April 1, 2023, taking into account the defendant's preparation procedures.
The effect on the Group as a result of litigation	According to the judgement of supreme court, the Group estimated amount that workers should receive and accounted for other provisions, and as the final compensation progresses, the amount estimated may change.

HD HYUNDAI CO., LTD. AND SUBSIDIARIES
Notes to the Consolidated Financial Statements, Continued
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47. Litigations, Continued

(2) Lawsuit of claim of damages related to LDK long-term supply contract

Date of filing	May 3, 2017.
Litigant	Plaintiff: Gangseo Saeyu LDK Solar Energy Advanced Technology Co., Ltd. Defendant: Korea Shipbuilding & offshore Engineering Co., Ltd.
Litigation content	LDK Solar Co., Ltd. (hereafter LDK) insisted on the nonfulfillment of the contract by the company with related to the long-term supply contract for polycrystalline wafers and filed a lawsuit for damages against the Intermediate People's Court in Xinyu City, Jiangxi on May 03, 2017.
Litigation value	USD 27 million
The progress of litigation	The Group was served a petition through judicial assistance The letter of reply was submitted on November 28, 2018. The Group submitted the plea on December 28, 2018. The Group sent the draft of the settlement agreement to the other party in accordance with the negotiation process for the conclusion of the settlement on September 6, 2019. The Group obtained the amendment to the settlement agreement from LDK and proceeded with the final settlement on November 5, 2019. The Group obtained a decision to withdraw the lawsuit from the jurisdiction court for LDK's failure to pay the lawsuit costs on December 9, 2019.
Future litigation schedule and countermeasures	The case was closed by the conclusion of settlement agreement in 2022.

(3) Arbitration for a claim related to KOC

Date of filing	February 17, 2020
Litigant	Plaintiff: Kuwait Oil Company, Defendant: Korea Shipbuilding & offshore Engineering Co., Ltd. and Hyundai Heavy Industries Co., Ltd.
Litigation content	The Kuwait Oil Company (KOC) claimed compensation for a defect to the part of construction delivered by Offshore, Industrial Plant and Engineering segment.
Litigation value	USD 64 million
The progress of litigation	The KOC filed a request for arbitration with the London Court of International Arbitration (LCIA) on February 17, 2020. The KOC submitted a statement of claiming compensation for a defect to the part of construction on January 30, 2021. The Group submitted refutation document for the plaintiff's statement on May 7, 2021. The KOC submitted response and the Group submitted refutation document on June 25, 2021. Completion of 'Document Production' procedure on November 16, 2021. Submission of witness statement on March 21, 2022. Submission of witness response statement on May 16, 2022. Submission of first expert opinion statement on July 9, 2022. Submission of second expert opinion statement on September 30, 2022. International arbitration proceedings on October 25, 2022.
Future litigation schedule and countermeasures	The Group plans to resume arbitration response and reconciliation negotiations.
The effect on the Group as a result of litigation	If the Group loses the case, there will be additional loss due to the compensation. As of December 31, 2022, the impact on the Group's financial statement is not reasonably estimated.

HD HYUNDAI CO., LTD. AND SUBSIDIARIES
Notes to the Consolidated Financial Statements, Continued
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47. Litigations, Continued

(4) The transformer's antidumping

1) The transformer's second annual antidumping appeal (US Court of Appeals for the Federal Circuit)

Date of filing	March 31, 2016.
Litigant	Plaintiff: ABB, INC., Defendant: United States Government
Litigation content	In March 2016, ABB, INC., appealed the US Department of Commerce's antidumping duties determination rate of 4.07% in the second annual review to the United States Court of International Trade (CIT).
The progress of litigation	The International Trade Court upheld a 16.13% tariff rate at the U.S. Department of Commerce on May 26, 2021 (U.S time). Appeals to Court of Appeals for the Federal Circuit (CAFC) on July 24, 2020. Following Court of Appeals for the Federal Circuit (CAFC)'s remand decision. The United States Department of Commerce (DOC) will reassess the tariff rates on May 24, 2022.
Future litigation schedule and countermeasures	The Group plans to submission of a response brief and oral arguments in accordance with the litigation process of the Court of International Trade (CIT)
The effect on the Group as a result of litigation	Since the electric and electronic business is under the jurisdiction of the Group before the division, and we will reflect the impact in our financial statement as determined by the U.S. Court of Appeals for the Federal Circuit (CAFC) and may pay additional tariffs or receive refunds.

2) The transformer's fourth annual antidumping appeal (US Court of International Trade)

Date of filing	March 30, 2018.
Litigant	Plaintiff: Korea Shipbuilding & Offshore Engineering Co., Ltd. Defendant: United States Government
Litigation content	On March 12, 2018, Korea Shipbuilding & Offshore Engineering Co., Ltd. Appealed the US Department of Commerce's antidumping duties determination rate of 60.81% about transformer that electro electronic segment of Korea Shipbuilding & Offshore Engineering Co., Ltd. exported in the four annual review to the United States Court of International Trade (CIT). Korea Shipbuilding & Offshore Engineering Co., Ltd. filed a complaint with the International Trade Court (CIT) on March 30, 2018 against the decision of the U.S. Department of Commerce.
The progress of litigation	The United States Court of International Trade (CIT) finally approved the 0% anti-dumping duty rate, which is the final calculated plan of the U.S. Department of commerce on July 9, 2021 (US time). The complainant (ABB, INC.) dissatisfied with the decision, appealed to the Superior Court of Appeals for the Federal Circuit (CAFC) on September 7, 2021. the Superior Court of Appeals for the Federal Circuit (CAFC) affirmed the decision of the United States Court of International Trade (CIT) on August 11, 2022. The U.S. Department of commerce received settlement order on November 22, 2022.
Future litigation schedule and countermeasures	The lawsuit ended due to the plaintiff's (Hitachi, formerly ABB) withdrawal of appeal to the Supreme Court.
The effect on the Group as a result of litigation	According to the decision of the Superior Court of Appeals for the Federal Circuit (CAFC), the Group reversed anti-dumping-related expenses that we have already recognized USD 83,689 thousand (custom duty: USD 66,988 thousand, delayed interest: USD 16,701 thousand) for the year ended December 31, 2022.

HD HYUNDAI CO., LTD. AND SUBSIDIARIES
Notes to the Consolidated Financial Statements, Continued
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47. Litigations, Continued

(4) The transformer's antidumping, continued

3) The Transformer's sixth annual antidumping appeal (US Court of International Trade)

Date of filing	May 27, 2020.
Litigant	Plaintiff: The Group Defendant: The United States Government
Litigation content	On April 16, 2020, the Group appealed the US Department of Commerce's antidumping duties determination rate of 60.81% about transformer that the Group exported in the sixth annual review to the United States Court of International Trade (CIT). The Group filed a complaint with the International Trade Court (CIT) on May 27, 2020 against the decision of the U.S. Department of Commerce.
The progress of litigation	The United States Court of International Trade (CIT) ordered a remand to the U.S. Department of commerce for a redetermination of the tariff rate on May 10, 2022. The U.S. Department of commerce determined a tariff rate of 60.81% on August 15, 2022. The United States Court of International Trade (CIT) upheld the U.S. Department of Commerce's revised tariff on January 11, 2023.
Future litigation schedule and countermeasures	Litigation concluded
The effect on the Company as a result of litigation	As the Group has deposited tariffs according to the US Department of Commerce's anti-dumping tariff rate of 60.81%, there is no additional tariff burden based on the judgment.

(5) Counterindemnity charged sue related to LPG price-fixing (Seoul Central District Court 2012 gahap 85828 and three cases)

Date of filing	April 2, 2010 etc.
Litigant	Plaintiff: Taxi operator, the disabled and others, Defendant: Hyundai Oilbank Co., Ltd. and six others
Litigation content	The Fair Trade Commission imposed fines on two LPG importers and four domestic oil refinery companies including subsidiaries for alleged collusive price-fixing on LPG prices from January 1, 2003 to December 31, 2008. 1,751 private taxi drivers, corporate taxi drivers and others jointly filed a lawsuit against four domestic oil refinery companies including Hyundai Oilbank Co., Ltd. and two LPG importers claiming damages. On the other hand, Hyundai Oilbank Co., Ltd., has filed a lawsuit against Fair Trade Commission Hyundai Oilbank and filed a lawsuit against Hyundai Oilbank and won on revocation lawsuit and corrective order.
Litigation value	₩28,450 million
The progress of litigation	The first trial suit is currently pending (Seoul Central District Court)
Future litigation schedule and countermeasures	The Group plans to appeal against the decision, in case it loses the first trial (entirely or partly).
The effect on the Group as a result of litigation	If Hyundai Oilbank Co., Ltd., a subsidiary, loses the case, it is expected to make an additional loss from compensation. Currently, the impact on the Group's financial statement, if any, cannot be reliably estimated.

HD HYUNDAI CO., LTD. AND SUBSIDIARIES
Notes to the Consolidated Financial Statements, Continued
For the years ended December 31, 2022 and 2021

47. Litigations, Continued

- (6) Counterindemnity charged sue related to land contamination for Hankook Shell Oil Co., Ltd. (Seoul High District Court 2018 na 2052465)

Date of filing	February 21, 2012
Litigant	Plaintiff: Hankook Shell Oil Co., Ltd., Defendant: Hyundai Oilbank Co., Ltd.
Litigation content	Hankook Shell Oil Co., Ltd. filed litigation for damages of contamination clean-up costs and others including already accrued costs and costs likely to accrue in the future due to fuel spills at Busan refinery in the past and current Busan oil reservoir of Hyundai Oilbank Co., Ltd. on the site of the Hankook Shell Oil Co., Ltd.
Litigation value	₩14,244 million (Decreased the purpose of the plaintiff's claim from ₩14,775 million)
The progress of litigation	The first trial suit is partially won on August 20, 2022. The second trial suit and appeal on September 10, 2022. According to the first sentence, the quotation amount was ₩7,970 million. If the Group misses the payment, it incurs arrear interest, and therefore the Group paid Hankook Shell Oil Co., Ltd. ₩11,030 million (quotation amount ₩7,970 million and arrear interest as of August 20, 2022 ₩3,060 million).
Future litigation schedule and countermeasures	Currently pending in the appeals court (Seoul High Court) and will be appealed even if a part of it is lost.
The effect on the Group as a result of litigation	If Hyundai Oilbank Co., Ltd. loses the case, it is expected to make an additional loss from compensation. Currently, the impact on the Group's financial statement, if any, cannot be reliably estimated

- (7) Claim for reimbursement for construction warranty of Incheon Airport Energy Co., Ltd (Seoul Central District Court 2021 gadan 5344398)

Date of filing	December 16, 2021
Litigant	Plaintiff: DB Insurance Co., Ltd Defendant: Hyundai Heavy Industries Co., Ltd., Hyundai Electric & Energy Systems Co., Ltd.
Litigation content	After compensating for damages caused by a defect in blades of a gas turbine, plaintiff filed a lawsuit for indemnity against the Group, which manufactured the gas turbine as a preliminary defendant.
Litigation value	₩11,600 million
The progress of litigation	Filed a lawsuit on December 16, 2021. Arbitration award (Seoul Central District Court 2022 moe 5344398) on March 17, 2022. Failure of adjustment on May 3, 2022. Hearing date on June 16, 2022. Hearing date (estimated deadline for factual inquiry response) on July 14, 2022.
Future litigation schedule and countermeasures	Defendant requested withdrawal of preliminary lawsuit against the Group at the date of pleading because the gas turbine was not manufactured by the Group.
The effect on the Group as a result of litigation	If the lawsuit against a subsidiary (Hyundai Electric & Energy Systems Co., Ltd.) is withdrawn, the outcome will not have an impact on the Group.

HD HYUNDAI CO., LTD. AND SUBSIDIARIES
Notes to the Consolidated Financial Statements, Continued
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47. Litigations, Continued

(8) Agent fee payment arbitration (ICC CASE 26781/XZG)

Date of filing	December 28, 2021
Litigant	Applicant: Display Technology Service Co., Ltd. Respondent: Hyundai robotics Co., Ltd
Litigation content	Regarding the 'Sales Agent Agreement' signed with the Company, the applicant claims that Hyundai Robotics' termination of the contract is illegal, and claims agent fee and compensation for damages.
Litigation value	₩3,600 million and USD 1.26 million
The progress of litigation	Submission of Request for Arbitration by Applicant on December 28, 2021. Submission of Respondent filing counterclaim on May 20, 2022. Conduct of the proceedings of arbitration on February 20, 2023.
Future litigation schedule and countermeasures	Arbitration in Progress
The effect on the Group as a result of litigation	Currently, the impact on the Group's financial statement, if any, cannot be reliably estimated.

(9) Lawsuit to revoke the invalidation of a trademark registration

Date of filing	November 16, 2022
Litigant	Plaintiff: Hyundai Technology (Puerto Rico) Defendant: The Parent Company
Litigation content	The Plaintiff claimed that the parent company trademark (Hyundai Connect), which was registered in May 2020, was similar to their pre-registered trademark (Hyundai) and filed a petition for invalidation with the Patent Trial and Appeal Board. In September 2022, the plaintiff lost the case at the Patent Trial and Appeal Board. Therefore, the plaintiff filed a lawsuit to cancel the decision of invalidation on November 16, 2022, with the Patent Court in appeal of the previous decision.
Litigation value	₩100 million
The progress of litigation	November 17, 2022: Hyundai Technology files a lawsuit. January 30, 2023: The parent company submits a preparation document.
Future litigation schedule and countermeasures	The Parent company is planning to submit a response document in consultation with legal representative.
The effect on the Group as a result of litigation	If the Parent company loses the case, there will be an additional loss due to the compensation. As of December 31, 2022 the impact on the parent company's financial statement can not be reasonably estimated.

(10) In addition to the cases mentioned above, the Group is facing 150 lawsuits left (amounting to ₩235.5 billion). Currently, the impact on the Group's consolidated financial statement, if any, cannot be reliably estimated. However, the management of the Group believes that the ultimate outcomes will not have a significant impact on the Group's consolidated financial statement.

(11) In addition to the cases mentioned above, Hyundai Construction Equipment Co., Ltd., a subsidiary, totally won in the first trial of the US product liability lawsuit, and the prospects for the lawsuit cannot be predicted as the plaintiff submitted an appeal after the rejection of the retrial request. Furthermore, the lawsuit filed by the UAE dealer for the termination of the dealer contract was dismissed on the grounds of the violation of the first trial's jurisdiction of the plaintiff Al Wasit, and although the second trial was also dismissed, the plaintiff has appealed, and Hyundai Construction Equipment Co., Ltd., a subsidiary, plans to actively respond in accordance with the legal procedures, and the prospect of the lawsuit cannot be predicted.

HD HYUNDAI CO., LTD. AND SUBSIDIARIES
Notes to the Consolidated Financial Statements, Continued
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48. Related Parties

(1) Transactions between the Company and its subsidiaries are eliminated in the preparation of the consolidated financial statement and the related parties as of December 31, 2022 are as follows:

Description	Company	Main business
Joint ventures(*)	Hyundai Cosmo Petrochemical Co., Ltd.	Manufacture of basic chemicals for petrochemical industry
	Saudi Engines Manufacturing Company	Manufacture, assemble and test of marine engines and parts
	Doosan Infracore Liaoning Machinery Sales Co., Ltd	Sale of excavator
	Mirae asset-Hyundai Heavy Industries holdings Co., Ltd Growth Opportunity Securities Investment joint No.1	New technology business investment service
Associates(*)	KC LNG tech Co., Ltd.	Other engineering service
	ZVEZDA-HYUNDAI LLC	Shipbuilding
	International Maritime Industries Company	Shipbuilding
	Hyundai Green Industries Co. W.L.L.	Education
	New Korea Country Club	Country club
	Hyundai Hymys Co., Ltd.	Sale and manufacture of machinery equipment for shipbuilding
	Potenit Co., Ltd	Manufacturing of robot
	Daehoji Solar park Co., Ltd.	Solar power generation business
	Palantir Technologies Korea LLC	Other Investment
	Koramco Energy Plus Reit and others	Real estate investing company and others
Others (large-scale corporate conglomerate)	Aramco Overseas Company B.V and subsidiaries	Oil refinery
	HEA Co., Ltd	Landscape construction
	SEBoat Co., Ltd	Manufacturing of turbine
	Uou Holdings	Consulting
	Taebaek Wind Power Co., Ltd.	Manufacture of facilities for wind power generation
	Taebaek Guinemi Wind Power Co., Ltd.	Manufacture of facilities for wind power generation
	Changjuk Wind Power Co., Ltd.	Manufacture of facilities for wind power generation

(*) Including associates and joint ventures' subsidiaries.

HD HYUNDAI CO., LTD. AND SUBSIDIARIES
Notes to the Consolidated Financial Statements, Continued
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48. Related Parties, Continued

(2) Transactions with related parties

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

(In millions of won)

Description	2022		
	Revenue and other	Purchases and other	
	Revenue(*1)	Purchase of raw materials	Others purchase(*2)
Associates:			
Korea Shipbuilding & Offshore Engineering Co., Ltd.(*5)	₩ 58	101	5,142
International Maritime Industries Company	11,756	-	-
Hyundai Hymys Co., Ltd.(*6)	6,462	116,166	80
Koramco Energy Plus Reit and 3 companies	391	525	9,958
Other(*5)	4,467	171	584
	<u>23,134</u>	<u>116,963</u>	<u>15,764</u>
Joint ventures:			
Hyundai Cosmo Petrochemical Co., Ltd.	2,312,245	1,425,179	3,348
Saudi Engines Manufacturing Company(*6)	4,250	-	-
Doosan Infracore Liaoning Machinery Sales Co., Ltd	8,605	-	-
Mirae asset-Hyundai Heavy Industries holdings Co., Ltd Growth Opportunity Securities Investment joint No.1	201	-	-
Haining Hagong Hyundai Robotics. Co., Ltd.(*7)	7,658	19	-
Tianjin Lovol Doosan Engine Company LTD.(*8)	4,718	22,032	269
	<u>2,337,677</u>	<u>1,447,230</u>	<u>3,617</u>
Other related parties (large-scale corporate conglomerate):			
Hyundai Heavy Industries Co., Ltd.(*5)	29,032	2,884	6,069
Hyundai Samho Heavy Industries Co., Ltd.(*5)	8,607	9	1
Hyundai Mipo Dockyard Co., Ltd.(*5)	7,238	37	20
Ulsan Hyundai Football Club Co., Ltd.(*5)	6	-	5,596
S-Oil Co., Ltd.(*3)	781,867	26,499	652,905
Saudi Arabian Oil Company(*4)	-	5,590,594	-
Aramco Trading Limited(*4)	-	1,539,982	-
Aramco Trading Company(*4)	2,794	1,163,907	-
Aramco Trading Singapore Pte Ltd.(*4)	5,814,289	3,017,625	5,269
Aramco Trading Fujairah FZE(*4)	-	455,742	3,836
Others	1,139	1,953	2,247
	<u>6,644,972</u>	<u>11,799,232</u>	<u>675,943</u>
	<u>₩ 9,005,783</u>	<u>13,363,425</u>	<u>695,324</u>

(*1) Including sales of property, plant and equipment, interest income and others.

(*2) Including acquisition of property, plant and equipment, interest expense and others.

(*3) Amounts resulting from inventory exchange between S-Oil Co., Ltd and Hyundai Oilbank Co., Ltd are included.

(*4) Aramco Overseas Company B.V and Hyundai Oilbank Co., Ltd. have signed long-term crude oil purchase and refinery supply contracts.

(*5) The transaction amount before the reclassification when acquiring controlling in Korea Shipbuilding & Offshore Engineering Co., Ltd., which were previously classified as associates, is the amount of the transaction before the reclassification.

(*6) The transaction amount before the reclassification when acquiring controlling in Korea Shipbuilding & Offshore Engineering Co., Ltd., which were previously classified as associates, is the amount of the transaction after the reclassification.

(*7) Excluded from related parties and the transaction amount is before the reclassification.

(*8) The transaction amount before the reclassification when acquiring controlling in Tianjin Hyundai Doosan Engine Company LTD., which was previously a joint venture, is the amount of the transaction before the reclassification.

HD HYUNDAI CO., LTD. AND SUBSIDIARIES
Notes to the Consolidated Financial Statements, Continued
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48. Related Parties, Continued

(2) Transactions with related parties, continued

1) Significant transactions for the years ended December 31, 2022 and 2021 with related parties are as follows, continued:

(In millions of won)

Description	2021			
	Revenue and other	Purchases and other		
		Purchase of raw materials	Purchase of Property, Plant and Equipment	Others purchase
Revenue(*1)				
Associates:				
Korea Shipbuilding & Offshore Engineering Co., Ltd.	₩ 646	1,658	-	15,978
Koramco Energy Plus Reit and 4 companies	-	-	6,927	7,219
	646	1,658	6,927	23,197
Joint ventures:				
Hyundai Cosmo Petrochemical Co., Ltd.	1,906,023	918,584	5,017	8,471
Mirae asset-Hyundai Heavy Industries holdings Co., Ltd Growth Opportunity Securities Investment joint No.1	34	-	-	-
Haining Hagong Hyundai Robotics. Co., Ltd.	2,530	888	-	-
Tianjin Lovol Doosan Engine Company LTD.	1,841	3,612	-	-
Doosan Infracore Liaoning Machinery Sales Co., Ltd	2,444	-	-	-
	1,912,872	923,084	5,017	8,471
Other related parties (large-scale corporate conglomerate):				
Hyundai Heavy Industries Co., Ltd.	191,296	18,439	592	40,336
Hyundai Samho Heavy Industries Co., Ltd.	94,270	38	-	39
Hyundai Mipo Dockyard Co., Ltd.	56,849	89	-	82
Hyundai E&T Co., Ltd.	528	8,507	-	3,414
Ulsan Hyundai Football Club Co., Ltd.	47	-	-	21,166
Hyundai Heavy Industries MOS Co., Ltd.	176	4,259	-	4,776
Hyundai Energy Solutions America Inc.	1,369	1	36	636
Hyundai Heavy Industries Power Systems Co., Ltd.	8,779	16,592	-	15
Hyundai Heavy Industries Brasil - Manufacturing and Trading of Construction Equipment(*2)	145,362	41,713	-	396
Taebaek Wind Power Co., Ltd	1,164	-	-	-
Taebaek Guinemi Wind Power Co., Ltd.	1,923	-	-	-
S-Oil Co., Ltd.	449,524	54,056	4	463,432
Aramco Trading Singapore Pte Ltd.	2,328,138	158,359	-	979
Saudi Arabian Oil Company	-	2,629,692	-	-
Aramco Trading Limited	-	3,138,672	-	-
Aramco Trading Company	521	2,276,882	-	-
Aramco Trading Fujairah FZE	-	166,238	-	-
Others	1,474	-	-	-
	3,281,420	8,513,537	632	535,271
	₩ 5,194,938	9,438,279	12,576	566,939

(*1) Including sales of property, plant and equipment, interest income and others.

(*2) For the year ended December 31, 2021, Hyundai Construction Equipment Co., Ltd., a subsidiary, acquired 100% shares of Hyundai Heavy Industries Brasil - Manufacturing and Trading of Construction Equipment from Korea Shipbuilding & Offshore Engineering Co., Ltd., an associate, and Hyundai Heavy Industries Brasil - Manufacturing and Trading of Construction Equipment is reclassified from other related parties to subsidiary. The transaction amount until the date of acquiring control (December 2021) are disclosed.

HD HYUNDAI CO., LTD. AND SUBSIDIARIES
Notes to the Consolidated Financial Statements, Continued
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48. Related Parties, Continued

(2) Transactions with related parties, continued

2) Outstanding balances as of December 31, 2022 and 2021 between the Group and associates or joint ventures are as follows:

(In millions of won)

	2022			
	Trade and other receivables		Trade and other payables	
	Trade Receivable	Other receivables	Trade Payables	other payables(*2)
Associates:				
KC LNG tech Co., Ltd.	₩ -	-	368	-
ZVEZDA-HYUNDAI LLC	-	39	-	-
International Maritime Industries Company	6,290	-	-	-
Hyundai Hymys Co., Ltd.	663	5,017	5,505	-
Koramco Energy Plus Reit	-	82,132	-	227,910
Koramco dongjak PFV Co., Ltd	-	392	-	4,055
	<u>6,953</u>	<u>87,580</u>	<u>5,873</u>	<u>231,965</u>
Joint ventures:				
Hyundai Cosmo Petrochemical Co., Ltd.(*1)	44,468	824	10,547	19,079
Saudi Engines Manufacturing Company	905	-	-	-
Doosan Infracore Liaoning Machinery Sales Co., Ltd	700	-	-	10
Mirae asset-Hyundai Heavy Industries holdings Co., Ltd	-	51	-	-
Growth Opportunity Securities Investment joint No.1	-	-	-	-
	<u>46,073</u>	<u>875</u>	<u>10,547</u>	<u>19,089</u>
Other related parties (large-scale corporate conglomerate):				
S-Oil Co., Ltd.	202	9,576	1,035	2
Saudi Arabian Oil Company	-	-	439,488	-
Aramco Trading Limited	-	-	256	-
Aramco Trading Company	-	-	68	-
Aramco Trading Singapore Pte Ltd.	134,272	-	193	-
	<u>134,474</u>	<u>9,576</u>	<u>441,040</u>	<u>2</u>
	<u>₩ 187,500</u>	<u>98,031</u>	<u>457,460</u>	<u>251,056</u>

(*1) The amount of receivables and payables that were eliminated from the balance sheet due to the offsetting agreement with Hyundai Cosmo Petrochemical Co., Ltd. is ₩11,124 million.

(*2) The other payables include lease liability.

HD HYUNDAI CO., LTD. AND SUBSIDIARIES
Notes to the Consolidated Financial Statements, Continued
For the years ended December 31, 2022 and 2021

48. Related Parties, Continued

(2) Transactions with related parties, continued

2) Outstanding balances as of December 31, 2022 and 2021 between the Group and associates or joint ventures are as follows, continued:

(In millions of won)

	2021			
	Trade and other receivables		Trade and other payables	
	Trade Receivable	Other receivables	Trade Payables	other payables
Associates:				
Korea Shipbuilding & Offshore Engineering Co., Ltd.	₩ 71	189	3,656	1,139
Koramco Energy Plus Reit and 4 companies	-	88,179	184	263,431
	<u>71</u>	<u>88,368</u>	<u>3,840</u>	<u>264,570</u>
Joint ventures:				
Hyundai Cosmo Petrochemical Co., Ltd.	27,207	390	24,815	20,152
Haining Hagong Hyundai Robotics. Co., Ltd.	1,230	-	-	-
Tianjin Lovol Doosan Engine Company LTD.	1,511	-	938	-
Doosan Infracore Liaoning Machinery Sales Co., Ltd	729	-	-	15
	<u>30,677</u>	<u>390</u>	<u>25,753</u>	<u>20,167</u>
Other related parties (large-scale corporate conglomerate):				
Hyundai Heavy Industries Co., Ltd.	57,696	795	8,524	8,409
Hyundai Samho Heavy Industries Co., Ltd.	28,457	524	-	534
Hyundai Mipo Dockyard Co., Ltd.	17,310	-	8	1,450
Hyundai E&T Co., Ltd.	-	71	1,047	-
Ulsan Hyundai Football Club Co., Ltd.	8	2,833	-	-
Hyundai Heavy Industries MOS Co., Ltd.	24	-	1,811	-
Hyundai Energy Solutions America Inc.	227	-	66	-
Hyundai Heavy Industries Power Systems Co., Ltd.	2,100	945	660	71
S-Oil Co., Ltd.	-	-	2,897	7,178
Saudi Arabian Oil Company	-	-	341,903	-
Aramco Trading Limited	-	-	1,226	-
Aramco Trading Company	-	-	47,266	19
Aramco Trading Singapore Pte Ltd.	80,011	-	1,073	-
Aramco Trading Fujairah FZE	-	-	35,206	-
Others	885	-	-	-
	<u>186,718</u>	<u>5,168</u>	<u>441,687</u>	<u>17,661</u>
₩	<u>217,466</u>	<u>93,926</u>	<u>471,280</u>	<u>302,398</u>

HD HYUNDAI CO., LTD. AND SUBSIDIARIES
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48. Related Parties, Continued

(3) Fund transactions with related parties

1) For the years ended December 31, 2022 and 2021, Hyundai Oilbank Co., Ltd., a subsidiary, received dividends of respectively ₩4,002 million and ₩2,401 million from Koramco Energy Plus Reit and subsidiary.

2) For the years ended December 31, 2022 and 2021, Hyundai Oilbank Co., Ltd., a subsidiary, paid dividends of ₩65,329 million and ₩16,166 million to Aramco Overseas Company B.V which has significant influence over the Group.

3) For the year ended December 31, 2022, the subsidiary Hyundai Oilbank Co., Ltd. participated in capital increases of the joint venture Hyundai Cosmo Co., Ltd. and the associate Eugene Special Growth Opportunity Securities Investment trust No.1 with paid-in amounts of ₩70,000 million and ₩47,500 million, respectively.

4) For the year ended December 31, 2022, Korea Shipbuilding & Offshore Engineering Co., Ltd., a subsidiary, received dividends of ₩3,327 million from New Korea Country Club and others.

5) For the year ended December 31, 2022, the subsidiary, Korea Shipbuilding and Offshore Engineering Co., Ltd., participated in a capital increase of the associate, International Maritime Industries Company, and paid SAR 75,000 thousand. As of December 31, 2022, the paid-in capital increase procedure has been completed, and a total of SAR 138,750 thousand, including SAR 63,750 thousand paid during the previous year, has been replaced with investment in associates from deposits.

6) For the year ended December 31, 2022, Hyundai Doosan Infracore Co., Ltd., a subsidiary, acquired a 50% share in Tianjin Hyundai Doosan Engine Company Ltd. for ₩5,017 million, and included it as a subsidiary. In addition, ₩2,730 million was contributed as additional investment, and the name was changed to Tianjin Hyundai Doosan Engine Co., Ltd.

7) For the year ended December 31, 2021, HHI China Investment Co., Ltd., a subsidiary, has cashpooling arrangements with other related parties, and the details of the Group's fund transactions under the agreement are as follows:

(In thousands of CNY currency)

		2021		
		<u>Beginning balance</u>	<u>Change</u>	<u>Ending balance</u>
Yantai Hyundai Moon Heavy Industries Co., Ltd.	Borrowing CNY	17,335	(17,335)	-

In order to secure debt amounting to ₩90,000 million of Koramco Banpo PFV Co., Ltd., an associate, 189,000 shares of the common stocks that the Group owns have been pledged.

(4) Compensation for key management of the Group for the years ended December 31, 2022 and 2021 are as follows:

(In millions of won)

	<u>2022</u>	<u>2021</u>
Short-term employee benefits	₩ 31,585	17,355
Post-employment benefits	7,924	1,652
	<u>₩ 39,509</u>	<u>19,007</u>

Key management is defined as directors and internal auditors who have important roles and responsibilities involving the planning, operation and control of the Group.

HD HYUNDAI CO., LTD. AND SUBSIDIARIES
Notes to the Consolidated Financial Statements, Continued
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49. Disposal group held for sale

Assets held for sale and liabilities held for sale for the years 2022 and 2021 are as follows:

<i>(In millions of won)</i>	<u>2022</u>	<u>2021</u>
Hyundai Oilbank Co., Ltd.		
Investments in associates and joint ventures(*1)	₩ -	3,768
Hyundai LNS Co., Ltd		
Property, Plant and Equipment(*2)	-	1,527
Hyundai Robotics Investment (Shanghai) Co., Ltd.		
Investments in associates and joint ventures(*3)	<u>2,952</u>	<u>-</u>
	<u>₩ 2,952</u>	<u>5,295</u>

(*1) It entered into a stock sale agreement of Koramco Ocheon PFV Co., Ltd., an associate for the year ended December 31, 2021. The expected number of shares that the Group holds is 202,500 shares and the sale price is ₩17,300 million. For the year ended December 31, 2022, the sale process was completed.

(*2) As of December 31, 2021, Robot logistics system demo centers were decided to be paid for paid-in capital decrease to ASETEC Co., Ltd and the entire assets were classified as assets held for sale. The payment for capital reduction was completed on January 31, 2022 after creditor protection procedures expired.

(*3) For the year ended December 31, 2022, it entered into a stock sale agreement of Haining Hagong Hyundai Robotics Co., Ltd., and 6% out of 30% of shares was sold.

HD HYUNDAI CO., LTD. AND SUBSIDIARIES
Notes to the Consolidated Financial Statements, Continued
For the years ended December 31, 2022 and 2021

50. Subsequent Events

- (1) On January 30, 2023, the Group made a capital contribution of USD 3,500 thousand to PT Hyundai Construction Equipment Asia, a subsidiary, for the purpose of operating funds.
- (2) On January 3, 2023, the Group entered into an agreement to purchase 4,647,201 shares of convertible preferred stock with voting rights held by Triton 1 Limited, a financial investor in Hyundai Samho Heavy Industries Co., Ltd., a subsidiary, and completed the acquisition of the convertible preferred stock with voting rights on February 1, 2023.
- (3) The Parent company issued corporate bonds amounting to ₩100,000 million on February 23, 2023.
- (4) Hyundai Oilbank Co., Ltd., a subsidiary, issued corporate bonds amounting to ₩300,000 million on February 22, 2023.
- (5) Korea Shipbuilding & Offshore Engineering Co., Ltd., a subsidiary, established SEAMARQ Services Co., Ltd. by contributing ₩3,000 million in capital on February 20, 2023.