

Hana Financial Group Inc. and its subsidiaries

Consolidated Financial Statements

December 31, 2022

(With the Independent Auditor' s Report Thereon)

Hana Financial Group Inc.

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INDEPENDENT AUDITOR'S REPORT

English Translation of Independent Auditor's Report Originally Issued in Korean on
March 10, 2023

To the Shareholders and the Board of Directors of Hana Financial Group Inc.

Audit Opinion

We have audited the consolidated financial statements of Hana Financial Group Inc. and its subsidiaries (the "Group"), which comprise the consolidated statement of financial position as of December 31, 2022, and the consolidated statement of comprehensive income, consolidated statement of changes in shareholders' equity and separate statement of cash flows, for the years then ended, and notes to the consolidated financial statements, including a summary of significant accounting policies.

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

Basis for Audit Opinion

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

Key audit matter

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

1. Assessment of the allowance for credit losses for loans

As discussed in Note 3, 16 to the consolidated financial statements, the Group recognized an allowance for credit losses using the Expected Credit Loss (ECL) impairment model for loans at amortized cost amounting to KRW 2,419,868 million as of December 31, 2022. A lifetime ECL is recognized for those loans that have experienced a Significant Increase in Credit Risk (SICR) since initial recognition or are credit impaired, otherwise a 12-month ECL is recognized. The Group measures ECL allowances on an individual basis for individually significant loans which are credit impaired and for those which have experienced a SICR and demonstrate certain other high risk indicators (for example, debt restructuring). The individual assessment involves judgement by the Group in estimating the future cash flows, i

ncluding the value of related collateral. The allowance for credit losses for other loans are measured on a collective basis. For these loans, the Group measures ECL based on its estimates of the Probability of Default (PD), the Loss Given Default (LGD) and the Exposure at Default (EAD) as well as the impact of Forward-Looking information (FLI). For the loans measured on a collective basis, one of the relevant inputs for determining PD is the internal credit risk rating of the borrower.

The internal credit risk rating of the borrower is defined by the Group using quantitative and qualitative factors.

We identified the assessment of the allowance for credit losses for loans as a key audit matter. A high degree of audit effort, including specialized skills and knowledge, and subjective and complex auditor judgment was involved to evaluate the Group's estimates of future cash flows, including from the sale of collateral, for the loans with ECL measured on an individual basis. In addition, a high degree of audit effort, including specialized skills and knowledge, and subjective and complex auditor judgment was involved to evaluate the Group's estimates and judgments with respect to the measurement of ECL on a collective basis. This included the analysis of the qualitative factors considered in determining the internal credit risk ratings of loans, the calculation of 12 month and lifetime PD, the calculation of LGD and the evaluation of FLI incorporated in the measurement of collective ECL.

The following are the primary procedures we performed to address this key audit matter. We evaluated the design and tested the operating effectiveness of certain internal controls related to: (i) the estimation of future cash flows for individually assessed loans, including controls over the work of external valuation professionals engaged by the Group to assess the future cash flows together with the value of collateral; (ii) the validation of the models used to determine the inputs to the collective ECL calculation and the impact of FLI; (iii) the assessment of quantitative and qualitative factors in the process of determining the internal credit risk rating of the loans, including the review of internal credit risk ratings performed by an independent department with access to the same qualitative information; and (iv) the completeness and accuracy of data used in the determination of the credit risk

sk ratings. We assessed the estimates of future cash flows expected from collateral on a sample of individually assessed loans by: (i) comparing assumptions made with information obtained from internal and external sources; and (ii) assessing the reliability of information used in the estimates, including the qualification of external valuation professionals engaged by the Group. We involved credit risk and information technology professionals with specialized skills and knowledge who assisted in: (i) evaluating the methodology and key judgments used in determining the PD and LGD parameters; (ii) evaluating how FLI was incorporated in the collective ECL model; and (iii) checking the accuracy of the calculation of PDs, and a sample of LGDs. We evaluated whether, for a sample of loans with ECL measured on a collective basis, Group policy was applied in the internal credit risk rating process.

2. Assessment of the measurement of fair value of certain level 3 derivatives and level 3 derivative-linked securities

As described in Note 5 to the consolidated financial statements, the Group discloses the fair value of financial instruments classified at level 3 if the inputs that have a significant impact on the fair value assessment results are based on information that is not observable in the market.

In particular, Hana Securities Co., Ltd. evaluates some derivatives and derivatives-linked securities classified as level 3 through its own evaluation system. As of the end of 2022, the derivative assets was accounted for KRW 17,627 million and the derivative liabilities was accounted for KRW 258,8853 million. In addition, the derivative-linked securities was accounted at KRW 96,626 million for fair value through profit or loss financial assets and at KRW 3,346,917 million for fair value through profit or loss designated financial liabilities. To measure these financial instruments, the Group uses valuation methods such as discounted cash flow models and option models, which require various inputs and assumptions depending on the characteristics of the financial instruments.

The principal considerations for our determination that performing procedures relating to valuation of level 3 derivatives and level 3 derivative-linked securities is a key audit matter are: (i) there was significant judgment by management in determining the internal valuation models, which in turn led to a high degree of auditor subjectivity in performing procedures related to the valuation of derivatives using internal valuation models; (ii) there was significant judgment and effort in evaluating audit evidence related to these internal valuation models and unobservable inputs used to determine the valuation of level 3 derivatives and level 3 derivative-linked securities; and (iii) the audit effort involved the use of professionals with specialized skill and knowledge.

The following are the primary procedures we performed to address this key audit matter. We evaluated the design and tested the operating effectiveness of certain internal controls related to the measurement of fair value of the level 3 derivatives and derivative-linked securities that are valued using internally developed valuation models. These procedures included controls over the review on development and validation on change of the internal valuation models and unobservable inputs used in valuation of level 3 derivatives. Also, we used professionals with specialized skill, competence and objectivity to evaluate valuation models and unobservable inputs for specific contracts, and to confirm whether the fair value calculated using independently developed valuation models and unobservable inputs is significantly different from the management's fair value.

Other Matters

EY Korea has audited the consolidated statement of financial position of the Company as of December 31, 2021, and the related consolidated statement of comprehensive income, consolidated statement of changes in equity, and consolidated statement of cash flows for the year then ended in accordance with KSAs (not presented in this report), and the report dated March 10, 2022, expressed an unqualified opinion. By the way, the consolidated financial statements that EY Korea expr

essed an unqualified opinion are the consolidated financial statements before the adjustments described in Note 3-35-5 to the consolidated financial statements were reflected, and the comparative consolidated financial statements as of December 31, 2021, are consolidated financial statements were reflected such adjustments.

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

Management is responsible for the preparation of the accompanying consolidated financial statements in accordance with K-IFRS, and for such internal control as they determine 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 of the Group is responsible for assessing the Group's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless management either intends to liquidate the Group or to cease operations, or has no realistic alternative but to do so.

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

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

Our objectives are to obtain reasonable assurance about whether the consolidated financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with 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 audit 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 and the reasonableness of accounting estimates and related disclosures made by management.
- Conclude on the appropriateness of the management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Group's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the consolidated financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future e

vents 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 are solely responsible for our audit opinion.

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

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

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



The engagement partner on the audit resulting in this independent auditor's report is Ho Young, Heo.

March 10, 2023

Deloitte Idnjin LLC

Notice to Readers

This report is effective as of March 10, 2023, the auditor's report date. Certain subsequent events or circumstances may have occurred between the auditor's report date and the time the auditor's report is read. Such events or circumstances could significantly affect the consolidated financial statements and may result in modifications to the auditor's report.

Hana Financial Group Inc. and its subsidiaries

Consolidated Financial Statements

for the years ended December 31, 2022 and 2021

The accompanying consolidated financial statements including all footnote disclosures were prepared by and are the responsibility of the management of Hana Financial Group Inc.

Young-Joo Ham

President and Chief Executive Officer

Hana Financial Group Inc.

Consolidated Statements of Financial Position

As of December 31, 2022 and 2021

Hana Financial Group Inc. and its subsidiaries

(Korean won in millions)

Accounts	Notes	December 31, 2022	December 31, 2021
Assets			
I. Cash and due from banks	5, 6, 7, 9, 11, 15, 57	45,756,109	31,406,596
II. Financial assets measured at fair value through profit or loss("FVTPL")	5, 6, 7, 9, 12,15, 17	51,158,805	38,718,285
III. Financial assets measured at fair value through other comprehensive income ("FVOCI")	5, 6, 7, 9, 13, 15, 17	37,370,178	39,473,529
IV. Securities measured at amortized cost	5, 6, 7, 9, 14, 15, 17	38,928,911	23,769,017
V. Loans measured at amortized cost	5, 6, 7, 9, 15, 16	361,484,896	337,349,273
VI. Derivative assets used for hedging	5, 6, 7, 9, 17	32,312	77,507
VII. Investments in associates and joint ventures	18	3,917,787	3,282,042
VIII. Property and equipment	15, 19, 21	5,243,039	3,539,669
IX. Investment properties	20	1,250,085	1,055,719
X. Intangible assets	22	870,443	748,337
XI. Net defined benefit assets	30	134,965	–
XII. Deferred tax assets	53	428,812	302,030
XIII. Current income tax assets		41,881	27,515
XIV. Non-current assets held for sale	23	72,950	412,594
XV. Other assets	5, 6, 7, 9, 24	22,182,026	22,283,157
Total assets		568,873,199	502,445,270
Liabilities			
I. Financial liabilities measured at FVTPL	5, 6, 7, 9, 17, 25, 26	28,020,558	15,876,923
II. Deposits	5, 6, 7, 9, 27	362,575,964	325,149,095
III. Borrowings	5, 6, 7, 9, 28	37,087,312	30,261,598
IV. Debentures	5, 6, 7, 9, 29	56,673,832	54,476,161
V. Derivative liabilities used for hedging	5, 6, 7, 9, 17	546,408	118,599
VI. Net defined benefit liabilities	30	10,610	198,020
VII. Provisions	31	636,761	587,422
VIII. Deferred tax liabilities	53	2,259	203,288
IX. Current income tax liabilities		728,389	782,822
X. Other liabilities	5, 6, 7, 9, 32	45,172,217	39,292,002
Total liabilities		531,454,310	466,945,930
Equity			
I. Equity attributable to equity holder of the parent		36,426,453	34,218,635
1. Issued capital	33	1,501,210	1,501,210
2. Hybrid equity securities	33	3,294,688	2,626,459
3. Capital surplus	33	10,581,291	10,576,587
4. Capital adjustment	34	(165,041)	(315,606)
5. Accumulated other comprehensive loss	35	(1,980,988)	(994,227)

Accounts	Notes	December 31, 2022	December 31, 2021
6. Retained earnings	36	23,195,293	20,824,212
II. Non-controlling shareholders' equity	1	992,436	1,280,705
Total equity		37,418,889	35,499,340
Total liabilities and equity		568,873,199	502,445,270

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

**Consolidated Statements of Profit or Loss and
Other Comprehensive Income**

For the years ended December 31, 2022 and 2021

Hana Financial Group Inc. and its subsidiaries

(Korean won in millions)

Accounts	Notes	2022		2021	
I. Net interest income	38, 39		8,919,763		7,437,205
1. Interest income		15,876,580		10,867,491	
2. Interest expense		(6,956,817)		(3,430,286)	
II. Net fees and commission income	38, 40		1,754,919		1,741,717
1. Fees and commission income		2,735,800		2,653,186	
2. Fees and commission expense		(980,881)		(911,469)	
III. Net gain on financial assets measured at FVTPL	38, 41, 42		273,599		789,984
IV. Net gain on financial assets measured at FVOCI	38, 43		17,146		104,548
V. Gain on disposal of financial assets measured at amortized cost	38, 44		61,066		76,830
VI. Loss on derivative assets used for hedging	38, 45		(67,719)		(51,735)
VII. Gain on foreign currencies transactions	38		516,085		38,322
VIII. Total operating income			11,474,859		10,136,871
IX. Impairment loss on financial assets	38, 46		(1,186,798)		(533,218)
X. Net operating income			10,288,061		9,603,653
XI. General and administrative expenses	38, 47		(4,432,949)		(4,050,460)
XII. Other operating income	38, 48, 50		2,101,877		1,587,197
XIII. Other operating expenses	38, 49, 50		(3,266,677)		(2,509,294)
XIV. Operating income			4,690,312		4,631,096
XV. Non-operating income			253,754		273,829
1. Net gain on valuation of investments in associates and joint ventures	18	233,166		130,980	
2. Other non-operating income	51	261,784		558,348	
3. Other non-operating expenses	52	(241,196)		(415,499)	
XVI. Net income before income tax expense			4,944,066		4,904,925
XVII. Income tax expenses	53		(1,322,872)		(1,323,343)
XVIII. Net income for the year			3,621,194		3,581,582
XIX. Other comprehensive income (loss)			(997,923)		62,539
1. Items that may be reclassified subsequently to profit or loss:		(936,516)		27,642	
Loss on valuation of debt securities measured at FVOCI		(900,173)		(405,131)	
Exchange differences on translation of foreign operations, net		5,992		292,027	
Changes in capital from valuation of equity method for investments in associates		(1,366)		181,108	
Loss on valuation of net investment in hedges		(20,529)		(40,788)	
Gain (loss) on valuation of cash flow hedges		(3,864)		2,234	

Accounts	Notes	2022		2021	
Other comprehensive loss on separate accounts		(16,576)		(1,808)	
2. Items that will not be reclassified subsequently to profit or loss:		(61,407)		34,897	
Gain (loss) on valuation of equity securities measured at FVOCI		(56,142)		18,208	
Effect of changes in the credit risk of financial liabilities designated at FVTPL		(7,675)		(10,356)	
Loss on valuation of the fair value hedging instruments		(11,861)		(14,138)	
Changes in capital from valuation of equity method for investments in associates		(14,676)		1,534	
Remeasurements of the defined benefit plan		28,947		39,649	
XX. Total comprehensive income for the year			2,623,271		3,644,121
XXI. Net income for the year attributable to:			3,621,194		3,581,582
Equity of owner of the parent		3,552,391		3,526,068	
Non-controlling interests	1	68,803		55,514	
XXII. Total comprehensive income for the year attributable to:			2,623,271		3,644,121
Equity of owner of the parent		2,565,362		3,570,890	
Non-controlling interests	1	57,909		73,231	
XXII. Earnings per share	55				
Basic earnings per share (Korean won)			11,803		11,819
Diluted earnings per share (Korean won)			11,803		11,819

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

Consolidated Statements of Changes in Equity

For the years ended December 31, 2022 and 2021

Hana Financial Group Inc. and its subsidiaries

(Korean won in millions)

Accounts	Issued capital	Hybrid equity securities	Capital surplus	Capital adjustments	Accumulated other comprehensive income	Retained earnings	Equity attributable to equity holder of the parent	Non-controlling shareholder's equity	Total
As of January 1, 2021	1,501,210	2,007,927	10,579,945	(315,030)	(1,001,953)	17,941,584	30,713,683	886,605	31,600,288
Annual dividends	—	—	—	—	—	(393,611)	(393,611)	—	(393,611)
Interim dividends	—	—	—	—	—	(204,094)	(204,094)	—	(204,094)
Issuance of hybrid equity securities	—	618,532	—	—	—	—	618,532	353,739	972,271
Redemption of hybrid equity securities	—	—	(165)	—	—	—	(165)	(29,835)	(30,000)
Paid-in capital increases of subsidiaries	—	—	(3,109)	(578)	—	—	(3,687)	17	(3,670)
Changes in shares of subsidiaries	—	—	—	—	—	—	—	12,889	12,889
Dividends on hybrid equity securities	—	—	—	—	—	(80,083)	(80,083)	(15,941)	(96,024)
Reclassification of equity securities measured at FVOCI	—	—	—	—	(37,096)	37,096	—	—	—
Others	—	—	(84)	2	—	(2,748)	(2,830)	—	(2,830)
Subtotal	1,501,210	2,626,459	10,576,587	(315,606)	(1,039,049)	17,298,144	30,647,745	1,207,474	31,855,219
Net income for the year	—	—	—	—	—	3,526,068	3,526,068	55,514	3,581,582
Loss on valuation of financial assets measured at FVOCI	—	—	—	—	(386,160)	—	(386,160)	(763)	(386,923)
Exchange differences on translation of foreign operations	—	—	—	—	274,147	—	274,147	17,880	292,027
Changes in capital from valuation of equity method for investments in associates	—	—	—	—	182,658	—	182,658	(16)	182,642
Loss on valuation of net investment hedges	—	—	—	—	(40,788)	—	(40,788)	—	(40,788)
Gain on valuation of cash flow hedges	—	—	—	—	1,899	—	1,899	335	2,234
Loss on valuation of fair value hedges	—	—	—	—	(14,138)	—	(14,138)	—	(14,138)
Other comprehensive loss on separate accounts	—	—	—	—	(1,808)	—	(1,808)	—	(1,808)

Accounts	Issued capital	Hybrid equity securities	Capital surplus	Capital adjustments	Accumulated other comprehensive income	Retained earnings	Equity attributable to equity holder of the parent	Non-controlling shareholder's equity	Total
Effect of changes in credit risk on financial liabilities designated as measured at FVTPL	–	–	–	–	(10,356)	–	(10,356)	–	(10,356)
Remeasurement of the net defined benefit plan	–	–	–	–	39,368	–	39,368	281	39,649
Total comprehensive income for the year	–	–	–	–	44,822	3,526,068	3,570,890	73,231	3,644,121
As of December 31, 2021	1,501,210	2,626,459	10,576,587	(315,606)	(994,227)	20,824,212	34,218,635	1,280,705	35,499,340
As of January 1, 2022	1,501,210	2,626,459	10,576,587	(315,606)	(994,227)	20,824,212	34,218,635	1,280,705	35,499,340
Annual dividends	–	–	–	–	–	(699,752)	(699,752)	–	(699,752)
Interim dividends	–	–	–	–	–	(233,251)	(233,251)	–	(233,251)
Issuance of hybrid equity securities	–	668,229	–	–	–	–	668,229	–	668,229
Paid-in capital increases of subsidiaries	–	–	4,905	–	44	–	4,949	8,299	13,248
Changes in shares of subsidiaries	–	–	(201)	–	–	–	(201)	(325,082)	(325,283)
Dividends on hybrid equity securities	–	–	–	–	–	(111,210)	(111,210)	(29,395)	(140,605)
Retirement of treasury stock	–	–	–	149,972	–	(149,972)	–	–	–
Reclassification of equity securities measured at FVOCI	–	–	–	–	224	(224)	–	–	–
Others	–	–	–	593	–	13,099	13,692	–	13,692
Subtotal	1,501,210	3,294,688	10,581,291	(165,041)	(993,959)	19,642,902	33,861,091	934,527	34,795,618
Net income for the year	–	–	–	–	–	3,552,391	3,552,391	68,803	3,621,194
Loss on valuation of financial assets measured at FVOCI	–	–	–	–	(953,150)	–	(953,150)	(3,165)	(956,315)
Exchange differences on translation of foreign operations	–	–	–	–	13,946	–	13,946	(7,954)	5,992
Changes in capital from valuation of equity method for investments in associates	–	–	–	–	(16,068)	–	(16,068)	26	(16,042)
Loss on valuation of net investment hedges	–	–	–	–	(20,529)	–	(20,529)	–	(20,529)
Gain (loss) on valuation of cash flow hedges	–	–	–	–	(4,085)	–	(4,085)	221	(3,864)

Accounts	Issued capital	Hybrid equity securities	Capital surplus	Capital adjustments	Accumulated other comprehensive income	Retained earnings	Equity attributable to equity holder of the parent	Non-controlling shareholder's equity	Total
Loss on valuation of fair value hedging instruments	–	–	–	–	(11,861)	–	(11,861)	–	(11,861)
Special account other comprehensive loss	–	–	–	–	(16,576)	–	(16,576)	–	(16,576)
Effect of changes in credit risk on financial liabilities designated as measured at FVTPL	–	–	–	–	(7,675)	–	(7,675)	–	(7,675)
Remeasurement of the net defined benefit plan	–	–	–	–	28,969	–	28,969	(22)	28,947
Total comprehensive income for the year	–	–	–	–	(987,029)	3,552,391	2,565,362	57,909	2,623,271
As of December 31, 2022	1,501,210	3,294,688	10,581,291	(165,041)	(1,980,988)	23,195,293	36,426,453	992,436	37,418,889

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

Consolidated Statements of Cash Flows

For the years ended December 31, 2022 and 2021

Hana Financial Group Inc. and its subsidiaries

(Korean won in millions)

Accounts	2022	2021
I. Net cash cash provided by operating activities	25,063,802	4,929,909
1. Net income before income tax expenses	4,944,066	4,904,925
2. Adjustments to reconcile net income before income tax expense	(8,994,524)	(7,504,043)
Interest expenses	6,956,817	3,430,286
Interest income	(15,876,580)	(10,867,491)
Dividends income	(74,761)	(66,838)
3. Adjustments to non-cash items	3,044,397	1,829,221
Net loss on valuation of financial assets measured at FVTPL	969,817	277,054
Net gain on disposal of financial assets measured at FVTPL	(32,675)	(42,913)
Net gain on transaction of financial assets measured at FVOCI	(3,315)	(93,754)
Reversal of credit loss allowance on financial assets measured at FVOCI	(361)	(64)
Provision for credit loss allowance on financial assets measured at amortized cost	66,946	10,286
Net loss on derivative assets used for hedging	68,786	50,561
Net loss (gain) on foreign currencies transactions	(348,998)	254,606
Provisions of credit loss allowance	1,019,075	522,996
Depreciation and amortization	932,061	768,787
Share-based compensation expenses	21,976	28,712
Provision for postemployment benefit obligations	183,733	194,874
Net gain on valuation of investments in associates and joint ventures	(233,166)	(130,980)
Other gain relating to property and equipment and intangible assets	(5,278)	(62,272)
Others	405,796	51,328
4. Changes in operating assets and liabilities:	17,572,976	(107,019)
Due from banks	(1,591,043)	(527,362)
Financial assets measured at FVTPL (held for trading)	(12,567,383)	4,638,039
Loans measured at amortized cost	(19,172,516)	(23,112,201)
Net defined benefit assets	(134,965)	-
Derivative assets used for hedging	(2,193)	(21,013)
Investments in associates and joint ventures (related to dividend)	47,465	23,201
Other assets	1,664,482	(2,849,831)
Financial liabilities measured at FVTPL	12,957,613	(4,657,581)
Deposits	32,936,503	24,942,466
Derivative liabilities used for hedging	(3,118)	(20,857)
Net defined benefit liabilities	(331,040)	(268,397)
Provisions	21,428	29,918
Other liabilities	3,747,743	1,716,599
5. Cash provided by operating activities:	15,571,480	10,441,547
Interest received	15,496,088	10,374,289
Dividend received	75,392	67,258
6. Cash used in operating activities:	(7,074,593)	(4,634,722)

Accounts	2022		2021	
Interest paid	(5,550,366)		(3,530,628)	
Income tax paid	(1,524,227)		(1,104,094)	
II. Net cash flows used in investing activities		(18,309,511)		(8,931,994)
Net cash flows used in acquisition of subsidiary	121,520		40,612	
Purchase of financial assets measured at FVTPL (other than held for trading)	(17,499,913)		(16,707,654)	
Proceeds from disposal of financial assets measured at FVTPL (other than held for trading)	16,263,845		17,005,226	
Purchase of financial assets measured at FVOCI	(11,856,630)		(21,648,517)	
Proceeds from disposal of financial assets measured at FVOCI	13,108,794		18,462,270	
Purchase of financial assets measured at amortized cost	(16,706,356)		(10,511,761)	
Proceeds from redemption of financial assets measured at amortized cost	1,652,761		5,429,969	
Acquisition of investment in associates and joint ventures	(633,803)		(402,667)	
Proceeds from disposal of investment in associates and joint ventures	204,257		357,122	
Purchase of property and equipment	(2,458,635)		(1,163,853)	
Proceeds from disposal of property and equipment	189,121		359,175	
Purchase of investment properties	(449,462)		(171,986)	
Proceeds from disposal of investment properties	19,998		127,847	
Acquisition of intangible assets	(309,289)		(201,443)	
Proceeds from disposal of intangible assets	260		9,122	
Decrease in non-current assets held for sale, net	9,275		16,147	
Decrease in guarantee deposit, net	34,746		68,397	
III. Net cash flows provided by financing activities		6,463,890		6,872,426
Increase of borrowings, net	6,082,331		2,827,521	
Issuance of debentures	38,261,070		39,441,225	
Redemption of debentures	(36,938,979)		(35,425,612)	
Payment of lease liabilities	(223,276)		(224,509)	
Dividends payment	(933,003)		(597,705)	
Issuance of hybrid equity securities	668,229		618,532	
Dividends on hybrid equity securities	(111,210)		(80,083)	
Decrease in non-controlling shareholders' equity, net	(341,272)		304,128	
Net decrease in hedging instruments	-		8,929	
IV. Effect of exchange rate changes on cash and cash equivalents		(399,427)		644,916
V. Net increase in cash and cash equivalents (I +II+III+IV)		12,818,754		3,515,257
VI. Cash and cash equivalents as of January 1		26,936,469		23,421,212
VII. Cash and cash equivalents as of December 31 (Note 57)		39,755,223		26,936,469

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

Notes to the consolidated financial statements

As of and for the Years Ended December 31, 2022 and 2021

Hana Financial Group Inc. and its subsidiaries

1. Company Overview

The general information of Hana Financial Group, Inc. ("HFG" or "the Company" or "the Parent Company"), which is the controlling entity, and its controlled subsidiaries (collectively, "the Group") under K-IFRS 1110, is as follows.

1-1 HFG

HFG was incorporated on December 1, 2005 under the Financial Holding Companies Act, in exchange for those entities' shares owned by the shareholders of Hana Bank, Hana Securities Co., Ltd. (formerly known as Hana Financial Investment Co., Ltd.) ("Hana Securities"), Hana TI (formerly known as Hana I&S) and Hana Institute of Finance. HFG primarily engages in the management of its subsidiaries, which operate in the financial services industry or closely related sectors in the Republic of Korea.

The capital stock amounted to ₩1,021,281 million at the time of incorporation. As of December 31, 2022, the capital stock amounted to ₩1,501,210 million due to stock dividends, stock exchanges and capital increase. Also, the Group's common shares were listed on the Korea Exchange ("KRX") on December 12, 2005 and the Group's authorized common shares are 800,000,000 shares as of December 31, 2022.

1-2 Scope of consolidation

Details of subsidiaries in scope of consolidation as of the December 31, 2022 are as follows:

Classification	Country	Major business	Ownership (%) (*1)	Reporting date
Subsidiaries of HFG:				
Hana Bank	Korea	Banking	100.0	December 31, 2022
Hana Securities	Korea	Financial investments	100.0	December 31, 2022
Hana Card	Korea	Credit card business	100.0	December 31, 2022
Hana Capital	Korea	Installment credit financing	100.0	December 31, 2022
Hana Asset Trust	Korea	Real estate trust	100.0	December 31, 2022
Hana TI	Korea	System development service	100.0	December 31, 2022
Hana Savings Bank	Korea	Mutual savings banking	100.0	December 31, 2022
Hana Life Insurance	Korea	Life insurance	100.0	December 31, 2022
Hana Insurance. Co., Ltd.	Korea	Non-life insurance	89.6	December 31, 2022
HIS	Korea	Transfer agent	100.0	December 31, 2022
Hana Alternative Asset Management	Korea	Asset management	100.0	December 31, 2022
Hana Ventures	Korea	New technology financial business	100.0	December 31, 2022
Hana F&I, Inc..	Korea	Investment and management service for non-performing loan ("NPL") asset-backed securities	99.8	December 31, 2022
Finnq Co., Ltd.	Korea	Other financial business	100.0	December 31, 2022
Hana Alternative BlackRock QIP Trust No. 73	Korea	Privately placed fund	33.3	December 31, 2022
Hana Alternative Special Investment Private Trust No.90	Korea	Privately placed fund	67.5	December 31, 2022
Hana Alternative UK Government Office Professional Investors' Private Real Estate Investment Feeder Trust No. 1	Korea	Privately placed fund	50.1	December 31, 2022
Hana Alternative Infra Special Investment Private Trust No. 3-1	Korea	Privately placed fund	100.0	December 31, 2022
Hana Alternative Infra Special Investment Private Trust No. 3-2	Korea	Privately placed fund	100.0	December 31, 2022
Hana Alternative Infra Special Investment Private Trust No. 3-3	Korea	Privately placed fund	100.0	December 31, 2022
Hana Alternative Energy Infra Special Asset Fund 3-4	Korea	Privately placed fund	100.0	December 31, 2022
Hana Alternative Special Investment Private Trust No. 100	Korea	Privately placed fund	50.0	December 31, 2022
Hana Alternative Special Investment Private Trust No. 102	Korea	Privately placed fund	44.0	December 31, 2022
Hana Alternative Special Investment Private Trust No. 108	Korea	Privately placed fund	83.3	December 31, 2022
Hana Alternative Special Investment Private Trust No. 123-1 (USD)	Korea	Privately placed fund	100.0	December 31, 2022
Hana Alternative Special Asset Private Trust No. 126	Korea	Privately placed fund	30.3	December 31, 2022
Hana Private Real Estate Investment Trust No. 165	Korea	Privately placed fund	58.0	December 31, 2022
Hana Alternative Investment Land Chip Real Estate Private Trust No. 68	Korea	Privately placed fund	52.2	December 31, 2022
Hana Ventures New Technology Investment Association No. 4	Korea	New technology financial business	100.0	December 31, 2022
Hana Ventures New Technology Investment Association No. 6	Korea	New technology financial business	73.8	December 31, 2022
Hana Ventures New Technology Investment Association No. 7	Korea	New technology financial business	100.0	December 31, 2022
HANA Alternative Wando Geum-il Wind Power Infra Special Asset No. 1	Korea	Privately placed fund	66.7	December 31, 2022
Hana Special New Deal National Representative Growth Private Trust	Korea	Privately placed fund	100.0	December 31, 2022
Hana Alternative Frontier Private Investment Trust No. 1	Korea	Privately placed fund	67.6	December 31, 2022
Hana Alternative Private Real Estate Investment Trust No. 119	Korea	Privately placed fund	40.2	December 31, 2022
Hana Alternative Private Real Estate Investment Trust No. 181	Korea	Privately placed fund	52.5	December 31, 2022
Hana Alternative Private Real Estate Investment Trust No. 186	Korea	Privately placed fund	80.7	December 31, 2022
Hana Alternative Private Real Estate Investment Trust No. 187	Korea	Privately placed fund	70.0	December 31, 2022
Hana Alternative Investment PRC Logistics General Private Investment Trust No. 1 (professional)	Korea	Privately placed fund	100.0	December 31, 2022
Hana Beyond Finance Fund	Korea	Privately placed fund	100.0	December 31, 2022
Hana Alternative Private Real Estate Investment Trust No. 180	Korea	Privately placed fund	100.0	December 31, 2022
Hana Alternative Private Real Estate Investment Trust No. 182	Korea	Privately placed fund	61.9	December 31, 2022
Hana Alternative Private Real Estate Investment Trust No. 185	Korea	Privately placed fund	88.5	December 31, 2022

Classification	Country	Major business	Ownership (%) (*1)	Reporting date
Hana Alternative Investment Chuncheon Fuel Cell General Private Investment Trust No. 1 (professional)	Korea	Privately placed fund	36.4	December 31, 2022
Defense Technology Innovation Private Investment Trust	Korea	Privately placed fund	100.0	December 31, 2022
Specified Money Trust (HFG) (*2)	Korea	Specified money trust	-	December 31, 2022
Subsidiaries of Hana Bank:				
Hana Bank (China) Co., Ltd.	China	Financial business	100.0	December 31, 2022
KEB Hana Bank Canada	Canada	Financial business	100.0	December 31, 2022
KEB Hana Bank Germany	Germany	Financial business	100.0	December 31, 2022
PT. Bank KEB Hana Indonesia	Indonesia	Financial business	69.0	December 31, 2022
Banco KEB Hana do Brazil S.A.	Brazil	Financial business	100.0	December 31, 2022
KEB Hana NY Financial Corp.	United States	Financial business	100.0	December 31, 2022
KEB Hana LA Financial Corp.	United States	Financial business	100.0	December 31, 2022
KEB Hana Global Finance	Hong Kong	Financial business	100.0	December 31, 2022
KEB HNB RUS LLC	Russia	Financial business	99.9	December 31, 2022
BANCO KEB HANA MEXICO S.A.	Mexico	Financial business	99.9	December 31, 2022
Hana Bancorp, inc.	United States	Financial business	96.8	December 31, 2022
GLN International Inc.	Korea	Other financial business	85.4	December 31, 2022
UBS Hana Power Private Equity Investment Trust 21 [Bond]	Korea	Privately placed fund	100.0	December 31, 2022
Hyundai Trust PEF Invest 16 [Bond]	Korea	Privately placed fund	100.0	December 31, 2022
Kyobo Axa Tomorrow Private Equity K+-1 [Bond]	Korea	Privately placed fund	100.0	December 31, 2022
Sevenstar Co., Ltd. (*3)	Korea	Other financial business	-	December 31, 2022
Marine Solution Co., Ltd. (*3)	Korea	Other financial business	-	December 31, 2022
Chungangstar Co., Ltd. (*3)	Korea	Other financial business	-	December 31, 2022
Hana Display First Ltd. (*3)	Korea	Other financial business	-	December 31, 2022
Ocean Betts The First Co., Ltd. (*3)	Korea	Other financial business	-	December 31, 2022
Hana H in the Holdings 1st LLC (*3)	Korea	Other financial business	-	December 31, 2022
H-Plus 1st, L.L.C. (*3)	Korea	Other financial business	-	December 31, 2022
Hana CK 1st Co., Ltd (*3)	Korea	Other financial business	-	December 31, 2022
Hana H in the Holdings 2nd L.L.C. (*3)	Korea	Other financial business	-	December 31, 2022
PIOTOWER1st, LLC (*3)	Korea	Other financial business	-	December 31, 2022
HEONEQ1st, LLC (*3)	Korea	Other financial business	-	December 31, 2022
HCONEQ1st, LLC (*3)	Korea	Other financial business	-	December 31, 2022
H Hotel ONEQ 1st, LLC (*3)	Korea	Other financial business	-	December 31, 2022
DPS 2nd, Co., Ltd (*3)	Korea	Other financial business	-	December 31, 2022
Bbq 1q 1st, LLC(*3)	Korea	Other financial business	-	December 31, 2022
Skoffice 1q 1st, LLC (*3)	Korea	Other financial business	-	December 31, 2022
Cleanenergy 1q 1st, LLC (*3)	Korea	Other financial business	-	December 31, 2022
HANA DL First Co., Ltd (*3)	Korea	Other financial business	-	December 31, 2022
HANA TERMINUS First Co., Ltd. (*3)	Korea	Other financial business	-	December 31, 2022
Hana Tech Value-Up Investment Fund	Korea	Other financial business	100.0	December 31, 2022
Hana 1Q Startup Investment Fund	Korea	Other financial business	100.0	December 31, 2022
THE HAM ONEQ 1st, LLC (*3)	Korea	Other financial business	-	December 31, 2022
HANA BAY 1st, LLC (*3)	Korea	Other financial business	-	December 31, 2022
HANA I.S 1st, LLC (*3)	Korea	Other financial business	-	December 31, 2022
HANA I.G 1st, LLC (*3)	Korea	Other financial business	-	December 31, 2022

Classification	Country	Major business	Ownership (%) (*1)	Reporting date
GRAND ONEQ 1st. LLC (*3)	Korea	Other financial business	-	December 31, 2022
THE MIRAE ONEQ 1st. LLC (*3)	Korea	Other financial business	-	December 31, 2022
DONG DAEGU TERMINAL 2nd. LLC (*3)	Korea	Other financial business	-	December 31, 2022
KENDALL NO.9 1st. LLC (*3)	Korea	Other financial business	-	December 31, 2022
BYK 3rd Co., Ltd. (*3)	Korea	Other financial business	-	December 31, 2022
Mini Hana 1st, LLC (*3)	Korea	Other financial business	-	December 31, 2022
Jinwoori 1Q 1st, LLC (*3)	Korea	Other financial business	-	December 31, 2022
Hana Double H 1Q 4th Co., Ltd. (*3)	Korea	Other financial business	-	December 31, 2022
Hana Double H 1Q 5th Co., Ltd. (*3)	Korea	Other financial business	-	December 31, 2022
H-ECHO 1st, LLC (*3)	Korea	Other financial business	-	December 31, 2022
HANA STARLORD 1st, LLC (*3)	Korea	Other financial business	-	December 31, 2022
CLEAN WORLD 1st, LLC (*3)	Korea	Other financial business	-	December 31, 2022
H-HANA 1st, LLC (*3)	Korea	Other financial business	-	December 31, 2022
HANA ANANTI 1st, LLC (*3)	Korea	Other financial business	-	December 31, 2022
One Q B777F 66872 Co., Ltd. (*3)	Cayman Islands	Other financial business	-	December 31, 2022
NAE CHON HANA 1st, LLC (*3)	Korea	Other financial business	-	December 31, 2022
DRAGON HANA 1st, LLC (*3)	Korea	Other financial business	-	December 31, 2022
HANA BAEKSA LOGISTICS 1st, LLC (*3)	Korea	Other financial business	-	December 31, 2022
HANA S ONE Q 1st, LLC (*3)	Korea	Other financial business	-	December 31, 2022
HOME PLUS HANA CONNECT, LLC (*3)	Korea	Other financial business	-	December 31, 2022
Antarctica 1st, Ltd (*3)	Korea	Other financial business	-	December 31, 2022
Enerbility Hana 1st, Ltd (*3)	Korea	Other financial business	-	December 31, 2022
Hana Plant 1st, Ltd (*3)	Korea	Other financial business	-	December 31, 2022
Gs Hana 1st, Ltd (*3)	Korea	Other financial business	-	December 31, 2022
Cha Cha Hana 1st, Ltd (*3)	Korea	Other financial business	-	December 31, 2022
T A 1st, Ltd (*3)	Korea	Other financial business	-	December 31, 2022
Neostar 6th, Ltd (*3)	Korea	Other financial business	-	December 31, 2022
Galaxia 1Q 1st, Ltd (*3)	Korea	Other financial business	-	December 31, 2022
Trust accounts guaranteeing the repayment of principal	Korea	Trust account	-	December 31, 2022
Subsidiaries of Hana Bancorp, inc.:				
KEB Hana Bank USA	United States	Banking	100.0	December 31, 2022
Subsidiaries of Hana Securities :				
Hana the First Private Equity Fund	Korea	Privately placed fund for institution	48.9	December 31, 2022
Hana Daol Land Chip Heungdeok Real Estate Private Fund 35	Korea	Privately placed fund	100.0	December 31, 2022
Hana Equity Investment Management (Shenzhen) Co., Ltd	China	Investment consulting	50.1	December 31, 2022
Hana Asset Management Asia Pte. Ltd.	Singapore	Investment consulting	100.0	December 31, 2022
Hana Land Chip Houston Real Estate Private Fund 59	Korea	Privately placed fund	100.0	December 31, 2022
Hana the Third Private Equity Fund	Korea	Privately placed fund for institution	35.0	December 31, 2022
Citizenfyu 1st Co., Ltd. (*3)	Korea	Other financial business	-	December 31, 2022
Portfolio 1st Co., Ltd. (*3)	Korea	Other financial business	-	December 31, 2022
Yellow Balloon 3rd Co., Ltd. (*3)	Korea	Other financial business	-	December 31, 2022
Areca 1st Co., Ltd. (*3)	Korea	Other financial business	-	December 31, 2022
Hana Charlemont Exchange (*3)	Korea	Other financial business	-	December 31, 2022
Centaur First Co., Ltd. (*3)	Korea	Other financial business	-	December 31, 2022

Classification	Country	Major business	Ownership (%) (*1)	Reporting date
Hana Formula-E Private Special Asset Fund 114	Korea	Privately placed fund	99.4	December 31, 2022
KB Mobility Solution Private Special Asset Fund 1	Korea	Privately placed fund	99.9	December 31, 2022
San Jose Real 1st Co., Ltd. (*3)	Korea	Other financial business	-	December 31, 2022
GIF Rodinante Co., Ltd. (*3)	Korea	Other financial business	-	December 31, 2022
Hana US Emerging Office Co., Ltd. (*3)	Korea	Other financial business	-	December 31, 2022
AIP Energy Infrastructure Specialized Privately Placed Fund Trust #2	Korea	Privately placed fund	99.8	December 31, 2022
Capstone EU Private Investment Trust No. 13 (formerly known as Hana Private Real Estate Investment Trust No. 130)	Korea	Privately placed fund	100.0	December 31, 2022
HERITAGE US Manhattan Qualified Investors Real Estate Private Investment Trust No. 2 (USD)	Korea	Privately placed fund	99.8	December 31, 2022
Shinhan AIM Infrastructure Fund No. 6-2	Korea	Privately placed fund	100.0	December 31, 2022
STIC Logistics Qualified Investors Real Estate Investment Trust No. 3 (formerly known as K-REITs Specialized Private Investment Trust No. 23)	Korea	Privately placed fund	99.6	December 31, 2022
Shinhan AIM Infrastructure Fund No. 6-A	Korea	Privately placed fund	99.3	December 31, 2022
KAIM Global Value Specialized Private Investment Trust No. 1	Korea	Privately placed fund	99.9	December 31, 2022
AIP Energy Transport Infrastructure Specialized Privately Placed Fund Trust #4	Korea	Privately placed fund	99.9	December 31, 2022
Hana Trust Global REIT One Co., Ltd.	Korea	Real estate management	100.0	December 31, 2022
Hana AIC 1st Co., Ltd. (*3)	Korea	Other financial business	-	December 31, 2022
Peach Shine 2nd Co., Ltd. (*3)	Korea	Other financial business	-	December 31, 2022
Hanalogis No. 1 Co., Ltd. (*3)	Korea	Other financial business	-	December 31, 2022
GIF Boomerang Co., Ltd. (*3)	Korea	Other financial business	-	December 31, 2022
GIF Sowol-ro Co., Ltd. (*3)	Korea	Other financial business	-	December 31, 2022
Hana Runway Co., Ltd. (*3)	Korea	Other financial business	-	December 31, 2022
JLB Squire Co., Ltd. (*3)	Korea	Other financial business	-	December 31, 2022
Hana Private Real Estate Investment Trust No. 137	Korea	Privately placed fund	99.9	December 31, 2022
Broadway 1st Co. Ltd (*3)	Korea	Other financial business	-	December 31, 2022
Hana-Sinjang 1st Co., Ltd (*3)	Korea	Other financial business	-	December 31, 2022
Hana Datacenter 1st., Co., Ltd. (*3)	Korea	Other financial business	-	December 31, 2022
Achenhaim Co., Ltd. (*3)	Korea	Other financial business	-	December 31, 2022
Eco Clover Co., Ltd. (*3)	Korea	Other financial business	-	December 31, 2022
Hana 5-geori 1st., Co., Ltd. (*3)	Korea	Other financial business	-	December 31, 2022
Hana-Ulsan Co., Ltd (*3)	Korea	Other financial business	-	December 31, 2022
Hana Port 1st., Co., Ltd. (*3)	Korea	Other financial business	-	December 31, 2022
HF Caribbean Co., Ltd. (*3)	Korea	Other financial business	-	December 31, 2022
GMHB 2nd., Co., Ltd. (*3)	Korea	Other financial business	-	December 31, 2022
Hana In Chungmu 1st., Co., Ltd. (*3)	Korea	Other financial business	-	December 31, 2022
Hangdong West 2nd., Co., Ltd. (*3)	Korea	Other financial business	-	December 31, 2022
Wonderful GM 1st., Co., Ltd. (*3)	Korea	Other financial business	-	December 31, 2022
GIF Olympus Co., Ltd. (*3)	Korea	Other financial business	-	December 31, 2022
Zero To One 1st., Co., Ltd. (*3)	Korea	Other financial business	-	December 31, 2022
Hana Heaven 1st., Co., Ltd. (*3)	Korea	Other financial business	-	December 31, 2022
Hana 1Q Logis B Co., Ltd. (*3)	Korea	Other financial business	-	December 31, 2022
Hana Bukjincheon 2nd., Co., Ltd. (*3)	Korea	Other financial business	-	December 31, 2022
Tree Unique 1st., Co., Ltd. (*3)	Korea	Other financial business	-	December 31, 2022
Ernest Hyun 1st., Co., Ltd. (*3)	Korea	Other financial business	-	December 31, 2022
GIF MD Co., Ltd. (*3)	Korea	Other financial business	-	December 31, 2022
Hana Alternative Investment Shipping Specialized Private Equity Fund No. 1	Korea	Privately placed fund	99.9	December 31, 2022

Classification	Country	Major business	Ownership (%) (*1)	Reporting date
Darby Hana New York Hotel Specialized Private Investment Trust No. 1	Korea	Privately placed fund	99.9	December 31, 2022
Tree Yard 1st., Co., Ltd. (*3)	Korea	Other financial business	-	December 31, 2022
Tree Axion 1st., Co., Ltd. (*3)	Korea	Other financial business	-	December 31, 2022
Easy Tree 6th., Co., Ltd. (*3)	Korea	Other financial business	-	December 31, 2022
AIP Environment Infrastructure Specialized Privately Placed Fund Trust No. 1	Korea	Privately placed fund	99.2	December 31, 2022
JA 8th., Co., Ltd. (*3)	Korea	Other financial business	-	December 31, 2022
Joon Dragon Fairness 2nd., Co., Ltd. (*3)	Korea	Other financial business	-	December 31, 2022
Hana Asan Baebang 1st Co., Ltd. (*3)	Korea	Other financial business	-	December 31, 2022
Zeronine 1st Co., Ltd. (*3)	Korea	Other financial business	-	December 31, 2022
Highyield Stone Co., Ltd. (*3)	Korea	Other financial business	-	December 31, 2022
The 1st GM 23th Co., Ltd. (*3)	Korea	Other financial business	-	December 31, 2022
Hana JH 2nd Co., Ltd. (*3)	Korea	Other financial business	-	December 31, 2022
Hana Gamsam 1st Co., Ltd. (*3)	Korea	Other financial business	-	December 31, 2022
JEY Complex Co., Ltd. (*3)	Korea	Other financial business	-	December 31, 2022
JHY Complex Co., Ltd. (*3)	Korea	Other financial business	-	December 31, 2022
Sanchilly Renewable Energy Privat Equity Trust II	Korea	Privately placed fund	100.0	December 31, 2022
Hana Alternative Specialized Private Placement Real Estate Investment Trust No. 175-1	Korea	Privately placed fund	100.0	December 31, 2022
Hana Alternative Specialized Private Placement Real Estate Investment Trust No. 175-2	Korea	Privately placed fund	100.0	December 31, 2022
KTG Global CRE Private Investment Trust No. 49	Korea	Privately placed fund	100.0	December 31, 2022
Vestas Europe Logistics Private Real Estate Investment Trust No. 73B	Korea	Privately placed fund	97.4	December 31, 2022
Mastern US Private Real Estate Investment Trust No. 52	Korea	Privately placed fund	96.4	December 31, 2022
Vestas Private Real Estate Investment Trust No.82	Korea	Privately placed fund	99.9	December 31, 2022
Meritz Private Real Estate Investment Trust No. 30	Korea	Privately placed fund	99.9	December 31, 2022
Hana Residence 1st Co., Ltd. (*3)	Korea	Other financial business	-	December 31, 2022
Hana Residence 2nd Co., Ltd. (*3)	Korea	Other financial business	-	December 31, 2022
New Deal Beomeo 1 Co., Ltd. (*3)	Korea	Other financial business	-	December 31, 2022
Joon Dragon Brite Co., Ltd. (*3)	Korea	Other financial business	-	December 31, 2022
E-Master 14th Co., Ltd. (*3)	Korea	Other financial business	-	December 31, 2022
Planet Seocho 2nd Co., Ltd. (*3)	Korea	Other financial business	-	December 31, 2022
E-Master 18th Co., Ltd. (*3)	Korea	Other financial business	-	December 31, 2022
Hana Boston Core 1st Co., Ltd. (*3)	Korea	Other financial business	-	December 31, 2022
Hana Boston Core 2nd Co., Ltd. (*3)	Korea	Other financial business	-	December 31, 2022
E-Master 17th Co., Ltd. (*3)	Korea	Other financial business	-	December 31, 2022
Geomdan Nine One 1st Co., Ltd. (*3)	Korea	Other financial business	-	December 31, 2022
Geomdan Nine One 2nd Co., Ltd. (*3)	Korea	Other financial business	-	December 31, 2022
New Deal IDC 1st Co., Ltd. (*3)	Korea	Other financial business	-	December 31, 2022
New Deal IDC 2nd Co., Ltd. (*3)	Korea	Other financial business	-	December 31, 2022
US Alix 1st Co., Ltd. (*3)	Korea	Other financial business	-	December 31, 2022
Hana Western 1st Co., Ltd. (*3)	Korea	Other financial business	-	December 31, 2022
Hana Core-value Securitization 1st Co., Ltd. (*3)	Korea	Other financial business	-	December 31, 2022
Black Wing 1st Co., Ltd. (*3)	Korea	Other financial business	-	December 31, 2022
Joon Dragon Mark 1st Co., Ltd. (*3)	Korea	Other financial business	-	December 31, 2022
Hana HD 1st Co., Ltd. (*3)	Korea	Other financial business	-	December 31, 2022
Hana 4 Sky Co., Ltd. (*3)	Korea	Other financial business	-	December 31, 2022
Hana Auto 1st Co., Ltd. (*3)	Korea	Other financial business	-	December 31, 2022

Classification	Country	Major business	Ownership (%) (*1)	Reporting date
Hana Suseong 1st Co., Ltd. (*3)	Korea	Other financial business	-	December 31, 2022
Hana Dowon 1st Co., Ltd. (*3)	Korea	Other financial business	-	December 31, 2022
Hnidan 1st Co., Ltd. (*3)	Korea	Other financial business	-	December 31, 2022
Ernest Hyun 2nd., Co., Ltd. (*3)	Korea	Other financial business	-	December 31, 2022
DA Global Logis 1st., Co., Ltd. (*3)	Korea	Other financial business	-	December 31, 2022
SF Dadae New Dream, Co., Ltd. (*3)	Korea	Other financial business	-	December 31, 2022
One Mega Wonchang 1st., Co., Ltd. (*3)	Korea	Other financial business	-	December 31, 2022
Hana Parkway., Co., Ltd. (*3)	Korea	Other financial business	-	December 31, 2022
New Deal IDC 3rd Co., Ltd. (*3)	Korea	Other financial business	-	December 31, 2022
JH Double 1st., Co., Ltd. (*3)	Korea	Other financial business	-	December 31, 2022
Hana 1Q OSC., Co., Ltd. (*3)	Korea	Other financial business	-	December 31, 2022
J-On Prime., Co., Ltd. (*3)	Korea	Other financial business	-	December 31, 2022
J-On Eco., Co., Ltd. (*3)	Korea	Other financial business	-	December 31, 2022
Hana Dongnae 1st., Co., Ltd. (*3)	Korea	Other financial business	-	December 31, 2022
Hana Dongnae 2nd., Co., Ltd. (*3)	Korea	Other financial business	-	December 31, 2022
Hana Jangpo 1st., Co., Ltd. (*3)	Korea	Other financial business	-	December 31, 2022
The Conral GM 23rd., Co., Ltd. (*3)	Korea	Other financial business	-	December 31, 2022
The Conral GM 22nd., Co., Ltd. (*3)	Korea	Other financial business	-	December 31, 2022
Hana Ulsan Yaeum 1st., Co., Ltd. (*3)	Korea	Other financial business	-	December 31, 2022
Hana Moon10 1st., Co., Ltd. (*3)	Korea	Other financial business	-	December 31, 2022
Synergy 1st., Co., Ltd. (*3)	Korea	Other financial business	-	December 31, 2022
New Deal IDC 4th Co., Ltd. (*3)	Korea	Other financial business	-	December 31, 2022
Hana Haeundae Jungdong 1st., Co., Ltd. (*3)	Korea	Other financial business	-	December 31, 2022
Hana Haeundae Jungdong 2nd., Co., Ltd. (*3)	Korea	Other financial business	-	December 31, 2022
Blue Shining 1st., Co., Ltd. (*3)	Korea	Other financial business	-	December 31, 2022
Hana Chookhyun 1st., Co., Ltd. (*3)	Korea	Other financial business	-	December 31, 2022
Hana Chookhyun 2nd., Co., Ltd. (*3)	Korea	Other financial business	-	December 31, 2022
Excelsiop Saka IMP., Co., Ltd. (*3)	Korea	Other financial business	-	December 31, 2022
Black Mir 2nd., Co., Ltd. (*3)	Korea	Other financial business	-	December 31, 2022
Hana Logis Point 1st., Co., Ltd. (*3)	Korea	Other financial business	-	December 31, 2022
With GM 7th., Co., Ltd. (*3)	Korea	Other financial business	-	December 31, 2022
With GM 9th., Co., Ltd. (*3)	Korea	Other financial business	-	December 31, 2022
Tongyeong Ellioju 1st Co., Ltd. (*3)	Korea	Other financial business	-	December 31, 2022
Hana Jaehyun 1st Co., Ltd. (*3)	Korea	Other financial business	-	December 31, 2022
Planet Ayajin Co., Ltd. (*3)	Korea	Other financial business	-	December 31, 2022
Stade Blue 7th Co., Ltd. (*3)	Korea	Other financial business	-	December 31, 2022
Hnidan 2nd Co., Ltd. (*3)	Korea	Other financial business	-	December 31, 2022
Subsidiaries of Hana the 3rd PEF:				
Bareun Food Factory Co.,Ltd.	Korea	Other financial business	100.0	December 31, 2022
Subsidiaries of Bareun Food Factory Co.,Ltd.:				
Dduksim Co., Ltd. (*4)	Korea	Korean traditional food business	81.8	September 30, 2022
Keunrho Trading Co., Ltd. (*4)	Korea	Seafood processing business	67.4	September 30, 2022
Subsidiaries of Dduksim:				
Seojewon Co.,Ltd (*4)	Korea	Franchise business	70.0	September 30, 2022
Subsidiaries of Keunrho Trading Co., Ltd.:				
Keunrho Seafood Co., Ltd. (*4)	Korea	Seafood processing business	100.0	September 30, 2022
Designmeal co., Ltd. (*4)	Korea	Seafood processing business	100.0	September 30, 2022

Classification	Country	Major business	Ownership (%) (*1)	Reporting date
Subsidiaries of Hana Equity Investment Management (Shenzhen) Co., Ltd.:				
Shenzhen Hana No. 1 Investment Partnership(Limited Partnership)	China	Other financial business	100.0	December 31, 2022
HIC Global Limited (*3)	China	Other financial business	-	December 31, 2022
Subsidiaries of Hana Card:				
Hana Card Payment	Japan	Other financial support service	100.0	December 31, 2022
Hana Card 2020-1 Asset Securitization Specialty. Co., Ltd. (*3)	Korea	Asset securitization	0.5	December 31, 2022
Hana Card 2021-1 Asset Securitization Specialty. Co., Ltd. (*3)	Korea	Asset securitization	0.5	December 31, 2022
Hana Card 2022-1 Asset Securitization Specialty. Co., Ltd. (*3)	Korea	Asset securitization	0.5	December 31, 2022
Subsidiaries of Hana Capital:				
Hana Ventures No. 2 Investment Fund	Korea	New technology financial business	100.0	December 31, 2022
Hana Ventures No. 3 Investment Fund	Korea	New technology financial business	100.0	December 31, 2022
Hana Capital-Capstone Venture Fund	Korea	New technology financial business	88.9	December 31, 2022
Hana Capital-Capstone Venture Fund II	Korea	New technology financial business	90.0	December 31, 2022
Hana Collaboration Pre-IPO Fund	Korea	New technology financial business	100.0	December 31, 2022
Hana Micro Finance, Ltd.	Myanmar	Financial business	100.0	December 31, 2022
Subsidiaries of Hana Alternative Asset management:				
Hana Alternative Private Real Estate Investment Trust No. 158	Korea	Trust and collective investment	92.3	December 31, 2022
Hana Private Real Estate Investment Trust No. 166	Korea	Trust and collective investment	99.8	December 31, 2022
Hana Global REIT CO., Ltd.	Korea	Real estate business	100.0	December 31, 2022
Hana Global No. 1 REIT CO., Ltd.	Korea	Real estate business	100.0	December 31, 2022
Hana Alternative Private Real Estate Investment Trust No. 192	Korea	Trust and collective investment	80.0	December 31, 2022
Subsidiaries of Hana Private Real Estate Investment Trust No. 166:				
H&H investment 4 (*3)	Korea	Other financial business	-	December 31, 2022
Subsidiaries of Hana TI:				
PT Next Transfortech Indonesia	Indonesia	System development service	100.0	December 31, 2022
Subsidiaries of Hana F&I, Inc:				
KEB The Left co., Ltd. (*3)	Korea	Asset securitization	-	December 31, 2022
HFT Second Securitization Specialty (*3)	Korea	Asset securitization	5.0	December 31, 2022
Hana SH First Securitization Specialty Co., Ltd. (*3)	Korea	Asset securitization	14.0	December 31, 2022
HFS Second Securitization Specialty (*3)	Korea	Asset securitization	14.0	December 31, 2022
Hana K First Securitization Specialty (*3)	Korea	Asset securitization	14.0	December 31, 2022
HFD First Securitization Specialty (*3)	Korea	Asset securitization	14.0	December 31, 2022
HFS 73A Securitization Specialty Co., Ltd. (*3)	Korea	Asset securitization	9.0	December 31, 2022
HFS 73B Securitization Specialty Co., Ltd. (*3)	Korea	Asset securitization	9.0	December 31, 2022
HFW 73 Securitization Specialty Co., Ltd. (*3)	Korea	Asset securitization	9.0	December 31, 2022
HFK 74 Securitization Specialty Co., Ltd. (*3)	Korea	Asset securitization	9.0	December 31, 2022
HFSQNB1 Securitization Specialty Co., Ltd. (*3)	Korea	Asset securitization	9.0	December 31, 2022
HFB81 Securitization Specialty Co., Ltd. (*3)	Korea	Asset securitization	9.0	December 31, 2022
Fine Fifth Securitization Specialty Co., Ltd. (*3)	Korea	Asset securitization	9.0	December 31, 2022
HFS 82 Securitization Specialty Co Ltd. (*3)	Korea	Asset securitization	9.0	December 31, 2022
HFF 82 Securitization Specialty Co., Ltd. (*3)	Korea	Asset securitization	9.0	December 31, 2022

Classification	Country	Major business	Ownership (%) (*1)	Reporting date
HFI 83 Securitization Specialty Co., Ltd. (*3)	Korea	Asset securitization	9.0	December 31, 2022
HFS 84 Securitization Specialty Co., Ltd. (*3)	Korea	Asset securitization	9.0	December 31, 2022
HFF 84 Securitization Specialty Co., Ltd. (*3)	Korea	Asset securitization	9.0	December 31, 2022
HFK 84 Securitization Specialty Co., Ltd. (*3)	Korea	Asset securitization	9.0	December 31, 2022
HFFN 91 Securitization Specialty Co., Ltd. (*3)	Korea	Asset securitization	9.0	December 31, 2022
HFI 91 Securitization Specialty Co., Ltd. (*3)	Korea	Asset securitization	9.0	December 31, 2022
HFS 92A Securitization Specialty Co., Ltd. (*3)	Korea	Asset securitization	9.0	December 31, 2022
HFS 92B Securitization Specialty Co., Ltd. (*3)	Korea	Asset securitization	9.0	December 31, 2022
HFB 92 Securitization Specialty Co., Ltd. (*3)	Korea	Asset securitization	9.0	December 31, 2022
HFI 93 Securitization Specialty Co., Ltd. (*3)	Korea	Asset securitization	9.0	December 31, 2022
HFN 92 Securitization Specialty Co., Ltd. (*3)	Korea	Asset securitization	9.0	December 31, 2022
HFB 93 Securitization Specialty Co., Ltd. (*3)	Korea	Asset securitization	9.0	December 31, 2022
HFF 93 Securitization Specialty Co., Ltd. (*3)	Korea	Asset securitization	9.0	December 31, 2022
HFF94 Securitization Specialty Co., Ltd. (*3)	Korea	Asset securitization	9.0	December 31, 2022
HFF95 Securitization Specialty Co., Ltd.	Korea	Asset securitization	100.0	December 31, 2022
HFI01B Securitization Specialty Co., Ltd. (*3)	Korea	Asset securitization	9.0	December 31, 2022
HFH02 Inc. (*3)	Korea	Asset securitization	9.0	December 31, 2022
HFI01A Securitization Specialty Co., Ltd. (*3)	Korea	Asset securitization	9.0	December 31, 2022
HFD02 Securitization Specialty Co., Ltd. (*3)	Korea	Asset securitization	9.0	December 31, 2022
HFN02 Securitization Specialty Co., Ltd. (*3)	Korea	Asset securitization	9.0	December 31, 2022
HFH02 Securitization Specialty Co., Ltd. (*3)	Korea	Asset securitization	9.0	December 31, 2022
HFC03 Inc. (*3)	Korea	Asset securitization	9.0	December 31, 2022
HFI 03B Securitization Specialty Co., Ltd. (*3)	Korea	Asset securitization	9.0	December 31, 2022
HFB 03 Securitization Specialty Co., Ltd. (*3)	Korea	Asset securitization	9.0	December 31, 2022
HFG 03 Securitization Specialty Co., Ltd. (*3)	Korea	Asset securitization	9.0	December 31, 2022
HFD 03 Securitization Specialty Co., Ltd. (*3)	Korea	Asset securitization	9.0	December 31, 2022
HFG 04 Securitization Specialty Co., Ltd. (*3)	Korea	Asset securitization	9.0	December 31, 2022
HFI 04 Securitization Specialty Co., Ltd. (*3)	Korea	Asset securitization	9.0	December 31, 2022
HFI 11 Securitization Specialty Co., Ltd. (*3)	Korea	Asset securitization	9.0	December 31, 2022
HFG 11 Securitization Specialty Co., Ltd. (*3)	Korea	Asset securitization	9.0	December 31, 2022
HFT 12 Securitization Specialty Co., Ltd. (*3)	Korea	Asset securitization	9.0	December 31, 2022
HFTW 12 Securitization Specialty Co., Ltd. (*3)	Korea	Asset securitization	9.0	December 31, 2022
HFI 12A Securitization Specialty Co., Ltd. (*3)	Korea	Asset securitization	9.0	December 31, 2022
HFI 12C Securitization Specialty Co., Ltd. (*3)	Korea	Asset securitization	9.0	December 31, 2022
HFV 13 Securitization Specialty Co., Ltd. (*3)	Korea	Asset securitization	9.0	December 31, 2022
HFN 13 Securitization Specialty Co., Ltd. (*3)	Korea	Asset securitization	9.0	December 31, 2022
HFG 13 Securitization Specialty Co., Ltd. (*3)	Korea	Asset securitization	9.0	December 31, 2022
HFK 14 Securitization Specialty Co., Ltd. (*3)	Korea	Asset securitization	9.0	December 31, 2022
HFB14 Securitization Specialty Co., Ltd. (*3)	Korea	Asset securitization	9.0	December 31, 2022
HFN14 Securitization Specialty Co., Ltd. (*3)	Korea	Asset securitization	9.0	December 31, 2022
HFT 14 Securitization Specialty Co., Ltd. (*3)	Korea	Asset securitization	9.0	December 31, 2022
HFI 14A Securitization Specialty Co., Ltd. (*3)	Korea	Asset securitization	9.0	December 31, 2022
HFI 14B Securitization Specialty Co., Ltd. (*3)	Korea	Asset securitization	9.0	December 31, 2022
HFV21 Securitization Specialty Co., Ltd. (*3)	Korea	Asset securitization	—	December 31, 2022
HF 1st Corporate Private Equity Fund	Korea	Privately placed fund	82.0	December 31, 2022
HFB21 Securitization Specialty Co., Ltd. (*3)	Korea	Asset securitization	9.0	December 31, 2022
HFI22 Securitization Specialty Co., Ltd. (*3)	Korea	Asset securitization	9.0	December 31, 2022

Classification	Country	Major business	Ownership (%) (*1)	Reporting date
HFG 22 Securitization Specialty Co., Ltd. (*3)	Korea	Asset securitization	9.0	December 31, 2022
HFF 22 Securitization Specialty Co., Ltd. (*3)	Korea	Asset securitization	9.0	December 31, 2022
HFBG 23 Securitization Specialty Co., Ltd. (*3)	Korea	Asset securitization	9.0	December 31, 2022
HFS 23 Securitization Specialty Co., Ltd. (*3)	Korea	Asset securitization	9.0	December 31, 2022
HFN 23 Securitization Specialty Co., Ltd. (*3)	Korea	Asset securitization	9.0	December 31, 2022
HFF 24 Securitization Specialty Co., Ltd. (*3)	Korea	Asset securitization	9.0	December 31, 2022
Subsidiaries of Hana Insurance Co., Ltd.:				
Hana Financial Find Inc.	Korea	Financial business	100.0	December 31, 2022
Subsidiary of Hana Alternative Special Investment Private Trust No.90:				
H&H investment (*3)	Korea	Other financial business	–	December 31, 2022
Subsidiary of Hana Alternative Special investment private Trust No. 123-1(USD):				
Dragon One Investment Limited	Hong Kong	Other financial business	100.0	December 31, 2022
Subsidiaries of Dragon One Investment Limited:				
QFLP	China	Other financial business	100.0	December 31, 2022
Subsidiary of Hana Alternative Special Asset Private Trust No. 126:				
K-REIT LLC (*4)	United States	Other financial business	100.0	November 30, 2022
Subsidiaries of Hana Private Real Estate Investment Trust No. 165:				
H&H investment 3 (*3)	Korea	Other financial business	–	December 31, 2022
Subsidiaries of Hana Alternative Private Real Estate Investment Trust No. 181:				
SHORELINE SQUARE REIT LLC (*4)	United States	Real estate business	100.0	September 30, 2022
Subsidiaries of Hana Alternative Private Real Estate Investment Trust No. 182:				
BOSTON SEAPORT ALYX SG REIT, LLC (*4)	United States	Real estate business	100.0	September 30, 2022
Subsidiaries of Hana Alternative Private Real Estate Investment Trust No. 185:				
70 Hudson REIT LLC (*4)	United States	Asset securitization	88.2	November 30, 2022
Subsidiaries of 70 Hudson REIT LLC:				
70 Hudson LLC – PropCo (*4)	United States	Real estate business	100	November 30, 2022

(*1) The ownership percentage was calculated based on the shareholding of the ultimate parent company.

(*2) Specified money trust accounts consist of different accounts but the number of accounts is not recorded.

(*3) It is included in the scope of consolidation since the subsidiary provides granting of credit.

(*4) As the consolidated financial statements as of December 31, 2022, were not available, the Group used the most recent consolidated financial statements available as of December 31, 2022.

The financial information of subsidiaries as of December 31, 2022 and 2021, is as follows (Korean won in millions):

<December 31, 2022>

Classification	Assets	Liabilities	Equity	Revenue	Net income (loss)	Other comprehensive income (loss)	Comprehensive income (loss)
KEB Hana Bank (*1)	485,308,744	455,343,376	29,965,368	53,702,914	3,111,699	(663,520)	2,448,179
Hana Securities(*1)	43,345,325	37,539,264	5,806,061	13,121,776	130,645	(104,646)	25,999
Hana Card (*1)	12,284,060	10,067,212	2,216,848	1,445,422	191,981	(5,711)	186,270
Hana Capital (*1)	16,638,148	14,567,235	2,070,913	1,484,056	299,663	(5,773)	293,890
Hana Asset Trust	555,240	78,829	476,411	162,704	83,908	—	83,908
Hana TI (*1)	453,989	257,321	196,668	291,887	84,891	6,152	91,043
Hana Savings Bank	2,821,799	2,444,773	377,026	187,122	23,283	156	23,439
Hana Life Insurance	5,876,464	5,662,081	214,383	1,049,573	10,148	(211,154)	(201,006)
HIS	65,710	15,002	50,708	38,136	9,197	(242)	8,955
Hana Alternative Asset Management Co., Ltd.(*1)	243,238	29,497	213,741	73,661	28,155	—	28,155
Hana Ventures, Ltd.	111,515	3,552	107,963	12,884	2,321	157	2,478
Hana F&I, Inc.(*1)	1,302,476	988,352	314,124	105,258	30,350	178	30,528
Hana Insurance Co., Ltd. (*1)	1,526,322	1,255,259	271,063	635,669	(84,348)	(30,458)	(114,806)
HANA ASSET MANAGEMENT ASIA (*3)	—	—	—	—	(708)	(291)	(999)
Finnq Co., Ltd.	58,950	6,359	52,591	7,892	(12,380)	—	(12,380)
Specified Money Trust (HFG)	777,233	56	777,177	2,906	2,177	—	2,177
Hana Alternative BlackRock QIP Trust No. 73	57,497	75	57,422	7,538	3,800	—	3,800
Hana Professional Investment Type Private Equity 90	20,296	1,977	18,319	4,370	1,265	—	1,265
Hana Alternative UK Government Office Professional Investors' Private Real Estate Investment Feeder Trust No. 1	1,638	1,617	21	29	(93)	104	11
Hana Alternative Infra Special Investment Private Trust No. 3-1	38,716	43	38,673	957	514	—	514
Hana Alternative Infra Special Investment Private Trust No. 3-2	6,466	9	6,457	466	447	405	852
Hana Alternative Infra Special Investment Private Trust No. 3-3	22,629	4	22,625	2,213	2,006	—	2,006
Hana Alternative Infra Special Investment Private Trust No. 3-4	36,240	45	36,195	2,286	2,105	200	2,305
Hana Alternative Special Investment Private Trust No. 100	11,107	11	11,096	970	941	—	941
Hana Alternative Special Investment Private Trust No. 102	76,243	532	75,711	12,017	6,961	—	6,961
Hana Alternative Special Investment Private Trust No. 108	9,439	27	9,412	1,397	402	—	402
Hana Alternative Special Investment Private Trust No. 123-1	13,025	586	12,439	(14,749)	48,662	(9,417)	39,245
Hana Alternative Houston Private Investment Trust No. 121(*3)	—	—	—	11,662	3,859	—	3,859
Alternative Special Asset Private Trust No. 126	104,581	11,933	92,648	83	(6,773)	6,830	57
Hana Alternative Investment Land Chip Real Estate Private Trust 68	178,797	136,618	42,179	196	5,087	—	5,087
Hana Private Real Estate Investment Trust No. 165	55,659	4,617	51,042	9,367	2,770	—	2,770

Classification	Assets	Liabilities	Equity	Revenue	Net income (loss)	Other comprehensive income (loss)	Comprehensive income (loss)
Hana Alternative Special Investment Wando Geumil Offshore Wind Power Private Trust No. 1	2,045	58	1,987	134	108	—	108
Hana Ventures New Technology Investment Association No. 4	790	22	768	2	(5,049)	—	(5,049)
Hana Ventures New Technology Investment Association No. 6	11,450	33	11,417	3,461	3,314	—	3,314
Hana Ventures New Technology Investment Association No. 7	5,285	28	5,257	3	(113)	—	(113)
Hana Special New Deal National Representative Growth Private Trust	27,024	72	26,952	85	(21)	—	(21)
Hana Alternative Private Real Estate Investment Trust No. 119	12,589	101	12,488	14	(607)	—	(607)
Hana Alternative Frontier Private Investment Trust No. 1	78,819	1,114	77,705	5,489	4,042	—	4,042
Hana Alternative Investment PRC Logistics General Private Investment Trust No. 1 (professional) (*2)	61,837	9,824	52,013	4,359	904	167	1,071
Hana Alternative Private Real Estate Investment Trust No. 181 (*2)	44,686	1,946	42,740	2,235	150	2,441	2,591
Hana Alternative Private Real Estate Investment Trust No. 186 (*2)	16,022	415	15,607	1,817	940	—	940
Hana Alternative Private Real Estate Investment Trust No. 187(*2)	10,003	733	9,270	1,128	464	—	464
Hana Alternative Private Real Estate Investment Trust No. 182(*2)	103,794	5,911	97,883	10	(6,807)	6,897	90
Hana Alternative Private Real Estate Investment Trust No. 185(*2)	386,775	273,673	113,102	2,989	(18,966)	8,876	(10,090)
Hana Alternative Private Real Estate Investment Trust No. 180(*2)	68,522	135	68,387	64	(112)	—	(112)
Hana Beyond Finance Fund (*2)	88,908	756	88,152	229	(1,848)	—	(1,848)
Hana Alternative Investment Chuncheon Fuel Cell General Private Investment Trust No. 1 (professional) (*2)	49,464	16	49,448	1,011	(209)	—	(209)
Defense Technology Innovation Private Investment Trust (*2)	3,002	5	2,997	2	(3)	—	(3)

(*1) Consolidated financial information of the intermediate parent company.

(*2) Newly incorporated for the year ended December 31, 2022.

(*3) Excluded from subsidiary of the Company for the year ended December 31, 2022.

<December 31, 2021>

(Korean won in millions)

Classification	Assets	Liabilities	Equity	Revenue	Net income (loss)	Other comprehensive income (loss)	Comprehensive income (loss)
KEB Hana Bank (*1)	430,193,576	401,437,105	28,756,471	30,175,283	2,575,746	140,697	2,716,443

Classification	Assets	Liabilities	Equity	Revenue	Net income (loss)	Other comprehensive income (loss)	Comprehensive income (loss)
Hana Securities (*1)	37,614,683	32,323,651	5,291,032	8,059,329	505,993	(26,038)	479,955
KEB Hana Card (*1)	9,596,474	7,565,896	2,030,578	1,322,005	250,484	2,480	252,964
Hana Capital (*1)	13,856,805	12,030,439	1,826,366	1,017,815	273,726	(13,358)	260,368
Hana Asset Trust	511,369	88,866	422,503	163,732	92,739	—	92,739
Hana TI (*1)	482,015	376,564	105,451	261,276	374	(2,028)	(1,654)
Hana Savings Bank	2,477,165	2,116,578	360,587	130,573	26,548	(332)	26,216
Hana Life Insurance (*1)	5,858,383	5,442,993	415,390	767,576	24,271	(55,348)	(31,077)
HIS	57,833	13,081	44,752	36,645	8,303	108	8,411
Hana Alternative Asset Management Co., Ltd.(*1)	219,454	23,870	195,584	81,533	30,951	(49)	30,902
Hana Ventures, Ltd.	109,850	4,365	105,485	11,845	5,458	79	5,537
Hana F&I, Inc.(*1)	1,557,988	1,274,391	283,597	97,846	25,384	(489)	24,895
Hana Insurance Co., Ltd. (*1)	1,362,941	1,126,281	236,660	600,819	16,818	(21,221)	(4,403)
HANA ASSET MANAGEMENT ASIA	8,210	123	8,087	—	(664)	300	(364)
Specified Money Trust (HFG)	380,261	114	380,147	1,868	1,147	—	1,147
Hana Alternative BlackRock QIP Trust No. 73	52,717	1,859	50,858	7,907	3,336	—	3,336
Hana Professional Investment Type Private Equity 90 (*1)	20,265	1,743	18,522	3,830	2,165	—	2,165
Hana Alternative UK Government Office Professional Investors' Private Real Estate Investment Feeder Trust No. 1 (*1)	1,628	1,617	11	1	1,832	33	1,865
Hana Alternative Infra Special Investment Private Trust No. 3-1	9,728	13	9,715	636	504	—	504
Hana Alternative Infra Special Investment Private Trust No. 3-2	6,035	8	6,027	3,570	1,930	705	2,635
Hana Alternative Infra Special Investment Private Trust No. 3-3	20,937	25	20,912	1,104	442	—	442
Hana Alternative Infra Special Investment Private Trust No. 3-4 (*2)	34,672	26	34,646	165	(1,140)	47	(1,093)
Hana Alternative Special Investment Private Trust No. 100	11,862	159	11,703	947	726	—	726
Hana Alternative Special Investment Private Trust No. 102	75,768	2,130	73,638	10,031	2,921	—	2,921
Hana Alternative Special Investment Private Trust No. 108	9,627	590	9,037	2,002	391	—	391
Hana Alternative Special Investment Private Trust No. 123-1 (USD) (*1)	332,785	220,593	112,192	903	(15,586)	14,972	(614)
Hana Alternative Houston Private Investment Trust No. 121	35,907	1,416	34,491	6,083	2,581	—	2,581
Hana Alternative Special Asset Private Trust No. 123-2	41,800	1,924	39,876	11,377	2,892	—	2,892
Alternative Special Asset Private Trust No. 126 (*1)	104,490	7,242	97,248	74	(11,246)	8,444	(2,802)
Hana Alternative Special Investment Private Trust No. 116 (*1)	52,772	24	52,748	25,636	13,238	—	13,238
Hana Alternative Investment Real Estate Private Trust No. 163-1 (H) (*2)	35,770	3,163	32,607	7,641	1,417	—	1,417
Hana Alternative Investment Land Chip Real Estate Private Trust No. 68 (*3)	178,309	136,269	42,040	124	3,730	—	3,730
Hana Private Real Estate Investment Trust No. 165 (*1)(*2)	55,682	3,383	52,299	3,616	(2,186)	—	(2,186)
Hana Alternative Special Investment Wando Geunil	2,170	188	1,982	96	34	—	34

Classification	Assets	Liabilities	Equity	Revenue	Net income (loss)	Other comprehensive income (loss)	Comprehensive income (loss)
Offshore Wind Power Private Trust No. 1 (*2)							
Hana Ventures New Technology Investment Association No. 4	5,817	—	5,817	—	(95)	—	(95)
Hana Ventures New Technology Investment Association No. 6	10,891	—	10,891	4,543	4,407	—	4,407
Hana Ventures New Technology Investment Association No. 7	5,370	—	5,370	1	(115)	—	(115)
Hana Special New Deal National Representative Growth Private Trust (*2)	2,007	35	1,972	7	(28)	—	(28)
Hana-Capstone AI Platform Fund (*4)	—	—	—	8	(448)	—	(448)
Genesis Environment Energy No. 6 Private Equity Fund (*4)	—	—	—	—	(1,544)	—	(1,544)
Hana Alternative Private Real Estate Investment Trust No. 119 (*2)	13,196	101	13,095	1	(105)	—	(105)
Hana Alternative Private Real Estate Investment Trust No. 183-1 (*2)	19,793	94	19,699	405	(171)	—	(171)
Hana Alternative Frontier Private Investment Trust No. 1 (*2)	34,864	2,599	32,265	802	(85)	—	(85)

(*1) Consolidated financial information of the intermediate parent company.

(*2) Hana Asset Management Asia was newly incorporated during the year ended December 31, 2021.

(*3) Changed from subsidiary of Hana Life Insurance to subsidiary of HFG as of March 31, 2021.

(*4) Excluded from the consolidation scope during the year ended December 31, 2021

Changes in scope of consolidation for the year ended December 31, 2022 are as follows:

Name of subsidiaries	Rationale
Included in scope of consolidation:	
Ernest Hyun 2nd., Co., Ltd.	Holds power as an asset manager and exposed to variable returns based on credit facility or purchase commitments
DA Global Logis 1st., Co., Ltd.	Holds power as an asset manager and exposed to variable returns based on credit facility or purchase commitments
SF Dadae New Dream, Co., Ltd.	Holds power as an asset manager and exposed to variable returns based on credit facility or purchase commitments
One Mega Wonchang 1st., Co., Ltd.	Holds power as an asset manager and exposed to variable returns based on credit facility or purchase commitments
Hana Parkway., Co., Ltd.	Holds power as an asset manager and exposed to variable returns based on credit facility or purchase commitments
New Deal IDC 3rd Co., Ltd.	Holds power as an asset manager and exposed to variable returns based on credit facility or purchase commitments
Mt.Kai 1st., Co., Ltd.	Holds power as an asset manager and exposed to variable returns based on credit facility or purchase commitments

Name of subsidiaries	Rationale
JH Double 1st., Co., Ltd.	Holds power as an asset manager and exposed to variable returns based on credit facility or purchase commitments
OS Residence 1st., Co., Ltd.	Holds power as an asset manager and exposed to variable returns based on credit facility or purchase commitments
Hana 1Q OSC., Co., Ltd.	Holds power as an asset manager and exposed to variable returns based on credit facility or purchase commitments
EGIS British Core Infra Specialized Privately Placed Fund Trust No. 445	Holds power as an actual beneficiary of a private equity fund and exposed to variable returns
Pinestreet US Infra Specialized Privately Placed Fund Trust No. 7	Holds power as an actual beneficiary of a private equity fund and exposed to variable returns
IGIS Global, Specialized Private Placement Real Estate Investment Trust No. 436-1	Holds power as an actual beneficiary of a private equity fund and exposed to variable returns
IGIS Global, Specialized Private Placement Real Estate Investment Trust No. 436-2	Holds power as an actual beneficiary of a private equity fund and exposed to variable returns
KTB Global CRE Private Investment Trust No. 49	Holds power as an actual beneficiary of a private equity fund and exposed to variable returns
Hyundai Infiniti Private Placement Real Estate Investment Trust No. 3	Holds power as an actual beneficiary of a private equity fund and exposed to variable returns
J-On Prime., Co., Ltd.	Holds power as an asset manager and exposed to variable returns based on credit facility or purchase commitments
J-On Eco., Co., Ltd.	Holds power as an asset manager and exposed to variable returns based on credit facility or purchase commitments
Hana Dongnae 1st., Co., Ltd.	Holds power as an asset manager and exposed to variable returns based on credit facility or purchase commitments
Hana Dongnae 2nd., Co., Ltd.	Holds power as an asset manager and exposed to variable returns based on credit facility or purchase commitments
Hana Jangpoo 1st., Co., Ltd.	Holds power as an asset manager and exposed to variable returns based on credit facility or purchase commitments
The Conral GM 23rd., Co., Ltd.	Holds power as an asset manager and exposed to variable returns based on credit facility or purchase commitments
The Conral GM 22nd., Co., Ltd.	Holds power as an asset manager and exposed to variable returns based on credit facility or purchase commitments
Hana Ulsan Yaeum 1st., Co., Ltd.	Holds power as an asset manager and exposed to variable returns based on credit facility or purchase commitments
Hana Moon10 1st., Co., Ltd.	Holds power as an asset manager and exposed to variable returns based on credit facility or purchase commitments
Synergy 1st., Co., Ltd.	Holds power as an asset manager and exposed to variable returns based on credit facility or purchase commitments
New Deal IDC 4th Co., Ltd.	Holds power as an asset manager and exposed to variable returns based on credit facility or purchase commitments
Hana Haeundae Jungdong 1st., Co., Ltd.	Holds power as an asset manager and exposed to variable returns based on credit facility or purchase commitments
Hana Haeundae Jungdong 2nd., Co., Ltd.	Holds power as an asset manager and exposed to variable returns based on credit facility or purchase commitments
Blue Shining 1st., Co., Ltd.	Holds power as an asset manager and exposed to variable returns based on credit facility or purchase commitments
Hana Chookhyun 1st., Co., Ltd.	Holds power as an asset manager and exposed to variable returns based on credit facility or purchase commitments
Hana Chookhyun 2nd., Co., Ltd.	Holds power as an asset manager and exposed to variable returns based on credit facility or purchase commitments
Excelsiop Saka IMP., Co., Ltd.	Holds power as an asset manager and exposed to variable returns based on credit facility or purchase commitments
Black Mir 2nd., Co., Ltd.	Holds power as an asset manager and exposed to variable returns based on credit facility or purchase commitments
	Holds power as an asset manager and exposed to variable returns based on credit

Name of subsidiaries	Rationale
Hana Logis Point 1st., Co., Ltd.	facility or purchase commitments
Sprott Chile Renewable Energy Privat Equity Trust II	Holds power as an actual beneficiary of a private equity fund, and exposed to variable returns
Vestas Europe Logistics Private Real Estate Investment Trust No. 73B	Holds power as an actual beneficiary of a private equity fund, and exposed to variable returns
Masterm US Private Real Estate Investment Trust No. 52	Holds power as an actual beneficiary of a private equity fund, and exposed to variable returns
Vestas Private Real Estate Investment Trust No.82	Holds power as an actual beneficiary of a private equity fund, and exposed to variable returns
Meritz Private Real Estate Investment Trust No. 30	Holds power as an actual beneficiary of a private equity fund, and exposed to variable returns
With GM 7th., Co., Ltd.	Holds power as an asset manager and exposed to variable returns based on credit facility or purchase commitments
With GM 9th., Co., Ltd.	Holds power as an asset manager and exposed to variable returns based on credit facility or purchase commitments
Tongyeong Ellioju 1st Co., Ltd.	Holds power as an asset manager and exposed to variable returns based on credit facility or purchase commitments
Hana Jaehyun 1st Co., Ltd.	Holds power as an asset manager and exposed to variable returns based on credit facility or purchase commitments
Planet Ayajin Co., Ltd.	Holds power as an asset manager and exposed to variable returns based on credit facility or purchase commitments
Stade Blue 7th Co., Ltd.	Holds power as an asset manager and exposed to variable returns based on credit facility or purchase commitments
Hmidan 2nd Co., Ltd.	Holds power as an asset manager and exposed to variable returns based on credit facility or purchase commitments
Shenzhen Hana No. 1 Investment Partnership (Limited Partnership)	Obtained majority of shares with voting rights
HIC Global Limited	Holds power as an asset manager and exposed to variable returns based on credit facility or purchase commitments
HFM21 Securitization Specialty Co., Ltd.	Holds power as an asset manager and exposed to variable returns based on credit facility or purchase commitments
HF 1st Corporate Private Equity Fund	Holds power as an executive officer and exposed to variable returns
HFB 21 Securitization Specialty Co., Ltd.	Holds power as an asset manager and exposed to variable returns based on credit facility or purchase commitments
HFI 22 Securitization Specialty Co., Ltd.	Holds power as an asset manager and exposed to variable returns based on credit facility or purchase arrangements
HFG 22 Securitization Specialty Co., Ltd.	Holds power as an asset manager and exposed to variable returns based on credit facility or purchase commitments
HFF 22 Securitization Specialty Co., Ltd.	Holds power as an asset manager and exposed to variable returns based on credit facility or purchase arrangements
HFBG 23 Securitization Specialty Co., Ltd.	Holds power as an asset manager and exposed to variable returns based on credit facility or purchase commitments
HFS 23 Securitization Specialty Co., Ltd.	Holds power as an asset manager and exposed to variable returns based on credit facility or purchase arrangements
HFN 23 Securitization Specialty Co., Ltd.	Holds power as an asset manager and exposed to variable returns based on credit facility or purchase commitments
HFF 24 Securitization Specialty Co., Ltd.	Holds power as an asset manager and exposed to variable returns based on credit facility or purchase arrangements
Hana Alternative Private Real Estate Investment Trust No. 181	Holds power as an actual beneficiary of a private equity fund, and exposed to variable returns
Hana Alternative Private Real Estate Investment Trust No. 186	Holds power as an actual beneficiary of a private equity fund, and exposed to variable returns
Hana Alternative Private Real Estate Investment Trust No. 187	Holds power as an actual beneficiary of a private equity fund, and exposed to variable returns

Name of subsidiaries	Rationale
Hana Alternative Investment PRC Logistics General Private Investment Trust No. 1 (professional)	Holds power as an actual beneficiary of a private equity fund, and exposed to variable returns
Hana Beyond Finance Fund	Holds power as an actual beneficiary of a private equity fund, and exposed to variable returns
Hana Alternative Private Real Estate Investment Trust No. 180	Holds power as an actual beneficiary of a private equity fund, and exposed to variable returns
Hana Alternative Private Real Estate Investment Trust No. 185	Holds power as an actual beneficiary of a private equity fund, and exposed to variable returns
Hana Alternative Investment Chuncheon Fuel Cell General Private Investment Trust No. 1 (professional)	Holds power as an actual beneficiary of a private equity fund, and exposed to variable returns
BYK 3rd Co., Ltd.	Holds power as an asset manager and exposed to variable returns based on credit facility or purchase commitments
Mini Hana 1st, LLC	Holds power as an asset manager and exposed to variable returns based on credit facility or purchase commitments
Jinwoori 1Q 1st, LLC	Holds power as an asset manager and exposed to variable returns based on credit facility or purchase commitments
Hana Double H 1Q 4th Co.,Ltd.	Holds power as an asset manager and exposed to variable returns based on credit facility or purchase commitments
Hana Double H 1Q 5th Co.,Ltd.	Holds power as an asset manager and exposed to variable returns based on credit facility or purchase commitments.
H-ECHO 1st, LLC	Holds power as an asset manager and exposed to variable returns based on credit facility or purchase arrangements
HANA STARLORD 1st, LLC	Holds power as an asset manager and exposed to variable returns based on credit facility or purchase commitments.
CLEAN WORLD 1st, LLC	Holds power as an asset manager and exposed to variable returns based on credit facility or purchase arrangements
H-HANA 1st, LLC	Holds power as an asset manager and exposed to variable returns based on credit facility or purchase commitments.
HANA ANANTI 1st, LLC	Holds power as an asset manager and exposed to variable returns based on credit facility or purchase arrangements
One Q B777F 66872 Co., Ltd.	Holds power as an asset manager and exposed to variable returns based on credit facility or purchase commitments.
NAE CHON HANA 1st, LLC	Holds power as an asset manager and exposed to variable returns based on credit facility or purchase arrangements
DRAGON HANA 1st, LLC	Holds power as an asset manager and exposed to variable returns based on credit facility or purchase commitments.
HANA BAEKSA LOGISTICS 1st, LLC	Holds power as an asset manager and exposed to variable returns based on credit facility or purchase arrangements
HANA S ONE Q 1st, LLC	Holds power as an asset manager and exposed to variable returns based on credit facility or purchase commitments.
HOME PLUS HANA CONNECT, LLC	Holds power as an asset manager and exposed to variable returns based on credit facility or purchase arrangements
Antarctica 1st, Ltd	Holds power as an asset manager and exposed to variable returns based on credit facility or purchase commitments.
Enerbility Hana 1st, Ltd	Holds power as an asset manager and exposed to variable returns based on credit facility or purchase arrangements
Hana Plant 1st, Ltd	Holds power as an asset manager and exposed to variable returns based on credit facility or purchase commitments.
Gs Hana 1st, Ltd	Holds power as an asset manager and exposed to variable returns based on credit facility or purchase arrangements
Cha Cha Hana 1st, Ltd	Holds power as an asset manager and exposed to variable returns based on credit facility or purchase commitments.
T A 1st, Ltd	Holds power as an asset manager and exposed to variable returns based on credit facility or purchase arrangements
	Holds power as an asset manager and exposed to variable returns based on credit

Name of subsidiaries	Rationale
Neostar 6th, Ltd	facility or purchase commitments.
Galaxia 1Q 1st, Ltd	Holds power as an asset manager and exposed to variable returns based on credit facility or purchase arrangements
Hana Collaboration Pre-IPO Fund	Obtained majority of shares with voting rights
Hana Global REIT CO., Ltd.	Obtained majority of shares with voting rights
Hana Global No. 1 REIT CO., Ltd.	Obtained majority of shares with voting rights
Hana Alternative Private Real Estate Investment Trust No. 192	Holds power as an asset manager and exposed to variable returns based on credit facility or purchase commitments
Finnq Co., Ltd.	Obtained majority of shares with voting rights
Defense Technology Innovation Private Investment Trust	Holds power as an actual beneficiary of a private equity fund, and exposed to variable returns.
Hana Card 2022-1 Asset Securitization Specialty Co., Ltd.	Holds power as an asset manager and exposed to variable returns based on credit facility or purchase commitments
SHORELINE SQUARE REIT LLC	Obtained majority of shares with voting rights
BOSTON SEAPORT ALYX SG REIT, LLC	Obtained majority of shares with voting rights
70 Hudson REIT LLC	Obtained majority of shares with voting rights
70 Hudson LLC – PropCo	Obtained majority of shares with voting rights

Name of subsidiaries	Rationale
Excluded in scope of consolidation:	
IGIS U.S. Specialized Private Placement Real Estate Investment Trust No. 417-1	Loss of control due to disposal
YDL 1st Co. Ltd.	Loss of control due to disposal (Termination of credit facility)
Hana Ocean 1st	Loss of control due to disposal (Termination of credit facility)
Hana Solar 1st Co., Ltd	Loss of control due to disposal (Termination of credit facility)
GS Solution 1st., Co., Ltd.	Loss of control due to disposal (Termination of credit facility)
Madrid First Co., Ltd.	Loss of control due to disposal (Termination of credit facility)
Hana Seattle Prime Co., Ltd.	Loss of control due to disposal (Termination of credit facility)
Hana Middle Mile 1st Co., Ltd.	Loss of control due to disposal (Termination of credit facility)
KB Bonaccord Private Fund (FOFS)	Loss of control due to disposal
Shinhan AIM Real Estate Fund No. 22-B	Loss of control due to disposal
Midas Global Qualified Investors Private Real Estate Investment Trust No. 10	Loss of control due to disposal
Pinestreet US Infra Specialized Privately Placed Fund Trust No. 7	Loss of control due to disposal
Hyundai Infiniti Private Placement Real Estate Investment Trust No. 3	Loss of control due to disposal
Hana New Technology Fund No. 1	Loss of control due to disposal
IGIS Global. Specialized Private Placement Real Estate Investment Trust No. 436-1	Loss of control due to disposal
HANA MC ONE Co., Ltd.	Loss of control due to disposal (Termination of credit facility)
Anseong KL 1st., Co., Ltd.	Loss of control due to disposal (Termination of credit facility)
Hana Penta 1st., Co., Ltd.	Loss of control due to disposal (Termination of credit facility)
Magic Town 1st., Co., Ltd.	Loss of control due to disposal (Termination of credit facility)
Planet Seocho Co., Ltd.	Loss of control due to disposal (Termination of credit facility)
Hana HQ 1st., Co., Ltd.	Loss of control due to disposal (Termination of credit facility)
KB Spain Solar Energy Private Special Asset Fund	Loss of control due to disposal
EGIS British Core Infra Specialized Privately Placed Fund Trust No. 445	Loss of control due to disposal
IGIS Global. Specialized Private Placement Real Estate	

Name of subsidiaries	Rationale
Investment Trust No. 436-2	Loss of control due to disposal
Sprott Chile Renewable Energy Privat Equity Trust II	Loss of control due to disposal
Venus 1 SPC Co., Ltd.	Loss of control due to disposal
HIT 1 SPC LLC	Loss of control due to disposal
Hana Trust Global REIT One CO., Ltd.	Loss of control due to liquidation
YK Ho 1st., Co., Ltd	Loss of control due to disposal (termination of credit facility)
YK Ho 2nd., Co., Ltd	Loss of control due to disposal (termination of credit facility)
Hana YJDL Co., Ltd.	Loss of control due to disposal (termination of credit facility)
Hana Sewoon 1st., Co., Ltd.	Loss of control due to disposal (termination of credit facility)
Hana AI 5th Co., Ltd.	Loss of control due to disposal (termination of credit facility)
Planet Advisor Co., Ltd.	Loss of control due to disposal (termination of credit facility)
YDJ 2nd Co., Ltd.	Loss of control due to disposal (termination of credit facility)
Mt.Kai 1st., Co., Ltd.	Loss of control due to disposal (termination of credit facility)
OS Residence 1st., Co., Ltd.	Loss of control due to disposal (termination of credit facility)
Capstone EU Private Investment Trust No. 12	Loss of control due to disposal
Titan 1 SPC LLC	Loss of control due to liquidation
VICTORY LIMITED PARTNERSHIP	Loss of control due to liquidation
VICTORY Investment Company Limited	Loss of control due to liquidation
VICTORY GP	Loss of control due to liquidation
Specified Money Trust (Hana F&I)	Loss of control due to disposal
Hana Alternative Private Real Estate Investment Trust No. 157	Loss of control due to liquidation
Hana Private Real Estate Investment Trust No. 177	Loss of control due to decrease in voting rights
H&H investment 2	Loss of control due to liquidation
Hana Alternative Special Investment Private Trust No. 116	Loss of control due to liquidation
Hana Alternative Investment Real Estate Private Trust No. 163-1 (H)	Loss of control due to liquidation
Hana Alternative Special Asset Private Trust No. 123-2	Loss of control due to liquidation
Hana Alternative Private Real Estate Investment Trust No. 183-1	Loss of control due to liquidation
Hana Alternative Houston Private Investment Trust No. 121	Loss of control due to liquidation
BEST ONE Q 1st	Loss of control due to disposal (termination of credit facility)
HI Leading Solution PEF Invest Trust 143 (previously, DGB Leading Solution PEF Invest Trust 143)	Loss of control due to disposal
Netoneq 1st L.L.C	Loss of control due to disposal (termination of credit facility)
DONGAM TOWER 1st Co.,Ltd.	Loss of control due to disposal (termination of credit facility)
Hana H in the Holdings 2nd L.L.C.	Loss of control due to disposal (termination of credit facility)
Hana H in the Holdings 3rd L.L.C.	Loss of control due to disposal (termination of credit facility)
KSPARTNERSHIP 1st 2020, INC.	Loss of control due to disposal (termination of credit facility)
Specified Money Trust (KEB Hana Card)	Loss of control due to changes in accounting policy
Hana Card 2019-1 Asset Securitization Specialty Co., Ltd.	Loss of control due to liquidation
Beijing Jianhao Hongji Real Estate Development Co., Ltd. PFV	Loss of control due to disposal
Beijing Shunhe Enterprise Management Co., Ltd.	Loss of control due to disposal

1-3 Risk and the financial support to a consolidated structured entity

A structured entity is incorporated for asset-back securitization of NPL and beneficiary interest in investment funds of property. A consolidated entity has been involved by purchasing a subordinated bonds from a consolidated structured entity or offering buyout option of asset-backed commercial papers ("ABCP") or loans issued by a consolidated structured entity. It is exposed to a risk of not being able to recover the acquisition (investment) principal according to the performance.

Nature and reasons of the contractual arrangements for providing the financial support to a consolidated structured entity as of December 31, 2022 are as follows:

Name of entity	Commitments to provide financial support	Intention to provide support
Trust accounts with guarantee of the repayment of principal and interest	The Group offers principal conservation commitment to trust accounts. The Group is required to conserve the deficit amount in case the trust account stands below the principal as a result of the operation.	Credit enhancement on financial management of trust account
Ocean Betts The First Co., Ltd.	The Group entered into purchase commitment of ₩50 billion ABCP from Ocean Betts The First Co., Ltd.	Credit facility
Hana H in the Holdings 1st LLC	The Group entered into purchase commitment of ₩150 billion ABCP from Hana H in the Holdings 1st LLC	Credit facility
Hana Display the First Co., Ltd.	The Group entered into purchase commitment of ₩200 billion ABCP from Hana Display the First Co., Ltd.	Credit facility
H-Plus 1st, L.L.C.	The Group entered into purchase commitment of ₩100 billion ABCP from H-Plus 1st, L.L.C.	Credit facility
Hana CK 1st Co.,Ltd.	The Group entered into purchase commitment of ₩57.3 billion ABCP from Hana CK 1st Co.,Ltd.	Credit facility
Hana H in the Holdings 2nd L.L.C	The Group entered into purchase commitment of ₩50 billion ABCP from Hana H in the Holdings 2nd L.L.C	Credit facility
PIOTOWER1st, LLC	The Group entered into purchase commitment of ₩60 billion ABCP from PIOTOWER1st, LLC	Credit facility
HEONEQ1st, LLC	The Group entered into purchase commitment of ₩50 billion ABCP from HEONEQ1st, LLC	Credit facility
HCONEQ1st, LLC	The Group entered into purchase commitment of ₩50 billion ABCP from HCONEQ1st, LLC	Credit facility
DPS 2nd, Co., Ltd	The Group entered into purchase commitment of ₩45.7 billion ABCP from DPS 2nd, Co., Ltd	Credit facility
H Hotel ONEQ 1st, LLC	The Group entered into purchase commitment of ₩48 billion ABCP from H Hotel ONEQ 1st, LLC	Credit facility
Bbq 1q 1st, LLC	The Group entered into purchase commitment of ₩20 billion ABCP from Bbq 1q 1st, LLC	Credit facility
Skoffice 1q 1st, LLC	The Group entered into purchase commitment of ₩60 billion ABCP from Skoffice 1q 1st, LLC	Credit facility
Cleanenergy 1q 1st, LLC	The Group entered into purchase commitment of ₩60 billion ABCP from Cleanenergy 1q 1st, LLC	Credit facility
	The Group partially purchased ABCP (purchase commitment of ₩50 billion) from	

Name of entity	Commitments to provide financial support	Intention to provide support
HANA DL First Co., Ltd	HANA DL First Co., Ltd	Credit facility
HANA TERMINUS First Co., Ltd	The Group partially purchased ABCP (purchase commitment of ₩50 billion) from HANA TERMINUS First Co., Ltd	Credit facility
THE HAM ONEQ 1st. LLC	The Group entered into purchase commitment of ₩40 billion ABCP from THE HAM ONEQ 1st. LLC	Credit facility
HANA I.G 1st. LLC	The Group entered into purchase commitment of ₩20 billion ABCP from HANA I.G 1st. LLC	Credit facility
GRAND ONEQ 1st. LLC	The Group entered into purchase commitment of ₩40 billion ABCP from GRAND ONEQ 1st. LLC	Credit facility
THE MIRAE ONEQ 1st. LLC	The Group entered into purchase commitment of ₩50 billion ABCP from THE MIRAE ONEQ 1st. LLC	Credit facility
DONG DAEGU TERMINAL 2nd. LLC	The Group entered into purchase commitment of ₩20 billion ABCP from DONG DAEGU TERMINAL 2nd. LLC	Credit facility
KENDALL NO.9 1st. LLC	The Group entered into purchase commitment of ₩30.3 billion ABCP from KENDALL NO.9 1st. LLC	Credit facility
BYK 3rd Co., Ltd.	The Group entered into purchase commitment of ₩20 billion ABCP from BYK 3rd Co., Ltd.	Credit facility
Mini Hana 1st, LLC	The Group entered into purchase commitment of ₩30 billion ABCP from Mini Hana 1st, LLC.	Credit facility
Jinwoori 1Q 1st, LLC	The Group entered into purchase commitment of ₩30 billion ABCP from Jinwoori 1Q 1st, LLC.	Credit facility
Hana Double H 1Q 4th Co.,Ltd.	The Group entered into purchase commitment of ₩11.1 billion ABCP from Hana Double H 1Q 4th Co.,Ltd.	Credit facility
Hana Double H 1Q 5th Co.,Ltd.	The Group entered into purchase commitment of ₩11.1 billion ABCP from Hana Double H 1Q 5th Co.,Ltd.	Credit facility
H-ECHO 1st, LLC	The Group entered into purchase commitment of ₩80 billion ABCP from H-ECHO 1st, LLC.	Credit facility
HANA STARLORD 1st, LLC	The Group entered into purchase commitment of ₩30 billion ABCP from HANA STARLORD 1st, LLC.	Credit facility
CLEAN WORLD 1st, LLC	The Group entered into purchase commitment of ₩20 billion ABCP from CLEAN WORLD 1st, LLC.	Credit facility
H-HANA 1st, LLC	The Group entered into purchase commitment of ₩90 billion ABCP from H-HANA 1st, LLC.	Credit facility
HANA ANANTI 1st, LLC	The Group entered into purchase commitment of ₩50 billion ABCP from HANA ANANTI 1st, LLC.	Credit facility
NAE CHON HANA 1st, LLC	The Group entered into purchase commitment of ₩49.6 billion ABCP from NAE CHON HANA 1st, LLC.	Credit facility
DRAGON HANA 1st, LLC	The Group entered into purchase commitment of ₩30 billion ABCP from DRAGON HANA 1st, LLC.	Credit facility
HANA BAEKSA LOGISTICS 1st, LLC	The Group entered into purchase commitment of ₩34.6 billion ABCP from HANA BAEKSA LOGISTICS 1st, LLC	Credit facility
HANA S ONE Q 1st, LLC	The Group entered into purchase commitment of ₩30 billion ABCP from HANA S ONE Q 1st, LLC.	Credit facility
HOME PLUS HANA CONNECT, LLC	The Group entered into purchase commitment of ₩60 billion ABCP from HOME PLUS HANA CONNECT, LLC.	Credit facility
Antarctica 1st, Ltd	The Group entered into purchase commitment of ₩60 billion ABCP from Antarctica 1st, Ltd.	Credit facility
Enerbility Hana 1st, Ltd	The Group entered into purchase commitment of ₩50 billion ABCP from Enerbility Hana 1st, Ltd.	Credit facility
Hana Plant 1st, Ltd	The Group entered into purchase commitment of ₩100 billion ABCP from Hana Plant 1st, Ltd.	Credit facility
Gs Hana 1st, Ltd	The Group entered into purchase commitment of ₩60 billion ABCP from Gs Hana 1st, Ltd.	Credit facility
	The Group entered into purchase commitment of ₩30 billion ABCP from	

Name of entity	Commitments to provide financial support	Intention to provide support
Cha Cha Hana 1st, Ltd	Cha Cha Hana 1st, Ltd.	Credit facility
T A 1st, Ltd	The Group entered into purchase commitment of ₩10 billion ABCP from T A 1st, Ltd.	Credit facility
Neostar 6th, Ltd	The Group entered into purchase commitment of ₩40 billion ABCP from Neostar 6th, Ltd.	Credit facility
Galaxia 1Q 1st, Ltd	The Group entered into purchase commitment of ₩26.3 billion ABCP from Galaxia 1Q 1st, Ltd.	Credit facility
Hana Charlemont Exchange	The Group is obligated to acquire privately placed bonds up to ₩11.6 billion.	Credit facility
Hana AIC 1st Co., Ltd	The Group is obligated to acquire privately placed bonds up to ₩141.2 billion.	Credit facility
Peach Shine 2nd Co., Ltd.	The Group is obligated to acquire privately placed bonds up to ₩37 billion.	Credit facility
Centaur First Co., Ltd.	The Group is obligated to acquire privately placed bonds up to ₩29 billion.	Credit facility
Hana Runway Co., Ltd.	The Group is obligated to acquire privately placed bonds up to ₩76 billion.	Credit facility
JLB Squire Co., Ltd.	The Group is obligated to acquire privately placed bonds up to ₩110.3 billion.	Credit facility
Hana-Sinjang 1st Co.,Ltd	The Group is obligated to acquire privately placed bonds up to ₩4 billion.	Credit facility
Hana Datacenter 1st., Co., Ltd.	The Group is obligated to acquire privately placed bonds up to ₩0.1 billion.	Credit facility
Eco Clover Co., Ltd.	The Group is obligated to acquire privately placed bonds up to ₩92.1 billion.	Credit facility
Hana-Ulsan Co., Ltd	The Group is obligated to acquire privately placed bonds up to ₩2.7 billion.	Credit facility
Hana Port 1st., Co., Ltd.	The Group is obligated to acquire privately placed bonds up to ₩46 billion.	Credit facility
Hana 1Q Logis B Co., Ltd.	The Group is obligated to acquire privately placed bonds up to ₩10 billion.	Credit facility
Hana Bukjincheon 2nd., Co., Ltd.	The Group is obligated to acquire privately placed bonds up to ₩5 billion.	Credit facility
Ernest Hyun 1st., Co., Ltd.	The Group is obligated to acquire privately placed bonds up to ₩83 billion.	Credit facility
Tree Axion 1st., Co., Ltd.	The Group is obligated to acquire privately placed bonds up to ₩6.5 billion.	Credit facility
Easy Tree 6th., Co., Ltd.	The Group is obligated to acquire privately placed bonds up to ₩20 billion.	Credit facility
JA 8th., Co., Ltd.	The Group is obligated to acquire privately placed bonds up to ₩20 billion.	Credit facility
Joon Dragon Fairness 2nd., Co., Ltd.	The Group is obligated to acquire privately placed bonds up to ₩30.4 billion.	Credit facility
Hana Asan Baebang 1st Co., Ltd.	The Group is obligated to acquire privately placed bonds up to ₩13.1 billion.	Credit facility
Zeronine 1st Co., Ltd.	The Group is obligated to acquire privately placed bonds up to ₩6.8 billion.	Credit facility
Hana JH 2nd Co., Ltd.	The Group is obligated to acquire privately placed bonds up to ₩12 billion.	Credit facility
The 1st GM 23th Co., Ltd.	The Group is obligated to acquire privately placed bonds up to ₩10 billion.	Credit facility
JEY Complex Co., Ltd.	The Group is obligated to acquire privately placed bonds up to ₩83 billion.	Credit facility
JHY Complex Co., Ltd.	The Group is obligated to acquire privately placed bonds up to ₩50 billion.	Credit facility
Hana Residence 2nd Co., Ltd.	The Group is obligated to acquire privately placed bonds up to ₩42.8 billion.	Credit facility
New Deal Beorreo 1 Co., Ltd.	The Group is obligated to acquire privately placed bonds up to ₩20 billion.	Credit facility
E-Master 14th Co., Ltd.	The Group is obligated to acquire privately placed bonds up to ₩9.6 billion.	Credit facility
Planet Seocho 2nd Co., Ltd.	The Group is obligated to acquire privately placed bonds up to ₩30.5 billion.	Credit facility
E-Master 18th Co., Ltd.	The Group is obligated to acquire privately placed bonds up to ₩20.5 billion.	Credit facility
Hana Boston Core 1st Co., Ltd.	The Group is obligated to acquire privately placed bonds up to ₩79.6 billion.	Credit facility
Hana Boston Core 2nd Co., Ltd.	The Group is obligated to acquire privately placed bonds up to ₩53.1 billion.	Credit facility
Geomdan Nine One 1st Co., Ltd.	The Group is obligated to acquire privately placed bonds up to ₩4.9 billion.	Credit facility
New Deal IDC 1stnd Co., Ltd.	The Group is obligated to acquire privately placed bonds up to ₩20.5 billion.	Credit facility
New Deal IDC 2nd Co., Ltd.	The Group is obligated to acquire privately placed bonds up to ₩14.5 billion.	Credit facility
US Alix 1st Co., Ltd.	The Group is obligated to acquire privately placed bonds up to ₩36.5 billion.	Credit facility
Hana Core-value Securitization 1st Co., Ltd.	The Group is obligated to acquire privately placed bonds up to ₩82 billion.	Credit facility
Black Wing 1st Co., Ltd.	The Group is obligated to acquire privately placed bonds up to ₩30 billion.	Credit facility
Hana HD 1st Co., Ltd.	The Group is obligated to acquire privately placed bonds up to ₩30 billion.	Credit facility
Hana 4 Sky Co., Ltd.	The Group is obligated to acquire privately placed bonds up to ₩17 billion.	Credit facility
Hana Dowon 1st Co., Ltd.	The Group is obligated to acquire privately placed bonds up to ₩38 billion.	Credit facility
Portfolio 1st Co., Ltd.	The Group is obligated to acquire privately placed bonds up to ₩15 billion.	Credit facility
Ernest Hyun 2nd., Co., Ltd.	The Group is obligated to acquire privately placed bonds up to ₩4.1 billion.	Credit facility

Name of entity	Commitments to provide financial support	Intention to provide support
DA Global Logis 1st., Co., Ltd.	The Group is obligated to acquire privately placed bonds up to ₩27.9 billion.	Credit facility
SF Dadae New Dream, Co., Ltd.	The Group is obligated to acquire privately placed bonds up to ₩50 billion.	Credit facility
One Mega Wonchang 1st., Co., Ltd.	The Group is obligated to acquire privately placed bonds up to ₩6.1 billion.	Credit facility
New Deal IDC 3rd Co., Ltd.	The Group is obligated to acquire privately placed bonds up to ₩19 billion.	Credit facility
JH Double 1st., Co., Ltd.	The Group is obligated to acquire privately placed bonds up to ₩21 billion.	Credit facility
Hana 1Q OSC., Co., Ltd.	The Group is obligated to acquire privately placed bonds up to ₩30 billion.	Credit facility
New Deal IDC 4th Co., Ltd.	The Group is obligated to acquire privately placed bonds up to ₩37 billion.	Credit facility
The Conral GM 23rd., Co., Ltd.	The Group is obligated to acquire privately placed bonds up to ₩20 billion.	Credit facility
The Conral GM 22nd., Co., Ltd.	The Group is obligated to acquire privately placed bonds up to ₩30 billion.	Credit facility
Black Mir 2nd., Co., Ltd.	The Group is obligated to acquire privately placed bonds up to ₩73.5 billion.	Credit facility
Blue Shining 1st., Co., Ltd.	The Group is obligated to acquire privately placed bonds up to ₩20 billion.	Credit facility
Synergy 1st., Co., Ltd.	The Group is obligated to acquire privately placed bonds up to ₩120 billion.	Credit facility
Excelsiop Saka IMP., Co., Ltd.	The Group is obligated to acquire privately placed bonds up to ₩34.6 billion.	Credit facility
J-On Prime., Co., Ltd.	The Group is obligated to acquire privately placed bonds up to ₩79.8 billion.	Credit facility
Hana Dongnae 2nd., Co., Ltd.	The Group is obligated to acquire privately placed bonds up to ₩6.1 billion.	Credit facility
Hana Dongnae 1st., Co., Ltd.	The Group is obligated to acquire privately placed bonds up to ₩16.2 billion.	Credit facility
Hana Logis Point 1st., Co., Ltd.	The Group is obligated to acquire privately placed bonds up to ₩14 billion.	Credit facility
Hana Moon10 1st., Co., Ltd.	The Group is obligated to acquire privately placed bonds up to ₩11.5 billion.	Credit facility
Hana Ulsan Yaeum 1st., Co., Ltd.	The Group is obligated to acquire privately placed bonds up to ₩11 billion.	Credit facility
Hana Jangpo 1st., Co., Ltd.	The Group is obligated to acquire privately placed bonds up to ₩23 billion.	Credit facility
Hana Chookhyun 2nd., Co., Ltd.	The Group is obligated to acquire privately placed bonds up to ₩10 billion.	Credit facility
Hana Chookhyun 1st., Co., Ltd.	The Group is obligated to acquire privately placed bonds up to ₩13.1 billion.	Credit facility
Hana Haeundae Jungdong 1st., Co., Ltd.	The Group is obligated to acquire privately placed bonds up to ₩20.2 billion.	Credit facility
Stade Blue 7th Co., Ltd.	The Group is obligated to acquire privately placed bonds up to ₩40.8 billion.	Credit facility
With GM 9th., Co., Ltd.	The Group is obligated to acquire privately placed bonds up to ₩12 billion.	Credit facility
With GM 7th., Co., Ltd.	The Group is obligated to acquire privately placed bonds up to ₩20 billion.	Credit facility
Tongyeong Ellioju 1st Co., Ltd.	The Group is obligated to acquire privately placed bonds up to ₩50.5 billion.	Credit facility
Planet Ayajin Co., Ltd.	The Group is obligated to acquire privately placed bonds up to ₩15.6 billion.	Credit facility
Hana Jaehyun 1st Co., Ltd.	The Group is obligated to acquire privately placed bonds up to ₩17 billion.	Credit facility
Hmidan 2nd Co., Ltd.	The Group is obligated to acquire privately placed bonds up to ₩30.5 billion.	Credit facility
AIP Environment Infrastructure Specialized Privately Placed Fund Trust No. 1	The Group committed to increase investment up to ₩11 billion on its asset.	Investment commitment
AIP Energy Transport Infrastructure Specialized Privately Placed Fund Trust #4	The Group committed to increase investment up to ₩10.9 billion on its asset.	Investment commitment
AIP Energy Infrastructure Specialized Privately Placed Fund Trust #2	The Group committed to increase investment up to ₩3 billion on its asset.	Investment commitment
Sandhyllly Renewable Energy Privat Equity Trust II	The Group committed to increase investment up to ₩10.6 billion on its asset.	Investment commitment
Mastern US Private Real Estate Investment Trust No. 52	The Group committed to increase investment up to ₩38 billion on its asset.	Investment commitment
Vestas Europe Logistics Private Real Estate Investment Trust No. 73B	The Group committed to increase investment up to ₩27 billion on its asset.	Investment commitment
Meritz Private Real Estate Investment Trust No. 30	The Group committed to increase investment up to ₩18.2 billion on its asset.	Investment commitment
Vestas Private Real Estate Investment Trust No.82	The Group committed to increase investment up to ₩57.6 billion on its asset.	Investment commitment
Hana Card 2020-1 Asset Securitization Specialty Co., Ltd.	In related to asset securitization, the transferred beneficial interest is required to be above a certain rate. If asset shortage is constant, additional asset transfer shall be held.	Asset securitization
Hana Card 2021-1 Asset Securitization Specialty Co., Ltd.	In related to asset securitization, the transferred beneficial interest is required to be above a certain rate. If asset shortage is constant, additional asset transfer shall be held.	Asset securitization
Hana Card 2022-1 Asset Securitization	In related to asset securitization, the transferred beneficial interest is required to be above	

Name of entity	Commitments to provide financial support	Intention to provide support
Specialty Co., Ltd.	ve a certain rate. If asset shortage is constant, additional asset transfer shall be held.	Asset securitization
Hana Alternative Infra Special Investment Private Trust	The Group committed to increase investment up to ₩16.6 billion on its asset of Hana Alternative Infra Special Investment Private Trust Nos.3-1, 3-2, 3-3 and 3-4.	Investment commitment
Hana Special New Deal National Representative Growth Private Trust	The Group committed to increase investment up to ₩73 billion on its asset.	Investment commitment
Hana Alternative Special Investment Private Trust No. 108	The Group committed to increase investment up to ₩3.3 billion on its asset.	Investment commitment
HANA Alternative Wando Geum-il Wind Power Infra Special Asset No. 1	The Group committed to increase investment up to ₩0.7 billion on its asset.	Investment commitment
Hana Tech Value-Up Investment Fund	The Group committed to increase investment up to ₩15.3 billion on its asset.	Investment commitment
Hana Alternative Private Real Estate Investment Trust No. 119	The Group committed to increase investment up to ₩35 billion on its asset.	Investment commitment
Hana Alternative Frontier Private Investment Trust No. 1	The Group committed to increase investment up to ₩2.5 billion on its asset.	Investment commitment
Hana Collaboration Pre-IPO Fund	The Group committed to increase investment up to ₩8.8 billion on its asset.	Investment commitment
HF 1st Corporate Private Equity Fund	The Group committed to increase investment up to ₩16.7 billion on its asset.	Investment commitment
Hana Beyond Finance Fund	The Group committed to increase investment up to ₩210 billion on its asset.	Investment commitment
Hana Alternative Private Real Estate Investment Trust No. 180	The Group committed to increase investment up to ₩215 billion on its asset..	Investment commitment
Defense Technology Innovation Private Investment Trust	The Group committed to increase investment up to ₩587 billion on its asset.	Investment commitment

1-4 Non-controlling interest of subsidiaries

1-4-1 Major non-controlling interests' share of the equity of the subsidiaries as of December 31, 2022 and 2021, is as follows (Korean won in millions):

Classification	December 31, 2022	December 31, 2021
Hana Bank (*1)	533,475	533,475
KEB Hana Card	—	305,825
Hana Capital (*1)	149,578	149,578
Hana F&I, Inc.	599	540
PT Bank KEB Hana	267,149	262,399
Hana Bancorp, inc.	4,071	4,089
GLN International Co., Ltd.	8,179	—
Hana Equity Investment Management (Shenzhen) Co., Ltd	23,726	18,153
Others (*2)	5,659	6,646
Total	992,436	1,280,705

(*1) The carrying amount of hybrid bonds issued by the subsidiary.

(*2) The carrying amounts of non-controlling interest of Dduksim Co., Ltd. and Keumho Trading Co., Ltd.

1-4-2 Major non-controlling interest share of profit or loss of the subsidiaries for the years ended December 31, 2022 and 2021, is as follows (Korean won in millions):

Classification	2022	2021
Hana Bank (*1)	22,532	7,027
KEB Hana Card	20,076	37,573
Hana Capital (*1)	5,625	5,625
Hana F&I, Inc. (*1)	–	503
Hana F&I, Inc.	58	47
PT Bank KEB Hana	15,980	5,430
Hana Bancorp, inc.	(127)	(44)
Hana Equity Investment Management (Shenzhen) Co., Ltd	5,660	–
Others (*2)	(1,001)	(647)
Total	68,803	55,514

(*1) The carrying amount of hybrid bonds issued by the subsidiary

(*2) The carrying amounts of non-controlling interest of Dduksim Co., Ltd., Sejoong Co., Ltd. and Keumho Trading Co., Ltd.

2. Unconsolidated structured entities

2-1 Nature of the Group's interests in unconsolidated structured entities

Details of the nature of the Group's interests in unconsolidated structured entities as of December 31, 2022 and 2021, are as follows (Korean won in millions):

Classification	Purpose	Financing arrangement	Total assets	
			December 31, 2022	December 31, 2021
Asset securitization	Financing through asset liquidation and	Issuing asset backed		

Classification	Purpose	Financing arrangement	Total assets	
			December 31, 2022	December 31, 2021
special-purpose company ("SPC")	securitization	loan ("ABL")/ABCP and others	8,061,914	7,211,374
Real estate finance	Operation for real estate (including SOC) development	Investment and borrowing	136,331,948	35,521,837
Shipping finance and acquisition financing	Financing to purchase ships, NPL and ownership	Investment and borrowing	54,032,565	25,967,276
Investment fund	Managing investment fund and trust	Issuing beneficiary certificates	242,591,368	277,704,873

2-2 Risks from its interests in unconsolidated structured entities (Korean won in millions):

<December 31, 2022>

(Korean won in millions)

Classification	Asset securitization SPC	Real estate finance	Shipping finance and acquisition financing	Investment fund
Assets:				
Loans receivable (A)	899,544	4,644,713	1,771,780	1,163,791
Securities (B)	1	90,421	29,007	17,516,734
Derivatives (C)	8,778	6,104	19,536	379
Others (D)	1,430	16,301	8,883	157,142
Liabilities:				
Derivatives	41,255	2,347	6,460	—
Provision	206	2,872	490	96
Others	17	61	45	2,970
Net asset	868,275	4,752,259	1,822,211	18,834,980
Maximum exposure to loss				
Financial assets (A+B+C+D)	909,753	4,757,539	1,829,206	18,838,046
Credit and other commitment	295,062	1,043,612	354,198	2,598,034

<December 31, 2021>

(Korean won in millions)

Classification	Asset securitization SPC	Real estate finance	Shipping finance and acquisition financing	Investment fund
Assets:				
Loans receivable (A)	416,759	2,395,327	1,276,791	1,044,937
Securities (B)	1	55,260	26,292	13,991,289
Derivatives (C)	4,391	3,782	11,868	—
Others (D)	1,253	6,988	4,694	70,232

Classification	Asset securitization SPC	Real estate finance	Shipping finance and acquisition financing	Investment fund
Liabilities:				
Derivatives	6,574	170	1,200	–
Provision	2,198	3,291	979	252
Others	24	124	55	–
Net asset	413,608	2,457,772	1,317,411	15,106,206
Maximum exposure to loss				
Financial assets (A+B+C+D)	422,404	2,461,357	1,319,645	15,106,458
Credit and other commitment	908,695	1,129,319	462,185	1,847,264

3. Summary of significant accounting policies and basis of preparation

3-1 Basis of preparation

The Group prepares statutory consolidated financial statements in the Korean in accordance with Korean International Financial Reporting Standard ("K-IFRS") based on the Act on External Audit of Stock Companies

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

3-2 Principles of consolidation

The significant accounting methods of consolidation that the Group adopts in preparing the consolidated financial statements are as follows.

3-2-1 Subsidiaries

Subsidiaries are the companies controlled by the Group, and the Group has rights to determine the financial and operational policies of the subsidiaries. Generally, it has at least 50% voting rights, and special-purpose vehicles are included. When the Group evaluates whether a company falls under a subsidiary, it considers the existence of an exercisable or convertible potential voting right and its effect.

When the Group controls a subsidiary, the subsidiary is subject to consolidation; when the Group loses the control, it is eliminated from the consolidation.

3-2-2 Structured entity

A structured entity is an entity that has been designed so that voting or similar rights are not a dominant factor in deciding who controls the entity.

When assessing whether the Group has power over a structured entity, which the Group holds an interest in, the following factors should be considered:

the purpose and form of the structured entity; substantive ability to direct the relevant activities of the structured entity; relationship and its character with the structured entity and the size of exposure to earnings volatility of the structured entity.

3-2-3 Offsetting investment account against equity account

The investment accounts of the Group and the corresponding equity accounts of the subsidiaries were offset and eliminated as of the date of acquiring control.

3-2-4 Difference between net assets of an investee and acquisition costs

When offsetting the investment of the Parent Company and the equity of a subsidiary, the Group applies an acquisition method in accounting treatment.

When applying the acquisition method, if the purchase price to acquire shares of the subsidiary's assets and liabilities at fair value exceeds the investment as of the date of acquiring control, the excess is recognized as goodwill and recorded as an intangible asset, and the Group tests goodwill for impairment annually at the end of reporting period.

If the parent acquires additional shares of the subsidiary after acquiring the control of the subsidiary, the investment of the Parent Company and the equity of the subsidiary are offset and eliminated as of the initial acquisition date; at this time, if the investment and the corresponding equity are not equal, the difference is recorded as consolidated capital surplus (or consolidated capital adjustments).

3-2-5 Elimination of related-party transactions and unrealized gains or losses

The Group offset and eliminated intercompany accounts receivable-payable, intercompany revenue-expenses, and interest incomes or expenses arising from intercompany loans by applying an interest rate for the current term.

3-2-6 Application of equity method

According to the sources of changes in net assets of an investee under equity method, the Group differently records the changes in accounting treatments. If the net assets of an investee are changed due to a net profit or loss for the current term, the change is recorded as an investment income or loss under equity method; if the net assets are changed due to an increase or decrease in retained earnings carried over from the previous term, the change is recorded as a positive or negative change in retained earnings under equity method; if the net assets are changed due to an increase or decrease in equity other than the net profit or loss for the current term or the change in retained earnings carried over from the previous term, the change is recorded as a positive or negative change in equity under equity method.

3-2-7 Special reserve of trust account

In the trusts with stipulations of preserving principals and interests, which are consolidated, special reserves accumulated in accordance with the terms and conditions of the trusts are adjusted in the consolidated retained earnings in accordance with the detailed enforcement regulations on banking supervision.

3-2-8 Non-controlling interests

The Group recognizes equity in a subsidiary not attributable to a parent as non-controlling interests. The Group also attributes total comprehensive income to the non-controlling interests even if this results in the non-controlling interests having a deficit balance. The Group presents the deficit balance as a negative number in equity.

3-2-9 Business combinations

3-2-9-1 Business combinations

Acquisition method is applied to business combinations except a business combination between entities or business under the control of the same ultimate parent company. The Group recognizes identifiable assets acquired and liabilities taken over at fair value on the acquisition date, except in the following cases.

- Lease contracts: classified by the terms and conditions of contracts on the date of contract
- Contingent liabilities: recognized as the liabilities that can be reliably measured as current obligations
- Deferred tax assets and liabilities: recognized and measured in accordance with K-IFRS 1012 Income taxes.
- Employee benefits: recognized and measured in accordance with K-IFRS 1019 Employee benefits
- Compensable assets: recognized and measured in accordance with standards applicable to compensable items
- Reacquired rights: measured in accordance with special regulations
- Stock options: stock option-related debt or equity securities are measured in accordance with K-IFRS 1102 Share-based payment
- Assets held-for-sale: measured at net fair value in accordance with K-IFRS 1105 Non-current assets held-for-sale and discontinued operations

In business combination, consideration for transfer is measured at fair value, which is a sum of the fair values of assets transferred by the Group, liabilities that the Group bears for the previous owner of a company being acquired and equity instruments issued by the Group on the acquisition date. However, the stock options included in the consideration for transfer, which the acquirer grants to exchange for the compensations that are held by the employees of the acquiree, are not measured at fair value but evaluated in the way described above.

The acquisition-related costs are costs the acquirer has incurred to achieve effects of business combination. Those costs include brokerage fees, in other words, advisory, legal, accounting, valuation and other professional or consulting fees; general administrative costs, including costs of maintaining an internal acquisitions department; and costs to register and issue debt securities and equity securities. Except the costs of issuing debt and equity securities under K-IFRS 1032 and K-IFRS 1109, the acquirer recognizes acquisition-related costs as expenses in the periods in which the costs are incurred and the services are received.

3-2-9-2 Goodwill or gain on bargain purchase

The Group recognizes goodwill as of the acquisition date measured as the excess of (a) the aggregate of (i) the consideration transferred measured that which generally requires acquisition-date fair value and (ii) the amount of any non-controlling interest in the acquire over (b) the net of the acquisition-date amounts of the identifiable assets acquired and the liabilities assumed in accordance with K-IFRS 1103 Business combinations. If (b) exceeds (a), the Group reassess whether it has correctly identified all of the assets acquired and all of the liabilities assumed. After reassessments, the Group recognizes the resulting gain in profit or loss (a gain on bargain purchase) on the acquisition date.

Additional acquisition of non-controlling interest is taken into account as transactions between the shareholders and the resulting goodwill, etc. is not recognized.

3-3 Foreign exchange

3-3-1 Functional currency

When the Group prepares the consolidated financial statements, it measures and recognizes all transactions according to the functional currency. The functional cu

currency is the currency of the primary economic environment in which the entity operates and entities with different functional currencies measured and recognized in its own functional currencies.

3-3-2 Translation of foreign currency transactions and balances at the end of the reporting period

Transactions in foreign currencies are initially recorded at the functional currency rate of exchange ruling at the date of the transaction. Monetary assets and liabilities denominated in foreign currencies are translated at the exchange rate at the reporting date and the exchange difference is recognized as profit or loss. Non-monetary items measured at fair value in a foreign currency are translated at the exchange rates at the end of reporting date. When a gain or loss on a non-monetary item is recognized in other comprehensive income ("OCI"), any exchange component of that gain or loss is recognized in OCI. Conversely, when a gain or loss on a non-monetary item is recognized in profit or loss, any exchange component of that gain or loss is recognized in profit or loss. Non-monetary items that are measured in terms of historical cost in a foreign currency are translated using the exchange rates as of the dates of the initial transactions.

The Group may have a monetary item that is receivable from or payable to a foreign operation. An item for which settlement is neither planned nor likely to occur in the foreseeable future is, in substance, a part of the entity's net investment in that foreign operation. Exchange differences arising on a monetary item that forms part of a reporting entity's net investment in a foreign operation are recognized initially in OCI and reclassified from equity to profit or loss on disposal of the net investment

3-3-3 Translation to the presentation currency

The Group translates the results and financial position of overseas branches and

subsidiaries recorded in its own functional currencies into the presentation currency of the Group, Korean won ("KRW"). The Group translates (i) assets and liabilities for each statement of financial position at the closing rate at the date of that statement of financial position and (ii) income and expenses for each statement presenting profit or loss and OCI at exchange rates at the dates of the transactions or an average rate of the period. The Group recognizes all resulting exchange differences as OCI.

3-4 Cash and cash equivalents

Cash and cash equivalent are comprised of cash at banks and on hand and short-term demand deposits. The purpose of cash and cash equivalents is to make short-term investments and to meet short-term cash demands. Cash equivalents are short-term, highly liquid investments that are readily convertible to known amounts of cash and which are subject to an insignificant risk of changes in value

The restrictions on the Group's use of a demand deposit arising from a contract with a third party do not result in the deposit no longer being cash, unless those restrictions change the nature of the deposit in a way that it would no longer meet the definition of cash. The restrictions on the use of cash and due from banks arising from contracts are disclosed in Note 11-2.

3-5 Classification and measurement of financial assets

The classification of financial assets at initial recognition depends on the financial asset's contractual cash flow characteristics and the Group's business model for managing them. Financial assets are classified, at initial recognition, as FVTPL, FVOCI and subsequently measured at amortized cost, and financial liabilities are classified as FVTPL and subsequently measured at amortized cost.

Purchase or sale of financial assets is recognized at the date of settlement. However, purchases or sales of financial assets that require delivery of assets

within a time frame established by regulation or convention in the market place (regular-way trades) are recognized on the trade date, i.e., the date that the Group commits to purchase or sell the asset.

The Group initially measures a financial asset and a financial liability at its fair value, plus (minus), in the case of a financial asset (financial liability) not at FVTPL, transaction costs. Fair value is defined as the amount by which an asset can be exchanged or a liability settled in a transaction between an independent party with a reasonable judgment and willingness to trade. The fair value of a financial instrument at initial recognition is generally the transaction price (the fair value provided or received).

3-5-1 Financial assets at FVTPL

Financial assets at FVTPL include financial assets held for trading, financial assets designated upon initial recognition at FVTPL and financial assets not classified as FVOCI or subsequently measured at amortized cost.

In addition, if the designation of a financial asset eliminates or significantly reduces the recognition and measurement inconsistencies that may arise from the measurement of assets or liabilities on a different basis or recognition of gains or losses, a financial asset can be designated as FVTPL.

Financial assets at FVTPL are measured at fair value and the gains or losses arising from changes in fair value are recognized in profit or loss. Dividends and interest income from financial assets are also recognized in profit or loss.

3-5-2 Financial assets at FVOCI

The Group measures debt instruments at FVOCI if both of the following conditions are met:

- a. The financial asset is held within a business model with the objective of both holding to collect contractual cash flows and selling
- b. The contractual terms of the financial asset give rise on specified dates to cash flows that are solely payments of principal and interest on the principal amount outstanding

The Group can elect to classify irrevocably its equity investments as equity instruments designated at FVOCI when they are held strategically not for short-term trading. Financial assets at FVOCI are measured at fair value after initial recognition. For debt instruments at FVOCI, interest income, foreign exchange revaluation and impairment losses or reversals are recognized in the consolidated statement of profit or loss and other comprehensive income and computed in the same manner as for financial assets measured at amortized cost. The remaining fair value changes are recognized in OCI.

Upon derecognition, the cumulative fair value change recognized in OCI is recycled to profit or loss. However, the cumulative fair value change from equity instruments designated at FVOCI is never recycled to profit or loss when derecognized.

The fair value of financial assets at FVOCI is measured in the foreign currency and translated at the exchange rate at the end of the reporting period. The part of changes in fair value arising from changes in the amortized cost is recognized in profit or loss and other changes are recognized in equity.

3-5-3 Financial assets at amortized cost

The Group measures financial assets at amortized cost if both of the following conditions are met:

- a. The financial asset is held within a business model with the objective to hold financial assets in order to collect contractual cash flows

- b. The contractual terms of the financial asset give rise on specified dates to cash flows that are solely payments of principal and interest on the principal amount outstanding

Financial assets at amortized cost are subsequently measured using the effective interest rate ("EIR") method and are subject to impairment. Interest income is recognized using the EIR method.

The Group defers loan origination fees / loan origination costs ("LOF/LOCs") associated with originating loans and LOCs that have future economic benefits. Loan balances are reported net of these LOF/LOCs. The deferred LOF/LOCs are amortized based on the EIR method with the amortization recognized as adjustments to interest income.

3-6 Derivative financial instruments and hedge accounting

The Group measures derivative financial instruments at fair value at initial recognition. The Group classifies derivative financial instruments as derivative financial instruments held for trading purpose or hedging instruments. After initial recognition, the Group measures derivative financial instruments at fair value and gains or loss arising from changes in the fair value as profit or loss, except when the derivative financial instruments are previously a designated and effective hedging instrument in a cash flow hedge or net investment hedge. No longer qualifies, the Group recognizes the portion of the gain or loss on the hedging instrument that is determined to be an effective hedge as OCI.

The Group applies fair value hedge accounting for a hedge of the exposure to changes in fair value of a recognized asset or liability or an unrecognized firm commitment, or an identified portion of such an asset, liability or firm commitment, that is attributable to a particular risk and could affect profit or loss.

The Group applies cash flow hedge for a hedge of the exposure to variability in

cash flows that is attributable to a particular risk associated with a recognized asset or liability (such as all or some future interest payments on variable-rate debt) or a highly probable forecast transaction.

The Group documents the hedging relationship, Group's risk management objective and strategy for undertaking the hedge, the risk being hedged and how to assess the hedging instrument's effectiveness for applying hedge accounting. The effectiveness of the hedge is the hedging instrument's effectiveness in offsetting the exposure to changes in the hedged item's fair value or cash flows attributable to the hedged risk. The Group assesses the hedge on an ongoing basis and determined actually to have been highly effective throughout the financial reporting periods for which the hedge was designated and documents the result of assessment.

3-6-1 Fair value hedges

For fair value hedge accounting, the Group recognizes a gain or a loss on valuation of the hedging instrument and the hedged item as profit or loss for offsetting the changes in the fair value of the hedging instrument and the hedged item. If the Group elect to classify irrevocably the hedged equity instruments designated at fair value through OCI, the Group recognizes a gain or a loss on valuation of the hedging instrument and the hedged item as other comprehensive income or loss

The Group discontinues prospectively the hedge accounting if the hedge no longer meets the criteria for hedge accounting. Any adjustment arising from the change in the fair value of the hedged financial instrument for which the EIR method is used is amortized to profit or loss fully by maturity of the hedged financial instrument.

3-6-2 Cash flow hedges

For cash flow hedge accounting, the Group recognizes the effective portion of the gain or loss on the hedging instrument directly as OCI for offsetting the

exposure to changes in cash flows of the hedging instrument and the hedged item attributable to the hedged risk. The Group reclassified from equity to profit or loss the associated gain or loss that was recognized in OCI in the same period during which the hedged forecast cash flows affect profit or loss. The Group discontinues prospectively the cash flow hedge accounting if the hedge no longer meets the criteria for hedge accounting.

3-6-3 Hedges of a net investment

Hedges of a net investment in a foreign operation, including a hedge of a monetary item that is accounted for as part of the net investment, are accounted for in a way gains or losses on the hedging instrument relating to the effective portion of the hedge are recognized as OCI, while any gains or losses relating to the ineffective portion are recognized in the consolidated statement of profit or loss and other comprehensive income. On disposal of the foreign operation, the cumulative value of any such gains or losses recorded in equity is transferred to the consolidated statement of comprehensive income in accordance with K-IFRS 1021 The Effects of Changes in Foreign Exchange Rates.

3-6-4 Embedded derivatives

An embedded derivative is a component of a hybrid (combined) instrument that also includes a non-derivative host contract with the effect that some of the cash flows of the combined instrument vary in a way similar to a stand-alone derivative. The Group separates an embedded derivative from the host contract and it is accounted for as a derivative only if the requirements of separation are met.

3-6-5 'Day 1' profit or loss

In case of derivatives in Level 3, whose fair value is determined using data that is not observable from markets, the difference between the transaction price and fair value at initial recognition (a 'Day 1' profit or loss) is deferred and amortized over the life of the associated instrument using the straight-line method and the amortization is recognized in the consolidated statement of comprehensive

income.

3-6-6 Credit risk valuation adjustment

When measuring derivatives at fair value, credit risk valuation adjustment is calculated to reflect the effectiveness of the adjustment for counterparties.

3-7 Investments in associates and joint ventures

Investments in entities over which the Group has joint control or significant influence (investments in associates and joint ventures) are accounted for using the equity method. Under the equity method, on initial recognition, the Group recognizes investments in associates and joint ventures cost. Subsequently, the Group adjusts the carrying amount of the investments in associates and joint ventures to recognize the Group's share of the profit or loss of the investee as profit or loss in the consolidated statement of comprehensive income. The Group recognizes the Group's share of changes in equity (except for profit or loss of the investee) directly in the related equity account to the consolidated statement of financial position.

If the Group's share of losses of the investee equals or exceeds its interest in the associates and joint ventures, it suspends recognizing its share of further losses. However, if the Group has other long-term interests in the investee, it continues recognizing its share of further losses to the extent of the carrying amount of such long-term interests. Such items include preference shares and long-term receivables or loans. The Group resumes the application of the equity method if the Group's share of income or change in equity of an investee exceeds the Group's share of losses accumulated during the period of suspension of the equity method.

On acquisition of the investment, the excess of the cost of the investment over the Group's share of the net fair value of the investee's identifiable assets and liabilities is accounted for as goodwill. The Group does not amortize goodwill relating to an associate or a joint venture and tests the investment for

impairment if there is an indication that the investment is impaired. Further, the Group's share of any difference between the net fair value of the investee's identifiable assets and liabilities and the net book value of such assets and liabilities is amortized based on the investee's accounting treatments on the related assets and liabilities and charged or credited to the valuation gain or loss on the equity method investments in the consolidated statement of comprehensive income.

The Group's share in the investee's unrealized profits and losses resulting from transactions between the Group and its investee is eliminated to the extent of the interest in the investee.

3-8 Impairment of financial assets

The Group evaluates expected credit losses ("ECLs") of financial assets at amortized cost and FVOCI, except financial assets at FVTPL at the end of each reporting period, and an allowance for ECLs is recognized.

The ECL is the weighted-average amount of possible outcomes within a certain range, reflecting the time value of money; estimates on the past, current and future situations; and information accessible without excessive cost of effort.

The ECL can be measured in three followings ways:

- General approach: when financial assets do not fall into below two categories and are off-consolidated statement of financial position undrawn commitments.
- Simplified approach: when financial assets are trade receivables, contract assets or lease receivables.
- Credit-impaired approach: when financial assets are credit impaired at initial recognition.

The general approach is applied differently depending on the significance of the increase of the credit risk. If, at the reporting date, the credit risk on a financial

instrument has not increased significantly since initial recognition, an entity shall measure the loss allowance for that financial instrument at an amount equal to 12-month ECLs. If the credit risk on that financial instrument has increased significantly since initial recognition, an entity shall measure the loss allowance for a financial instrument at an amount equal to the lifetime ECLs at each reporting date.

The loss allowance is measured at an amount equal to lifetime ECLs for the simplified approach, and an entity shall only recognize the cumulative changes in lifetime ECLs since initial recognition as a loss allowance for purchased or originated credit-impaired financial assets at each reporting date for the credit-impaired approach.

The following non-exhaustive list of information may be relevant in assessing changes in credit risk:

- Significant changes in internal price indicators of credit risk as a result of a change in credit risk since inception
- Other changes in the rates or terms of an existing financial instrument that would be significantly different
- An actual or expected significant change in the financial instrument's external credit rating
- An actual or expected internal credit rating downgrade for the borrower or decrease in behavioral scoring used to assess credit risk internally
- An actual or expected significant change in the operating results of the borrower
- Past-due information

1) Forward-looking information

The Group measures the significance of the increase of the credit risk and the

ECL using forward-looking information.

The Group assumes that the risk component is correlated with changes in market conditions, and calculates the ECL using the forward-looking information by modelling macroeconomic variables and risk components.

The forward-looking information used to measure the ECL is derived from 'stress-case' or 'worst-case' scenarios.

2) Measurement of ECL for financial assets measured at amortized cost

ECL for financial assets measured at amortized cost is measured as the difference between the present value of the cash flows expected to be received and the cash flow expected to be paid. For this purpose, the Group calculates expected cash flows for individually significant financial assets (individual valuation allowance).

Financial assets insignificant in value individually are measured on a collective basis with financial assets with similar credit risks (collective loss allowance).

① Loss allowance on an individual assessment basis

Loss allowance on an individual assessment basis is based on the best estimates of management in regard to the present value of cash flows expected to be recovered from receivables. In estimating the cash flows, the Group uses all available information including the financial conditions such as the operating cash flows of counterparties and the net realizable value of collateral provided.

② Loss allowance on a collective assessment basis

Loss allowance on a collective assessment basis uses the estimation model that accounts for the forward-looking information based on the past loss rate to measure the ECL. The model considers the probability of default ("PD") and the loss given default ("LGD") reflecting the type of instruments and borrowers'

credit rating, portfolio size and collection period. Also, certain assumptions are applied to model the ECL measurement and to determine input variables based on past experiences and forward-looking information. Methodologies and assumptions for this model are regularly reviewed to minimize the difference between the loss allowance and the actual loss.

The ECL for financial assets measured at amortized cost is recognized as the loss allowance, and when the financial asset is determined to be irrecoverable, the carrying amount and loss allowance are decreased. If financial assets previously written off are recovered, the loss allowance is increased and the difference is recognized in the current profit or loss.

3) ECL measurement for financial assets measured at FVOCI

The measurement method is the same as the one for financial assets measured at amortized cost, but the change in the loss allowance is recognized as OCI. The loss allowance for financial assets measured at FVOCI is reclassified from OCI to current profit or loss when the assets are disposed of or repaid.

3-9 Derecognition of financial assets

A financial asset (or, where applicable, a part of a financial asset or part of a group of similar financial assets) is derecognized when (i) the rights to receive cash flows from the asset have expired or (ii) the Group has transferred substantially all the risks and rewards of the asset. If the Group has neither transferred nor retained substantially all the risks and rewards of the asset, but has transferred control of the asset, the Group recognizes the asset and the associated liability to the extent of the Group's continuing involvement in the asset. If the Group has retained substantially all the risks and rewards of ownership of the transferred asset, the Group continues to recognize the transferred asset and recognizes a collateralized borrowing for the consideration received.

3-10 Classification and measurement of financial liabilities

Financial liabilities are classified, at initial recognition, as financial liabilities at FVTPL or borrowings. All financial liabilities are recognized initially at fair value and, except for financial liabilities at FVTPL, net of directly attributable transaction costs.

3-10-1 Financial liabilities at FVTPL

Financial liabilities at FVTPL include financial liabilities held for trading and financial liabilities designated upon initial recognition as of FVTPL. Financial liabilities are classified as held for trading if they are incurred for the purpose of repurchasing in the near term. This category also includes derivative financial instruments entered into by the Group that are not designated as hedging instruments in hedge relationships as defined by K-IFRS 1109. Separated embedded derivatives are also classified as held for trading, unless they are designated as effective hedging instruments. Financial liabilities at FVTPL are subsequently measured at fair value and the related gain and income expense are recognized in the consolidated statement of profit or loss and other comprehensive income.

The Group performs securities lending and borrowing classified to financial liabilities at FVTPL. When the Group borrows securities from Korea Securities Depository, securities borrowed are managed as memorandum value, and when selling them, they are recorded as securities sold. At closing, the difference in the price securities are sold and the market price prevailing on the closing date is taken into account as valuation gain or loss on securities sold, and at the time of selling the securities, the difference in book value and the price securities are purchased is recorded as trading gain or loss on securities sold.

3-10-2 Deposits, borrowings and debentures

After initial recognition, interest bearing deposits, borrowings and debentures are subsequently measured at amortized cost using the EIR method. Gains and losses are recognized in the consolidated statement of comprehensive income when the

liabilities are derecognized as well as through the EIR method amortization process.

3-11 Derecognition of financial liabilities

A financial liability is derecognized when the obligation under the liability is discharged, canceled or expired. When an existing financial liability is replaced by another from the same lender on substantially different terms, or the terms of an existing liability are substantially modified, such an exchange or modification is treated as of the original liability and the recognition of a new liability, and the difference in the respective carrying amounts is recognized in the consolidated statement of comprehensive income.

3-12 Offsetting of financial instruments

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

3-13 Provisions

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

The provision is used only for expenditures for which the provision was originally recognized. If a present obligation is not probable that an outflow of resources embodying economic benefits will be required to settle the obligation or the amount of the obligation cannot be measured with sufficient reliability, the Group discloses the obligation as a contingent liability. If the effect of the time value of money is material, provisions are measured at present value; the amount of a provision is measured at the present value of the expenditures expected to be required to settle the obligation.

The Group recognizes a provision for confirmed acceptances and guarantees, unconfirmed acceptances and guarantees, bills endorsed by applying cash conversion factor, same way that is applied to collective assessments of loans and receivables. The Group measures provisions for unused credit line by applying credit conversion factor, the additional withdrawal rate in the event of default, in the same way.

3-14 Financial guarantee contracts

A financial guarantee contract is a contract that requires the issuer to make specified payments to reimburse the holder for a loss it incurs because a specified debtor fails to make payment when due in accordance with the original or modified terms of a debt instrument and is measured at fair value on date of initial recognition. After initial recognition, the Group, as an issuer of such a contract, measures it at the higher of (i) the amount determined in accordance with K-IFRS 1109 Financial instruments and (ii) the amount initially recognized less, when appropriate, cumulative amortization recognized in accordance with K-IFRS 1115 Revenues from contracts with customers.

3-15 Bonds purchased under resale agreements and bonds sold under repurchase agreements

Bonds purchased under resale agreements and bonds sold under repurchase agreements are included in loans receivable and borrowings, respectively, in the accompanying consolidated statement of financial position. Interest income and expense from purchase or sale are recognized as interest income on loan receivables and interest expense on borrowings.

3-16 Property and equipment

An item of property and equipment is measured at its cost less any accumulated depreciation. The cost of an item of property and equipment includes any costs directly attributable to acquisition of an item.

Subsequent cost is recognized as an asset if, and only if it is probable that future economic benefits associated with the cost will flow to the Group and the cost can be measured reliably. The carrying amount of parts that are replaced is derecognized. The Group recognizes other repair and maintenance costs as profit or loss for the current period.

Land is not depreciated. Depreciation of other item of property and equipment is calculated using methods listed below to write down the cost of property and equipment to their residual values over their estimated useful lives. The depreciation methods and estimated useful lives are as follows:

Classification	Depreciation method	Useful life (years)
Buildings for business purpose, equipment attached to the building and construction structures	Straight-line method	5 to 55
Vehicles, furniture and fixtures, and leasehold improvements	Straight-line method or declining-balance method	3 to 20

When the carrying amount of an asset exceeds its recoverable amount, the asset is written down to its recoverable amount. The residual value and useful life of an asset are reviewed at each financial year end, and if expectations differ from previous estimates, the Group applies change in estimates. Any gain or loss arising on derecognition of the asset (calculated as the difference between the net disposal proceeds and the carrying amount of the asset) is included in non-operating income in the consolidated statements of comprehensive income.

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

3-17 Investment properties

An item of investment properties is measured at its cost less any accumulated depreciation. The cost of an item of investment properties includes any costs directly attributable to acquisition of an item. After initial recognition, the Group measures all of its investment properties in accordance with the cost model in K-IFRS 1040.

Land is not depreciated. Depreciation of other item of investment properties is calculated using methods listed below to write down the cost of investment properties to their residual values over their estimated useful lives. The depreciation methods and estimated useful lives are as follows:

Classification	Depreciation method	Useful life (years)
Buildings	Straight-line method	5 to 55

Investment properties are derecognized when either they have been disposed of or when the investment property is permanently withdrawn from use and no future economic benefit is expected from its disposal. The difference between the net disposal proceeds and the carrying amount of the asset is recognized in the consolidated statement of comprehensive income in the period of derecognition. Transfers to, or from, investment properties are made when, and only when, there is a change in use.

3-18 Intangible assets

An intangible asset is recognized only when its cost can be measured reliably and it is probable that the expected future economic benefits that are attributable to it will flow to the Group. Intangible assets include industrial right, software, development cost and others. These intangible assets are amortized using the straight-line method over the estimated useful life based on the following

economic useful life. Membership is not amortized.

Classification	Depreciation method	Years
Industrial property, software, system development, and trademark rights	Straight-line method	5
Core deposit	Straight-line method	14
Client membership	Straight-line method	10 to 30
Others	Straight-line method	1 to 20

Intangible assets acquired separately are measured on initial recognition at cost. The cost of intangible assets acquired in a business combination is their fair value as of the date of acquisition in accordance with K-IFRS 1103 Business Combinations. Following initial recognition, the carrying amount of intangible assets with finite useful lives is allocated on a systematic basis over their useful lives. The intangible assets with indefinite useful lives are not amortized and the Group tests those assets for impairment annually and whenever there is an indication that the intangible asset may be impaired. The assessment of indefinite life is reviewed annually to determine whether the indefinite life continues to be supportable.

3-19 Non-current assets held for sale

The Group classifies a non-current asset or disposal group as held for sale if its carrying amount will be recovered principally through a sale transaction rather than through continuing use. For this to be the case, the asset or disposal group must be available for immediate sale in its present condition and its sale must be highly probable. The asset (or disposal group) must be available for immediate sale in its present condition subject only to terms that are usual and customary for sales of such assets (or disposal groups) and its sale must be highly probable.

The Group measures a non-current asset (or disposal group) classified as held for sale at the lower of its carrying amount and fair value less costs to sell.

3-20 Impairment of non-financial assets

The Group tests the depreciable asset for impairment whenever there is a change of environment or an event that the carrying amount may not be recoverable. The Group recognizes an excess of the carrying amount over the recoverable amount as an impairment loss. The Group defines recoverable amount as the higher of an asset's or cash-generating unit's ("CGU") fair value less costs to sell and its value in use. For measuring the impairment of assets, the Group identifies the lowest aggregation of assets that generate largely independent cash inflows (CGU). The Group assesses reversal of an impairment loss recognized for the non-financial assets other than goodwill at the end of reporting period.

3-21 Short-term employee benefits

When employees have rendered services to the Group during an accounting period, the Group recognizes the undiscounted amount of short-term employee benefits. This amount is expected to be settled in whole before 12 months after the end of the reporting period, in exchange for those services.

3-22 Net defined benefit liabilities (assets)

The Group has both defined benefit and defined contribution plans. A defined contribution plan is a pension plan under which the Group pays fixed contributions into a separate entity. The Group has no legal or constructive obligations to pay further contributions if the fund does not hold sufficient assets to pay all employees the benefits relating to employee service rendered in the current and prior periods. Defined benefit plans are all postemployment benefit plans, except for defined contribution plans. A defined benefit plan is a pension plan that defines an amount of pension benefit that an employee will receive on retirement, usually dependent on one or more factors, such as years of service and compensation.

The defined benefit liability is the present value of the defined benefit obligation less the fair value of plan assets. The cost of providing benefits under the defined benefit plan is determined separately using the projected unit credit actuarial

valuation method. The present value of the defined benefit liability is recorded in the same currency as the payment itself and is calculated by discounting the expected future cash flow and using the interest rate of other reputable companies with similar payment and end of reporting dates.

Changes in the actuarial estimates and actuarial gains and losses between estimates and results are recognized in the period they occur as part of other comprehensive income. The past service cost is recognized immediately.

The Group has no further payment obligations once the contributions have been paid. The contributions are recognized as employee benefit expense when they are due. Prepaid contributions are recognized as an asset to the extent that a cash refund or a reduction in the future payments is available.

3-23 Termination benefits

Termination benefits are payable when employment is terminated by the Group before the normal retirement date or an employee's decision to accept an offer of benefits in exchange for the termination of employment. The Group recognizes a liability and expense for termination benefits at the earlier of the following dates when the Group can no longer withdraw the offer of those benefits and when the Group recognizes costs for a restructuring that is within the scope of K-IFRS 1037 and involves the payment of termination benefits. Termination benefits for voluntary redundancies are recognized as an expense if the Group has made an offer of voluntary redundancy, it is probable that the offer will be accepted and the number of acceptances can be estimated reliably. If the termination benefits are not expected to be settled wholly before 12 months after the end of the annual reporting period, then the termination benefits are discounted to present value.

3-24 Share-based payment transactions

The Group grants share options to its employees in the form of share-based payment transactions. For equity-settled share-based payment transactions, the

Group measures the goods or services received and the corresponding increase in equity, directly, at the fair value of the goods or services received and recognizes the cost as employee benefits expense and other capital adjustment in equity. If the Group cannot estimate reliably the fair value of the goods or services received, the Group measures their value and the corresponding increase in equity, indirectly, by reference to the fair value of the equity instruments granted and recognizes the cost as employee benefits expense and other capital adjustment in equity. For cash-settled share-based payment transactions, the Group measures the goods or services acquired and the liability incurred at the fair value of the liability. Until the liability is settled, the Group remeasures the fair value of the liability at the end of each reporting period and at the date of settlement, with any changes in fair value recognized in profit or loss for the period. For share-based payment transactions in which the terms of the arrangement provide the counterparty with a choice of settlement, the Group accounted for the transactions in accordance with their commercial substance.

3-25 Income tax expenses and deferred tax assets and liabilities

3-25-1 Recognition of income tax expenses and deferred tax assets and liabilities

Income taxes are comprised of current and deferred taxes. All items related to taxes, other than those recognized directly in equity, are accounted for in the consolidated statement of comprehensive income. Accordingly, items recognized directly in equity and the related taxes are accounted for as OCI in the consolidated statements of comprehensive income.

Current income tax expenses are computed based on the tax rates and tax laws enacted or substantively enacted in the jurisdictions that the Group operates in and generates taxable income at the end of the reporting period. If application of related tax law or regulation depends on the interpretation, the Group measures the current tax liabilities at the amount expected to be paid to the taxation authorities based on its interpretation and assesses its initial interpretation periodically.

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

When the initial recognition of an asset or liability in a transaction that is not a business and at the time of the transaction, affects neither accounting profit nor taxable profit, the Group does not recognize a deferred tax asset or liability. The Group measures deferred tax assets and liabilities at the tax rates that are expected to apply 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.

The Group recognizes a deferred tax asset for all deductible temporary differences to the extent it is probable that taxable profit will be available against which the deductible temporary difference can be utilized.

The Group recognizes a deferred tax liability for all taxable temporary differences with investments in subsidiaries, except to the extent that both of the following conditions are satisfied: (a) the parent is able to control the timing of the reversal of the temporary difference and (b) it is probable that the temporary difference will not reverse in the foreseeable future.

The Group offsets deferred assets and liabilities if, and only if (a) the Group has a legally enforceable right to set off current tax assets against current tax liabilities and (b) the deferred tax assets and the deferred tax liabilities relate to income taxes levied by the same taxation authority on either on (i) the same taxable entity or (ii) different taxable entities that intend either to settle current tax liabilities and assets on a net basis, or to realize the assets and settle the liabilities simultaneously, in each future period in which significant amounts of deferred tax liabilities or assets are expected to be settled or recovered.

3-25-2 Uncertain tax position

Uncertain tax position arises from the Company's request for correction due to the complexity of transactions or differences in interpretation of tax laws, litigation for refund of additional tax by the tax authorities, and tax investigation. The Company recognizes and measures uncertain tax position in accordance with K-IFRS 1012 and IFRS Interpretations Committee ("IFRIC") 23.

If the Company concludes it is probable that the taxation authority will refund taxes in the future, the Company shall recognize an income tax asset. On the other hand, if the Company concludes it is probable that the Company will pay tax as a result of tax investigations, the amount expected to be paid is recognized as an income tax liability. However, penalty tax and refund penalty are recognized as interest and penalties in accordance with K-IFRS 1037

3-26 Insurance contracts

Hana Life Insurance and Hana Insurance Co., Ltd.'s significant accounting policies relating to insurance contracts are as follows.

An insurance contract is a contract under which one party (the insurer) accepts significant insurance risk from another party (the policyholder) by agreeing to compensate the policyholder if a specified uncertain future event (the insured event) adversely affects the policyholder.

A contract that qualifies as an insurance contract remains an insurance contract until all rights and obligations are extinguished or expired. Such investment contract that contains Discretionary Participation Features subsequent to the contract classification according to quantitative criteria is within the scope of K-IFRS 1104 Insurance Contracts. If the investment contract does not contain Discretionary Participation Features, the contract is subject to K-IFRS 1109 Financial Instruments.

3-26-1 Reinsurance assets

The Group does not offset the reinsurance assets against the related reinsurance liabilities. If a reinsurance asset is impaired, the Group reduces its carrying amount accordingly and recognizes that impairment loss in profit or loss.

3-26-2 Deferred acquisition costs

The Group amortized the acquisition costs arising from long-duration contracts during the term of the contracts in the straight-line method in accordance with Accounting Standards for Insurance Business Article 31 and Article 3 of the supplementary provisions. If the acquisition costs exceed the expected amount or the additional premiums are settled highly for earlier term of the contracts to collect the acquisition costs in early stage, the acquisition costs are recognized in the period they occur as profit or loss. The deferred acquisition costs are amortized over the term of the contracts within the limits of seven years.

The unamortized costs of surrendered insurance contract are amortized in the period it is surrendered.

3-26-3 Liabilities reserves

The Group recognizes liabilities reserves by types of insurance contracts as of the reporting date in accordance with the Insurance Business Act and the related regulations. The liabilities reserves refer to an amount calculated pursuant to the premiums and liabilities reserves calculation manual for payment of claims, bonus return and policyholders dividend.

3-26-4 Valuation of special accounts assets and liabilities

The Group designates and operates any of the retirement insurance contracts, retirement dividend insurance contracts and variable insurance contracts (including variable universal insurance contracts) as special accounts pursuant to Article 108 (1) of the Insurance Business Act and Article 52 of the Regulations on Supervision of Insurance Business.

3-26-5 Liability adequacy assessment

At the end of each reporting period, the Group evaluates the appropriate insurance liabilities recognized using current estimates of future cash flows of all insurance contracts (including cash flows, such as claims handling costs as well as cash flows resulting from embedded options and guarantees). In the case of long-term insurance, future cash flows are discounted at the rate of return on future operating assets, and in the case of general insurance and auto insurance, the present value is not discounted.

Earned premiums and long-term unearned premiums evaluate insurance liabilities adequacy by considering all cash flows, such as future insurance, business expenses and operating insurance premiums. As a result of the evaluation, if the carrying amount of insurance liability is inappropriate from the perspective of estimated future cash flows, the full amount is recognized as profit or loss. If the evaluation shows that the liability is inadequate, the entire deficiency is recognized in profit or loss.

3-27 Equity

3-27-1 Classification of equity

The Group classifies a financial instrument on initial recognition as a financial liability or an equity instrument in accordance with the substance of the contractual arrangement. If the Group has the right to avoid contractual obligation relating to an issued financial instrument, the Group classifies the financial instrument as an equity instrument in accordance with the substance of the contractual arrangement. The Group classifies a hybrid equity security on initial recognition as equity if it meets the condition of an equity instrument. The hybrid equity securities, issued by subsidiaries of the Group, are classified as non-controlling interests according to this classification standard. Distributions from hybrid equity securities are accounted as net income attributable to non-controlling interests in the consolidated statements of profit or loss and other comprehensive income.

3-27-2 Stock issuance costs

Additional stock issuance costs or incremental costs related to the stock issuance for business combinations are recorded as a deduction from issued capital net of tax effects.

3-27-3 Dividends on common stock

Dividends from common stock are deducted from the Group's equity and recognized as a liability upon approval of dividend distributions at the shareholders' meeting (the board of directors for the interim dividends).

Dividends declared for the year that are approved after the reporting date are disclosed as a subsequent event.

3-27-4 Treasury stock

Equity instruments of the Group that are acquired by the Group or any of its subsidiaries are deducted from its equity and recorded at acquisition cost, including transaction costs. Consideration received on the sale or issuance of the Group's own equity instruments is recognized directly in equity.

3-28 Earnings per share

Basic and diluted earnings per share are computed by dividing net income by the weighted-average number of shares of common stock outstanding during the year.

3-29 Accounting basis for trust accounts

The Group separates trust properties from proprietary properties in accordance with the Supervisory Regulations on Financial Investment Business. The Group recognizes funds lent or borrowed to trust accounts as accounts receivable or accounts payable, respectively. The Group recognizes trust commissions earned from trust accounts as income from trust operations. When a loss is incurred on a trust account that includes a guarantee of principal repayment, the corresponding loss is recognized as a loss from trust operations.

3-30 Lease

In accordance with K-IFRS 1116, the Group applies a single recognition and measurement approach for all leases, except for leases of low-value assets. K-IFRS 1116 provides guidance on specific transition requirements and practical expedients that an entity may apply.

The Group recognized right-of-use assets and lease liabilities for those leases previously classified as operating leases, except leases of low-value assets. The right-of-use assets for most leases were recognized based on the carrying amount as if the standard had always been applied, apart from the use of incremental borrowing rate at the date of initial application. In some leases, the right-of-use assets were recognized based on the amount equal to the lease liabilities, adjusted for any related prepaid and accrued lease payments previously recognized. Lease liabilities were recognized based on the present value of the remaining lease payments, discounted using the incremental borrowing rate at the date of initial application.

The Group also applied the available practical expedients wherein it:

- Used a single discount rate to a portfolio of leases with reasonably similar characteristics
- Relied on its assessment of whether leases are onerous immediately before the date of initial application
- Applied the short-term leases exemptions to leases with lease term that ends within 12 months of the date of initial application
- Excluded the initial direct costs from the measurement of the right-of-use asset at the date of initial application
- Used hindsight in determining the lease term where the contract contained options to extend or terminate the lease

3-31 Merchant banking accounts

As permitted by the Restructuring of Financial Institutions Act, the Group may continue its merchant banking operations, including business affairs of bill management accounts, until the existing contracts acquired from Korea International Merchant Bank upon merger are terminated.

Significant accounting policies applied to the Group's merchant banking operations are summarized as follows:

3-31-1 Revenue recognition on discounted notes

Interest income on discounted notes is accrued over the term of the notes. Income from the sale of the discounted notes is recognized at the date of sale based on the difference between the purchase and sales prices of the notes, adjusted for interest earned during the holding period.

3-31-2 Cash Management Accounts (CMA)

The Group recognizes interest income from CMA investments and interest expense from CMA deposits as other income and other expenses, respectively.

3-32 Revenue Recognition

The Group recognizes revenues in accordance with the following steps determined in accordance with K-IFRS 1115 Revenue from Contracts with Customers:

- Step 1: Identify the contract with a customer.
- Step 2: Identify the separate performance obligations in the contract.
- Step 3: Determine the transaction price of the contract.
- Step 4: Allocate the transaction price to each of the separate performance obligations in the contract.
- Step 5: Recognize revenue when (or as) each performance obligation is satisfied.

3-32-1 Interest income and interest expense

The Group recognizes interest income and expense using the EIR method by the passage of time.

The EIR method is a method of calculating the amortized cost of a financial asset or a financial liability (or group of financial assets or financial liabilities) and of allocating the interest income or interest expense over the relevant period. The EIR is the rate that exactly discounts estimated future cash payments or receipts through the expected life of the financial instrument or, when appropriate, a shorter period to the net carrying amount of the financial asset or financial liability. The Group estimates cash flows considering all contractual terms of the financial instrument, but does not consider future credit losses. The cash flows include all fees and points paid or received by the Group, including transaction costs, and all other premiums or discounts.

If it is probable that interest income arising from a financial asset will flow to the Group, the interest income is recognized as income when the Group receives interest payments. For the impaired loans and receivable that are individually assessed, the Group recognizes the adjustment as interest income if recoverability of the assets subsequently increases.

3-32-2 Fee and commission income

The Group earns fees and commissions income from a diverse range of services it provides to its customers. Fee income, which is part of the EIR of a financial instrument, is adjusted to an EIR and recognized as interest income.

Under the new K-IFRS 1115, the commission income charged by providing services is recognized by applying a five-stage revenue recognition model (①Identification of a contract with a customer → ②Identification of performance obligations in the contract → ③Determination of the transaction price → ④Allocation of the transaction price to the separate performance obligations in the contract → ⑤Recognition of revenue upon satisfying the performance

obligations) to all of its contracts with customers.

3-32-3 Net gains or losses on financial instruments at FVTPL

Net gains or losses on financial instruments at FVTPL (including changes in fair value, etc) include gains and losses from following financial instruments:

- Gains or losses relating to financial instruments at FVTPL
- Gains or losses relating to derivatives for trading

3-33 Dividend income

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

3-34 Transaction under common control

The Group conducted accounting treatment of transactions under common control based on book value. Therefore, the Group recognized (eliminated) asset, liability and capital as at merger and spinoff date as book value and didn't recognize transaction gain (loss).

3-35 Nature and the impact of each new and amended standards and interpretations

3-35-1 K-IFRS 1103 Business Combinations – Reference to the Conceptual Framework (Amendments)

The amendments update K-IFRS 1103 so that it refers to the Conceptual Framework (2018) instead of the Framework (2007). They also add to K-IFRS 1103 a requirement that, for obligations within the scope of K-IFRS 1037 Provisions, Contingent Liabilities and Contingent Assets, an acquirer applies K-IFRS 1037 to determine whether at the acquisition date a present obligation exists as a result of past events. For a levy that would be within the scope of K-IFRS 2121 Levies, the acquirer applies K-IFRS 2121 to determine whether the obligating event that gives rise to a liability to pay the levy has occurred by

the acquisition date.

Finally, the amendments add an explicit statement that an acquirer does not recognize contingent assets acquired in a business combination.

The amendments are effective for business combinations for which the date of acquisition is on or after the beginning of the first annual period beginning on or after January 1, 2022. There is no material impact of this amendment on the Group's consolidated financial statements.

3-35-2 K-IFRS 1016 Property, Plant and Equipment – Proceeds before Intended Use and the related costs (Amendments)

The amendments prohibit an entity from deducting from the cost of an item of property, plant and equipment the proceeds from selling items produced before that asset is available for use. Proceeds before intended use and related cost are recognized in profit and loss. An entity recognizes the proceeds from selling any such items, and the cost of those items, in profit or loss and measures the cost of those items applying the measurement requirements of K-IFRS 1002 Inventories.

If not presented separately in the consolidated statement of comprehensive income, the consolidated financial statements shall also disclose the amounts of proceeds and cost included in profit or loss that relate to items produced that are not an output of the entity's ordinary activities and which line items in the consolidated statement of comprehensive income include such proceeds and cost.

An entity shall apply those amendments retrospectively, but only to items of property, plant and equipment that are brought to the location and condition necessary for them to be capable of operating in the manner intended by management on or after the beginning of the earliest period presented in the consolidated financial statements in which the entity first applies the

amendments. The entity shall recognize the cumulative effect of initially applying the amendments as an adjustment to the opening balance of retained earnings (or other component of equity, as appropriate) at the beginning of that earliest period presented. There is no material impact of this amendment on the Group's consolidated financial statements.

3-35-3 K-IFRS 1037 Provisions, Contingent Liabilities and Contingent Assets – Onerous Contracts – Cost of Fulfilling a Contract (Amendments)

The amendments specify that the 'cost of fulfilling a contract' comprises the 'costs that relate directly to the contract.' Costs that relate directly to a contract consist of both the incremental costs of fulfilling that contract (examples would be direct labor or materials) and an allocation of other costs that relate directly to fulfilling contracts (an example would be the allocation of the depreciation charge for an item of property, plant and equipment used in fulfilling the contract).

The amendments apply to contracts for which the entity has not yet fulfilled all its obligations at the beginning of the annual reporting period in which the entity first applies the amendments. Comparatives are not restated. Instead, the entity shall recognize the cumulative effect of initially applying the amendments as an adjustment to the opening balance of retained earnings or other component of equity, as appropriate, at the date of initial application. There is no material impact of this amendment on the Group's consolidated financial statements.

3-35-4 Annual Improvements to K-IFRS Standards 2018-2020

The annual improvements include amendments to four standards such as K-IFRS 1101 First-time Adoption of K-IFRS, K-IFRS 1109 Financial Instruments, K-IFRS 1116 Leases and K-IFRS 1041 Agriculture.

3-35-4-1 K-IFRS 1101 First-time Adoption of K-IFRS (Amendment)

The amendment provides additional exemption to a subsidiary, which becomes a first-time adopter later than its parent in respect of accounting for cumulative translation differences. As a result of the amendment, a subsidiary that uses the exemption in K-IFRS 1101 paragraph D16(1) can now also elect to measure cumulative translation differences for all foreign operations at the carrying amount that would be included in the parent's consolidated financial statements, based on the parent's date of transition to K-IFRS standards, if no adjustments were made for consolidation procedures and for the effects of the business combination in which the parent acquired the subsidiary. A similar election is available to an associate or joint venture that uses the exemption in K-IFRS 1101 paragraph D16(1). There is no material impact of this amendment on the Group's consolidated financial statements.

3-35-4-2 K-IFRS 1109 Financial Instruments (Amendment)

The amendment clarifies that in applying the '10 percent' test to assess whether to derecognize a financial liability, an entity includes only fees paid or received between the entity (the borrower) and the lender, including fees paid or received by either the entity or the lender on the other's behalf. The amendment is applied prospectively to modifications and exchanges that occur on or after the date the entity first applies the amendment. There is no material impact of this amendment on the Group's consolidated financial statements.

3-35-4-3 K-IFRS 1041 Agriculture

The amendment removes the requirement in K-IFRS 1041 for entities to exclude cash flows for taxation when measuring fair value. This aligns the fair value measurement in K-IFRS 1041 with the requirements of K-IFRS 1113 Fair Value Measurement to use internally consistent cash flows and discount rates and enables preparers to determine whether to use pretax or posttax cash flows and discount rates for the most appropriate fair value measurement.

As the Company does not have assets within the scope of K-IFRS 1041, there is no material impact of this amendment on the Group's consolidated financial statements.

3-35-5 K-IFRS 1007 Statements of cash flow – Cash and cash equivalent

The Group has applied an accounting policy that excludes demand deposits with restrictions on use arising from relevant regulations, such as reserve requirement deposits, from cash equivalents. However, based on the agenda decision made by IFRS Interpretations Committee in March 2022, regarding "Demand Deposits with Restrictions on Use arising from a Contract with a Third Party," the Group has changed its accounting policy to classify demand deposits with restrictions on use arising from relevant regulations, including reserve requirement deposits, as cash equivalent.

There is no change in the consolidated statement of financial position and consolidated statement of comprehensive income due to the accounting policy. The main revised amount for each item in the consolidated statements of cash flow for the year ended December 31, 2021 are as follows (Korean won in millions):

<December 31, 2021>

Classification	Before revision	After revision	Net increase
IV. Effect of exchange rate changes on cash and cash equivalents	164,574	644,916	480,342
V. Net increase (decrease) in cash and cash equivalents	(1,207,693)	3,515,257	4,722,950
VI. Cash and cash equivalents as of January 1, 2021	7,357,241	23,421,212	16,063,971
VII. Cash and cash equivalents as of December 31, 2021	6,149,548	26,936,469	20,786,921

3-36 Standard issued but not yet effective is as follows:

The standards and interpretations that are issued, but not yet effective, up to the date of issuance of the Group's consolidated financial statements are disclosed below.

3-36-1 K-IFRS 1117 Insurance Contracts (Enactment)

The K-IFRS 1117 insurance contract established on April 23, 2021 applies for annual periods beginning on after January 1, 2023, which will replace the current K-IFRS 1104 insurance contract.

The main features of K-IFRS 1117 are the measurement of the current value of insurance liabilities, the recognition of insurance returns on accrual basis and the separation of gains and losses on insurance and investment. Previous K-IFRS 1104 measured insurance liabilities using historical information (such as interest rates at the time of sale), recognized premiums received by the entity as insurance revenue on cash basis and had no obligation to distinguish between insurance and investment gains. On the other hand, K-IFRS 1117 measures the current value of insurance liabilities by using discount rates that reflect assumptions and risks at present, and insurance revenue recognizes revenue on an accrual basis, reflecting services provided by insurers to contractors in each financial year, separating insurance gain or loss on investment.

When an insurer applies K-IFRS 1117 to prepare new financial statements, it is expected to cause significant differences from the current financial statements. These parts do not include all future differences and can be changed by the analytical results in the future.

According to K-IFRS 1117, an insurer estimates all cash flows under an insurance contract and measures insurance liabilities using discount rates that reflect assumptions and risks at the time of reporting.

Specifically, insurers identify a portfolio of insurance contracts that are exposed to similar risks and consisted of similar contracts and within that portfolio separate sets of insurance contracts with similar profitability. Subsequently, group of insurance contracts are measured by estimates of future cash flows (including insurance loan-related cash flows, reflecting the time value of money), risk adjustment and the sum of insurance contract margins. The introduction of

K-IFRS 1117 introduces a new insurance contract margin account, that means unrealized gains that will be recognized in future by delivering insurance contract services.

On the other hand, reinsurance contracts mean insurance contracts issued by reinsurers to compensate for insurance premiums. Also, the new group of insurance contracts applies a consistent assumption with original contract in estimating the present value of future cash flows.

According to K-IFRS 1117, insurance revenue is recognized on an accrual basis, reflecting the services (insurance) provided by the insurer to the contractor in each fiscal year, and the investment components paid to the clients are excluded from insurance revenue. In addition, by separately displaying insurance gains and losses on investment, the information user can identify the source of the gains and losses.

In addition, insurance companies include the time value of money related to group of insurance contracts, financial risks and the effects of their fluctuations on insurance finance income and loss, and should select an accounting policy on whether to separate insurance finance gains and losses for the period into profit or loss and OCI.

According to the transitional provisions of K-IFRS 1117, insurers apply a full retrospective method, modified retrospective method or fair value method to adjust fair value measurement rather than cost-based valuation for group of insurance contracts issued prior to the date of transition on January 1, 2022 (the beginning of the annual reporting period prior to the date of initial application).

In principle, an insurer must identify, recognize and measure a group of insurance contracts (completely retrospectively) as if K-IFRS 1117 had been applied even before the transition date. However if it is practically difficult, the

insurer may choose to apply the modified retrospective method or fair value approach. However, in the case of a group of insurance contracts with direct participation characteristics that meet certain requirements, the fair value method can be applied even if the full retrospective method is applicable.

The modified retrospective method is a method for obtaining results similar to the full retrospective method using reasonable and supportable information available without undue cost or effort. The fair value method is a method of evaluating a group of insurance contracts by using the fair value valuation amount according to K-IFRS 1113 Measurement of fair value.

When the fair value method is applied, the insurance contract margin on the remaining guarantee liability is calculated as the difference between the fair value of the insurance contract group at the date of transition and the fulfillment cash flow.

In K-IFRS 1104, insurance liabilities have been measured using historical information, but in K-IFRS 1117, insurance liabilities are measured at their present value using a discount rate that reflects the assumptions and risks at the time of reporting. In addition, the existing cost-based valuation should be adjusted to the current valuation by applying (optionally) the full retrospective method, the modified retrospective method or the fair value method for a group of insurance contracts issued before the date of conversion.

In order for an insurance company to adopt K-IFRS 1117, it is necessary to prepare a separate introduction team, establish an accounting settlement system, train employees and analyze financial impact. Above all, the stability of the accounting settlement system and the consistency of system calculations must be secured for the adequacy of insurance liability evaluation, and accounting policies and actuarial assumptions must be set reasonably and applied consistently every period. To do this, the insurer must continuously validate the system and put internal control in place. In particular, the entity must establish and comply with an internal accounting management system suitable

for the changed accounting environment so that reliable accounting information can be prepared and disclosed after the implementation of the new accounting standards.

The adoption of K-IFRS 1117 will not only change accounting standards, but will also have an impact on insurance product development, sales strategies and long-term management strategy. Accordingly, it is necessary for entities to establish various management strategies after the implementation of the new standards, to provide continuous education for related employees and to report the preparation status and future plans to the management.

The preparation status and plans for the introduction of K-IFRS 1117 of Hana Life Insurance, a subsidiary of the Group, are as follows.

In preparation for the adoption of K-IFRS 1117, Hana Life Insurance has organized and operated the IFRS 17 task force team (currently, the person in-charge of the actuary department) since March 2017. In March 2017, Hana Life Insurance established an insurance liability valuation system in April 2018. Hana Life Insurance established an accounting system in January 2020. Hana Life Insurance has been conducting a pilot operation of the system and verifying its adequacy. And Hana Life Insurance completed a upgrade of the liability valuation system and the accounting system in November 2022. Hana Life Insurance plans to establish the internal control over the financial reporting ("ICFR") related to the adoption of K-IFRS 1117.

In addition, while providing education related to K-IFRS 1117 for executives and employees, Hana Life Insurance has frequently reported the preparation and the financial impact of the adoption of K-IFRS 1117 to the board of directors and its management

Specific preparations for the adoption and future plans are as follows:

Main activity	Preparation (December 31, 2022)	Future plans
Organized a task force	– In March (2017), organization of task force (Seven members in present)	– Continuous operation of task force
Establishment of accounting system	– In January (2020), system development completed – In November (2022), system upgrade completed – Pilot operation in progress	– Parallel financial closing – Establishment of ICFR
Training	– Sharing K-IFRS 1117 knowledge and new work process with department managers and key staff	– Sharing the acts and regulations amended related to K-IFRS 1117
Management reporting	– System establishment, reporting financial impact	– Report on all matters related to parallel financial closing

With the adoption of K-IFRS 1117, as the valuation method of liabilities and the method of revenue recognition are changed, the financial figures for 2023 are expected to change accordingly. Furthermore, as it is allowed to change the business model under K-IFRS 1109 with the adoption of K-IFRS 1117, it is expected that the Group's consolidated financial statements including the consolidated statements of financial position and the consolidated statements of comprehensive income will reflect the impact of the reclassification of the financial instruments.

In accordance with the initial application of K-IFRS 1117, the financial impact on the financial statements of Hana Life Insurance for the year ended December 31, 2022, calculated by the financial closing system, is as follows:

When applying K-IFRS 1117, Hana Life Insurance's assets, liabilities and equity in the statements of financial position as of December 31, 2022 are expected to be ₩5,704,028 million, ₩5,357,738 million and ₩346,290 million, respectively. Hana Life Insurance's net income and comprehensive income in the statements of comprehensive income for the year ended December 31, 2022 are expected to be ₩16,600 million and ₩63,378 million, respectively. Compared to applying K-IFRS 1104, assets and liabilities decreased by ₩172,436 million and ₩304,343

million, respectively; equity increased by ₩131,907 million; and net income increased by ₩6,452 million and total comprehensive income decreased by ₩137,628 million, respectively.

The results of this analysis are subject to change depending on additional information available in the future and economic conditions.

<Statement of the financial position>

Accounts	The amount in accordance with K-IFRS 1104(A) (*1)	Accounts	The amount in accordance with K-IFRS 1117(B) (*2)	Effect(B-A)
Total assets	5,876,464	Total assets	5,704,028	(172,436)
Financial assets	4,011,527	Financial assets	5,614,526	
Derivatives assets	2,114	Derivatives assets	2,114	
Tangible assets	2,091	Tangible assets	2,091	
Lease right-of-use assets	11,067	Lease right-of-use assets	11,067	
Intangible assets	10,287	Intangible assets	10,287	
Reinsurance contract assets	2,883	Reinsurance contract assets	5,576	
Deferred acquisition costs	30,806	Other assets	58,367	
Other assets	112,448			
Special accounts assets	1,693,241			
Total liabilities	5,662,081	Total liabilities	5,357,738	(304,343)
Insurance contract liabilities	3,644,652	Insurance contract liabilities	4,511,067	
Debentures	49,992	Reinsurance contract liabilities	6,853	
Derivatives liabilities	4,236	investment contract liabilities	751,845	
Lease liabilities	11,081	Debentures	49,992	
Defined benefit obligation	1,498	Derivatives liabilities	4,236	
Provisions	157	Lease liabilities	11,081	
Other liabilities	183,262	Defined benefit obligation	1,498	
Special accounts liabilities	1,767,203	Provisions	157	
		Other liabilities	21,009	
Total equity	214,383	Total equity	346,290	131,907

<Statements of comprehensive income>

Accounts	The amount in accordance with K-IFRS 1104(A) (*1)	Accounts	The amount in accordance with K-IFRS 1117(B) (*2)	Effect(B-A)
Operating income	1,047,110	Insurance revenue	477,013	(570,097)
Premium income	795,308	Expected claims, etc.	71,454	

Accounts	The amount in accordance with K-IFRS 1104(A) (*1)	Accounts	The amount in accordance with K-IFRS 1117(B) (*2)	Effect(B-A)
Reinsurance income	11,773	Investment income	9,940	
Investment income	240,029	Other operating income	395,619	
Operating expense	1,027,567	Operating expense	458,391	(569,176)
Provision for policy reserve	246,600	Insurance service expense	60,716	
Insurance claim	607,296	Reinsurance expens	11,924	
Reinsurance expense	12,316	Other operating expense	11,856	
Business expenses	59,138	Investment operating income	373,895	
Depreciation of acquisition costs	16,030	–		
Investment expense	76,919	–		
Other operating expense	9,268	–		
Net operating income	19,543	Net operating income	18,622	(921)
Non-operating income	1,331	Non-operating income	9,585	
Non-operating loss	3,403	Non-operating loss	1,667	
Income tax expenses	17,471	Income tax expenses	26,540	9,069
Net income (loss)	7,323	Net income (loss)	9,940	
Other comprehensive income (loss)	10,148	Other comprehensive income (loss)	16,600	6,452
Other comprehensive income	(211,154)	Other comprehensive income	(79,978)	
Total comprehensive income	(201,006)	Total comprehensive income	(63,378)	137,628

<Statements of cash flow>

Accounts	The amount in accordance with K-IFRS 1104(A) (*1)	The amount in accordance with K-IFRS 1117(B) (*2)	Effect(B-A)
Net cash flows provided by (used in) operating activities	322,818	409,694	86,876
Net cash flows used in investing activities	(362,859)	(489,453)	(126,594)
Net cash flows provided by financing activities	(1,815)	(1,815)	–
Effect of exchange rate changes on cash and cash equivalents	(200)	(200)	–

(*1) These amounts are based on K-IFRS 1104 Insurance contracts and K-IFRS 1109 Financial instruments.

(*2) These amounts are based on K-IFRS 1117 Insurance contracts and K-IFRS 1109 Financial instruments.

Hana Life Insurance adjusted the valuation of insurance liabilities from the cost to current value applying the modified retrospective method to insurance contracts issued within four years (2018-2021) immediately before the transition date (January 1, 2022) and the fair value method to insurance contracts issued earlier than four years before the transition date.

When applying the fair value method, the fair value of insurance contracts was calculated based on the insurance contract liability valuation calculated by the Korean Insurance Capital Standards ("K-ICS") and adjusted for certain items.

As a result of analyzing the financial impact related to transition, the insurance contract assets and insurance contract liabilities applied to K-IFRS 1117 are expected to be ₩4,602 million and ₩4,693,285 million, respectively, as of January 1, 2022.

The effect (estimated value) of the transition method on the valuation of insurance contract liabilities is as follows (Korean won in millions):

Classification	Transition method	Issuance year of insurance contracts	The effect of the adoption of K-IFRS 1117		
			Insurance contract assets(*1)	Insurance contract liabilities(*1)	Insurance contract margin(*2)
Underlying insurance contracts	Modified retrospective method	2018-2021	-	1,353,076	101,406
	Fair value method	Before 2017	-	3,331,455	26,929
Reinsurance	Fair value method	Before 2021	4,602	8,754	(12,526)
Total			4,602	4,693,285	115,809

(*1) These amounts are the total amount of all components in insurance contract assets and insurance contract liabilities.

(*2) These amounts include insurance contract margin in insurance contract assets and insurance contract liabilities.

When applying K-IFRS 1117, Hana Life Insurance's insurance contract assets and liabilities are expected to amount to ₩5,576 million and ₩4,517,920 million, respectively. As insurance contract loans' cash flows of ₩107,212 million are reflected in insurance contract liabilities, there was a decrease in liabilities, and insurance contract liabilities are expected to decrease due to factors such as an increase in interest rates.

The composition (estimated value) of insurance contract assets and liabilities when applying K-IFRS 1117 is as follows (Korean won in millions):

Classification	Assets in K-IFRS 1117					Liabilities in K-IFRS 1117				
	Total (A+B)	Insurance contract assets (A) (*1), (*2)		Reinsurance contract assets (B) (*1), (*3)		Total (C+D)	Insurance contract liabilities(C) (*1), (*2)		Reinsurance contract liabilities(D) (*1), (*3)	
		Sub -total	Insurance contract margin (*4)	Sub -total	Insurance contract margin (*4)		Sub -total	Insurance contract margin (*4)	Sub -total	Insurance contract margin (*4)
Estimated value	5,576	-	-	5,576	6,800	4,517,920	4,511,067	188,007	6,853	(2,142)

(*1) The total amount of insurance (reinsurance) contract assets and insurance (reinsurance) contract liabilities includes all components.

(*2) These amounts include assets and liabilities related to groups of insurance contracts issued by Hana Life Insurance.

(*3) These amounts include assets and liabilities related to groups of reinsurance contracts held by Hana Life Insurance.

(*4) Insurance contract margin included in insurance (reinsurance) contract assets and insurance (reinsurance) contract liabilities are separately disclosed.

The preparation status and plans for the adoption of K-IFRS 1117 of Hana Insurance Co., Ltd. , a subsidiary of the Group, are as follows.

Hana Insurance Co., Ltd. first formed the K-IFRS17 introduction preparation task force team in May 2017 to introduce K-IFRS 1117. Hana Insurance Co., Ltd. has been operating IFRS 17 promotion team which consists of eight members.

In May 2017, Hana Insurance Co., Ltd. initiated the establishment of an actuarial

system for calculating insurance contract liabilities through the Insurance Development Institute consortium and from March 2019, has commissioned an accounting firm to establish the financial closing system and completed in June 2020. As of June 2022, Hana Insurance Co., Ltd. is conducting a pilot operation of the system and verifying its adequacy, and plans to continuously upgrade the system by 2022 and establish an overall internal accounting management system. As of December 2022, Hana Insurance Co., Ltd. plans to establish the internal controls over the financial reporting while stabilizing the accounting system to respond to parallel financial closing.

In addition, Hana Insurance Co., Ltd. plans to provide internal and external training to the related employees on accounting actuary, impact and settlement process related to K-IFRS 1117, and prepare an in-depth training course in 2022. The Group's management reported the preparations for introduction four times in 2021 and two times in 2022 to midlevel management.

Specific preparations for introduction and future plans are as follows

Main activity	Preparation (December 31, 2022)	Future plans
Organized a task force	– On May, 2017, organization of Task Force Team (currently named IFRS 17 promotion team, eight members present)	– Continuous operation of IFRS 17 promotion team
Establishment of financial closing system	– On May, 2017, system development – On February, 2022, completion of system development, pilot operation in progress – On November, 2022, initiate preaudit	– System enhancement/preaudit – Establishment of internal control over the financial reporting
Employee training	– Conducted training for major accounting practitioners – Training for executives and department heads	– Intensive course
Management reporting	– System development, reporting financial impact	– Report on all matters related to parallel financial closing

Hana Insurance Co., Ltd. is conducting parallel financial closing before the adoption of K-IFRS 1117 for the year ended December 31, 2022. A preaudit is being conducted by Hana Insurance Co., Ltd.'s external auditor as of December 31, 2022.

The results of the financial impact assessment according to the adoption of K-IFRS 1117 in the consolidated financial statements for the year ended December 31, 2022, prepared using the financial closing system are as follows.

When applying K-IFRS 1117, Hana Insurance Co., Ltd.'s assets, liabilities and equity in the statements of financial position as of December 31, 2022 are expected to increase ₩1,478,236 million, ₩1,058,272 million and ₩419,963 million, respectively. Hana Insurance Co., Ltd.'s net income and comprehensive income in the statements of comprehensive income for the year ended December 31, 2022 are expected to decrease ₩46,329 million and ₩1,929 million, respectively.

Compared to applying K-IFRS 1104, assets and liabilities decreased by ₩63,950 million and ₩194,912 million, respectively; equity increased by ₩130,961 million; and net income and comprehensive income increased by ₩23,915 million and ₩98,849 million, respectively. (The results of this analysis are subject to change depending on additional information available in the future and economic conditions)

The detailed results of financial impact assessment according to the adoption of K-IFRS 1117 are as follows (Korean won in millions):

<Statement of the financial position>

Accounts	The amount in accordance with K-IFRS 1104(A) (*1)	Accounts	The amount in accordance with K-IFRS 1117(B) (*2)	Effect(B-A)
Total assets	1,542,186	Total assets	1,478,236	(63,950)
Financial assets	1,171,130	Financial assets	1,285,629	114,499

Accounts	The amount in accordance with K-IFRS 1104(A) (*1)	Accounts	The amount in accordance with K-IFRS 1117(B) (*2)	Effect(B-A)
Non-financial assets	205,827	Non-financial assets	160,589	(45,238)
Insurance contract assets	–	Insurance contract assets	2,829	2,829
Reinsurance contract assets	31,722	Reinsurance contract assets	29,189	(2,533)
Special accounts assets	133,507	Special accounts assets	–	(133,507)
Total liabilities	1,253,184	Total liabilities	1,058,273	(194,911)
Insurance contract liabilities	1,053,729	Insurance contract liabilities	868,357	(185,372)
Reinsurance contract liabilities	–	Reinsurance contract liabilities	112	112
Investment contract liabilities	–	Investment contract liabilities	135,052	135,052
Special accounts liabilities	135,236	Special accounts liabilities	–	(135,236)
Other liabilities	64,219	Other liabilities	54,752	(9,467)
Total equity	289,002	Total equity	419,963	130,961
Issued capital, etc.	433,857	Issued capital, etc.	433,857	–
OCI	(48,403)	OCI	24,365	72,768
Deficit carried forward	(96,452)	Deficit carried forward	(38,259)	58,193

<Statements of comprehensive income>

Accounts	The amount in accordance with K-IFRS 1104(A) (*1)	Accounts	The amount in accordance with K-IFRS 1117(B) (*2)	Effect(B-A)
Operating income	635,021	Insurance revenue	503,999	(131,022)
Premium income	556,411	Expected claims, etc.	449,534	
Reinsurance income	12,829	Investment income	53,694	
Investment income	50,667	Other operating income	771	
Other operating income	15,114			
Operating expense	695,506	Insurance service expense	563,229	(132,277)
Provision for policy reserve	69,855	Actual claims, etc.	511,465	
Insurance claim	398,028	Investment expense	44,613	
Reinsurance expense	30,199	Other operating expense	7,151	
Business expenses	142,631			
Depreciation of acquisition costs	23,211			
Investment expense	16,513			
Other operating expense	15,069			
Net operating income	(60,485)	Net operating income	(59,230)	1,255
Non-operating income	704	Non-operating income	704	–
Non-operating loss	1,854	Non-operating loss	1,854	–

Accounts	The amount in accordance with K-IFRS 1104(A) (*1)	Accounts	The amount in accordance with K-IFRS 1117(B) (*2)	Effect(B-A)
Income tax expenses	8,609	Income tax expenses	(14,051)	(22,660)
Net income (loss)	(70,244)	Net income (loss)	(46,329)	23,915
Other comprehensive income (loss)	(30,534)	Other comprehensive income (loss)	44,400	74,934
Total comprehensive income	(100,778)	Total comprehensive income	(1,929)	98,849

<Statements of cash flow>

Accounts	The amount in accordance with K-IFRS 1104(A) (*1)	The amount in accordance with K-IFRS 1117(B) (*2)	Effect(B-A)
Net cash flows provided by (used in) operating activities	(61,435)	61,599	123,034
Net cash flows used in investing activities	(153,069)	(287,581)	(134,512)
Net cash flows provided by financing activities	139,486	139,486	—

(*1) These amounts are based on K-IFRS 1104 Insurance contracts and K-IFRS 1109 Financial instruments.

(*2) These amounts are based on K-IFRS 1117 Insurance contracts and K-IFRS 1109 Financial instruments.

The value of insurance contract liabilities was adjusted from cost to current value by applying the fair value method for long-term insurance contracts issued before 2016 and the modified retrospective method for long-term insurance contracts issued from 2017 to 2021 and general and automobile insurance contracts before 2021.

When applying the fair value method, the fair value of insurance contracts was calculated based on the insurance contract liability valuation calculated by the K-ICS, and adjusted for certain items.

As a result of analyzing the financial impact related to transition, the insurance contract assets and insurance contract liabilities applied to K-IFRS 1117 as of January 1, 2022 are as follows (Korean won in millions):

(The results of this analysis are subject to change depending on additional information available in the future and economic conditions.)

Transition method	Type	Issuance year of insurance contracts	The effect of the adoption of K-IFRS 1117		
			Insurance contract assets(*1)	Insurance contract liabilities(*1)	Insurance contract margin (*2)
Fair value method	Long term	Until 2016	–	387,051	4,761
Modified retrospective method	Long term	2017–2021	4,965	105,580	74,161
Modified retrospective method	Automobile	Until 2021	633	293,575	–
Modified retrospective method	General	Until 2021	17,689	35,663	–

(*1) These amounts are the total amount of all components in insurance contract assets and insurance contract liabilities.

(*2) These amounts include insurance contract margin in insurance contract assets and insurance contract liabilities.

When applying K-IFRS 1117, the value of insurance contract assets and liabilities as of December 31, 2022, amounts to ₩32,018million and ₩868,469 million, respectively. (The results of this analysis are subject to change depending on additional information available in the future and economic conditions.)

(Korean won in millions)

Classification	Assets in K-IFRS 1117				
	Total (A+B)	Insurance contract assets (A) (*1), (*2)		Reinsurance contract assets (B) (*1), (*3)	
		Insurance contract assets (A) (*1), (*2)	Insurance contract margin (*4)	Reinsurance contract assets (B) (*1), (*3)	Insurance contract margin (*4)
Estimated value	32,018	2,829	(6,104)	29,189	7,809

Classification	Assets in K-IFRS 1117				
	Total (C+D)	Insurance contract liabilities(C) (*1), (*2)		Reinsurance contract liabilities(D) (*1), (*3)	
		Insurance contract liabilities(C) (*1), (*2)	Insurance contract margin (*4)	Reinsurance contract liabilities(D) (*1), (*3)	Insurance contract margin (*4)
Estimated value	868,469	868,357	113,985	112	–

(*1) The total amount of insurance (reinsurance) contract assets and insurance (reinsurance) contract liabilities includes all components.

(*2) These amounts include assets and liabilities related to groups of insurance contracts issued by Hana Insurance Co., Ltd.

(*3) These amounts include assets and liabilities related to groups of reinsurance contracts held by Hana Insurance Co., Ltd.

(*4) Insurance contract margin included in insurance (reinsurance) contract assets and insurance (reinsurance) contract liabilities are separately disclosed.

3-36-2 K-IFRS 1001 Presentation of Financial Statements– Classification of Liabilities as Current or Non-current (Amendment)

The amendments to K-IFRS 1001 affect only the presentation of liabilities as current or non-current in the consolidated statement of financial position and not the amount or timing of recognition of any asset, liability, income or expenses or the information disclosed about those items.

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

The amendments are applied retrospectively for annual periods beginning on or after January 1, 2023, with early application permitted. The amendments are not expected have a material impact on the consolidated financial statements.

3-36-3 K-IFRS 1001 Presentation of Financial Statements and IFRS Practice Statement 2 Making Materiality Judgements – Disclosure of Accounting Policies

(Amendment)

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

The supporting paragraphs in K-IFRS 1001 are also amended to clarify that accounting policy information that relates to immaterial transactions, other events or conditions is immaterial and need not be disclosed. Accounting policy information may be material because of the nature of the related transactions, other events or conditions, even if the amounts are immaterial. However, not all accounting policy information relating to material transactions, other events or conditions is itself material.

The board has also developed guidance and examples to explain and demonstrate the application of the 'four-step materiality process' described in IFRS Practice Statement 2.

The amendments to K-IFRS 1001 are effective for annual periods beginning on or after January 1, 2023, with earlier application permitted and are applied prospectively. The amendments to IFRS Practice Statement 2 do not contain an effective date or transition requirements. The amendments are not expected have material impact on the consolidated financial statements.

3-36-4 K-IFRS 1001 Presentation of Financial Statements(Amendment)-
Disclosure of financial liabilities with condition to adjust exercise price

The amendments require disclosure of valuation gains or losses (limited to those

recognized in the profit or loss) of the conversion options or warrants (or financial liabilities including them), if all or part of the financial instrument with exercise price that is adjusted depending on the issuer's share price change is classified as financial liability as defined in paragraph 11 (2) of K-IFRS 1032.

The amendments are applied retrospectively for annual periods beginning on or after 1 January 2023, with early application permitted. The amendments are not expected have material impact on the consolidated financial statements.

3-36-5 K-IFRS 1008 Accounting Policies, Changes in Accounting Estimates and Errors – Definition of Accounting Estimates (Amendment)

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

The definition of a change in accounting estimates was deleted. However, the International Accounting Standards Board retained the concept of changes in accounting estimates in the standard with the following clarifications:

- A change in accounting estimate that results from new information or new developments is not the correction of an error
- The effects of a change in an input or a measurement technique used to develop an accounting estimate are changes in accounting estimates if they do not result from the correction of prior-period errors

The amendments are effective for annual periods beginning on or after January 1, 2023 to changes in accounting policies and changes in accounting estimates that occur on or after the beginning of that period, with earlier application permitted. The amendments are not expected to have a material impact on the consolidated financial statements.

3-36-6 K-IFRS 1012 Income Taxes – Deferred Tax related to Assets and Liabilities arising from a Single Transaction (Amendment)

The amendments introduce a further exception from the initial recognition exemption. Under the amendments, an entity does not apply the initial recognition exemption for transactions that give rise to equal taxable and deductible temporary differences.

Depending on the applicable tax law, equal taxable and deductible temporary differences may arise on initial recognition of an asset and liability in a transaction that is not a business combination and affects neither accounting nor taxable profit. For example, this may arise upon recognition of a lease liability and the corresponding right-of-use asset applying K-IFRS 1116 at the commencement date of a lease.

Following the amendments to K-IFRS 1012, an entity is required to recognize the related deferred tax asset and liability, with the recognition of any deferred tax asset being subject to the recoverability criteria in K-IFRS 1012.

The amendments apply to transactions that occur on or after the beginning of the earliest comparative period presented. In addition, at the beginning of the earliest comparative period an entity recognizes:

- A deferred tax asset (to the extent it is probable that taxable profit will be available against which the deductible temporary difference can be utilized) and a deferred tax liability for all deductible and taxable temporary differences associated with:
 - o Right-of-use assets and lease liabilities
 - o Decommissioning, restoration and similar liabilities and the corresponding amounts recognized as part of the cost of the related asset
- The cumulative effect of initially applying the amendments as an adjustment to the opening balance of retained earnings (or other component of equity, as

appropriate) at that date.

The amendments are effective for annual reporting periods beginning on or after January 1, 2023, with earlier application permitted. The amendments are not expected have material impact on the consolidated financial statements.

4. Significant accounting estimates and judgments

For applying accounting policies of the Group's consolidated financial statements, management is required to make judgments, estimates and assumptions that affect the amount of assets and liabilities that are difficult to identify through other resources. The estimates and assumptions are based on the other factors considered that they are related to historical experience. Actual results may differ from these estimations.

Management reviews these estimates and assumptions regularly. The effect of a change in an accounting estimate is recognized in profit or loss in the period of the change if the change affects that period only and the effect of a change in an accounting estimate is recognized in profit or loss in the period of the change and the future periods if the change affects both.

In the process of applying the Group's accounting policies, management has made the following judgments that have a significant effect on the amounts recognized in the consolidated financial statements.

4-1 Fair value of financial instruments

Where the fair values of financial assets and financial liabilities recorded in the statement of financial position cannot be derived from active markets, they are determined using a variety of valuation techniques that include the use of mathematical models. The inputs to these models are derived from observable market data where possible, but where observable market data is not available,

a degree of judgment is required to establish fair values. The judgments include considerations of liquidity and model inputs, such as volatility for longer-dated derivatives and discount rates, prepayment rates and default rate assumptions for asset-backed securities.

4-2 Impairment losses on financial assets

The Group recognizes impairment losses on debt instruments, lease receivables, contract assets, loan commitment and financial guarantee contracts that were accounted for at amortized cost, or FVOCI, based on the ECL impairment model using a three-stage model for 12-month ECLs or lifetime ECLs based on changes in credit risk since initial recognition of financial assets.

Classification		Loss allowance
STAGE 1	Credit risk on a financial instrument has not increased significantly since initial recognition.	12-month ECL: ECLs that result from default events that are possible within 12 months after the reporting date
STAGE 2	Credit risk on a financial instrument has increased significantly since initial recognition.	Lifetime ECL: ECLs that result from all possible default events over the expected life of the financial instrument
STAGE 3	Credit-impaired	

The cumulative changes in lifetime ECLs since initial recognition are recognized as loss allowance for a financial asset that is considered credit-impaired at initial recognition.

4-3 Provision for severance and retirement benefits

The cost of providing benefits under the defined benefit plans is determined separately for each plan using the projected unit credit method. Actuarial assumptions were made for the discount rate, the overall expected rates of return on assets and an increase in the future pay rate. Severance and retirement benefits include significant uncertainties in the estimates due to the long duration of the period.

4-4 Impairment of non-financial assets

The Group assesses at the end of the reporting period whether there is any indication that a non-financial assets may be impaired. The Group tests an intangible asset with an indefinite useful life for impairment annually or if any such indication exists. The Group tests an intangible asset with definite useful life for impairment if any such indication exists. Management estimates future cash flow associated with an asset or a CGU and selects the adequate discount rate to compute present value of future cash flow.

4-5 Income taxes

There are uncertainties that exist on the calculation of the final tax effect since the Group's tax expense on taxable income is calculated based on the tax laws and interpretations of tax authorities in numerous countries. In addition, there has been various transactions and tax accounting methods that have made computing the final tax expenses for the period uncertain. Significant judgment is required when determining the estimation of corporate taxes in various countries. The contingent liability from any future tax assessments is based on the estimates of the likelihood of additional taxes imposed and has been included in the Group's consolidated financial statements for the current period. When the finalized tax expense assessments are different from the appropriated amounts, the differences, if any, are recognized in current deferred tax assets, liabilities and expenses for the period.

4-6 Estimated amount for IBNR

Incurred but not reported ("IBNR") is the sum of the estimated insurance amount of accidents that have not been reported to the Group, but have already occurred and the estimated insurance amount to be additionally paid due to the resumption of payment claims. The Group calculates the estimated amount by applying statistical method to the calculation units prescribed by the Insurance Business Supervision Enforcement Regulations and accounts for the reserve within the insurance contract liability. IBNR according to the statistical method requires significant estimation in determining the application methodology (paid loss

development method, incurred loss development method, Bornhuetter–Ferguson method, etc.) for each accident year and determining the progress coefficient.

5. Methods for measuring the fair value of financial assets and financial liabilities

The following standards are applied in measuring the fair value of financial assets and financial liabilities

- a. Financial assets and financial liabilities traded in active markets at the reporting date is based on their quoted market price or dealer price quotations (bid price for long positions and ask price for short positions), without any deduction for transaction costs.
- b. For all other financial instruments not traded in an active market, the fair value is determined by using appropriate valuation techniques. Valuation techniques include the discounted cash flow method, comparison to similar instruments for which market observable prices exist, options pricing models, credit models and other relevant valuation models. These techniques incorporate the Group's estimate of assumptions that a market participant would make when valuing the instruments. Valuation techniques that provide reliable estimates on mark-to-market prices are applied.
- c. When determining fair value by the use of valuation techniques, comparison of current market transaction of another instrument that is substantially the same to the financial instrument needs to be objectively substantiated or inclusion of variables in the marketable data must be performed. Not all the significant market variables are observable and therefore in determining fair value, reasonable estimates or assumptions are required.
- d. Investments in equity instruments that do not have a quoted market price in an active market and whose fair value cannot be reliably measured and derivatives that are linked to and must be settled by delivery of such unquoted equity instruments, which are measured at cost, will be accounted for using the cost method.

5-1 Fair value hierarchy of financial instruments

The fair value hierarchy of financial assets and liabilities as of December 31, 2022 and 2021, are as follows (Korean won in millions):

<December 31, 2022>

Classification	Fair value hierarchy(*)			Total
	Level 1	Level 2	Level 3	
Financial assets:				
Financial assets measured at FVTPL				
Debt securities	5,381,402	22,316,229	6,753,229	34,450,860
Equity securities	112,589	30,953	1,320,312	1,463,854
Derivative assets held for trading	89,534	12,394,288	149,404	12,633,226
Loans	–	–	1,227,865	1,227,865
Others	–	–	1,383,000	1,383,000
Subtotal	5,583,525	34,741,470	10,833,810	51,158,805
Financial assets designated at FVOCI:				
Debt securities	11,829,606	24,449,668	–	36,279,274
Equity securities	339,744	34	751,126	1,090,904
Subtotal	12,169,350	24,449,702	751,126	37,370,178
Derivative assets used for hedging	–	32,312	–	32,312
Merchant banking accounts asset	–	4,631,361	–	4,631,361
Total	17,752,875	63,854,845	11,584,936	93,192,656
Financial liabilities:				
Financial liabilities measured at FVTPL				
Derivative liabilities held for trading	252,393	13,161,037	834,646	14,248,076
Securities lent	945,673	109,301	–	1,054,974
Subtotal	1,198,066	13,270,338	834,646	15,303,050
Financial liabilities designated as measured at FVTPL	6,480	4,853,499	7,857,529	12,717,508
Derivative liabilities used for hedging	–	515,571	30,837	546,408
Total	1,204,546	18,639,408	8,723,012	28,566,966

(*) The Group recognizes a change in level at the beginning of the reporting period when the event or change in circumstances that causes the transfer between levels occurs.

<December 31, 2021>

Classification	Fair value hierarchy(*)			Total
	Level 1	Level 2	Level 3	
Financial assets:				
Financial assets measured at FVTPL				
Debt securities	3,216,070	18,881,802	5,818,785	27,916,657
Equity securities	329,917	32,783	1,267,151	1,629,851
Derivative assets held for trading	67,335	5,003,189	218,451	5,288,975
Loans	–	–	1,898,878	1,898,878
Others	–	–	1,983,924	1,983,924
Subtotal	3,613,322	23,917,774	11,187,189	38,718,285
Financial assets designated at FVOCI:				
Debt securities	13,410,125	24,975,265	–	38,385,390
Equity securities	326,532	50	761,557	1,088,139
Subtotal	13,736,657	24,975,315	761,557	39,473,529
Derivative assets used for hedging	–	77,507	–	77,507
Merchant banking accounts asset	–	4,741,939	–	4,741,939
Total	17,349,979	53,712,535	11,948,746	83,011,260
Financial liabilities:				
Financial liabilities measured at FVTPL				
Derivative liabilities held for trading	167,633	4,866,443	855,358	5,889,434
Securities lent	859,252	23,614	–	882,866
Subtotal	1,026,885	4,890,057	855,358	6,772,300
Financial liabilities designated as measured at FVTPL	364,970	1,910,365	6,829,288	9,104,623
Derivative liabilities used for hedging	–	109,475	9,124	118,599
Total	1,391,855	6,909,897	7,693,770	15,995,522

(*) The Group recognizes a change in level at the beginning of the reporting period when the event or change in circumstances that causes the transfer between levels occurs.

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

a. Level 1: Quoted (unadjusted) prices in active markets for similar assets or

liabilities

- b. Level 2: Other techniques for that all inputs which have a significant effect on the recorded fair value are observable, either directly or indirectly
- c. Level 3: Techniques that use inputs that have a significant effect on the recorded fair value that are not based on observable market data

Fair value, valuation method and input variables used to measure fair value of financial instruments classified as fair value hierarchy Level 2 as of December 31, 2022 and 2021, are as follows (Korean won in millions):

<December 31, 2022>

(Korean won in millions)

Classification	Fair value	Valuation method	Input variable
Financial assets:			
Financial assets measured at FVTPL			
Debt securities	22,316,229	Black-Scholes model, Hull-White 1 factor model, DCF model, Gaussian 1 factor model, Net asset value model, etc.	Volatility, Discount rate, Stock price, exchange rate, interest rate, CDS premium, price of underlying asset such as bond, stock, etc.
Equity securities	30,953	Hull-White Monte Carlo Simulation, Market approach	Discount rate, interest rate curve, quoted price in a market that is not active
Derivative assets held for trading	12,394,288	Black-Scholes model, Hull-White 1 factor model, Black model, DCF Model, Gaussian 1 factor model, etc.	Volatility, discount rate, stock price, exchange rate, interest rate, CDS premium, yield curve of swap, volatility of swaption, yield curve of currency, etc..
Subtotal	34,741,470		
Financial assets measured at FVOCI			
Debt securities	24,449,668	DCF model	Discount rate, etc.
Equity securities	34	Market price	Stock price
Subtotal	24,449,702		
Derivative assets used for hedging	32,312	Hull-White 1 factor model	Exchange rate, yield curve of swap, volatility of swaption, yield curve of currency
Merchant banking account asset	4,631,361	DCF model	Discount rate
Total	63,854,845		
Financial liabilities:			
Financial liabilities measured at FVTPL			
Derivative liabilities held for trading	13,161,037	Black-Scholes model, Hull-White 1 factor model, DCF model, Black model, Gaussian 1 factor model, etc.	Volatility, discount rate, stock price, exchange rate, interest rate, CDS premium, yield curve of swap, volatility of swaption, yield curve of currency, index, etc..
Securities sold	109,301	DCF model	Discount rate
Subtotal	13,270,338		
Financial liabilities designated as measured at FVTPL	4,853,499	Black-Scholes model, Hull-White 1 factor model, DCF model, Gaussian 1 factor model, etc	Volatility, discount rate, stock price, exchange rate, interest rate, CDS premium, yield curve of swap, volatility of swaption, etc.
Derivative liabilities used for hedging	515,571	Hull-White 1 factor model	Exchange rate, yield curve of swap, volatility of

Classification	Fair value	Valuation method	Input variable
			swaption, yield curve of currency, interest rate
Total	18,639,408		

<December 31, 2021>

(Korean won in millions)

Classification	Fair value	Valuation method	Input variable
Financial assets:			
Financial assets measured at FVTPL			
Debt securities	18,881,802	Black-Scholes model, Hull-White 1 factor model, DCF model, Gaussian 1 factor model, Net asset value model, etc.	Volatility, discount rate, stock price, exchange rate, interest rate, CDS premium, price of underlying asset such as bond, stock, etc.
Equity securities	32,783	Hull-White Monte Carlo Simulation	Discount rate, etc.
Derivative assets held for trading	5,003,189	Black-Scholes model, Hull-White 1 factor model, Black model, DCF model, Gaussian 1 factor model, etc.	Volatility, discount rate, stock price, exchange rate, interest rate, CDS premium, yield curve of swap, volatility of swaption, yield curve of currency etc.
Subtotal	23,917,774		
Financial assets measured at FVOCI			
Debt securities	24,975,265	DCF model	Discount rate, etc.
Equity securities	50	Market price	Stock price
Subtotal	24,975,315		
Derivative assets used for hedging	77,507	Hull-White 1 factor model	Exchange rate, yield curve of swap, volatility of swaption, yield curve of currency, etc.
Merchant banking account asset	4,741,939	DCF model	Discount rate
Total	53,712,535		
Financial liabilities :			
Financial liabilities measured at FVTPL			
Derivative liabilities held for trading	4,866,443	Black-Scholes model, Hull-White 1 factor model, DCF model, Black model, Gaussian 1 factor model, etc.	Volatility, discount rate, stock price, exchange rate, interest rate, CDS premium, yield curve of swap, volatility of swaption, yield curve of currency etc.
Securities sold	23,614	DCF model	Discount rate
Subtotal	4,890,057		
Financial liabilities designated as measured at FVTPL	1,910,365	Black-Scholes model, Hull-White 1 factor model, DCF model, Gaussian 1 factor model, etc.	Volatility, discount rate, stock price, exchange rate, interest rate, CDS premium, yield curve of swap, volatility of swaption, etc.
Derivative liabilities used for hedging	109,475	Hull-White 1 factor model	Exchange rate, yield curve of swap, volatility of swaption, yield curve of currency etc.
Total	6,909,897		

Fair value, valuation method, input variables and significant unobservable input variables information used to measure fair value of financial instruments classified as fair value hierarchy Level 3 as of December 31, 2022 and 2021, are as follows (Korean won in millions):

<December 31, 2022>

(Korean won in millions)

Classification	Fair value	Valuation method	Input variable	Significant unobservable inputs used in the fair value measurement	Range	The effect of changes in unobservable inputs on fair value
Financial assets :						
Financial assets measured at FVTPL						
Debt securities	6,753,229	DCF model, net assets model, income approach, Black-Scholes model, Hull-White 1 factor model, Gaussian 1 factor model, etc.	Volatility, exchange rate, interest rate, CDS premium, correlation, discount rate, stock price, liquidating value, Volatility and price of underlying asset, etc..	Volatility, correlation, discount rate, liquidating value, price of underlying asset.	Volatility: 0~100% Correlation: -1~+1 Discount rate: 5.68~6.88% Liquidating value: 0	Volatility of underlying assets: Positive Correlation: Positive Discount rate: Negative Liquidating value: Positive Some cases show an opposite effect as above
Equity securities	1,320,312	DCF model, income approach, Multiple, Monte Carlo Simulation model, Hull-White 1 factor model, etc.	Growth rate, liquidating rate, discount rate, volatility, stock price, interest rate, striking price, liquidating value, etc	Volatility, Growth rate, Discount rate, liquidating rate, liquidating value, etc..	Volatility: -1~1% Discount rate: 0.15~20.14% Liquidating rate: -1~1% Growth rate: 0~2% Liquidating value: 0	Volatility of underlying assets: Positive Growth rate: Positive Liquidating rate: Positive Discount rate: Negative Liquidating value: Positive
Derivative assets held for trading	149,404	Black-Scholes model, Hull-White 1 factor model, Hull-White 2 factor model, DCF model, Gaussian 1 factor model, etc.	Exchange rate, yield curve of swap, volatility of swaption, correlation between valuation models, volatility, discount rate, stock price, interest rate, CDS premium, correlation, etc..	Volatility, correlation, regression coefficient related to interest rate, spread of underlying assets, recovery rate related to credit	Volatility: 0.06~65.6% Correlation: -64.51~+89.28% Regression coefficient: 1~10% Spread of underlying assets: 0.061~4.281% Recovery rate: 0~40%	Volatility: Positive Correlation: Positive Changes in correlation because of products and market condition is positive or negative Some cases show an opposite effect as above
Loans	1,227,865	DCF model, etc.	Discount rate, etc.	Discount rate	Discount rate: 0~10.05%	Discount rate: Negative
Others	1,383,000	DCF model, etc.	Discount rate, etc.	Discount rate, etc.		
Subtotal	10,833,810					
Financial assets measured at FVOCI						
Equity securities	751,126	DCF model, binominal model, discounted shareholders' cash flow model, Peer group analysis, etc.	Growth rate, discount rate, liquidating value, volatility and price of underlying asset, etc.	Growth rate, discount rate, liquidating value, volatility of underlying asset	Growth rate: 0~1% Discount rate: 0.15~20.14% Liquidating value: 0 Volatility of underlying asset: 21.98~46.53%	Growth rate: Positive Discount rate: Negative Liquidating value: Positive Volatility of underlying asset: Positive
Total	11,584,936					
Financial liabilities :						
Financial liabilities measured at FVTPL						
				Volatility, correlation,	Volatility: 0.06~65.6%	

Classification	Fair value	Valuation method	Input variable	Significant unobservable inputs used in the fair value measurement	Range	The effect of changes in unobservable inputs on fair value
Derivative liabilities held for trading	834,646	Black-Scholes model, Hull-White 1 factor model, Hull-White 2 factor model, DCF model, Gaussian 1 factor model, etc.	Discount rate, swap yield curve, volatility of swaption, correlation between valuation models, volatility, discount rate, stock price, CDS premium, correlation, etc.	regression coefficient related to interest rate, spread of underlying assets, recovery rate related to credit	Correlation:-64.51 →+89.28% Regression coefficient: 1-10% Spread of underlying assets: 0.061-4.281% Recovery rate: 0-40%	Volatility : Positive Correlation : Positive Changes in correlation because of products and market condition is positive or negative Some cases show an opposite effect as above
Financial liabilities designated as measured at FVTPL	7,857,529	DCF model, Black-Scholes model, Hull-White 1 factor model, Gaussian 1 factor model, etc.	Volatility, discount rate, stock price, exchange rate, interest rate, CDS premium, correlation, etc.	Volatility, correlation, regression coefficient, spread of underlying assets, recovery rate	Volatility:0.06-65.6% Correlation:-64.51 →+89.28% Regression coefficient: 1-10% Spread of underlying assets: 0.061-4.281% Recovery rate: 0-40%	Volatility : Positive Correlation : Positive Some cases show an opposite effect as above
Derivative liabilities used for hedging	30,837	Hull-White 2 factor model	Swap yield curve, volatility of swaption, correlation between valuation models, exchange rate, etc.	Correlation between KRW Interest Rate Swap("IRS") rates, correlation between USD IRS rates	Correlation between KRW IRS rates, correlation between USD IRS rates : 39.00-96.00%	Fair value increase or decrease based on the changes in correlation by the effect of trading instruments and market status
Total	8,723,012					

<December 31, 2021>

(Korean won in millions)

Classification	Fair value	Valuation method	Input variable	Significant unobservable inputs used in the fair value measurement	Range	The effect of changes in unobservable inputs on fair value
Financial assets :						
Financial assets measured at FVTPL						
Debt securities	5,818,785	DCF model, net assets model, income approach, Black-scholes model, Hull-White 1 factor model, Gaussian 1 factor model, etc.	Volatility, exchange rate, interest rate, interest rate, CDS premium, correlation, discount rate, stock price, liquidating value, etc..	Volatility, correlation, discount rate, liquidating value, etc.	Volatility: 0-100% Correlation: -1→+1 Discount rate : 5.13-21.37% Liquidating value: 0	Volatility of underlying assets: Positive Correlation : Positive (Negative in some cases) Discount rate : Negative Liquidating value: Positive
		DCF model, income approach, Multiple, Monte	Growth rate, liquidating rate, discount rate,	Volatility, growth rate, discount rate,	Volatility: -1-1% Discount rate: 10.25-25.46%	Volatility of underlying assets: Positive Growth rate : Positive

Classification	Fair value	Valuation method	Input variable	Significant unobservable inputs used in the fair value measurement	Range	The effect of changes in unobservable inputs on fair value
Equity securities	1,267,151	Carlo Simulation model, Hull-White 1 factor model, etc.	volatility, stock price, interest rate, striking price, liquidating value, etc.	liquidating rate, liquidating value, etc..	Liquidating rate: -1~1% Growth rate: 0~1% Liquidating value: 0	Liquidating rate: Positive Discount rate : Negative Liquidating value: Positive
Derivative assets held-for-trading	218,451	Black-Scholes model, Hull-White 1 factor model, Hull-White 2 factor model, DCF model, Gaussian 1 factor model, etc.	Exchange rate, yield curve of swap, volatility of swaption, correlation between valuation models, volatility, discount rate, stock price, interest rate, CDS premium, correlation, etc..	Volatility, correlation, correlation between USD IRS rate, etc	Volatility: 0~100% Correlation: -1~+1 Correlation between USD IRS rate: 53.00~79.00%	Volatility: Positive Correlation: Positive (Negative in some cases) Fair value increase or decrease based on the changes in correlation by the effect of trading instruments and market status
Loans	1,898,878	Least Square Monte Carlo method ("LSMC"), DCF model, etc.	Volatility and price of underlying asset, discount rate, etc.	Price of underlying asset, volatility of underlying asset, discount rate, etc.	Volatility of underlying asset: 17.89~34.16% Discount rate: 3.84~10.53%	Volatility: Positive Discount rate: Negative
Others	1,983,924	DCF model, etc.	Discount rate, etc.	Discount rate, etc.		
Subtotal	11,187,189					
Financial assets measured at FVOCI						
Equity securities	761,557	DCF model, market approach, net asset approach, LSMC, Income approach, multiple, binominal trees, etc	Growth rate, discount rate, volatility and price of underlying asset etc.	Growth rate, discount rate, volatility of underlying assets	Growth rate: 0.00~2.0% Discount rate: 9.90~18.02% Volatility of underlying asset: 23.32~25.49%	Growth rate: Positive Discount rate: Negative Volatility of underlying asset: Positive
Total	11,948,746					
Financial liabilities :						
Financial liabilities measured at FVTPL						
Derivative liabilities held-for-trading	855,358	Black-Scholes model, Hull-White 1 factor model, Hull-White 2 factor model, DCF model, Gaussian 1 factor model, etc.	Exchange rate, yield curve of swap, volatility of swaption, correlation between valuation models, volatility, discount rate, stock price, interest rate, CDS premium, correlation, etc..	Volatility, correlation, correlation between USD IRS rate, etc	Volatility: 0~100% Correlation: -1~+1 Correlation between USD IRS rate: 53.00~79.00%	Volatility : Positive Correlation : Positive (Negative in some cases) Fair value increase or decrease based on the changes in correlation by the effect of trading instruments and market status
Financial liabilities designated as measured at FVTPL	6,829,288	DCF model, Black-Scholes model, Hull-White 1 factor model, Gaussian 1 factor model, etc.	Volatility, discount rate, stock price, exchange rate, interest rate, CDS premium, correlation, etc.	Volatility, correlation	Volatility: 0~100% Correlation: -1~+1	Volatility : Positive Correlation : Positive (Negative in some cases)
Derivative liabilities used for			Swap yield curve, volatility of swaption,	Correlation between KRW IRS rates,cor	Correlation between KRW and	Fair value increase or decrease based on the changes in correlation by th

Classification	Fair value	Valuation method	Input variable	Significant unobservable inputs used in the fair value measurement	Range	The effect of changes in unobservable inputs on fair value
hedging	9,124	Hull-White 2 factor model	correlation between valuation models, exchange rate	relation between USD IRS rates	USD IRS rates: 53.00~98.00	e effect of trading instruments and market status
Total	7,693,770					

5-2 Changes in the fair value of Level 3

Changes in the fair value of Level 3 financial instruments for the years ended December 31, 2022 and 2021, are as follows (Korean won in millions):

◁December 31, 2022▷

Classification	Financial assets measured at FVTPL				Financial assets measured at FVOCI	Financial liabilities designated as measured at FVTPL	Net derivative instruments	
	Debt securities	Equity securities	Loans	Others			Held-for-trading	Held-for-hedging
January 1, 2022	5,818,785	1,267,151	1,898,878	1,983,924	761,557	6,829,288	(636,907)	(9,124)
Increase due to business combination(*)	41,528	246,565	4,383	-	-	-	-	-
Transfer from Level 1 to Level 3	-	10	-	-	-	-	-	-
Transfer from Level 3 to Level 1	(15,584)	-	-	-	-	-	-	-
Net income	40,016	(65,321)	(52,572)	32,843	-	(388,970)	(478,511)	(21,713)
Other comprehensive income	-	-	-	-	(12,389)	(8,756)	-	-
Buy/issue	3,444,522	801,593	2,512,417	4,754,506	2,499	3,874,305	1,069	-
Sell/settlement	(2,419,176)	(708,103)	(3,135,241)	(5,388,273)	(541)	(2,789,238)	152,345	-
Others	(156,862)	(221,583)	-	-	-	340,900	276,762	-
December 31, 2022	6,753,229	1,320,312	1,227,865	1,383,000	751,126	7,857,529	(685,242)	(30,837)

(*) It includes the changes of subsidiaries incorporated as of credit provision or purchase agreements.

◁December 31, 2021▷

Classification	Financial assets measured at FVTPL				Financial assets measured at FVOCI	Financial liabilities designated as measured at FVTPL	Net derivative instruments	
	Debt securities	Equity securities	Loans	Others			Held-for-trading	Held-for-hedging
January 1, 2021	5,298,892	1,178,768	1,492,111	1,685,297	810,710	8,079,634	(518,987)	152
Increase due to business combination(*)	14,948	485	-	-	-	-	-	-
Net income	56,253	(36,416)	64,082	18,678	-	209,454	106,357	(9,276)

Classification	Financial assets measured at FVTPL				Financial assets measured at FVOCI	Financial liabilities designated as measured at FVTPL	Net derivative instruments	
	Debt securities	Equity securities	Loans	Others			Held-for-trading	Held-for-hedging
Other comprehensive income	—	—	—	—	(38,473)	(2,516)	—	—
Buy/issue	3,461,049	1,252,384	2,275,703	11,305,075	1,018	4,808,344	(377,461)	—
Sell/settlement	(3,015,651)	(1,284,467)	(1,937,195)	(11,025,126)	(11,698)	(6,265,628)	153,184	—
Others	3,294	156,397	4,177	—	—	—	—	—
December 31, 2021	5,818,785	1,267,151	1,898,878	1,983,924	761,557	6,829,288	(636,907)	(9,124)

(*) It includes the changes of subsidiaries incorporated as of credit provision or purchase agreements.

5-3 Total gains or losses recognized in profit or loss

Total gains or losses recognized in profit or loss, and the line item in profit or loss in which those gains or losses are recognized for the years ended December 31, 2022 and 2021, are as follows (Korean won in millions):

<December 31, 2022>

(Korean won in millions)

Classification	Total gains or losses recognized in profit or loss	The line item in profit or loss in which those gains or losses are recognized
Net gain or loss on financial instruments measured at FVTPL	(523,545)	(557,116)
Net gain or loss related to financial instruments designated as measured at FVTPL	388,970	525,648
Net gain or loss related to derivative instruments used for hedging	(21,713)	(21,713)
Total	(156,288)	(53,181)

<December 31, 2021>

(Korean won in millions)

Classification	Total gains or losses recognized in profit or loss	The line item in profit or loss in which those gains or losses are recognized
Net gain or loss on financial instruments measured at FVTPL	208,954	(72,304)

Classification	Total gains or losses recognized in profit or loss	The line item in profit or loss in which those gains or losses are recognized
Net gain or loss related to financial instruments designated as measured at FVTPL	(209,454)	97,614
Net gain or loss related to derivative instruments used for hedging	(9,276)	(9,124)
Total	(9,776)	16,186

5-4 Transfer into or out among the fair value hierarchy

Transfers into or out of Level 3 of the fair value hierarchy for the years ended December 31, 2022 and 2021, are as follows (Korean won in millions):

Classification	2022	2021
Transfer from Level 3 to Level 1(*1)	(15,584)	—
Transfer from Level 1 to Level 3(*2)	10	—

There is transfer out of Level 3 of the fair value hierarchy due to changes in the availability of observable input variables for the financial instruments.

(*1) This is due to the listing of equity securities.

(*2) This is due to the delisting of equity securities.

5-5 Sensitivity analysis

The results of the sensitivity analysis in accordance with changes in significant unobservable inputs as of December 31, 2022 and 2021, are as follows.

The subjects of the sensitivity analysis are the financial assets and liabilities classified as Level 3. The effects of changes in fair values, recognized in profit or loss or OCI, are classified into favorable and unfavorable changes. (Korean won in millions):

<December 31, 2022>

(Korean won in millions)

Classification	Favorable changes	Unfavorable changes
Financial assets:		
Financial assets measured at FVTPL		
Debt securities (*1)	40,112	(71,550)
Equity securities (*2)	15,592	(13,062)
Derivative assets held for trading (*3)	1,156	(1,142)
Loans (*4)	6,557	(6,276)
Subtotal	63,417	(92,030)
Financial assets measured at FVOCI		
Equity securities (*2)	30,414	(19,330)
Total	93,831	(111,360)
Financial liabilities:		
Financial liabilities measured at FVTPL		
Derivative liabilities held for trading (*3)	1,281	(1,298)
Financial liabilities designated as measured at FVTPL	9,762	(9,762)
Subtotal	11,043	(11,060)
Derivative liabilities used for hedging (*3)	6	(1)
Total	11,049	(11,061)

(*1) Favorable changes and unfavorable changes in fair value of debt securities are calculated by changing discount rate (-1.0-1.0%), which is the main unobservable input. Favorable changes and unfavorable changes in fair value of beneficiary securities are calculated by changing discount rate of lease cash flow (-1.0-1.0%) and growth rate of selling price of real estate (-1.0-1.0%), under limited circumstances when it is consisted of real estate. However it is impossible to calculate sensitivity of beneficiary securities based on changes in inputs. Favorable changes and unfavorable changes in fair value of convertible private bond are calculated by changing the price of underlying assets (-10.0-10.0%) and volatility of underlying assets (-10.0-10.0%), which is the main unobservable

input.

(*2) Changes in fair value of equity securities are calculated by changing growth rate (0.0–1.0%) and discount rate(–1.0–20.14%), which are main unobservable inputs.

(*3) ① Correlation between rates of IRS of KRW, ② Correlation between rates of KRW/USD IRS, ③ Correlation between KRW/USD exchange rate and rate of USD IRS, ④ Correlation between stock price index and individual stock and ⑤ Favorable and unfavorable changes are calculated by taking 10% fluctuation of correlation within the valuation model.

(*4) Favorable changes and unfavorable changes in loans are calculated by changing discount rate (Range: 0.00–10.5%), which are the main unobservable input. Favorable changes and unfavorable changes in the fair value of derivative linked securities and derivatives linked securities sold are calculated by changing volatility of underlying assets (–1–1%), which are the main unobservable input. Positions with mutual risk hedging effects were excluded.

<December 31, 2021>

(Korean won in millions)

Classification	Favorable changes	Unfavorable changes
Financial assets:		
Financial instruments measured at FVTPL		
Debt securities (*1)	25,765	(25,522)
Equity securities (*2)	11,089	(10,521)
Derivative assets held for trading (*3)	1,630	(1,812)
Loans (*4)	6,907	(6,630)
Financial assets designated as measured at FVTPL	11,054	(7,761)
Subtotal	56,445	(52,246)
Financial assets measured at FVOCI		
Equity securities (*2)	29,646	(22,348)
Total	86,091	(74,594)

Classification	Favorable changes	Unfavorable changes
Financial liabilities:		
Financial liabilities measured at FVTPL		
Derivative liabilities held for trading (*3)	2,967	(2,790)
Financial liabilities designated as measured at FVTPL	8,986	(8,986)
Subtotal	11,953	(11,776)
Derivative liabilities used for hedging (*3)	287	(241)
Total	12,240	(12,017)

(*1) Changes in fair value of debt securities are calculated by changing discount rate (-1.0-1.0%), which is the main unobservable input. Favorable changes and unfavorable changes in fair value of beneficiary securities are calculated by changing discount rate of lease cash flow (-1.0-1.0%) and growth rate of selling price of real estate (-1.0-1.0%), under limited circumstances when it is consisted of real estate. However it is impossible to calculate sensitivity of beneficiary securities based on changes in inputs.

(*2) Changes in fair value of equity securities are calculated by changing growth rate (0.0-1.0%) and discount rate, which are main unobservable inputs.

(*3) ① Correlation between rates of IRS of KRW, ② Correlation between rates of KRW/USD IRS, ③ Correlation between KRW/USD exchange rate and rate of USD IRS, ④ Correlation between stock price index and individual stock and ⑤ Favorable and unfavorable changes are calculated by taking 10% fluctuation of correlation within the valuation model.

(*4) Changes in loans (convertible private bond, etc.) are calculated by changing the prices and volatility of underlying assets (-10.0-10.0%, -10.0-10.0%, respectively), which are the main unobservable input.

5-6 Financial assets and liabilities that are not measured with fair values

The fair values of financial assets and liabilities whose fair values are not readily determinable as of December 31, 2022 and 2021, are as follows (Korean won in millions):

<December 31, 2022>

Classification	Levels of the fair value hierarchy			Total
	Level 1	Level 2	Level 3	
Financial assets:				
Cash and due from banks	1,923,815	43,832,294	–	45,756,109
Securities measured at amortized cost	4,302,775	32,405,461	100,000	36,808,236
Loans measured at amortized cost	–	–	358,037,812	358,037,812
Others	–	–	14,615,037	14,615,037
Total	6,226,590	76,237,755	372,752,849	455,217,194
Financial liabilities:				
Deposits	–	55,701,960	306,521,168	362,223,128
Borrowings	–	14,598,621	22,130,474	36,729,095
Debentures	–	53,235,519	2,425,633	55,661,152
Merchant banking account liabilities	–	–	3,667,273	3,667,273
Others	–	–	33,373,198	33,373,198
Total	–	123,536,100	368,117,746	491,653,846

<December 31, 2021>

Classification	Levels of the fair value hierarchy			Total
	Level 1	Level 2	Level 3	
Financial assets:				
Cash and due from banks	2,139,052	29,267,544	–	31,406,596
Securities measured at amortized cost	3,113,948	20,312,141	–	23,426,089

Classification	Levels of the fair value hierarchy			Total
	Level 1	Level 2	Level 3	
Loans measured at amortized cost	–	–	336,125,757	336,125,757
Others	–	–	14,924,535	14,924,535
Total	5,253,000	49,579,685	351,050,292	405,882,977
Financial liabilities:				
Deposits	–	51,251,577	274,811,131	326,062,708
Borrowings	–	12,801,006	17,358,134	30,159,140
Debentures	–	51,400,853	2,773,206	54,174,059
Merchant banking account liabilities	–	–	2,908,280	2,908,280
Others	–	–	28,937,543	28,937,543
Total	–	115,453,436	326,788,294	442,241,730

Details of fair value, valuation technique, and inputs used to develop those measurements classified into Level 2 assets and liabilities that are not measured at fair value as of December 31, 2022 and 2021, are as follows
(Korean won in millions):

<December 31, 2022>

(Korean won in millions)

Classification	Fair value	Valuation method	Input variables
Financial assets:			
Cash and due from banks	43,832,294	DCF model, etc	Discount rate, credit and other spread, etc.
Securities measured at amortized cost	32,405,461	DCF model, etc	Discount rate
Total	76,237,755		
Financial liabilities:			
Deposits	55,701,960	DCF model, etc	Discount rate
Borrowings	14,598,621	DCF model, etc	Discount rate and other spread

Classification	Fair value	Valuation method	Input variables
Debentures	53,235,519	DCF model, etc	Discount rate, other spread and rate of inherent bankruptcy
Total	123,536,100		

<December 31, 2021>

(Korean won in millions)

Classification	Fair value	Valuation method	Input variables
Financial assets:			
Cash and due from banks	29,267,544	DCF model, etc	Discount rate, credit and other spread, etc.
Securities measured at amortized cost	20,312,141	DCF model, etc	Discount rate
Total	49,579,685		
Financial liabilities:			
Deposits	51,251,577	DCF model, etc	Discount rate
Borrowings	12,801,006	DCF model, etc	Discount rate and other spread
Debentures	51,400,853	DCF model, etc	Discount rate, other spread and rate of inherent bankruptcy
Total	115,453,436		

Fair value, valuation method and input variables of financial instruments disclosed as fair value though it cannot be measured as fair value and the fair value hierarchy Level 3 as of December 31, 2022 and 2021, are as follows (Korean won in millions):

<December 31, 2022>

(Korean won in millions)

Classification	Fair value	Valuation method	Input variables
Financial assets :			

Classification	Fair value	Valuation method	Input variables
Securities measured at amortized cost	100,000	DCF model etc.	Discount rate, etc.
Loans measured at amortized cost	358,037,812	DCF model etc.	Credit and other spread, other spread, rate of advanced redemption, etc..
Others	14,615,037	DCF model etc.	Discount rate, etc.
Total	372,752,849		
Financial liabilities :			
Deposits	306,521,168	DCF model etc.	Other spread, rate of advanced redemption, etc.
Borrowings	22,130,474	DCF model etc.	Other spread
Debentures	2,425,633	DCF model etc.	Other spread and rate of inherent bankruptcy
Merchant banking account liabilities	3,667,273	(*)	
Others	33,373,198	DCF model etc.	Discount rate, etc.
Total	368,117,746		

(*) The carrying amount is considered fair value without applying the DCF method because it is derived from various transactions and has a relatively short or no maturity

<December 31, 2021>

(Korean won in millions)

Classification	Fair value	Valuation method	Input variables
Financial assets :			
Loans measured at amortized cost	336,125,757	DCF model etc.	Credit and other spread, rate of advanced redemption and discount rate, etc.
Others	14,924,535	DCF model etc.	Discount rate, etc.
Total	351,050,292		
Financial liabilities :			
Deposits	274,811,131	DCF model etc.	Other spread, rate of advanced redemption, and discount rate
Borrowings	17,358,134	DCF model etc.	Other spread and discount rate
Debentures	2,773,206	DCF model etc.	Other spread, rate of inherent bankruptcy, Discount rate, etc.
Merchant banking account liabilities	2,908,280	(*)	
Others	28,937,543	DCF model etc.	Discount rate, etc.
Total	326,788,294		

(*) The carrying amount is considered fair value without applying the DCF

method because it is derived from various transactions and has a relatively short or no maturity

5-7 Deferred Day 1 loss

Changes in deferred Day 1 loss for the years ended December 31, 2022 and 2021 are summarized as follows (Korean won in millions):

Classification	2022	2021
Beginning balance	(113,997)	(107,818)
Increase	(102,770)	(89,824)
Profit or loss	85,283	83,645
Ending balance	(131,484)	(113,997)

5-8 Financial instruments transfer transaction

The Group has bonds sold under repurchase agreements and securities. In such transactions, financial assets were transferred but the derecognition conditions were not met; so, the entire transferred assets are continuously recognized in the Group's consolidated statement of financial position. In the case of bonds sold under repurchase agreements, it is sold on the condition that it will be repurchased at a fixed price, and when the Group lends securities held by the Group, ownership of the securities is transferred, but the securities are returned at the end of the rental period, so they retain most of the risks and rewards of ownership.

Transferred financial assets and related liabilities not eliminated as a whole as of December 31, 2022 and 2021, are as follows (Korean won in millions):

<December 31, 2022>

Classification	Book value	Fair value
Assets:		

Classification	Book value	Fair value
Financial assets measured at FVTPL (*)	7,588,843	7,588,843
Financial assets measured at FVOCI (*)	3,151,670	3,151,670
Securities measured at amortized cost (*)	900,453	839,133
Liabilities:		
Securities sold under repurchase agreements	487,732	436,183

(*) The leased financial assets at FVTPL and FVOCI and leased securities measured at amortized cost, of which related liabilities are not recognized, amounting to ₩412,492 million ₩1,925,345 million and ₩416,386 million, respectively, as of December 31, 2022, are included.

<December 31, 2021>

Classification	Book value	Fair value
Assets:		
Financial assets measured at FVTPL (*)	6,563,556	6,563,556
Financial assets measured at FVOCI (*)	3,988,042	3,988,042
Securities measured at amortized cost (*)	969,732	961,803
Liabilities:		
Securities sold under repurchase agreements	8,180,548	8,161,707

(*) The leased financial assets at FVTPL and FVOCI and leased securities measured at amortized cost, of which related liabilities are not recognized, amounting to ₩49,906 million ₩2,538,542 million and ₩59,586 million, respectively, as of December 31, 2021, are included.

Transferred financial assets(without deducting allowance for loan losses) and related liabilities not eliminated related to asset securitization as a whole as of December 31, 2022 and 2021, are as follows (Korean won in millions):

<December 31, 2022>

Classification	December 31, 2022	December 31, 2021
Assets:		

Classification	December 31, 2022	December 31, 2021
Financial assets measured at FVTPL	20,000	20,000
Loans measured at amortized cost	1,291,332	1,335,098
Total	1,311,332	1,355,098
Liabilities:		
Securitized borrowings	1,321,944	1,335,319
Securitized debentures	—	30,000
Total	1,321,944	1,365,319

6. Fair value of financial instruments

Details of carrying amount and fair value of financial instruments as of December 31, 2022 and 2021, are as follows (Korean won in millions):

Classification	December 31, 2022		December 31, 2021	
	Book value	Fair value	Book value	Fair value
Financial assets:				
Cash and due from banks	45,756,109	45,756,109	31,406,596	31,406,596
Financial assets measured at FVTPL	51,158,805	51,158,805	38,718,285	38,718,285
Financial assets measured at FVOCI	37,370,178	37,370,178	39,473,529	39,473,529
Securities measured at amortized cost	38,928,911	36,808,236	23,769,017	23,426,089
Loans measured at amortized cost	361,484,896	358,037,812	337,349,273	336,125,757
Derivative assets used for hedging	32,312	32,312	77,507	77,507
Merchant banking account asset	4,631,361	4,631,361	4,741,939	4,741,939
Others	14,615,387	14,615,037	14,924,144	14,924,535
Total	553,977,959	548,409,850	490,460,290	488,894,237
Financial liabilities:				
Financial liabilities measured at FVTPL	15,303,050	15,303,050	6,772,300	6,772,300
Financial liabilities designated as measured at FVTPL	12,717,508	12,717,508	9,104,623	9,104,623
Deposits	362,575,964	362,223,128	325,149,095	326,062,708
Borrowings	37,087,312	36,729,095	30,261,598	30,159,140
Debentures	56,673,832	55,661,152	54,476,161	54,174,059
Derivative liabilities used for hedging	546,408	546,408	118,599	118,599
Merchant banking account liabilities	3,667,273	3,667,273	2,908,280	2,908,280
Others	33,344,020	33,373,198	28,951,207	28,937,543
Total	521,915,367	520,220,812	457,741,863	458,237,252

The following standards are applied in measuring the fair value of financial instruments

- a. Loans measured at amortized cost : Expected cash flows, current market interest rates and discount rates including borrowers' credit risks are factors to calculate the fair value of loans. For lines of credit available for deposit and withdrawal from time to time and loans that have a short-term maturity (less than three months), it is assumed that the carrying amounts approximate to their fair value.
- b. Financial investment assets: The fair value of securities measured at amortized cost are as stated by the market or broker or by credible sources. If none of the information from these entities is usable, quoted market price of financial instruments with similar credit rating, maturity and return on income is used to estimate the fair value.
- c. Deposits: For deposits without an explicit maturity period, including deposits with no interests, deposits that have a short-term maturity (less than three months) and deposits with a floating-rate readjustment period of less than three months, it is assumed that the carrying amounts approximate their fair value. The estimated fair value of fixed interest bearing deposits is based on DCFs using prevailing money market interest rates for debts with similar credit risk and maturity.
- d. Borrowings: For borrowings that have a short-term maturity (less than three months) and borrowings with floating-rate readjustment period of less than three months, it is assumed that the carrying amounts approximate to their fair value. The estimated fair value of fixed-interest-bearing borrowings is based on and DCFs using prevailing money market interest rates for debts with similar credit risk and maturity.
- e. Debentures: For quoted debt issued, the fair values are determined based on

quoted market prices. For those notes issued where quoted market prices are not available, a DCF model is used based on a current interest rate yield curve appropriate for the remaining term to maturity and credit spreads.

7. Categories of financial assets and financial liabilities

Categories of financial assets and financial liabilities as of December 31, 2022 and 2021, are as follows (Korean won in millions):

<December 31, 2022>

(Korean won in millions)

Classification	Financial assets measured at FVTPL	Financial assets measured at FVOCI	Financial assets measured at amortized cost	Derivatives for hedging	Total
Financial assets					
Cash and due from banks	–	–	45,756,109	–	45,756,109
Financial assets measured at FVTPL	51,158,805	–	–	–	51,158,805
Financial assets measured at FVOCI	–	37,370,178	–	–	37,370,178
Securities measured at amortized cost	–	–	38,928,911	–	38,928,911
Loans measured at amortized cost	–	–	361,484,896	–	361,484,896
Derivative assets used for hedging	–	–	–	32,312	32,312
Merchant banking account asset	4,631,361	–	–	–	4,631,361
Others	–	–	14,615,387	–	14,615,387
Total	55,790,166	37,370,178	460,785,303	32,312	553,977,959

Classification	Financial liabilities measured at FVTPL	Financial liabilities designated as measured at FVTPL	Financial liabilities measured at amortized cost	Derivatives for hedging	Total
Financial liabilities					
Financial liabilities measured at FVTPL	15,303,050	–	–	–	15,303,050
Financial liabilities designated as measured at FVTPL	–	12,717,508	–	–	12,717,508
Deposits	–	–	362,575,964	–	362,575,964
Borrowings	–	–	37,087,312	–	37,087,312
Debentures	–	–	56,673,832	–	56,673,832
Derivative liabilities used for hedging	–	–	–	546,408	546,408
Merchant banking account liabilities	–	–	3,667,273	–	3,667,273
Others	–	–	33,344,020	–	33,344,020
Total	15,303,050	12,717,508	493,348,401	546,408	521,915,367

<December 31, 2021>

(Korean won in millions)

Classification	Financial assets measured at FVTPL	Financial assets measured at FVOCI	Financial assets measured at amortized cost	Derivatives for hedging	Total
Financial assets					
Cash and due from banks	-	-	31,406,596	-	31,406,596
Financial assets measured at FVTPL	38,718,285	-	-	-	38,718,285
Financial assets measured at FVOCI	-	39,473,529	-	-	39,473,529
Securities measured at amortized cost	-	-	23,769,017	-	23,769,017
Loans measured at amortized cost	-	-	337,349,273	-	337,349,273
Derivative assets used for hedging	-	-	-	77,507	77,507
Merchant banking account asset	4,741,939	-	-	-	4,741,939
Others	-	-	14,924,144	-	14,924,144
Total	43,460,224	39,473,529	407,449,030	77,507	490,460,290

Classification	Financial liabilities measured at FVTPL	Financial liabilities designated as measured at FVTPL	Financial liabilities measured at amortized cost	Derivatives for hedging	Total
Financial liabilities					
Financial liabilities measured at FVTPL	6,772,300	-	-	-	6,772,300
Financial liabilities designated as measured at FVTPL	-	9,104,623	-	-	9,104,623
Deposits	-	-	325,149,095	-	325,149,095
Borrowings	-	-	30,261,598	-	30,261,598
Debentures	-	-	54,476,161	-	54,476,161
Derivative liabilities used for hedging	-	-	-	118,599	118,599
Merchant banking account liabilities	-	-	2,908,280	-	2,908,280
Others	-	-	28,951,207	-	28,951,207
Total	6,772,300	9,104,623	441,746,341	118,599	457,741,863

8. Offsetting financial assets and liabilities

The Group engages in master netting arrangement contracts with counterparties through International Derivatives Swaps and Dealers Association or similar agreements in relation to over-the-counter derivatives and spot exchange transactions. Under this agreement, in the event of a credit case such as the counterparty's bankruptcy, the transaction with the counterparty will be terminated, and at the time of termination, the amount paid or received by each party is offset and paid or received. Bonds purchased under resale agreements and Securities loan transaction has been made offsetting arrangement that is similar derivatives offsetting arrangement

In the case of unpaid domestic exchange bonds and unpaid domestic exchange obligations that deal with bonds and debts arising from domestic exchange transactions between banks, the Group holds the right to netting and pays in a net amount, it is displayed in the consolidated statement of financial position based on the amount after offsetting. Other financial instruments include bonds and debts related to securities traded in the market and are marked on the consolidated statement of financial position based on the amount after netting as they hold legal offsetting rights and pay in net amounts.

8-1 Details of financial assets subject to offsetting, enforceable master netting arrangements and similar agreements as of December 31, 2022 and 2021, are as follows (Korean won in millions):

<December 31, 2022>

(Korean won in millions)

Classification	Gross amounts of recognized financial assets	Gross amounts of recognized financial liabilities offset	Net amounts of financial assets presented in the consolidated financial statements	Related amounts not off set in the consolidated statement of financial position(*1)		Net amount
				Financial instruments	Cash collateral	
Derivatives	12,482,455	—	12,482,455	(10,329,187)	(1,493,553)	958,292
Derivative-linked securities	298,577	—	298,577			
Securities lending	2,754,223	—	2,754,223	(2,754,223)	—	—
Bonds purchased under resale agreement	12,306,702	—	12,306,702	(12,306,702)	—	—
Unsettled spot exchanges	5,982,300	—	5,982,300	(5,980,820)	—	1,480
Domestic exchange settlement debts	40,695,225	(36,454,614)	4,240,611	—	—	4,240,611
Other accounts receivable (*2)	727,613	(343,889)	383,724	—	—	383,724
Total	75,247,095	(36,798,503)	38,448,592	(31,370,932)	(1,493,553)	5,584,107

<December 31, 2021>

(Korean won in millions)

Classification	Gross amounts of recognized financial assets	Gross amounts of recognized financial liabilities offset	Net amounts of financial assets presented in the consolidated financial statements	Related amounts not off set in the consolidated statement of financial position(*1)		Net amount
				Financial instruments	Cash collateral	
Derivatives	5,280,303	—	5,280,303	(3,856,516)	(238,492)	1,185,295
Securities lending	2,648,033	—	2,648,033	(2,648,033)	—	—
Bonds purchased under resale agreement	11,676,882	—	11,676,882	(11,676,882)	—	—
Unsettled spot exchanges	7,936,381	—	7,936,381	(7,930,650)	—	5,731
Domestic exchange settlement debts	36,861,598	(33,077,374)	3,784,224	—	—	3,784,224
Other accounts receivable(*2)	1,090,665	(428,851)	661,814	—	—	661,814
Total	65,493,862	(33,506,225)	31,987,637	(26,112,081)	(238,492)	5,637,064

(*1) The rights to offset exist only in case of default, insolvency or bankruptcy.

Accordingly, the amounts are not offset in the consolidated statement of financial position as they do not meet the criteria for offsetting.

(*2) It includes accounts receivable on the KRX related to brokerage trading and proprietary trading transactions

8-2 Details of financial liabilities subject to offsetting, enforceable master netting arrangements and similar agreements as of December 31, 2022 and 2021, are as follows (Korean won in millions):

<December 31, 2022>

(Korean won in millions)

Classification	Gross amounts of recognized financial liabilities	Gross amounts of recognized financial assets offset	Net amounts of financial liabilities presented in the consolidated financial statements	Related amounts not off set in the consolidated statement of financial position(*1)		Net amount
				Financial instruments recognized in the consolidated financial statements	Financial collateral	
Derivatives	14,275,835	—	14,275,835	(12,671,751)	(70,522)	2,674,431
Derivatives linked securities sold	1,140,869	—	1,140,869	—	—	—
Bonds sold under	8,346,645	—	8,346,645	(8,346,645)	—	—

Classification	Gross amounts of recognized financial liabilities	Gross amounts of recognized financial assets offset	Net amounts of financial liabilities presented in the consolidated financial statements	Related amounts not off set in the consolidated statement of financial position(*1)		Net amount
				Financial instruments recognized in the consolidated financial statements	Financial collateral	
repurchase agreements						
Unsettled spot exchanges	5,982,363	–	5,982,363	(5,980,880)	–	1,483
Domestic exchange settlement credit	41,967,417	(36,454,614)	5,512,803	–	–	5,512,803
Other accounts payable (*2)	717,547	(343,889)	373,658	–	–	373,658
Securities sold	1,054,974	–	1,054,974	(1,054,974)	–	–
Total	73,485,650	(36,798,503)	36,687,147	(28,054,250)	(70,522)	8,562,375

(*1) The rights to offset exist only in case of default, insolvency or bankruptcy.

Accordingly, the amounts are not offset in the consolidated statement of financial position as they do not meet the criteria for offsetting.

(*2) It includes accounts payable on the KRX related to brokerage trading and proprietary trading transactions

<December 31, 2021>

(Korean won in millions)

Classification	Gross amounts of recognized financial liabilities	Gross amounts of recognized financial assets offset	Net amounts of financial liabilities presented in the consolidated financial statements	Related amounts not off set in the consolidated statement of financial position(*1)		Net amount
				Financial instruments recognized in the consolidated financial statements	Financial collateral	
Derivatives	5,806,970	–	5,806,970	(4,533,548)	(246,815)	1,026,607
Bonds sold under repurchase agreements	8,180,548	–	8,180,548	(8,180,548)	–	–
Unsettled spot exchanges	7,935,821	–	7,935,821	(7,930,656)	–	5,165
Domestic exchange settlement credit	39,250,072	(33,077,374)	6,172,698	(6,172,698)	–	–
Other accounts payable(*2)	1,099,653	(428,851)	670,802	–	–	670,802
Securities sold	882,866	–	882,866	(882,866)	–	–
Total	63,155,930	(33,506,225)	29,649,705	(27,700,316)	(246,815)	1,702,574

(*1) The rights to offset exist only in case of default, insolvency or bankruptcy.

Accordingly, the amounts are not offset in the consolidated statement of financial position as they do not meet the criteria for offsetting.

(*2) It includes accounts payable on the KRX related to brokerage trading and proprietary trading transactions

9. Risk management

The Group is exposed to credit risk, liquidity risk, market risk and operational risk of its financial instruments. Risk management is a basic activity to use the Group's limited capital effectively under the rapidly changing financial circumstances. The ultimate goal of risk management is to maximize the Group's shareholder value with minimizing the sudden fluctuation of its income through a proper balance between risks and returns.

To keep the consistent risk management on a group-level basis, the Group establishes and manages the group risk management policies and each of its subsidiaries also establishes its own risk management systems and policies suitable for the subsidiaries' industry through the risk committees and working-level councils under the group risk management policies. The Group identifies improvements by diagnosing the subsidiaries' risk management performance if necessary, and continuously enforces the subsidiaries' risk management activities to make them reflect the improvements.

The group risk management committee is a top decision-making organization of the group risk management and has responsibilities to establish and monitor risk management strategies and policies, allowable risk limits and investment limits and capital allocation, which are required to be managed on a group-level basis. The subsidiaries' risk management committees (or board of directors) are responsible for its own risk management strategies, policies and monitoring. If necessary, the group risk management committee or group risk management execution committee can apply separate risk management standards considering distinct characteristics of each subsidiary.

9-1 Credit risk

9-1-1 Credit risk management

Credit risk is the risk that the Group will incur a loss because its customers' or counterparties' credit rating goes down or fail to discharge their contractual obligations. Credit risk is the highest risk exposed to the Group. Credit risk arises from on-balance and off-balance accounts including loans, financial guarantees, securities and derivatives. The purpose of managing credit risk is to control the relevant losses upon counterparties' default, for a certain period, within the allowable range.

The Company's group risk management committee and group risk management execution committee examine its credit risk on a regular basis. The Group continuously monitors whether credit limits set for each individual, corporation, borrower, subsidiary and major shareholder are complied and reviews the subsidiaries' asset quality. The Group also checks the status of change of risk exposure, residual limit, profitability, delinquency rate and change of loan loss provision, etc. at least on a quarterly basis.

The Group classifies expected loss and unexpected loss calculating the credit risk. The expected loss is assessed based on estimated LGD. The LGD is calculated by using exposure at default, estimated PD, which is based on a historical default rate, and historical collection rate. The assessed expected loss is reflected on the interest rates on new or rolled over loans and loan loss provision. The unexpected loss, which means a potential volatility between estimate loss and actual loss, is estimated as a credit risk exposure of a portfolio using statistical models. The unexpected loss is used for the Group's internal management purpose.

9-1-2 Degree of exposure to credit risk

The maximum exposure to credit risk as of December 31, 2022 and 2021, is as follows. The following table shows the maximum exposure to credit risk for the items in the consolidated statement of financial position, including derivatives, by geography of counterparty and by industry before the effect of mitigation through the use of master netting and collateral agreements. Equity securities in financial assets measured at FVTPL and financial assets held for trading and financial assets measured at FVOCI are excluded (Korean won in millions):

Classification	December 31, 2022	December 31, 2021
On-consolidated statement of financial position items:		
Due from banks	43,851,198	29,375,449
Financial assets measured at FVTPL		
Debt securities	34,064,189	27,939,273
Derivative assets held for trading	12,633,226	5,288,975
Loans	1,227,865	1,898,878
Others	1,383,000	1,983,924
Subtotal	49,308,280	37,111,050
Financial assets measured at FVOCI	36,279,274	38,385,390
Securities measured at amortized cost	38,928,911	23,769,017
Derivative assets used for hedging	32,312	77,507
Loans measured at amortized cost	361,484,896	337,349,273
Merchant banking account asset	4,631,361	4,741,939
Others	14,615,387	14,924,144
Total	549,131,619	485,733,769
Off-consolidated statement of financial position items:		
Financial guarantee contracts	1,313,320	1,451,843
Guarantee contracts	20,566,305	16,433,918
Commitment	133,138,270	118,472,476
Commitment to merchant banking account	620,000	790,000

Classification	December 31, 2022	December 31, 2021
Total	155,637,895	137,148,237

9-1-3 Collateral management and credit risk mitigation

Details of collateral management and credit risk mitigation as of December 31, 2022 and 2021, are as follows (Korean won in millions):

<December 31, 2022>

(Korean won in millions)

Classification	Impaired loan		Total
	Individual assessment	Collective assessment	
Guarantees	13,949	178,192	192,141
Deposit	92	11,936	12,028
Real estate	191,261	226,932	418,193
Movables and others	8,694	6,022	14,716
Total	213,996	423,082	637,078

<December 31, 2021>

(Korean won in millions)

Classification	Impaired loan		Total
	Individual assessment	Collective assessment	
Guarantees	12,936	106,383	119,319
Deposit	90	10,593	10,683
Real estate	206,468	193,442	399,910
Securities	—	58	58
Movables and others	25,630	3,963	29,593
Total	245,124	314,439	559,563

9-1-3-1 As of December 31, 2022 and 2021, financial assets that have collateral and do not recognize a loss allowance are ₩1,302,377 million and ₩455,162 million, respectively.

9-1-4 Credit risk exposure

9-1-4-1 Loans

As of December 31, 2022 and 2021, carrying amounts of debt securities by internal credit rating in accordance with the loss allowance measurement method are as follows (Korean won in millions):

<December 31, 2022>

(Korean won in millions)

Classification	12-month ECL	Lifetime ECL		Subject to the application of credit-impaired approach(*1)	Total
		Non credit-impaired loan	Credit-impaired loans		
Household loans					
Grade 1	104,736,860	18,497,592	–	–	123,234,452
Grade 2	8,356,443	6,312,502	–	–	14,668,945
Grade 3	181,229	284,158	453,355	–	918,742
Unrated (*2)	1,841,522	1,045	1,751	–	1,844,318
Subtotal	115,116,054	25,095,297	455,106	–	140,666,457
Corporate loans					
Grade 1	130,040,890	3,297,413	–	–	133,338,303
Grade 2	63,409,668	11,109,167	3,258	–	74,522,093
Grade 3	386,230	3,405,512	769,750	968,506	5,529,998
Unrated (*2)	178,287	14,000	–	–	192,287
Subtotal	194,015,075	17,826,092	773,008	968,506	213,582,681
Credit card loans					
Grade 1	4,076,150	94,698	–	–	4,170,848
Grade 2	4,474,393	382,703	–	–	4,857,096
Grade 3	7,731	72,966	155,329	–	236,026
Subtotal	8,558,274	550,367	155,329	–	9,263,970
Total	317,689,403	43,471,756	1,383,443	968,506	363,513,108

(*1) The Group applies the credit-impaired approach to the underlying assets subject to securitization (purchased NPL assets).

(*2) The amounts of items that are internally unrated

<December 31, 2021>

(Korean won in millions)

Classification	12-month ECL	Lifetime ECL		Subject to the application of credit-impaired approach (*1)	Total
		Non credit-impaired loan	Credit-impaired loans		
Household loans					
Grade 1	105,546,439	19,132,518	—	—	124,678,957
Grade 2	8,603,470	5,547,758	—	—	14,151,228
Grade 3	94,255	141,541	355,748	—	591,544
Unrated (*2)	2,354,909	700	5,931	—	2,361,540
Subtotal	116,599,073	24,822,517	361,679	—	141,783,269
Corporate loans					
Grade 1	113,400,972	2,694,780	—	—	116,095,752
Grade 2	58,317,326	9,959,224	—	—	68,276,550
Grade 3	240,056	2,131,950	683,009	1,369,499	4,424,514
Unrated (*2)	256,190	10,000	—	—	266,190
Subtotal	172,214,544	14,795,954	683,009	1,369,499	189,063,006
Credit card loans					
Grade 1	3,362,392	93,494	—	—	3,455,886
Grade 2	3,988,964	383,003	—	—	4,371,967
Grade 3	3,049	43,528	127,519	—	174,096
Subtotal	7,354,405	520,025	127,519	—	8,001,949
Total	296,168,022	40,138,496	1,172,207	1,369,499	338,848,224

(*1) The Group applies the credit-impaired approach to the underlying assets subject to securitization (purchased NPL assets).

(*2) The amounts of items that are internally unrated

The above book amount does not reflect the loan origination deferred asset, provision for loss and present value discount.

The credit rating classification of the loans for the years ended December 31, 2022 and 2021, is as follows:

<December 31, 2022>

Classification	Household loans	Corporate loans	Small office home office ("SOHO")
Grade 1	Less or equal to 0.49% of PD	Less or equal to 0.58% of PD	Less or equal to 2.85% of PD

Classification	Household loans	Corporate loans	Small office home office ("SOHO")
Grade 2	From 0.49% to 24.93% of PD	From 0.58% to 12.83% of PD	From 2.85% to 27.43% of PD
Grade 3	From 24.93% to 100% of PD	From 12.83% to 100% of PD	From 27.43% to 100% of PD

<December 31, 2021>

Classification	Household loans	Corporate loans	SOHO
Grade 1	Less or equal to 0.58% of PD	Less or equal to 0.51% of PD	Less or equal to 2.56% of PD
Grade 2	From 0.58% to 30.72% of PD	From 0.51% to 10.99% of PD	From 2.56% to 25.64% of PD
Grade 3	From 30.72% to 100% of PD	From 10.99% to 100% of PD	From 25.64% to 100% of PD

9-1-4-2 Off-consolidated statement of financial position items

As of December 31, 2022 and 2021, exposures of off-balance-sheet items by internal credit rating in accordance with the loss allowance measurement method are as follows (Korean won in millions):

<December 31, 2022>

(Korean won in millions)

Classification	12 month expected credit loss	Lifetime expected credit losses		Total
		Non credit-impaired loans	Credit-impaired loans	
Financial guarantee contracts				
Grade 1	1,138,318	60,616	–	1,198,934
Grade 2	78,156	22,248	–	100,404
Grade 3	8,908	5,070	4	13,982
Subtotal	1,225,382	87,934	4	1,313,320
Guarantee contracts				
Grade 1	16,243,568	579,746	–	16,823,314
Grade 2	2,956,691	404,440	–	3,361,131
Grade 3	9	359,681	22,170	381,860
Subtotal	19,200,268	1,343,867	22,170	20,566,305
Commitment				

Classification	12 month expected credit loss	Lifetime expected credit losses		Total
		Non credit-impaired loans	Credit-impaired loans	
Grade 1	108,746,430	5,434,384	–	114,180,814
Grade 2	15,752,227	2,764,895	–	18,517,122
Grade 3	6,163	286,665	39,600	332,428
Unrated	107,906	–	–	107,906
Subtotal	124,612,726	8,485,944	39,600	133,138,270
Total	145,038,376	9,917,745	61,774	155,017,895

<December 31, 2021>

(Korean won in millions)

Classification	12 month expected credit loss	Lifetime expected credit losses		Total
		Non credit-impaired loans	Credit-impaired loans	
Financial guarantee ontracts				
Grade 1	1,218,378	55,091	–	1,273,469
Grade 2	147,773	26,447	–	174,220
Grade 3	–	4,150	4	4,154
Subtotal	1,366,151	85,688	4	1,451,843
Guarantee contracts				
Grade 1	11,705,587	1,075,730	–	12,781,317
Grade 2	2,740,338	588,344	–	3,328,682
Grade 3	8	297,838	26,073	323,919
Subtotal	14,445,933	1,961,912	26,073	16,433,918
Commitment				
Grade 1	96,936,886	5,210,937	–	102,147,823
Grade 2	12,650,113	3,169,877	–	15,819,990
Grade 3	8,622	304,186	32,681	345,489
Unrated	159,174	–	–	159,174
Subtotal	109,754,795	8,685,000	32,681	118,472,476
Total	125,566,879	10,732,600	58,758	136,358,237

The credit rating classification of the off-Off-consolidated statement of financial position items as of December 31, 2022 and 2021, is as follows:

<December 31, 2022>

Classification	Household loans	Corporate loans	SOHO
	Less or equal to	Less or equal to	Less or equal to

Classification	Household loans	Corporate loans	SOHO
Grade 1	0.49% of PD	0.58% of PD	2.85% of PD
Grade 2	From 0.49% to 24.93% of PD	From 0.58% to 12.83% of PD	From 2.85% to 27.43% of PD
Grade 3	From 24.93% to 100% of PD	From 12.83% to 100% of PD	From 27.43% to 100% of PD

<December 31, 2021>

Classification	Household loans	Corporate loans	SOHO
Grade 1	Less or equal to 0.58% of PD	Less or equal to 0.51% of PD	Less or equal to 2.56% of PD
Grade 2	From 0.58% to 30.72% of PD	From 0.51% to 10.99% of PD	From 2.56% to 25.64% of PD
Grade 3	From 30.72% to 100% of PD	From 10.99% to 100% of PD	From 25.64% to 100% of PD

9-1-5 Internal credit rating of debt securities

9-1-5-1 As of December 31, 2022 and 2021, the carrying amounts of debt securities by internal credit rating in accordance with the loss allowance measurement method are as follows (Korean won in millions):

<December 31, 2022>

(Korean won in millions)

Classification	12 month expected credit loss	Lifetime expected credit losses		Total
		Non credit-impaired loans	Credit-impaired loans	
Financial assets measured at FVOCI				
Grade 1	36,264,534	–	–	36,264,534
Grade 2	14,740	–	–	14,740
Subtotal	36,279,274	–	–	36,279,274
Financial assets measured at amortized cost				
Grade 1	38,848,534	–	–	38,848,534
Grade 2	71,783	–	–	71,783
Grade 3	–	24,507	67,336	91,843
Subtotal	38,920,317	24,507	67,336	39,012,160

Classification	12 month expected credit loss	Lifetime expected credit losses		Total
		Non credit-impaired loans	Credit-impaired loans	
Total	75,199,591	24,507	67,336	75,291,434

<December 31, 2021>

(Korean won in millions)

Classification	12 month expected credit loss	Lifetime expected credit losses		Total
		Non credit-impaired loans	Credit-impaired loans	
Financial assets measured at FVOCI				
Grade 1	38,385,390	–	–	38,385,390
Subtotal	38,385,390	–	–	38,385,390
Financial assets measured at amortized cost				
Grade 1	23,618,738	–	–	23,618,738
Grade 2	76,096	68,827	–	144,923
Grade 3	–	25,113	–	25,113
Subtotal	23,694,834	93,940	–	23,788,774
Total	62,080,224	93,940	–	62,174,164

The credit ratings of debt securities based on the internal rating used by Hana Bank and credit ratings by external credit rating agencies are as follows:

Classification	Internal credit rating (Corporate)	Domestic rating agencies	Overseas rating agencies	
			Moody's	Fitch
Grade 1	A1 – A7	AAA – BBB	Aaa – Ba2	AAA – BB
Grade 2	B1 – B6	BBB– – BB–	Ba3 – B3	BB– – B–
Grade 3	C1 – C3	B+ – CCC	Caa1 – C	CCC+ – C

9-1-6 Credit risk concentration

9-1-6-1 Credit risk concentration in each major industry as of December 31, 2022 and 2021, is as follows (Korean won in millions):

Classification	Industry	December 31, 2022		December 31, 2021	
		Amounts	Ratio(%)	Amounts	Ratio(%)
On-consolidated statement					

Classification	Industry	December 31, 2022		December 31, 2021	
		Amounts	Ratio(%)	Amounts	Ratio(%)
of financial position items					
Due from banks	Financial services	43,851,198	100.0	29,375,449	100.0
Financial assets measured at FVTPL	Financial services	32,035,757	65.0	22,855,396	61.6
	Manufacturing	2,669,343	5.4	2,315,583	6.2
	Public administration	6,970,203	14.1	3,705,198	10.0
	Construction	175,720	0.4	8,829	–
	Wholesale and retail	341,340	0.7	214,002	0.6
	Others	7,115,917	14.4	8,012,042	21.6
	Subtotal	49,308,280	100.0	37,111,050	100.0
Financial assets measured at FVOCI	Financial services	17,492,958	48.2	19,322,185	50.3
	Manufacturing	264,703	0.7	273,971	0.7
	Public administration	15,010,857	41.4	14,754,866	38.4
	Construction	66,962	0.2	337,319	0.9
	Wholesale and retail	126,301	0.3	133,056	0.3
	Others	3,317,493	9.2	3,563,993	9.4
	Subtotal	36,279,274	100.0	38,385,390	100.0
Securities measured at amortized cost	Financial services	19,546,733	50.2	9,904,454	41.7
	Manufacturing	248,479	0.6	84,749	0.4
	Public administration	10,464,619	26.9	7,987,248	33.6
	Construction	83,495	0.2	204,833	0.9
	Others	8,668,834	22.3	5,607,490	23.5
	Subtotal	39,012,160	100.2	23,788,774	100.1
	Allowance for credit loss	(83,249)	(0.2)	(19,757)	(0.1)
	Total	38,928,911	100.0	23,769,017	100.0
Derivative assets used for hedging	Financial services	32,312	100.0	77,507	100.0
Loans measured at amortized cost	Household loans	140,666,457	38.9	141,783,269	42.0
	Credit card loans	9,263,970	2.6	8,001,949	2.4
	Corporate loans				
	Manufacturing	51,878,007	14.4	44,901,226	13.3
	Construction	5,851,966	1.6	4,104,014	1.2
	Wholesale and retail	24,367,647	6.7	22,244,449	6.6
	Financial services	25,826,786	7.1	22,848,839	6.8
	Real estate rental	46,934,536	13.0	44,839,185	13.3
	Others	58,723,739	16.3	50,125,293	14.8
	Subtotal	363,513,108	100.6	338,848,224	100.4
	Deferred loan fees	410,522	0.1	420,682	0.1
	Present value discount	(18,866)	–	(5,231)	–
	Expected credit loss allowance	(2,419,868)	(0.7)	(1,914,402)	(0.5)
	Subtotal	(2,028,212)	(0.6)	(1,498,951)	(0.4)

Classification	Industry	December 31, 2022		December 31, 2021	
		Amounts	Ratio(%)	Amounts	Ratio(%)
	Total	361,585,610	100.0	337,349,273	100.0
Merchant banking account	Financial services	817,368	17.6	668,878	14.1
	Manufacturing	—	—	49,827	1.1
	Wholesale and retail	—	—	119,976	2.5
	Real estate rental	1,007,544	21.8	1,208,226	25.5
	Others	2,806,449	60.6	2,695,032	56.8
	Subtotal	4,631,361	100.0	4,741,939	100.0
Total		534,516,232		470,809,625	
Off-consolidated statement of financial position items					
Financial guarantee contracts	Manufacturing	219,522	16.7	170,742	11.8
	Construction	6,643	0.5	4,083	0.3
	Wholesale and retail	58,813	4.5	48,765	3.4
	Financial services	695,034	52.9	652,535	44.9
	Real estate rental	54,214	4.1	138,890	9.6
	Others	279,094	21.3	436,828	30.0
	Subtotal	1,313,320	100.0	1,451,843	100.0
Guarantee contracts	Household loans	353,026	1.7	19,369	0.1
	Manufacturing	11,165,598	54.3	9,410,325	57.3
	Construction	1,600,908	7.8	1,602,680	9.8
	Wholesale and retail	3,664,550	17.8	3,264,298	19.9
	Financial services	2,154,942	10.5	802,350	4.9
	Real estate rental	168,777	0.8	149,210	0.9
	Others	1,458,504	7.1	1,185,686	7.1
	Subtotal	20,566,305	100.0	16,433,918	100.0
Commitment	Household loans	56,430,947	42.4	51,108,539	43.1
	Manufacturing	30,606,423	23.0	27,245,050	23.0
	Construction	2,269,858	1.7	2,542,532	2.1
	Wholesale and retail	9,994,085	7.5	8,613,975	7.3
	Financial services	9,839,807	7.4	8,602,102	7.3
	Real estate rental	4,692,251	3.5	4,142,299	3.5
	Others	19,304,899	14.5	16,217,979	13.7
	Subtotal	133,138,270	100.0	118,472,476	100.0
Merchant banking account	Financial services	310,000	50.0	460,000	58.2
	Manufacturing	50,000	8.1	50,000	6.3
	Wholesale and retail	110,000	17.7	130,000	16.5
	Real estate rental	100,000	16.1	100,000	12.7
	Others	50,000	8.1	50,000	6.3
	Subtotal	620,000	100.0	790,000	100.0
Total		155,637,895		137,148,237	

9-1-6-2 Credit risk concentration in each country as of December 31, 2022 and 2021, is as follows (Korean won in millions):

Classification	Country	December 31, 2022		December 31, 2021	
		Amounts	Ratio(%)	Amounts	Ratio(%)
On-consolidated statement of financial position items					
Due from banks	Korea	29,198,285	66.6	21,769,253	74.1
	United States	7,384,384	16.8	619,767	2.1
	China	1,203,980	2.7	1,133,907	3.9
	Japan	1,006,988	2.3	1,844,472	6.3
	Singapore	96,289	0.2	246,342	0.8
	Hong Kong	165,821	0.4	123,637	0.4
	United Kingdom	67,588	0.2	54,880	0.2
	Others	4,727,863	10.8	3,583,191	12.2
	Subtotal	43,851,198	100.0	29,375,449	100.0
Financial assets measured at FVTPL (*)	Korea	42,963,001	87.1	32,172,436	86.7
	United States	1,755,529	3.6	2,164,344	5.8
	China	679,035	1.4	14,802	—
	Japan	87,217	0.2	152,774	0.4
	Singapore	13,404	—	36,475	0.1
	Hong Kong	73,318	0.1	42,795	0.1
	United Kingdom	276,302	0.6	251,772	0.7
	Others	3,460,474	7.0	2,275,652	6.2
	Subtotal	49,308,280	100.0	37,111,050	100.0
Financial assets measured at FVOCI	Korea	31,369,891	86.5	33,079,714	86.2
	United States	861,451	2.4	596,427	1.6
	China	1,977,918	5.5	2,195,189	5.7
	Japan	—	—	13,460	—
	Hong Kong	79,518	0.2	103,977	0.3
	Australia	—	—	35,249	0.1
	France	55,351	0.2	56,571	0.1
	Others	1,935,145	5.2	2,304,803	6.0
	Subtotal	36,279,274	100.0	38,385,390	100.0
Securities measured at amortized cost	Korea	36,380,281	93.5	21,614,683	90.9
	United States	90,775	0.2	540,728	2.3
	China	128,242	0.3	131,144	0.6
	Others	2,412,863	6.2	1,502,220	6.3
	Subtotal	39,012,161	100.2	23,788,775	100.1
	Allowance for credit loss	(83,250)	(0.2)	(19,758)	(0.1)
	Total	38,928,911	100.0	23,769,017	100.0
	Korea	32,312	100.0	20,590	26.6
	United States	—	—	86	0.1

Classification	Country	December 31, 2022		December 31, 2021	
		Amounts	Ratio(%)	Amounts	Ratio(%)
Derivative assets used for hedging	Hong Kong	–	–	2,177	2.8
	United Kingdom	–	–	273	0.4
	Others	–	–	54,381	70.1
	Subtotal	32,312	100.0	77,507	100.0
Loans measured at amortized cost	Korea	332,675,461	92.0	311,205,550	92.3
	United States	4,748,966	1.3	4,263,906	1.3
	China	6,051,565	1.7	6,107,149	1.8
	Japan	1,855,875	0.5	1,840,661	0.5
	Hong Kong	2,545,485	0.7	2,359,165	0.7
	Others	15,635,756	4.4	13,071,793	3.8
	Subtotal	363,513,108	100.6	338,848,224	100.4
	Deferred loan fees and expenses	410,522	0.1	420,682	0.1
	Present value discount	(18,866)	–	(5,231)	–
	Expected credit loss allowance	(2,419,868)	(0.7)	(1,914,402)	(0.5)
	Subtotal	(2,028,212)	(0.6)	(1,498,951)	(0.4)
	Total	361,484,896	100.0	337,349,273	100.0
Merchant banking accounts assets	Korea	4,631,361	100.0	4,741,939	100.0
Total		534,516,232		470,809,625	
Off-consolidated statement of financial position items					
Financial guarantees	Korea	1,313,320	100.0	1,451,843	100.0
Guarantee contracts	Korea	15,171,807	73.8	13,097,487	79.7
	United States	213,716	1.0	26,714	0.2
	China	1,831,845	8.9	1,822,912	11.1
	Japan	23,331	0.1	29,602	0.2
	Others	3,325,606	16.2	1,457,203	8.8
	Subtotal	20,566,305	100.0	16,433,918	100.0
Commitment	Korea	128,228,602	96.3	114,407,903	96.6
	United States	682,571	0.5	293,350	0.2
	China	783,536	0.6	623,483	0.5
	Japan	199,854	0.2	272,926	0.2
	Others	3,243,707	2.4	2,874,814	2.5
	Subtotal	133,138,270	100.0	118,472,476	100.0
Merchant banking accounts	Korea	620,000	100.0	790,000	100.0
Total		155,637,895		137,148,237	

9-1-7 Details of the Group's corporate loans by industry affected by the spread of COVID-19 as of December 31, 2022 and 2021, are as follows.

The effect on the industries may vary significantly based on future economic conditions. Household loan debtors subject to measurement of lifetime ECL as disclosed in Note 9-1-4-1, may be impacted by the spread of COVID-19, The effect may change depending on future economic conditions

(Korean won in millions):

<December 31, 2022>

(Korean won in millions)

Industry	Financial assets at FVTPL	Financial assets at FVOCI	Securities measured at amortized cost	Loans at amortized cost	Merchant banking account assets	Off-consolidated statement of financial position items	Total
Air transportation	134,278	–	–	581,155	–	442,132	1,157,565
Water transportation	–	–	–	–	118,889	–	118,889
Lodging	480,714	–	–	3,253,722	–	219,923	3,954,359
Food	3,692	–	–	5,749,221	–	227,043	5,979,956
Automobile	191,334	9,515	14,222	6,520,246	–	5,147,485	11,882,802
Petroleum refining	332,596	9,268	–	1,632,294	–	2,633,508	4,607,666
Travel	258	–	–	216,039	–	50,561	266,858
Total	1,142,872	18,783	14,222	17,952,677	118,889	8,720,652	27,968,095

<December 31, 2021>

(Korean won in millions)

Industry	Financial assets at FVTPL	Financial assets at FVOCI	Securities measured at amortized cost	Loans at amortized cost	Off-consolidated statement of financial position items	Total
Air transportation	118,276	–	–	559,471	290,076	967,823
Lodging	377,220	–	–	3,235,904	406,478	4,019,602
Food	4,302	–	–	5,276,673	209,605	5,490,580
Automobile	429,609	9,849	13,379	6,587,129	5,060,751	12,100,717
Petroleum refining	181,251	9,728	–	819,014	2,424,649	3,434,642
Travel	301	–	–	172,308	60,374	232,983
Total	1,110,959	19,577	13,379	16,650,499	8,451,933	26,246,347

9-2 Liquidity risk

9-2-1 Liquidity risk management

Liquidity risk is defined as the risk that the Group will encounter difficulty in meeting obligations associated with financial liabilities. The purpose to manage liquidity risk is to early identify the potential risk factors upon raising and operating the Group's funds and to obtain a stable revenue base through maintaining an appropriate level of the Group's liquidity by systematically managing the risk. The targets of liquidity risk management are all assets and liabilities outstanding in the Group's consolidated statements of financial position.

The Group's principles regarding liquidity risk management are as follows:

- Set up and comply with tolerable limits to liquidity risk
- Maintain liquidity by regularly forecasting cash requirements on a regular basis

Each associate assesses and manages liquidity coverage ratios and liquidity ratio of the relevant assets and liabilities by applying the relevant supervisory regulations. The Group manages an acceptable limit on each associate's liquidity risk through the group risk management executive committee and performs liquidity stress test periodically and establishes a contingent funding plan based on the test results to be prepared for liquidity crisis.

9-2-2 Maturity of financial instruments analysis

9-2-2-1 Reporting standard

Details of the remaining contractual maturities of financial liabilities are analyzed by the earliest maturity date when the Group would be required to pay, based on the undiscounted cash outflows of the Group's financial liabilities. In addition, financial liabilities at FVTPL and depository liabilities (payment on demand) are shown at fair value in the immediate payment column.

9-2-2-2 Remaining maturity of the financial liabilities

The table below summarizes the maturity profile of the contractual undiscounted cash flows of the Group's financial liabilities. The remaining maturity of financial liabilities as of December 31, 2022 and 2021, is summarized as follows
(Korean won in millions):

<December 31, 2022>

(Korean won in millions)

Classification	On demand	Within 1 month	After 1 month ~ but no later than 3 months	After 3 months ~ but no later than 1 year	After 1 year ~ but no later than 5 years	After 5 years	Total
On-consolidated statement of financial position accounts:							
Financial liabilities measured at FVTPL	15,303,050	-	-	-	-	-	15,303,050
Financial liabilities designated as measured at FVTPL	6,480	558,267	1,818,812	3,307,693	4,740,720	2,395,703	12,827,675
Deposits	157,708,593	35,030,107	41,387,865	115,996,872	17,202,553	1,473,265	368,799,255
Borrowings	5,488,091	12,201,635	4,740,635	7,877,506	6,734,267	518,789	37,560,923
Debentures	139	3,466,112	5,991,676	18,431,443	26,540,659	4,219,764	58,649,793
Derivative liabilities used for hedging	-	11,322	3,591	33,937	41,224	(20,827)	69,247
Merchant banking account liabilities	1,122,469	2,544,804	-	-	-	-	3,667,273
Others	10,671,444	17,771,177	118,392	160,356	763,338	42,070	29,526,777
Total	190,300,266	71,583,424	54,060,971	145,807,807	56,022,761	8,628,764	526,403,993
Off-consolidated statement of financial position accounts:							
Financial guarantee contracts	1,313,320	-	-	-	-	-	1,313,320
Acceptances and guarantees	20,566,305	-	-	-	-	-	20,566,305
Commitment	133,138,270	-	-	-	-	-	133,138,270
Commitment to merchant banking account	620,000	-	-	-	-	-	620,000
Total	155,637,895	-	-	-	-	-	155,637,895

<December 31, 2021>

(Korean won in millions)

Classification	On demand	Within 1 month	After 1 month ~ but no later than 3 months	After 3 months ~ but no later than 1 year	After 1 year ~ but no later than 5 years	After 5 years	Total
On-consolidated statement of financial position accounts:							
Financial liabilities measured at FVTPL	6,772,300	–	–	–	–	–	6,772,300
Financial liabilities designated as measured at FVTPL	–	128,507	113,122	1,950,260	4,044,713	2,944,657	9,181,259
Deposits	168,885,302	20,824,748	32,642,988	93,004,427	9,739,702	2,084,058	327,181,225
Borrowings	5,530,618	10,622,547	3,157,158	6,672,462	3,917,418	449,091	30,349,294
Debentures	12,741	2,946,602	3,719,445	14,694,412	29,100,506	5,160,244	55,633,950
Derivative liabilities used for hedging	–	1,889	1,728	7,312	43,457	(88,970)	(34,584)
Merchant banking account liabilities	895,438	2,012,842	–	–	–	–	2,908,280
Others	7,040,521	19,106,583	121,314	336,510	794,470	307,694	27,707,092
Total	189,136,920	55,643,718	39,755,755	116,665,383	47,640,266	10,856,774	459,698,816
Off-consolidated statement of financial position accounts:							
Financial guarantee contracts	1,451,843	–	–	–	–	–	1,451,843
Acceptances and guarantees	16,433,918	–	–	–	–	–	16,433,918
Commitment	118,472,476	–	–	–	–	–	118,472,476
Commitment to merchant banking account	790,000	–	–	–	–	–	790,000
Total	137,148,237	–	–	–	–	–	137,148,237

Derivative liabilities used for hedging are denominated based on the net cash flow. Available assets that exist in redeeming financial liabilities and unused loan commitments are cash and due from banks, debt securities, equity securities, loans, etc. In addition, the Group is able to cope with unexpected cash flows through the sale of securities and additional sources of funding, similar to asset-backed securitization.

9-3 Market risk

Market risk is the risk that the fair value or future cash flows of financial instruments will fluctuate due to the changes in market variables, such as interest rates, equity prices and exchange ratios in the market.

The purpose of market risk management is to maintain the loss of assets and liabilities incurred due to changes in market variables, such as interest rates, foreign exchanges and equity ,prices within the allowable limits in order to ensure profitability and stability. Market risk management targets include securities held for trading, foreign currency net positions, derivatives and other assets and liabilities with embedded market risks. Significant risks exposed to the Group as of the reporting date are interest rate risk, foreign exchange risk and equity price risk.

For market risk management, the Group measures and monitors the relevant risk exposures on a regular basis. The Group also establishes and complies with market risk limits, whereby it can manage the exposures arising from changes of market variables within an adequate level. The subsidiaries exposed to market risks, such as Hana Bank and Hana Securities, set up and operate their own market risk management system. The Group-level market risk exposures are consistently calculated through the Group-integrated risk management system.

The Group reports its current status of market risk management to the group risk management execution committee and group risk management committee on a monthly and quarterly basis.

9-3-1 Trading position

The trading positions include positions of interest rate, equity price, commodity and foreign exchange held for trading purpose. To be more specific, the trading positions include financial instruments for the purpose of acquiring the

differences incurred due to short-term trading or price fluctuations, financial instruments for the purpose of hedging risks, financial instruments for the purpose of acquiring arbitrages, financial instruments for the purpose of acquisition, brokerage and market-making.

The Group's principles to manage the market risk of its trading positions are to measure its market risk status on a regular basis and to establish and comply with the various market risk limits. The Group analyzes whether the return against risk are appropriate by reviewing its profit and risk on a regular basis

9-3-1-1 Value at Risk ("VaR")

VaR is a primary method that manages and measures the degree of market risks of the trading portfolio subject to exposure, which estimates the potential loss of the trading portfolio that is not expected to be exceeded if the current market risk positions were to be held unchanged for one day. The Group calculates the VaR for a standard 10 days in the 99% confidence level. In addition, to account for the method's limited use, stress tests are performed in order to measure the extent of the loss in extreme cases.

9-3-1-2 Risk types of VaR

Risk types of VaR as of December 31, 2022 and 2021, are summarized as follows (Korean won in millions):

Classification	December 31, 2022	Average	Minimum	Maximum	December 31, 2021
Interest rates risk	121,787	91,389	47,140	214,468	64,980
Foreign exchange rates risk	468,262	404,949	301,090	638,195	406,435
Stock price risk	50,283	34,004	6,144	67,153	39,554
Total risk(*)	584,101	437,304	341,684	674,819	408,720

(*) The calculation of the total risk VaR takes into consideration the correlation and diversification effects between each risk factor and therefore, is not the same as the arithmetic additions of all the VaRs.

9-3-2 Non-trading position

9-3-2-1 Interest rate risk

Interest rate risk of non-trading position is a risk of losses on financial assets and liabilities with interest rates due to adverse changes in interest rates and is incurred when maturity structure does not match interest rate setting cycle of the related assets and liabilities. The Group measures interest rate risk on interest rate-bearing assets, such as loans, due from banks and debt securities; interest rate liabilities, such as deposits, borrowings and debentures; and interest rate-sensitive derivatives, such as interest rate swaps for each subsidiary. The Group manages interest rate risks in order to maintain the stability of net interest income and net asset value.

Interest rate risk establishes limits and monitors interest rate economic value of equity ("interest rate EVE") according to interest rate risk in the banking book ("IRRBB") methodology. Interest rate EVE means the maximum decrease in net asset value when interest rate changes, and details of changes in EVE as of December 31, 2022 and 2021, are as follows (Korean won in millions):

Classification	December 31, 2022	December 31, 2021
Changes in EVE	1,655,929	411,681

9-3-2-2 Details of of the financial instruments that have not been converted to an alternative indicator interest rate as of December 31, 2022 and 2021, are as follows (Korean won in millions):

<December 31, 2022>

(Korean won in millions)

Classification	Non-derivative financial assets(*1)			Non-derivative financial liabilities(*1)		Derivatives(*2)	Commitments and finance guarantee contracts (*2)
	Financial assets measured at FVOCI	Financial assets measured at amortized costs	Total	Financial liabilities measured at amortized costs	Total		
USD London Interbank Offered Rate ("LIBOR")	32,245	5,236,730	5,268,975	1,393,822	1,393,822	72,946,982	40,438

(*1) The amount of non-derivative financial instruments is based on the book value

(*2) The amount of derivatives is based on the nominal amount.

(*3) For financial instruments related to USD-LIBOR, those with maturities before June 30, 2023, are excluded.

<December 31, 2021>

(Korean won in millions)

Classification	Non-derivative financial assets(*1)			Non-derivative financial liabilities(*1)		Derivatives(*2)	Commitments and finance guarantee contracts (*2)
	Financial assets measured at FVOCI	Financial assets measured at amortized costs	Total	Financial liabilities measured at amortized costs	Total		
USD LIBOR	48,425	5,595,621	5,644,046	1,319,972	1,319,972	58,912,456	631,126

(*1) The amount of non-derivative financial instruments is based on the book value

(*2) The amount of derivatives is based on the nominal amount.

(*3) For financial instruments related to USD-LIBOR, those with maturities before June 30, 2023, are excluded.

9-3-2-3 Stock price risk

Stock price risk is the risk that the fair value of equities results in changes in the level of related revenue and capital. Effects on capital due to fluctuations in stock price risk as of December 31, 2022 and 2021, are as follows

(Korean won in millions):

<December 31, 2022>

(Korean won in millions)

Classification	20% decline	10% decline	10% rise	20% rise
Stock price risk	(52,211)	(26,106)	26,106	52,211

<December 31, 2021>

(Korean won in millions)

Classification	20% decline	10% decline	10% rise	20% rise
Stock price risk	(98,040)	(49,020)	49,020	98,040

The Group measures the stock price risk on the domestic listed equity securities only.

9-3-3 Currency risk concentration

Currency risk is a risk incurred when the value of a financial instrument or future cash flows fluctuates due to the changes in foreign exchange rates. Currency risk arises from the financial instruments expressed in currencies other than the functional currency. Currency risk does not arise from the financial instruments expressed in the functional currency, measured based on historical currency, or in non-monetary items measured by using the historical foreign exchange rates. The Group manages the foreign exchange net exposure amount of the trading and non-trading positions by each currency.

Significant foreign currency assets and liabilities denominated in Korean won as of December 31, 2022 and 2021, are as follows (Korean won in millions):

<December 31, 2022>

Classification	USD	JPY	EUR	CNY	IDR	Others	Total
Assets							
Cash and due from bank	19,672,287	1,354,473	1,283,069	1,064,480	313,517	1,137,302	24,825,128
Financial assets measured at FVTPL	5,454,613	389,502	656,328	93,358	10,254	436,544	7,040,599
Financial assets measured at FVOCI	2,584,584	–	–	1,975,363	295,867	1,292,405	6,148,219
Securities measured at amortized cost	1,880,750	–	165,033	58,488	160,655	1,644,946	3,909,872
Loans measured at amortized cost	26,134,296	1,751,839	4,648,700	6,873,532	1,439,045	4,934,226	45,781,638
Derivative assets used for hedging	20,459	–	193	–	–	–	20,652
Others	3,367,759	176,096	351,893	333,968	49,282	523,602	4,802,600
Total	59,114,748	3,671,910	7,105,216	10,399,189	2,268,620	9,969,025	92,528,708
Liabilities							
Financial liabilities measured at FVTPL	2,784,580	294,180	136,457	17,268	–	222,586	3,455,071
Financial liabilities designated as measured at FVTPL	1,969,910	385	9,430	–	–	9,091	1,988,816
Deposits	42,152,397	2,732,463	5,044,365	8,645,503	1,386,024	4,936,062	64,896,814
Borrowings	10,525,246	136,405	1,036,917	383,820	43,523	1,088,758	13,214,669
Debentures	5,281,339	–	827,921	336,151	19,709	239,891	6,705,011
Derivative liabilities used for hedging	246,333	–	9,044	–	–	–	255,377
Others	6,192,605	217,709	681,816	501,470	38,205	323,356	7,955,161
Total	69,152,410	3,381,142	7,745,950	9,884,212	1,487,461	6,819,744	98,470,919

<December 31, 2021>

Classification	USD	JPY	EUR	CNY	IDR	Others	Total
Assets							
Cash and due from bank	9,387,554	1,973,385	554,962	781,113	206,986	1,006,320	13,910,320
Financial assets measured at FVTPL	3,992,312	151,116	834,640	115,512	122,071	321,327	5,536,978
Financial assets measured at FVOCI	2,852,585	–	–	2,193,679	282,334	1,430,360	6,758,958
Securities measured at amortized cost	1,625,260	–	104,411	119,932	199,405	1,195,406	3,244,414
Loans measured at amortized cost	23,921,730	1,906,806	4,009,683	6,853,211	1,449,769	4,067,343	42,208,542
Derivative assets used for hedging	57,747	–	–	–	–	–	57,747
Others	3,795,944	234,531	443,485	139,047	49,171	514,839	5,177,017
Total	45,633,132	4,265,838	5,947,181	10,202,494	2,309,736	8,535,595	76,893,976
Liabilities							
Financial liabilities measured at FVTPL	926,610	20,327	76,237	3,332	1,252	159,470	1,187,228
Financial liabilities designated as measured at FVTPL	2,312,957	–	13,685	–	–	6,904	2,333,546
Deposits	31,150,254	2,332,032	4,068,677	7,667,956	1,396,788	4,907,220	51,522,927
Borrowings	6,404,445	128,189	1,283,632	435,611	3,882	846,133	9,101,892
Debentures	5,240,235	–	881,849	340,786	20,213	231,796	6,714,879
Derivative liabilities used for hedging	22,764	–	3,242	–	–	–	26,006
Others	5,341,727	518,474	1,171,299	232,302	18,638	390,756	7,673,196
Total	51,398,992	2,999,022	7,498,621	8,679,987	1,440,773	6,542,279	78,559,674

9-4 Operational risk

Operational risk is a risk of loss arising from systems failure, human error, fraud or other external events. Risks related to strategies or damaging reputation are excluded but legal or regulatory implications are identified as operational risks. Operational risk includes non-financial risks related to losses due to internal operational problems and externalities such as natural disasters and terrorist attacks. Operational risk does not have a direct correlation with income and the Group needs to mitigate such risk through internal controls and insurance.

The Group measures and monitors its operational risks on a regular basis and complies with the predetermined risk limits, whereby the Group manages and controls its operational risk arising from changes of its operation environments and internal controls within an appropriate level. The Group's subsidiaries measures the operational risk exposures using their own approaches suitable to the relevant supervisory regulations of each industry and the group-level operational risk exposures are consistently calculated through the group-integrated risk management system. The Group reports its current status of operational risk management to the group risk management execution committee and group risk management committee on a monthly and quarterly basis.

9-5 Capital management

The Group implements the Bank of International Settlements ("BIS") capital requirement system in order to secure capital adequacy and comply with the supervisory regulations. The Group maintains appropriate capital ratio in accordance with BIS capital requirement system. In addition, the Group performs a capital adequacy assessment in order to cope with an unexpected loss.

Risk-weighted assets calculated per each risk type when calculating BIS ratio are

as follows:

- a. Credit risk incurs when potential loss arises from default of a borrower or counterparty or downgrading of its credit rating Risk-weighted assets of credit risk of bank subsidiaries are calculated using the internal model approved by Financial Supervisory Service. Risk-weighted assets of credit risk are calculated by multiplying risk weights reflecting counterparty credit rating, maturity, collateral and guarantees granted according to the standardized model of Basel III .
- b. Market risk incurs when potential loss arises from the fluctuation of market price of stocks, interest rates and foreign currency rates. Risk-weighted assets of market risk are calculated by multiplying 12.5 to the required capital of market risk, which consists of the interest rate risk, equity price risk, foreign currency risk, commodity risk and option risk, according to the standardized model of Supervisory Regulations on Financial Holding Companies.
- c. Operational risk incurs when loss arises from systems failure, human error and business process. Risk-weighted assets of operational risk are calculated by multiplying 12.5 to the required capital of operational risk according to Detailed Regulations on Supervisory of Banking Business.

Regulatory capital and BIS ratios as of December 31, 2022 and 2021, are as follows (Korean won in millions):

Classification	December 31, 2022	December 31, 2021
Common Equity Tier 1 capital	31,592,690	30,001,299
Additional Tier 1 capital	3,494,640	2,983,389
Subtotal(Tier 1 capital)	35,087,330	32,984,688
Tier 2 capital	2,547,376	2,490,969
Total(total capital)	37,634,706	35,475,657
Risk-weighted assets:		
Credit risk-weighted assets	208,160,882	189,389,595
Market risk-weighted assets	14,064,799	11,996,151

Classification	December 31, 2022	December 31, 2021
Operational risk-weighted assets	17,887,065	16,382,247
Total	240,112,746	217,767,993
BIS capital ratio:		
Common Equity Tier 1 ratio	13.16%	13.78%
Additional Tier 1 capital ratio	14.61%	15.15%
Total capital ratio	15.67%	16.29%

9-5-1 Assessment and management of reasonableness of internal capital

Internal capital is defined as capital defined for internal management purposes to determine whether a financial institution has a level of capital that can cover possible risks in its portfolio.

The purpose of the Group's internal capital management is to adjust the operating portfolio to maximize risk-to-return while controlling the possibility of loss from investment operations within a certain level, and to compare the size of internal capital with the actual available capital ("Tier 1"). The Group use the internal capital management indicators as a measure of financial soundness comparing the internal capital with actual available capital ("Tier 1 capital"). The indicators consist of risk appetite ratio which is the ratio of the internal capital to Tier 1 capital, and exhaustion ratio, which is the ratio of the amount of internal capital used against the internal capital limits.

Internal capital limits are established after accounting for the size of current and subsequent Tier 1 capital as well as the components, quality, risk appetite, target credit rating, operational strategy and business plans. The Risk Committee determines risk types and internal capital limits for HFG and each subsidiary more than once a year. In the case where new operations or expansion of operations result in the amount exceeding the internal capital limits, an approval from the Risk Committee is needed beforehand. If such a situation occurs in cases outlined as exceptions, an approval from the Risk Committee is needed for

the information on exceeded amount and post hoc results, as well as subsequent plans.

10. Operating segments information

10-1 General information

The Group is organized into four operating segments based on its financial information of each legal entity used for making decisions about resources to be allocated to the segment and assessing its performance. Details of operating segments are presented as follows 1) Hana Bank and its subsidiaries (Banking); 2) Hana Securities and its subsidiaries (Financial Investing); 3) KEB Hana Card and its subsidiaries (Credit Card) and 4) Others (consist of Hana Financial Group's separate performance and its other subsidiaries such as Hana Capital, Hana Asset Trust, Hana TI, Hana Ventures, Hana Savings Bank, Hana Life Insurance, Hana Alternative Asset Management, HIS, Hana Insurance Co., Ltd. and others)

10-2 Income or loss by operating segments

10-2-1 Details of net income, assets and liabilities by operating segments for the years ended December 31, 2022 and 2021, are as follows (Korean won in millions) :

<For the year ended December 31, 2022>

(Korean won in millions)

Classification	Hana Bank	Hana Securities	KEB Hana Card	Others	Subtotal	Adjustments	Total
Operating segment income and loss (*):							
Net interest income	7,608,678	340,509	395,401	573,493	8,918,081	1,682	8,919,763
Interest income	13,347,231	879,333	571,184	1,115,158	15,912,906	(36,326)	15,876,580
Interest expense	(5,738,553)	(538,824)	(175,783)	(541,665)	(6,994,825)	38,008	(6,956,817)
Net fee and commission income (loss)	593,612	363,916	225,499	574,676	1,757,703	(2,784)	1,754,919

Classification	Hana Bank	Hana Securities	KEB Hana Card	Others	Subtotal	Adjustments	Total
Fee and commission income	874,721	494,808	766,115	676,478	2,812,122	(76,322)	2,735,800
Fee and commission expense	(281,109)	(130,892)	(540,616)	(101,802)	(1,054,419)	73,538	(980,881)
Others	520,098	60,958	90,758	1,556,535	2,228,349	(1,428,172)	800,177
Total operating income (loss)	8,722,388	765,383	711,658	2,704,704	12,904,133	(1,429,274)	11,474,859
Impairment loss on financial assets	(657,650)	(149,044)	(212,846)	(165,428)	(1,184,968)	(1,830)	(1,186,798)
Net operating income (loss)	8,064,738	616,339	498,812	2,539,276	11,719,165	(1,431,104)	10,288,061
General and administrative expenses	(3,318,831)	(534,022)	(245,480)	(534,616)	(4,632,949)	200,000	(4,432,949)
Net other operating income (loss)	(679,304)	14,315	(6,074)	(303,935)	(974,998)	(189,802)	(1,164,800)
Operating income (loss)	4,066,603	96,632	247,258	1,700,725	6,111,218	(1,420,906)	4,690,312
Net other non-operating income (loss)	104,883	65,670	(711)	194,553	364,395	(110,641)	253,754
Income tax expenses (income)	(1,059,787)	(31,657)	(54,566)	(201,394)	(1,347,404)	24,532	(1,322,872)
Net income (loss)	3,111,699	130,645	191,981	1,693,884	5,128,209	(1,507,015)	3,621,194
Total assets (*)	485,308,744	43,345,325	12,284,060	57,077,998	598,016,127	(29,142,928)	568,873,199
Total liabilities (*)	455,343,376	37,539,264	10,067,212	32,188,109	535,137,961	(3,683,651)	531,454,310

(*) The amount of net income or loss, asset and liabilities by the operating segments does not consider the transaction amount between the segments.

<For the year ended December 31, 2021>

(Korean won in millions)

Classification	Hana Bank	Hana Securities	KEB Hana Card	Others	Subtotal	Adjustments	Total
Operating segment income and loss(*):							
Net interest income (loss)	6,150,597	291,749	471,974	524,608	7,438,928	(1,723)	7,437,205
Interest income	8,786,664	595,099	587,624	918,542	10,887,929	(20,438)	10,867,491
Interest expense	(2,636,067)	(303,350)	(115,650)	(393,934)	(3,449,001)	18,715	(3,430,286)
Net fee and commission income (loss)	552,794	553,955	232,595	409,054	1,748,398	(6,681)	1,741,717
Fee and commission income	837,624	685,482	682,944	523,171	2,729,221	(76,035)	2,653,186
Fee and commission expense	(284,830)	(131,527)	(450,349)	(114,117)	(980,823)	69,354	(911,469)
Others	545,724	239,421	45,226	1,525,891	2,356,262	(1,398,313)	957,949
Total operating income (loss)	7,249,115	1,085,125	749,795	2,459,553	11,543,588	(1,406,717)	10,136,871
Impairment loss on financial assets	(243,338)	(3,446)	(188,173)	(98,805)	(533,762)	544	(533,218)
Net operating income (loss)	7,005,777	1,081,679	561,622	2,360,748	11,009,826	(1,406,173)	9,603,653
General and administrative expenses	(2,973,063)	(575,010)	(221,898)	(434,925)	(4,204,896)	154,436	(4,050,460)

Classification	Hana Bank	Hana Securities	KEB Hana Card	Others	Subtotal	Adjustments	Total
Net other operating income (loss)	(614,276)	(15,159)	4,735	(147,028)	(771,728)	(150,369)	(922,097)
Operating income (loss)	3,418,438	491,510	344,459	1,778,795	6,033,202	(1,402,106)	4,631,096
Net other non-operating income (loss)	60,036	181,914	(1,739)	46,562	286,773	(12,944)	273,829
Income tax expenses	(902,728)	(167,431)	(92,236)	(176,964)	(1,339,359)	16,016	(1,323,343)
Net income (loss)	2,575,746	505,993	250,484	1,648,393	4,980,616	(1,399,034)	3,581,582
Total assets(*)	430,193,576	37,614,683	9,596,474	51,769,924	529,174,657	(26,729,387)	502,445,270
Total liabilities(*)	401,437,105	32,323,652	7,565,896	28,803,826	470,130,479	(3,184,549)	466,945,930

(*) The amount of net income or loss, asset and liabilities by the operating segments does not consider the transaction amount between the segments.

10-2-2 The operating income or loss from external customers and internal transactions for the years ended December 31, 2022 and 2021, is as follows (Korean won in millions):

<For the year ended December 31, 2022>

(Korean won in millions)

Classification	Hana Bank	Hana Securities	KEB Hana Card	Others	Subtotal	Adjustments	Total
Revenue (expense) from external customers	8,780,159	676,646	747,801	1,270,253	11,474,859	–	11,474,859
Revenue (expense) from internal transactions	(57,771)	88,737	(36,143)	1,434,451	1,429,274	(1,429,274)	–
Total	8,722,388	765,383	711,658	2,704,704	12,904,133	(1,429,274)	11,474,859

<For the year ended December 31, 2021>

(Korean won in millions)

Classification	Hana Bank	Hana Securities	KEB Hana Card	Others	Subtotal	Adjustments	Total
Revenue (expense) from external customers	7,165,349	1,132,653	780,850	1,058,019	10,136,871	–	10,136,871
Revenue (expense) from internal transactions	83,766	(47,528)	(31,055)	1,401,534	1,406,717	(1,406,717)	–
Total	7,249,115	1,085,125	749,795	2,459,553	11,543,588	(1,406,717)	10,136,871

10-2-3 Significant non-cash transactions included in income of operating segments for the years ended December 31, 2022 and 2021, are as follows (Korean won in millions):

<For the year ended December 31, 2022>

(Korean won in millions)

Classification	Hana Bank	Hana Securities	KEB Hana Card	Others	Subtotal	Adjustments	Total
Gain(loss) on equity method	189,012	29,973	1,949	5,631	226,565	6,601	233,166
Depreciation and amortization	(465,048)	(48,509)	(37,354)	(397,209)	(948,120)	16,059	(932,061)

<For the year ended December 31, 2021>

(Korean won in millions)

Classification	Hana Bank	Hana Securities	KEB Hana Card	Others	Subtotal	Adjustments	Total
Gain(loss) on equity method	127,673	(5,477)	2,070	6,445	130,711	269	130,980
Depreciation and amortization	(451,498)	(51,119)	(30,079)	(240,756)	(773,452)	4,665	(768,787)

10-3 Information about regions

Revenue by region from the external customers for the years ended December 31, 2022 and 2021, and non current assets by region as of December 31, 2022 and 2021 are as follows (Korean won in millions):

Classification	Revenues from external customers		Non-current assets	
	2022	2021	December 31, 2022	December 31, 2021
Domestic	11,853,441	10,672,518	7,499,536	5,408,606
Foreign:				
Hong Kong	72,199	63,976	5,320	3,997
Singapore	60,917	46,801	1,943	1,563
United States	68,959	49,686	29,170	6,872
Japan	36,539	29,060	3,486	3,894
China	230,305	229,228	62,992	63,523
Indonesia	201,009	195,281	59,288	67,821
United Kingdom	45,130	30,625	2,601	2,626
Canada	50,743	32,851	11,274	10,809

Classification	Revenues from external customers		Non-current assets	
	2022	2021	December 31, 2022	December 31, 2021
Others	284,891	193,562	19,263	18,323
Subtotal	1,050,692	871,070	195,337	179,428
Adjustments	(1,429,274)	(1,406,717)	(331,308)	(244,310)
Total	11,474,859	10,136,871	7,363,565	5,343,724

Non-current assets consist of property and equipment, investment properties and intangible assets and are classified as either domestic or overseas depending on its geographic proximity.

10-4 Information about major customers

There are no individual customers who account for more than 10% of the Group's consolidated revenue for the years ended December 31, 2022 and 2021.

11. Cash and due from banks

Cash and due from banks as of December 31, 2022 and 2021, are as follows (Korean won in millions):

Classification	Counterparty	December 31, 2022	December 31, 2021
Cash and foreign currency		1,904,911	2,031,147
Due from banks in Korean won			
Reserve deposits with Bank of Korea ("BOK"), etc.	BOK, etc.	16,119,619	13,199,451
Time deposits, etc.	Other banks	224,939	281,200
Other deposits	Other financial institutions	3,237,506	2,446,061
Subtotal		19,582,064	15,926,712
Due from banks in foreign currencies			

Classification	Counterparty	December 31, 2022	December 31, 2021
Due from banks on demand	BOK, etc.	11,590,380	7,815,953
Time deposits	ICICI Bank, etc.	1,147,224	971,559
Other deposits	Other financial institutions	11,531,530	4,661,225
Subtotal		24,269,134	13,448,737
Total		45,756,109	31,406,596

11-2 Restricted balances in due from banks as of December 31, 2022 and 2021, are summarized as follows (Korean won in millions):

Classification	December 31, 2022	December 31, 2021	Restrictions
Due from banks in Korean won			
Reserve deposits with BOK, etc.	16,036,240	13,102,451	Reserve deposits from the Banking Act and the Bank of Korea Act, currency stabilization account, reserve and domestic exchange transaction collateral
Reserve for futures trading	110,013	-	Margin for trading account
Reserve for claims of customers' deposits	412,000	293,000	Capital market law, regulation on brokerage business of securities company, etc.
Other deposits	1,573,222	936,896	For the right of pledge, etc.
Subtotal	18,131,475	14,332,347	
Due from banks in foreign currencies			
Deposits in foreign currencies in other branches	9,596,193	5,883,930	Reserve for payment of deposits from the Banking Act and the Bank of Korea Act
Other deposits	10,100,883	4,150,948	Over-the-counter ("OTC") derivative contracts, etc.
Subtotal	19,697,076	10,034,878	
Total	37,828,551	24,367,225	

12. Financial assets measured at FVTPL

Financial assets measured at FVTPL as of December 31, 2022 and 2021, are as follows (Korean won in millions):

Classification	December 31, 2022	December 31, 2021
Stocks	609,892	483,000
Investments in partnerships	652,382	464,596

Classification	December 31, 2022	December 31, 2021
Government and public bonds	5,037,314	2,828,697
Financial bonds	6,873,159	7,240,570
Corporate bonds and others	8,913,209	5,465,545
Beneficiary certificates	8,388,332	7,434,923
Other securities denominated in Korean won	277,194	293,367
Securities denominated in foreign currencies	4,851,537	4,860,918
Derivative linked securities	311,695	474,891
Derivative assets held for trading(*)	12,633,226	5,288,975
Loans	1,227,865	1,898,878
Others	1,383,000	1,983,925
Total	51,158,805	38,718,285

(*) Refers to Note 17. Derivatives instruments

13. Financial assets measured at FVOCI

13-1 Details of financial assets measured at FVOCI as of December 31, 2022 and 2021 are as follows (Koreanwon in millions):

Classification	December 31, 2022	December 31, 2021
Stocks	994,619	977,270
Investments in partnerships	748	773
Government and public bonds	11,352,572	11,253,235
Financial bonds	12,349,570	14,143,886
Corporate bonds	6,428,912	6,229,311
Other securities denominated in Korean won	89,132	80,334
Securities denominated in foreign currencies	6,154,625	6,788,720
Total	37,370,178	39,473,529

13-2 Details of shares(including shares in foreign currencies) included in financial assets measured at FVOCI as of December 31, 2022 and 2021, are as follows

<December 31, 2022>

Counterparty	Book value (fair value)
UAMCO., Ltd.	188,721
Daewoo Shipbuilding & Marine Engineering Co., Ltd. etc.	170,845
KRX	163,428
The Korea Securities Finance Corporation	135,479
SK TELECOM CO., LTD	61,974
Consumer Credit Assistant Fund Co., Ltd.	50,942
Taihan Electric Wire Co., Ltd.	46,131
STX Engine(perpetual convertible bonds)	45,207
KCI	43,924
SK Square Co., Ltd.	25,733
KoData Co., Ltd	20,111
HMM	17,387
Korea Asset Management Corporation	15,737
Korea Money Brokerage Corp	11,620
BC Card Co., Ltd.	10,604
HJC CORP.	9,817
KG Dongbu Steel Co., Ltd.	8,387
Korea Securities Depository	8,216
Kumho Tire Co., Inc.	6,748
DB ASSET MANAGEMENT CO., LTD	5,713
CLS GROUP HOLDINGS AG	5,038
Others	39,142
Total	1,090,904

<December 31, 2021>

Counterparty	Book value (fair value)
Daewoo Shipbuilding & Marine Engineering Co., Ltd. etc.	207,809

Counterparty	Book value (fair value)
UAMCO., Ltd..	176,628
KRX	148,732
The Korea Securities Finance Corporation	139,872
Consumer Credit Assistant Fund Co., Ltd.	84,067
KCI	56,454
Taihan Electric Wire Co., Ltd.	54,925
HMM	23,924
STX Engine(perpetual convertible bonds)	23,877
CM International	23,710
KG Dongbu Steel Co., Ltd.	20,908
Korea Asset Management Corporation	15,737
Korea Enterprise Data	14,330
Korea Money Brokerage Corp	13,789
Kunho Tire Co., Inc.	11,190
BC Card Co., Ltd.	9,784
HJC CORP.	8,271
Korea Securities Depository	7,964
DB ASSET MANAGEMENT CO., LTD	5,698
CLS GROUP HOLDINGS AG	4,761
Daelim Construction Co.	4,586
Others	31,123
Total	1,088,139

Equity instruments that are held for strategic alliances, not for trading, converted from debt instruments and acquired for access rights of systems and facilities are designated as measured at FVOCI.

13-3 Details of disposal of shares (including shares in foreign currencies)
included in financial assets measured at FVOCI for the years December 31, 2022
and 2021, are as follows (Korean won in millions):

<2022>

Counterparty	Book value	Cumulative valuation gain (loss) (*)	Reason for disposal
KG DONGBUSTEEL CO., LTD.	20,980	(3,806)	Decision of Council of Financial creditors
ChinHung international, Inc	3,280	(1,320)	Decision of Council of Financial creditors
Taihan Electric Wire Co., Ltd. 55R	1,174	1,174	Decision of Council of Financial creditors
Others	659	259	
Total	26,093	(3,693)	

(*) Cumulative gain or loss is replaced with retained earnings.

<2021>

Counterparty	Book value	Cumulative valuation gain (loss) (*)	Reason for disposal
HMM	146,293	110,760	Decision of Council of Financial creditors
Hanjin Heavy Industries & Construction Co., Ltd.	40,747	(36,905)	Decision of Council of Financial creditors
ChinHung international, Inc	12,700	(2,915)	Decision of Council of Financial creditors
Taihan Electric Wire Co., Ltd.	12,111	(28,391)	Decision of Council of Financial creditors
Koramco REITs Management and Trust Co., Ltd.	9,327	8,952	Sales due to reduced effectiveness of strategic investment through business partnership
Kumgo Electric	1,672	(1,353)	Decision of Council of Financial creditors
Others	3,508	917	
Total	226,358	51,065	

(*) Cumulative gain or loss is replaced with retained earnings.

13-4 Dividends recognized from financial assets measured at FVOCI for the years ended December 31, 2022 and 2021, are as follows
(Korean won in millions):

Classification	2022	2021
Dividends recognized from equity instruments held as of December 31 2022 and 2021	13,831	10,661
Dividends recognized from equity instruments derecognized	–	133
Total	13,831	10,794

13-5 Changes in the loss allowance in relation to financial assets measured at FVOCI for the years ended December 31, 2022 and 2021, are as follows (Korean won in millions):

<2022>

Classification	12 month ELC	Lifetime ELC		Total
		Non credit-impaired debt securities	Credit-impaired debt securities	
Beginning balance	12,278	–	–	12,278
Provision (reversal) for possible loan losses	2,556	–	–	2,556
New financial assets executed or purchased	315	–	–	315
Disposal financial assets	(3,232)	–	–	(3,232)
Exchange rate fluctuation and others	454	–	–	454
Ending balance	12,371	–	–	12,371

<2021>

Classification	12 month ELC	Lifetime ELC		Total
		Non credit-impaired debt securities	Credit-impaired debt securities	
Beginning balance	10,859	–	–	10,859
Provision (reversal) for possible loan losses	4,982	–	–	4,982
New financial assets executed or purchased	693	–	–	693
Disposal financial assets	(5,739)	–	–	(5,739)
Exchange rate fluctuation and others	1,483	–	–	1,483
Ending balance	12,278	–	–	12,278

13-6 Changes in the carrying amount in relation to financial assets measured at FVOCI for the years ended December 31, 2022 and 2021, are as follows (Korean won in millions):

<2022>

Classification	12 month ELC	Lifetime ELC		Total
		Non credit-impaired debt securities	Credit-impaired debt securities	
Beginning balance	38,385,390	—	—	38,385,390
New financial assets executed or purchased	11,746,883	—	—	11,746,883
Disposed financial assets	(12,681,524)	—	—	(12,681,524)
Exchange rate fluctuation and others	(1,171,475)	—	—	(1,171,475)
Ending balance	36,279,274	—	—	36,279,274

<2021>

Classification	12 month ELC	Lifetime ELC		Total
		Non credit-impaired debt securities	Credit-impaired debt securities	
Beginning balance	34,883,331	—	—	34,883,331
New financial assets executed or purchased	21,641,073	—	—	21,641,073
Disposed financial assets	(17,957,206)	—	—	(17,957,206)
Exchange rate fluctuation and others	(181,808)	—	—	(181,808)
Ending balance	38,385,390	—	—	38,385,390

14. Securities measured at amortized cost

14-1 Details of securities measured at amortized cost as of December 31, 2022 and 2021, are as follows (Korean won in millions):

Classification	December 31, 2022	December 31, 2021
Government and public bonds	8,084,050	6,695,621
Financial bonds	7,991,991	1,483,330
Corporate bonds and others	18,954,431	12,352,368
Securities denominated in foreign currencies	3,981,688	3,257,456
Allowance for credit losses	(83,249)	(19,758)

Classification	December 31, 2022	December 31, 2021
Total	38,928,911	23,769,017

14-2 Profit or loss from disposal of securities at amortized cost for the years ended December 31, 2022 and 2021, are as follows (Korean won in millions):

<2022>

Classification	Face amount	Book value	Amount of profit from disposal
Corporate bonds and others	7,800	7,796	4

The Group disposed of some securities at amortized cost in accordance with the exercise of an option (put option) by the issuer of the securities for the year ended December 31, 2022.

<2021>

Classification	Face amount	Book value	Amount of profit from disposal
Corporate bonds and others	28,900	28,880	20

The Group disposed of some securities at amortized cost in accordance with the exercise of an option (put option) by the issuer of the securities for the year ended December 31, 2021.

14-3 Changes in provision for allowance for loan losses in relation to securities measured at amortized cost for the years ended December 31, 2022 and 2021, are as follows (Korean won in millions):

<2022>

Classification	12 month expected credit loss	Lifetime expected credit losses		Total
		Non credit-impaired loans	Credit-impaired loans	
Beginning balance	8,557	11,200	–	19,757
Transfer to non credit-impaired financial assets	–	(8,470)	8,470	–
Provision for possible loan losses	5,506	3,007	58,940	67,453
Disposed financial assets	(507)	–	–	(507)
Exchange rate fluctuation and others	(48)	35	(3,441)	(3,454)
Ending balance	13,508	5,772	63,969	83,249

<2021>

Classification	12 month expected credit loss	Lifetime expected credit losses		Total
		Non credit-impaired loans	Credit-impaired loans	
Beginning balance	10,090	–	–	10,090
Transfer to non credit-impaired financial assets	(4,062)	4,062	–	–
Provision for possible loan losses	5,489	6,603	–	12,092
Disposed financial assets	(1,561)	(245)	–	(1,806)
Exchange rate fluctuation and others	(1,399)	780	–	(619)
Ending balance	8,557	11,200	–	19,757

14-4 Changes in the carrying amount in relation to securities measured at amortized cost for years ended December 31, 2022 and 2021, are as follows (Korean won in millions):

<2022>

Classification	12 month expected credit loss	Lifetime expected credit losses		Total
		Non credit-impaired loans	Credit-impaired loans	
Beginning balance	23,694,834	93,940	–	23,788,774
Transfer to non credit-impaired financial assets	–	(68,827)	68,827	–
New financial assets executed or purchased	16,822,097	–	–	16,822,097
Disposed financial assets	(1,674,801)	–	–	(1,674,801)
Exchange rate fluctuation and others	78,187	(606)	(1,491)	76,090
Ending balance	38,920,317	24,507	67,336	39,012,160

<2021>

Classification	12 month expected credit loss	Lifetime expected credit losses		Total
		Non credit-impaired loans	Credit-impaired loans	
Beginning balance	18,386,747	–	–	18,386,747
Transfer to non credit-impaired financial assets	(112,583)	112,583	–	–
New financial assets executed or purchased	10,395,043	–	–	10,395,043
Disposed financial assets	(5,127,492)	(28,354)	–	(5,155,846)
Exchange rate fluctuation and others	153,119	9,711	–	162,830
Ending balance	23,694,834	93,940	–	23,788,774

15. Pledged asset

15-1 Details of assets provided as collateral as of the years ended December 31, 2022 and 2021, are as follows (Korean won in millions):

<December 31, 2022>

Classification	Details	Book Value
Financial assets measured at FVTPL	Pledged securities	6,745,131
	Derivative instruments	2,434,424
	KRX, etc.	164,082
	Client RP	6,733,265
	Others	555,915
	Subtotal	16,632,817
Financial assets measured at FVOCI	Futures	374,368
	Daylight credit	272,486
	Client RP	1,226,326
	Pledged securities	2,129,311
	BOK payment	39,707
	Borrowings from BOK	1,240,667
	Collateral for securities lending	78,084
	Others	3,057,069
	Subtotal	8,418,018
Securities measured at amortized cost	Foreign currency borrowing	484,066
	Establishment of a pledge right	10,155
	Futures	10,000
	BOK payment	2,905,847
	Daylight credit	373,511
	Borrowings from BOK	4,719,163
	Pledged securities	1,149,955
	Others	1,151,860
	Subtotal	10,804,557
Loans measured at amortized cost	Borrowings	475,051

Classification	Details	Book Value
Total		36,330,443

<December 31, 2021>

Classification	Details	Book Value
Financial assets measured at FVTPL	Pledged securities	5,766,635
	Derivative instruments	1,486,824
	KRX, etc.	393,312
	Client RP	6,513,651
	Others	46,608
	Subtotal	14,207,030
Financial assets measured at FVOCI	Futures	202,927
	Daylight credit	277,657
	Client RP	1,245,539
	Foreign currency	203,962
	Pledged securities	2,541,827
	BOK payment	1,871,226
	Borrowings from BOK	829,803
	Others	733,625
	Subtotal	7,906,566
Securities measured at amortized cost	Foreign currency borrowing	910,097
	Establishment of a pledge right	10,199
	Futures	100,047
	BOK payment	2,313,892
	Daylight credit	372,940
	Client RP	50
	Borrowings from BOK	4,311,268
	Pledged securities	59,586
	Others	427,638
	Subtotal	8,505,717
Loans measured at amortized cost	Borrowings	474,805
Property and equipment	Rental deposit	523

Classification	Details	Book Value
Total		31,094,641

15-2 The fair value of collateral that is available-for-sale and re-pledge, irrespective of default as of December 31, 2022 and 2021, is as follows (Korean won in millions):

<December 31, 2022>

Classification	Fair value of collateral	Fair value of collateral sold or re-pledged
Securities	14,777,597	4,229,813
Deposits	639,297	—

<December 31, 2021>

Classification	Fair value of collateral	Fair value of collateral sold or re-pledged
Securities	13,988,194	1,015,450
Deposits	336,619	—

16. Loans and receivables measured at amortized cost

16-1 Details of loans and receivables measured at amortized cost as of December 31, 2022 and 2021, are as follows (Korean won in millions):

Classification	December 31, 2022	December 31, 2021
Loans and receivables:		
Loans in Korean won	292,021,797	272,786,199
Loans in foreign currencies	32,507,537	28,782,642
Domestic import usance	4,546,348	4,188,861
Call loans	1,377,862	1,288,673

Classification	December 31, 2022	December 31, 2021
Bills purchased in Korean won	1,235,390	187,361
Bills purchased in foreign currencies	5,289,419	5,799,103
Advance payments on acceptances and guarantees	5,533	12,083
Credit card loans	9,278,288	8,023,704
Bonds purchased under resale agreement	12,306,702	11,676,882
Installment receivables purchased	777,910	808,625
Privately placed corporate bonds	2,230,400	2,821,097
Lease receivables	1,935,922	2,472,994
Subtotal	363,513,108	338,848,224
Plus (less):		
Deferred loan fees	410,522	420,682
Present value discount	(18,866)	(5,231)
Allowance for loan losses	(2,419,868)	(1,914,402)
Total	361,484,896	337,349,273

16-2 Loans measured at amortized cost to customer as of December 31, 2022 and 2021 are listed as follows (Korean won in millions):

Classification	December 31, 2022	December 31, 2021
Corporate loans:		
Large business	49,956,307	41,727,560
Small and medium business	135,518,988	123,156,797
Public sector and others	28,107,386	24,178,649
Subtotal	213,582,681	189,063,006
Household loans	140,666,457	141,783,269
Credit card loans	9,263,970	8,001,949
Subtotal	363,513,108	338,848,224
Plus (less):		
Deferred loan fees	410,522	420,682
Present value discount	(18,866)	(5,231)

Classification	December 31, 2022	December 31, 2021
Allowance for loan losses	(2,419,868)	(1,914,402)
Total	361,484,896	337,349,273

16-3 Changes in allowance for possible loan losses for the years ended December 31, 2022 and 2021, are as follows (Korean won in millions):

<2022>

Classification	12 month ECL	Lifetime ECL		Credit impairment model	Total
		Non credit-impaired loan	Credit-impaired loan		
As of January 1, 2022	590,313	740,738	549,222	34,129	1,914,402
Transfer to 12 month ECL	55,320	(52,168)	(3,152)	-	-
Transfer to non credit-impaired financial assets	(48,366)	50,839	(2,473)	-	-
Transfer to credit-impaired loan	(117,389)	(89,926)	207,315	-	-
Provisions of allowance of possible loan losses	312,933	301,169	475,812	12,296	1,102,210
Write-offs	1	22	(690,727)	-	(690,704)
Collection of loans written off	-	-	144,072	-	144,072
Disposal of NPLs	-	-	(61,452)	(470)	(61,922)
Changes in exchange rate, etc.	12,227	3,584	(4,001)	-	11,810
As of December 31, 2022	805,039	954,258	614,616	45,955	2,419,868

<2021>

Classification	12 month ECL	Lifetime ECL		Credit impairment model	Total
		Non credit-impaired loan	Credit-impaired loan		
As of January 1, 2021	617,285	558,893	573,611	20,683	1,770,472
Increase due to business combination	-	196	-	-	196
Transfer to 12 month ECL	115,989	(67,285)	(48,704)	-	-
Transfer to non credit-impaired financial assets	(73,774)	82,109	(8,335)	-	-
Transfer to credit-impaired loan	(126,969)	(90,843)	217,812	-	-
Provisions of allowance of possible loan losses	22,014	271,900	214,324	17,028	525,266
Write-offs	10	22	(558,867)	-	(558,835)
Collection of loans written off	-	-	213,419	-	213,419
Disposal of NPLs	-	-	(46,863)	(3,582)	(50,445)
Changes in exchange rate, etc.	35,758	(14,254)	(7,175)	-	14,329
As of December 31, 2021	590,313	740,738	549,222	34,129	1,914,402

16-4 Changes in the carrying amounts of allowance for possible loan losses for the years ended December 31, 2022 and 2021, are as follows (Korean won in millions):

<2022>

Classification	12 month ECL	Lifetime ECL		Credit impairment model	Total
		Non credit-impaired loan	Credit-impaired loan		
As of January 1, 2022	296,168,022	40,138,496	1,172,207	1,369,499	338,848,224
Transfer to 12 month ECL	6,518,117	(6,506,098)	(12,019)	-	-
Transfer to non credit-impaired financial assets	(13,909,307)	13,927,004	(17,697)	-	-
Transfer to credit-impaired loan	(784,939)	(505,848)	1,290,787	-	-
Write-offs	(177)	-	(690,727)	-	(690,904)
Net increase and decrease	29,713,294	(3,580,542)	(109,409)	(400,523)	25,622,820
Disposal of NPLs	-	-	(247,587)	(470)	(248,057)
Changes in exchange rate, etc.	(15,607)	(1,256)	(2,112)	-	(18,975)
As of December 31, 2022	317,689,403	43,471,756	1,383,443	968,506	363,513,108

<2021>

Classification	12 month ECL	Lifetime ECL		Credit impairment model	Total
		Non credit-impaired loan	Credit-impaired loan		
As of January 1, 2021	277,343,228	30,153,244	1,300,180	1,361,444	310,158,096
Increase due to business combination	-	10,000	-	-	10,000
Transfer to 12 month ECL	4,459,382	(4,399,754)	(59,628)	-	-
Transfer to non credit-impaired financial assets	(18,390,881)	18,438,038	(47,157)	-	-
Transfer to credit-impaired loan	(629,299)	(474,032)	1,103,331	-	-
Write-offs	-	-	(558,867)	-	(558,867)
Net increase and decrease	33,407,714	(3,581,951)	(318,178)	11,637	29,519,222
Disposal of NPLs	(22,122)	(7,049)	(247,474)	(3,582)	(280,227)
As of December 31, 2021	296,168,022	40,138,496	1,172,207	1,369,499	338,848,224

16-5 Amortized cost before change and net gain or loss due to change in cash flows of contract of loans, whose allowance for possible loan losses was measured based on the lifetime ECL for the years ended December 31, 2022 and 2021, are as follows (Korean won in millions):

Classification	2022	2021
Amortized cost before change	81,226	83,324
Net gain or loss due to change	(835)	(941)

16-6 Loans whose contractual cash flows changed for which the measurement of allowance for doubtful accounts changed from the lifetime ECL to 12-month ECL on initial recognition during the reporting period are ₩1,355 million and ₩17,538 million as of December 31, 2022 and 2021, respectively.

16-7 The contractual non-recoverable amount of the loan receivable that has been fully amortized as of the end of the reporting period but is still trying to recover is ₩5,260,733 million and ₩5,331,950 as of December 31, 2022 and 2021, respectively.

17. Derivative instruments

17-1 Details of amounts of the unsettled derivative contract and fair value of derivatives held by the Group as of December 31, 2022 and 2021, are as follows (Korean won in millions):

<December 31, 2022>

Classification	Notional amounts	Net valuation gain	Net valuation loss	Assets	Liabilities
Currency:					
Forward	246,586,069	5,751,081	5,660,985	6,455,877	5,981,513
Swap	102,309,784	3,239,312	3,922,569	3,986,397	5,070,355
Call option	664,573	3,976	–	3,741	–
Put option	635,883	–	1,377	–	3,267
Future	1,680,861	166	3,228	166	3,228
Subtotal	351,877,170	8,994,535	9,588,159	10,446,181	11,058,363
Interest:					
Forward	11,243,004	388,432	174,843	432,121	209,713
Swap	262,615,673	1,477,168	2,024,792	1,234,089	1,883,597
Call option	66,150	1,579	–	–	–
Put option	765,000	–	4,195	–	9,458
Future	3,607,527	5,114	304	5,421	298
Subtotal	278,297,354	1,872,293	2,204,134	1,671,631	2,103,066
Stock:					
Forward	524	171	–	286	–
Swap	3,356,095	22,430	229,843	18,433	370,774

Classification	Notional amounts	Net valuation gain	Net valuation loss	Assets	Liabilities
Call option	2,001,713	20,562	37,691	89,430	–
Put option	5,226,479	66,478	50,429	–	230,395
Future	1,014,092	11,540	7,772	11,540	7,772
Subtotal	11,598,903	121,181	325,735	119,689	608,941
Credit:					
Swap(CDS)	17,456,755	146,384	105,582	195,321	76,248
Total revenue swap	5,625,477	37,741	93,481	40,416	94,536
Subtotal	23,082,232	184,125	199,063	235,737	170,784
Others:					
Credit risk valuation adjustment	–	–	5,729	(17,758)	–
Profit or loss on the trade date (unamortized)	–	–	–	20,242	35,200
Other forwards	3,020,489	108,965	90,791	107,845	90,729
Other swaps	10,208,325	40,995	182,512	49,659	180,993
Subtotal	13,228,814	149,960	279,032	159,988	306,922
Total	678,084,473	11,322,094	12,596,123	12,633,226	14,248,076

<December 31, 2021>

Classification	Notional amounts	Net valuation gain	Net valuation loss	Assets	Liabilities
Currency:					
Forward	207,574,461	3,104,657	2,372,709	2,856,394	2,206,665
Swap	93,499,816	2,657,272	3,420,437	1,461,317	1,889,435
Call option	452,589	4,373	–	2,344	–
Put option	443,674	–	1,955	–	1,565
Future	1,492,911	562	494	562	494
Subtotal	303,463,451	5,766,864	5,795,595	4,320,617	4,098,159
Interest:					
Forward	1,467,163	36,539	28,408	49,367	40,459
Swap	175,714,299	472,784	732,906	486,615	559,343
Call option	251,966	4,688	821	53,273	–
Put option	905,000	–	299	–	13,354
Future	4,280,415	3,639	1,037	3,639	1,038
Subtotal	182,618,843	517,650	763,471	592,894	614,194
Stock:					
Forward	654	–	34	184	–
Swap	3,447,020	44,166	141,219	100,130	750,813
Call option	2,103,991	33,871	24,515	59,350	–
Put option	4,447,453	35,702	16,982	–	147,837
Future	611,158	2,666	2,849	2,666	2,849
Subtotal	10,610,276	116,405	185,599	162,330	901,499

Classification	Notional amounts	Net valuation gain	Net valuation loss	Assets	Liabilities
Credit:					
Swap(CDS)	13,626,442	26,002	46,684	99,821	125,059
Total revenue swap	151,447	908	544	5,975	1,438
Subtotal	13,777,889	26,910	47,228	105,796	126,497
Others:					
Credit risk valuation adjustment	-	2,159	-	(12,029)	-
Profit or loss on the trade date (unamortized)	-	-	-	19,150	33,430
Other forwards	1,550,831	30,684	28,177	30,684	28,177
Other swaps	7,635,278	29,353	22,086	40,705	57,766
Other call options	1,357,349	28,822	29,704	28,828	-
Other put options	-	-	-	-	29,712
Subtotal	10,543,458	91,018	79,967	107,338	149,085
Total	521,013,917	6,518,847	6,871,860	5,288,975	5,889,434

17-2 Unsettled derivative contracts held for hedging purpose as of December 31, 2022 and 2021, are as follows (Korean won in millions):

<December 31, 2022>

Classification	Notional amounts	Net valuation gain	Net valuation loss	Assets	Liabilities
Fair value hedge					
Currency forward	47,860	292	1,900	193	1,900
Currency swap	1,150,977	-	129,660	8,062	180,192
Interest swap	3,497,558	30	325,172	-	325,952
Subtotal	4,696,395	322	456,732	8,255	508,044
Cash flow hedge					
Currency swap	825,122	12,100	24,229	20,459	27,471
Interest swap	70,000	4,810	-	3,598	-
Bond forwards	8,779	-	620	-	620
Subtotal	903,901	16,910	24,849	24,057	28,091
Net investment hedged items					
Currency forwards	233,345	-	10,273	-	10,273
Total	5,833,641	17,232	491,854	32,312	546,408

<December 31, 2021>

Classification	Notional amounts	Net valuation gain	Net valuation loss	Assets	Liabilities
Fair value hedge					
Currency forward	59,324	359	4,057	359	2,834

Classification	Notional amounts	Net valuation gain	Net valuation loss	Assets	Liabilities
Currency swap	1,138,491	3,532	67,910	19,281	61,752
Interest swap	2,940,680	222	99,231	49,389	49,439
Subtotal	4,138,495	4,113	171,198	69,029	114,025
Cash flow hedge					
Currency swap	577,341	34,077	3,242	8,359	3,242
Interest swap	130,000	824	1,332	119	1,332
Subtotal	707,341	34,901	4,574	8,478	4,574
Total	4,845,836	39,014	175,772	77,507	118,599

For derivative transactions involving both Korean won and foreign currency such as currency forwards, currency futures and currency swap, the fair value of the unsettled amount for such transaction is presented using the proper foreign exchange rate of the contract amount in foreign currency at the reporting date. For a derivative transaction involving only foreign currency, the fair value of the unsettled amount is presented using the proper foreign exchange rate of the foreign currency purchased at the reporting date.

Non-derivative contracts held for hedging purpose as of December 31, 2022 and 2021, are as follows (Korean won in millions):

Classification	December 31, 2022		December 31, 2021	
	Book value	Net valuation gain or loss	Book value	Net valuation gain or loss
Fair value hedge accounting:				
Debt securities in foreign currencies	–	–	237,100	(19,500)
Net investment in foreign operations hedge accounting:				
Debt securities in foreign currencies	1,131,686	(24,527)	779,488	(56,259)
Borrowings in foreign currencies	170,314	6,559	–	–
Subtotal	1,302,000	(17,968)	779,488	(56,259)
Total	1,302,000	(17,968)	1,016,588	(75,759)

17-2-1 Details of fair value hedge as of December 31, 2022 and 2021, are as follows (Korean won in millions):

<December 31, 2022>

Risk	Hedged item	Book value		Accumulated adjusted fair value hedge amount		Adjusted fair value hedge amount	
		Asset	Liability	Asset	Liability	Asset	Liability
Foreign currency risk	Securities measured at FVOCI	8,671	–	(1,224)	–	818	–
Foreign currency risk	Securities measured at amortized cost	31,233	–	502	–	805	–
Interest rate risk	Depository liabilities in Korean won	–	187,705	–	(62,295)	–	(46,117)
Interest rate risk	Depository liabilities in foreign currency	–	115,865	–	(23,538)	–	(24,898)
Interest rate risk	Financial debentures in Korean won	–	93,262	–	(36,738)	–	(26,241)
Interest rate risk	Financial debentures in foreign currency	–	2,773,530	–	(204,625)	–	(228,870)
Interest rate and Foreign currency risk	Financial debentures in foreign currency	–	1,080,816	–	(70,161)	–	(61,499)
Total		39,904	4,251,178	(722)	(397,357)	1,623	(387,625)

<December 31, 2021>

Risk	Hedged item	Book value		Accumulated adjusted fair value hedge amount		Adjusted fair value hedge amount	
		Asset	Liability	Asset	Liability	Asset	Liability
Foreign currency risk	Securities measured at FVOCI	36,956	–	17,694	–	20,674	–
Foreign currency risk	Securities measured at amortized cost	41,949	–	1,530	–	1,894	–
Interest rate risk	Depository liabilities in Korean won	–	233,822	–	(16,178)	–	(12,659)
Interest rate risk	Depository liabilities in foreign currency	–	131,765	–	1,360	–	(3,899)
Interest rate risk	Financial debentures in Korean won	–	119,503	–	(10,497)	–	(6,345)
Interest rate risk	Financial debentures in foreign currency	–	2,455,251	–	24,976	–	(76,182)
Interest rate and Foreign currency risk	Financial debentures in foreign currency	–	1,129,830	–	(8,662)	–	(17,439)
Total		78,905	4,070,171	19,224	(9,001)	22,568	(116,524)

17-2-2 Details of the fair value hedge target items and the fair value hedge method of the consolidated entity as of the end of the year December 31, 2022 and 2021, are as follows (Korean won in millions):

<December 31, 2022>

Hedged item	Hedging instrument	Gain (loss) on valuation of hedged item	Gain (loss) on valuation of hedging instrument	Ineffective portion of hedge recognized in profit or loss
Securities measured at FVOCI	Currency forwards	818	(987)	(169)
Securities measured at amortized cost	Currency forwards	805	(720)	85
Depository liabilities in Korean won	Interest swap	46,117	(46,117)	—
Depository liabilities in foreign currency	Interest swap	24,898	(24,898)	—
Financial debentures in Korean won	Interest swap	26,241	(26,241)	—
Financial debentures in foreign currency	Interest swap	228,870	(227,915)	955
Financial debentures in foreign currency	Currency swap	61,499	(129,660)	(19)
Total		389,248	(456,538)	852

<December 31, 2021>

Hedged item	Hedging instrument	Gain (loss) on valuation of hedged item	Gain (loss) on valuation of hedging instrument	Ineffective portion of hedge recognized in profit or loss
Securities measured at FVOCI	Financial debentures in foreign currency	19,500	(19,500)	—
Securities measured at FVOCI	Currency forwards	1,174	(2,112)	(938)
Securities measured at amortized cost	Currency forwards	1,894	(1,586)	308
Depository liabilities in Korean won	Interest swap	12,659	(12,659)	—
Depository liabilities in foreign currency	Interest swap	3,899	(3,899)	—
Financial debentures in Korean won	Interest swap	6,345	(6,345)	—
Financial debentures in foreign currency	Interest swap	76,182	(76,328)	(146)
Financial debentures in foreign currency	Currency swap	17,439	(64,377)	(11)
Total		139,092	(186,806)	(787)

17-2-3 Details of items subject to cash flow hedge as of December 31, 2022 and 2021, are as follows (Korean won in millions):

<December 31, 2022>

Risk	Hedged item	Book value		Accumulated cash flow hedge adjustments		Cash flow hedging effect	
		Asset	Liability	Asset	Liability	Asset	Liability
Interest rate risk	Variable interest rate debentures denominated in Korean won	-	69,944	-	3,963	-	4,700
Interest rate and foreign exchange risk	Variable interest rate debentures denominated in foreign currency	-	601,067	16,244	20,429	6,426	-
Foreign exchange risk	Fixed interest rate debentures denominated in foreign currency	-	222,866	7,170	-	5,802	-
Interest rate risk	Expected bond purchase transaction	-	620	-	620	-	620
Total		-	894,497	23,414	25,012	12,228	5,320

<December 31, 2021>

Risk	Hedged item	Book value		Accumulated cash flow hedge adjustments		Cash flow hedging effect	
		Asset	Liability	Asset	Liability	Asset	Liability
Interest rate risk	Variable interest rate debentures denominated in Korean won	-	129,946	-	559	526	-
Interest rate and foreign exchange risk	Variable interest rate debentures denominated in foreign currency	-	355,382	8,487	-	-	33,874
Foreign exchange risk	Fixed interest rate debentures denominated in foreign currency	-	221,322	-	750	3,242	-
Total		-	706,650	8,487	1,309	3,768	33,874

17-2-4 Cash flow hedged items and gain or loss on valuation of items subject to cash flow hedge for the years ended December 31, 2022 and 2021, are as follows (Korean won in millions):

<December 31, 2022>

Hedged item	Hedging instrument	Gain (loss) on valuation of hedged item	Gain (loss) on valuation of hedging instrument (*)	Ineffective portion of hedge recognized in profit or loss
Variable interest rate debentures denominated in Korean won	Interest swap	(4,700)	4,810	110
Variable interest rate debentures denominated in foreign currency	Currency swap	6,426	(6,327)	99
Fixed interest rate debentures denominated in foreign currency	Currency swap	5,802	(5,802)	—
Expected bond purchase transaction	Bond forwards	(620)	617	(2)
Total		6,908	(6,702)	207

(*) Gain (loss) on valuation of hedging instrument effective for hedging are included in OCI.

<December 31, 2021>

Hedged item	Hedging instrument	Gain (loss) on valuation of hedged item	Gain (loss) on valuation of hedging instrument (*)	Ineffective portion of hedge recognized in profit or loss
Variable interest rate debentures denominated in Korean won, borrowings	Interest swap	526	(508)	18
Interest rate and foreign exchangerisk	Currency swap	(33,874)	34,077	203
Currency risk	Currency swap	3,242	(3,242)	—
Total		(30,106)	30,327	221

(*) Gain (loss) on valuation of hedging instrument effective for hedging are included in OCI.

17-2-5 Net investment hedged items and gain or loss on valuation of items subject to net investment hedge for the years ended December 31, 2022 and 2021 are as follows (Korean won in millions):

<December 31, 2022>

Hedged item	Hedging instrument	Gain (loss) on valuation of hedged item	Gain (loss) on valuation of hedging instrument	Ineffective portion of hedge recognized in profit or loss
Net investment in foreign operation (foreign currency risk)	Debentures denominated in foreign currencies	24,527	(24,527)	—
Net investment in foreign operation (exchange differences on translation of foreign operations)	Currency forwards	10,273	(10,273)	—
Net investment in foreign operation (exchange differences on translation of foreign operations)	Borrowings denominated in foreign currencies	(6,559)	6,559	—
Total		28,241	(28,241)	—

<December 31, 2021>

Hedged item	Hedging instrument	Gain (loss) on valuation of hedged item	Gain (loss) on valuation of hedging instrument	Ineffective portion of hedge recognized in profit or loss
Net investment in foreign operation (foreign currency risk)	Debentures denominated in foreign currencies	56,259	(56,259)	—

17-3 Details of the average hedging ratio of future nominal cash flow as of December 31, 2022 and 2021, are as follows (Korean won in millions):

<December 31, 2022>

(Korean won in millions)

Classification	1 year	2 years	2 years	4 years	5 years	After 5 years	Total
Fair value hedge:							
Nominal value of hedged items	536,350	1,375,348	—	1,435,980	760,380	582,768	4,690,826
Nominal value of hedging instrument	541,918	1,375,348	—	1,435,980	760,380	582,768	4,696,394
Rate of average hedging	99.14%	100.36%	—	99.95%	102.32%	100.00%	100.03%
Cash flow hedge:							
Nominal value of cash flow hedge	221,778	—	324,482	307,641	—	50,000	903,901
Nominal value of hedging instrument	221,778	—	324,482	307,641	—	50,000	903,901

Classification	1 year	2 years	2 years	4 years	5 years	After 5 years	Total
Rate of average hedging	100.00%	–	100.00%	100.00%	–	100.00%	100.00%
Net investment hedges of foreign operations:							
Nominal value of hedged items	511,355	576,205	–	224,713	–	–	1,312,273
Nominal value of hedging instrument	511,355	576,205	–	224,713	–	–	1,312,273
Rate of average hedging	99.42%	100.00%	–	100.00%	–	–	99.78%

<December 31, 2021>

(Korean won in millions)

Classification	1 year	2 years	2 years	4 years	5 years	After 5 years	Total
Fair value hedge:							
Nominal value of hedged items	409,380	467,116	1,304,256	–	1,382,470	806,780	4,370,002
Nominal value of hedging instrument	414,974	467,116	1,304,256	–	1,382,470	806,780	4,375,596
Rate of average hedging	98.65%	99.75%	99.66%	–	99.90%	100.00%	99.77%
Cash flow hedge:							
Nominal value of cash flow hedge	228,188	207,463	–	–	221,691	50,000	707,342
Nominal value of hedging instrument	228,188	207,463	–	–	221,691	50,000	707,342
Rate of average hedging	100.00%	100.00%	–	–	100.00%	100.00%	100.00%
Net investment hedges of foreign operations:							
Nominal value of hedged items	–	–	–	–	–	779,488	779,488
Nominal value of hedging instrument	–	–	–	–	–	779,488	779,488
Rate of average hedging	–	–	–	–	–	100.00%	100.00%

17-4 Hedging relationships affected by Interbank Offered Rate ("IBOR") Reform

17-4-1 The exposure to hedging relationships due to the Group's IBOR Reform as of December 31, 2022 and 2021, is as follows (Korean won in millions):

The USD LIBOR interest rate will be replaced by a Secure Overnight Financing Rate ("SOFR") based on actual transactions. And the KRW Certificate of Deposit ("CD") rate can be replaced by the Risk Free Rate ("RFR") in case of an emergency in the long run. In this hedging relationship, the Group assumed that the spread based on a SOFR would be similar to that included in the interest rate swap used as a hedging instrument and no other changes were assumed.

<December 31, 2022>

(Korean won in millions)

Interest index	Currency	Book value of non-derivative financial liabilities (*)	Nominal value of hedging instruments (*)
KRW 91 CD	KRW	280,967	380,000
USD 1M LIBOR	USD	221,742	221,778
USD 3M LIBOR	USD	3,257,616	3,508,155

(*) It contains the amount prior to the time when the LIBOR was calculated.

<December 31, 2021>

(Korean won in millions)

Interest index	Currency	Book value of non-derivative financial liabilities (*)	Nominal value of hedging instruments (*)
KRW 91 CD	KRW	433,317	460,000
USD 1M LIBOR	USD	355,382	355,650
USD 3M LIBOR	USD	3,716,846	3,699,172

(*) It contains the amount prior to the time when the LIBOR was calculated.

17-4-2 The nominal amount and weighted average maturity of derivatives that will be affected by the IBOR reform for transition to a SOFR basis as of December 31, 2022 and 2021, (Korean won in millions, year):

<December 31, 2022>

(Korean won in millions)

Interest index	Currency	Nominal value of derivatives	Weighted average of remaining life
KRW 91 CD	KRW	380,000	16.74
USD 1M LIBOR	USD	221,778	0.25
USD 3M LIBOR	USD	3,508,155	3.48

(*) It contains the amount prior to the time when the LIBOR was calculated.

<December 31, 2021>

(Korean won in millions)

Interest index	Currency	Nominal value of derivatives	Weighted average of remaining life
KRW 91 CD	KRW	460,000	14.80
USD 1M LIBOR	USD	355,650	1.07
USD 3M LIBOR	USD	3,699,172	4.03

(*) It contains the amount prior to the time when the LIBOR was calculated.

18. Investments in associates and joint ventures

18-1 Details of investments in associates and joint ventures

Details of investments in associates and joint ventures as of December 31, 2022 and 2021 are as follows (Korean won in millions):

Classification	Type	Country	Date of financial statements	Ownership (%)		Book value	
				December 31, 2022	December 31, 2021	December 31, 2022	December 31, 2021
Bank for Investment and Development of Vietnam ("BIDV") (*1)	Associates	Vietnam	December 31, 2022	15.0	15.0	1,641,419	1,441,797
Bank of Jilin (*1)	Associates	China	December 31, 2022	11.9	11.9	877,490	853,877
HORIZON PRIVATE EQUITY FUND (*4)	Associates	Korea	December 31, 2022	80.2	80.2	177,775	233,270
Beijing Langa Asset Management Co., Ltd.	Associates	China	December 31, 2022	21.9	21.9	96,647	96,672
KEB Hana-KMC Unicorn Fund of Funds (*4)	Associates	Korea	December 31, 2022	90.9	90.9	98,244	72,528
Toss Bank Co., Ltd. (*1)	Associates	Korea	December 31, 2022	9.3	10.0	97,371	49,125
Hana Digital Transformation Fund(*4)	Associates	Korea	December 31, 2022	57.9	57.9	55,939	51,169
Hana-Capstone AI Platform Fund(*4)	Associates	Korea	December 31, 2022	60.9	60.9	48,812	25,000
Hana UBS Asset Management	Associates	Korea	December 31, 2022	49.0	49.0	35,660	35,674
KORAMCO THE ONE REIT (*1)	Associates	Korea	December 31, 2022	9.9	19.1	27,797	36,107
PT. SINARMAS HANA FINANCE (*3)	Joint ventures	Indonesia	December 31, 2022	85.0	85.0	24,068	22,338
Hana Power Infra 1st Private Equity Fund(*1)	Associates	Korea	December 31, 2022	7.0	7.0	20,110	21,204
Hana Innovation Venture Scale-up Fund	Associates	Korea	December 31, 2022	46.2	46.2	25,610	20,184
KIAMCO Daegu Complex Development Fund(*4)	Associates	Korea	December 31, 2022	95.0	95.0	19,091	18,971
Curious Solution Financial Stability Private Investment Joint Company	Associates	Korea	December 31, 2022	20.4	32.7	9,989	15,972
Genesis Environment Energy No. 6 Private Equity Fund	Associates	Korea	December 31, 2022	28.5	39.9	9,746	14,694
Gyeonggi Hana Turn around Fund No. 2	Associates	Korea	December 31, 2022	44.5	44.5	16,399	11,883
Mirae Credit Information Services Corp	Associates	Korea	December 31, 2022	31.0	31.0	11,647	11,481
YH Leisure Development Co., Ltd.(*1)	Associates	Korea	December 31, 2022	12.8	12.8	12,281	11,081
New Deal Extension New Technology Fund No. 1(*4)	Associates	Korea	December 31, 2022	50.0	50.0	15,269	10,806

Classification	Type	Country	Date of financial statements	Ownership (%)		Book value	
				December 31, 2022	December 31, 2021	December 31, 2022	December 31, 2021
All Together Korea Fund5 (*4)	Associates	Korea	December 31, 2022	100.0	100.0	10,244	10,070
Taurus Cloud Fund	Associates	Korea	December 31, 2022	27.1	27.1	9,417	9,391
Civic Center PFV(*1), (*2)	Associates	Korea	June 30, 2022	13.7	13.7	7,800	8,441
Genesis Environment Energy No. 3 Private Equity Fund	Associates	Korea	December 31, 2022	44.8	44.8	7,567	7,651
Dream Island(*1)	Associates	Korea	December 31, 2022	10.2	10.2	4,443	6,817
2018 Hana-Magna Start-up fund	Associates	Korea	December 31, 2022	21.9	21.9	6,086	6,556
Hana Ever Best Corporation Financial Stability Private Investment Co., Ltd.	Associates	Korea	December 31, 2022	20.1	20.1	11,768	5,835
Finnq Co., Ltd.(*7)	Joint ventures	Korea	–	–	51.0	–	7,664
Lakebridge The Growth Capital PEF1	Associates	Korea	December 31, 2022	23.5	23.5	5,552	5,749
F&U Credit Information(*2)	Associates	Korea	November 30, 2022	40.0	40.0	7,105	5,722
GFI ESG the 1st Private Equity Fund(*1)	Associates	Korea	December 31, 2022	0.3	15.0	200	10,191
Korea Credit Bureau(*1)	Associates	Korea	December 31, 2022	9.0	9.0	5,625	8,997
Templeton Hana Asset Management Co., Ltd.	Associates	Korea	December 31, 2022	29.8	29.8	4,177	3,828
CM International Financing Leases	Associates	China	December 31, 2022	25.0	25.0	1,629	2,149
Somesevit Co., Ltd. (*1), (*5)	Associates	Korea	December 31, 2022	1.9	1.9	–	–
MIDAN City Development Co., Ltd. (*1), (*5)	Associates	Korea	March 31, 2018	2.2	2.2	–	–
Company KStartup Winwin fund	Associates	Korea	December 31, 2022	23.8	23.8	2,356	5,215
BSK-6 Patent Technology Investment Association	Associates	Korea	December 31, 2022	20.0	20.0	2,748	2,559
Harvest Private Equity Fund Specializing in Start-Up and Venture Business I	Associates	Korea	December 31, 2022	27.3	27.3	2,803	2,876
Sinsa Station Complex Development PFV Co., Ltd. (*1)	Associates	Korea	December 31, 2022	9.0	9.0	364	451
Cheongna Medipolis PFV Co., Ltd. (*1)	Associates	Korea	December 31, 2022	12.4	12.4	1,891	2,865
NPX-Welcome Metaverse Contents fund (*4)	Associates	Korea	December 31, 2022	50.0	50.0	1,956	2,000
Shinjin International Corporation (*2) (*5)	Associates	Korea	December 31, 2022	24.2	24.2	–	–
KG fashion (*2) (*5)	Associates	Korea	December 31, 2022	20.5	20.5	–	–
A&D Credit Information Co., Ltd. (*1) (*2)	Associates	Korea	November 30, 2022	13.1	13.1	2,376	2,322
Hyoje PFV CO., LTD	Associates	Korea	December 31, 2022	20.0	20.0	4,579	4,674
			December				

Classification	Type	Country	Date of financial statements	Ownership (%)		Book value	
				December 31, 2022	December 31, 2021	December 31, 2022	December 31, 2021
Metheus Private Equity Real Estate Fund 10	Associates	Korea	31, 2022	23.0	–	2,037	–
Hana Capital-Capstone Venture Fund III(*4)	Associates	Korea	December 31, 2022	56.8	56.8	2,445	2,483
Hana-KDBC, Capstone Venture Fund (*4)	Associates	Korea	December 31, 2022	50.0	50.0	3,557	3,630
KCLAMS-Meta Fund No. 2	Associates	Korea	December 31, 2022	48.5	48.5	7,564	4,979
2019 Capstone Venture Fund	Associates	Korea	December 31, 2022	27.8	27.8	1,904	1,923
Smart Hana-K& Green New Deal No. 1 Fund	Associates	Korea	December 31, 2022	48.9	48.9	10,686	4,831
Hana-Magna Growth Booster Fund (*4)	Associates	Korea	December 31, 2022	50.0	50.0	14,373	7,505
Nautic Green Innovation ESG Co-investment No. 1 Private Equity Fund	Associates	Korea	December 31, 2022	30.1	–	4,922	–
Meta Liquifying Venture Asset 2nd Private Equity Fund	Associates	Korea	December 31, 2022	21.4	–	2,968	–
Glenwood Credit Private Equity Fund II	Associates	Korea	December 31, 2022	22.8	–	33,118	–
Gunsan BIO Energy Co., Ltd.(*) (*5)	Associates	Korea	December 31, 2022	18.9	18.9	–	–
Synergy-Incus Venture Business Fund No. 1	Associates	Korea	December 31, 2022	22.0	22.0	–	–
GMIHB Co., Ltd. (*) (*2)	Associates	Korea	September 30, 2022	19.9	19.9	33,035	–
Lotte Ventures Corp	Associates	Korea	December 31, 2022	20.0	20.0	6,024	5,187
DA Value-up Fund No. 2	Associates	Korea	December 31, 2022	33.3	33.3	223	944
Gwacheon Jisan Octa PFV., Ltd. (*) (*2)	Associates	Korea	November 30, 2022	19.2	19.2	1,375	1,279
DangsandongPFV Co., Ltd. (*) (*2)	Associates	Korea	September 30, 2022	5.0	5.0	250	298
Dream Island Leisure (*)	Associates	Korea	December 31, 2022	19.9	19.9	7,381	5,392
EBEST Hitech Fund No. 1	Associates	Korea	December 31, 2022	36.6	36.6	936	952
UBI+HBIC New Technology Investment Partnership II	Associates	Korea	December 31, 2022	27.0	27.0	1,804	1,821
UNION Proptech Fund I	Associates	Korea	December 31, 2022	22.1	22.1	2,854	2,895
Daegu MBC Development PFV Co. Ltd.(*) (*2) (*5)	Associates	Korea	November 30, 2022	15.1	15.1	–	627
Changio Innovation CO., Ltd. (*) (*2) (*5)	Associates	Korea	December 31, 2022	7.3	7.3	–	–
Dowon Asset Development Co., Ltd. (*) (*2)	Associates	Korea	December 31, 2022	19.9	19.9	–	1,242
MERITZ-KCLAMS Fund No. 1	Associates	Korea	December 31, 2022	22.1	22.1	969	984
Hana Must Seven Special Purpose Acquisition Company (*) (*2)	Associates	Korea	September 30, 2022	0.1	0.1	7	7
Hana Financial Sixteenth Special Purpose Acquisition Company (*) (*2)	Associates	Korea	September 30, 2022	0.2	0.2	18	18

Classification	Type	Country	Date of financial statements	Ownership (%)		Book value	
				December 31, 2022	December 31, 2021	December 31, 2022	December 31, 2021
DGH New Technology Investment Association No. 1	Associates	Korea	December 31, 2022	23.3	23.3	967	985
Hana Bio New Technology Fund No. 2	Associates	Korea	December 31, 2022	30.7	30.7	965	986
Hana Bio New Technology Fund No. 3	Associates	Korea	December 31, 2022	44.1	44.1	964	985
Forest of Suseong (*1) (*2) (*5)	Associates	Korea	December 31, 2022	10.0	10.0	–	–
BM Ventures Fund No. 1	Associates	Korea	December 31, 2022	23.1	23.1	1,449	1,481
MC Southeast Asia Fund No. 1	Associates	Korea	December 31, 2022	24.8	24.8	886	904
Hana Hoechang Private Equity Fund No. 1 (*4)	Associates	China	December 31, 2022	60.0	60.0	110	114
Hana Financial Nineteenth Special Purpose Acquisition Company (*1) (*2)	Associates	Korea	December 31, 2022	0.1	0.1	9	9
Hana Bio New Technology Fund No. 1-1(*4)	Associates	Korea	December 31, 2022	61.3	61.3	1,585	1,984
Hana Smart Logistics New Technology Fund	Associates	Korea	December 31, 2022	22.8	22.8	241	1,982
Cornerstone Mutual Growth VI Fund	Associates	Korea	December 31, 2022	25.0	25.0	971	992
People Korea Two (*1) (*2) (*5)	Associates	Korea	September 30, 2022	13.0	13.0	–	–
Hana Financial Twentieth Special Purpose Acquisition Company (*1) (*2)	Associates	Korea	September 30, 2022	0.0	2.0	2	2
C47 Investment-Contents Wavve Original Contents I Startup and Venture Private Equity Fund (*2)	Associates	Korea	November 30, 2022	20.5	20.5	966	1,000
Irgok Rental Housing OO., Ltd. (*1) (*2) (*5)	Associates	Korea	November 30, 2022	19.9	19.9	–	–
Daeyoung Networks Co., Ltd. (*1) (*2) (*5)	Associates	Korea	December 31, 2022	19.8	19.8	–	245
Hana Financial Twenty-first Special Purpose Acquisition Company (*1) (*2)	Associates	Korea	September 30, 2022	0.1	0.7	18	11
S&S-Redwood India Agri-tech Fund	Associates	Korea	December 31, 2022	36.0	36.0	1,957	1,995
KCLAMS AIM Artificial Intelligence Fund No. 1	Associates	Korea	December 31, 2022	36.9	36.9	974	1,000
K& Secondary No5 Fund	Associates	Korea	December 31, 2022	22.2	22.2	977	1,000
NPX-Welcome Metaverse Contents fund	Associates	Korea	December 31, 2022	42.6	–	978	–
Hana Financial Twenty-second Special Purpose Acquisition Company (*1) (*2)	Associates	Korea	September 30, 2022	0.2	–	18	–
STIC Healthcare I Private Equity Fund	Associates	Korea	December 31, 2022	23.8	–	983	–
NH-Deep Dive Smart Logistics Fund	Associates	Korea	December 31, 2022	37.6	–	1,966	–
Hana X Bio New Technology Fund	Associates	Korea	December 31, 2022	27.5	–	21,568	–
Octave Tech Investment L25 LLC	Associates	Korea	December 31, 2022	23.8	–	4,029	–
			December				

Classification	Type	Country	Date of financial statements	Ownership (%)		Book value	
				December 31, 2022	December 31, 2021	December 31, 2022	December 31, 2021
ST-CENTUM Fund No. 2	Associates	Korea	31, 2022	27.0	—	1,966	—
The Hahm Green Energy Fund	Associates	Korea	December 31, 2022	30.2	—	12,778	—
EBEST HBIC Fund No.83	Associates	Korea	December 31, 2022	23.5	—	2,797	—
Infinity ESG Private Equity Fund No. 2	Associates	Korea	December 31, 2022	31.5	—	13,221	—
Choice & Soyeon Construction Co., Ltd. (*2)	Associates	Korea	March 23, 2022	20.0	—	86	—
Daeyoung DUM PFV Co., Ltd	Associates	Korea	December 31, 2022	20.0	—	1,212	—
Hana Financial Twenty-third Special Purpose Acquisition Company (*1) (*2)	Associates	Korea	September 30, 2022	0.2	—	21	—
IMVGlobalCircularEconomyLPF(*2)	Associates	Korea	September 30, 2022	25.4	—	2,803	—
JB EBEST Autonomus The Current Fund No. 3	Associates	Korea	December 31, 2022	22.8	—	987	—
Hana Financial Twenty-fourth Special Purpose Acquisition Company (*1) (*2)	Associates	Korea	September 30, 2022	0.0	—	4	—
Hana Financial Twenty-fifth Special Purpose Acquisition Company (*1) (*2)	Associates	Korea	June 30, 2022	0.3	—	7	—
KDBC-Harvest Fund No. 1	Associates	Korea	December 31, 2022	22.1	—	25,112	—
Eugene Asia Food Tech Fund-1	Associates	Korea	December 31, 2022	25.0	—	1,045	—
Cheonan JDC PFV Co., Ltd. (*1)	Associates	Korea	December 31, 2022	19.2	—	1,149	—
K&Fashion No. 1 Fund	Associates	Korea	December 31, 2022	24.9	—	992	—
HMC-Primus Mobility New Tech Fund	Associates	Korea	December 31, 2022	29.9	—	2,008	—
UNIST-ATP Start-up Fund No. 1	Associates	Korea	December 31, 2022	23.8	—	985	—
BIDV Securities Joint Stock Company	Associates	Vietnam	December 31, 2022	35.0	—	106,195	—
Hana Financial Twenty-sixth Special Purpose Acquisition Company (*1)	Associates	Korea	December 31, 2022	1.9	—	15	—
Hana Financial Twenty-seventh Special Purpose Acquisition Company (*1) (*2)	Associates	Korea	November 1, 2022	1.6	—	15	—
Hanwha-Samsung Healthcare No. 1 Venture Fund	Associates	Korea	December 31, 2022	39.2	—	1,993	—
MS-KAI Contents Fund 1	Associates	Korea	December 31, 2022	27.0	—	1,989	—
Anda Mobility Infrastructure Fund No. 1	Associates	Korea	December 31, 2022	26.3	—	1,997	—
ACP Venture Blind Association No. 1	Associates	Korea	December 31, 2022	22.2	—	999	—
Srilegate Kairos Sub 1 PEF	Associates	Korea	December 31, 2022	44.7	—	1,699	—
Gongqingcheng Zhongyuan Hana Equity Investment Partnership(Limited Partnership)	Associates	China	December 31, 2022	29.2	—	5,238	—
Pushan Hana(Hainan)Technology Co., Ltd	Associates	China	November 30, 2022	39.0	—	1,533	—

Classification	Type	Country	Date of financial statements	Ownership (%)		Book value	
				December 31, 2022	December 31, 2021	December 31, 2022	December 31, 2021
Shenzhen Hana Future Energy Investment Partnership (Limited Partnership) (*1)	Associates	China	December 31, 2022	0.0	–	2	–
Hana Qualified Investor Private Real Estate Investment Trust No. 41-2	Associates	Korea	December 31, 2022	35.9	35.9	424	1,576
Hana Alternative Special Investment Private Trust No. 161	Associates	Korea	December 31, 2022	24.2	24.2	1,163	1,163
Hana Alternative Investment Real Estate Private Trust No. 189	Associates	Korea	December 31, 2022	26.5	–	2,129	–
Hana Alternative Investment Blind General Private Real Estate Investment Trust No. 172	Associates	Korea	December 31, 2022	20.0	–	794	–
Hana Ventures No. 1 Investment Fund(*1)	Associates	Korea	December 31, 2022	9.1	9.1	348	348
Hana Ventures No. 5 Investment Fund	Associates	Korea	December 31, 2022	33.8	33.8	1,954	1,985
Digital Innovation Growth Fund	Associates	Korea	December 31, 2022	23.1	23.1	2,883	2,967
Hana Untact Digital Innovation Fund(*4)	Associates	Korea	December 31, 2022	57.4	57.4	25,698	9,134
Hana K-NewDeal Unicorn Fund (*4)	Associates	Korea	December 31, 2022	60.8	–	28,118	–
HS INVESTMENTS EU11 L.P.(*2)	Associates	England	September 30, 2022	33.6	33.6	4,916	4,819
Apollon Private Equity Fund	Associates	Korea	December 31, 2022	29.9	29.9	4,223	1,958
Heat Private Equity Fund	Associates	Korea	December 31, 2022	20.5	20.5	2,550	2,552
NE HK 52 Ltd.(*4)	Associates	Hongkong	December 31, 2022	71.6	–	50,656	–
Axis Bio Fund (*6)	Associates	Korea	December 31, 2022	–	31.3	–	754
Smart score Co., Ltd. (*6)	Associates	Korea	–	–	5.7	–	5,078
Genesis Environment Energy No. 1 Private Equity Fund (*6)	Associates	Korea	–	–	29.7	–	4,699
Hana Financial Seventeen Special Purpose Acquisition Company (*6)	Associates	Korea	–	–	0.1	–	19
Hana-History No1 Investment Fund (*6)	Associates	Korea	–	–	36.5	–	5,452
Hana Bio New Technology Fund No. 1 (*6)	Associates	Korea	–	–	58.0	–	971
Odin 2 LLC (*6)	Associates	Korea	–	–	26.7	–	–
Inhee (*6)	Associates	Korea	–	–	21.8	–	–
Hana Financial Fifteenth Special Purpose Acquisition Company (*6)	Associates	Korea	–	–	0.2	–	20
Hana Financial Fourteen Special Purpose Acquisition Company (*6)	Associates	Korea	–	–	0.2	–	19
Total						3,917,787	3,282,042

(*1) The Group exercises significant influence on the investee's Board of Directors and therefore, is included as part of affiliated companies under the equity method.

(*2) The financial statements for the current period were not available; therefore,

the financial statements from the recent period were used and the effect from all material transactions or events from the current period were evaluated and appropriately reflected.

(*3) Equity method is applied since the Group cannot individually control the investees, and other shareholders' consent is required to make important decisions for the company.

(*4) Because the Group cannot exercise control over the company in the decision-making body, it was classified as an investment in the associates.

(*5) As the balances of investment accounts became below zero, the equity method application is suspended to them.

(*6) Excluded from investments in associates and joint ventures because the Group disposes all or some of the shares in them or lose significant influence on them.

(*7) Excluded from investments in associates and joint ventures through the acquisition of the remaining shares 49% for the year December 31, 2022.

Balances of investment accounts became zero so equity method was no longer applied. In this regard, unrecognized amount of changes in equity for the year ended December 31, 2022 and unrecognized accumulated amount of changes in equity as of December 31, 2021 are as follows

(Korean won in millions):

Classification	Ownership (%)	Unrecognized changes in equity for the year December 31, 2022	Unrecognized accumulated changes in equity as of December 31, 2021
Somesevit Co., Ltd.	1.9	(69)	(1,458)
Midan City Development Co., Ltd.	2.2	–	(523)
Gunsan Bio Energy Co., Ltd.	18.9	(122)	(3,864)
GMHB Co., Ltd.	19.9	22,286	–
Changjo Innovation CO., Ltd.	7.3	(2,176)	(970)
Forest of Suseong	10.0	(540)	(3,718)
People Korea Two Co., Ltd.	13.0	(3,737)	(2,721)
Irgok Rental Housing CO., Ltd.	19.9	(553)	(514)
Daegu MBC Development PFV Co. Ltd.	15.1	(10,470)	–

Classification	Ownership (%)	Unrecognized changes in equity for the year December 31, 2022	Unrecognized accumulated changes in equity as of December 31, 2021
Daeyoung Networks Co., Ltd.	19.8	(1,416)	—

18-2 Condensed financial information of investments in associates and joint ventures

The condensed financial information of investments in associates and joint ventures as of December 31, 2022 and 2021, is as follows (Korean won in millions):

<December 31, 2022>

(Korean won in millions)

Classification	Assets	Liabilities	Equity	Revenue	Net income (loss)	Other comprehensive income (loss)	Comprehensive income(loss)
BIDV (*1)	114,300,714	108,381,237	5,919,477	8,100,357	1,071,496	(62,742)	1,008,754
Bank of Jilin	99,356,297	92,088,037	7,268,260	4,248,227	409,505	(47,294)	362,211
HORIZON PRIVATE EQUITY FUND	226,400	5,453	220,947	37	(13,684)	—	(13,684)
Beijing Langa Asset Management Co., Ltd.	481,800	34,098	447,702	47,954	23,524	427	23,951
KEB Hana-KMC Unicorn Fund of Funds	108,429	361	108,068	1,440	1,077	(465)	612
Toss Bank Co., Ltd.	23,398,698	22,432,155	966,543	755,905	(244,515)	(123,920)	(368,435)
Hana Digital Transformation Fund	98,380	1,684	96,696	24,428	16,227	—	16,227
Hana-Capstone AI Platform Fund	80,570	420	80,150	142	(1,502)	—	(1,502)
Hana UBS Asset Management	127,034	54,260	72,774	28,323	7,747	24	7,771
KORAMCO THE ONE REIT	519,597	312,655	206,942	27,499	9,974	—	9,974
PT. SINARIMAS HANA FINANCE	113,883	85,812	28,071	17,664	2,496	—	2,496
Hana Power Infra 1st Private Equity Fund	287,905	621	287,284	10,083	—	—	—
Hana Innovation Venture Scale-up Fund	55,807	320	55,487	2,101	(1,244)	—	(1,244)
KIAMCO Daegu Complex Development Fund	20,102	7	20,095	1,039	993	—	993
Curious Solution Financial Stability Private Investment Joint Company No. 1	49,191	347	48,844	3,668	3,697	—	3,697
Genesis Environment No. 6 Private Equity Fund	30,515	93	30,422	1	(542)	—	(542)
Gyeonggi Hana Turn around Fund No. 2	37,038	141	36,897	96	(3,341)	—	(3,341)
Mirae Credit Information Services Corp	57,637	20,065	37,572	76,293	2,495	—	2,495
YH Leisure Development Co., Ltd.	209,329	113,537	95,792	23,050	9,359	—	9,359
New Deal Extension New Technology Fund No. 1	30,539	—	30,539	39	(1,073)	—	(1,073)
All Together Korea Fund5	10,246	1	10,245	149	144	—	144
Taurus Cloud Fund	34,675	3	34,672	—	(171)	—	(171)
Civic Center PFV	49,518	6	49,512	—	(1,700)	—	(1,700)

Classification	Assets	Liabilities	Equity	Revenue	Net income (loss)	Other comprehensive income (loss)	Comprehensive income(loss)
Genesis Environment No. 3 Private Equity Fund	16,915	5	16,910	1,500	1,212	—	1,212
Dream Island	173,014	130,868	42,146	104,113	(23,339)	—	(23,339)
2018 Hana- Magna Startup Fund	28,449	695	27,754	130	(2,148)	—	(2,148)
Hana Ever Best Corporation Financial Stability Private Investment Co., Ltd.	59,104	490	58,614	1,205	(498)	(56)	(554)
Lakebridge The Growth Capital PEF1	23,544	—	23,544	627	251	—	251
F&U Credit Information	28,653	10,889	17,764	65,798	2,940	520	3,460
GFI ESG the 1st Private Equity Fund	68,188	—	68,188	2,925	1,794	—	1,794
Korea Credit Bureau	155,165	100,065	55,100	144,907	13,809	—	13,809

(* 1) Financial information of BIDV is reflecting the purchase price allocation ("PPA") valuation and generally accepted accounting principle ("GAAP") adjustments.

<December 31, 2021>

(Korean won in millions)

Classification	Assets	Liabilities	Equity	Revenue	Net income (loss)	Other comprehensive income (loss)	Comprehensive income(loss)
Bank of Jilin	88,184,828	81,116,728	7,068,100	3,702,700	371,737	54,571	426,308
Korea Credit Bureau	113,859	21,284	92,575	127,751	20,486	—	20,486
CM International Financing Leases	2,007,878	1,951,718	56,160	73,361	(56,735)	4,997	(51,738)
Beijing Langa Asset Management Co., Ltd.	474,244	26,676	447,568	28,444	32,066	300	32,366
Company KStartup Winwin Fund	22,160	257	21,903	747	484	(368)	116
KEB Hana-KMC Unicorn Fund of Funds	79,960	179	79,781	59	(340)	—	(340)
BIDV	92,956,813	87,629,602	5,327,211	6,348,533	800,354	9,760	810,114
PT. SINARMAS Hana Finance	98,012	71,762	26,250	13,618	1,804	—	1,804
Hana UBS Asset Management	125,496	52,693	72,803	28,873	8,618	(273)	8,345
Hana Power Infra 1st Private Equity Fund	303,524	606	302,918	9,043	(11,523)	—	(11,523)
KORAMCO THE ONE REIT (formerly known as KOCREF REIT 30)	521,373	407,750	113,623	2,181	296	—	296
Lotte Ventures Corp. (previously, Lotte Accelerator Corporation)	19,800	717	19,083	4,192	522	(1,389)	(867)
2018 Hana-Magna Start-up fund	31,147	1,245	29,902	3,796	2,994	—	2,994
Dream Island	274,059	208,573	65,486	—	(972)	—	(972)
Hana Digital Transformation Fund	89,365	915	88,450	15,691	12,531	—	12,531
Mirae Credit Information Services Corp	48,985	14,948	34,037	57,391	2,355	—	2,355
Finnq Co., Ltd.	23,887	8,858	15,029	5,938	(12,274)	—	(12,274)
Lakebridge The Growth Capital PEF1	24,480	2	24,478	570	277	—	277
All Together Korea Fund5	10,073	1	10,072	53	47	—	47
HORIZON PRIVATE EQUITY FUND	292,739	2,743	289,996	—	(3,002)	—	(3,002)
Toss Bank Co., Ltd.	14,348,062	13,906,113	441,949	37,066	(81,653)	3,753	(77,900)
Curious Solution Financial Stability Private Investment Joint Company No. 1	49,159	344	48,815	4,392	3,697	—	3,697
YH Leisure Development Co., Ltd.	206,221	119,788	86,433	21,022	13,111	—	13,111

Classification	Assets	Liabilities	Equity	Revenue	Net income (loss)	Other comprehensive income (loss)	Comprehensive income(loss)
Civic Center PFV	51,389	177	51,212	–	(3,820)	–	(3,820)
Hana-History No. 1 Investment Fund	14,920	–	14,920	1	(130)	–	(130)
Templeton Hana Asset Management Co., Ltd. (previously, Darby Hana Infrastructure Fund Management)	16,414	3,569	12,845	6,954	2,164	–	2,164
Dream Island Leisure Co., Ltd.	27,097	2	27,095	–	485	–	485
F&U Credit Information Co., Ltd.	29,394	15,088	14,306	67,668	1,953	(331)	1,622

(*1) Financial information of BIDV is reflecting the PPA valuation and GAAP adjustments.

18-3 Changes in investments in associates and joint ventures

Details of changes in investments in associates and joint ventures for the years ended December 31, 2022 and 2021, are as follows (Korean won in millions):

<2022>

(Korean won in millions)

Classification	Owner ship (%)	Initial book value	Purchase	Replace ment	Dividend	Book value before valuation	Valuation of equity method		Disposal	Impairment loss	Book value
							Gain or loss	Changes in equity			
BIDV	15.0	1,441,797	–	–	–	1,441,797	160,724	38,898	–	–	1,641,419
Bank of Jilin	11.9	853,877	–	–	–	853,877	49,900	(26,287)	–	–	877,490
HORIZON PRIVATE EQUITY FUND	80.2	233,270	–	–	(28,817)	204,453	(11,128)	11,215	(26,765)	–	177,775
Beijing Langa Asset Management Co., Ltd.	21.9	96,672	–	–	(2,888)	93,784	5,030	(2,167)	–	–	96,647
KEB Hana-KMC Unicorn Fund of Funds	90.9	72,528	25,130	–	–	97,658	1,009	(423)	–	–	98,244
Toss Bank Co., Ltd.	9.3	49,125	79,753	–	–	128,878	(23,982)	(7,525)	–	–	97,371
Hana Digital Transformation Fund	57.9	51,169	–	–	–	51,169	9,387	–	(4,617)	–	55,939
Hana-Capstone AI Platform Fund	60.9	25,000	25,000	–	–	50,000	(915)	–	(273)	–	48,812
Hana UBS Asset Management	49.0	35,674	–	–	(3,822)	31,852	3,796	12	–	–	35,660
KORAMOO THE ONE REIT	9.9	36,107	–	–	(1,727)	34,380	1,123	(4)	(7,702)	–	27,797
PT. SINARMAS HANA FINANCE	85.0	22,338	–	–	–	22,338	2,380	(650)	–	–	24,068
Hana Power Infra 1st Private Equity Fund	7.0	21,204	–	–	–	21,204	(559)	(535)	–	–	20,110
Hana Innovation Venture Scale-up Fund	46.2	20,184	6,000	–	–	26,184	(574)	–	–	–	25,610
KIAMOO Daegu Complex Development Fund	95.0	18,971	–	–	(825)	18,146	945	–	–	–	19,091
Curious Solution Financial Stability Private Investment Joint Company	20.4	15,972	–	–	(1,200)	14,772	1,190	–	(5,973)	–	9,989

Classification	Owner ship (%)	Initial book value	Purchase	Replacement	Dividend	Book value before valuation	Valuation of equity method		Disposal	Impairment loss	Book value
							Gain or loss	Changes in equity			
No. 1											
Genesis Environment No. 6 Private Equity Fund	28.5	14,694	5,704	(6,510)	-	13,888	(178)	-	(3,964)	-	9,746
Gyeonggi Hana Turn around Fund No. 2	44.5	11,883	6,000	-	-	17,883	(1,484)	-	-	-	16,399
Mirae Credit Information Services Corp	31.0	11,481	-	-	(186)	11,295	352	-	-	-	11,647
YH Leisure Development Co., Ltd.	12.8	11,081	-	-	-	11,081	1,200	-	-	-	12,281
New Deal Extension New Technology Fund No. 1	50.0	10,806	5,000	-	-	15,806	(537)	-	-	-	15,269
All Together Korea Fund5	100.0	10,070	62	-	(62)	10,070	174	-	-	-	10,244
Taurus Cloud Fund	27.1	9,391	77	-	-	9,468	(51)	-	-	-	9,417
Civic Center PFV	13.7	8,441	-	-	-	8,441	(641)	-	-	-	7,800
Genesis Environment No. 3 Private Equity Fund	44.8	7,651	-	-	(627)	7,024	543	-	-	-	7,567
Dream Island	10.2	6,817	-	-	-	6,817	(2,374)	-	-	-	4,443
2018 Hana-Magna Start-up fund	21.9	6,556	-	-	-	6,556	(470)	-	-	-	6,086
Hana Ever Best Corporation Financial Stability Private Investment Co., Ltd.	20.1	5,835	6,044	-	-	11,879	(100)	(11)	-	-	11,768
Finnq Co., Ltd.	-	7,664	-	(3,332)	-	4,332	(4,332)	-	-	-	-
Lakebridge The Growth Capital PEF1	23.5	5,749	-	-	(46)	5,703	59	-	(210)	-	5,552
F&U Credit Information	40.0	5,722	-	-	-	5,722	1,175	208	-	-	7,105
GFI ESG the 1st Private Equity Fund	0.3	10,191	200	-	(5)	10,386	5	-	(10,191)	-	200
Korea Credit Bureau	9.0	8,997	-	-	-	8,997	(3,372)	-	-	-	5,625
Others	-	135,125	474,833	(17,148)	(7,260)	585,550	44,871	(13,040)	(93,304)	(3,461)	520,616
Total		3,282,042	633,803	(26,990)	(47,465)	3,841,390	233,166	(309)	(152,999)	(3,461)	3,917,787

<2021>

Classification	Owner ship (%)	Initial book value	Purchase	Replacement	Dividend	Book value before valuation	Valuation of equity method		Disposal	Impairment loss	Book value
							Gain or loss	Changes in equity			
Bank of Jilin	11.9	758,816	-	-	-	758,816	4,656	94,111	(3,706)	-	853,877
Korea Credit Bureau	9.0	7,819	-	-	(90)	7,729	1,268	-	-	-	8,997
OM International Financing Leases	25.0	2,777	-	-	-	2,777	-	-	-	(628)	2,149
Beijing Langa Asset Management Co., Ltd.	21.9	82,176	-	-	(2,281)	79,895	7,747	9,030	-	-	96,672
Company KStartup Winwin Fund	23.8	5,487	-	-	-	5,487	116	(88)	(300)	-	5,215
KEB Hana-KMC Unicorn Fund of Funds	90.9	55,812	18,000	-	-	73,812	(1,284)	-	-	-	72,528
OurCrowd International Invest	-	13,970	-	-	-	13,970	-	-	(13,970)	-	-
Bank for Investment and Development of Vietnam	15.0	1,194,183	-	-	(6,262)	1,187,921	120,053	133,823	-	-	1,441,797
PT. SINARMAS Hana Finance	85.0	20,213	-	-	-	20,213	1,062	1,063	-	-	22,338
Hana UBS Asset Management	49.0	35,107	-	-	(3,523)	31,584	4,224	(134)	-	-	35,674

Classification	Ownership (%)	Initial book value	Purchase	Replacement	Dividend	Book value before valuation	Valuation of equity method		Disposal	Impairment loss	Book value
							Gain or loss	Changes in equity			
Hana Power Infra 1st Private Equity Fund	7.0	22,469	-	(458)	-	22,011	(807)	-	-	-	21,204
KOCREF REIT 30	19.1	36,609	-	-	(1,036)	35,573	262	272	-	-	36,107
Lotte Ventures Corp. (previously, Lotte Accelerator Corporation)	20.0	5,229	-	-	-	5,229	236	(278)	-	-	5,187
Petra 6th Alpha Private Equity Fund	-	14,503	-	-	-	14,503	-	-	(14,503)	-	-
Myoungshin Co., Ltd.	-	22,059	-	(17,141)	-	4,918	-	(4,918)	-	-	-
2018 Hana-Magna Start-up fund	21.9	6,616	-	-	-	6,616	625	-	(685)	-	6,556
Dream Island	10.2	6,910	-	-	-	6,910	(93)	-	-	-	6,817
Fresheasy Co., Ltd.	-	20,811	-	-	-	20,811	(9,612)	(1,956)	(9,243)	-	-
Hana Digital Transformation Fund	57.9	52,880	-	-	-	52,880	7,250	-	(8,961)	-	51,169
Mirae Credit Information Services Corp	31.0	10,072	-	-	(186)	9,886	1,595	-	-	-	11,481
Finnq Co., Ltd.	51.0	13,716	-	-	-	13,716	(6,263)	211	-	-	7,664
Lakebridge The Growth Capital PEF1	23.5	5,949	-	-	(33)	5,916	43	-	(210)	-	5,749
All Together Korea Fund5	100.0	10,023	-	-	-	10,023	47	-	-	-	10,070
HORIZON PRIVATE EQUITY FUND	71.0	215,652	25,655	-	-	241,307	(1,876)	19,427	(25,588)	-	233,270
TossBank Corp. (previously, TOSS INNOVATION CO., LTD.)	10.0	7,500	47,500	-	-	55,000	(6,124)	249	-	-	49,125
Curious Solution Financial Stability Private Investment Joint Company No. 1	32.7	15,995	-	-	(1,232)	14,763	1,209	-	-	-	15,972
YH Leisure Development Co., Ltd.	12.8	9,956	-	-	-	9,956	1,125	-	-	-	11,081
Civic Center PFV	13.7	7,973	-	-	-	7,973	468	-	-	-	8,441
Hana-History No. 1 Investment Fund	36.5	-	5,500	-	-	5,500	(48)	-	-	-	5,452
Templeton Hana Asset Management Co., Ltd. (previously, Darby Hana Infrastructure Fund Management)	29.8	5,937	-	-	(2,980)	2,957	871	-	-	-	3,828
Dream Island Leisure Co., Ltd.	19.9	2	5,969	-	-	5,971	(489)	(90)	-	-	5,392
F&J Credit Information Co., Ltd.	40.0	5,067	-	-	-	5,067	787	(132)	-	-	5,722
Others		59,090	300,043	5,899	(5,578)	359,454	3,932	6,148	(141,196)	14,170	242,508
Total		2,731,378	402,667	(11,700)	(23,201)	3,099,144	130,980	256,738	(218,362)	13,542	3,282,042

18-4 Details of net assets of related companies as of December 31, 2022 and 2021, are as follows (Korean won in million) :

<December 31, 2022>

Classification	Net assets	Ownership (%)	Interest in net assets	Goodwill and others	Book value
BIDV	5,919,477	15.0	887,922	753,497	1,641,419
Bank of Jilin	7,268,259	11.9	866,377	11,113	877,490
HORIZON PRIVATE EQUITY FUND	220,947	80.2	177,129	646	177,775
Beijing Langa Asset Management Co., Ltd.	447,703	21.9	98,181	(1,534)	96,647
KEB Hana-KVC Unicorn Fund of Funds	108,068	90.9	98,244	-	98,244
Toss Bank Co., Ltd.	966,543	9.3	89,792	7,579	97,371

Classification	Net assets	Ownership (%)	Interest in net assets	Goodwill and others	Book value
Hana Digital Transformation Fund	96,696	57.9	55,939	–	55,939
Hana-Capstone AI Platform Fund	80,150	60.9	48,812	–	48,812
Hana UBS Asset Management	72,775	49.0	35,660	–	35,660
KORAMCO THE ONE REIT	206,942	9.9	20,489	7,308	27,797
PT. SINARMAS HANA FINANCE	28,071	85.0	23,861	207	24,068
Hana Power Infra 1st Private Equity Fund	287,284	7.0	20,110	–	20,110
Hana Innovation Venture Scale-up Fund	55,487	46.2	25,610	–	25,610
KIAMCO Daegu Complex Development Fund	20,095	95.0	19,091	–	19,091
Curious Solution Financial Stability Private Investment Joint Company No. 1	48,844	20.4	9,989	–	9,989
Genesis Environment No. 6 Private Equity Fund	30,422	28.5	8,667	1,079	9,746
Gyeonggi Hana Turn around Fund No. 2	36,897	44.5	16,401	(2)	16,399
Mirae Credit Information Services Corp	37,572	31.0	11,647	–	11,647
YH Leisure Development Co., Ltd.	95,792	12.8	12,281	–	12,281
New Deal Extension New Technology Fund No. 1	30,539	50.0	15,269	–	15,269
All Together Korea Fund5	10,245	100.0	10,244	–	10,244
Taurus Cloud Fund	34,672	27.1	9,382	35	9,417
Civic Center PFV	49,511	13.7	6,775	1,025	7,800
Genesis Environment No. 3 Private Equity Fund	16,910	44.8	7,567	–	7,567
Dream Island	42,147	10.2	4,288	155	4,443
2018 Hana-Magna Start-up fund	27,754	21.9	6,071	15	6,086
Hana Ever Best Corporation Financial Stability Private Investment Co., Ltd.	58,614	20.1	11,768	–	11,768
Lakebridge The Growth Capital PEF1	23,544	23.5	5,529	23	5,552
F&U Credit Information	17,763	40.0	7,105	–	7,105
GFI ESG the 1st Private Equity Fund	68,188	0.3	192	8	200
Korea Credit Bureau	55,100	9.0	4,959	666	5,625
Others	–	–	–	–	520,616
Total					3,917,787

<December 31, 2021>

Classification	Net assets	Ownership (%)	Interest in net assets	Goodwill and others	Book value
Bank of Jilin	7,068,100	11.9	842,518	11,359	853,877
Korea Credit Bureau	92,575	9.0	8,332	665	8,997
QIM International Financing Leases	56,160	25.0	14,040	(11,891)	2,149
Beijing Langa Asset Management Co., Ltd.	447,568	21.9	98,152	(1,480)	96,672
Company KStartup Winwin Fund	21,903	23.8	5,215	–	5,215

Classification	Net assets	Ownership (%)	Interest in net assets	Goodwill and others	Book value
KEB Hana-KVIC Unicorn Fund of Funds	79,781	90.9	72,528	–	72,528
BIDV	5,327,211	15.0	799,082	642,715	1,441,797
PT. SINARIMAS Hana Finance	26,250	85.0	22,313	25	22,338
Hana UBS Asset Management	72,803	49.0	35,674	–	35,674
Hana Power Infra 1st Private Equity Fund	302,918	7.0	21,204	–	21,204
Previously, KOCREF REIT 30	113,623	19.1	21,746	14,361	36,107
Lotte Ventures Corp. (previously, Lotte Accelerator Corporation)	19,083	20.0	3,813	1,374	5,187
2018 Hana-Magna Start-up fund	29,902	21.9	6,541	15	6,556
Dream Island	65,486	10.2	6,662	155	6,817
Hana Digital Transformation Fund	88,450	57.9	51,169	–	51,169
Mirae Credit Information Services Corp	34,037	31.0	10,551	930	11,481
Finnq Co., Ltd.	15,027	51.0	7,664	–	7,664
Lakebridge The Growth Capital PEF1	24,478	23.5	5,749	–	5,749
All Together Korea Fund5	10,070	100.0	10,070	–	10,070
HORIZON PRIVATE EQUITY FUND	289,996	71.0	205,804	27,466	233,270
Toss Bank Corp. (previously, TOSS INNOVATION CO., LTD.)	441,949	10.0	44,195	4,930	49,125
Curious Solution Financial Stability Private Investment Joint Company No. 1	48,815	32.7	15,972	–	15,972
YH Leisure Development Co., Ltd.	86,433	12.8	11,081	–	11,081
Civic Center PFV	51,211	13.7	7,008	1,433	8,441
Hana-History No1 Investment Fund	14,920	36.5	5,452	–	5,452
Templeton Hana Asset Management Co., Ltd. (previously, Darby Hana Infrastructure Fund Management)	12,845	29.8	3,828	–	3,828
Dream Island Leisure Co., Ltd.	27,095	19.9	5,392	–	5,392
F&U Credit Information Co., Ltd.	14,306	40.0	5,722	–	5,722
Others	–	–	–	–	242,508
Total					3,282,042

18-5 Details of marketable investment shares in related companies as of December 31, 2022 and 2021, are as follows (Korean won in million, price per share in won) :

<December 31, 2022>

Classification	Market price	Price per share
Bank for Investment and Development of Vietnam	1,572,811	2,073
KORAMCO THE ONE REIT	17,080	4,270

Classification	Market price	Price per share
Hana Must Seven Special Purpose Acquisition Company	8	2,035
Hana Financial Sixteenth Special Purpose Acquisition Company	21	2,060
Hana Financial Nineteen Special Purpose Acquisition Company	11	2,210
Hana Financial Twentieth Special Purpose Acquisition Company	2	2,150
Hana Financial Twenty-first Special Purpose Acquisition Company	20	2,020
Hana Financial Twenty-second Special Purpose Acquisition Company	20	2,015
Hana Financial Twenty-third Special Purpose Acquisition Company	20	2,010
Hana Financial Twenty-fourth Special Purpose Acquisition Company	4	1,995
Hana Financial Twenty-fifth Special Purpose Acquisition Company	9	9,480
BIDV Securities Joint Stock Company	61,417	934

<December 31, 2021>

Classification	Market price	Price per share
Bank for Investment and Development of Vietnam(*)	1,466,651	1,933
Hana Must Seven Special Purpose Acquisition Company	9	2,160
Hana Financial Fourteen Special Purpose Acquisition Company	21	2,115
Hana Financial Fifteenth Special Purpose Acquisition Company	21	2,130
Hana Financial Sixteenth Special Purpose Acquisition Company	22	2,160
Hana Financial Seventeen Special Purpose Acquisition Company	28	2,810
Hana Financial Nineteen Special Purpose Acquisition Company	11	2,240
Hana Financial Twentieth Special Purpose Acquisition Company	3	2,885

(*) BIDV has decided to distribute stock dividends in December 2021. As a result, the number of shares held by the Group increased from 603 million to 759 million.

18-6 There's no company excluded from investments in associates and joint ventures despite holding more than 20% of shares as of December 31, 2022.

Investment in trusts that have limited significant influence on related activities under trust contracts even if the Group holds it more than 20% of shares are excluded from investments in associates and joint ventures.

19. Property and equipment

19-1 Details of property and equipment as of December 31, 2022 and 2021, are as follows (Korean won in millions):

<December 31, 2022>

Classification	Acquisition cost	Accumulated depreciation	Accumulated impairment loss	Book value
Property and equipment				
Land	1,063,133	–	(3,786)	1,059,347
Buildings	1,188,762	(285,567)	(8,510)	894,685
Leasehold improvements	392,128	(317,911)	–	74,217
Vehicles, furniture and fixtures	1,191,317	(954,330)	–	236,987
Construction in progress	54,629	–	–	54,629
Operating lease assets	2,871,705	(495,787)	–	2,375,918
Subtotal	6,761,674	(2,053,595)	(12,296)	4,695,783
Right-of-use assets				
Real estate for business	1,180,023	(652,420)	–	527,603
Vehicles	32,935	(15,219)	–	17,716
Others	2,881	(944)	–	1,937
Subtotal	1,215,839	(668,583)	–	547,256
Total	7,977,513	(2,722,178)	(12,296)	5,243,039

<December 31, 2021>

Classification	Acquisition cost	Accumulated depreciation	Accumulated impairment loss	Book value
Property and equipment				
Land	985,424	–	(3,831)	981,593
Buildings	996,078	(240,761)	(8,660)	746,657
Leasehold improvements	374,240	(298,322)	–	75,918
Vehicles, furniture and fixtures	1,127,887	(897,495)	–	230,392
Construction in progress	34,825	–	–	34,825
Operating lease assets	1,443,369	(374,641)	–	1,068,728
Subtotal	4,961,823	(1,811,219)	(12,491)	3,138,113
Right-of-use assets				
Real estate for business	878,018	(492,393)	–	385,625
Vehicles	29,310	(14,202)	–	15,108
Others	1,177	(354)	–	823
Subtotal	908,505	(506,949)	–	401,556
Total	5,870,328	(2,318,168)	(12,491)	3,539,669

19-2 Changes in property and equipment for the years ended December 31, 2022 and 2021 are as follows (Korean won in millions):

<2022>

Classification	January 1	Increase due to business combination	Acquisition	Disposal	Depreciation	Impairment loss	Transfer in (out)	Others	December 31
Property and equipment									
Land	981,593	–	249	(1,377)	–	–	78,952	(70)	1,059,347
Buildings	746,657	–	29,405	476	(35,406)	(12)	153,895	(330)	894,685
Leasehold improvements	75,918	568	28,561	(1,448)	(31,619)	–	2,167	70	74,217
Vehicles, furniture and fixtures	230,392	183	110,758	(16,084)	(99,367)	–	11,356	(251)	236,987
Construction in progress	34,825	–	499,742	(261)	–	–	(479,214)	(463)	54,629
Operating lease assets	1,068,728	–	1,790,174	(163,046)	(319,938)	–	–	–	2,375,918
Subtotal	3,138,113	751	2,458,889	(181,740)	(486,330)	(12)	(232,844)	(1,044)	4,695,783
Right-of-use assets									
Real estate for business	385,625	638	365,365	(10,851)	(212,763)	–	–	(411)	527,603
Vehicles	15,108	–	12,481	(1,475)	(7,959)	–	–	(439)	17,716
Others	823	96	937	(62)	(916)	–	–	1,059	1,937
Subtotal	401,556	734	378,783	(12,388)	(221,638)	–	–	209	547,256
Total	3,539,669	1,485	2,837,672	(194,128)	(707,968)	(12)	(232,844)	(835)	5,243,039

<2021>

Classification	January 1	Acquisition	Disposal	Depreciation	Impairment loss	Transfer in (out)	Others	December 31
Property and equipment								
Land	1,038,749	1,515	(39,031)	–	(1,867)	(12,519)	(5,254)	981,593
Buildings	806,057	16,392	(17,491)	(32,276)	(5,170)	(16,012)	(4,843)	746,657
Leasehold improvements	74,330	31,750	(1,399)	(30,255)	–	488	1,004	75,918
Vehicles, furniture and fixtures	230,227	100,656	(20,826)	(92,860)	–	14,520	(1,325)	230,392
Construction in progress	25,421	228,340	(1,000)	–	–	(217,911)	(25)	34,825
Operating lease assets	707,633	789,791	(246,661)	(182,035)	–	–	–	1,068,728
Subtotal	2,882,417	1,168,444	(326,408)	(337,426)	(7,037)	(231,434)	(10,443)	3,138,113
Right-of-use assets								
Real estate for business	406,648	228,254	(53,142)	(207,385)	–	–	11,250	385,625
Vehicles	15,254	9,638	(3,108)	(7,761)	–	–	1,085	15,108
Others	417	–	(10)	(711)	–	–	1,127	823
Subtotal	422,319	237,892	(56,260)	(215,857)	–	–	13,462	401,556
Total	3,304,736	1,406,336	(382,668)	(553,283)	(7,037)	(231,434)	3,019	3,539,669

20. Investment properties

20-1 Details of investment properties as of December 31, 2022 and 2021, are summarized as follows (Korean won in millions):

<December 31, 2022>

Classification	Acquisition cost	Accumulated depreciation	Accumulated impairment loss	Book value
Land	538,282	–	(3,568)	534,714
Buildings	854,048	(137,211)	(1,466)	715,371
Total	1,392,330	(137,211)	(5,034)	1,250,085

<December 31, 2021>

Classification	Acquisition cost	Accumulated depreciation	Accumulated impairment loss	Book value
Land	557,686	–	(5,912)	551,774
Buildings	618,917	(111,111)	(3,861)	503,945
Total	1,176,603	(111,111)	(9,773)	1,055,719

20-2 Changes in investment properties for the years ended December 31, 2022 and 2021 are as follows (Korean won in millions):

<2022>

Classification	January 1	Acquisition	Disposal	Depreciation	Transfer in (out)	Others	December 31
Land	551,774	55,873	(6,111)	–	(66,822)	–	534,714
Buildings	503,945	393,589	(6,858)	(28,143)	(147,244)	82	715,371
Total	1,055,719	449,462	(12,969)	(28,143)	(214,066)	82	1,250,085

<2021>

Classification	January 1	Acquisition	Disposal	Depreciation	Impairment loss	Transfer in (out)	Others	December 31
Land	665,657	76,604	(56,194)	–	(2,415)	(131,878)	–	551,774
Buildings	233,689	95,382	(33,086)	(19,103)	(1,602)	229,514	(849)	503,945

Classification	January 1	Acquisition	Disposal	Depreciation	Impairment loss	Transfer in (out)	Others	December 31
Total	899,346	171,986	(89,280)	(19,103)	(4,017)	97,636	(849)	1,055,719

20-3 Rental income and operating expenses arising from the Group's investment properties for the years ended December 31, 2022 and 2021, are as follows (Korean won in millions):

Classification	2022	2021
Rental income	33,402	14,675
Operating expenses	21,284	3,339

20-4 Details and fair value, valuation method and input variables of investment properties for the years ended December 31, 2022 and 2021, are as follows (Korean won in millions):

<December 31, 2022>

Classification	Fair value(*)	Valuation method	Input variables
Land and buildings	1,783,517	Officially appraised land price and estimated value by cost method	Officially appraised land price and procurement cost

<December 31, 2021>

Classification	Fair value(*)	Valuation method	Input variables
Land and buildings	1,097,528	Officially appraised land price and estimated value by cost method	Officially appraised land price and procurement cost

(*) The fair value of the investment property was measured on the basis of market-based value by an independent appraisal agency with professional qualifications. All investment properties are classified as Level 3 in the fair value hierarchy described in Note 5-1.

21. Financial lease and operating lease

21-1 The total amount of investment in leases on financial lease receivables and the net investment in leases and the minimum lease payments to be recovered as of December 31, 2022 and 2021, are as follows (Korean won in millions):

<December 31, 2022>

Description	Present value of minimum lease payments	Direct cost	Net investment in lease	Unrealized interest income	Total amount of investment
Within 1 year	666,133	3,341	669,474	87,554	757,028
After 1 year, but no later than 2 years	553,871	12,306	566,177	56,039	622,216
After 2 years, but no later than 3 years	392,118	19,813	411,931	29,591	441,522
After 3 years, but no later than 5 years	262,198	26,124	288,322	11,917	300,239
After 5 years	17	—	17	1	18
Total	1,874,337	61,584	1,935,921	185,102	2,121,023

(*) Interest income on finance lease receivables recognized for the year ended December 31, 2022 is ₩109,055 million.

<December 31, 2021>

Description	Present value of minimum lease payments	Direct cost	Net investment in lease	Unrealized interest income	Total amount of investment
Within 1 year	733,876	2,928	736,804	104,347	841,151
After 1 year, but no later than 2 years	590,296	9,126	599,422	70,966	670,388
After 2 years, but no later than 3 years	558,362	22,336	580,698	42,906	623,604
After 3 years, but no later than 5 years	491,164	64,528	555,692	25,733	581,425
After 5 years	91	286	377	8	385
Total	2,373,789	99,204	2,472,993	243,960	2,716,953

(*) Interest income on finance lease receivables recognized for the year ended December 31, 2021 is ₩105,787 million.

21-2 Details of operating lease assets for each type of underlying asset as of December 31, 2022 and 2021, are as follows (Korean won in millions):

<December 31, 2022>

Classification	Real estate for business	Vehicles	Equipment	Other assets	Total
Operating lease assets(*)	-	2,871,705	-	-	2,871,705
Accumulated depreciation	-	(495,787)	-	-	(495,787)
Accumulated impairment loss	-	-	-	-	-
Total	-	2,375,918	-	-	2,375,918

(*) The operating lease asset includes the direct cost of commencing the lease of ₩192,653 million.

<December 31, 2021>

Classification	Real estate for business	Vehicles	Equipment	Other assets	Total
Operating lease assets(*)	-	1,443,369	-	-	1,443,369
Accumulated depreciation	-	(374,641)	-	-	(374,641)
Accumulated impairment loss	-	-	-	-	-
Total	-	1,068,728	-	-	1,068,728

(*) The operating lease asset includes the direct cost of commencing the lease of ₩95,436 million.

21-3 Details of operating lease assets by type of underlying asset classified by industry based on acquisition costs as of December 31, 2022 and 2021, are as follows (Korean won in millions):

<December 31, 2022>

Classification	Real estate for business	Vehicles	Equipment	Other assets	Total
Manufacturing	-	1,024,181	-	-	1,024,181
Wholesale and retail , lodging	-	945,684	-	-	945,684
Logistics, storage	-	10,708	-	-	10,708
Private service	-	47,143	-	-	47,143
Others	-	843,989	-	-	843,989
Total	-	2,871,705	-	-	2,871,705

<December 31, 2021>

Classification	Real estate for business	Vehicles	Equipment	Other assets	Total
Manufacturing	-	256,783	-	-	256,783
Wholesale and retail, lodging	-	199,054	-	-	199,054
Logistics, storage	-	1,748	-	-	1,748
Private service	-	37,159	-	-	37,159
Others	-	948,625	-	-	948,625
Total	-	1,443,369	-	-	1,443,369

21-4 Details of changes in operating lease assets by type of underlying asset for the year ended December 31, 2022 and 2021, are as follows (Korean won in millions):

<2022>

Classification	Beginning	Acquisition	Disposal	Depreciation	Impairment	Ending
Real estate for business	-	-	-	-	-	-
Vehicles	1,068,728	1,790,174	(163,046)	(319,938)	-	2,375,918
Equipment	-	-	-	-	-	-
Other assets	-	-	-	-	-	-
Total	1,068,728	1,790,174	(163,046)	(319,938)	-	2,375,918

<2021>

Classification	Beginning	Acquisition	Disposal	Depreciation	Impairment	Ending
Real estate for business	-	-	-	-	-	-
Vehicles	707,633	789,791	(246,661)	(182,035)	-	1,068,728
Equipment	-	-	-	-	-	-
Other assets	-	-	-	-	-	-
Total	707,633	789,791	(246,661)	(182,035)	-	1,068,728

21-5 The annual lease collection plan for operating lease contracts executed as of December 31, 2022 and 2021, is as follows (Korean won in millions):

<December 31, 2022>

Description	Real estate for business	Vehicles	Equipment	Other Assets	Total
Within 1 year	-	470,419	-	-	470,419
After 1 year, but no later than 2 years	-	418,503	-	-	418,503
After 2 years, but no later than 3 years	-	355,915	-	-	355,915
After 3 years, but no later than 5 years	-	348,598	-	-	348,598
After 5 years	-	129	-	-	129
Total	-	1,593,564	-	-	1,593,564

<December 31, 2021>

Description	Real estate for business	Vehicles	Equipment	Other Assets	Total
Within 1 year	-	228,312	-	-	228,312
After 1 year, but no later than 2 years	-	169,404	-	-	169,404
After 2 years, but no later than 3 years	-	125,490	-	-	125,490
After 3 years, but no later than 5 years	-	123,902	-	-	123,902
After 5 years	-	168	-	-	168
Total	-	647,276	-	-	647,276

22. Intangible assets

22-1 Details of intangible assets as of December 31, 2022 and 2021, are summarized as follows (Korean won in millions):

<December 31, 2022>

Classification	Acquisition cost	Accumulated amortization	Accumulated impairment loss	Book value
Goodwill	108,097	-	(23,890)	84,207
Industrial property	59,466	(58,844)	-	622
Core deposits	992,484	(987,290)	(3,116)	2,078

Classification	Acquisition cost	Accumulated amortization	Accumulated impairment loss	Book value
Client relationship	423,113	(356,619)	—	66,494
Software and system development	2,114,353	(1,567,089)	(18)	547,246
Membership	53,201	(135)	(6,479)	46,587
Others	332,710	(209,501)	—	123,209
Total	4,083,424	(3,179,478)	(33,503)	870,443

<December 31, 2021>

Classification	Acquisition cost	Accumulated amortization	Accumulated impairment loss	Book value
Goodwill	102,929	—	(18,722)	84,207
Industrial property	58,837	(58,323)	—	514
Core deposits	992,144	(986,713)	(3,116)	2,315
Client relationship	423,113	(339,975)	—	83,138
Software and system development	1,860,302	(1,448,709)	(18)	411,575
Membership	46,894	(214)	(6,270)	40,410
Others	303,581	(177,403)	—	126,178
Total	3,787,800	(3,011,337)	(28,126)	748,337

22-2 Details of goodwill as of December 31, 2022 and 2021, are as follows
(Korean won in millions):

<December 31, 2022>

Classification	Acquisition cost	Accumulated impairment loss	Book value
Hana Savings Bank (*1)	75,229	(18,722)	56,507
Hana Asset Trust (*2)	22,377	—	22,377
Hana Securities (*3)	4,431	—	4,431

Classification	Acquisition cost	Accumulated impairment loss	Book value
KEB Hana Bank (*4)	892	—	892
FinngCo., Ltd.	5,168	(5,168)	—
Total	108,097	(23,890)	84,207

(*1) The goodwill was recognized due to the business combination relating to Jeil II Savings Bank, Ace Savings Bank, KOREA SAVINGS BANK, etc.

(*2) Includes goodwill relating to Hana Alternative Asset Management Co., Ltd.

(*3) Includes goodwill relating to Bareun Food Factory Co.,Ltd., a subsidiary of Hana Securities.

(*4) Includes goodwill relating to PT Bank KEB Hana, a subsidiary of KEB Hana Bank.

<December 31, 2021>

Classification	Acquisition cost	Accumulated impairment loss	Book value
Hana Savings Bank (*1)	75,229	(18,722)	56,507
Hana Asset Trust (*2)	22,377	—	22,377
Hana Secuties (*3)	4,431	—	4,431
KEB Hana Bank (*4)	892	—	892
Total	102,929	(18,722)	84,207

(*1) The goodwill was recognized due to the business combination relating to Jeil II Savings Bank, Ace Savings Bank, KOREA SAVINGS BANK, etc.

(*2) Includes goodwill relating to Hana Alternative Asset Management Co., Ltd.

(*3) Includes goodwill relating to Bareun Food Factory Co.,Ltd., a subsidiary of Hana Securities.

(*4) Includes goodwill relating to PT Bank KEB Hana, a subsidiary of KEB Hana Bank.

22-3 The method of goodwill impairment test

The Group allocated goodwill to CGUs which are composed of operating segments or its sub-segments. Impairment test was performed regularly on an annual basis and at times there is any indication of impairment through comparing the carrying amount of CGUs including goodwill with its recoverable amount.

The recoverable amount of a CGU is estimated to be the higher of the CGU's fair value and its value in use. The fair value is based on the best information available to reflect the amount that the Group could obtain, at the end of the reporting period, from the disposal of the assets or the transfer of the liabilities in formal transaction between participants, after deducting the costs of disposal. However, if the fair value could not be measured with sufficient reliability, it is possible applying the value in use which is present value of future cash flows. The Group estimates future cash flows based on the financial budget authorized by management. The estimation period cannot exceed five years without reasonable causes.

22-4 Result of goodwill impairment test

The goodwill allocated by CGU for the impairment test as of December 31, 2022 and 2021, is as follows (Korean won in millions):

Classification	Hana Savings Bank	Hana Securities	Hana Asset Trust	Hana Alternative Asset Management	Finnq Co., Ltd.
Value in use (recoverable amount)	420,513	33,420	503,942	165,983	50,710
Carrying amount of net assets	377,747	32,664	377,266	127,052	58,249
Value in use that exceeds carrying amount of net assets	42,766	756	126,676	38,931	(7,539)
Discount rate (%)	9.45	12.49	12.06	12.06	19.06
Permanent growth rate (%)	0.00	0.00	0.50	0.50	0.50

The Group estimates future cash flows based on the assumption that cash flows will continue to grow at 0.0%~0.5% over five years referred to a recent macroeconomic indicator provided by EIU (Economist Intelligence Unit). The

pre-tax discount rate used for discounting future cash flows is calculated based on the assumption of risk-free interest rate, market risk premium, systematic risk of CGU and other factors.

22-5 Changes in the carrying amount of intangible assets for the years ended December 31, 2022 and 2021, are as follows

<2022>

Classification	January 1	Increase due to business combination	Acquisition	Disposal	Amortization	Impairment loss	Reclassification	Others (*)	December 31
Goodwill	84,207	5,167	—	—	—	(5,167)	—	—	84,207
Industrial property	514	36	411	—	(345)	—	—	6	622
Core deposits	2,315	—	—	—	(383)	—	—	146	2,078
Client relationship	83,138	—	—	—	(16,644)	—	—	—	66,494
Software and system development	411,575	2,182	234,770	—	(146,350)	(4,562)	49,382	249	547,246
Membership	40,629	—	5,753	(167)	(135)	(280)	649	138	46,587
Others	125,959	—	79,312	(122)	(32,093)	—	(50,098)	251	123,209
Total	748,337	7,385	320,246	(289)	(195,950)	(10,009)	(67)	790	870,443

(*) Includes the effect of exchange rate differences.

<2021>

Classification	January 1	Acquisition	Disposal	Amortization	Impairment loss	Reclassification	Others (*)	December 31
Goodwill	85,344	—	—	—	—	—	(1,137)	84,207
Industrial property	656	214	(70)	(279)	—	—	(7)	514
Core deposits	2,474	—	—	(340)	—	—	181	2,315
Client relationship	113,593	—	—	(30,455)	—	—	—	83,138
Software and system development	366,552	162,904	(8,348)	(135,847)	—	25,418	896	411,575
Membership	37,833	2,926	(1,010)	(52)	(73)	220	785	40,629
Others	132,686	48,818	(298)	(29,428)	—	(23,685)	(2,134)	125,959
Total	739,138	214,862	(9,726)	(196,401)	(73)	1,953	(1,416)	748,337

(*) Includes the effect of exchange rate differences.

23. Non-current assets held for sale

Details of non-current assets held for sale as of December 31, 2022 and 2021, are as follows (Korean won in millions):

Classification	December 31, 2022	December 31, 2021
Property and equipment	72,950	292,863
Other assets	–	119,731
Total	72,950	412,594

(*) The Group measures a non-current asset classified as held for sale at the lower of its carrying amount and fair value less costs to sell and there are no non-current assets held for sale for which impairment losses have been recognized as of December 31, 2022 and 2021.

As of December 31, 2022, non-current assets held for sale consist of 138 collateral acquired by Hana Bank, etc, a subsidiary of the group, for the purpose of repaying loans. These assets were classified as held for sale in accordance with the management's decision to sell, but were not disposed as of December 31, 2022.

24. Other assets

24-1 Other assets as of December 31, 2022 and 2021, are as follows (Korean won in millions):

Classification	December 31, 2022	December 31, 2021
Guarantee deposits	715,915	766,155
Accounts receivable	7,520,162	9,154,921
Accrued income	1,981,189	1,148,592
Prepaid expenses	352,459	252,178
Advance payments	222,168	286,130
Reinsurance assets	34,605	29,001

Classification	December 31, 2022	December 31, 2021
Unamortized new contract	58,752	41,369
Separate account assets	1,826,235	1,647,534
Domestic exchange unsettlement debts	4,240,611	3,784,224
Merchant banking account assets	4,631,361	4,741,939
Others	640,770	459,457
Allowance for possible losses	(42,201)	(28,343)
Total	22,182,026	22,283,157

24-2 Details of merchant banking account assets as of December 31, 2022 and 2021 are as follows (Korean won in millions):

Classification	December 31, 2022	December 31, 2021
On-consolidated statement of financial position accounts:		
Financial assets measured at FVTPL-Loans	198,790	758,436
Financial assets measured at FVTPL-Debt securities	3,415,666	3,334,493
CMA asset FVTPL debt instruments	1,016,905	649,010
Total	4,631,361	4,741,939
Off-consolidated statement of financial position accounts:		
Commitment	620,000	790,000

24-3 Changes in the allowance for possible losses for the years ended December 31, 2022 and 2021, are as follows (Korean won in millions):

Classification	2022	2021
Beginning balance	28,343	31,486
Write-offs	(2,390)	(2,525)
Debt-for-equity swap/dispose NPLs	(163)	(280)
Provision for possible losses	18,003	(2,467)
Interest income from impaired assets	3	22
Others	(1,595)	2,107
Ending balance	42,201	28,343

24-4 Changes in reinsurance assets and unamortized new contract fee for the years ended December 31, 2022 and 2021, are as follows
(Korean won in millions):

<2022>

Classification	January 1	Increase	Decrease	December 31
Reinsurance assets	29,001	5,717	(113)	34,605
Unamortized new contract fee	41,369	41,134	(23,751)	58,752
Total	70,370	46,851	(23,864)	93,357

<2021>

Classification	January 1	Increase	Decrease	December 31
Reinsurance assets	25,895	8,115	(5,009)	29,001
Unamortized new contract fee	32,552	25,036	(16,219)	41,369
Total	58,447	33,151	(21,228)	70,370

24-5 Changes in greenhouse gas emissions rights held to obtain short-term profit for the years ended December 31, 2022 and 2021, are as follows
(ton(tCO₂-eq), Korean won in millions):

<2022>

Classification	Emissions rights(tCO ₂ -eq)	Book value
Beginning balance	417,865	14,667
Purchase (disposal)	419,368	4,926
Valuation	—	(6,197)
Ending balance	837,233	13,396

<2021>

Classification	Emissions rights(tCO ₂ -eq)	Book value
Beginning balance	—	—
Purchase (disposal)	417,865	9,722
Valuation	—	4,945
Ending balance	417,865	14,667

25. Financial liabilities measured at FVTPL

Financial liabilities measured at FVTPL as of December 31, 2022 and 2021, are as follows (Korean won in millions):

Classification	December 31, 2022	December 31, 2021
Derivative liabilities held for trading (*)	14,248,076	5,889,434
Securities sold	1,054,974	882,866
Total	15,303,050	6,772,300

(*) Refer to Note 17. Derivative instruments

26. Financial liabilities designated as measured at FVTPL

26-1 Financial liabilities designated as measured at FVTPL as of December 31, 2022 and 2021, are as follows (Korean won in millions):

Classification	December 31, 2022	December 31, 2021
Derivative-linked securities sold	12,041,745	8,330,544
Deposits	162,069	195,600
Borrowings	386,341	473,741
Deferred Day 1 profit or loss	127,353	104,738
Total	12,717,508	9,104,623

With respect to derivative linked securities and structured deposits, the Group does not separate embedded derivatives from main contracts but designates them as financial liabilities measured at FVTPL.

26-2 The difference between the book value and the maturity repayment amount as of the December 31, 2022 and 2021, are as follows (Korean won in millions):

Classification	December 31, 2022	December 31, 2021
Book value	12,717,508	9,104,623
Maturity repayment amount	13,932,734	9,444,298

Classification	December 31, 2022	December 31, 2021
Difference	(1,215,226)	(339,675)

26-3 Credit risk for the financial liabilities designated as measured at FVTPL as of December 31, 2022 and 2021, are as follows (Korean won in millions):

Classification	December 31, 2022	December 31, 2021
Financial liabilities designated as measured at FVTPL OCI:		
Changes in fair value price from credit risk fluctuation	(12,024)	(14,284)
Changes in fair value price from credit risk fluctuation (accumulated)(*)	(46,782)	(35,001)

(*) Includes the amount realized by removal and marked in other comprehensive income

27. Deposits

27-1 Details of deposits as of December 31, 2022 and 2021, are as follows (Korean won in millions):

Classification	December 31, 2022	December 31, 2021
Demand deposits:		
Demand deposits in Korean won	17,265,403	19,104,577
Demand deposits in foreign currency	40,576,241	34,959,125
Subtotal	57,841,644	54,063,702
Time and saving deposits:		
Time and saving deposits in Korean won	267,361,214	248,140,611
Time and saving deposits in foreign currency	24,320,573	16,563,802
Subtotal	291,681,787	264,704,413
Certificate of deposits	13,052,533	6,380,980
Total	362,575,964	325,149,095

27-2 Allocations of deposits by customer as of December 31, 2022 and 2021, are listed as follows (Korean won in millions):

Classification	December 31, 2022	December 31, 2021
Individuals	115,689,026	106,227,659
Corporations	127,985,882	112,055,878
Other banks	22,459,518	18,707,709
Public institutions	16,399,356	13,265,257
Other financial institutions	44,901,265	48,443,041
Government	8,205,076	5,924,293
Non-profit corporations	13,812,012	12,346,117
Foreign corporations	3,049,951	3,130,833
Others	10,073,878	5,048,308
Total	362,575,964	325,149,095

28. Borrowings

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

Type	Lender	Interest rate (%)	December 31, 2022	December 31, 2021
Borrowings in Korean won:				
BOK borrowings	BOK	0.3–1.8	5,085,245	4,473,504
Government borrowings	Korea Development Bank, etc	0.5–5.6	2,061,794	1,932,544
Other borrowings	Korean Energy Management Corporation, etc.	0.0–8.6	10,382,367	8,865,274
Subtotal			17,529,406	15,271,322
Borrowings in foreign currencies:				
Bank overdrafts	Foreign bank, etc.	0.0–12.5	380,662	313,417
Other borrowings	Oversea-Chinese Banking Corporation ("OCBC"), etc	0.7–12.6	10,125,268	5,378,973
Subtotal			10,505,930	5,692,390

Type	Lender	Interest rate (%)	December 31, 2022	December 31, 2021
Call money:				
Call money in Korean won	Heungkuk Asset Management	5.1–5.5	100,000	–
Call money in foreign currencies	Shinhan Bank, etc	0.1–5.6	970,661	1,091,728
Subtotal			1,070,661	1,091,728
Bonds sold under repurchase agreements:				
Bonds sold under repurchase agreements in Korean won	General customers, etc	0.0–4.3	6,217,174	5,862,774
Bonds sold under repurchase agreements in foreign currencies	Banco Bilbao Vizcaya Argentaria ("BBVA"), Citi, etc	3.2–5.6	1,743,130	2,317,774
Subtotal			7,960,304	8,180,548
Other borrowings:				
Bills sold	General customers, etc	0.0–0.0	26,063	25,610
Deferred borrowing costs			(5,052)	–
Total			37,087,312	30,261,598

29. Debentures

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

Type of debentures	Lender	Interest rate (%)	December 31, 2022	December 31, 2021
Korean won:				
Debentures	Financial institutions, etc	0.7–8.9	44,982,206	41,541,547
Subordinated bonds	Financial institutions, etc	2.1–4.9	5,061,139	6,265,139
Net gain on fair value hedges (this term)			(26,241)	(6,345)
Net gain on fair value hedges (before the previous period)			(10,497)	(4,152)
Present value discount			(37,786)	(34,907)
Subtotal			49,968,821	47,761,282
Foreign currencies:				

Type of debentures	Lender	Interest rate (%)	December 31, 2022	December 31, 2021
Debentures	Financial institutions, etc	0.0~5.6	5,946,585	5,728,806
Subordinated bonds	Financial institutions, etc	4.3~10.0	1,042,641	977,378
Net gain on fair value hedges (this period)			(290,369)	(93,621)
Net loss on fair value hedges (before the previous period)			15,583	109,935
Present value discount			(9,429)	(7,619)
Subtotal			6,705,011	6,714,879
Total			56,673,832	54,476,161

30. Net defined benefit liabilities

30-1 Actuarial assumptions as of December 31, 2022 and 2021, are as follows:

Classification	December 31, 2022 (%)	December 31, 2021 (%)	Notes
Demographic assumptions:			
Mortality	0.0-0.2	0.0-0.2	Table from Korea insurance development institute, etc.
Rates of employee turnover	0.0-90.6	0.0-45.2	Table from Korea insurance development institute, etc.
Financial assumptions:			
Expected salary increase rate	0.0-8.3	0.0-7.0	The average of the past five years, etc.
Discount rate	4.1-6.1	2.3-3.0	Return on corporate bond with the same credit rating

30-2 Details of the net defined benefit liabilities as of December 31, 2022 and 2021, are as follows (Korean won in millions):

Classification	December 31, 2022	December 31, 2021
Present value of defined benefit obligation	2,249,741	2,297,307
Fair value of plan assets (-)	(2,374,096)	(2,099,287)
Net defined benefit liabilities	10,610	198,020
Net defined benefit assets	(134,965)	-

30-3 Changes in the present value of defined benefit obligation for the years ended December 31, 2022 and 2021, are as follows (Korean won in millions):

Classification	2022	2021
Beginning balance	2,297,307	2,328,212
Acquired in business combination	1,337	–
Current service cost	176,177	187,088
Past service cost	951	121
Interest cost on benefit obligation	55,744	43,884
Remeasurements of the net defined benefit liability	(54,909)	(63,647)
Benefits paid	(226,808)	(198,085)
Others	(58)	(266)
Ending balance	2,249,741	2,297,307

30-4 Details of losses incurred from severance and retirement benefit plan for the years ended December 31, 2022 and 2021, are as follows (Korean won in millions):

Classification	2022	2021
Current service cost	176,177	187,088
Past service cost	951	121
Net interest on the net defined benefit liability	6,605	7,665
Subtotal	183,733	194,874
Benefits paid for the defined contribution plan	4,661	5,391
Long-term employee payment and others	1,064	256
Total	189,458	200,521

30-5 Plan assets for severance benefit as of December 31, 2022 and 2021 consist of the followings (Korean won in millions):

<December 31, 2022>

Classification	Existence of active market price	Inexistence of active market price	Total
Time deposit	–	789,275	789,275
ELB	–	7,660	7,660
GlC (Interest rate guarantee insurance contract)	–	1,544,584	1,544,584
Others	–	32,577	32,577
Total	–	2,374,096	2,374,096

<December 31, 2021>

Classification	Existence of active market price	Inexistence of active market price	Total
Time deposit	–	1,900,282	1,900,282
ELB	–	27,437	27,437
GlC (Interest rate guarantee insurance contract)	–	6,695	6,695
Others	–	164,873	164,873
Total	–	2,099,287	2,099,287

30-6 Changes in the fair value of plan assets for the years ended December 31, 2022 and 2021, are as follows (Korean won in millions):

Classification	2022	2021
Beginning balance	2,099,287	2,003,043
Acquired due to business combination	1,216	–
Employer contributions	387,766	195,140
Expected return on plan assets	49,139	36,219
Remeasurements of the plan assets	(12,307)	(9,576)
Benefits paid	(149,650)	(125,678)
Others	(1,355)	139
Ending balance	2,374,096	2,099,287

30-7 Details of remeasurement accompanied by the application of actuarial assumptions for the years ended December 31, 2022 and 2021, are as follows (Korean won in millions):

Classification	2022	2021
Actual gains (losses):		
Changes in demographic assumptions	425,266	(1,768)
Changes in financial assumptions	(297,480)	98,323
Experience adjustments	(72,877)	(32,908)
Subtotal	54,909	63,647
Income on planned assets:		
Actual income on planned assets	36,804	26,631
Amounts included in net interest on the net defined benefit liability (assets)	(49,111)	(36,207)
Subtotal	(12,307)	(9,576)
Total	42,602	54,071

30-8 The quantitative sensitivity analysis for significant actuarial assumptions as of December 31, 2022 and 2021, is as follows (Korea won in millions):

30-8-1 Discount rate

<December 31, 2022>

Classification	December 31, 2022	1% point increase	1% point decrease
Present value of defined benefit obligation	2,249,741	2,006,910	2,327,093

<December 31, 2021>

Classification	December 31, 2022	1% point increase	1% point decrease
Present value of defined benefit obligation	2,297,307	2,059,725	2,498,056

30-8-2 Expected rate of salary increase

<December 31, 2022>

Classification	December 31, 2021	1% point increase	1% point decrease
Present value of defined benefit obligation	2,249,741	2,329,724	2,002,052

<December 31, 2021>

Classification	December 31, 2021	1% point increase	1% point decrease
Present value of defined benefit obligation	2,297,307	2,495,863	2,063,275

The sensitivity analyses above have been determined based on a method that extrapolates the impact on defined benefit obligation as a result of reasonable changes in key assumptions occurring at the end of the reporting period.

30-8-3 Employer contributions in 2023 reasonably estimated for the years ended December 31, 2022 amounts to ₩ 156,602 million (employer contributions in 2022 reasonably estimated for the years ended December 31, 2021 amounts to ₩185,510 million), and the average durations of the defined benefit plan obligation as of December 31, 2022 and 2021, are 5.32-9.9 years and 5.91-10.17 years, respectively.

31. Contingent, Commitments and Provisions

31-1 Details of provisions as of December 31, 2022 and 2021, are as follows (Korean won in millions):

Classification	December 31, 2022	December 31, 2021
Allowance for possible losses		

Classification	December 31, 2022	December 31, 2021
on acceptances and guarantees:		
Financial acceptances and guarantees (*)	2,565	1,682
Non-financial acceptances and guarantees	81,450	34,887
Bills endorsed	13	15
Subtotal	84,028	36,584
Allowances for unused commitments	115,314	114,094
Other allowance:		
Allowances for restoration cost	61,856	65,312
Allowance for lawsuits	43,227	77,742
Others	332,336	293,690
Subtotal	437,419	436,744
Total	636,761	587,422

(*) The Group recognizes the amount of financial guarantee contracts subsequently measured that exceed the unamortized balance as provisions for acceptances and guarantees on initial recognition. The unamortized balance amounts to ₩14,843 million and ₩12,096 million as of December 31, 2022 and 2021, respectively, and are categorized as financial guarantee contract liability.

31-2 Changes in allowances for unused commitments for the years ended December 31, 2022 and 2021, are as follows (Korean won in millions):

<2022>

Classification	Allowances for unused commitments			Total
	12month EOL	Lifetime EOL		
		Non credit-impaired financial assets	Credit-impaired financial assets	
Beginning balance	76,971	32,989	4,134	114,094
Transfer to 12 month EOL	8,457	(6,797)	(1,660)	—
Transfer to non credit-impaired financial assets	(2,976)	3,051	(75)	—
Transfer to credit-impaired financial assets	(268)	(172)	440	—
(Reversal) provision	(3,603)	5,704	1,131	3,232

Classification	Allowances for unused commitments			Total
	12month ECL	Lifetime ECL		
		Non credit-impaired financial assets	Credit-impaired financial assets	
Ex change rate fluctuation	(2,169)	117	–	(2,052)
Others	40	–	–	40
Ending balance	76,452	34,892	3,970	115,314

<2021>

Classification	Allowances for unused commitments			Total
	12month ECL	Lifetime ECL		
		Non credit-impaired financial assets	Credit-impaired financial assets	
Beginning balance	87,148	39,521	4,332	131,001
Transfer to 12 month ECL	11,504	(9,051)	(2,453)	–
Transfer to non credit-impaired financial assets	(3,328)	3,425	(97)	–
Transfer to credit-impaired financial assets	(226)	(120)	346	–
(Reversal) provision	(18,236)	(859)	2,007	(17,088)
Exchange rate fluctuation	109	73	(1)	181
Ending balance	76,971	32,989	4,134	114,094

31-3 Changes in provision for financial guarantees for the years ended December 31, 2022 and 2021, are as follows (Korean won in millions):

<2022>

Classification	Allowances for unused commitments			Total
	12month ECL	Lifetime ECL		
		Non credit-impaired financial assets	Credit-impaired financial assets	
Beginning balance	1,667	15	–	1,682
Transfer to 12 month expected credit loss	1	(1)	–	–
Transfer to non credit-impaired financial assets	(11)	11	–	–
Provision	311	253	–	564
Exchange rate fluctuation	3	–	–	3
Others	316	–	–	316
Ending balance	2,287	278	–	2,565

<2021>

Classification	Allowances for unused commitments			Total
	12month ECL	Lifetime ECL		
		Non credit-impaired financial assets	Credit-impaired financial assets	
Beginning balance	2,296	14	—	2,310
Transfer to 12 month expected credit loss	1	(1)	—	—
Transfer to non credit-impaired financial assets	(1)	1	—	—
Reversal	(695)	—	—	(695)
Exchange rate fluctuation	18	1	—	19
Others	48	—	—	48
Ending balance	1,667	15	—	1,682

31-4 Changes in other provisions for the years ended December 31, 2022 and 2021 are as follows (Korean won in millions):

<2022>

Classification	January 1, 2022	Increase due to business combination	Provision (reversal)	Allowance used	Others	December 31, 2022
Non-financial acceptances and guarantees	34,902	—	44,623	—	1,938	81,463
Other allowance:						
Allowances for restoration cost	65,312	8	(1,704)	(3,231)	1,471	61,856
Allowance for lawsuits	77,742	—	(19,233)	(15,954)	672	43,227
Others	293,690	—	64,317	(25,226)	(445)	332,336
Subtotal	436,744	8	43,380	(44,411)	1,698	437,419
Total	471,646	8	88,003	(44,411)	3,636	518,882

<2021>

Classification	January 1, 2021	Provision (reversal)	Allowance used	Others	December 31, 2021
Non-financial acceptances and guarantees	32,540	(1,025)	—	3,387	34,902
Other allowance:					
Allowances for restoration cost	75,257	683	(16,426)	5,798	65,312
Allowances for reward points	1	(1)	—	—	—
Allowance for lawsuits	62,500	17,642	(2,771)	371	77,742
Others	251,630	64,128	(22,153)	85	293,690
Subtotal	389,388	82,452	(41,350)	6,254	436,744
Total	421,928	81,427	(41,350)	9,641	471,646

31-5 Details of guarantees as of December 31, 2022 and 2021, are as follows
(Korean won in millions):

Classification	Amount of guarantee	
	December 31, 2022	December 31, 2021
Financial acceptances and guarantees in Korean won:		
Private bond issue payment guarantee	94,500	71,000
Collateral for loans	43,130	45,253
Loans for purchase	307,369	249,240
Loan commitment	120,119	110,944
Commitment to acquire securities	743,287	972,857
Others	2,190	–
Subtotal	1,310,595	1,449,294
Financial acceptances and guarantees in foreign currencies	2,725	2,549
Confirmed acceptances and guarantees in Korean won	2,446,127	1,857,587
Confirmed acceptances and guarantees in foreign currencies:		
Acceptance on letter of credit	2,213,852	2,189,408
Acceptance on letter of guarantees	101,659	91,942
Others	10,137,249	7,437,488
Subtotal	12,452,760	9,718,838
Contingent acceptances and guarantees:		
Letters of credit	4,080,758	4,114,571
Others	1,575,952	730,840
Subtotal	5,656,710	4,845,411
Bills endorsed	10,708	12,082
Total	21,879,625	17,885,761

31-6 Unused commitments

Details of unused commitments as of December 31, 2022 and 2021, are as follows (Korean won in millions):

Classification	Unused commitments	
	December 31, 2022	December 31, 2021
Commitments on loans in Korean won	92,221,193	84,870,711
Commitments on loans in foreign currencies	28,960,161	23,829,960
Commitments on credit lines on asset-backed securities	85,200	247,596
Commitments on purchase of securities	11,871,082	9,523,616
Merchant banking account-commitment	620,000	790,000
Others	634	593
Total	133,758,270	119,262,476

31-7 Pending litigation

As of December 31, 2022, the Group is involved in 1,793 lawsuits as a plaintiff and 834 lawsuits as a defendant. The aggregate amounts of claims as a plaintiff and a defendant are approximately ₩453,246 million and ₩686,463 million, respectively. The Group's material lawsuits in progress as a defendant are as follows (Korean won in millions):

Defendant	Plaintiff	Amount	Status of lawsuit			Content
			First trial	second trial	third trial	
Hana Alternative Asset Management	**** Insurance Co., Ltd.	56,382	In-progress	—	—	Compensation for damages
Hana Bank	Bankruptcy trustee(F*****)	42,573	Won	In-progress	—	Restitution of unjust enrichment
Hana F&I	Shin **	38,542	In-progress	—	—	Appeal against dividend
Hana Bank	**** Securities Co., Ltd	37,136	Won	In-progress	—	Compensation for damages
Hana Bank	**** Investment Co., Ltd	16,798	Won	Some win in a litigation	In-progress	Compensation for damages
Hana Bank	****Cooperation Co., Ltd.	15,000	In-progress	—	—	Restitution of unjust enrichment
Hana Bank	**** Securities Co., Ltd	10,000	In-progress	—	—	Compensation for damages

31-8 COVID-19 impact

Due to the spread of COVID-19, major economic factors are expected to worsen due to the domestic and international economic slowdown in domestic and the ripple effects of financial instability. Considering the possibility of entering a global recession caused by the global spread of COVID-19, the economic forecast scenario used to estimate ECLs for financial instruments has been reset. As of December 31, 2022, the Group has remeasured forward-looking information by using macro variables and estimated default rates based on the scenario. In addition, the Group has additionally recognized the credit loss allowance by reviewing and adjusting credit rates for industries vulnerable to COVID-19 and conservatively evaluating the credit loss allowance on an individual assessment basis. The Group manages exposure to high-risk industries and high-risk groups/companies and preemptively responds to credit risk that will increase in the future by measuring lifetime ECL allowance on borrowers subject to deferred repayment of interest or principal and interest in installments.

In addition, the key assumptions used by financial instruments were based on fair values calculated based on the estimated assumptions taking into account the impact of COVID-19 as of December 31, 2022. The Group has prepared the consolidated financial statements by reasonably estimating the impact of COVID-19 on the consolidated financial statements for the year ended December 31, 2022. However, the ultimate impact of the future spread of COVID-19 on the consolidated financial position, financial performance and cash flows of the Group cannot be predicted.

31-9 Uncertainties Related to Overseas Subsidiaries

31-9-1 Hana Microfinance LTD, the Group's overseas subsidiary, is experiencing a contraction in normal operation due to movement restrictions as of December 31, 2022 due to the spread and disruption of COVID-19 and Myanmar unrest. If this situation continues for a long time, the uncertainty of loan receivable

collection may increase, and it is difficult to predict the ultimate effect on the consolidated financial position, consolidated financial performance and consolidated cash flows as of December 31, 2022. The Group is responding to possible crises by continuously monitoring economic conditions to minimize the impact on the Group.

31-9-2 The ongoing armed conflict in the Ukraine area which began in February 2022 and international sanctions imposed against Russia may impact sanctioned entities, entities doing business with Ukraine or Russia, as well as entities exposed directly or indirectly to industries or the economy of Ukraine or Russia. As of the reporting date, the Group expects that the event has a financial impact on the business of KEB HNB RUS LLC, a subsidiary, but the financial impact of such events cannot be estimated reasonably.

32. Other liabilities

32-1 Details of other liabilities as of December 31, 2022 and 2021, are as follows (Korean won in millions):

Classification	December 31, 2022	December 31, 2021
Accounts payable	8,368,200	9,665,502
Accrued expense payables	3,119,342	1,693,293
Advances	315,200	208,385
Income in advance	711,243	672,439
Policy reserve	4,698,380	4,376,685
Separate account liabilities	1,902,439	1,781,403
Borrowing from trust accounts	7,882,857	5,874,089
Foreign exchange settlement credits	937,940	585,628
Domestic exchange settlement credits	5,512,803	6,172,698
Deposits for letter of guarantees and others	2,665,544	1,132,396
Taxes withheld	288,449	157,077
Security deposits received	281,894	74,371

Classification	December 31, 2022	December 31, 2021
Accounts for agency businesses	190,874	352,697
Agency	2,869,079	2,332,083
Lease liabilities	521,555	397,394
Merchant banking account liabilities	3,667,273	2,908,280
Others	1,312,958	944,114
Present value discount	(73,813)	(36,532)
Total	45,172,217	39,292,002

32-2 Details of merchant banking account liabilities as of December 31, 2022 and 2021 are as follows (Korean won in millions):

Classification	December 31, 2022	December 31, 2021
Merchant banking account deposits	3,666,199	2,908,071
Merchant banking account others(*)	1,074	209
Total	3,667,273	2,908,280

(*) Merchant banking account others consist of accrued expense payables.

32-3 Details of policy reserve as of December 31, 2022 and 2021, are as follows (Korean won in millions):

Classification	December 31, 2022	December 31, 2021
Premium reserve	4,263,417	3,934,235
Prepaid premium reserve	234,596	236,430
Guaranteed reserve	6,902	4,887
Outstanding claim	193,465	201,133
Total	4,698,380	4,376,685

32-4 Changes in the policy reserve for the years ended December 31, 2022 and 2021 are as follows (Korean won in millions):

<2022>

Classification	January 1, 2022	Changes	December 31, 2022
Premium reserve	3,934,235	329,182	4,263,417

Classification	January 1, 2022	Changes	December 31, 2022
Prepaid premium reserve	236,430	(1,834)	234,596
Guaranteed reserve	4,887	2,015	6,902
Outstanding claim	201,133	(7,668)	193,465
Total	4,376,685	321,695	4,698,380

<2021>

Classification	January 1, 2021	Changes	December 31, 2021
Premium reserve	3,669,316	264,919	3,934,235
Prepaid premium reserve	208,455	27,975	236,430
Guaranteed reserve	5,122	(235)	4,887
Outstanding claim	193,591	7,542	201,133
Total	4,076,484	300,201	4,376,685

32-5 Details of lease liabilities as of December 31, 2022 and 2021, are as follows
(Korean won in millions):

<December 31, 2022>

Classification	Nominal value	Present value discount	Book value
Real estate for business	533,244	(32,094)	501,150
Vehicles	19,316	(868)	18,448
Others	2,045	(88)	1,957
Total	554,605	(33,050)	521,555

<December 31, 2021>

Classification	Nominal value	Present value discount	Book value
Real estate for business	395,914	(14,220)	381,694
Vehicles	15,652	(403)	15,249
Others	462	(11)	451
Total	412,028	(14,634)	397,394

32-6 Changes in lease liabilities for the years ended December 31, 2022 and 2021 are as follows (Korea won in millions):

<2022>

Classification	January 1, 2022	Increase due to business combination	Increase	Amortization	Payment (*)	Other	December 31, 2022
Real-estate	381,694	645	329,380	11,466	(213,925)	(8,110)	501,150
Vehicles	15,249	-	12,312	386	(8,609)	(890)	18,448
Others	451	107	2,448	93	(983)	(159)	1,957
Total	397,394	752	344,140	11,945	(223,517)	(9,159)	521,555

(*) The total cash outflow related to lease liabilities for the year ended December 31, 2022 is ₩223,276 million.

<2021>

Classification	January 1, 2021	Increase	Amortization	Payment (*)	Other	December 31, 2021
Real-estate	400,227	223,712	9,127	(214,347)	(37,025)	381,694
Vehicles	15,821	9,451	285	(9,512)	(796)	15,249
Others	429	-	25	(717)	714	451
Total	416,477	233,163	9,437	(224,576)	(37,107)	397,394

(*) The total cash outflow related to lease liabilities for the year ended December 31, 2021 is ₩224,509 million.

32-7 Details of the composition by maturity of the contractual cash flows before discounting the lease liability as of December 31, 2022 and 2021, are as follows (Korea won in millions):

<December 31, 2022>

Classification	Not more than 1 month	Not more than 3 month	Not more than 6 month	Not more than 1 year	Not more than 5 years	More than 5 years	Total
Real-estate	18,748	33,627	49,846	92,544	279,404	59,075	533,244
Vehicles	732	1,395	1,961	3,619	11,609	-	19,316
Others	82	32	115	225	1,591	-	2,045
Total	19,562	35,054	51,922	96,388	292,604	59,075	554,605

<December 31, 2021>

Classification	Not more than 1 month	Not more than 3 month	Not more than 6 month	Not more than 1 year	Not more than 5 years	More than 5 years	Total
Real-estate	19,376	35,594	48,464	84,960	170,367	37,153	395,914
Vehicles	699	1,227	1,606	2,901	9,192	27	15,652
Others	78	23	100	122	139	—	462
Total	20,153	36,844	50,170	87,983	179,698	37,180	412,028

32-8 Assessment of the adequacy of liabilities

32-8-1 The experience rates and calculation basis used by the Group for the liability adequacy test are as follows

Classification		Calculation methodology
Hana Life Insurance Co., Ltd.	Discount rate	Two hundred scenarios suggested by the Governor of the Financial Supervisory Service are applied.
	Business expense rate	Based on the last year experience statistics, business expense rate is estimated by calculating the ratio of detailed business expenses to total business expenses categorized by types of product, premium payment method, business expense (new acquisition cost or maintenance cost) and elapsed time. Besides the experience statistics, the Group reasonably estimated the trend of business expense by considering the variability arising from inflation and changes in management policies. Temporary expenses that are not expected to incur are excluded from the assumption for calculation of the business expense rate.
	Surrender ratio	Based on the last five years' experience statistics, surrender ratio is estimated by calculating the ratios of elapsed or canceled contracts to total contracts held by the Group by types of product, premium payment method, sales channel and lapse of time. The ratio is calculated on the basis of 50 or more historical data to ensure statistical reliability. If the historical data is insufficient, the Group applies surrender ratio of a similar type of contract, uses trends by elapsed time or reclassifies the categories for the surrender ratio to ensure statistical reliability. The Group considers elapsed time, premium payment status, employee benefits policy, the period of tax benefit for an insurance contract, trend on the market interest rate which can be influential on surrender ratio. The Group applies the same surrender ratio after the specific period of elapsed time to the end of the projected period. If there are temporary increases in surrender ratio due to tax benefits, the Group calculates the final surrender ratio by eliminating the tax benefit effect or by applying the surrender ratio for the period in which there is no effect.
	Risk rate	Based on the last five years' experience statistics, risk rate is calculated based on the ratio of payment of premium to risk premium by collateral, time of sales (by experience life table), and elapsed time. Risk rate is reasonably calculated after reviewing and applying increase rate/trend rate compared to previous year or on a yearly basis. When risk rate is applied, at least 10 years of risk rate should be applied. But in case of decline in cash flow stability due to extreme fluctuation in risk rate by elapsed time caused by shortage of statistics after five years, risk rate can be calculated by adding statistics by elapsed time. In order to retain statistical

Classification		Calculation methodology
		reliability by category, there should be at least 50 experience statistics. For sections that are short of such experience statistics, similar risk rates of other categories are applied. In case the reliability of the calculation results is not guaranteed due to shortage of experience statistics, trends by elapsed time of similar risk rates or upper-level category may be applied.
Hana Insurance . Co., Ltd.	Discount rate	The discount rate for calculating the present value of future net cash flows is the future operating asset return rate, and the future operating asset return rate is calculated by reflecting future prospects, such as future trends, risk rates and the Group's operational strategy.
	Business expense rate	<p>–Long-term insurance Based on the prior-year experience statistics, business expense rate is estimated by calculating the ratio of detailed business expenses to total business expenses categorized by types of product, premium payment method, business expenses (new acquisition costs or maintenance costs) and elapsed time. Besides the experience statistics, the Group reasonably estimated the trend of business expenses by considering the variability arising from inflation and changes in management policies. Temporary expenses that are not expected to incur are excluded from the assumption for calculation of the business expense rate.</p> <p>–General insurance: General insurance is assessed based on the "large classification criteria set forth in Appendix 2. Types of Insurance in the standard business method of [Attachment 14] of the Insurance Business Supervision Regulations" as the evaluation unit, and the costs of maintaining the contract compared to the prior year's premium was calculated as an assumption of the business expense rate. Temporary expenses are excluded from the assumption for the calculation of the business expense rate.</p> <p>–Automobile insurance For automobile insurance, the cost of maintaining the contract compared to the prior year's premium for each collateral (personal, property, descendant, vehicle, uninsured, etc.) was calculated as an assumption of business expense rate. Temporary expenses are excluded from the assumption for the calculation of the business expense rate.</p>
	Surrender ratio	Based on the last five years' experience statistics, surrender ratio is estimated by calculating the ratios of elapsed or cancelled contracts to total contracts held by the Group by types of product, premium payment method, sales channel and lapse of time. The ratio is calculated on the basis of 50 or more historical data to ensure statistical reliability. If the historical data is insufficient, the Group applies surrender ratio of a similar type of contract, uses trends by elapsed time or reclassifies the categories for the surrender ratio to ensure statistical reliability. The Group considers elapsed time, premium payment status, employee benefits policy, the period of tax benefit for an insurance contract and trends in the market interest rate, which can be influential on surrender ratio. The Group applies the same surrender ratio after the specific period of elapsed time to the end of the projected period. If there are temporary increases in surrender ratio due to tax benefits, the Group calculates the final surrender ratio by eliminating the tax benefit effect or by applying the surrender ratio for the period in which there is no effect.
		Based on the last five years' experience statistics, risk rate is calculated based on the ratio of payment of premium to risk premium by collateral, time of sales (by experience life table) and elapsed time. Risk rate is reasonably calculated

Classification		Calculation methodology
	Risk rate	after reviewing and applying increase rate/trend rate compared to previous year or on a yearly basis. When risk rate is applied, at least 10 years of risk rate should be applied. But in case of a decline in cash flow stability due to extreme fluctuation in risk rate by elapsed time caused by shortage of statistics after five years, risk rate can be calculated by adding statistics by elapsed time. In order to retain statistical reliability by category, there should be at least 50 experience statistics. For sections that are short of such experience statistics, similar risk rates of other categories are applied. In case the reliability of the calculation results is not guaranteed due to shortage of experience statistics, trends by elapsed time of similar risk rates or upper-level category may be applied.
	Loss ratio	<p>-General insurance: General insurance is assessed based on the "large classification criteria set forth in Appendix 2. Types of Insurance in the standard business method of [Attachment 14] of the Insurance Business Supervision Regulations" as the evaluation unit, and the loss ratio assumption was calculated by analyzing the experience statistics for the previous five years and calculating the loss ratio applied to future cash flows and the cash-out ratio for each period of progress.</p> <p>-Automobile insurance: Automobile insurance is assessed based on each collateral (personal, property, descendant, vehicle, uninsured, etc.) as the evaluation unit, and the loss ratio assumption was calculated by analyzing the experience statistics for the previous five years and calculating the loss ratio applied to future cash flows and the cash-out ratio for each period of progress.</p>
	Loss investigation ratio	<p>-General insurance: General insurance is assessed based on the "large classification criteria set forth in Appendix 2. Types of Insurance in the standard business method of [Attachment 14] of the Insurance Business Supervision Regulations", as the evaluation unit, and the loss investigation costs relative to the insurance payment for the previous three years are used as the assumption for the calculation of the loss investigation ratio.</p> <p>-Automobile insurance: Automobile insurance is assessed based on each collateral (personal, property, descendant, vehicle, uninsured, etc.) as the evaluation unit, and the loss investigation costs relative to the insurance payment for the previous three years are used as the assumption for the calculation of the loss investigation ratio.</p>

32-8-2 The results of LAT as of December 31, 2022 and 2021, are as follows (Korean won in millions):

<December 31, 2022>

Classification		Reserve for test	LAT base (*1)	Premium surplus (loss) (*2)
Hana Life Insurance	Interest rate-linked	2,278,111	2,266,205	11,906
	Interest rate-fixed	1,164,903	912,451	252,452
	Variable life insurance	(2,092)	(41,589)	39,497

Classification		Reserve for test	LAT base (*1)	Premium surplus (loss) (*2)
Subtotal		3,440,922	3,137,067	303,855
Hana Insurance Co., Ltd.	General insurance	18,502	12,354	6,148
	Automobile insurance	202,849	206,543	(3,694)
	Long-term insurance (*3)	654,193	380,426	273,767
Subtotal		875,544	599,323	276,221
Total (*4)		4,316,466	3,736,390	580,076

(*1) LAT of the Group is conducted at the end of reporting period, and surplus to reserve for the test is calculated as of December 31, 2022.

(*2) Surplus= Reserve for test - LAT base((-) is loss, (+) is surplus)

(*3) For the long-term insurance calculation, the amount is calculated by adding or subtracting new acquisition costs from the insurance premium reserve. For the calculation of general insurance and automobile insurance, unpaid insurance premiums based on the original insurance are considered.

(*4) The Group did not record additional reserves since the surplus exceeded the deficit based on the result of LAT.

<December 31, 2021>

Classification		Reserve for test	LAT base (*1)	Premium surplus (loss) (*2)
Hana Life Insurance	Interest rate-linked	2,458,818	2,399,609	59,209
	Interest rate-fixed	711,698	650,143	61,555
	Variable life insurance	(1,590)	(52,770)	51,180
Subtotal		3,168,926	2,996,982	171,944
Hana Insurance Co., Ltd.	General insurance	17,941	12,321	5,620
	Automobile insurance	207,265	209,410	(2,145)
	Long-term insurance (*3)	601,901	407,901	194,000
Subtotal		827,107	629,632	197,475
Total (*4)		3,996,033	3,626,614	369,419

(*1) LAT of the Group is conducted at the end of reporting period, and the surplus to reserve for the test is calculated as of December 31, 2021.

(*2) Surplus= Reserve for test - LAT base((-) is loss, (+) is surplus)

(*3) For the long-term insurance calculation, the amount is calculated by adding

or subtracting new acquisition costs from the insurance premium reserve. For the calculation of general insurance and automobile insurance, unpaid insurance premiums based on the original insurance are considered.

(*4) The Group did not record additional reserves since the surplus exceeded the deficit based on the result of LAT.

33. Capital stock and capital surplus

33-1 Details of capital stock as of December 31, 2022 and 2021 areas follows (Korean won):

Classification	December 31, 2022	December 31, 2021
Number of shares authorized	800,000,000 shares	800,000,000 shares
Par value per share	₩5,000	₩5,000
Number of shares issued	295,903,476 shares	300,242,062 shares

(*) The par value of issued shares and paid-in capital are different due to the retirement of shares (the number of shares retired: 4,338,586)

33-2 Changes in capital stock and capital surplus from December 1, 2005 (inception) to December 31, 2022, are as follows (Korean won in millions except for number of shares):

Classification	Date	Shares	Common stock	Capital surplus
Incorporation	Dec. 1, 2005	204,256,243	1,021,281	5,075,488
Stock dividends	Mar. 24, 2006	2,042,562	10,213	—
Shares swap (*1)	Oct. 13, 2006	5,552,788	27,764	215,427
Paid-in capital increase	Feb. 21, 2011	31,198,170	155,991	1,168,759
Shares swap (*2)	Apr. 5, 2013	46,844,299	234,221	1,511,856
Paid-in capital increase	Apr. 21, 2015	6,109,000	30,545	149,298
Paid-in capital increase	Mar. 9, 2018	4,239,000	21,195	178,688
Retirement of Treasury stock	Apr. 29, 2022	(4,338,586)	—	—
Total		295,903,476	1,501,210	8,299,516

(*1) Represents transactions that the Group conducted to incorporate Hana Securities (formerly known as Hana IB) into its subsidiaries.

(*2) Represents transactions that the Group conducted to incorporate Hana bank into its wholly owned subsidiaries.

33-3 Details of hybrid equity securities classified as equity attributable to equity holders of the Parent Company as of December 31, 2022 and 2021, are as follows (Korean won in millions):

Classification	Issuance date	Maturity	Interest rate (%)	Amount	
				December 31, 2022	December 31, 2021
The 1-2st hybrid debentures (*2)	May 29, 2015	May 29, 2045	4.445	190,000	190,000
The 2-2st hybrid debentures (*2)	November 6, 2015	November 6, 2045	4.612	20,000	20,000
The 3-1st hybrid debentures (*1)	March 9, 2018	—	4.225	192,000	192,000
The 3-2st hybrid debentures (*2)	March 9, 2018	—	4.680	50,000	50,000
The 4th hybrid debentures (*1)	November 8, 2018	—	4.040	296,000	296,000
The 5th hybrid debentures (*1)	April 15, 2019	—	3.340	265,000	265,000
The 6-1st hybrid debentures (*1)	May 28, 2020	—	3.200	450,000	450,000
The 6-2st hybrid debentures (*2)	March 28, 2020	—	3.500	50,000	50,000
The 7-1st hybrid debentures (*1)	August 28, 2020	—	3.200	410,000	410,000
The 7-2st hybrid debentures (*2)	August 28, 2020	—	3.550	90,000	90,000
The 8th hybrid debentures (*1)	May 13, 2021	—	3.200	220,000	220,000
The 9-1st hybrid debentures (*1)	September 9, 2021	—	3.340	280,000	280,000
The 9-2nd hybrid debentures (*2)	September 9, 2021	—	3.770	120,000	120,000
The 10th hybrid debentures (*1)	January 26, 2022	—	4.000	270,000	—
The 11th hybrid debentures (*1)	June 10, 2022	—	4.550	400,000	—
Subtotal				3,303,000	2,633,000
Issuance cost				(8,312)	(6,541)
Total				3,294,688	2,626,459

(*1) Five years after the hybrid equity securities are issued, these can be redeemed at any point before the maturity date with the approval of the governor of the Financial Supervisory Service.

(*2) Ten years after the hybrid equity securities are issued, these can be redeemed at any point before the maturity date with the approval of the governor of the Financial Supervisory Service.

33-4 Capital surplus as of December 31, 2022 and 2021, consists of the following (Korean won in millions):

Classification	December 31, 2022	December 31, 2021
Paid-in capital in excess of par value	8,299,516	8,299,516
Gain on disposal of treasury stock	76,372	76,372
Other capital surplus	2,205,403	2,200,699
Total	10,581,291	10,576,587

34. Capital adjustment

34-1 Details of capital adjustment as of December 31, 2022 and 2021, are summarized as follows (Korean won in millions):

Classification	December 31, 2022	December 31, 2021
Treasury stock	(150,024)	(299,996)
Stock option	17	2
Other capital adjustment	(15,034)	(15,612)
Total	(165,041)	(315,606)

34-2 Fluctuations of the treasury stock for the years ended December 31, 2022 and 2021 are as follows (Korean won in millions and number of shares in unit):

<2022>

Classification	January 1, 2022	Retirement of treasury stock	December 31, 2022
Number of shares	8,678,586	(4,338,586)	4,340,000
Amount	299,996	(149,972)	150,024

<2021>

Classification	January 1, 2021	Retirement of treasury stock	December 31, 2021
Number of shares	8,678,586	—	8,678,586
Amount	299,996	—	299,996

35. Accumulated OCI

Changes in accumulated OCIs for the years ended December 31, 2022 and 2021,
are as follows (Korean won in millions):

<2022>

(Korean won in millions)

Classification	Gain (loss) on valuation of Financial assets measured at FVOCI	Gain (loss) on exchange differences on translation of foreign operations	Changes in equities of investments in associates	Gain(loss) on valuation of net investment hedges of foreign operations	Gain (loss) on cash flow hedge	Gain (loss) on valuation of fair value hedges	Special account other comprehensive incomes	Credit risk fluctuation effect of financial liabilities designated at FVPTL	Remeasurement of the net defined benefit plan	Total
January 1, 2022	(401,028)	(70,128)	99,341	(29,295)	59	(13,123)	(2,426)	(47,886)	(529,741)	(994,227)
Increase(decrease) due to business combination	-	-	-	-	-	-	-	-	(289)	(289)
Changes in gain (loss) on valuation of financial assets measured at FVOCI	(1,275,875)	-	-	-	-	-	-	-	-	(1,275,875)
Reclassified from financial debt security measured at FVOCI to financial assets measured at FVTPL	(8,603)	-	-	-	-	-	-	-	-	(8,603)
Reclassified from financial debt security measured at FVOCI to retained gain	3,609	-	-	-	-	-	-	-	-	3,609
Credit risk fluctuation of financial debt security measured at FVOCI	94	-	-	-	-	-	-	-	-	94
Changes in exchange differences on translation of foreign operations	-	16,341	-	-	-	-	-	-	-	16,341
Changes in unrealized gain on valuation of equity method investments	-	-	(23,966)	-	-	-	-	-	-	(23,966)
Changes in loss on valuation	-	-	-	-	-	-	-	-	-	-

Classification	Gain (loss) on valuation of Financial assets measured at FVOCI	Gain (loss) on exchange differences on translation of foreign operations	Changes in equities of investments in associates	Gain(loss) on valuation of net investment hedges of foreign operations	Gain (loss) on cash flow hedge	Gain (loss) on valuation of fair value hedges	Special account other comprehensive incomes	Credit risk fluctuation effect of financial liabilities designated at FVPTL	Remeasurement of the net defined benefit plan	Total
of net investment hedges of foreign operations	-	-	-	(28,316)	-	-	-	-	-	(28,316)
Changes in loss on cash flow hedge	-	-	-	-	(4,953)	-	-	-	-	(4,953)
Changes in loss on valuation of fair value hedges	-	-	-	-	-	(16,360)	-	-	-	(16,360)
Changes in special account other comprehensive incomes	-	-	-	-	-	-	(22,167)	-	-	(22,167)
Changes in credit risk fluctuation effect of financial liabilities designated at FVPTL	-	-	-	-	-	-	-	(12,024)	-	(12,024)
Remeasurements of the net defined benefit liabilities (assets)	-	-	-	-	-	-	-	-	40,130	40,130
Tax effect	327,796	(2,299)	7,898	7,787	869	4,499	5,591	4,349	(10,872)	345,618
December 31, 2022	(1,354,007)	(56,086)	83,273	(49,824)	(4,025)	(24,984)	(19,002)	(55,561)	(500,772)	(1,980,988)

<2021>

(Korean won in millions)

Classification	Gain (loss) on valuation of Financial assets measured at FVOCI	Gain (loss) on exchange differences on translation of foreign operations	Changes in equities of investments in associates	Gain(loss) on valuation of net investment hedge s of foreign operations	Gain (loss) on cash flow hedge	Gain (loss) on valuation of fair value hedges	Special account other comprehensive incomes	Credit risk fluctuation effect of financial liabilities designated at FVPTL	Remeasurement of the net defined benefit plan	Total
January 1, 2021	22,228	(344,273)	(83,317)	11,493	(1,840)	1,014	(618)	(37,531)	(569,109)	(1,001,953)
Changes in gain (loss) on valuation of financial assets measured at FVOCI	(441,417)	-	-	-	-	-	-	-	-	(441,417)
Reclassified from financial debt security measured at FVOCI to financial assets measured at FVTPL	(92,994)	-	-	-	-	-	-	-	-	(92,994)
Reclassified from financial debt security measured at FVOCI to retained gain	(51,163)	-	-	-	-	-	-	-	-	(51,163)
Credit risk fluctuation of financial debt security measured at FVOCI	1,420	-	-	-	-	-	-	-	-	1,420
Changes in exchange differences on translation of foreign operations	-	292,617	-	-	-	-	-	-	-	292,617
Changes in unrealized gain on valuation of equity method investments	-	-	251,247	-	-	-	-	-	-	251,247
Changes in loss on valuation of net i rvestment hedges of foreign operations	-	-	-	(56,259)	-	-	-	-	-	(56,259)
Changes in loss on cash flow hedge	-	-	-	-	2,612	-	-	-	-	2,612
Changes in loss on valuation of fair value hedges	-	-	-	-	-	(19,500)	-	-	-	(19,500)
Changes in special account other comprehensive incomes	-	-	-	-	-	-	(2,494)	-	-	(2,494)
Changes in credit risk fluctuation effect of financial liabilities designated at FVTPL	-	-	-	-	-	-	-	(14,284)	-	(14,284)
Remeasurements of the net defined benefit liabilities (assets)	-	-	-	-	-	-	-	-	54,354	54,354
Tax effect	160,898	(18,472)	(68,589)	15,471	(713)	5,363	686	3,929	(14,986)	83,587
December 31, 2021	(401,028)	(70,128)	99,341	(29,295)	59	(13,123)	(2,426)	(47,886)	(529,741)	(994,227)

36. Retained earnings

36-1 Retained earnings as of December 31, 2022 and 2021, consist of the following (Korean won in millions):

Classification	December 31, 2022	December 31, 2021
Legal reserve (*)	926,600	813,400
compensation for damages	2,000	2,000
Voluntary reserve	3,654,391	3,653,230
Unappropriated retained earnings	18,612,302	16,355,582
Total	23,195,293	20,824,212

(*) In accordance with the Financial Holding Company Act, whenever dividends are paid, an amount equal to at least 10% of net income is required to be appropriated as a legal reserve until the reserve amount equals the aggregate par value of common stock. The legal reserve may not be utilized for cash dividends but may only be used to offset a deficit, if any, or be transferred to the capital.

36-2 Changes in retained earnings for years ended December 31, 2022 and 2021, are as follows (Korean won in millions):

Classification	2022	2021
Beginning balance	20,824,212	17,941,584
Net income attributable to equity holders of the parent	3,552,391	3,526,068
Dividends	(933,003)	(597,705)
Dividends on hybrid equity securities	(111,210)	(80,083)
Reclassification of gain on valuation of FVOCI securities	(224)	37,096
Retirement of Treasury stock	(149,972)	—
Others	13,099	(2,748)
Ending balance	23,195,293	20,824,212

37. Regulatory reserve for bad debts

Regulatory reserves for bad debt is calculated and disclosed in accordance with Article 27, Sections 1 and 2 of the Financial Holding Company Act.

37-1 Balance of regulatory reserve for bad debt

Regulatory reserves for bad debt reserve as of December 31, 2022 and 2021, are as follows (Korean won in millions):

Classification	December 31, 2022	December 31, 2021
Beginning balance	3,080,295	2,767,615
Additional planned reserve for bad debts	52,749	312,680
Ending balance	3,133,044	3,080,295
Attributable to equity holders of the parent	3,128,258	3,032,031
Attributable to non-controlling interests	4,786	48,264

37-2 Provision of bad debt reserve and adjusted income after deducting provisions for bad debt reserve, etc.

Provisions for bad debt reserves and income adjusted for deductions of provisions for bad debt for the years ended December 31, 2022 and 2021, are as follows (Korean won in millions and per share amounts in units):

Classification	2022	2021
Net income attributable to equity holders of the parent before deducting provisions for bad debt reserve	3,552,391	3,526,068
Provision of bad debt reserve	96,227	312,862
Adjusted income after deducting provisions for bad debt reserve	3,456,164	3,213,206
Basic earnings per share on adjustment (Korean won) (*)	11,472	10,746
Diluted earnings per share on adjustment	11,472	10,746

Classification	2022	2021
(Korean won) (*)		

(*) When calculating earnings per share on adjustment for the years ended December 2022 and 2021, the Group deducts dividends on hybrid equity securities (₩111,211 million in 2022 and ₩80,083 million in 2021, respectively) from adjusted income after deducting provisions for bad debt reserve.

38. Operating income and expenses

38-1 Total operating income for the years ended December 31, 2022 and 2021, is as follows (Korean won in millions):

Classification	2022	2021
Interest income	15,876,580	10,867,491
Fee and commission income	2,735,800	2,653,186
Gains on financial instruments at FVPL	39,933,992	20,681,138
Gains on financial instruments designated at FVPL	1,020,589	367,518
Gains on financial instruments measured at FVOCI	26,545	113,978
Gains on disposal of securities measured at amortized cost	72,965	80,735
Gain on derivative instruments used for hedging	397,940	126,542
Gain on foreign currency transactions	8,677,131	5,197,457
Recovery of impairment loss on financial assets	361	2,530
Other operating income	2,101,877	1,587,197
Total	70,843,780	41,677,772

38-2 Total operating expenses for the years ended December 31, 2022 and 2021 are as follows (Korean won in millions):

Classification	2022	2021
Interest expense	6,956,817	3,430,286
Fee and commission expense	980,881	911,469
Loss on financial instruments at FVTPL	40,411,398	19,824,144
Loss on financial instruments designated as measured at FVTPL	269,584	434,528
Loss on financial instruments measured at FVOCI	9,399	9,430
Loss on disposal of securities measured at amortized cost	11,899	3,905

Classification	2022	2021
Loss on derivative instruments used for hedging purpose	465,659	178,277
Loss on foreign currency transactions	8,161,046	5,159,135
Impairment loss on financial assets	1,187,159	535,748
General and administrative expense	4,432,949	4,050,460
Other operating expense	3,266,677	2,509,294
Total	66,153,468	37,046,676

39. Net interest income

39-1 Interest income for the years ended December 31, 2022 and 2021, are as follows (Korean won in millions):

Classification	2022	2021
Interest income on due from banks	353,440	91,758
Interest income on financial assets measured at FVOCI	631,281	497,322
Interest income on financial assets measured at amortized cost	725,523	429,035
Interest income on loans receivable	13,600,530	9,478,602
Subtotal	15,310,774	10,496,717
Interest income on financial assets measured at FVTPL	468,236	305,319
Others	97,570	65,455
Total	15,876,580	10,867,491

39-2 Interest expenses for the years ended December 31, 2022 and 2021, are as follows (Korean won in millions):

Classification	2022	2021
Interest expense on deposit liabilities	4,612,680	2,077,615
Interest expense on borrowings	680,896	216,650
Interest expense on debentures	1,342,641	942,719
Subtotal	6,636,217	3,236,984
Interest income on financial assets held for trading	130,357	127,027
Others	190,243	66,275
Total	6,956,817	3,430,286

40. Net fee and commission income

40-1 Fee and commission income for the years ended December 31, 2022 and 2021 are as follows (Korean won in millions):

Classification	2022	2021
Fee and commission received from loans and others	1,618,203	1,653,450
Fee and commission received on credit card	764,272	680,608
Fee and commission received on guarantee	89,740	78,364
Fee and commission received from redemption before maturity	2,137	2,745
Fee and commission-related foreign exchange	261,448	238,019
Total	2,735,800	2,653,186

40-2 Fee and commission expenses for the years ended December 31, 2022 and 2021 are as follows (Korean won in millions):

Classification	2022	2021
Commission paid borrowings and others	427,623	457,240
Commission paid on credit card	503,012	417,064
Commission related foreign exchange	50,128	37,081
Commission paid trust	118	84
Total	980,881	911,469

41. Gain (loss) on financial instruments measured at FVTPL

Gain (loss) on financial instruments measured at FVTPL and held-for-trading for the years ended December 31, 2022 and 2021, is as follows (Korean won in millions):

Classification	2022	2021
Gain on financial instruments measured at FVTPL:		
Securities measured at FVTPL:		

Classification	2022	2021
Gain on valuation	465,117	345,917
Gain on disposal	345,721	317,933
Gain on redemption	9,477	6,691
Dividend income	329,566	351,055
Subtotal	1,149,881	1,021,596
Loans measured at FVTPL:	7,940	25,777
Derivatives-linked securities	1,233	16,652
Derivatives held for trading:		
Gain on valuation of derivatives:		
Currency related derivatives	8,994,535	5,766,864
Interest related derivatives	1,872,293	517,650
Stock related derivatives	121,181	116,405
Credit related derivatives	184,125	26,910
Others related derivatives	149,960	91,018
Subtotal	11,322,094	6,518,847
Gain on transactions of derivatives:		
Currency related derivatives	17,668,065	8,271,115
Interest related derivatives	7,916,006	3,275,827
Stock related derivatives	1,088,110	1,052,100
Credit related derivatives	130,662	56,501
Others related derivatives	508,029	393,272
Subtotal	27,310,872	13,048,815
Gain on securities sold	109,177	34,751
Gain on other financial instruments measured at FVTPL	32,795	14,700
Total	39,933,992	20,681,138
Loss on financial instruments measured at FVTPL:		
Securities measured at FVTPL:		
Loss on valuation	977,577	451,072
Loss on disposal	693,361	295,190
Loss on redemption	5,736	22,869
Transaction cost	1,407	158
Subtotal	1,678,081	769,289

Classification	2022	2021
Loans measured at FVTPL:	10,940	10,860
Derivatives-linked securities	33,053	9,131
Derivatives held for trading:		
Loss on valuation of derivatives:		
Currency related derivatives	9,588,159	5,795,595
Interest related derivatives	2,204,134	763,471
Stock related derivatives	325,735	185,599
Credit related derivatives	199,063	47,228
Others related derivatives	279,032	79,967
Subtotal	12,596,123	6,871,860
Loss on transactions of derivatives:		
Currency related derivatives	17,603,955	7,926,967
Interest related derivatives	6,554,736	2,915,743
Stock related derivatives	1,267,189	900,568
Credit related derivatives	121,049	54,886
Others related derivatives	528,616	346,603
Subtotal	26,075,545	12,144,767
Loss on securities sold	17,656	18,237
Total	40,411,398	19,824,144
Net amount	(477,406)	856,994

42. Gain (loss) on financial instruments designated as measured at FVPL

Gain (loss) on financial assets and liabilities designated as measured at FVPL for the years ended December 31, 2022 and 2021, is as follows (Korean won in millions):

Classification	2022	2021
Gain on financial instruments designated as measured at FVTPL:		
Deposits:		

Classification	2022	2021
Gain on valuation	33,531	10,058
Gain on redemption	–	12
Borrowings:		
Gain on valuation	2,340	779
Gain on redemption	334	–
Derivatives linked securities sold:		
Gain on valuation	882,482	234,577
Gain on redemption	101,902	122,092
Total	1,020,589	367,518
Loss on financial instruments designated as measured at FVTPL:		
Deposits:		
Loss on redemption	–	412
Borrowings:		
Loss on valuation	–	320
Loss on redemption	862	–
Derivatives linked securities sold:		
Loss on valuation	105,456	101,675
Loss on redemption	163,267	332,121
Total	269,585	434,528
Net amount	751,004	(67,010)

43. Gain (loss) on financial assets measured at FVOCI

Gain (loss) on financial assets measured at FVOCI for the years ended December 31, 2022 and 2021, is as follows (Korean won in millions):

Classification	2022	2021
Gain on financial assets measured at FVOCI		
Gain on disposal	12,711	103,184
Gain on redemption	3	–

Classification	2022	2021
Dividend income	13,831	10,794
Total	26,545	113,978
Loss on financial assets measured at FVOCI		
Loss on disposal	9,302	9,430
Loss on redemption	97	–
Total	9,399	9,430
Net amount	17,146	104,548

44. Gains (losses) on disposal of financial assets measured at amortized cost

Gain(loss) on disposal of financial assets measured at amortized cost for the years ended December 31, 2022 and 2021, is as follows (Korean won in millions):

Classification	2022	2021
Gain on disposal of financial assets measured at amortized cost:		
Securities measured at amortized cost:		
Gain on disposal	4	20
Loans measured at amortized cost:		
Gain on disposal	72,961	80,715
Subtotal	72,965	80,735
Loss on disposal of financial assets measured at amortized cost:		
Loans measured at amortized cost:		
Loss on disposal	11,899	3,905
Net amount	61,066	76,830

45. Gains (losses) on derivative instruments used for hedging

Gain (loss) on derivative instruments used for hedging purpose for the years ended December 31, 2022 and 2021, is as follows (Korean won in millions):

Classification	2022	2021
Gain on derivative instruments used for hedging purposes:		
Hedged item:		
Gain on valuation of hedged item:		
Debentures	320,975	99,966
Deposits	71,014	16,558
Subtotal	391,989	116,524
Gain on disposal of hedged item:		
Debentures	732	4,012
Deposits	–	426
Subtotal	732	4,438
Derivative instruments used for hedging purposes:		
Gain on valuation of derivatives:		
Currency related derivatives	292	4,095
Interest related derivatives	30	18
Subtotal	322	4,113
Gain on settlement of derivatives:		
Currency related derivatives	2,316	1,459
Interest related derivatives	2,581	8
Subtotal	4,897	1,467
Total	397,940	126,542
Loss on derivative instruments used for hedging purposes:		
Hedged item:		
Loss on valuation of hedged item:		
Debentures	4,365	–
Subtotal	4,365	–
Loss on disposal of hedged item:		
Debentures	–	887

Classification	2022	2021
Subtotal	–	887
Derivative instruments used for hedging purposes:		
Loss on valuation of derivatives:		
Currency related derivatives	131,560	71,967
Interest related derivatives	325,172	99,231
Subtotal	456,732	171,198
Loss on settlement of derivatives:		
Currency related derivatives	2,948	2,428
Interest related derivatives	1,614	3,764
Subtotal	4,562	6,192
Total	465,659	178,277
Net amount	(67,719)	(51,735)

46. Impairment losses of financial instruments

Impairment loss on financial instruments for the years ended December 31, 2022 and 2021, is as follows (Korean won in millions):

Classification	2022	2021
Reversal of credit loss on debt securities measured at FVOCI	(361)	(64)
Provision for loan losses on debt securities measured at amortized cost	66,946	10,286
Provision of allowances for possible loan losses for loans	1,102,210	525,462
Provision (reversal) of allowances for possible loan losses for other assets	18,003	(2,466)
Total	1,186,798	533,218

47. General and administrative expenses

General and administrative expenses for the years ended December 31, 2022 and 2021, is as follows (Korean won in millions):

Classification	2022	2021
Salaries	2,238,908	2,268,294
Provision for severance and retirement benefits	181,449	194,745
Provision for severance (defined contributions)	3,943	6,726
Provision for severance (defined benefits)	177,506	188,019
Termination benefits	199,741	20,582
Employee benefits	138,571	115,882
Rental expenses(*)	63,387	66,822
Entertainment expenses	31,844	29,162
Depreciation on property and equipment	160,645	151,198
Depreciation on investment property	21,874	12,834
Amortization	166,185	168,648
Depreciation for right-of-use assets	221,113	215,000
Taxes and dues	182,136	145,956
Advertising expenses	252,193	156,634
Servicing expenses	232,893	221,574
Supplies expense	8,063	7,927
Others	333,947	275,202
Total	4,432,949	4,050,460

(*) It includes ₩2,310 million and ₩2,515 million of small lease expenses for the year ended December 31, 2022 and 2021.

48. Other operating income

Other operating income for the years ended December 31, 2022 and 2021, is as follows (Korean won in millions):

Classification	2022	2021
Reversal of provisions for payment guarantees	–	1,720
Reversal of allowances for unused commitments	–	17,088
Reversal of allowance for restoration cost	1,768	–
Reversal of allowances for mileage points	–	1
Reversal of allowance for lawsuits	18,141	–
Reversal of other allowance	827	–
Trust commissions	309,470	303,736
Insurance income	1,396,293	1,074,236
Non-controlling interest	33,330	23,615
Merchant banking accounts profit	119,943	46,395
Others	222,105	120,406
Total	2,101,877	1,587,197

49. Other operating expense

Other operating expenses for the years ended December 31, 2022 and 2021, is as follows (Korean won in millions):

Classification	2022	2021
Provision of provisions for payment guarantees	44,927	–
Provision of allowances for unused commitments	3,232	–
Provision of allowance for restoration cost	–	683
Provision of allowance for lawsuits	–	5,544
Provision of other allowance	454	12,000
Contribution to guarantee fund	275,105	241,764
Insurance fee on deposit	467,417	455,795
Contribution to housing credit guarantee fund	148,136	131,243

Classification	2022	2021
Insurance expense	1,125,010	823,350
Provision for policy reserves	316,455	296,375
Non-controlling liability adjustment loss	15,351	68,960
Merchant banking accounts expense	89,351	20,853
Others	781,239	452,727
Total	3,266,677	2,509,294

50. Insurance income and Insurance expense

Details of insurance income and insurance expense for the years ended December 31, 2022 and 2021, are as follows (Korean won in millions):

Classification		2022	2021
Insurance income	Premium income	1,336,799	1,038,187
	Reinsurance income	24,602	17,786
	Other insurance income	6,099	5,289
	Special account income	28,793	12,974
	Subtotal	1,396,293	1,074,236
Insurance expense	Insurance expense	414,631	344,154
	Policyholder dividend expense	2	—
	Refund cost	590,652	395,376
	Reinsurance cost	42,515	36,424
	Provision for policy reserve	316,455	296,375
	Business expense	18,704	1,154
	Depreciation on new contract	23,751	26,063
	Discount fee	5,611	7,205
	Other insurance expense	351	—
	Special account expense	28,793	12,974
	Subtotal	1,441,465	1,119,725
Total		(45,172)	(45,489)

51. Other non-operating income

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

Classification	2021	2020
Rental fee income	33,968	14,675
Gains of disposal of property, equipment and intangible assets	8,197	38,936
Gains of disposal of investment property	8,078	43,174
Gains on disposal of investment in associates	94,509	145,705
Reversal of impairment loss on investments in associates	1	14,170
Others	117,031	301,688
Total	261,784	558,348

52. Other non-operating expenses

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

Classification	2022	2021
Disposal of property, equipment and intangible assets	845	6,774
Disposal of investment property	1,049	4,608
Disposal of investment in associates	9,702	6,945
Contribution	70,086	85,029
Impairment loss on property, equipment and intangible assets	10,374	7,111
Impairment loss on stock of related parties	3,462	628
Commissions received on collection of special bond	7,197	7,781
Others	138,481	296,623
Total	241,196	415,499

53. Income taxes

53-1 The major components of income tax expense for the years ended December 31, 2022 and 2021, are as follows (Korean won in millions):

Classification	2022	2021
Tax burden		
Current income taxes	1,342,975	1,374,938
Additional refund of prior year's income tax	(38,575)	(7,156)
Changes in deferred income taxes due to the tax effect of temporary differences	(327,811)	(113,157)
Current and deferred income taxes recognized directly to equity	346,283	68,718
Income tax expense	1,322,872	1,323,343

53-2 Reconciliations of income tax expense applicable to income before income tax at the Korea statutory tax rate to income tax expense at the effective income tax rate of the Group for the years ended December 31, 2022 and 2021, are as follows (Korean won in millions):

Classification	2022	2021
Income before income tax	4,944,066	4,904,925
Tax at domestic statutory income tax rate	1,346,009	1,273,037
Tax-exempt income	(28,805)	(240,910)
Expenses not deductible for tax purposes	84,040	50,071
Tax deduction	(28,674)	(30,120)
Deduction of tax loss carryforwards	(1,450)	–
Income tax expense of foreign branches and subsidiaries	60,708	47,663
Tax effect of consolidated tax return	(89,822)	818
Additional refund of prior year's income tax	(35,075)	(7,156)
Effect of tax rates change	(16,704)	147
Non-recognition of deferred income tax assets and the effect of write-off	33,316	(456)
Others	(671)	230,249
Income tax expense	1,322,872	1,323,343

Classification	2022	2021
Effective income tax rate (%)	26.8	27.0

53-3 Temporary differences and deferred income tax assets (liabilities) as of December 31, 2022 and 2021, are as follows (Korean won in millions):

<December 31, 2022>

Classification	Deductible (taxable) temporary differences	Deferred income tax assets (liabilities)
Loss on valuation of securities	545,746	144,125
Impairment loss on securities	77,235	20,390
Securities measured at FVOCI	1,361,559	359,329
Gain on valuation of investments in subsidiaries or associates	(458,810)	(121,126)
Gain on valuation of derivatives	444,726	117,408
Deemed dividends	282,048	74,461
Deferred loan fees and expenses	(587,625)	(155,133)
Accrued income	(435,265)	(114,915)
Accrued expenses	296,177	78,129
Allowance for acceptance guarantees	81,109	21,413
Defined benefit obligation	2,105,530	555,793
Plan assets for severance benefit	(2,122,893)	(560,377)
Allowance for other losses	512,647	135,339
Bad debt expenses	846,990	223,111
Depreciation	26,163	6,907
Dormant deposits	22,198	5,860
Advanced depreciation provision	(180,315)	(47,603)
Deemed cost for property and equipment	(680,858)	(179,746)
Investment in kind	18,479	4,878
Financial acceptances and guarantees	4,631	1,222
Deferred point income	201,261	53,133
Fair value valuation resulting from merger	6,937	1,831

Classification	Deductible (taxable) temporary differences	Deferred income tax assets (liabilities)
Fair value differences due to the business combination	(73,644)	(16,808)
Others	503,353	135,349
Tax loss carryforwards	(1,612,624)	(427,178)
Total	1,184,755	315,792
Domestic deferred income tax assets		322,392
Domestic deferred income tax liabilities		(6,600)
Foreign deferred income tax assets(*)		113,020
Foreign deferred income tax liabilities(*)		(2,259)
Deferred income tax assets		426,553

<December 31, 2021>

Classification	Deductible (taxable) temporary differences	Deferred income tax assets (liabilities)
Loss on valuation of securities	238,329	65,459
Impairment loss on securities	75,291	19,454
Securities measured at FVOCI	498,990	137,002
Gain on valuation of investments in subsidiaries	(551,583)	(151,685)
Gain on valuation of derivatives	(397,233)	(109,279)
Deemed dividends	293,313	80,661
Deferred loan fees and expenses	(578,482)	(159,082)
Accrued income	(268,363)	(73,800)
Accrued expenses	276,610	74,047
Allowance for acceptance guarantees	31,300	8,608
Defined benefit obligation	2,237,548	610,680
Plan assets for severance benefit	(2,045,076)	(558,262)
Allowance for other losses	529,178	144,659
Bad debt expenses	745,180	204,009
Depreciation	17,208	4,709

Classification	Deductible (taxable) temporary differences	Deferred income tax assets (liabilities)
Dormant deposits	25,284	6,953
Advanced depreciation provision	(180,315)	(49,587)
Deemed cost for property and equipment	(687,439)	(189,046)
Investment in kind	18,479	5,082
Financial acceptances and guarantees	4,127	1,135
Deferred point income	210,192	50,869
Fair value valuation resulting from merger	9,281	2,552
Fair value differences due to the business combination	(78,693)	(18,384)
Others	323,392	86,481
Tax loss carryforwards	76,869	17,095
Total	823,387	210,330
Domestic deferred income tax assets		268,241
Domestic deferred income tax liabilities		(57,911)
Foreign deferred income tax assets(*)		39,313
Foreign deferred income tax liabilities(*)		(150,901)
Deferred income tax assets		98,742

(*) Deferred income tax assets of foreign branches are not offset against the deferred income tax liabilities due to differences in tax jurisdictions.

The effective income tax rate of 26.4% is applied as of December 31, 2022 when calculating deferred income tax assets or liabilities that will be realized. Also, deferred income tax assets are recognized when it is foreseeable that future taxable income will be incurred and that future tax credits will be realized

53-4 The unrealizable temporary differences as of December 31, 2022 and 2021, are as follows (Korean won in millions):

Classification	December 31, 2022	December 31, 2021
Deductible temporary differences	1,545,389	1,519,929
Taxable temporary differences	(4,304,801)	(4,317,952)

Classification	December 31, 2022	December 31, 2021
Total	(2,759,412)	(2,798,023)

53-5 Details of deferred income taxes charged (credited) directly to equity as of December 31, 2022 and 2021, are as follows (Korean won in millions):

<December 31, 2022>

Classification	Before-tax amounts	Deferred income tax assets (liabilities)
(Loss) gain on valuation of financial assets measured at FVOCI	(1,848,869)	485,971
Changes in valuation of equity method investments	113,458	(30,186)
(Loss) gain on fair value hedge	(34,460)	9,477
Profit or loss on hedge valuation of net investment in overseas operations	(68,721)	18,898
(Loss) gain on valuation of cash flow hedges	(5,468)	1,444
Changes in credit risk of financial liabilities designated as measured at FVTPL	(75,492)	19,930
Exchange differences on translation of foreign operations	(46,220)	(9,866)
Remeasurements of the net defined benefit (asset) liability	(676,237)	175,464
Others	(1,184)	287
Total	(2,643,193)	671,419

<December 31, 2021>

Classification	Before-tax amounts	Deferred income tax assets (liabilities)
(Loss) gain on valuation of financial assets measured at FVOCI	57,156	(15,526)

Classification	Before-tax amounts	Deferred income tax assets (liabilities)
Changes in valuation of equity method investments	86,280	(24,039)
Loss on fair value hedge	–	(1)
Gain (loss) on valuation of cash flow hedges	(2,175)	526
Changes in credit risk of financial liabilities designated as measured at FVTPL	14,284	(3,928)
Exchange differences on translation of foreign operations	(9,488)	2,609
Revaluation surplus	3,502	(963)
Remeasurements of the net defined benefit liability (asset)	(22,413)	5,380
Others	(462)	90
Total	126,684	(35,852)

54. Dividends

54-1 Details of the Group's dividend including interim dividend for the years ended December 31, 2022 and 2021, are as follows (Korean won):

<2022>

Type of dividend	Number of shares	Dividend per share	Share ratio (%)	Dividends (Korea won in millions)
Cash dividend (interim)	291,563,476	800	16.0	233,251
Cash dividend (annual)	291,563,476	2,550	51.0	743,487
Total				976,738

<2021>

Type of dividend	Number of shares	Dividend per share	Share ratio (%)	Dividends (Korea won in millions)
Cash dividend (interim)	291,563,476	700	14.0	204,094
Cash dividend (annual)	291,563,476	2,400	48.0	699,752
Total				903,846

54-2 Details of the Group's dividend pay-out ration and dividend yield (including interim dividends) for the years ended December 31, 2022 and 2021, are as follows(%):

Classification	Formula	2022	2021
Dividend pay-out ratio	Cash dividend amount/Net income	27.5	25.6
Dividend yield	Cash dividend per share/stock prices (closing price of the settlement date)	8.0	7.4

54-3 Details of dividends on hybrid equity securities for the years ended December 31, 2022 and 2021, are summarized as follows (Korean won in millions):

Classification	2022	2021
Average balance of hybrid equity securities	3,109,164	2,278,370
Weighted-average interest rate	3.68%	3.60%
Total dividends	111,211	80,083

55. Earning per share

55-1 Weighted-average numbers of common shares for the years ended December 31, 2022 and 2021, are calculated as follows (shares in units):

Classification	2022	2021
Beginning	291,563,476	291,563,476
Weighted-average number of shares of common stocks outstanding	291,563,476	291,563,476

55-2 The Group's basic earnings per share for the years ended December 31, 2022 and 2021, are calculated as follows (Korean won in millions and per share amounts in units):

Classification	2022	2021
Net income attributable to equity holders of the parent	3,552,391	3,526,068
Dividends on hybrid equity securities	(111,210)	(80,083)
Net income attributable to common stock	3,441,181	3,445,985
Weighted-average number of shares of common stocks outstanding	291,563,476	291,563,476
Basic earnings per share (Korean won in units)	11,803	11,819

55-3 Weighted-average numbers of common shares adjusted for the effect of dilution for the years ended December 31, 2022 and 2021, are calculated as follows (shares in units):

Classification	2022	2021
Beginning	291,563,476	291,563,476
Weighted-average number of common shares (diluted)	291,563,476	291,563,476

55-4 The Group's diluted earnings per share for the years ended December 31, 2022 and 2021, are computed as follows (Korean won in millions and number of shares in units):

Classification	2022	2021
Net income attributable to common stock holders	3,441,181	3,445,985
Weighted-average number of shares of common stocks outstanding (diluted)	291,563,476	291,563,476
Diluted earnings per share (Korean won in units)	11,803	11,819

56. Share-based payment transactions

The Group has granted employees and directors of HFG and its subsidiaries the share options, which may be settled by the issuance of additional shares or by cash payment equal to the difference between the market value and exercise price.

FinnqCo., Ltd., a subsidiary of the Group, has granted the rights and performance-based stock grants to its employees and directors according to the share-based compensation agreements. The compensation costs are measured by reference to the fair value of equity instruments granted.

GLN International Co., Ltd., a subsidiary of the Group, has granted stock option to its employees and directors. The compensation costs are measured by reference to the fair value of equity instruments granted.

56-1 Performance-based stock grants

56-1-1 Details of performance-based stock grants as of December 31, 2022 are summarized as follows (number of shares in units):

Classification	Grant date	Settlement method	Vesting period (specified service period)	Payment date	Estimated vested shares as of December 31, 2022
Grant in 2018(*1)	2018. 1. 1	Cash settlement	2018. 1. 1 – 2020. 12. 31	2020. 12. 31	12,128
Grant in 2019(*1)	2019. 1. 1	Cash settlement	2019. 1. 1 – 2021. 12. 31	2021. 12. 31	558,815
Grant in 2020(*1)	2020. 1. 1	Cash settlement	2020. 1. 1 – 2022. 12. 31	2022. 12. 31	513,834
Grant in 2021(*1)	2021. 1. 1	Cash settlement	2021. 1. 1 – 2023. 12. 31	2023. 12. 31	342,162
Grant in 2022(*1)	2022. 1. 1	Cash settlement	2022. 1. 1 – 2024. 12. 31	2024. 12. 31	101,784

(*1) The maximum number of shares to be compensated is predetermined before the grant date, and vested shares are determined by performance measures. Performance is evaluated as 40% of group performance (relative shareholder return), 55% of group performance (subsidiary ROE and net profit target

achievement rate) and 5% of soundness evaluation. The stocks granted in 2021 and 2022 are based on the Company performance assessment (relative shareholder return) constituting 40%, the business unit performance assessment (based on the company's ROE and the rate of goal net income achieved) constituting 50%, soundness evaluation constituting 5% and mid-and long-term strategic tasks 5%.

(*2) As the payment stock price in four years after the grant date (The arithmetic average of the weighted-average stock prices for the past two months, the past one month, and the past one week from the day before the payment date) will be paid in cash based on the performance-based stock grant agreements, the fair value of the base price to be paid in the future is measured at the closing price at the reporting period.

The Group uses the cash settlement method in connection with the performance-based stock grant liabilities based on past practice, and the compensation costs are recognized by measuring the fair value of liabilities at the end of the reporting period. The performance-based stock grant liabilities in accounts payable are in the amount of ₩66,833 million and ₩57,088 million as of December 31, 2022 and 2021, respectively.

56-1-2 Details of performance-based stock grants by Finng Co., Ltd. as of December 31, 2022, are summarized as follows (number of shares in units):

Classification	Grant date	Settlement method	Vesting period (specified service period)	Payment date	Estimated vested shares as of December 31, 2022
3rd grant(*1)	2020.01.01	Cash settlement	2020.01.01-2022.12.31	2022.12.31	6,155
4th grant(*1)	2021.01.01	Cash settlement	2021.01.01-2023.12.31	2023.12.31	5,654

(*1) The maximum number of shares to be compensated is predetermined before the grant date, and vested shares are determined by performance measures.

(*2) As cash will be paid based on the stock price evaluated by an objective third party designated by Finng Co., Ltd. according to the performance-based stock grant agreements, the price per share of performance-based stock grants is measured at the fair value calculated using the net asset approach by the external

valuation firm.

The compensation costs are recognized by measuring the fair value of liabilities at the end of the reporting period. The performance-based stock grant liabilities in accounts payable are in the amount of ₩46 million as of December 31, 2022.

56-1-3 Compensation costs for a performance-based stock grant for the years ended December 31, 2022 and 2021, are as follows (Korean won in millions):

<2022>

(Korean won in millions)

Classification	HFG	Subsidiary	Finnq Co., Ltd.	Total
Compensation cost	5,164	16,847	(35)	21,976

<2021>

(Korean won in millions)

Classification	HFG	Subsidiary	Total
Compensation cost	5,130	23,582	28,712

56-2 Stock option

56-2-1 GLN International Co., Ltd.

GLN International Co., Ltd., a subsidiary of Hana bank, has granted the stock option with new share issuance to its executives and employees. The stock option vests when the executives and employees have served for at least two years from the grant date, and the exercise period is within five years from the date on which three years from the grant date have elapsed. Details of stock option grants as of December 31, 2022, are summarized as follows:

Classification	Details
Granted by	GLN International Co., Ltd.
Grant shares	GLN International Co., Ltd.'s common stock.
Grant type	Issuance of new shares
Grant date	November 4, 2021
Number of shares granted	400,000 shares
Exercisable period	November 4, 2024 – November 3, 2029
Price per shares (Korean won in units)	500
Evaluation model	LSMC(Least-Squares Monte Carlo) simulation.
Risk-free interest rate	Interest rate on government bonds
Stock price volatility	15.48%
Interest rate volatility	Volatility by period applied to the Hull and White interest rate model.
Fair value per share (Korean won in units) (*)	109.03

(*) The fair value per share is the fair value at the time the stock option is granted.

The compensation costs related to the stock option for the year ended December 31, 2022, are ₩15 million and there is no stock option available for exercise as of December 31, 2022.

56-2-2 Finnq Co., Ltd.

Finnq Co., Ltd., a subsidiary of the Company, has granted the stock option to its executives and employees. Details of stock option grants as of December 31, 2022, are summarized as follows:

Classification	3rd grant	4th grant
Granted by	Finnq Co., Ltd	Finnq Co., Ltd
Grant shares	Finnq Co., Ltd's common stock.	Finnq Co., Ltd's common stock.
Grant type	Able to choose issuance of new shares, receipt of treasury stock or cash-settled share	Able to choose issuance of new shares, receipt of treasury stock or cash-settled share

Classification	3rd grant	4th grant
	appreciation right	appreciation right
Grant date	July 28, 2021	January 1, 2022
Number of shares granted	203,500 shares	45,000 shares
Estimated number of shares vested as of December 31, 2022	109,000 shares	24,000 shares
Vesting period (specified service period)	August 12, 2021 – July 31, 2024	January 1, 2022 – March 31, 2025
Exercisable period	August 1, 2024 – November 30, 2024	April 1, 2025 – July 31, 2025
Payment date	July 31, 2024	March 31, 2025
Exercise price per shares (Korean won in units)	5,000	5,000
Evaluation model	Black-Scholes model	Black-Scholes model

(*1) The maximum number of shares to be compensated is predetermined before the grant date, and vested shares are determined by performance measures.

The compensation costs related to the stock option for the year ended December 31, 2022, are not accrued and there is no stock option available for exercise as of December 31, 2022.

57. Cash flow statements

57-1 Cash and cash equivalents on hand as of December 31, 2022 and 2021, are as follows (Korean won in millions):

Classification	December 31, 2022	December 31, 2021
Cash	1,904,911	2,031,147
Due from banks in Korean won	19,582,064	15,926,712
Due from banks in foreign currencies	24,269,134	13,448,737
Subtotal	45,756,109	31,406,596
Restricted balances (*)	4,605,275	3,580,304
Due from banks with original maturities exceeding three	1,395,611	889,823

Classification	December 31, 2022	December 31, 2021
months from the date of acquisition		
Adjustments	6,000,886	4,470,127
Cash and cash equivalents	39,755,223	26,936,469

(*) Reserve requirement deposits, etc., that meet the definition of cash and cash equivalent are excluded from the restricted balances.

57-2 Significant non-cash transactions for the years ended December 31, 2022 and 2021 are as follows (Korean won in millions):

Description	2022	2021
Gain on valuation of financial assets measured at FVOCI, net	(1,280,775)	(584,154)
Debt-to-equity swap	40,370	—
Replacement from loan, etc., to non-current assets held for sale	7,371	10,489
Replacement from current assets to investment properties	(214,066)	97,636
Replacement from properties to prepaid assets	12,789	16,442
Changes in right-of-use assets	145,700	20,763
Changes in lease liability	347,678	205,493
Changes in exchange differences on translation of foreign operations	316	300,302

57-3 Changes in liabilities arising from financing activities for the years ended December 31, 2022 and 2021, are as follows (Korean won in millions):

<2022>

Classification	January 1, 2022	Cash flows	Foreign exchange movement	Changes in fair values	Other	December 31, 2022
Borrowings	30,261,598	6,082,331	743,383	—	—	37,087,312
Debentures	54,476,161	1,322,091	257,968	(271,934)	889,546	56,673,832
Lease liability	397,394	(222,973)	—	—	347,134	521,555
Total	85,135,153	7,181,449	1,001,351	(271,934)	1,236,680	94,282,699

<2021>

Classification	January 1, 2021	Cash flows	Foreign exchange movement	Changes in fair values	Other	December 31, 2021
Borrowings	26,494,316	2,827,521	939,761	–	–	30,261,598
Debentures	48,761,838	4,015,613	392,646	(24,207)	1,330,271	54,476,161
Lease liability	416,477	(224,509)	–	–	205,426	397,394
Total	75,672,631	6,618,625	1,332,407	(24,207)	1,535,697	85,135,153

58. Related party transactions

The Group defines related parties to include the associates, a member of the key management personnel and a close member of the key management personnel's family and a post-employment benefit plan for the benefit of employees of either the Group or an entity related to the Group. The Group discloses the profit and loss, outstanding balances with related parties arising from the below significant transactions. Details of the investments in associates and joint ventures are disclosed in Note 18.

58-1 Details of significant transactions with related parties for the years ended December 31, 2022 and 2021, are summarized as follows
(Korean won in millions):

<2022>

(Korean won in millions)

Related party	Type	Income			Provisions (reversals) of credit loss allowance on loans	Expenses		
		Interest income	Fee and commission income	Other income		Interest expenses	Fee and commission expenses	Other expenses
Bank of Jilin	Associate	100	3	–	–	–	–	5
CM International Financing Leases	Associate	2,407	–	–	16,015	–	–	–
Beijing Langa Asset Management Co., Ltd.	Associate	67	1	1	(22)	8	–	–
PT. SINARIMAS Hana Finance	Joint venture	2,398	274	259	76	–	–	–
Korea Credit Bureau	Associate	978	38	–	17	108	4,498	1
KEB Hana-KMC Unicorn Fund of Funds	Associate	–	–	–	–	78	–	–
Templeton Hana Asset Management Co., Ltd.	Associate	–	1	2	–	213	–	–

Related party	Type	Income			Provisions (reversals) of credit loss allowance on loans	Expenses		
		Interest income	Fee and commission income	Other income		Interest expenses	Fee and commission expenses	Other expenses
BIDV	Associate	780	–	–	(15)	1,284	1	–
All Together Korea Fund5	Associate	–	–	62	–	–	–	–
Toss Bank Co., Ltd.	Associate	10,541	20,649	1	1	2	1	–
Shinjin International Corporation	Associate	4	–	–	–	–	–	–
Sinsa Station Complex Development PFV Co., Ltd.	Associate	2,681	218	–	9,174	–	–	–
Cheongna Medipolis PFV Co., Ltd.	Associate	–	300	–	–	53	–	–
Mirae Credit Information Services Corp.	Associate	242	10	32	9	42	10,395	–
Lakebridge The Growth Capital PEF1	Associate	–	–	–	–	1	–	–
Hana-Capstone AI Platform Fund	Associate	–	–	–	–	54	–	–
KORAMOO THE ONE REIT (formerly known as KOCREF REIT 30)	Associate	608	975	–	(139)	605	–	16,951
GMIHB Co., Ltd.	Associate	1,494	–	29	(336)	1	–	–
Lotte Ventures Corp. (formerly known as Lotte Accelerator Corporation)	Associate	–	–	1	–	–	–	–
Hana Power Infra 1st Private Equity Fund	Associate	588	2,432	–	(69)	20	–	–
Hana UBS Asset Management	Associate	–	2,283	9	–	353	–	–
2018 Hana- Magna Startup Fund	Associate	–	341	–	–	–	–	–
Dangsandong PFV Co., Ltd.	Associate	–	99	–	–	–	–	–
World HansSang Dream Island	Associate	68	405	–	(18)	–	–	–
Dream Island Leisure	Associate	–	300	–	–	–	–	–
Daegu MBC Development PFV Co. Ltd.	Associate	7,306	367	–	210	–	–	–
YH Leisure Development Co., Ltd.	Associate	3,917	57	–	(160)	29	–	–
Changio Innovation CO., Ltd.	Associate	–	1,122	–	–	–	–	–
Dowon Asset Development Co., Ltd.	Associate	63	2	–	(55)	–	–	–
HORIZON PRIVATE EQUITY FUND	Associate	–	2,623	–	–	–	–	–
Hana Must Seven Special Purpose Acquisition Company	Associate	–	–	–	–	1	–	–
Hana Financial Sixteenth Special Purpose Acquisition Company	Associate	–	–	–	–	1	–	–
Hana Ever Best Corporation Financial Stability Private Investment Co., Ltd.	Associate	–	776	–	–	–	–	–
Hana Bio New Technology Fund No. 2	Associate	–	39	–	–	–	–	–
Hana Bio New Technology Fund No. 3	Associate	–	27	–	–	–	–	–
Forest of Suseong	Associate	–	4	–	–	–	–	–
Hana Financial Nineteenth Special Purpose Acquisition Company	Associate	–	–	–	–	29	–	–
Hana Bio New Technology Fund No. 1-1	Associate	–	39	–	–	–	–	–
Smart Hana-K& Green New Deal No. 1 Fund	Associate	–	303	–	–	–	–	–
Hana Smart Logistics New Technology Fund	Associate	–	105	–	–	–	–	–
People Korea Two	Associate	1,495	249	–	22,097	–	–	–
Hana Financial Twentieth Special Purpose Acquisition Company	Associate	–	–	–	–	1	–	–
New Deal Extension New Technology Fund No. 1	Associate	–	550	–	–	–	–	–
GFI ESG the 1st Private Equity Fund	Associate	–	139	–	–	–	–	–
Imgok Rental Housing CO., Ltd.	Associate	1,071	1,155	–	39	1	77	–

Related party	Type	Income			Provisions (reversals) of credit loss allowance on loans	Expenses		
		Interest income	Fee and commission income	Other income		Interest expenses	Fee and commission expenses	Other expenses
Daeyoung Networks Co., Ltd.	Associate	-	36	-	-	-	-	-
Haba Financial Twenty-first Special Purpose Acquisition Company	Associate	-	180	-	-	17	-	-
Hana X Bio New Technology Fund	Associate	-	758	-	-	-	-	-
The Hahm Green Energy Fund	Associate	-	-	-	-	25	-	-
Choice & Soyeon Construction Co., Ltd.	Associate	1,055	8,250	-	100	-	-	-
Daeyoung DUM PFV Co., Ltd	Associate	-	827	-	-	-	-	-
Hana Financial Twenty-second Special Purpose Acquisition Company	Associate	-	150	-	-	13	-	-
Hana Financial Twenty-third Special Purpose Acquisition Company	Associate	-	150	-	-	12	-	-
Hana Financial Twenty-fourth Special Purpose Acquisition Company	Associate	-	210	-	-	19	-	-
Hana Financial Twenty-fifth Special Purpose Acquisition Company	Associate	-	400	-	-	44	-	-
Eugene Asia Food Tech Fund-1	Associate	-	-	37	-	-	-	-
K&Fashion No. 1 Fund	Associate	-	9	-	-	-	-	-
Hana-Magna Growth Booster Fund	Associate	-	696	-	-	-	-	-
Hana Qualified Investor Private Real Estate Investment Trust No. 41-2	Associate	-	4	-	-	-	-	-
Hana Alternative Special Investment Private Trust No. 161	Associate	-	76	-	-	-	-	-
Hana Alternative Investment Real Estate Private Trust No. 189	Associate	-	12	-	-	-	-	-
Hana Alternative Investment Blind General Private Real Estate Investment Trust No. 172	Associate	-	35	-	-	-	-	-
Hyoje PFV CO., LTD	Associate	-	240	-	-	-	-	-
F&J Credit Information	Associate	-	995	-	-	11	12,137	23
Hana Ventures No. 1 Investment Fund	Associate	-	33	-	-	-	-	-
Hana Digital Transformation Fund	Associate	-	1,634	-	-	-	-	-
Hana Ventures No. 5 Investment Fund	Associate	-	90	-	-	6	-	-
Hana Innovation Venture Scale-up Fund	Associate	-	1,302	-	-	76	-	-
Digital Innovation Growth Fund	Associate	-	369	-	-	-	-	-
Gyeonggi Hana Turn around Fund No. 2	Associate	-	903	16	-	94	-	-
Hana Untact Digital Innovation Fund	Associate	-	1,089	21	-	69	-	-
Hana K-NewDeal Unicorn Fund	Associate	-	1,918	-	-	-	-	-
Inhee(*)	Associate	-	1	-	-	-	-	-
Finng(*)	Joint venture	-	51	30	(12)	7	1,185	70
Smartscore Co., Ltd. (*)	Associate	-	-	5	-	-	-	-
Hana Financial Seventeen Special Purpose Acquisition Company (*)	Associate	-	332	-	-	40	-	-
Hana-History No1 Investment Fund(*)	Associate	-	(51)	-	-	3	-	-
Hana Bio New Technology Fund No. 1 (*)	Associate	-	21	-	-	-	-	-
Striker Morgarten I Private Equity Fund (*)	Associate	-	2,000	-	-	-	-	-
Genesis Environment No. 5 Private Equity Fund(*)	Associate	-	840	-	-	-	-	-
Hana Financial Fourteenth Special Purpose Acquisition Company(*)	Associate	-	-	-	-	1	-	-

Related party	Type	Income			Provisions (reversals) of credit loss allowance on loans	Expenses		
		Interest income	Fee and commission income	Other income		Interest expenses	Fee and commission expenses	Other expenses
Hana Financial Fifteenth Special Purpose Acquisition Company(*)	Associate	–	420	–	–	1	–	–
Key management personnel		304	–	81	9	189	–	–
Total		38,167	59,866	586	46,921	3,511	28,294	17,059

(*) Excluded from the related party for the year ended December 31, 2022

<2021>

(Korean won in millions)

Related party	Type	Income			Provisions (reversals) of allowance for possible loan losses	Expenses		
		Interest income	Fee and commission income	Other income		Interest expenses	Fee and com mission expenses	Other expenses
Bank of Jilin	Associate	62	3	1	–	–	–	2
OM International Financing Leases	Associate	2,282	–	–	7,590	–	–	–
Beijing Langa Asset Management Co., Ltd.	Associate	629	537	20	(50)	8	–	–
PT. SINARIMAS Hana Finance	Joint venture	1,427	64	220	89	–	–	–
Company KStartup Winwin fund	Associate	–	–	–	–	1	–	–
Korea Credit Bureau	Associate	–	48	–	–	13	4,081	–
KEB Hana-KMC Unicorn Fund of Funds	Associate	–	–	–	–	27	–	–
Templeton Hana Asset Management Co., Ltd.	Associate	–	3,092	5	–	127	–	–
BIDV	Associate	307	–	–	(105)	500	–	–
Toss Bank Co., Ltd.	Associate	12	2,049	–	–	330	–	–
Shinjin International Corporation	Associate	–	–	–	92	–	–	–
Inhee	Associate	–	2	–	–	–	–	–
Sinsa Station Complex Development PFV Co., Ltd.	Associate	497	1,041	–	713	–	–	–
Finnq Co., Ltd.	Joint venture	–	437	80	7	19	1,094	140
Mirae Credit Information Services Corp.	Associate	18	10	19	(1)	18	9,979	–
Hana-Capstone AI Platform Fund	Associate	–	–	–	–	8	–	–
KORAMOO THE ONE REIT (formerly known as KOCREF REIT 30)	Associate	2,141	–	–	(20)	727	–	17,215
Gunsan BIO Energy Co., Ltd.	Associate	–	–	–	–	1	–	–
GMHB Co., Ltd.	Associate	2,583	–	30	(158)	1	–	–
Lotte Ventures Corp. (previously, Lotte Accelerat or Corporation)	Associate	–	–	1	–	6	–	–
Hana Power Infra 1st Private Equity Fund	Associate	528	2,432	–	(104)	17	–	–
Hana UBS Asset Management	Associate	–	2,967	15	–	148	–	–
Smartscore Co., Ltd.	Associate	70	13	19	–	–	–	–
2018 Hana- Magna Startup Fund	Associate	–	388	–	–	–	–	–
DangsandongPFV Co., Ltd.	Associate	–	95	–	–	–	–	–
World HansSang Dream Island	Associate	181	403	–	6	–	–	–
Dream Island Leisure	Associate	–	300	–	–	–	–	–

Related party	Type	Income			Provisions (reversals) of allowance for possible loan losses	Expenses		
		Interest income	Fee and commission income	Other income		Interest expenses	Fee and com mission expenses	Other expenses
Daegu MBC Development PFV Co., Ltd.	Associate	940	20,118	—	1,124	—	—	—
YH Leisure Development Co., Ltd.	Associate	3,994	55	—	(31)	3	—	—
Changio Innovation CO., Ltd.	Associate	959	2,676	—	—	—	—	—
Hana Bio New Technology Fund No. 1	Associate	—	21	—	—	—	—	—
Dowon Asset Development Co., Ltd.	Associate	353	734	—	4	1	—	—
HORIZON PRIVATE EQUITY FUND	Associate	—	2,640	—	—	—	—	—
Hana Must Seven Special Purpose Acquisition Company	Associate	—	150	—	—	1	—	—
Hana Financial Fourteen Special Purpose Acquisition Company	Associate	—	—	—	—	1	—	—
Hana Financial Fifteenth Special Purpose Acquisition Company	Associate	—	—	—	—	2	—	—
Hana Financial Sixteenth Special Purpose Acquisition Company	Associate	—	—	—	—	1	—	—
Hana Financial Seventeen Special Purpose Acquisition Company	Associate	—	180	821	—	3	—	—
Hana Ever Best Corporation Financial Stability Private Investment Co., Ltd.	Associate	—	462	—	—	—	—	—
Hana Bio New Technology Fund No. 2	Associate	—	27	—	—	—	—	—
Hana Bio New Technology Fund No. 3	Associate	—	19	—	—	—	—	—
Forest of Suseong	Associate	604	1,485	—	—	—	—	—
Hana Financial Nineteenth Special Purpose Acquisition Company	Associate	—	165	—	—	9	—	—
Hana Bio New Technology Fund No. 1-1	Associate	—	15	—	—	—	—	—
Smart Hana-K& Green New Deal No. 1 Fund	Associate	—	40	—	—	—	—	—
Hana Smart Logistics New Technology Fund	Associate	—	36	—	—	—	—	—
People Korea Two	Associate	457	7,681	—	182	1	—	—
Hana Financial Twentieth Special Purpose Acquisition Company	Associate	—	150	—	—	—	—	—
New Deal Extension New Technology Fund No. 1	Associate	—	172	—	—	—	—	—
Irgok Rental Housing CO., Ltd.	Associate	539	299	—	39	—	—	—
Daeyoung Networks Co., Ltd.	Associate	—	4,410	—	—	—	—	—
Hana-Magna Growth Booster Fund	Associate	—	122	—	—	—	—	—
Odin 2 LLC	Associate	14,648	—	—	—	—	—	—
Hana Qualified Investor Private Real Estate Investment Trust No. 41-2	Associate	—	7	—	—	—	—	—
Hana Alternative Special Investment Private Trust No. 161	Associate	—	1,039	—	—	—	—	—
A&D Credit Information Co.,Ltd.	Associate	—	—	—	—	—	4	—
Hyoje PFV CO., LTD	Associate	—	240	—	—	—	—	—
F&J Credit Information	Associate	—	708	—	—	4	13,158	85
Hana Ventures No. 1 Investment Fund	Associate	—	33	—	—	—	—	—
Hana Digital Transformation Fund	Associate	—	1,842	—	—	—	—	—
Hana Ventures No. 5 Investment Fund	Associate	—	90	—	—	1	—	—
Hana Innovation Venture Scale-up Fund	Associate	—	1,365	—	—	12	—	—

Related party	Type	Income			Provisions (reversals) of allowance for possible loan losses	Expenses		
		Interest income	Fee and commission income	Other income		Interest expenses	Fee and commission expenses	Other expenses
Digital Innovation Growth Fund	Associate	–	141	–	–	–	–	–
Hana-History No1 Investment Fund	Associate	–	51	–	–	–	–	–
Gyeonggi Hana Turn around Fund No. 2	Associate	–	264	–	–	–	–	–
Hana Untact Digital Innovation Fund	Associate	–	289	–	–	–	–	–
Hana Financial Strategic the 1st Private Equity Fund (*)	Associate	–	91	–	–	–	–	–
Our Crowd International Invest III (*)	Associate	–	–	137	–	–	–	27
Hana Must Sixth Special Purpose Acquisition Company (*)	Associate	–	–	–	–	1	–	–
K1 No. 13 Entrustment Management Real Estate Investment Company (*)	Associate	–	825	–	–	–	–	–
Myoungshin Co., Ltd. (*)	Associate	52	–	–	(9)	–	–	–
Fresheasy Co., Ltd. (*)	Associate	378	17	–	–	41	–	–
Key management personnel		294	68	114	(2)	89	6	–
Total		33,955	62,608	1,482	9,366	2,121	28,322	17,469

(*) It is excluded from the related party for the year ended December 31, 2021.

58-2 Outstanding balances with related parties arising from the below significant transactions as of December 31, 2022 and 2021, are summarized as follows (Korean won in millions):

<December 31, 2022>

(Korean won in millions)

Related party	Type	Assets		Allowance for possible loan losses	Liabilities		
		Loans receivables	Other receivables		Deposits	Borrowings	Other payables
Bank of Jilin	Associate	3,200	2,409	–	1,611	–	–
CM International Financing Leases	Associate	61,969	–	49,620	18	–	–
Beijing Langa Asset Management Co., Ltd.	Associate	–	–	–	3,601	–	–
PT. SINARIMAS Hana Finance	Joint venture	37,144	143	229	5	–	–
MIDAN City Development Co., Ltd.	Associate	–	–	–	2	–	–
Korea Credit Bureau	Associate	40,069	–	17	8,263	–	20
KEB Hana-KVIC Unicorn Fund of Funds	Associate	–	–	–	3,993	–	–
Templeton Hana Asset Management Co., Ltd.	Associate	–	–	–	10,672	–	–
BIDV	Associate	6,337	5,394	24	2,045	10,740	–
Toss Bank Co., Ltd.	Associate	250	45,715	1	–	–	1,588
Shinjin International Corporation	Associate	1,444	1	107	–	–	–
Sinsa Station Complex Development PFV Co., Ltd.	Associate	33,300	–	9,887	45	–	–
Cheongna Medipolis PFV Co., Ltd.	Associate	–	–	–	2,500	–	25
Mirae Credit Information Services Corp.	Associate	7,238	172	9	2,267	–	146

Related party	Type	Assets		Allowance for possible loan losses	Liabilities		
		Loans receivables	Other receivables		Deposits	Borrowings	Other payables
Lakebridge The Growth Capital PEF1	Associate	-	-	-	330	-	-
Hana-Capstone AI Platform Fund	Associate	-	-	-	16,841	-	-
KORAMOO THE ONE REIT (formerly known as KOCREF REIT 30)	Associate	-	39,421	-	-	-	27,920
Gunsan BIO Energy Co., Ltd.	Associate	-	2,617	2,617	549	-	-
GMHB Co., Ltd.	Associate	-	-	-	100	-	343
Lotte Ventures Corp. (formerly known as Lotte Accelerator Corporation)	Associate	-	-	-	96	-	-
Hana Power Infra 1st Private Equity Fund	Associate	11,116	598	170	4,264	-	-
Hana UBS Asset Management	Associate	21	507	-	18,287	-	-
2018 Hana- Magna Startup Fund	Associate	-	346	-	-	-	-
DangsandongPFV Co., Ltd.	Associate	-	-	-	675	-	9
World HansSang Dream Island	Associate	-	-	-	-	-	120
Daegu MBC Development PFV Co. Ltd.	Associate	134,430	-	1,345	2	-	6
YH Leisure Development Co., Ltd.	Associate	112,331	-	172	5,045	-	7
Changio Innovation CO., Ltd.	Associate	4	-	-	70	-	201
Dowon Asset Development Co., Ltd.	Associate	10,000	3,685	-	-	-	-
HORIZON PRIVATE EQUITY FUND	Associate	-	5,263	-	-	-	-
Hana Must Seven Special Purpose Acquisition Company	Associate	-	796	-	1,389	-	-
Hana Financial Sixteenth Special Purpose Acquisition Company	Associate	-	990	-	1,275	-	-
Hana Ever Best Corporation Financial Stability Private Investment Co., Ltd.	Associate	-	207	-	-	-	19
Genesis Environment No. 3 Private Equity Fund	Associate	-	-	-	-	-	1
Hana Haechang Private Equity Fund No. 1	Associate	-	-	-	-	-	28
Hana Financial Nineteenth Special Purpose Acquisition Company	Associate	-	1,595	-	2,423	-	-
Smart Hana-K& Green New Deal No. 1 Fund	Associate	-	84	-	-	-	-
People Korea Two	Associate	30,000	-	22,279	47	-	-
Hana Financial Twentieth Special Purpose Acquisition Company	Associate	-	700	-	778	-	-
New Deal Extension New Technology Fund No. 1	Associate	-	-	-	-	-	17
Imgok Rental Housing CO., Ltd.	Associate	-	-	-	38	-	-
Daeyoung Networks Co., Ltd.	Associate	-	-	-	-	-	7
Hana Financial Twenty-first Special Purpose Acquisition Company	Associate	-	1,390	-	2,572	-	-
Hana X Bio New Technology Fund	Associate	-	2,000	-	-	-	-
Infinity ESG Private Equity Fund No. 2	Associate	-	-	-	-	-	9
Choice & Soyeon Construction Co., Ltd.	Associate	25,000	1,600	100	104	-	-
Hana Financial Twenty-second Special Purpose Acquisition Company	Associate	-	1,190	-	2,007	-	-
Hana Financial Twenty-third Special Purpose Acquisition Company	Associate	-	1,290	-	1,911	-	-
Hana Financial Twenty-fourth Special Purpose Acquisition Company	Associate	-	1,798	-	2,954	-	-
Hana Financial Twenty-fifth Special Purpose Acquisition Company	Associate	-	4,995	-	6,536	-	-
Eugene Asia Food Tech Fund-1	Associate	-	-	-	247	-	-
K&Fashion No. 1 Fund	Associate	-	6	-	-	-	-
Hana Financial Twenty-sixth Special Purpose Acquisition Company	Associate	-	1,290	-	-	-	-
Hana Financial Twenty-seventh Special Purpose Acquisition Company	Associate	-	1,390	-	-	-	-

Related party	Type	Assets		Allowance for possible loan losses	Liabilities		
		Loans receivables	Other receivables		Deposits	Borrowings	Other payables
Hana-Magna Growth Booster Fund	Associate	-	174	-	-	-	18
Glenwood Credit Private Equity Fund II	Associate	-	2,070	-	-	-	-
Hana Alternative Special Investment Private Trust No. 161	Associate	-	6	-	-	-	-
Hana Alternative Investment Real Estate Private Trust No. 189	Associate	-	12	-	-	-	-
Hana Alternative Investment Blind General Private Real Estate Investment Trust No. 172	Associate	-	10	-	-	-	-
F&J Credit Information	Associate	192	-	-	1,149	-	-
Hana Ventures No. 1 Investment Fund	Associate	-	8	-	-	-	-
Hana Digital Transformation Fund	Associate	-	5,507	-	-	-	12
Hana Ventures No. 5 Investment Fund	Associate	-	23	-	592	-	-
Hana Innovation Venture Scale-up Fund	Associate	-	1,174	-	10,943	-	-
Digital Innovation Growth Fund	Associate	-	100	-	-	-	-
Gyeonggi Hana Turn around Fund No. 2	Associate	-	141	-	11,370	-	-
Hana Untact Digital Innovation Fund	Associate	-	172	-	8,252	-	-
Hana K-NewDeal Unicorn Fund	Associate	-	573	-	-	-	-
Key management personnel		9,505	-	14	17,663	-	4
합계		523,550	137,562	86,591	153,531	10,740	30,500

<December 31, 2021>

(Korean won in millions)

Related party	Type	Assets		Allowance for possible loan losses	Liabilities		
		Loans receivables	Other receivables		Deposits	Borrowings	Other payables
Bank of Jilin	Associate	6,300	11,573	-	3,492	-	-
OM International Financing Leases	Associate	63,341	-	35,184	18	-	-
Beijing Langa Asset Management Co., Ltd.	Associate	11,161	-	21	12	-	-
PT. SINARMAS Hana Finance	Joint venture	32,491	33	163	12	-	-
MIDAN City Development Co., Ltd.	Associate	-	-	-	2	-	-
Company KStartup Winwin fund	Associate	-	-	-	300	-	-
Korea Credit Bureau	Associate	55	-	-	141	-	217
KEB Hana-KMC Unicorn Fund of Funds	Associate	-	-	-	3,779	-	-
Templeton Hana Asset Management Co., Ltd.	Associate	-	-	-	11,694	-	-
BIDV	Associate	11,855	3,851	39	1,653	80,755	-
Toss Bank Co., Ltd. (formerly Toss INNOVATION CO., LTD)	Associate	138	10,682	-	-	-	514
Shinjin International Corporation	Associate	1,444	1	107	-	-	-
Inhee	Associate	-	-	-	2	-	-
Sinsa Station Complex Development PFV Co., Ltd.	Associate	99,000	-	713	92	-	-
Finnq Co., Ltd.	Joint venture	88	13	12	15,289	-	47
Mirae Credit Information Services Corp.	Associate	253	246	-	4,631	-	100
Heat Private Equity Fund	Associate	-	-	-	1	-	8
Lakebridge The Growth Capital PEF1	Associate	-	-	-	277	-	-
Hana-Capstone AI Platform Fund	Associate	-	-	-	2,129	-	48
KORAMCO THE ONE REIT (formerly known as KOCREF REIT 30)	Associate	40,000	48,434	139	-	-	35,836
Gunsan BIO Energy Co., Ltd.	Associate	2	2,617	2,617	555	-	-

Related party	Type	Assets		Allowance for possible loan losses	Liabilities		
		Loans receivables	Other receivables		Deposits	Borrowings	Other payables
GMHB Co., Ltd.	Associate	52,500	–	336	100	–	169
Lotte Ventures Corp. (previously, Lotte Accelerator Corporation)	Associate	–	–	–	777	–	–
Hana Power Infra 1st Private Equity Fund	Associate	13,023	598	239	12,428	–	–
Hana UBS Asset Management	Associate	19	689	–	16,328	–	–
Smartscore Co., Ltd.	Associate	1	2,077	–	188	–	37
2018 Hana- Magna Startup Fund	Associate	–	147	–	–	–	–
DangsandongPFV Co., Ltd.	Associate	–	–	–	183	–	12
World HansSang Dream Island	Associate	4,750	8	18	52	–	122
Daegu MBC Development PFV Co. Ltd.	Associate	123,325	–	1,163	2,402	–	104
Genesis Environment No. 1 Private Equity Fund	Associate	–	–	–	–	–	1
YH Leisure Development Co., Ltd.	Associate	115,473	–	332	1,788	–	–
Changio Innovation CO., Ltd.	Associate	1	–	–	45	–	98
Dowon Asset Development Co., Ltd.	Associate	9,942	3,685	55	83	–	2
HORIZON PRIVATE EQUITY FUND	Associate	–	2,640	–	–	–	–
Hana Must Seven Special Purpose Acquisition Company	Associate	–	796	–	1,405	–	–
Hana Financial Fourteen Special Purpose Acquisition Company	Associate	–	990	–	1,285	–	–
Hana Financial Fifteenth Special Purpose Acquisition Company	Associate	–	1,390	–	1,588	–	–
Hana Financial Sixteenth Special Purpose Acquisition Company	Associate	–	990	–	1,286	–	–
Hana Financial Seventeen Special Purpose Acquisition Company	Associate	–	2,611	–	2,535	–	–
Hana Ever Best Corporation Financial Stability Private Investment Co., Ltd.	Associate	–	136	–	–	–	24
Genesis Environment No. 3 Private Equity Fund	Associate	–	–	–	–	–	1
Hana Hoechang Private Equity Fund No. 1	Associate	–	–	–	–	–	24
Hana Financial Nineteenth Special Purpose Acquisition Company	Associate	–	1,595	–	2,496	–	–
Smart Hana-K& Green New Deal No. 1 Fund	Associate	–	–	–	–	–	4
People Korea Two	Associate	30,000	–	182	57	–	69
Hana Financial Twentieth Special Purpose Acquisition Company	Associate	–	700	–	817	–	–
New Deal Extension New Technology Fund No. 1	Associate	–	–	–	–	–	22
Irgok Rental Housing CO., Ltd.	Associate	12,000	239	39	308	–	901
Daeyoung Networks Co., Ltd.	Associate	–	–	–	–	–	23
Hana Financial Twenty-One Special Purpose Acquisition Company	Associate	–	1,390	–	2,786	–	–
Hana-Magna Growth Booster Fund	Associate	–	122	–	–	–	28
Hana Qualified Investor Private Real Estate Investment Trust No. 41-2	Associate	–	1	–	–	–	–
Hana Alternative Special Investment Private Trust No. 161	Associate	–	6	–	–	–	–
F&U Credit Information	Associate	97	–	–	1,266	–	–
Hana Ventures No. 1 Investment Fund	Associate	–	4,403	–	–	–	10
Hana Digital Transformation Fund	Associate	–	–	–	661	–	–
Hana Innovation Venture Scale-up Fund	Associate	–	704	–	7,786	–	–

Related party	Type	Assets		Allowance for possible loan losses	Liabilities		
		Loans receivables	Other receivables		Deposits	Borrowings	Other payables
Key management personnel		11,216	–	4	16,036	–	3
Total		638,475	103,367	41,363	118,765	80,755	38,424

58-3 The Group engages in financing activities and transactions with related parties as part of normal business activities. Money transactions between related parties for the years ended December 31, 2022 and 2021, are as follows (Korean won in millions).

<2022>

(Korean won in millions)

Related party	Type	Loans Receivables(*1)			Deposits(*1) and Borrowings			Capital Contribution		
		Lend	Collect	Difference	Increase	Decrease	Difference	Increase	Decrease	Difference
Bank of Jilin	Associate	108,600	(111,700)	(3,100)	–	–	–	–	–	–
Beijing Langa Asset Management Co., Ltd.	Associate	–	(12,083)	(12,083)	–	–	–	–	(2,888)	(2,888)
PT. SINARMAS Hana Finance	Joint venture	7,086	(1,572)	5,514	5	(12)	(7)	–	–	–
BSK-6 Patent Technology Investment Association	Associate	–	–	–	–	–	–	–	(327)	(327)
Company KStartup Winwin fund	Associate	–	–	–	–	(300)	(300)	–	(7,090)	(7,090)
Korea Credit Bureau	Associate	40,640	(626)	40,014	8,000	–	8,000	–	–	–
KEB Hana-KVC Unicorn Fund of Funds	Associate	–	–	–	–	–	–	25,130	–	25,130
Templeton Hana Asset Management Co., Ltd.	Associate	–	–	–	10,500	(11,000)	(500)	–	(198)	(198)
BIDV	Associate	419,413	(425,749)	(6,336)	1,349,738	(1,422,233)	(72,495)	–	–	–
Harvest Private Equity Fund Specializing in Start-Up and Venture Business I	Associate	–	–	–	–	–	–	–	(27)	(27)
All Together Korea Fund5	Associate	–	–	–	–	–	–	62	(62)	–
Toss Bank Co., Ltd.	Associate	1,063,137	(1,063,025)	112	–	–	–	79,753	–	79,753
Sinsa Station Complex Development PFV Co., Ltd.	Associate	56,800	(122,500)	(65,700)	–	–	–	–	–	–
Taurus Cloud Fund	Associate	–	–	–	–	–	–	77	–	77
Cheongna Medipolis PFV Co., Ltd.	Associate	–	–	–	2,500	–	2,500	–	–	–
NE HK 52 Ltd.	Associate	–	–	–	–	–	–	48,872	–	48,872
Mirae Credit Information Services Corp.	Associate	10,143	(3,158)	6,985	–	(300)	(300)	–	(186)	(186)
Lakebridge The Growth Capital PEF1	Associate	–	–	–	–	–	–	–	(256)	(256)
Hana-Capstone AI Platform Fund	Associate	–	–	–	42	(42)	–	25,000	–	25,000
KORAMOO THE ONE REIT (Formerly known as KOCREF REIT 30)	Associate	–	(40,000)	(40,000)	–	–	–	–	(1,727)	(1,727)
Gunsan BIO Energy Co., Ltd.	Associate	4	(5)	(1)	–	–	–	–	–	–
GMIHB Co., Ltd.	Associate	–	(52,500)	(52,500)	–	–	–	–	–	–

Related party	Type	Loans Receivables(*1)			Deposits(*1) and Borrowings			Capital Contribution		
		Lend	Collect	Difference	Increase	Decrease	Difference	Increase	Decrease	Difference
Hana Power Infra 1st Private Equity Fund	Associate	-	(1,907)	(1,907)	-	-	-	-	-	-
Hana UBS Asset Management	Associate	279	(277)	2	18,000	(16,000)	2,000	-	(3,822)	(3,822)
World HansSang Dream Island	Associate	-	(4,750)	(4,750)	-	-	-	-	-	-
Dream Island Leisure	Associate	-	-	-	-	-	-	1,990	-	1,990
Daegu MBC Development PFV Co., Ltd.	Associate	11,105	-	11,105	-	-	-	-	-	-
YH Leisure Development Co., Ltd.	Associate	465	(3,608)	(3,143)	5,000	-	5,000	-	-	-
Changjo Innovation CO., Ltd.	Associate	68	(66)	2	-	(10)	(10)	-	-	-
Dowon Asset Development Co., Ltd.	Associate	184	(126)	58	-	-	-	-	-	-
HORIZON PRIVATE EQUITY FUND	Associate	-	-	-	-	-	-	-	(55,811)	(55,811)
Curious Solution No.1 Corporate Recovery Private Equity Fund	Associate	-	-	-	-	-	-	-	(7,200)	(7,200)
Hana Ever Best Corporation Financial Stability Private Investment Co., Ltd.	Associate	-	-	-	-	-	-	6,044	-	6,044
Genesis Environment No. 3 Private Equity Fund	Associate	-	-	-	-	-	-	-	(766)	(766)
Hana Financial Nineteenth Special Purpose Acquisition Company	Associate	-	-	-	13	-	13	-	-	-
Smart Hana-K& Green New Deal No. 1 Fund	Associate	-	-	-	-	-	-	6,050	-	6,050
People Korea Two	Associate	20,000	(20,000)	-	-	-	-	-	-	-
New Deal Extension New Technology Fund No. 1	Associate	-	-	-	-	-	-	5,000	-	5,000
GFI ESG the 1st Private Equity Fund	Associate	-	-	-	-	-	-	4,754	(10,556)	(5,802)
Ingok Rental Housing CO., Ltd.	Associate	-	(12,000)	(12,000)	-	-	-	-	-	-
Hana Financial Twenty-first Special Purpose Acquisition Company	Associate	-	-	-	2,100	-	2,100	-	-	-
NPX-Welcome Metaverse Contents fund	Associate	-	-	-	-	-	-	1,000	-	1,000
STIC Healthcare I Private Equity Fund	Associate	-	-	-	-	-	-	1,000	-	1,000
NH-Deep Dive Smart Logistics Fund	Associate	-	-	-	-	-	-	2,000	-	2,000
Octave Tech Investment L25 LLC	Associate	-	-	-	-	-	-	1,841	-	1,841
ST-CENTUM Fund No. 2	Associate	-	-	-	-	-	-	2,000	-	2,000
Hana X Bio New Technology Fund	Associate	-	-	-	-	-	-	22,000	-	22,000
The Hahn Green Energy Fund	Associate	-	-	-	5,600	(5,600)	-	19,500	(6,500)	13,000
EBEST HBIC Fund No.83	Associate	-	-	-	-	-	-	2,000	-	2,000
Infinity ESG Private Equity Fund No. 2	Associate	-	-	-	-	-	-	15,034	(1,634)	13,400
Choice & Soyeon Construction Co., Ltd.	Associate	25,000	-	25,000	-	-	-	86	-	86
Daeyoung DLM PFV Co., Ltd	Associate	-	-	-	-	-	-	1,400	-	1,400
Hana Financial Twenty-second Special Purpose Acquisition Company	Associate	-	-	-	1,600	-	1,600	10	-	10
JB EBEST Autonomous The Current Fund No. 3	Associate	-	-	-	-	-	-	1,000	-	1,000

Related party	Type	Loans Receivables(*1)			Deposits(*1) and Borrowings			Capital Contribution		
		Lend	Collect	Difference	Increase	Decrease	Difference	Increase	Decrease	Difference
Hana Financial Twenty-third Special Purpose Acquisition Company	Associate	-	-	-	1,500	-	1,500	10	-	10
Hana Financial Twenty-fourth Special Purpose Acquisition Company	Associate	-	-	-	2,450	-	2,450	2	-	2
Hana Financial Twenty-fifth Special Purpose Acquisition Company	Associate	-	-	-	5,800	-	5,800	5	-	5
IMM Global Circular Economy LPF	Associate	-	-	-	-	-	-	2,562	-	2,562
Cheonan JDC PFV Co., Ltd. _Preferred stock	Associate	-	-	-	-	-	-	1,149	-	1,149
KDBC-Harvest Fund No. 1	Associate	-	-	-	-	-	-	27,400	(2,000)	25,400
Eugene Asia Food Tech Fund-1	Associate	-	-	-	-	-	-	1,000	-	1,000
K&Fashion No. 1 Fund	Associate	-	-	-	-	-	-	1,000	-	1,000
HMC-Primus Mobility New Tech Fund	Associate	-	-	-	-	-	-	2,000	-	2,000
UNIST-ATP Start-up Fund No. 1	Associate	-	-	-	-	-	-	1,000	-	1,000
BIDV Securities Joint Stock Company (BSC)	Associate	-	-	-	-	-	-	118,708	(2,632)	116,076
Hana Financial Twenty-sixth Special Purpose Acquisition Company	Associate	-	-	-	-	-	-	10	-	10
Hana Financial Twenty-seventh Special Purpose Acquisition Company	Associate	-	-	-	-	-	-	10	-	10
Hanwha-Samsung Healthcare No. 1 Venture Fund	Associate	-	-	-	-	-	-	2,000	-	2,000
MS-KAI Contents Fund 1	Associate	-	-	-	-	-	-	2,000	-	2,000
Anda Mobility Infrastructure Fund No. 1	Associate	-	-	-	-	-	-	2,000	-	2,000
ACP Venture Blind Association No. 1	Associate	-	-	-	-	-	-	1,000	-	1,000
Srilegate Kairos Sub 1 PEF	Associate	-	-	-	-	-	-	1,700	-	1,700
Hana-Magna Growth Booster Fund	Associate	-	-	-	-	-	-	7,500	-	7,500
KCLAMS-Meta Fund No. 2	Associate	-	-	-	-	-	-	-	(1,595)	(1,595)
KIAMCO Daegu Complex Development Fund	Associate	-	-	-	-	-	-	-	(825)	(825)
Nautic Green Innovation ESG Co-investment No. 1 Private Equity Fund	Associate	-	-	-	-	-	-	5,000	-	5,000
Meta Liquifying Venture Asset 2nd Private Equity Fund	Associate	-	-	-	-	-	-	3,000	-	3,000
Glenwood Credit Private Equity Fund II	Associate	-	-	-	-	-	-	32,000	-	32,000
Hana Qualified Investor Private Real Estate Investment Trust No. 41-2	Associate	-	-	-	-	-	-	-	(1,394)	(1,394)
Hana Alternative Special Investment Private Trust No. 161	Associate	-	-	-	-	-	-	-	(38)	(38)
Hana Alternative Investment Real Estate Private Trust No. 189	Associates	-	-	-	-	-	-	2,150	-	2,150
Hana Alternative Investment Blind General Private Real Estate Investment Trust No. 172	Associates	-	-	-	-	-	-	800	(16)	784

Related party	Type	Loans Receivables(*1)			Deposits(*1) and Borrowings			Capital Contribution		
		Lend	Collect	Difference	Increase	Decrease	Difference	Increase	Decrease	Difference
A&D Credit Information Co., Ltd.	Associate	-	-	-	-	-	-	-	(33)	(33)
Metheus Private Equity Real Estate Fund 10	Associate	-	-	-	-	-	-	2,000	(104)	1,896
F&J Credit Information	Associate	1,584	(1,489)	95	502	(1,011)	(509)	-	-	-
Hana Digital Transformation Fund	Associate	-	-	-	-	-	-	-	(4,738)	(4,738)
Hana Ventures No. 5 Investment Fund	Associate	-	-	-	1,000	(500)	500	-	-	-
Hana Innovation Venture Scale-up Fund	Associate	-	-	-	13,000	(8,000)	5,000	6,000	-	6,000
Gyeonggi Hana Turn around Fund No. 2	Associate	-	-	-	17,000	(10,000)	7,000	6,000	-	6,000
Hana Untact Digital Innovation Fund	Associate	-	-	-	13,000	(10,000)	3,000	18,600	-	18,600
Hana K-NewDeal Unicorn Fund	Associate	-	-	-	-	-	-	29,160	-	29,160
Axis Bio Fund	Associate	-	-	-	-	-	-	-	(507)	(507)
Smartscore Co., Ltd. (*2)	Associate	38	(39)	(1)	-	-	-	-	-	-
Genesis Environment No. 1 Private Equity Fund (*2)	Associate	-	-	-	-	-	-	-	(5,566)	(5,566)
Hana-History No1 Investment Fund (*2)	Associate	-	-	-	-	-	-	-	(5,452)	(5,452)
Hana Bio New Technology Fund No. 1 (*2)	Associate	-	-	-	-	-	-	-	(1,170)	(1,170)
Striker Morgarten I Private Equity Fund (*2)	Associate	-	-	-	-	-	-	43,400	(43,300)	100
Genesis Environment No. 6 Private Equity Fund(*2)	Associate	-	-	-	-	-	-	-	(4,677)	(4,677)
Otium-Gravity Private Equity Fund (*2)	Associates	-	-	-	-	-	-	2,000	(2,000)	-
Genesis Environment No. 5 Private Equity Fund(*2)	Associate	-	-	-	-	-	-	30,000	(23,000)	7,000
Key management personnel (*3)		-	(1,711)	(1,711)	5,363	-	5,363	-	-	-
Total		1,764,546	(1,878,891)	(114,345)	1,462,713	(1,485,008)	(22,295)	622,769	(198,097)	424,672

(*1) Overdrawn accounts on a daily basis are excluded from the lending and collection of loans, and the amounts of frequent deposits and borrowings are excluded from the changes in deposits.

(*2) It is excluded from a related party for the year ended December 31, 2022.

(*3) Financial transactions with key management personnel are shown as net amounts.

<2021>

(Korean won in millions)

Related Party	Type	Loans Receivables(*1)			Deposits(*1) and Borrowings			Capital Contribution		
		Lend	Collect	Difference	Increase	Decrease	Difference	Increase	Decrease	Difference
Bank of Jilin	Associate	216,800	(221,100)	(4,300)	-	-	-	-	-	-
Beijing Langa Asset Management Co., Ltd.	Associate	-	(1,860)	(1,860)	-	-	-	-	(2,281)	(2,281)
PT. SINARMAS Hana Finance	Joint venture	15,062	(2,517)	12,545	23	(24)	(1)	-	-	-

Related Party	Type	Loans Receivables(*1)			Deposits(*1) and Borrowings			Capital Contribution		
		Lend	Collect	Difference	Increase	Decrease	Difference	Increase	Decrease	Difference
Company KStartup Winwin fund	Associate	-	-	-	300	-	300	-	(300)	(300)
Korea Credit Bureau	Associate	542	(550)	(8)	-	(3,000)	(3,000)	-	(90)	(90)
KEB Hana-KMC Unicorn Fund of Funds	Associate	-	-	-	15,000	(15,000)	-	18,000	-	18,000
Templeton Hana Asset Management Co., Ltd.	Associate	-	-	-	11,000	(18,000)	(7,000)	-	(990)	(990)
BIDV	Associate	898,147	(904,075)	(5,928)	647,603	(620,511)	27,092	-	(6,262)	(6,262)
Harvest Private Equity Fund Specializing in Start-Up and Venture Business I	Associate	-	-	-	-	-	-	-	(27)	(27)
Toss Bank Co., Ltd.	Associate	1,555	(1,476)	79	180,000	(200,000)	(20,000)	47,500	-	47,500
Sinsa Station Complex Development PFV Co., Ltd.	Associate	99,000	-	99,000	-	-	-	450	-	450
Taurus Cloud Fund	Associate	-	-	-	-	-	-	9,401	-	9,401
NPX-Welcome Metaverse Contents fund	Associate	-	-	-	-	-	-	2,000	-	2,000
Cheongna Medipolis PFV Co., Ltd.	Associate	-	-	-	-	-	-	3,708	-	3,708
Finnq Co., Ltd.	Joint venture	890	(834)	56	-	-	-	-	-	-
Mirae Credit Information Services Corp.	Associate	2,868	(2,771)	97	310	(10)	300	-	(186)	(186)
Apollon Private Equity Fund	Associate	-	-	-	-	-	-	-	(3,817)	(3,817)
Lakebridge The Growth Capital PEF1	Associate	-	-	-	-	-	-	-	(243)	(243)
Hana-Capstone AI Platform Fund	Associate	-	-	-	42	-	42	25,000	-	25,000
KORAMCO THE ONE REIT (formerly known as KOCREF REIT 30)	Associate	-	(10,000)	(10,000)	-	-	-	-	(1,036)	(1,036)
Gunsan BIO Energy Co., Ltd.	Associate	15	(16)	(1)	-	-	-	-	-	-
Lotte Ventures Corp. (previously, Lotte Accelerator Corporation)	Associate	-	-	-	1,500	(2,500)	(1,000)	-	-	-
Hana Power Infra 1st Private Equity Fund	Associate	-	(1,163)	(1,163)	-	-	-	-	-	-
Hana UBS Asset Management	Associate	230	(219)	11	26,000	(28,000)	(2,000)	-	(3,523)	(3,523)
Smartscore Co., Ltd.	Associate	84	(84)	-	-	-	-	-	-	-
2018 Hana- Magna Startup Fund	Associate	-	-	-	-	-	-	-	(685)	(685)
World HansSang Dream Island	Associate	3,300	-	3,300	-	-	-	-	-	-
Dream Island Leisure	Associate	-	-	-	-	-	-	5,969	-	5,969
Daegu MBC Development PFV Co. Ltd.	Associate	123,420	-	123,420	-	-	-	-	-	-
YH Leisure Development Co., Ltd.	Associate	250	(1,727)	(1,477)	-	-	-	-	-	-
Changio Innovation CO., Ltd.	Associate	221	(40,227)	(40,006)	110	(100)	10	-	-	-
Dowon Asset Development Co., Ltd.	Associate	2,799	(857)	1,942	-	-	-	-	-	-
HORIZON PRIVATE EQUITY FUND	Associate	-	-	-	-	-	-	26,171	(25,588)	583
Curious Solution No.1 Corporate Recovery Private Equity Fund	Associate	-	-	-	-	-	-	-	(1,232)	(1,232)
DGH New Technology Investment Association No. 1	Associate	-	-	-	-	-	-	1,000	-	1,000
Hana Ever Best Corporation Financial Stability Private Investment Co., Ltd.	Associate	-	-	-	-	-	-	6,087	-	6,087
Hana Bio New Technology Fund No. 2	Associate	-	-	-	-	-	-	1,000	-	1,000
Hana Bio New Technology Fund No. 3	Associate	-	-	-	-	-	-	1,000	-	1,000
Genesis Environment No. 3 Private Equity Fund	Associate	-	-	-	-	-	-	18,900	-	18,900
Forest of Suseong	Associate	-	-	-	-	-	-	110	-	110
BM Ventures Fund No. 1	Associate	-	-	-	-	-	-	1,500	-	1,500
MC Southeast Asia Fund No. 1	Associate	-	-	-	-	-	-	916	-	916
Hana Haechang Private Equity Fund No. 1	Associate	-	-	-	-	-	-	362	-	362

Related Party	Type	Loans Receivables(*1)			Deposits(*1) and Borrowings			Capital Contribution		
		Lend	Collect	Difference	Increase	Decrease	Difference	Increase	Decrease	Difference
Hana Financial Nineteenth Special Purpose Acquisition Company	Associate	-	-	-	1,800	-	1,800	5	-	5
Hana Bio New Technology Fund No. 1-1	Associate	-	-	-	-	-	-	2,000	-	2,000
Smart Hana-K& Green New Deal No. 1 Fund	Associate	-	-	-	-	-	-	4,950	-	4,950
Hana Smart Logistics New Technology Fund	Associate	-	-	-	-	-	-	2,000	-	2,000
Cornerstone Mutual Growth VI Fund	Associate	-	-	-	-	-	-	1,000	-	1,000
People Korea Two	Associate	30,000	-	30,000	-	-	-	45	-	45
Hana Financial Twentieth Special Purpose Acquisition Company	Associate	-	-	-	-	-	-	1	-	1
C47 Investment-Contents Wavve Original Contents I Startup and Venture Private Equity Fund	Associate	-	-	-	-	-	-	1,000	-	1,000
New Deal Extension New Technology Fund No. 1	Associate	-	-	-	-	-	-	11,000	-	11,000
GFI ESG the 1st Private Equity Fund	Associate	-	-	-	-	-	-	10,600	-	10,600
Ingok Rental Housing CO., Ltd.	Associate	12,000	-	12,000	-	-	-	20	-	20
Daeyoung Networks Co., Ltd.	Associate	-	-	-	-	-	-	245	-	245
Hana Financial Twenty-One Special Purpose Acquisition Company	Associate	-	-	-	-	-	-	10	-	10
S&S-Redwood India Agri-tech Fund	Associate	-	-	-	-	-	-	2,000	-	2,000
KCLAMS AIM Artificial Intelligence Fund No. 1	Associate	-	-	-	-	-	-	1,000	-	1,000
K& Secondary No5 Fund	Associate	-	-	-	-	-	-	1,000	-	1,000
Genesis Environment Energy No. 6 Private Equity Fund	Associate	-	-	-	-	-	-	31,000	-	31,000
Hana-Magna Growth Booster Fund	Associate	-	-	-	-	-	-	7,500	-	7,500
Hana Capital-Capstone Venture Fund III	Associate	-	-	-	-	-	-	2,500	-	2,500
Hana-KDBC, Capstone Venture Fund	Associate	-	-	-	-	-	-	-	(1,102)	(1,102)
KCLAMS-Meta Fund No. 2	Associate	-	-	-	-	-	-	5,000	-	5,000
2019 Capstone Venture Fund	Associate	-	-	-	-	-	-	500	-	500
KIAMCO Daegu Complex Development Fund	Associate	-	-	-	-	-	-	19,000	(1,017)	17,983
Hana Qualified Investor Private Real Estate Investment Trust No. 41-2	Associate	-	-	-	-	-	-	-	(107)	(107)
Hana Alternative Special Investment Private Trust No. 161	Associate	-	-	-	-	-	-	800	(24)	776
A&D Credit Information Co.,Ltd.	Associate	-	-	-	-	-	-	-	(33)	(33)
F&J Credit Information	Associate	1,297	(1,295)	2	3	-	3	-	-	-
Hana Digital Transformation Fund	Associate	-	-	-	-	-	-	-	(8,903)	(8,903)
HS INVESTMENTS EU11 L.P.	Associate	-	-	-	-	-	-	16	-	16
Hana Innovation Venture Scale-up Fund	Associate	-	-	-	-	-	-	12,000	-	12,000
Digital Innovation Growth Fund	Associate	-	-	-	-	-	-	3,000	-	3,000
Hana-History No1 Investment Fund	Associate	-	-	-	-	-	-	5,500	-	5,500
Gyeonggi Hana Turn around Fund No. 2	Associate	-	-	-	-	-	-	12,000	-	12,000
Hana Untact Digital Innovation Fund	Associate	-	-	-	-	-	-	9,300	-	9,300
Hana Financial Strategic the 1st Private Equity Fund (*2)	Associate	-	-	-	-	-	-	-	(1,061)	(1,061)
Our Crowd International Invest III (*2)	Associate	-	-	-	-	-	-	-	(497)	(497)
KiwomSecurities - Friend 1 New										

Related Party	Type	Loans Receivables(*1)			Deposits(*1) and Borrowings			Capital Contribution		
		Lend	Collect	Difference	Increase	Decrease	Difference	Increase	Decrease	Difference
Technology Business Investment Fund (*2)	Associate	-	-	-	-	-	-	-	(1,424)	(1,424)
Petra 6th Alpha Private Equity Fund (*2)	Associate	-	-	-	-	-	-	-	(47,978)	(47,978)
K1 No. 13 Entrustment Management Real Estate Investment Company (*2)	Associate	-	-	-	-	-	-	4,500	(122)	4,378
Gwangju Numun Mirae Asset PFV Co., LTD. (*2)	Associate	-	-	-	-	-	-	995	-	995
Genesis Environment No. 4 Private Equity Fund (*2)	Associate	-	-	-	-	-	-	55,402	-	55,402
Myoungshin Co., Ltd. (*2)	Associate	-	-	-	30	-	30	-	-	-
Fresheasy Co., Ltd. (*2)	Associate	4,682	(3,335)	1,347	450	-	450	-	-	-
Key management personnel (*3)		-	(955)	(955)	-	(2,864)	(2,864)	-	-	-
Total		1,413,162	(1,195,061)	218,101	884,171	(890,009)	(5,838)	374,963	(108,528)	266,435

(*1) Overdrawn accounts on a daily basis are excluded from the lending and collection of loans, and the amounts of frequent deposits and borrowings are excluded from the changes in deposits.

(*2) It is excluded from a related party for the year ended December 31, 2021.

(*3) Financial transactions with key major management personnel are shown as net amounts.

58-4 Tangible and intangible assets etc. acquired from related parties were ₩17 million and ₩ 260 million for the year ended December 31, 2022 and 2021, respectively.

58-5 Significant guarantee contracts, Commitment and collateral provided between related parties as of December 31, 2022 and 2021, are summarized as follows (Korean won in millions):

<December 31, 2022>

(Korean won in millions)

Related parties		Transactions	Amounts
Benefactor	Beneficiary		
KEB Hana Bank	Gyeonggi Hana Turn around Fund No. 2	Securities purchase contract	450
KEB Hana Bank	Daegu MBC Development PFV Co. Ltd.	Unused limit (Loans in Korean won)	65,292
KEB Hana Bank	Taurus Cloud Fund	Securities purchase contract	522
KEB Hana Bank	Hana Digital Transformation Fund	Securities purchase contract	1,000
KEB Hana Bank	Hana Untact Digital Innovation Fund	Securities purchase contract	450

Related parties		Transactions	Amounts
Benefactor	Beneficiary		
KEB Hana Bank	Hana K-NewDeal Unicorn Fund	Securities purchase contract	10,800
KEB Hana Bank	Hana Innovation Venture Scale-up Fund	Securities purchase contract	520
KEB Hana Bank	Cheongna Medipolis PFV Co., Ltd.	Securities purchase contract	16,628
KEB Hana Bank	Templeton Hana Asset Management Co., Ltd.	Securities purchase contract	4,619
BIDV	Hana Bank	Foreign currency Payment Guarantee	59,306
PT Bank KEB Hana	PT. SINARMAS HANA FINANCE	Collateral provided	1,688
Hana Securities	Hana Digital Transformation Fund	Securities purchase contract	400
Hana Securities	Hana Ever Best Corporation Financial Stability Private Investment Co., Ltd.	Securities purchase contract	13,968
Hana Securities	Genesis Environment Energy No. 3 Private Equity Fund	Securities purchase contract	900
Hana Securities	Hana Hoechang Private Equity Fund No. 1	Securities purchase contract	20,495
Hana Securities	New Deal Extension New Technology Fund No. 1	Securities purchase contract	5,400
Hana Securities	Hana-Magna Growth Booster Fund	Securities purchase contract	6,000
Hana Securities	Infinity ESG Private Equity Fund No. 2	Securities purchase contract	3,000
KEB Hana Card	F&U Credit Information	Unused limit(Credit card)	798
KEB Hana Card	Korea Credit Bureau	Unused limit(Credit card)	231
KEB Hana Card	Mirae Credit Information Services Corp.	Unused limit(Credit card)	762
KEB Hana Card	Gunsan BIO Energy Co., Ltd.	Unused limit(Credit card)	30
KEB Hana Card	Hana UBS Asset Management	Unused limit(Credit card)	479
KEB Hana Card	YH Leisure Development Co., Ltd.	Unused limit(Credit card)	12
KEB Hana Card	Changio Innovation CO., Ltd.	Unused limit(Credit card)	26
KEB Hana Card	Toss Bank Co., Ltd.	Unused limit(Credit card)	750
KEB Hana Card	Hana Digital Transformation Fund	Securities purchase contract	250
KEB Hana Card	Gyeonggi Hana Turn around Fund No. 2	Securities purchase contract	300
KEB Hana Card	Hana Untact Digital Innovation Fund	Securities purchase contract	350
KEB Hana Card	Hana K-NewDeal Unicorn Fund	Securities purchase contract	4,200
Hana Capital	PT. SINARMAS HANA FINANCE	Payment Guarantee	21,034
Hana Capital	Hana Digital Transformation Fund	Securities purchase contract	250
Hana Capital	Hana Innovation Venture Scale-up Fund	Securities purchase contract	600
Hana Capital	Genesis Environment Energy No. 3 Private Equity Fund	Securities purchase contract	200
Hana Capital	Gyeonggi Hana Turn around Fund No. 2	Securities purchase contract	300
Hana Capital	Hana Untact Digital Innovation Fund	Securities purchase contract	300
Hana Capital	Hana K-NewDeal Unicorn Fund	Securities purchase contract	4,800
Hana Capital	Nautic Green Innovation ESG Co-investment No. 1 Private Equity Fund	Securities purchase contract	3,280
Hana Capital	New Deal Extension New Technology Fund No. 1	Securities purchase contract	4,000
Hana Capital	Hana-Magna Growth Booster Fund	Securities purchase contract	3,600
Hana Life Insurance	Hana Digital Transformation Fund	Securities purchase contract	150
Hana Life Insurance	Hana Innovation Venture Scale-up Fund	Securities purchase contract	200
Hana Life Insurance	Hana Beyond Finance Fund	Securities purchase contract	7,000

Related parties		Transactions	Amounts
Benefactor	Beneficiary		
Hana Savings Bank	Hana Digital Transformation Fund	Securities purchase contract	200
Hana Savings Bank	Hana Innovation Venture Scale-up Fund	Securities purchase contract	100
Hana Asset Trust	Hana Digital Transformation Fund	Securities purchase contract	100
Hana Asset Trust	Hana Innovation Venture Scale-up Fund	Securities purchase contract	200
Hana Asset Trust	Hana Untact Digital Innovation Fund	Securities purchase contract	200
Hana Asset Trust	Hana K-NewDeal Unicorn Fund	Securities purchase contract	1,200
Hana Alternative Asset Management	Hana Innovation Venture Scale-up Fund	Securities purchase contract	100
Hana Alternative Asset Management	Hana K-NewDeal Unicorn Fund	Securities purchase contract	600
Hana Ventures	Hana Digital Transformation Fund	Securities purchase contract	393
Hana Ventures	Hana Innovation Venture Scale-up Fund	Securities purchase contract	1,280
Hana Ventures	Gyeonggi Hana Turn around Fund No. 2	Securities purchase contract	950
Hana Ventures	Hana Untact Digital Innovation Fund	Securities purchase contract	1,800
Hana Ventures	Hana K-NewDeal Unicorn Fund	Securities purchase contract	22,140
Total			294,603

<December 31, 2021>

Related parties		Transactions	Amounts
Benefactor	Beneficiary		
KEB Hana Bank	GMHB Co., Ltd.	Unused limit (Loans in Korean won)	6,000
KEB Hana Bank	Hana Digital Transformation Fund	Securities purchase contract	1,000
KEB Hana Bank	Hana Innovation Venture Scale-up Fund	Securities purchase contract	1,560
KEB Hana Bank	All Together Korea Fund5	Securities purchase contract	990,000
KEB Hana Bank	KEB Hana-KMC Unicorn Fund of Funds	Securities purchase contract	25,130
KEB Hana Bank	TossBank Corp. (previously, TOSS INNOVATION CO., LTD.)	Securities purchase contract	227,273
KEB Hana Bank	Taurus Cloud Fund	Securities purchase contract	599
KEB Hana Bank	Hana-Capstone AI Platform Fund	Securities purchase contract	15,000
KEB Hana Bank	Daegu MBC Site Complex Development PFV	Unused limit (Loans in foreign currency)	74,880
KEB Hana Bank	Smartscore Co., Ltd.	Unused limit (Loans in foreign currency)	7
BIDV	KEB Hana Bank	Foreign currency Payment Guarantee	26,782
Firmq Co., Ltd.	KEB Hana Bank	Collateral provided	50
PT Bank KEB Hana	PT. SINARMAS HANA FINANCE	Unused limit (Loans in foreign currency)	7,397
Hana Securities	Hana Digital Transformation Fund	Securities purchase contract	400
Hana Securities	Heat Private Equity Fund	Securities purchase contract	297
Hana Securities	Genesis Environment No. 1 Private Equity Fund	Securities purchase contract	1,099
Hana Securities	Hana Ever Best Corporation Financial Stability Private Investment Co., Ltd.	Securities purchase contract	20,013

Related parties		Transactions	Amounts
Benefactor	Beneficiary		
Hana Securities	Genesis Environment No. 3 Private Equity Fund	Securities purchase contract	900
Hana Securities	Hana Hoechang(Shenzhen) Private Equity Fund No. 1	Securities purchase contract	20,495
Hana Securities	Hana-Capstone AI Platform Fund	Securities purchase contract	10,000
Hana Securities	Smart Hana-K& Green New Deal No. 1 Fund	Securities purchase contract	3,300
Hana Securities	New Deal Extension New Technology Fund No. 1	Securities purchase contract	8,400
Hana Securities	Hana-Magna Growth Booster Fund	Securities purchase contract	10,500
KEB Hana Card	F&J Credit Information	Unused limit(Credit card)	893
KEB Hana Card	Finnq Co., Ltd.	Unused limit(Credit card)	132
KEB Hana Card	Korea Credit Bureau	Unused limit(Credit card)	245
KEB Hana Card	Mirae Credit Information Services Corp.	Unused limit(Credit card)	747
KEB Hana Card	Gunsan BIO Energy Co., Ltd.	Unused limit(Credit card)	28
KEB Hana Card	Hana UBS Asset Management	Unused limit(Credit card)	481
KEB Hana Card	Smart score Co., Ltd.	Unused limit(Credit card)	6
KEB Hana Card	YH Leisure Development Co., Ltd.	Unused limit(Credit card)	10
KEB Hana Card	Changjo Innovation CO., Ltd.	Unused limit(Credit card)	29
KEB Hana Card	Toss Bank Co., Ltd. (formerly Toss Innovation Preparation Corporation)	Unused limit(Credit card)	862
KEB Hana Card	Dowon Asset Development Co., Ltd.	Unused limit(Credit card)	28
KEB Hana Card	Hana Financial Fourteen Special Purpose Acquisition Company	Unused limit(Credit card)	50
KEB Hana Card	Hana Financial Nineteenth Special Purpose Acquisition Company	Unused limit(Credit card)	50
KEB Hana Card	Hana Digital Transformation Fund	Securities purchase contract	250
KEB Hana Card	Gyeonggi Hana Turn around Fund No. 2	Securities purchase contract	1,200
KEB Hana Card	Hana Untact Digital Innovation Fund	Securities purchase contract	2,450
Hana Capital	PT SINARMAS HANA FINANCE	Payment Guarantee	21,606
Hana Capital	Hana Digital Transformation Fund	Securities purchase contract	250
Hana Capital	Hana Innovation Venture Scale-up Fund	Securities purchase contract	1,800
Hana Capital	Genesis Environment Energy No. 3 Private Equity Fund	Securities purchase contract	200
Hana Capital	Smart Hana-K& Green New Deal No. 1 Fund	Securities purchase contract	2,750
Hana Capital	New Deal Extension New Technology Fund No. 1	Securities purchase contract	5,600
Hana Capital	Gyeonggi Hana Turn around Fund No. 2	Securities purchase contract	1,200
Hana Capital	Hana Untact Digital Innovation Fund	Securities purchase contract	2,100
Hana Life Insurance	Hana Digital Transformation Fund	Securities purchase contract	150
Hana Life Insurance	Hana Innovation Venture Scale-up Fund	Securities purchase contract	600
Hana Life Insurance	Dowon Asset Development Co., Ltd.	Unused limit (Loans in Korean won)	100
Hana Savings Bank	World HansSang Dream Island	Unused limit (Loans in Korean won)	250
Hana Savings Bank	Hana Digital Transformation Fund	Securities purchase contract	200

Related parties		Transactions	Amounts
Benefactor	Beneficiary		
Hana Savings Bank	Hana Innovation Venture Scale-up Fund	Securities purchase contract	300
Hana Asset Trust	Hana Digital Transformation Fund	Securities purchase contract	100
Hana Asset Trust	Hana Innovation Venture Scale-up Fund	Securities purchase contract	600
Hana Asset Trust	Hana Untact Digital Innovation Fund	Securities purchase contract	1,400
Hana Alternative Asset Management	Hana Digital Transformation Fund	Securities purchase contract	150
Hana Alternative Asset Management	Hana Innovation Venture Scale-up Fund	Securities purchase contract	300
Hana Ventures	Hana Digital Transformation Fund	Securities purchase contract	393
Hana Ventures	Hana Innovation Venture Scale-up Fund	Securities purchase contract	3,840
Hana Ventures	Gyeonggi Hana Turn around Fund No. 2	Securities purchase contract	3,800
Hana Ventures	Hana Untact Digital Innovation Fund	Securities purchase contract	12,600
Total			1,518,832

58-6 Details of compensation paid to key management personnel for the years ended December 31, 2022 and 2021, are summarized as follows (Korean won in millions):

Classification	2022	2021
Employee payment	61,788	58,302
Severance payment	7,656	2,684
Share-based compensation expenses	8,912	17,805
Total	78,474	78,791

58-7 The defined benefit plans between entities belonging to the Group as of December 31, 2022 and 2021, are as follows (Korean won in millions):

Classification	December 31, 2022	December 31, 2021	Description
KEB Hana Bank	235,023	188,126	Trust account
Hana Securities	170,140	133,408	Trust account
Total	405,163	321,534	

59. Business combination

59-1 Overview

Finnq Co., Ltd. is a fintech company established on August 24, 2016 with the Group and SK Telecom investing 51% and 49%, respectively. Finnq Co., Ltd. became a wholly-owned subsidiary of the Group by acquiring the remaining 49% stake of Finnq Co., Ltd. on July 27, 2022. The main reasons for the business combination are securing profitability through the expansion of Finnq's financial product intermediation business, as well as entering new business areas and collaborating on digital-related operations within the Group.

59-2 Identifiable net assets

Finnq Co., Ltd.'s identifiable assets acquired and liabilities assumed as of the acquisition date are as follows (Korean won in millions):

Classification	Accounts	Amounts(*)
Assets	Cash and due from banks	9,023
	Trade receivables	1,064
	Tangible assets	762
	Intangible assets	2,218
	Other assets	1,553
	Subtotal	14,620
Liabilities	Defined benefit liabilities	121
	Trade payables and other payables	383
	Advances	4,875
	Other liabilities	2,708
	Subtotal	8,087
The fair value of identifiable net assets		6,533

(*) The business combination of Finnq Co., Ltd. is measured by using the book value of identifiable assets and liabilities assumed as of the acquisition date.

59-3 Goodwill

Goodwill related to the business combination of Finnq Co., Ltd. is as follows
(Korean won in millions):

Classification	Amounts
Consideration transferred(*)	11,700
The fair value of identifiable net assets	(6,533)
Goodwill	5,167

(*) The fair value of the investments in associates of Finnq Co., Ltd. before the acquisition date amounts to ₩5,733 million.

60. Subsequent events after the reporting period

On February 9, 2023, the Group decided to acquire and retire its treasury stock at the meeting of the board of directors, and plans to acquire ₩150,000 million worth of its treasury stock through a trust agreement from February 17, 2023 to August 16, 2023. After the acquisition, the Company plans to retire all of the treasury stock acquired.

61. Approval of the consolidated financial statements

The Group's consolidated financial statements for the year ended December 31, 2022 were approved by the board of directors on March 7, 2023, and will receive final approval at the shareholders' meeting to be held on March 24, 2023.