

KAKAO CORP. and Subsidiaries

Consolidated Financial Statements

December 31, 2023 and 2022

KAKAO CORP. and Subsidiaries

Index

December 31, 2023 and 2022

	Page(s)
Independent Auditor's Report	1 - 5
Consolidated Financial Statements	
Consolidated Statements of Financial Position	6 - 7
Consolidated Statements of Comprehensive Income.....	8
Consolidated Statements of Changes in Equity	9 - 10
Consolidated Statements of Cash Flows	11
Notes to the Consolidated Financial Statements	12 - 205
Independent Auditor's Report on	
Internal Control over Financial Reporting for Consolidation Purposes	206 - 207
Management's Report on the Effectiveness of	
Internal Control over Financial Reporting for Consolidation Purposes	208

Independent Auditor's Report

To the Board of Directors and Shareholders of
KAKAO CORP.

Opinion

We have audited the accompanying consolidated financial statements of KAKAO CORP. and its subsidiaries (collectively referred to as the "Group"), which comprise the consolidated statement of financial position as at December 31, 2023, and the consolidated statement of comprehensive income, consolidated statement of changes in equity and consolidated statement of cash flows for the year then ended, and notes to the consolidated financial statements, including material accounting policy information.

In our opinion, the accompanying consolidated financial statements present fairly, in all material respects, the consolidated financial position of the Group as at December 31, 2023, and its consolidated financial performance and its consolidated cash flows for the year then ended in accordance with International Financial Reporting Standards as adopted by the Republic of Korea (Korean IFRS).

We also have audited, in accordance with Korean Standards on Auditing, the Company's Internal Control over Financial Reporting for consolidation purposes as at December 31, 2023, based on *Conceptual Framework for Designing and Operating Internal Control over Financial Reporting*, and our report dated March 20, 2024 expressed an unqualified opinion.

Basis for Opinion

We conducted our audit in accordance with Korean Standards on Auditing. 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 of the Republic of Korea that are relevant to our audit of the consolidated financial statements and we have fulfilled our other ethical responsibilities in accordance with the ethical requirements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Key Audit Matters

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

(1) Impairment of goodwill of cash-generating units of internet portal service and other services, e-commerce services, game business, other mobile services, music services and entertainment services

Reason why the matter was determined to be a Key Audit Matter

We focused on this area due to the significance of size of goodwill balance as at December 31, 2023 and because the assessment of the 'value in use' of the Group's cash generating units involves management's judgements about the future results of the business and the discount rates applied to future cash flow forecast. Details are described in Note 19.

In particular, we focused our audit effort on the remaining goodwill balance as at December 31, 2023, in relation to the significant cash generating units including internet portal services and other services, e-commerce services, game business, other mobile services, music services, and entertainment services. We identified accounting for the forementioned goodwill as a key audit matter due to its significant magnitude, and due to the significant judgements required for the Group's managements in determining the assumptions such as discount rates, growth rates and future cash flow forecasts to estimate the value-in-use.

How our audit addressed the Key Audit Matter

We have performed the following audit procedures to address the Key Audit Matter.

- Obtained an understanding of and evaluated the accounting policies and internal controls in connection with the impairment tests.
- Evaluated the effectiveness of design and operation of internal controls including review and approval by management for future cash flow estimates and significant assumptions in connection with the impairment tests.
- Evaluated the eligibility and independence of an external specialist hired by management.
- Evaluated the adequacy of valuation model used by management to estimate value-in-use.
- Evaluated the reasonableness of key assumptions used to estimate value-in-use.
- Confirmed that future cash flow estimates in connection with the impairment tests are consistent with the business plan approved by management, except for certain cash flows adjusted from the perspective of market participants.
- Reviewed the appropriateness of the carrying amount allocated to the cash generating units.
- Assessed the result of sensitivity analysis of the discount rates and permanent growth rates used by management in order to assess the impacts of changes in key assumptions on the impairment tests.

(2) Accounting for business combination with SM Entertainment Co., Ltd.

Reason why the matter was determined to be a Key Audit Matter

On March 28, 2023, the Group acquired 40.54% of interests in SM Entertainment Co., Ltd. ("SME") for W 1,360,132 million and obtained control over SME. The Group accounted for the acquisitions in accordance with Korean IFRS 1103 *Business Combinations* (Note 39). The purchase consideration was allocated to various assets and liabilities acquired. The purchase price allocation relies on fair value estimates. The Group engaged an independent external expert to assist the Group in valuation of the main intangible assets acquired. We considered that the forementioned accounting for business combination is a key audit matter given the size of the purchase consideration and the significant level of management's judgment involved for the allocation of purchase consideration.

How our audit addressed the Key Audit Matter

We have performed the following audit procedures to address the Key Audit Matter.

- Obtained an understanding of and evaluated the accounting policies and internal controls in connection with the business combination.
- Evaluated the eligibility and independence of an external specialist hired by management for the purchase price allocation.
- Performed the following procedures for assessment of the fair value,
 - Assessed the appropriateness of the methodology applied by management in determining the fair value of identifiable intangible assets and other assets and liabilities acquired
 - Evaluated whether the underlying assumptions and variables used in determining fair value are consistent with those used in other type of valuations.
 - Tested the mathematical accuracy of the fair value calculation
- Assessed the appropriateness of the Group's disclosures related to the business combination in the notes to the consolidated financial statements.

Other Matters

The consolidated financial statements of the Group for the year ended December 31, 2022, were audited by another auditor who expressed an unqualified opinion on those statements on March 19, 2024 (March 20, 2023 except for the emphasis of matters regarding the restatement of financial statements). The Group's consolidated financial statements for the year ended December 31, 2022 another auditor audited did not reflect the effects of adjustments described in Note 2.(2).5) to the consolidated financial statements. The Group's consolidated financial statements for the year ended December 31, 2022, presented herein for comparative purposes, were restated to reflect these adjustments.

Auditing standards and their application in practice vary among countries. The procedures and practices used in the Republic of Korea to audit such consolidated financial statements may differ from those generally accepted and applied in other countries.

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

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

In preparing the consolidated financial statements, management is responsible for assessing the Group's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless management either intends to liquidate the Group or to cease operations.

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 Korean Standards on Auditing 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 Korean Standards on Auditing, we exercise professional judgment and maintain professional skepticism throughout the audit. We also:

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

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

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

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

The engagement partner on the audit resulting in this independent auditor's report is Seung Whan Lee, Certified Public Accountant.

/s/ Samil PricewaterhouseCoopers

Seoul, Korea

March 20, 2024

This report is effective as at March 20, 2024, the audit report date. Certain subsequent events or circumstances, which may occur between the audit report date and the time of reading this report, could have a material impact on the accompanying consolidated financial statements and notes thereto. Accordingly, the readers of the audit report should understand that there is a possibility that the above audit report may have to be revised to reflect the impact of such subsequent events or circumstances, if any.

KAKAO CORP. and Subsidiaries
Consolidated Statements of Financial Position
December 31, 2023 and 2022

<i>(in millions of Korean won)</i>	Notes	2023	2022
Assets			
Current assets			
Cash and cash equivalents	4,7,8	₩ 5,268,779	₩ 4,780,244
Short-term financial instruments	4,7,8	1,661,509	1,210,213
Financial assets at fair value through profit or loss	4,5,7,10	154,695	565,644
Derivative financial assets	4,5,7,10,26	220	351
Trade receivables	4,7,10	622,027	440,899
Other current financial assets	4,7,10	575,469	361,873
Income tax receivable		4,275	-
Inventories	15	138,644	160,328
Other current assets	14	468,099	236,181
Assets held for sale	42	49,543	-
		<u>8,943,260</u>	<u>7,755,733</u>
Non-current assets			
Long-term financial instruments	4,7,8	12,992	10,131
Financial assets at fair value through profit or loss	4,5,7,10	484,753	502,078
Financial assets at fair value through other comprehensive income	5,7,10	1,658,868	1,449,567
Investments in associates and joint ventures	16	2,941,239	2,651,898
Non-current derivative financial assets	4,5,7,10,26	12,340	6,211
Other non-current financial assets	4,7,10	289,480	269,788
Property and equipment	17	1,322,051	885,397
Intangible assets	19	5,688,508	6,022,352
Investment property	18	73,807	20,878
Right-of-use assets	20	1,770,900	1,715,592
Net defined benefit assets	22	60,429	69,448
Other non-current assets	14	255,674	353,770
Deferred income tax assets	24	519,146	493,981
		<u>15,090,187</u>	<u>14,451,091</u>
Assets of financial services business			
Cash and cash equivalents	4,7,8	120,412	55,665
Deposits	4,7,8	108,797	66,511
Financial assets at fair value through profit or loss	4,5,7,10	677,902	496,616
Financial assets at amortized cost	4,7	67,375	16,175
Property and equipment	17	14,878	15,037
Intangible assets	19,39	80,379	70,561
Right-of-use assets	20	2,256	3,093
Net defined benefit assets	22	1,212	289
Reinsurance assets		199	-
Other financial assets	4,7,10	71,055	15,590
Other assets	14	2,057	17,181
		<u>1,146,522</u>	<u>756,720</u>
Total Assets		<u>₩ 25,179,969</u>	<u>₩ 22,963,544</u>

KAKAO CORP. and Subsidiaries
Consolidated Statements of Financial Position
December 31, 2023 and 2022

<i>(in millions of Korean won)</i>	Notes	2023	2022
Liabilities			
Current liabilities			
Trade and other payables	4,7,12	₩ 1,799,199	₩ 1,373,954
Short-term borrowings	4,7,21,37	1,629,452	1,096,884
Deposits received	4,7,13	521,689	442,303
Other current financial liabilities	4,7,13	1,556,291	38,623
Other current liabilities	14	802,219	1,801,744
Income tax payable	24	144,441	157,670
Provisions	25	20,652	20,574
Derivative financial liabilities	5,7,26	8,195	34,076
Short-term lease liabilities	4,20,37	284,615	244,391
		<u>6,766,753</u>	<u>5,210,219</u>
Non-current liabilities			
Non-current trade and other payables	4,7,12	67,666	110,592
Long-term borrowings	4,7,21,37	845,628	1,176,181
Non-current provisions	25	80,962	70,152
Long-term lease liabilities	4,20,37	1,730,858	1,643,416
Net defined benefit liabilities	22	22,455	18,514
Other long-term employee benefits liabilities	23	69,997	73,168
Non-current derivative financial liabilities	5,7,26	-	3,540
Deferred income tax liabilities	24	719,233	606,586
Other non-current financial liabilities	4,7,13	161,765	25,620
Other non-current liabilities	14	38,620	70,105
		<u>3,737,184</u>	<u>3,797,874</u>
Liabilities of financial services business			
Deposits received	4,7,13	714,931	394,287
Other long-term employee benefits liabilities	23	4,485	2,845
Provisions	25	845	1,124
Insurance contract liabilities		2,763	152
Lease liabilities	4,20,37	1,711	2,327
Other financial liabilities	4,5,7,13	88,019	33,109
Other liabilities	14	4,679	5,890
		<u>817,433</u>	<u>439,733</u>
Total Liabilities		<u>11,321,370</u>	<u>9,447,827</u>
Equity			
Share capital	1,27	44,535	44,592
Share premium	27	8,839,891	8,116,372
Other components of equity	29	7,571	41,031
Accumulated other comprehensive income(loss)	30	(1,050,415)	(1,249,666)
Retained earnings	31	1,922,137	3,031,388
Equity attributable to owners of the Parent			
Company		<u>9,763,719</u>	<u>9,983,717</u>
Non-controlling interests	41	<u>4,094,880</u>	<u>3,532,000</u>
Total Equity		<u>13,858,599</u>	<u>13,515,717</u>
Total Equity and Liabilities		<u>₩ 25,179,969</u>	<u>₩ 22,963,544</u>

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

KAKAO CORP. and Subsidiaries
Consolidated Statements of Comprehensive Income
Years Ended December 31, 2023 and 2022

<i>(in millions of Korean won, except for share amounts)</i>		Notes	2023	2022
Revenue	6,11	₩	7,557,002	₩ 6,798,742
Operating expenses	32		<u>7,096,144</u>	<u>6,229,351</u>
Operating profit			460,858	569,391
Other non-operating income	33		192,325	2,013,527
Other non-operating expenses	33		2,314,424	1,111,461
Finance income	34		317,437	342,770
Interest income			190,163	122,729
Other finance income			127,274	220,041
Finance costs	34		308,396	487,663
Gain of associates and joint ventures accounted for using equity method	16		122,169	100,294
Loss of associates and joint ventures accounted for using equity method	16		<u>118,209</u>	<u>157,923</u>
Profit (loss) before tax	6		(1,648,240)	1,268,935
Income tax expense	24		<u>168,429</u>	<u>201,906</u>
Profit (loss) for the year	6		<u>(1,816,669)</u>	<u>1,067,029</u>
Profit attributable to:				
Equity holders of the Parent Company			(1,012,551)	1,358,019
Non-controlling interests			<u>(804,118)</u>	<u>(290,990)</u>
Other comprehensive income				
<i>Other comprehensive income, before tax, that will not be reclassified to profit or loss</i>				
Remeasurements of net defined benefit liabilities			(26,603)	(2,244)
Gain (loss) on valuation of equity instruments at fair value through other comprehensive income			137,432	(1,721,801)
Share of other comprehensive income (loss) of associates, net of tax			33,447	(52,476)
<i>Other comprehensive income, before tax, that will be reclassified to profit or loss</i>				
Share of other comprehensive income (loss) of associates, net of tax			(145)	1,927
Foreign currency translation adjustments, net of tax			(42,007)	44,799
Net financial gain on insurance contract assets (liabilities) through other comprehensive income			-	-
Other comprehensive income (loss) for the year, net of tax			<u>102,124</u>	<u>(1,729,795)</u>
Total comprehensive income (loss) for the year		₩	<u>(1,714,545)</u>	₩ <u>(662,766)</u>
Total comprehensive income (loss) for the year is attributable to:				
Equity holders of the Parent Company		₩	(883,798)	₩ (262,475)
Non-controlling interests			(830,747)	(400,290)
Earnings (losses) per share to the equity holders of the Parent Company (in Korean won)				
Basic earnings (losses) per share	35	₩	(2,315)	₩ 3,118
Diluted earnings (losses) per share	35		(2,315)	3,066

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

KAKAO CORP. and Subsidiaries
Consolidated Statements of Changes in Equity
Years Ended December 31, 2023 and 2022

(in millions of Korean won)

(in millions of Korean won)

		Attributable to owners of the Parent										
					Other components of equity	Accumulated Other comprehensive Income		Retained Earnings	Total	Non-controlling Interests	Total Equity	
	Notes	Share capital	Share premium									
Balance at January 1, 2022		₩ 44,641	₩ 7,781,648		₩ 77,071	₩ 371,824	₩ 1,689,445	₩ 9,964,629	₩ 3,603,705	₩ 13,568,334		
Total comprehensive income (loss)												
Profit (loss) for the year		-	-	-	-	1,358,019	1,358,019	(290,990)	1,067,029			
Foreign currency translation adjustments, net of tax	30	-	-	-	29,702	-	29,702	15,097	44,799			
Share of other comprehensive loss of associates, net of tax		-	-	-	(32,859)	-	(32,859)	(17,690)	(50,549)			
Loss on valuation of financial instruments												
at fair value through other comprehensive income	30	-	-	-	(1,615,956)	-	(1,615,956)	(105,845)	(1,721,801)			
Reclassification of gains on valuation of financial instruments												
at fair value through other comprehensive income	30	-	-	-	(991)	991	-	-	-			
Remeasurements of net defined benefit liabilities		-	-	-	(1,386)	5	(1,381)	(863)	(2,244)			
Total comprehensive income (loss) for the year		-	-	-	(1,621,490)	1,359,015	(262,475)	(400,290)	(662,765)			
Transactions with equity holders :												
Exercise of stock options		276	110,372	(39,607)	-	-	71,041	41,273	112,314			
Share-based compensation	28	-	-	84,564	-	-	84,564	74,584	159,148			
Retirement of treasury shares		(324)	81,318	(80,996)	-	-	(2)	-	(2)			
Cash dividends	36	-	-	-	-	(22,990)	(22,990)	-	(22,990)			
Change in ownership interest over subsidiaries		-	(23,138)	-	-	-	(23,138)	101,728	78,590			
Change from share premium to retained earnings		-	(5,918)	-	-	5,918	-	-	-			
Change in scope of consolidation		-	(11,461)	-	-	-	(11,461)	(25,743)	(37,204)			
Change in corporate tax effect		-	183,551	-	-	-	183,551	136,742	320,293			
Total transactions with equity holders		(48)	334,724	(36,039)	-	(17,072)	281,565	328,584	610,149			
Balance at December 31, 2022		₩ 44,592	₩ 8,116,372	₩ 41,031	₩ (1,249,666)	₩ 3,031,388	₩ 9,983,718	₩ 3,532,000	₩ 13,515,717			

KAKAO CORP. and Subsidiaries

Consolidated Statements of Changes in Equity

Years Ended December 31, 2023 and 2022

(in millions of Korean won)

(in millions of Korean won)

		Attributable to owners of the Parent									
					Other	Accumulated					
	Notes	Share capital	Share premium	Components of equity	Other Comprehensive Income	Retained Earnings	Total	Non-controlling Interests	Total Equity		
		₩	₩	₩	₩	₩	₩	₩	₩	₩	
Balance at January 1, 2023		44,592	8,116,372	41,031	(1,249,666)	3,031,388	9,983,718	3,532,000	13,515,717		
Total comprehensive income (loss)											
Profit (loss) for the year		-	-	-	-	(1,012,551)	(1,012,551)	(804,118)	(1,816,669)		
Foreign currency translation adjustments, net of tax	30	-	-	-	(20,578)	-	(20,578)	(21,429)	(42,007)		
Share of other comprehensive income of associates, net of tax		-	-	-	29,136	556	29,692	3,609	33,301		
Gain on valuation of financial instruments											
at fair value through other comprehensive income	30	-	-	-	138,270	-	138,270	(837)	137,433		
Reclassification of losses on valuation of financial instruments											
at fair value through other comprehensive income	30	-	-	-	71,484	(71,484)	-	-	-		
Net profit on insurance contract assets (liabilities) through other comprehensive income	30	-	-	-	-	-	-	-	-		
Remeasurements of net defined benefit liabilities		-	-	-	(18,631)	-	(18,631)	(7,972)	(26,603)		
Reclassification of remeasurements of net defined benefit liabilities		-	-	-	(430)	430	-	-	-		
Total comprehensive income (loss)		-	-	-	199,251	(1,083,049)	(883,798)	(830,747)	(1,714,545)		
Transactions with owners											
Exercise of stock options		132	60,014	(29,823)	-	-	30,323	15,729	46,052		
Change of equity related to stock options		-	(930)	-	-	-	(930)	(2,236)	(3,166)		
Share-based compensation	28	-	-	43,287	-	-	43,287	39,998	83,285		
Retirement of treasury shares		(189)	47,112	(46,925)	-	-	(2)	-	(2)		
Cash dividends	36	-	-	-	-	(26,202)	(26,202)	-	(26,202)		
Change in ownership interest over subsidiaries		-	584,480	-	-	-	584,480	369,628	954,108		
Change in scope of consolidation		-	-	-	-	-	-	928,316	928,316		
Change in income tax effect		-	32,843	-	-	-	32,843	42,193	75,036		
Total transactions with owners		(57)	723,519	(33,461)	-	(26,202)	663,799	1,393,628	2,057,427		
Balance at December 31, 2023		₩ 44,535	₩ 8,839,891	₩ 7,571	₩ (1,050,415)	₩ 1,922,137	₩ 9,763,719	₩ 4,094,880	₩ 13,858,599		

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

KAKAO CORP. and Subsidiaries
Consolidated Statements of Cash Flows
Years Ended December 31, 2023 and 2022

<i>(in millions of Korean won)</i>	Notes	2023	2022
Cash flows from operating activities			
Cash generated from operations	37	₩ 1,600,533	₩ 935,230
Interest received		167,452	118,713
Interest paid		(168,396)	(113,101)
Dividend received		44,839	55,458
Income taxes paid		(303,330)	(317,923)
Cash flows provided by operating activities		1,341,098	678,376
Cash flows from investing activities			
Decrease (increase) in short-term financial instruments		(221,801)	342,616
Decrease (increase) in long-term financial instruments		(3,051)	7
Purchase of property and equipment		(575,150)	(452,916)
Disposal of property and equipment		13,898	14,340
Purchase of intangible assets		(147,080)	(189,960)
Disposal of intangible assets		11,852	99,340
Purchase of financial assets at fair value through profit or loss		(395,575)	(2,161,219)
Disposal of financial assets at fair value through profit or loss		826,779	1,744,502
Purchase of financial assets at fair value through other comprehensive income		(13,968)	(63,014)
Disposal of financial assets at fair value through other comprehensive income		25,032	43,396
Purchase of investments in associates and joint ventures		(86,477)	(58,343)
Disposal of investments in associates and joint ventures		77,180	79,372
Acquisition of subsidiaries, net of cash acquired		(1,215,429)	(174,036)
Disposal of subsidiaries, net of cash transferred		(7,048)	34,851
Decrease in other current financial assets		6,892	18,982
Increase in other non-current financial assets		(26,518)	(66,252)
Decrease in financial liabilities at fair value through profit or loss		-	(754,073)
Other cash outflow from investing activities		(49,468)	(31,698)
Cash flows used in investing activities		(1,779,932)	(1,574,105)
Cash flows from financing activities			
Proceeds from short-term borrowings	21	1,386,091	1,263,672
Repayments of short-term borrowings	21	(1,444,749)	(1,560,734)
Proceeds from long-term borrowings	21	202,000	710,478
Repayments of long-term borrowings	21	(3,012)	(413)
Principal elements of lease payments		(215,478)	(148,175)
Exercise of stock options		34,257	72,490
Payments of dividends		(54,575)	(22,990)
Cash inflows from transactions with non-controlling interests		1,181,314	281,706
Cash outflows from transactions with non-controlling interests		(52,068)	(209,035)
Other cash inflow (outflow) from financing activities		(14,193)	24,822
Cash flows provided by financing activities		1,019,587	411,821
Effects of exchange rate changes on cash and cash equivalents		(27,471)	(5,884)
Increase (decrease) in cash and cash equivalents		553,282	(489,791)
Cash and cash equivalents at the beginning of year		4,835,909	5,325,700
Cash and cash equivalents at the end of year		₩ 5,389,191	₩ 4,835,909

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

KAKAO CORP. and Subsidiaries

Notes to the Consolidated Financial Statements

December 31, 2023 and 2022

1. General Information

Kakao Corp. (the "Parent Company") has prepared the consolidated financial statements in accordance with International Financial Reporting Standards as adopted by the Republic of Korea (Korean IFRS) 1110 *Consolidated Financial Statements*, and its consolidated subsidiaries include Daum Global Holdings and 174 entities (collectively referred to as the "Group").

(1) Description of the Parent Company

The Parent Company was incorporated in February 1995 for the purpose of computer program developments and online services, and provides advertising services, contents offerings including emoticons, games and music, and other online services through its online platforms.

The Parent Company was listed on the KOSDAQ market in Korea on November 9, 1999, and was transferred to the KOSPI market in Korea on July 10, 2017.

The Parent Company's headquarters are located in Youngpyong-dong, Jeju City, in Jeju Province, Korea. As at December 31, 2023, the Parent Company's paid capital amounted to ₩ 44,535 million and the Parent Company's shareholders are as follows:

	Number of shares (in shares)	Percentage of ownership (%)
Kim Bum Soo	59,068,747	13.3
K Cube Holdings Co., Ltd.	46,253,222	10.4
National Pension Service	25,307,322	5.7
MAXIMO PTE. LTD.	26,396,880	5.9
Others	287,823,707	64.7
	<u>444,849,878</u>	<u>100.0</u>

(2) Consolidated Subsidiaries

1) Details of the consolidated subsidiaries as at December 31, 2023 and 2022, are as follows:

(in millions of Korean won)

Name of entity	Share capital	Primary business	Location	Closing month	Percentage of ownership (%)
Daum Global Holdings	₩ 2,554	Holding company	Korea	December	100.0
KAKAO BRAIN Corp.	963	Software development	Korea	December	100.0
Kakao Ventures Corp.	26,456	Holding company	Korea	December	100.0
KAKAO Venture Fund ^{2,6}	3,000	Investment/holding company	Korea	December	36.7
Kakao digital contents Fund ^{2,6}	18,179	Investment/holding company	Korea	December	40.4
Kakao Game Growth Share Fund ⁶	12,000	Investment/holding company	Korea	December	100.0
Kakao Copilot Fund No. 1 ⁷	32,300	Investment/holding company	Korea	December	99.1
Kakao Copilot Fund No. 2 ^{1,6}	12,168	Investment/holding company	Korea	December	98.6

KAKAO CORP. and Subsidiaries

Notes to the Consolidated Financial Statements

December 31, 2023 and 2022

(in millions of Korean won)

Name of entity	Share capital	Primary business	Location	Closing month	Percentage of ownership (%)
KAKAO_CCVC Jeju Creative Economy Innovative Fund	2,000	Investment/holding company	Korea	December	95.0
KnWorks Co., Ltd.	1,611	Service operations	Korea	December	100.0
DK Techin	9,450	Service operations	Korea	December	100.0
DK CHINA Co., Ltd.	1,093	Service operations	China	December	100.0
Seoul Arena Co., Ltd	20,400	Real estate development	Korea	December	98.0
Kakao healthcare Corp.	60,900	Information communication services	Korea	December	100.0
LINKAGE LAB Co., Ltd.	149	Services	Korea	December	100.0
Kakao Investment Co., Ltd.	7,460	Holding company	Korea	December	100.0
KI SG PTE. LTD. ⁵	3,928	Holding company	Singapore	December	100.0
Kakao Piccoma Corp.	273,597	Software development and services	Japan	December	91.3
piccoma Kumamoto Corp. (formerly, DK CORPAORATION.) ³	587	Advertising agency and others	Japan	December	100.0
Piccoma Europe ³	55,710	Application software development and distribution	France	December	100.0
Studio1pic Corp. ³	275	Application software development and distribution	Korea	December	100.0
Sherpa Studio Corp. ³	1,993	Electronic publishing	Japan	December	60.0
Voithru Inc. ³	222	Information communication services	Korea	December	74.7
Voithru Japan Inc. ⁴	48	Information communication services	Japan	December	100.0
Kakao Space Corp.	1,853	Real estate development and consulting	Korea	December	100.0
KAKAO IX CHINA CO.,LTD.	33,573	Wholesale and retail sales	China	December	100.0
KAKAO IX HK LTD.	53	Retail sales	Hong Kong	December	100.0
Kakao G Corp.	83,934	Software development and services	Japan	December	100.0
PANZEA Pte. Ltd. ²⁴	150,042	Software development	Singapore	December	100.0
KRUST UNIVERSE PTE. LTD. ²⁵	147,069	Software development	Singapore	December	100.0
Ground X Corp. ²⁶	6,285	E-commerce, internet information services	Korea	December	97.4
Kakao Mobility Corp. ³⁰	25,480	Software development and distribution	Korea	December	57.3
KM Solution Corp. ²¹	35	Services	Korea	December	100.0
KM parking and space Corp. ²¹	159	Services	Korea	December	70.0
CMNP Corp. ²¹	1,009	Transportation service	Korea	December	100.0
K Drive Corp. ²³	3,020	Services	Korea	December	100.0
TJ Partners Corp. ²¹	762	Transportation service	Korea	December	100.0
KM ONE Corp. ²²	69	Taxi services	Korea	December	100.0
KM Two Corp. ²²	82	Taxi services	Korea	December	100.0

KAKAO CORP. and Subsidiaries

Notes to the Consolidated Financial Statements

December 31, 2023 and 2022

(in millions of Korean won)

Name of entity	Share capital	Primary business	Location	Closing month	Percentage of ownership (%)
KM Three Corp. ²²	80	Taxi services	Korea	December	100.0
KM Four Corp. ²²	71	Taxi services	Korea	December	100.0
KM Five Corp. ²²	71	Taxi services	Korea	December	100.0
KM SIX Corp. ²²	93	Taxi services	Korea	December	100.0
KM Seven Corp. ²²	61	Taxi services	Korea	December	100.0
Donggo Taxi Corp. ²²	103	Taxi services	Korea	December	100.0
Jinhwa Corp. ²²	693	Taxi services	Korea	December	100.0
KM PARK.CO., Ltd ²¹	23,000	Services	Korea	December	100.0
RS Solutions Corp ²¹	232	Software development and consulting	Korea	December	100.0
Korea freight forwarders association Corp. ^{2,21}	50	Services	Korea	December	49.0
Kakao Entertainment Corp. ³⁰	22,162	Software development and services	Korea	December	66.1
SamyangCNC Co., Ltd. ⁸	50	Contents production and distribution	Korea	December	100.0
Daon Creative inc. ⁸	283	Contents production and distribution	Korea	December	73.7
PT. Neo Bazar Indonesia ⁹	12,908	Software development and services	Indonesia	December	100.0
Feelyeon Management ⁸	24	Contents production and distribution	Korea	December	72.7
Intime ⁸	200	Contents production and distribution	Korea	December	70.0
PAGE LAB Inc. ⁸	4	Contents production and distribution	Korea	December	79.0
KWBOOKS ⁸	101	Contents production and distribution	Korea	December	50.5
IST Entertainment Corp. ⁸	50	Entertainment management	Korea	December	100.0
EDAM Entertainment Corp. ⁸	50	Entertainment management	Korea	December	52.5
OOTB Incorporated ⁸	13	Movies and videos production	Korea	December	100.0
Mega Monster Corporations ⁸	256	Contents production	Korea	December	94.1
J,WIDE-COMPANY ⁸	53	Entertainment management	Korea	December	100.0
BH Entertainment ⁸	574	Entertainment management	Korea	December	100.0
READY ENTERTAINMENT ⁸	450	Entertainment management	Korea	December	100.0
Shanghai Ready Entertainment Co.,Ltd. ²⁰	290	Entertainment management	China	December	100.0
SOOP ENTERTAINMENT CO., LTD. ⁸	1,372	Entertainment management	Korea	December	100.0
AWESOMEENT CO., LTD. ⁸	547	Entertainment management	Korea	December	100.0
Moonlight film Corp. ⁸	1	Movies production	Korea	December	81.0
SANAI PICTURES ⁸	2	Movies production	Korea	December	81.0
VAST.CO., Ltd. ⁸	50	Entertainment management	Korea	December	100.0
Antenna Corp. ⁸	65	Entertainment management	Korea	December	57.9
Baram Pictures Corp. ⁸	152	Broadcast programs	Korea	December	100.0

KAKAO CORP. and Subsidiaries

Notes to the Consolidated Financial Statements

December 31, 2023 and 2022

(in millions of Korean won)

Name of entity	Share capital	Primary business	Location	Closing month	Percentage of ownership (%)
		production			
Logos Film Corporation ⁸	50	Broadcast programs production	Korea	December	100.0
STORY & PICTURES MEDIA ⁸	100	Broadcast programs production	Korea	December	100.0
STARSHIP ENTERTAINMENT CORP. ⁸	64	Record production and entertainment management	Korea	December	58.2
SHOWNOTE Inc. ¹⁸	324	Performance planning	Korea	December	100.0
KAKAO ENTERTAINMENT ASIA CO., LTD. ¹⁹	2,032	Digital contents production and distribution in Thailand	Thailand	December	100.0
Kakao Entertainment (Thailand) Ltd. ⁸	1,081	Publishing and electronic publishing	Thailand	December	100.0
Kiwi Vine Corp. ⁸	124	Translation services	Korea	December	80.9
Cradle Studio Corp. ⁸	10	Entertainment management	Korea	December	51.0
STUDIO PHEONIX CO., LTD. ²⁹	1,079	VR CONTENTS DEVELOPMENT	Thailand	December	100.0
STUDIO ORANGE CO., LTD. ²⁹	1,079	Animation studio	Thailand	December	100.0
3Y Corporation ⁸	14	Broadcast programs production	Korea	December	100.0
TAPAS ENTERTAINMENT, INC. ⁸	-	Publishing and electronic publishing	USA	December	98.5
Wuxiaworld Limited ³¹	2	Information communication services	Hong Kong	December	100.0
Wuxiaworld Publishing USA Ltd. ³²	12	Information communication services	USA	December	100.0
INISOFT Co., Ltd. ⁸	1,250	IT Biz including video streaming	Korea	December	100.0
Kross Pictures Corp. ⁸	498	Contents production and distribution	Korea	December	100.0
KROSS COMICS INDIA PRIVATE LIMITED ⁸	117	Information communication services	India	December	100.0
KROSS TELEVISION INDIA PRIVATE LIMITED ²⁷	1,190	Information communication services	India	December	100.0
KROSS PICTURES INDIA PRIVATE LIMITED ²⁸	63	Information communication services	India	December	100.0
Glink Media Corp. ⁸	30	Advertising agency	Korea	December	100.0
Gleline Corp. ⁸	20	Creation and art related services	Korea	December	70.0
Dolphins Films ⁸	-	Advertisements and movie videos productions	Korea	December	100.0
Studio K110 Co., Ltd. ⁸	100	Advertisements production and advertising agency	Korea	December	100.0
Zip Cinema Corp. ⁸	84	Movies production	Korea	December	100.0
Nextlevelstudio Inc. ⁸	21	Print publishing	Korea	December	61.2
Kakao Games Corp. ^{2,30}	8,252	Game development and services	Korea	December	41.3

KAKAO CORP. and Subsidiaries

Notes to the Consolidated Financial Statements

December 31, 2023 and 2022

(in millions of Korean won)

Name of entity	Share capital	Primary business	Location	Closing month	Percentage of ownership (%)
Kakao Games Europe B.V. ¹⁰	716,579	Game software development and distribution	Netherlands	December	100.0
Kakao Games USA, Inc. ¹⁴	2,305	Game software development and distribution	USA	December	100.0
Kakao Games Japan Corp. ¹⁰	2,024	Game software development and distribution	Japan	December	100.0
GLOHOW HOLDINGS PTE. LTD. ¹⁴	1,669	Game software distribution	Singapore	December	54.9
GLOHOW Co., Ltd. ¹⁶	343	Game software distribution	Thailand	December	100.0
Glohow Co., Ltd. Taiwan ¹⁶	209	Game software distribution	Taiwan	December	100.0
Glohow Joint Stock Company ¹⁶	60	Game software distribution	Vietnam	December	80.0
Kakao VX ¹⁰	22,516	Software development and distribution	Korea	December	65.2
TAESIK MAUMGOLF. CO., LTD. ¹⁵	578	Golf simulator sales	China	December	100.0
GSWING SPORTING GOODS CO., LTD. ¹⁵	574	Golf simulator sales	China	December	100.0
Gaseung Development Company ¹⁵	100	Golf course development and operation	Korea	December	55.0
Beagle Co., Ltd. ¹⁵	650	Software development and distribution	Korea	December	100.0
FRIENDS GOLF HOLDINGS VN JOINT STOCK COMPANY ¹⁵	3,815	Golf simulator sales	Vietnam	December	51.0
METABORA Co., Ltd. ¹⁰	1,790	Game software development and distribution	Korea	December	57.7
METABORA SINGAPORE PTE. LTD. ¹¹	-	System software development and distribution	Singapore	March 31	100.0
Bora Ecosystem Fund LP ⁵⁹	12,672	Fund management	Singapore	December	86.7
NGLE CORPORATION ¹¹	205	Software planning, development and distribution	Korea	December	51.2
Dalian Technology Co., Ltd. ¹²	374	Software planning, development and distribution	China	December	100.0
XLGAMES Inc. ¹⁰	4,341	Game software development and distribution	Korea	December	52.8
Sena Technologies Co., Ltd. ¹⁰	2,485	Electronic/communication/ computer products manufacturing and sales	Korea	December	54.3
SENA Technologies, Inc. ³³	10,804	Home appliances, telecommunication equipment wholesale and retail business	USA	December	100.0
Shenzhen Sena Technologies Co., Ltd. ³⁴	386	Telecommunication equipment manufacturing and development, wholesale and retail business	China	December	100.0
SENA Europe GmbH ³⁴	258	Home appliances, telecommunication equipment wholesale and retail business	Germany	December	100.0
SENA SAS ³⁴	259	Home appliances, telecommunication equipment	France	December	100.0

KAKAO CORP. and Subsidiaries

Notes to the Consolidated Financial Statements

December 31, 2023 and 2022

(in millions of Korean won)

Name of entity	Share capital	Primary business	Location	Closing month	Percentage of ownership (%)
		wholesale and retail business			
		Telecommunication			
Qingyuan SENA smart Helmets, Inc. ³⁴	10,557	equipment manufacturing and development, wholesale and retail business	China	December	100.0
Lionheart Studio Corp. ¹⁰	37,451	Game software development and distribution	Korea	December	55.0
Ocean Drive Studio Corp. ¹⁰	5	Game software development and distribution	Korea	December	65.2
OCEAN DRIVE GAMES, INC.	733	Game software development and distribution	USA	December	100.0
Kakaopay Corp. ²	67,133	Software development and distribution	Korea	December	46.4
KP Insurance Services Corp. ¹³	761	Financial services and insurance services	Korea	December	97.0
Kakaopay Securities Corp. ¹³	53,834	Financial services	Korea	December	67.4
Kakaopay Insurance Corp. ¹³	200,000	Financial services	Korea	December	100.0
Paymint Inc. ^{13,57}	1,712	Electronic payment agency	Korea	December	87.7
Kakao Enterprise Corp.	8,328	Software development and distribution	Korea	December	85.1
EXNTU Corp. ¹⁷	100	Software development and distribution	Korea	December	100.0
SM Entertainment Co., Ltd. ^{2,35}	11,915	Music planning, recording business and entertainment management	Korea	December	40.5
SM Studios Co., Ltd. ^{35,36}	978	Holding business	Korea	December	100.0
SM Culture & Contents Co., Ltd. ^{2,35,37}	48,353	Advertising, video contents production and distribution, entertainment management	Korea	December	30.4
HANEUL DAMDA CO., LTD. ^{35,40}	70	Cosmetics manufacturing and sales	Korea	December	60.0
		Video contents planning and production, copyright business, entertainment management			
KEYEAST Co., Ltd. ^{2,35,38}	9,774	production, copyright business, entertainment management	Korea	December	33.7
SM Life Design Group Co., Ltd. ^{2,35,39}	55,667	Print manufacturing and contents distribution	Korea	December	29.3
MOA L&B International Co., Ltd. ^{35,41}	1,380	Import and export of alcoholic beverages	Korea	December	100.0
SMTOWN PLANNER Co., Ltd. ^{35,36}	3,800	Real estate investment and development consulting	Korea	December	100.0
S.M. ENTERTAINMENT USA, INC. ^{35,36}	18,871	Entertainment management	USA	December	100.0
S.M. Innovative Holdings, LLC ^{35,42}	14,476	Holding business	USA	December	100.0
S.M. Innovative Amusement, LLC ^{35,43}	5,547	Real estate development	USA	December	100.0
Creative Space Development, LLC ^{35,43}	1,562	Real estate investment and restaurant business	USA	December	100.0

KAKAO CORP. and Subsidiaries

Notes to the Consolidated Financial Statements

December 31, 2023 and 2022

(in millions of Korean won)

Name of entity	Share capital	Primary business	Location	Closing month	Percentage of ownership (%)
Creative Space					
Development Property, LLC ^{35,43}	4,960	Real estate development	USA	December	100.0
Creative Space Entertainment, Inc. ^{2,35,43}	4,227	Investment/holding company	USA	December	50.0
Creative Space Innovation, LLC ^{35,44}	4,153	Real estate investment and development consulting	USA	December	100.0
S.M. ENTERTAINMENT JAPAN, INC. ^{35,36}	556	Holding business	Japan	December	100.0
Stream Media Corporation ^{35,45}	71,595	Broadcast programs distribution	Japan	December	82.2
everyising Japan Co., Ltd. ^{35,47}	855	Mobile application development and operation	Japan	December	59.5
SMEJ Plus, Inc. ^{35,46}	19,261	Fan club planning and operation	Japan	December	69.9
DREAM MAKER Entertainment Ltd. ^{35,36}	1,421	Domestic and overseas performance business	Hong Kong	December	77.0
Dream With Us Co., Ltd. ^{35,48}	100	Personal protection services and facility security services	Korea	December	100.0
S.M.(BEIJING) ENTERTAINMENT MEDIA CO., LTD. ^{35,48}	5,191	Entertainment management, broadcast programs production services	China	December	100.0
Beyond Live Corporation ^{35,49}	1,114	Internet transmission and sales of music/image/video contents, etc.	Japan	December	63.0
Beyond Live Japan ^{35,50}	106	Invitation of domestic and foreign artists, internet transmission and sales of music/image/video contents, etc.	Japan	December	51.0
DREAM MAKER ENTERTAINMENT U.S.A. INC. ^{35,48}	3,545	Entertainment management	USA	December	100.0
STUDIO KWANGYA CO., Ltd. ^{35,36}	9,000	Metaverse contents production	Korea	December	100.0
STUDIO A Co., Ltd. ^{35,51}	1,000	VR contents production	Korea	December	51.0
Studio CLON ^{35,51}	267	Broadcast program post production, entertainment production	Korea	December	51.0
Catchers Cultural Industry Company ^{35,52}	10	Broadcast programs production	Korea	December	100.0
SM CULTURE PARTNERS CO., Ltd. ^{35,36}	50,000	Venture investment	Korea	December	100.0
Kreation Music Rights CO., Ltd. ^{35,36t}	27,100	Fan club planning and operation	Korea	December	100.0
MonoTree Inc. ^{35,53}	86	Music production and publishing, copyright agency brokerage	Korea	December	100.0
Kreation Music Rights Europe AB ^{1,35,53}	13	Copyright agency brokerage	Sweden	December	100.0
SM Universe Co., Ltd. ^{35,36}	8,100	Applied music academy	Korea	December	70.3

KAKAO CORP. and Subsidiaries

Notes to the Consolidated Financial Statements

December 31, 2023 and 2022

(in millions of Korean won)

Name of entity	Share capital	Primary business operation	Location	Closing month	Percentage of ownership (%)
KAKAO SM					
ENTERTAINMENT (SHANGHAI) CO., LTD. ^{1,35,36}	4,580	Culture and entertainment brokerage services	China	December	100.0
SM BRAND MARKETING Co., LTD. ^{35,36}	3,717	Intellectual property licensing, performance venue operation, clothing design and manufacturing and wholesale/retail sales	Korea	December	84.4
SM BRAND MARKETING SE ASIA Holdings PTE.LTD. ^{35,54}	8,268	Holding company in Southeast Asia	Singapore	December	100.0
SM LIFESTYLE JOINT STOCK COMPANY ^{35,55}	1,781	MD sales and CAFÉ operation using artist IP	Vietnam	December	100.0
PT. SMBM INDONESIA CORPORA ^{35,55}	1,961	MD sales and CAFÉ operation using artist IP	Indonesia	December	99.3
Urban Coconut Inc. ^{35,54}	1,867	Sales of albums and MD products in the USA	USA	December	100.0
SM & Kakao					
Entertainment America Corp. (formerly, Kakao Entertainment America Corp.) ^{35,36,58}	2,560	Performance planning	USA	December	100.0
MADE IN KOREA MEDIA LIMITED ^{1,35,56}	-	Entertainment management	UK	December	66.7

¹ Newly established in 2023.

² The Group has classified the investee as a subsidiary because its shareholding is 50% or less, but the Group has determined that it can exercise substantial control based on the potential voting rights it has over the investee.

³ As a subsidiary of Kakao Piccoma Corp., the percentage of ownership represents Kakao Piccoma Corp.'s ownership as at December 31, 2023.

⁴ As a subsidiary of Voithru Inc., the percentage of ownership represents Voithru Inc.'s ownership as at December 31, 2023.

⁵ As a subsidiary of Kakao Investment Co., Ltd., the percentage of ownership represents Kakao Investment Co., Ltd.'s ownership as at December 31, 2023.

⁶ As a subsidiary of Kakao Ventures Corp., the percentage of ownership represents the Parent Company and Kakao Ventures Corp.'s ownership as at December 31, 2023.

⁷ As a subsidiary of Kakao Ventures Corp., the percentage of ownership represents the Parent Company, Kakao Ventures Corp. and KAKAO BRAIN Corp.'s ownership as at December 31, 2023.

⁸ As a subsidiary of Kakao Entertainment Corp., the percentage of ownership represents Kakao Entertainment Corp.'s ownership as at December 31, 2023.

⁹ As a subsidiary of Kakao Entertainment Corp., the percentage of ownership represents Kakao Entertainment Corp. and Kakao Investment Co., Ltd.'s ownership as at December 31, 2023.

¹⁰ As a subsidiary of Kakao Games Corp., the percentage of ownership represents Kakao Games Corp.'s ownership as at December 31, 2023.

KAKAO CORP. and Subsidiaries

Notes to the Consolidated Financial Statements

December 31, 2023 and 2022

¹¹ As a subsidiary of METABORA Co., Ltd., the percentage of ownership represents METABORA Co., Ltd.'s ownership as at December 31, 2023.

¹² As a subsidiary of NGLE CORPORATION., the percentage of ownership represents the Parent Company and NGLE CORPORATION's ownership as at December 31, 2023.

¹³ As a subsidiary of Kakaopay Corp., the percentage of ownership represents Kakaopay Corp.'s ownership as at December 31, 2023.

¹⁴ As a subsidiary of Kakao Games Europe B.V., the percentage of ownership represents Kakao Games Europe B.V.'s ownership as at December 31, 2023.

¹⁵ As a subsidiary of Kakao VX, the percentage of ownership represents Kakao VX's ownership as at December 31, 2023.

¹⁶ As a subsidiary of GLOHOW HOLDINGS PTE. LTD., the percentage of ownership represents GLOHOW HOLDINGS PTE. LTD.'s ownership as at December 31, 2023.

¹⁷ As a subsidiary of Kakao Enterprise Corp., the percentage of ownership represents Kakao Enterprise Corp.'s ownership as at December 31, 2023.

¹⁸ As a subsidiary of STARSHIP ENTERTAINMENT CORP., the percentage of ownership represents STARSHIP ENTERTAINMENT CORP.'s ownership as at December 31, 2023.

¹⁹ As a subsidiary of Kakao Entertainment Corp., the percentage of ownership represents Kakao Entertainment Corp., STUDIO PHEONIX CO., LTD. and STUDIO ORANGE CO., LTD.'s ownership as at December 31, 2023.

²⁰ As a subsidiary of READY ENTERTAINMENT, the percentage of ownership represents READY ENTERTAINMENT's ownership as at December 31, 2023.

²¹ As a subsidiary of Kakao Mobility Corp., the percentage of ownership represents Kakao Mobility Corp.'s ownership as at December 31, 2023.

²² As a subsidiary of TJ Partners Corp., the percentage of ownership represents TJ Partners Corp.'s ownership as at December 31, 2023.

²³ As a subsidiary of CMNP Corp., the percentage of ownership represents CMNP Corp.'s ownership as at December 31, 2023.

²⁴ As a subsidiary of Kakao G Corp., the percentage of ownership represents Kakao G Corp.'s ownership as at December 31, 2023.

²⁵ As a subsidiary of PANZEA Pte. Ltd., the percentage of ownership represents PANZEA Pte. Ltd.'s ownership as at December 31, 2023.

²⁶ As a subsidiary of KRUST UNIVERSE PTE. LTD., the percentage of ownership represents KRUST UNIVERSE PTE. LTD.'s ownership as at December 31, 2023.

²⁷ As a subsidiary of Kross Pictures Corp., the percentage of ownership represents Kross Pictures Corp.'s ownership as at December 31, 2023.

²⁸ As a subsidiary of KROSS TELEVISION INDIA PRIVATE LIMITED, the percentage of ownership represents KROSS TELEVISION INDIA PRIVATE LIMITED's ownership as at December 31, 2023.

²⁹ As a subsidiary of Kakao Entertainment Corp., the percentage of ownership represents STUDIO ORANGE CO., LTD. and STUDIO PHEONIX CO., LTD.'s ownership as at December 31, 2023.

³⁰ In accordance with the agreements with non-controlling interests of some of the above subsidiaries, the Group should obtain a pre-approval from investors, when the Group wants to dispose of the investments in subsidiaries within the period specified in the agreements through a transfer to the third party or other methods not determined in the agreements such as exercise of tag-along right.

³¹ As a subsidiary of TAPAS ENTERTAINMENT, INC., the percentage of ownership represents

KAKAO CORP. and Subsidiaries

Notes to the Consolidated Financial Statements

December 31, 2023 and 2022

TAPAS ENTERTAINMENT, INC.'s ownership as at December 31, 2023.

³² As a subsidiary of Wuxiaworld Limited, the percentage of ownership represents Wuxiaworld Limited's ownership as at December 31, 2023.

³³ As a subsidiary of Sena Technologies Co., Ltd. (Korea), the percentage of ownership represents Sena Technologies Co., Ltd. (Korea)'s ownership as at December 31, 2023.

³⁴ As a subsidiary of SENA Technologies, Inc. (USA), the percentage of ownership represents SENA Technologies, Inc. (USA)'s ownership as at December 31, 2023.

³⁵ SM Entertainment Co., Ltd. and its subsidiaries have been included in the Group's subsidiaries but may be excluded from the consolidation scope depending on the approval results of M&A review by the Korea Fair Trade Commission which is currently in progress.

³⁶ As a subsidiary of SM Entertainment Co., Ltd., the percentage of ownership represents SM Entertainment Co., Ltd.'s ownership as at December 31, 2023.

³⁷ As a subsidiary of SM Studios Co., Ltd., the percentage of ownership represents SM Studios Co., Ltd. and DREAM MAKER ENTERTAINMENT LIMITED's ownership as at December 31, 2023.

³⁸ As a subsidiary of SM Studios Co., Ltd., the percentage of ownership represents SM Studios Co., Ltd. and S.M.ENTERTAINMENT JAPAN, INC.'s ownership as at December 31, 2023.

³⁹ As a subsidiary of SM Studios Co., Ltd., the percentage of ownership represents SM Studios Co., Ltd.'s ownership as at December 31, 2023.

⁴⁰ As a subsidiary of SM Culture & Contents Co., Ltd., the percentage of ownership represents SM Culture & Contents Co., Ltd.'s ownership as at December 31, 2023.

⁴¹ As a subsidiary of SM Life Design Group Co., Ltd., the percentage of ownership represents SM Life Design Group Co., Ltd.'s ownership as at December 31, 2023.

⁴² As a subsidiary of S.M. ENTERTAINMENT USA, INC., the percentage of ownership represents S.M. ENTERTAINMENT USA, INC.'s ownership as at December 31, 2023.

⁴³ As a subsidiary of S.M. Innovative Holdings, LLC, the percentage of ownership represents S.M. Innovative Holdings, LLC's ownership as at December 31, 2023.

⁴⁴ As a subsidiary of Creative Space Entertainment, Inc., the percentage of ownership represents Creative Space Entertainment, Inc.'s ownership as at December 31, 2023.

⁴⁵ As a subsidiary of S.M.ENTERTAINMENT JAPAN, INC., the percentage of ownership represents S.M.ENTERTAINMENT JAPAN, INC. and KEYEAST Co., Ltd.'s ownership as at December 31, 2023.

⁴⁶ As a subsidiary of S.M.ENTERTAINMENT JAPAN, INC., the percentage of ownership represents S.M.ENTERTAINMENT JAPAN, INC.'s ownership as at December 31, 2023.

⁴⁷ As a subsidiary of Stream Media Corporation, the percentage of ownership represents Stream Media Corporation's ownership as at December 31, 2023.

⁴⁸ As a subsidiary of DREAM MAKER ENTERTAINMENT LIMITED, the percentage of ownership represents DREAM MAKER ENTERTAINMENT LIMITED's ownership as at December 31, 2023.

⁴⁹ As a subsidiary of DREAM MAKER ENTERTAINMENT LIMITED, the percentage of ownership represents DREAM MAKER ENTERTAINMENT LIMITED and Stream Media Corporation's ownership as at December 31, 2023.

⁵⁰ As a subsidiary of Beyond Live Corporation, the percentage of ownership represents Beyond Live Corporation's ownership as at December 31, 2023.

⁵¹ As a subsidiary of STUDIO KWANGYA CO., Ltd., the percentage of ownership represents STUDIO KWANGYA CO., Ltd.'s ownership as at December 31, 2023.

⁵² As a subsidiary of Studio CLON, the percentage of ownership represents Studio CLON and Kakao Entertainment Corp.'s ownership as at December 31, 2023.

KAKAO CORP. and Subsidiaries

Notes to the Consolidated Financial Statements

December 31, 2023 and 2022

⁵³ As a subsidiary of Kreation Music Rights CO., Ltd., the percentage of ownership represents Kreation Music Rights CO., Ltd.'s ownership as at December 31, 2023.

⁵⁴ As a subsidiary of SM BRAND MARKETING Co., LTD., the percentage of ownership represents SM BRAND MARKETING Co., LTD.'s ownership as at December 31, 2023.

⁵⁵ As a subsidiary of SM BRAND MARKETING SE ASIA Holdings PTE.LTD., the percentage of ownership represents SM BRAND MARKETING SE ASIA Holdings PTE.LTD.'s ownership as at December 31, 2023.

⁵⁶ As a subsidiary of SM & Kakao Entertainment America Corp., the percentage of ownership represents SM & Kakao Entertainment America Corp.'s ownership as at December 31, 2023.

⁵⁷ As it was determined that the Group had potential voting rights for the remaining interests, 100% of ownership has been reflected at the closing.

⁵⁸ It was a subsidiary of Kakao Entertainment Corp., but the interests were transferred to SM Entertainment Co., Ltd. and entity name was changed for year ended December 31, 2023.

⁵⁹ As a subsidiary of METABORA SINGAPORE PTE. LTD., the percentage of ownership represents METABORA SINGAPORE PTE. LTD.'s ownership as at December 31, 2023.

KAKAO CORP. and Subsidiaries

Notes to the Consolidated Financial Statements

December 31, 2023 and 2022

2) Subsidiaries newly included in the consolidation for the year ended December 31, 2023:

Name of entity	Reason
SM Entertainment Co., Ltd.	Included to a subsidiary through acquisition of control
SM Studios Co., Ltd.	Included to a subsidiary through acquisition of control
SMTOWN PLANNER Co., Ltd.	Included to a subsidiary through acquisition of control
S.M. ENTERTAINMENT USA, INC.	Included to a subsidiary through acquisition of control
S.M.ENTERTAINMENT JAPAN, INC.	Included to a subsidiary through acquisition of control
DREAM MAKER ENTERTAINMENT LIMITED	Included to a subsidiary through acquisition of control
STUDIO KWANGYA CO., Ltd.	Included to a subsidiary through acquisition of control
SM CULTURE PARTNERS CO., Ltd.	Included to a subsidiary through acquisition of control
Kreation Music Rights CO., Ltd.	Included to a subsidiary through acquisition of control
SM Culture & Contents Co., Ltd.	Included to a subsidiary through acquisition of control
Dream With Us Co., Ltd.	Included to a subsidiary through acquisition of control
S.M.(BEIJING) ENTERTAINMENT MEDIA CO., LTD.	Included to a subsidiary through acquisition of control
Beyond Live Corporation	Included to a subsidiary through acquisition of control
DREAM MAKER ENTERTAINMENT U.S.A. INC.	Included to a subsidiary through acquisition of control
Beyond Live Japan	Included to a subsidiary through acquisition of control
S.M. Innovative Holdings, LLC	Included to a subsidiary through acquisition of control
S.M. Innovative Amusement, LLC	Included to a subsidiary through acquisition of control
Creative Space DEVELOPMENT, LLC	Included to a subsidiary through acquisition of control
Creative Space Development Property, LLC	Included to a subsidiary through acquisition of control
Creative Space Entertainment, Inc.	Included to a subsidiary through acquisition of control
Creative Space Innovation, LLC	Included to a subsidiary through acquisition of control
KEYEAST Co., Ltd.	Included to a subsidiary through acquisition of control
SM Life Design Group Co., Ltd.	Included to a subsidiary through acquisition of control
HANEUL DAMDA CO., LTD.	Included to a subsidiary through acquisition of control
MOA L&B International Co., Ltd.	Included to a subsidiary through acquisition of control
Stream Media Corporation	Included to a subsidiary through acquisition of control
SMEJ Plus, Inc.	Included to a subsidiary through acquisition of control
everysing Japan Co., Ltd.	Included to a subsidiary through acquisition of control
STUDIO A Co., Ltd.	Included to a subsidiary through acquisition of control
beaconholdings	Included to a subsidiary through acquisition of control
Studio CLON	Included to a subsidiary through acquisition of control
SM Universe Co., Ltd.	Included to a subsidiary through acquisition of control
Catchers Cultural Industry Company	Included to a subsidiary through acquisition of control
Bora Ecosystem Fund LP	Included to a subsidiary through acquisition of control
Kakao Copilot Fund No. 2	Newly established

KAKAO CORP. and Subsidiaries

Notes to the Consolidated Financial Statements

December 31, 2023 and 2022

SM BRAND MARKETING Co., LTD.	Included to a subsidiary through acquisition of control
SM BRAND MARKETING SE ASIA Holdings PTE.LTD.	Included to a subsidiary through acquisition of control
SM LIFESTYLE JOINT STOCK COMPANY	Included to a subsidiary through acquisition of control
Urban Coconut Inc.	Included to a subsidiary through acquisition of control
PT.SMBM INDONESIA CORPORA	Included to a subsidiary through acquisition of control
Ocean Drive Studio Corp.	Included to a subsidiary through acquisition of control
OCEAN DRIVE GAMES, INC.	Included to a subsidiary through acquisition of control
FRIENDS GOLF HOLDINGS VN JOINT STOCK COMPANY	Included to a subsidiary through acquisition of control
MADE IN KOREA MEDIA LIMITED	Newly established
Kakao SM ENTERTAINMENT (SHANGHAI) CO., LTD.	Newly established
MonoTree Inc.	Included to a subsidiary through acquisition of control
Kreation Music Rights Europe AB	Newly established
Paymint Inc.	Included to a subsidiary through acquisition of control

3) Subsidiaries excluded from the consolidation for the year ended December 31, 2023:

Name of entity	Reason
Linewalks Corp.	Merged with Kakao healthcare Corp., a subsidiary
Magenta Works Inc.	Merged with EXNTU Corp., a subsidiary
Legendaries Corp.	Excluded from consolidation due to loss of control
Soundist Entertainment.Co., Ltd.	Excluded from consolidation due to loss of control
LOC&ALL. INC.	Liquidation
Kross Comics Corp.	Liquidation
KAKAO IX JAPAN Corp.	Liquidation
Life MMO Corp.	Liquidation
WithONE's Inc	Merged with Kakao Mobility Corp., a subsidiary
KLAYBAY PTE. LTD.	Liquidation
Kids Note Co., Ltd.	Excluded from consolidation due to loss of control
AWINS	Excluded from consolidation due to loss of control
RS MEDIA Co., Ltd.	Excluded from consolidation due to loss of control
TAPAS ENTERTAINMENT, Inc. (formerly, Radish Korea Inc.)	Liquidation
beaconholdings	Excluded from consolidation due to loss of control

KAKAO CORP. and Subsidiaries

Notes to the Consolidated Financial Statements

December 31, 2023 and 2022

(3) Summarized Financial Information

Summarized financial information for consolidated subsidiaries as at and for the years ended December 31, 2023 and 2022, is as follows:

(in millions of Korean won)

Subsidiary ¹	2023						Total	
	Assets	Liabilities	Equity	Revenue	Profit (loss) for the year		comprehensive income (loss)	
Kakaopay Corp.	₩ 3,287,180	₩ 1,205,932	₩ 2,081,247	₩ 555,635	₩ 66,103	₩	63,688	
Kakao Entertainment Corp.	2,778,031	1,480,275	1,297,756	1,356,276	(1,219,262)		(1,230,703)	
Kakao Games Corp.	1,636,576	662,810	973,766	685,952	(459,574)		(451,677)	
Kakao investment Corp.	1,599,829	79,431	1,520,398	17	27,422		186,173	
Kakao Mobility Corp.	1,315,545	309,455	1,006,090	399,909	(83,764)		(84,589)	
Kakaopay Securities Corp.	1,017,532	825,814	191,718	79,313	(51,668)		(52,190)	
Kakao Games Europe B.V.	876,867	648,559	228,308	6,651	(508,255)		(483,826)	
SM Entertainment Co., Ltd.	871,215	328,928	542,287	619,490	64,924		62,503	
Kakao Piccoma Corp.	826,288	169,452	656,836	551,407	2,563		(1,191)	
Lionheart Studio Corp.	419,846	66,468	353,378	118,326	66,716		66,035	
Kakao VX	332,566	98,581	233,985	146,381	(10,854)		(12,911)	

¹ The above amounts are presented based on the respective separate financial statements.

(in millions of Korean won)

Subsidiary ¹	2022						Total	
	Assets	Liabilities	Equity	Revenue	Profit (loss) for the year		comprehensive income (loss)	
Kakao Entertainment Corp.	₩ 2,924,805	₩ 1,551,876	₩ 1,372,929	₩ 1,292,527	₩ (438,074)	₩	(443,248)	
Kakaopay Corp.	2,896,844	973,164	1,923,680	482,769	96,342		99,079	
Kakao Games Corp.	2,053,988	631,922	1,422,066	753,476	(69,308)		(254,057)	
Kakao Mobility Corp.	1,392,137	303,091	1,089,046	304,325	(68,774)		(69,933)	
Kakao Investment Co., Ltd.	1,384,142	45,945	1,338,197	21	(18,838)		(22,089)	
Kakao Games Europe B.V.	1,287,290	627,407	659,882	7,127	(27,359)		(27,715)	
Kakaopay Securities Corp.	691,954	448,045	243,909	62,604	(48,026)		(48,013)	
Kakao Piccoma Corp.	826,467	139,620	686,847	531,245	33,592		33,837	
Kakao VX	363,760	119,541	244,219	173,508	15,087		14,246	
Kakao Enterprise Corp.	221,883	167,412	54,471	160,742	(161,225)		(161,188)	
Kakao G Corp.	159,059	13	159,046	-	5,371		5,426	
Gaseung Development Company	84,874	84,726	148	-	(4,273)		(4,273)	

¹ The above amounts are presented based on the respective separate financial statements.

KAKAO CORP. and Subsidiaries

Notes to the Consolidated Financial Statements

December 31, 2023 and 2022

2. Material Accounting Policies

The principal accounting policies applied in the preparation of these consolidated financial statements are set out below. These policies have been consistently applied to all the years presented, unless otherwise stated.

(1) Basis of Preparation

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

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

During the year ended December 31, 2020, the Group newly acquired Kakaopay Securities Corp., which engages in financial services business. Accordingly, assets and liabilities for non-financial services and financial services business are separately presented in the consolidated financial statements.

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

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

- Certain financial assets and liabilities (including derivative instruments),
- Liabilities for cash-settled share-based compensation – measured at fair value,
- Defined benefit pension plans – net defined benefit assets measured at fair value and other long-term and short-term employee benefits liabilities, and
- Non-current assets held for sale – measured at fair value less costs to sell

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

KAKAO CORP. and Subsidiaries

Notes to the Consolidated Financial Statements

December 31, 2023 and 2022

(2) Changes in Accounting Policies and Disclosures

- *New and amended standards adopted by the Group*

The Group has applied the following standards and amendments for the first time for their annual reporting period commencing January 1, 2023.

1) Korean IFRS 1001 *Presentation of Financial Statements* - Disclosure of Accounting Policies

The amendments to Korean IFRS 1001 define and require entities to disclose their material accounting policy information (being information that, when considered together with other information included in an entity's financial statements, can reasonably be expected to influence decisions that the primary users of financial statements make on the basis of those financial statements). The amendments did not have a significant impact on the financial statements.

2) Korean IFRS 1001 *Presentation of Financial Statements* - Disclosure of gain or loss on valuation of financial liabilities subject to adjustment of exercise price

If the entire or a part of financial instrument, whose exercise price is subject to change due to the issuer's share price, is classified as a financial liability, the carrying amount of the financial liability and related gains and losses shall be disclosed. The Group disclosed relevant information of the financial instruments issued by the Group in Note 26.

3) Korean IFRS 1008 *Accounting Policies, Changes in Accounting Estimates and Errors* – Definition of Accounting Estimates

The amendments define accounting estimates and clarify how to distinguish them from changes in accounting policies. The amendments did not have a significant impact on the financial statements.

4) Korean IFRS 1012 *Income Taxes* – Deferred Income Tax related to Assets and Liabilities arising from a Single Transaction

The amendments include an additional condition to the exemption to initial recognition of an asset or liability that a transaction does not give rise to equal taxable and deductible temporary differences at the time of the transaction. The amendments did not have a significant impact on the financial statements.

5) New Standard: Korean IFRS 1117 *Insurance Contracts*

Korean IFRS 1117 *Insurance Contracts* replaces Korean IFRS 1104 *Insurance Contracts*. This standard estimates future cash flows of an insurance contract and measures insurance liabilities using discount rates applied with assumptions and risks at the measurement date. The entity recognizes insurance revenue on an accrual basis including services (insurance coverage) provided to the policyholder by each annual period. In addition, investment components (Refunds due to termination/maturity) repaid to a policyholder even if an insured event does not occur, are excluded from insurance revenue, and insurance financial income or expense and the investment income or expense are presented separately to enable users of the information to understand the sources of

KAKAO CORP. and Subsidiaries

Notes to the Consolidated Financial Statements

December 31, 2023 and 2022

income or expenses.

In accordance with the amendments to this standard, the comparative December 31, 2022 consolidated financial statements have been restated, and the impacts on the consolidated financial statements are described in Note 2.26.

If the Group applies Korean IFRS 1117 to insurance liabilities as at December 31, 2022, insurance (reinsurance) contract liabilities are changed to ₩ 177 million. In addition, insurance revenue of ₩ 18 million and insurance service expenses of ₩ 26,328 million on insurance contracts are recognized in the consolidated statements of comprehensive income. Compared to Korean IFRS 1104, the Group's assets, liabilities and equity decreased by ₩ 107 million, decreased by ₩ 142 million and increased by ₩ 35 million, respectively. Also, revenue and the profit for the year ended December 31, 2022 decreased by ₩ 306 million and increased by ₩ 35 million, respectively.

6) Korean IFRS 1012 *Income Taxes* – International Tax Reform – Pillar Two Model Rules

The amendments provide a temporary relief from the accounting for deferred income taxes arising from legislation enacted to implement the Pillar Two model rules, which aim to reform international corporate taxation for multinational enterprises, and require disclosure of related current tax effects.

The Group applies the exception to recognizing and disclosing information about deferred income tax assets and liabilities related to Pillar Two income taxes. Since the Pillar Two legislation is scheduled to be effective from January 1, 2024, the Group has no current tax expense related to Pillar Two. The impact of the Pillar Two income taxes is described in Note 24.

- New standards and interpretations not yet adopted by the Group

The following new accounting standards and interpretations have been published that are not mandatory for December 31, 2023 reporting periods and have not been early adopted by the Group.

1) Amendments to Korean IFRS 1001 *Presentation of Financial Statements* – Classification of Liabilities as Current or Non-current, Non-current Liabilities with Covenants

The amendments clarify that liabilities are classified as either current or non-current, depending on the substantive rights that exist at the end of the reporting period. Classification is unaffected by the likelihood that an entity will exercise right to defer settlement of the liability or the expectations of management. Also, the settlement of liability includes the transfer of the entity's own equity instruments, however, it would be excluded if an option to settle them by the entity's own equity instruments if compound financial instruments is met the definition of equity instruments and recognized separately from the liability. In addition, covenants that an entity is required to comply with after the end of the reporting period would not affect classification of a liability as current or non-current at the reporting date. When an entity classifies a liability that is subject to the covenants which an entity is required to comply with within twelve months of the reporting date as non-current at the end of the reporting period, the entity shall disclose information in the notes to understand the risk that non-current liabilities with covenants could become repayable within twelve months after the reporting period. The amendments should be applied for annual periods beginning on or after January 1, 2024, and earlier application is permitted. The Group does not expect that these amendments have a

KAKAO CORP. and Subsidiaries

Notes to the Consolidated Financial Statements

December 31, 2023 and 2022

significant impact on the financial statements.

2) Amendments to Korean IFRS 1007 *Statement of Cash Flows*, Korean IFRS 1107 *Financial Instruments: Disclosures* – Supplier finance arrangements

When applying supplier finance arrangements, an entity shall disclose information about its supplier finance arrangements that enables users of financial statements to assess the effects of those arrangements on the entity's liabilities and cash flows and on the entity's exposure to liquidity risk. The amendments should be applied for annual periods beginning on or after January 1, 2024, and earlier application is permitted. The Group is in review for the impact of these amendments on the financial statements.

3) Amendments to Korean IFRS 1116 *Leases* – Lease Liability in a Sale and Leaseback

When subsequently measuring lease liabilities arising from a sale and leaseback, a seller-lessee shall determine lease payments or revised lease payments in a way that the seller-lessee would not recognize any amount of the gain or loss that relates to the right of use retained by the seller-lessee. The amendments should be applied for annual periods beginning on or after January 1, 2024, and earlier application is permitted. The Group is in review for the impact of these amendments on the financial statements.

4) Amendments to Korean IFRS 1001 *Presentation of Financial Statements* – Disclosure of Crypto assets

The amendments require an additional disclosure if an entity holds crypto assets, or holds crypto assets on behalf of the customer, or issues crypto assets. The amendments should be applied for annual periods beginning on or after January 1, 2024, and earlier application is permitted. The Group is in review for the impact of these amendments on the financial statements.

5) Amendments to Korean IFRS 1021 *The Effects of Changes in Foreign Exchange Rates* and 1101 *First-time Adoption of International Financial Reporting Standards* – Lack of Exchangeability

When an entity estimates a spot exchange rate because exchangeability between two currencies is lacking, the entity shall disclose related information. The amendments should be applied for annual periods beginning on or after January 1, 2025, and earlier application is permitted. The Group is in review for the impact of these amendments on the financial statements.

(3) Consolidation

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

1) Subsidiaries

Subsidiaries are all entities over which the Parent Company has control. The Group controls the corresponding investee when it is exposed, or has rights, to variable returns from its involvement with the investee and has the ability to affect those returns through its power over the investee.

KAKAO CORP. and Subsidiaries

Notes to the Consolidated Financial Statements

December 31, 2023 and 2022

Consolidation of a subsidiary begins from the date the Group obtains control of a subsidiary and ceases when the Group loses control of the subsidiary.

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

Goodwill is recognized as the excess of the aggregate of the consideration transferred, the amount of any non-controlling interest in the acquiree, and the acquisition-date fair value of the acquirer's previously held equity interest in the acquiree over the identifiable net assets acquired. If this consideration is lower than the fair value of the net assets of the subsidiary acquired, the difference is recognized in profit or loss.

Balances of receivables and payables, income and expenses and unrealized gains on transactions between the Parent Company and its subsidiaries are eliminated during the consolidation. Accounting policies of subsidiaries have been changed where necessary to ensure consistency with the policies adopted by the Group.

In transactions with non-controlling interest, which do not result in loss of control, the Group recognizes directly in equity any difference between the amount of the non-controlling interests and the fair value of the consideration paid or received, and attributes it to the equity holders of the Parent Company.

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

2) Associates

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

KAKAO CORP. and Subsidiaries

Notes to the Consolidated Financial Statements

December 31, 2023 and 2022

circumstances, if necessary, adjustments shall be made to make the associate's accounting policies conform to those of the Group when the associate's financial statements are used by the Group in applying the equity method.

3) Joint arrangements

A joint arrangement, wherein two or more parties have joint control, is classified as either a joint operation or a joint venture. A joint operator has rights to the assets, and obligations for the liabilities, relating to the joint operation and recognizes the assets, liabilities, revenues and expenses relating to its interest in a joint operation. A joint venturer has rights to the net assets relating to the joint venture and accounts for that investment using the equity method.

(4) Segment Reporting

Information of each operating segment is reported in a manner consistent with the business segment reporting provided to the chief operating decision maker. As it is disclosed in Note 6, the Group has eight reportable segments including advertising, game and entertainment. The chief operating decision maker is responsible for allocating resources and assessing performance of the operating segments.

(5) Foreign Currency Translation

1) Functional and presentation currency

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

2) Transactions and balances

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

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

Non-monetary items that are measured at fair value in a foreign currency are translated using the exchange rates at the date when the fair value was determined. Translation differences on assets and liabilities carried at fair value are reported as part of the fair value gain or loss. For example, translation differences on nonmonetary assets and liabilities such as equities held at fair value

KAKAO CORP. and Subsidiaries

Notes to the Consolidated Financial Statements

December 31, 2023 and 2022

through profit or loss are recognized in profit or loss as part of the fair value gain or loss and translation differences on non-monetary assets such as equities held at fair value through other comprehensive income are recognized in other comprehensive income.

3) Translation into the presentation currency

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

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

(6) Material Accounting Policies

1) Cash and Cash Equivalents

Cash and cash equivalents include cash on hand, deposits in banks, and other short-term highly liquid investments with original maturities of three months or less.

2) Financial Assets

i) Classification

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

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

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

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

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

KAKAO CORP. and Subsidiaries

Notes to the Consolidated Financial Statements

December 31, 2023 and 2022

investments in equity instruments that are not accounted for as other comprehensive income are recognized in profit or loss.

ii) Measurement

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

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

① Debt instruments

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

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

On initial recognition, the Group may irrevocably designate a financial asset that otherwise meets the requirements to be measured at amortized cost or at fair value through other comprehensive income as at fair value through profit or loss if doing so eliminates or significantly reduces an

KAKAO CORP. and Subsidiaries
Notes to the Consolidated Financial Statements
December 31, 2023 and 2022

accounting mismatch that would otherwise arise.

The Group evaluates the way business is being managed, and the purpose of the business model for managing a financial asset best reflects the way information is provided to management at its portfolio level. Such information considers the following:

- The accounting policies and purpose specified for the portfolio, the actual operation of such policies. This includes strategy of management focusing on the receipt of contractual interest revenue, maintaining a certain level of interest income, matching the duration of financial assets and the duration of corresponding liabilities to obtain the asset, and outflow or realization of expected cash flows from disposal of assets.
- The way the performance of a financial asset held under the business model is evaluated, and the way such evaluation is being reported to management.
- The risk affecting the performance of the business model (and financial assets held under the business model), and the way such risk is being managed.
- The compensation plan for management (e.g., whether management is being compensated based on the fair value of assets or based on contractual cash flows received).
- Frequency, amount, timing and reason for sale of financial assets in the past, and forecast of future sale activities.

Transfers of financial assets to third parties in transactions that do not qualify for derecognition are not considered sales for this purpose.

Financial assets that qualify the definition of trading or portfolio performance is evaluated on a fair value basis shall be measured at fair value through profit or loss.

The principal is defined to be the fair value of a financial assets at initial recognition. Interest is not only composed of consideration for the time value of money, consideration for the credit risk related to remaining principal at a certain period of time, and consideration for other cost (e.g. liquidity risk and cost of operation) and fundamental risk associated with lending, but also profit.

When evaluating whether contractual cash flows are solely payments of principal and interests, the Group considers the contractual terms of the financial instrument. When a financial asset contains contractual conditions that modify the timing and amount of contractual cash flows, it is required to determine whether contractual cash flows that arise during the remaining life of the financial instrument due to such contractual condition are solely payments of principal and interest.

The Group considers the following elements when evaluating the above:

- Conditions that lead to modification of timing or amount of cash flows
- Contractual terms that adjust contractual nominal interest, including floating rate features

KAKAO CORP. and Subsidiaries

Notes to the Consolidated Financial Statements

December 31, 2023 and 2022

- Early payment features and maturity extension features
- Contractual terms that limit the Group's claim on cash flows arising from certain assets (e.g. non-recourse feature)

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

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

② Equity instruments

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

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

iii) Impairment

The Group assesses on a forward-looking basis the expected credit losses associated with its debt instruments carried at amortized cost and fair value through other comprehensive income. The impairment methodology applied depends on whether there has been a significant increase in credit risk.

The Group measures loss allowances at an amount equal to lifetime expected credit losses, except for the following, which are measured at 12-month expected credit losses:

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

For trade receivables and lease receivables, the Group applies the simplified approach, which

KAKAO CORP. and Subsidiaries

Notes to the Consolidated Financial Statements

December 31, 2023 and 2022

requires expected lifetime losses to be recognized from initial recognition of the receivables.

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

① Measurement of expected credit losses

Expected credit losses are a probability-weighted estimate of credit losses. Credit losses are measured at the present value of all cash shortfalls (i.e., the differences between all contractual cash flows to be received in accordance with the contract and the contractual cash flows that the Group expects to receive). Expected credit losses are discounted at the effective interest rate of the financial asset.

② Credit-impaired financial assets

At the end of each reporting period, the Group assesses whether the credit of financial assets measured at amortized cost and debt securities measured at fair value through other comprehensive income are credit-impaired. A financial asset is 'credit-impaired' when one or more events that have a detrimental impact on the estimated future cash flows of the financial asset have occurred.

③ Presentation of allowance for expected credit losses in the consolidated statement of financial position

The loss allowance for a financial asset measured at amortized cost is deducted from the gross carrying amount of the asset.

For debt instruments measured at fair value through other comprehensive income, the loss allowance is included in profit or loss and recognized in other comprehensive income.

④ Write-off

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

vi) Recognition and derecognition

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

If a transfer does not result in derecognition because the Group has retained substantially all the risks

KAKAO CORP. and Subsidiaries
Notes to the Consolidated Financial Statements
December 31, 2023 and 2022

and rewards of ownership of the transferred asset, the Group continues to recognize the transferred asset in its entirety and recognizes a financial liability for the consideration received. The Group classified the financial liability as “borrowings” in the consolidated statement of financial position.

v) Offsetting of financial instruments

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

3) Derivative Instruments

Derivatives are initially recognized at fair value on the date when a derivative contract is entered into and are subsequently re-measured at their fair value. Changes in the fair value of the derivatives that are not qualified for hedge accounting are recognized in the consolidated statement of comprehensive income as ‘finance income (costs)’ according to the nature of transactions.

4) Trade Receivables

Trade receivables are recognized initially at the amount of consideration that is unconditional, unless they contain significant financing components when they are recognized at fair value. Trade receivables are subsequently measured at amortized cost using the effective interest method, less loss allowance. See Note 10 for further information about the Group’s accounting for trade receivables.

5) Inventories

Inventories are stated at the lower of cost and net realizable value. Cost is determined using the moving-weighted average method.

6) Non-current Assets (or Disposal Group) Held for Sale

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

7) Property and Equipment

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

Depreciation on property and equipment, except land, is calculated using the straight-line method to allocate the difference between their cost and their residual values over their estimated useful lives,

KAKAO CORP. and Subsidiaries
Notes to the Consolidated Financial Statements
December 31, 2023 and 2022

as follows:

	Useful lives
Buildings	20 – 40 years
Structures	3 – 20
Machinery and equipment	4 – 6
Vehicles	4 – 6
Furniture	2 – 5

The depreciation method, residual values and useful lives of property and equipment are reviewed and adjusted at each financial year-end, if appropriate, accounted for as changes in accounting estimates.

8) Borrowing Costs

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

9) Government Grants

Government grants are recognized at their fair values when there is reasonable assurance that the grant will be received and the Group will comply with the conditions attached to it. Government grants related to assets are presented by deducting the grants in arriving at the carrying amount of the assets, and grants recognized as income are deferred and presented by deducting the expenses related to the purpose of the government grants.

10) Intangible Assets

i) Goodwill

Goodwill arises on the acquisition of subsidiaries, associates and business combination are included in intangible assets. Goodwill represents the excess of the cost of an acquisition over the fair value of the Group's share of the net identifiable assets of the acquired subsidiary, associates, joint ventures and businesses at the date of acquisition. If this consideration is lower than the fair value of the net assets of the subsidiary acquired, the difference is recognized in profit or loss.

Goodwill is tested annually for impairment and carried at cost less accumulated impairment losses. Any impairment is recognized immediately as an expense and is not subsequently reversed.

For the purpose of impairment testing, goodwill acquired in a business combination is allocated to each of the CGUs, or group of CGUs, that is expected to benefit from the synergies of the combination. Goodwill is monitored at the operating segment level. Goodwill impairment reviews are

KAKAO CORP. and Subsidiaries

Notes to the Consolidated Financial Statements

December 31, 2023 and 2022

undertaken annually or more frequently if events or changes in circumstances indicate a potential impairment. The carrying amount of goodwill is compared to the recoverable amount, which is the higher of value in use and the fair value less costs to sell.

ii) Membership and brand

Membership and brand are regarded as intangible assets with indefinite useful life and not amortized because there is no foreseeable limit to the period over which the asset is expected to be utilized.

iii) Other intangible assets

Other intangible assets such as development costs and industrial property rights are initially recognized at its historical costs and amortized using the straight-line method over their estimated useful lives and the unit of production method. Other intangible assets have definite useful life and are carried at cost less accumulated amortization.

Their estimated useful lives of other intangible assets are as follows:

	Useful lives
Industrial property rights	5 – 10 years
Others	Indefinite, 2 – 15
Development costs	5
Exclusive rights	Contractual period

iv) Crypto assets

① Issuer of crypto assets (KLAY)

The Group recorded development costs as expenses at the time of expenditure since it was not deemed that the development activities of platforms and crypto assets meet the recognition criteria of intangible assets prescribed in Korean IFRS 1038 paragraph 57. Relevant development costs were not recorded as assets.

As the issuance cost for the Group's crypto assets does not qualify for the definition of assets, costs expensed in the course of the issuance of crypto assets have been recorded as expenses.

The Group distributed and retired the issued KLAY to third parties and itself through sales with consideration, business development and R&D investment and distribution volume for developers.

No amounts were recognized as assets in relation to the reserved portion held as an issuer.

While developing the Klaytn Mainnet in 2019, the Group also completed its development for the crypto asset named KLAY. KLAY was developed using blockchain focused technologies for the purpose of being used as a payment means for various fees incurred while using Klaytn Mainnet. It is used to pay fees when creating and implementing Smart Contract within Klaytn Mainnet, or transmitting, recording and uploading transactions through Dapp registered in Klaytn Mainnet, and using services provided

KAKAO CORP. and Subsidiaries

Notes to the Consolidated Financial Statements

December 31, 2023 and 2022

by Dapp.

In accordance with the announced White Paper, Klaytn Position Paper, the Group completed its roadmap including upgrades and user-friendly interface development for the advancement in Mainnet through various tasks related to supporting major toolkits, platform advancement and ecosystem expansion, began the governance transfer and completed its performance obligations in 2021.

Meanwhile, the Group implemented the Klaytn governance roadmap which was established from the beginning of 2019 and realized the decentralization of Klaytn, which is entered into the maturity stage of Decentralization Phase during the current period. At the same time, through the KLAY tokenomics restructuring (KGP-6), the Group retired inter-company undistributed reserved volume held and paid pre-agreed volume. As a result, no undistributed reserved volume is held by the Group as at December 31, 2023. The Group is not an issuer of KLAY as at December 31, 2023.

a. Issuance and distribution of crypto assets

The Group issued 10 billion units of KLAY at the point of development completion of Klaytn Mainnet in 2019, and through the process of distribution and retirement, there are no undistributed reserved volumes as at December 31, 2023.

(in units)

	Total volume issued ²	Sales with consideration	Distributed volume (cumulative)			Undistributed reserved volume
			Business development, R&D and development service investment	Others ³	Total	
2022	10,000,000,000	1,631,586,994	869,759,242	-	2,501,346,236	7,498,653,764
2023 ¹	10,000,000,000	1,637,682,258	1,045,966,578	7,316,351,164	10,000,000,000	-

¹ As at December 31, 2023, there are no undistributed reserved volumes other than distributed volumes acquired and held by the Group.

² Quantity of KLAY which is not issued by the Group but created as Block rewards is not included.

³ Others consist of the retired volume through KIP-103 rebalancing.

KAKAO CORP. and Subsidiaries

Notes to the Consolidated Financial Statements

December 31, 2023 and 2022

b. Recognition of revenue from sales of crypto assets with consideration

In accordance with the announced White Paper, Klaytn Position Paper, the Group completed its roadmap including upgrades and user-friendly interface development for the advancement in Mainnet through various tasks related to supporting major toolkits, platform advancement and ecosystem expansion, began the governance transfer and completed its performance obligations and recognized revenues in 2021.

(in millions of Korean won)

Name of crypto assets	Distribution method	Distribution period	Amount recognized as revenue			
			2023	2022	2021	Total
KLAY	Sales with consideration, business development and R&D investment, etc.	2019~2023	₩ 1,615	₩ 91,645	₩ 71,940	₩ 165,199

c. Current status and future management plan for reserved volumes

As at December 31, 2023, there are no in-company undistributed reserved volumes other than distributed volumes acquired and held by the Group as a holder.

② Issuer of crypto assets (BORA)

On July 1, 2021, the Group acquired crypto assets through business combination with Way2bit Co., Ltd.

Way2bit Co., Ltd. Issued crypto assets through METABORA SINGAPORE PTE. LTD. (formerly known as BORANETWORK PTE. LTD.), a subsidiary domiciled in Singapore. Relevant development costs were not recorded as assets.

The Group's crypto assets were issued before the business combination. As the issuance cost for the Group's crypto assets does not qualify for the definition of assets, costs expensed in the course of the occurrence have been recorded as expenses.

The volumes of the crypto assets issued have been allocated to exchange with other crypto assets, sales with consideration, distribution for the purpose of ecosystem revitalization and distribution for developers. The amounts arising from sales with consideration are recorded as a contract liabilities and revenues are recorded at the point of fulfilling performance obligations prescribed in the White Paper regarding the crypto assets.

No amounts were recognized as assets in relation to the reserved portion held by an issuer.

When the assets re-enter into the issuer at a stage before the completion of performance obligations, if there are outstanding balances of contract liabilities, the contract liabilities and the paid consideration shall be offset first.

BORA was issued based on Ethereum chain in 2018 before the merger with Way2bit Co., Ltd.. After

KAKAO CORP. and Subsidiaries

Notes to the Consolidated Financial Statements

December 31, 2023 and 2022

the merger, Mainnet was transferred to Klaytn chain in 2021.

BORA developed by the Group can be exchangeable with game tokens of games operated in the BORA platform. The Group is continuously onboarding various games to the BORA platform so that the value of BORA is maintained and the ecosystem is activated, and efforts are being made to ensure that a large number of users can enjoy the games. This aims to connect various games through one platform and satisfy common interests based on interaction between users.

The reserved volumes of BORA as at December 31, 2023, account for 24% of total volumes issued, and if distributed through additional sales, etc., it may act as a dilution factor in the exchange market price.

a. Issuance and distribution of crypto assets

A total of 1,325,000,000 units of BORA was issued in 2018, and 119,250,000 units were retired, resulting in distributable volumes of 1,205,750,000 units. Of these, 548,711,967 units were allocated to sales with consideration and 197,683,684 units were allocated to distribution volumes for developers. The volumes reserved and held as at December 31, 2023, are 314,922,193 units.

	Total volume issued	Distributed volumes (cumulative)						Total	Volumes reserved and held
		Sales with consideration	Distribution without consideration	Volumes for developers	Retirement	Investment	Consideration for services		
2022	1,325,000,000	540,938,476	37,890,802	197,683,684	119,250,000	22,461,692	56,131,943	974,356,597	350,643,403
2023	1,325,000,000	548,711,967	38,769,397	197,683,684	119,250,000	44,722,440	60,940,319	1,010,077,807	314,922,193

Upon initial private sales before the business combination, 925,770,641 units were distributed including 530,000,000 units for exchange disposal, and after the business combination, 84,307,166 units were distributed to the Group.

The volumes collected through the platform are 72,066 units and 45,623 units in 2022 and 2023, respectively.

b. Recognition of revenue from sales of crypto assets with consideration

After the issuance, 548,711,967 units of BORA were allocated to sales with consideration (including 530 million units for exchange sales through private sales when issued in 2018 before the business combination and subsequent exchange sales with other crypto assets), 44,722,440 units to investing activities for ecosystem revitalization and 60,940,319 units to consideration for services.

The Group recognizes contract liabilities for 18,711,967 units for sales with consideration (including exchange sales), 44,722,440 units for investment and 6,771,826 units for consideration for services that have been carried out since the business combination dated July 1, 2021.

The Group collected 72,066 units and 45,623 units of BORA in 2022 and 2023, respectively, as a consideration for service usages within the platform, which results in recognizing revenues with deduction of contract liabilities.

KAKAO CORP. and Subsidiaries

Notes to the Consolidated Financial Statements

December 31, 2023 and 2022

In cases where the holders of crypto assets distributed through sales with consideration and without consideration use the crypto assets when paying fees for the service usage within the platform, the Group recognizes the revenues based on the collected volumes.

(in units and in millions of Korean won)

Total volume distributed ¹	Sales with consideration, etc.				Volumes used in the platform			Amount recognized as revenue			Outstanding balances of contract liabilities				
	Sales with consideration	Consideration for services	Others ²	Total	2022	2023	Cumulative	2022	2023	Cumulative					
1,010,077,807	548,711,967	60,940,319	44,722,440	654,374,726	72,066	45,623	117,689	₩	32	₩	7	₩	39	₩	28,785

¹ Total volume distributed after the issuance of BORA in 2018

² Investment for ecosystem revitalization is included.

c. Current status and future management plan for reserved volumes

The reserved volumes of BORA issued by the Group as at December 31, 2023, are 314,922,193 units. 6 million units are expected to be paid as a node compensation (consideration for services) of GC participating company, and there are no other specific plans.

③ Holder of crypto assets

The Group holds crypto assets through platform operations and acquisition with consideration based on the smart contracts.

The Group classifies the acquired crypto assets as intangible assets. Initial acquisition cost is recognized at fair value depending on the types of acquisition or by adding the costs that are reliably measurable and directly attributable to the acquisition to the purchasing price.

The crypto assets classified as intangible assets are considered to have an indefinite useful life and are not amortized, and their cost is determined using the moving average method.

Impairment test is performed for crypto assets classified as intangible assets annually or when there is an indicator of impairment. The crypto assets are carried at cost less accumulated impairment losses.

Impairment loss and gains or losses on disposal of crypto assets are classified as non-operating income or expenses.

11) Investment Properties

Investment property is a property held to earn rentals or for capital appreciation or both. An investment property is measured initially at its cost. After recognition as an asset, investment property is carried at cost less accumulated depreciation and impairment losses. The Group depreciates investment properties, except for land, using the straight-line method over their useful lives of 40 years.

12) Impairment of Non-financial Assets

KAKAO CORP. and Subsidiaries
Notes to the Consolidated Financial Statements
December 31, 2023 and 2022

Goodwill or intangible assets with indefinite useful lives are not subject to amortization and are tested annually for impairment. Assets that are subject to amortization are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount may not be recoverable. An impairment loss is recognized for the amount by which the asset's carrying amount exceeds its recoverable amount. The recoverable amount is the higher of an asset's fair value less costs to sell and value in use. Non-financial assets, other than goodwill, that suffered impairment are reviewed for possible reversal of the impairment at each reporting date.

The goodwill acquired in a business combination is allocated to each cash-generating unit that is expected to benefit from the synergy effect of the business combination. Impairment losses on cash-generating units allocated first to reduce the carrying amount of goodwill allocated to the cash-generating unit, and then to reduce the carrying amounts of the other asset in the cash-generating unit on a pro rata basis. An impairment loss recognized for goodwill is not reversible in a subsequent period.

13) Trade and Other Payables

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

14) Financial Liabilities

i) Classification and measurement

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

Subsequent to initial recognition, financial liabilities at fair value through profit or loss are measured at fair value, and changes therein are recognized in profit or loss. Upon initial recognition, any directly attributable transaction costs are recognized in profit or loss as incurred.

The Group classifies non-derivative financial liabilities, except for financial liabilities at fair value through profit or loss, financial guarantee contracts and financial liabilities that arise when a transfer of financial assets does not qualify for derecognition, as financial liabilities carried at amortized cost and present as 'trade payables', 'borrowings' and 'other financial liabilities' in the statement of financial position. These financial liabilities are initially measured at fair value deducting the transaction costs directly attributable to the issue. Other financial liabilities are subsequently measured at amortized cost using the effective interest method, and interest expenses are recognized using the effective interest method.

Borrowings are initially recognized at fair value, net of transaction costs incurred. Borrowings are subsequently measured at amortized cost. Any difference between the proceeds (net of transaction

KAKAO CORP. and Subsidiaries

Notes to the Consolidated Financial Statements

December 31, 2023 and 2022

costs) and the redemption amount is recognized in profit or loss over the period of the borrowings using the effective interest method. Fees paid on the establishment of loan facilities are recognized as transaction costs of the loan to the extent that it is probable that some or all of the facility will be drawn down. In this case, the fee is deferred until the draw-down occurs. To the extent there is no evidence that it is probable that some or all of the facility will be drawn down, the fee is capitalized as a prepayment for liquidity services and amortized over the period of the facility to which it relates.

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

Borrowings are classified as current liabilities unless the Group has an unconditional right to defer settlement of the liability for at least 12 months after the reporting period.

ii) Derecognition

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

15) Provisions

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

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

16) Current and Deferred Income Tax

Income tax expense for the period consists of current and deferred income tax. Income tax is recognized as income or expense for the period in the consolidated statement of comprehensive income, except to the extent that it relates to items recognized in other comprehensive income or directly in equity, or it relates to a business combination. In this case, income tax is also recognized in other comprehensive income or directly in equity, respectively.

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

KAKAO CORP. and Subsidiaries

Notes to the Consolidated Financial Statements

December 31, 2023 and 2022

end of the reporting period. Management periodically evaluates positions taken in tax returns with respect to situations in which applicable tax regulation is subject to interpretation, and considers whether it is probable that a taxation authority will accept an uncertain tax treatment. The Group measures its tax balances either based on the most likely amount or the expected value, depending on which method provides a better prediction of the resolution of the uncertainty.

When the Parent Company and subsidiaries are economically combined, the Group considers the Parent Company and subsidiaries as a single taxable unit and applies the consolidated tax return to pay corporate tax based on the aggregated income.

In accordance with the consolidated tax return, the Group calculates the current income tax of the Group including domestic subsidiaries wholly owned by the Parent Company. This amount is recognized as the current income tax liability of the Parent Company, which is obligated to pay, and the amount of Group's current income tax allocated to the Company is recognized as the current income tax.

Current income tax is calculated through calculating taxable income after i) calculating taxable income for each consolidated entity, ii) eliminating consolidation adjustment items for each consolidated entity, iii) adjusting intercompany transaction gains and losses between consolidated entities, and vi) allocating consolidation adjustment items for each consolidated items. After calculating the taxable income, the tax amount is calculated by applying the tax rate to the tax base which calculated by deducting the amount of net operating loss, non-taxable income and income deduction. Finally, current income tax is calculated by adding or deducting tax credits, tax deductions and additions. Taxable income differs from the income stated in the statement of comprehensive income as it excludes gains or losses that will be added or deducted in other taxable periods and items that are not taxable or deductible from the pre-tax income in the statement of comprehensive income. Income tax payable related to the Group's current income tax is calculated at the tax rates that have been enacted or substantively enacted.

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

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

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

The Group reviews the carrying amount of the deferred income tax asset at the end of each reporting

KAKAO CORP. and Subsidiaries

Notes to the Consolidated Financial Statements

December 31, 2023 and 2022

period and reduces the carrying amount of the deferred income tax asset if it is no longer probable that sufficient taxable income will be available to allow the benefits of the deferred income tax asset to be utilized.

Deferred income tax assets and liabilities are measured 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 laws that have been enacted or substantively enacted by the end of the reporting period. The measurement of deferred income tax liabilities and deferred income tax assets reflects the tax consequences that would follow from the manner in which the Group expects, at the end of the reporting period to recover or settle the carrying amount of its assets and liabilities.

Deferred income tax assets and liabilities are offset when there is a legally enforceable right to offset current tax assets and liabilities and when the deferred income tax balances relate to the same taxation authority. Current tax assets and tax liabilities are offset when the Group has a legally enforceable right to offset and intends either to settle on a net basis, or to realize the assets and settle the liability simultaneously.

17) Employee Benefits

i) Post-employment benefits

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

A defined contribution plan is a pension plan under which the Group pays fixed contributions into a separate entity. The contributions are recognized as employee benefit expenses when an employee has rendered service.

A defined benefit plan is a pension plan that is not a defined contribution plan. Typically defined benefit plans define an amount of pension benefit that an employee will receive on retirement, usually dependent on one or more factors such as age, years of service and compensation. The liability recognized in the statement of financial position in respect of defined benefit pension plans is the present value of the defined benefit obligation at the end of the reporting period less the fair value of plan assets. The defined benefit obligation is calculated annually by independent actuaries using the projected unit credit method. The present value of the defined benefit obligation is determined by discounting the estimated future cash outflows using interest rates of high-quality corporate bonds and that have terms to maturity approximating to the terms of the related pension obligation. On the other hand, remeasurements of the net defined benefit liability, which comprise actuarial gains and losses, the return on plan assets (excluding interest) and the effect of the asset ceiling (excluding interest), are recognized in other comprehensive income.

If any plan amendments, curtailments, or settlements occur, past service costs or any gains or losses on settlement are recognized as profit or loss for the year.

ii) Share-based compensation

Equity-settled share-based compensation granted to employees are estimated at fair value of equity

KAKAO CORP. and Subsidiaries

Notes to the Consolidated Financial Statements

December 31, 2023 and 2022

instruments at the grant date and recognized as employee benefit expenses over the vesting period. The number of equity instruments expected to vest is remeasured with consideration to non-market vesting conditions at the end of the reporting period, with any changes from the original measurement recognized in profit or loss for the year and equity.

When the options are exercised, the Group issues new shares. The proceeds received, net of any directly attributable transaction costs, are recognized as capital stock (nominal value) and capital surplus.

Under cash-settled share-based compensation plan, the Group compensates the difference of the fair value and exercise price of option as the consideration for employee services received. Total expense that will be recognized over the vesting period is determined by reference to the fair value of the option granted. Until the liability is settled, the Group is required to remeasure the fair value of the liability at the end of each reporting period and at the date of settlement, with any changes in value recognized in profit or loss for the year.

iii) Other long-term employee benefits

The Parent Company and certain subsidiaries provide long-term employee benefits, which are entitled to employees with service period for at least three years. The expected costs of these benefits are accrued over the period of employment using the same accounting methodology as used for defined benefit pension plans. The Group recognizes service cost, net interest on other long-term employee benefits liabilities and remeasurement as profit or loss for the year. These liabilities are valued annually by independent and qualified actuaries.

iv) Short-term employee benefits

Short-term employee benefits are recognized at the amount expected to be settled within 12 months from the end of the reporting period in which the employee has provided service in exchange for the service, and are recognized in profit or loss when the service is provided. Short-term employee benefits are recognized at an undiscounted amount.

18) Paid Capital

The Group classifies ordinary shares as equity. Incremental costs directly attributable to the equity transactions are recognized as a deduction from equity, net of any tax effects.

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

19) Revenue Recognition

Revenues are mainly comprised of advertisement, content, commerce revenue and merchandise sales.

KAKAO CORP. and Subsidiaries

Notes to the Consolidated Financial Statements

December 31, 2023 and 2022

i) Advertising revenue

The Group generally provides advertising services to a customer during the period of a contract and recognizes the allocated transaction price for a performance obligation over the period of service as revenue. However, in the case of a contract in which advertising services are priced based on the sum of the total number of advertising services provided other than the contracted period, the Group recognizes revenue when it satisfies its performance obligation. Advertising revenue is either prepaid by the customer at the set transaction price, or charged afterwards as the Group satisfies its obligations.

ii) Contents revenue

The Group provides a variety of contents to a customer including games, music, videos and webtoon. Transaction prices are immediately paid when a customer purchases contents online. The Group recognizes revenue at the time when contents are used at which point the right to use contents are transferred and controlled by the customer and there are no unfulfilled obligations of the Group that may affect the use of contents.

The Group recognizes revenue over the time when there are obligations of the Group that may affect the use of contents over the period over which contents are used by customers.

The Group pays the commission fees when a customer pays for the game services provided by the Group. The incremental costs are those commission fees that the Group incurs to acquire a contract with a customer that would not have been incurred if the contract had not been acquired. In accordance with the application of Korean IFRS 1115, the Group recognizes the incremental costs as an asset and amortizes it over the expected period of providing the game service to customers.

iii) Commerce revenue and goods sales

The Group sells goods or provides services as a principal or agent through KakaoTalk platforms and recognizes revenue when the performance obligation is satisfied.

iv) Fintech revenue

The Group runs a comprehensive fintech service business that provides payment agency through the platform. In accordance with the application of Korean IFRS 1115, services provided by the Group are identified as separate performance obligations and recognized as revenues at the point when the control is transferred.

v) Other revenues

The Group mainly engages in database-oriented information providing services. The revenue consists of the fair value of the consideration received or receivable for the sales of goods and rendering of services from the Group's ordinary activities.

20) Finance Income and Finance Costs

The Group's finance income and finance cost include:

KAKAO CORP. and Subsidiaries

Notes to the Consolidated Financial Statements

December 31, 2023 and 2022

- Interest income
- Interest expense
- Dividend income
- Net gains or losses on the disposal of investments in debt securities measured at fair value through other comprehensive income
- Net gains or losses on financial assets measured at fair value through profit or loss
- Foreign currency gains and losses on financial assets and financial liabilities
- Impairment loss (or reversal of impairment loss) on investments in debt securities measured at amortized cost or fair value through other comprehensive income

Interest income or interest expense is recognized using the effective interest method. Dividend income is recognized when the Group's right to receive dividends is established.

The effective interest rate is the rate that exactly discounts estimated future cash payments or receipts through the expected life of the financial instrument to the gross carrying amount of the financial asset (when the asset is not credit-impaired) or to the amortized cost of the financial liability.

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

21) Dividend

Dividend to the Group's shareholders is recognized as a liability in the consolidated financial statements in the year in which the dividends are approved by the Group's shareholders.

22) Leases

i) Lessor

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

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

To classify each lease, the Group makes an overall assessment of whether the lease transfers substantially all of the risks and rewards incidental to ownership of the underlying asset. If this is the

KAKAO CORP. and Subsidiaries
Notes to the Consolidated Financial Statements
December 31, 2023 and 2022

case, then the lease is a finance lease; if not, it is an operating lease. As part of this assessment, the Group considers certain indicators such as whether the lease is for the major part of the economic life of the asset.

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

If an arrangement contains lease and non-lease components, then the Group applies Korean IFRS 1115 to allocate the consideration in the contract.

When the Group is a lessor, the Group recognizes lease payments received under operating leases as income on a straight-line basis over the lease term. Initial direct cost incurred by the Group in arranging an operating lease are added to the carrying amount of the underlying asset and recognized as an expense on the same basis as the lease income. Each leased asset is presented in the consolidated statement of financial position on the basis of its characteristics.

ii) Lessee

The Group leases offices, vehicles and machinery. Lease contracts are typically made for fixed periods of 3 to 8 years, but may have extension options.

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

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

The Group determines the lease term by including the enforceable extended period when the lessee is reasonably certain to exercise an extension option within the non-cancellable period of lease and when the lessee is reasonably certain not to exercise a termination option. When assessing the enforceable period, the Group considers economic penalties imposed on the lessee and lessor when they have right to terminate the lease contract without the counterparty's consent.

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

KAKAO CORP. and Subsidiaries

Notes to the Consolidated Financial Statements

December 31, 2023 and 2022

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

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

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

The Group calculates the incremental borrowing interest rate as follows.

- If possible, reflect the change in financial position after receiving third-party financing in the latest third-party financial interest rate received by individual lessees.
- Reflect lease-specific adjustments such as country, currency, collateral, and guarantee.

When an individual lessee can readily observe the interest rate on a loan with a same term but a different payment profile (via recent financing sources or market data), the Group sets that interest rate as a starting point for calculating the incremental borrowing interest rate.

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

Each lease payment is allocated between the liability and finance cost. The finance cost is charged to profit or loss over the lease period so as to produce a constant periodic rate of interest on the remaining balance of the liability for each period.

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

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

KAKAO CORP. and Subsidiaries

Notes to the Consolidated Financial Statements

December 31, 2023 and 2022

- any initial direct costs, and
- restoration costs.

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

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

iii) Variable lease payments

Some leases contain variable payment terms that are linked to usage and revenue. Variable payment terms are used for a variety of reasons, including minimizing the fixed costs base for machinery. Variable lease payments that depend on usage are recognized in profit or loss when machinery is used and when the usage is confirmed by the settlement.

iv) Extension and termination options

Extension and termination options are included in a property across the Group. These terms are used to maximize operational flexibility in terms of managing contracts. Most of the extension and termination options held by the Group can be exercised upon agreement between the lessors and the Group.

23) Earnings per Share

Basic earnings per share is calculated by dividing net profit for the year available to ordinary shareholders by the weighted-average number of ordinary shares outstanding during the year. Diluted earnings per share are calculated using the weighted-average number of ordinary shares outstanding adjusted to include the potentially dilutive effect of ordinary equivalent shares outstanding.

24) Business Combinations between Entities under a Common Control

Book value method applies to a business combination under a common control. Related assets and liabilities are measured at book value of the consolidated financial statements. In addition, the difference between the sum of book values of the assets and liabilities transferred and the consideration paid is recognized as share premium.

25) Compound Financial Instruments

Compound financial instruments are convertible bonds, convertible preferred shares and redeemable convertible preferred shares that can be converted into equity instruments of the Parent Company at the option of the holder and exchangeable bond that can be converted into equity instruments of the subsidiary at the option of the holder.

KAKAO CORP. and Subsidiaries

Notes to the Consolidated Financial Statements

December 31, 2023 and 2022

The liability component of a compound financial instrument is recognized initially at the fair value of a similar liability that does not have equity conversion rights and exchange rights. The equity component is recognized initially on the difference between the fair value of the compound financial instrument as a whole and the fair value of the liability component. Subsequent to the initial recognition, it will not be remeasured. Any directly attributable transaction costs are allocated to the liability and equity components in proportion to their initial carrying amounts. Meanwhile, the entire amount of compound financial instruments may be accounted for liability as the event of default of these instruments is considered contingent settlement provisions.

In accordance with the Interpretation Statements No.00094 issued by the Financial Supervisory Service in Korea, the Group recognized some conversion rights and exchange rights (pre-emptive rights) as equity. This accounting treatment is applicable within Korean IFRS as defined in item1 of paragraph1 of Article 13 of Acts on External Audit for Stock Companies.

26) Insurance Contracts

(Scope of application)

The Group applies Korean IFRS 1117 *Insurance Contracts* to issued insurance contracts and reinsurance contracts, ceded reinsurance contracts, investment contract with discretionary participation features issued by the entity issuing the insurance contracts.

In addition, Korean IFRS 1117 determines whether a set or series of contracts should be regarded as a single contract when identifying contracts within scope. Also, it is necessary to determine whether the embedded derivatives, the investment component, and the goods and services component should be separated and accounted for in accordance with other standards.

(Level of aggregation)

After identifying a portfolio of insurance contracts consisting of contracts that are exposed to similar risks and managed together, the Group classifies contracts with similar profitability within the portfolio to groups of insurance contracts. Each portfolio is divided into annual cohorts based on the year of issuance, and each annual cohort is further divided into the following three sets.

- a group of contracts that are onerous at initial recognition
- a group of contracts that at initial recognition have no significant possibility of becoming onerous subsequently
- a group of remaining contracts in the annual cohort

(Measurement: Premium allocation approach)

In accordance with Korean IFRS 1117, the Group simplifies the measurement of a group of insurance contracts using the premium allocation approach for a group of contracts if it is expected that there will be no material difference from the liability for remaining coverage applied the general model of a group of insurance contracts, or the coverage period of each contract in the group (including

KAKAO CORP. and Subsidiaries

Notes to the Consolidated Financial Statements

December 31, 2023 and 2022

insurance contract services within the contract boundary) is one year or less at the inception of the group.

Contracts applying the premium allocation approach are initially recognized considering the premiums received and the cash flows from insurance acquisition, and subsequently, the insurance liability is amortized over the period in which insurance services are provided. If at any time during the coverage period, facts and circumstances indicate that a group of insurance contracts is onerous, the Group shall calculate the difference between the carrying amount of the liability for remaining coverage and the current estimate of the fulfillment cash flows related to it and add it to the liability for remaining coverage, and recognize a loss in profit or loss.

The Group uses all available information neutrally at the end of the reporting period and updates the assumptions to be applied to the settlement, considering the accumulated experience. When calculating assumptions, actuarial methods are applied by considering calculation units, product characteristics, and actuarial properties.

The discount rate used for the valuation of insurance contracts in accordance with Korean IFRS considers the time value of money, the characteristics of the cash flows of the insurance contracts, and the degree of liquidity. The Group determines the discount rate taking into account factors such as the final observation maturity, the final convergence point, the long-term forward interest rate, and the liquidity premium.

The discount rate applied to the valuation of insurance contracts is an interest rate with a liquidity premium added to the basic risk-free interest rate term structure, and may change in the future depending on changes in estimates of future inflation rates and economic growth rates. The basic risk-free interest rate term structure is calculated using the Smith-Wilson interpolation method based on the yield of government bonds until the final observation maturity and the long-term forward interest rate after the initial convergence point.

The non-financial risk adjustment is calculated by multiplying the best estimate by the risk adjustment ratio, and the risk adjustment ratio is calculated by applying a confidence level (75% Percentile), considering the statistical period and calculation unit. However, if there are additional requirements from the supervisory authority, these will be taken into consideration to determine the final risk adjustment ratio. In addition, changes in non-financial risk adjustment are presented separately into insurance service components and insurance finance components.

The Group identifies the investment component of the contract by determining the amount to be repaid to the policyholder even if an insurance event does not occur, and the investment component is not recognized as insurance revenue. Guarantee insurance, a type of general insurance, does not have a refund payable to the policyholder if an insurance event does not occur, and thus the original insurance contract may not have an investment component. The Group classifies the nature of services by dividing them into guaranteed services or investment services according to cash flow.

The carrying amount of a group of insurance contracts is exposed to the time value of money and financial risk. The Group includes time value of money and financial risk, and the effect of changes in the time value of money and financial risk related to the groups of insurance contracts in the insurance finance income or expenses, and presents the insurance finance income and expenses for

KAKAO CORP. and Subsidiaries
Notes to the Consolidated Financial Statements
December 31, 2023 and 2022

the period by systematically allocating them to the profit or loss and other comprehensive income for each contract group.

The Group reflects the effects calculated by applying the discount rate at the date of occurrence of the insurance event to the contract group in profit or loss, and presents the effects of discount rate changes applied on the settlement date in other comprehensive income. However, in the case of liabilities for remaining coverage of a group of contracts applying the premium allocation approach, the time value of money, financial risk, and their fluctuating effects are recognized in profit or loss for the relevant period.

Meanwhile, a reinsurance contract refers to an insurance contract issued by the reinsurer to compensate another entity for claims arising from insurance contracts issued by that other entity (underlying contracts). For the group of reinsurance contracts held, assumptions that are consistent with the groups of underlying insurance contracts are used when measuring the estimates of the present value of the future cash flows for the group of reinsurance contracts.

(Accounting policy related to transition of insurance contracts)

According to the transition of Korean IFRS 1117, an insurance company shall apply a fully retrospective approach, modified retrospective approach or fair value approach for a group of insurance contracts issued before the transition date (January 1, 2022, the beginning of the annual reporting period immediately preceding the date of initial application) and adjust the existing historical cost-based valuation to the valuation at the measurement date. Transitional provisions related to transition have not been applied since the Group started its operation after January 1, 2022.

27) Approval of Issuance of the Financial Statements

The issuance of the consolidated financial statements of the Group was initially approved by the Board of Directors on February 14, 2024, and re-approved due to revision on March 15, 2024, which is subject to change with approval at the annual shareholders' meeting.

KAKAO CORP. and Subsidiaries
Notes to the Consolidated Financial Statements
December 31, 2023 and 2022

3. Critical Accounting Estimates and Assumptions

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

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

(1) Subsidiaries

Subsidiaries are all entities over which the Group has control. The Group controls an entity when the Group is exposed to, or has rights to, variable returns from its involvement with the entity and has the ability to affect those returns through its power to direct the activities of the entity.

(2) Associates and joint ventures

In determining whether the Group has significant influence, the Group takes into account whether the Group directly or indirectly holds 20% or more of the voting rights over the investee, whether the Group participates in the board or other decision-making body equivalent thereto of the investees, or whether the Group's potential voting rights will affect these rights.

(3) Impairment loss on goodwill

The Group tests annually whether goodwill has suffered any impairment. The recoverable amounts of cash-generating units are determined based on value-in-use calculations (Note 19).

(4) Income taxes

The Group's taxable income generated from these operations are subject to income taxes based on tax laws and interpretations of tax authorities in numerous jurisdictions. There are many transactions and calculations for which the ultimate tax determination is uncertain (Note 24).

If certain portion of the taxable income is not used for investments or increase in wages or dividends in accordance with the relevant taxation law, the Group is liable to pay additional income tax calculated based on the tax laws. Accordingly, the measurement of current and deferred income tax is affected by the tax effects from the new tax system. As the Group's income tax is dependent on the investments, increase in wages and dividends, there is an uncertainty measuring the final tax effects.

KAKAO CORP. and Subsidiaries

Notes to the Consolidated Financial Statements

December 31, 2023 and 2022

(5) Fair value of financial instruments

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

(6) Impairment of financial assets

The provisions for impairment for financial assets are based on assumptions about risk of default and expected loss rates. The Group uses judgement in making these assumptions and selecting the inputs to the impairment calculation based on the Group's experience, existing market conditions as well as forward looking estimates at the end of each reporting period (Note 4).

(7) Provisions

As at December 31, 2023, the Group recognizes provisions as explained in Notes 2 (6) 15). These provisions are estimated based on experience.

(8) Net defined benefit liabilities (assets)

The present value of net defined benefit liabilities (assets) depends on a number of factors that are determined on an actuarial basis using a number of assumptions including the discount rate (Note 22).

(9) Other long-term employee benefits liabilities

The present value of other long-term employee benefits liabilities depends on a number of factors that are determined on an actuarial basis using a number of assumptions including the discount rate (Note 23).

(10) Share-based compensation

The Group measures equity-settled share-based compensation at the fair value at the date of grant of equity instruments. The fair value is estimated by using the evaluation model which considers grant condition of equity instruments. In addition, the Group measures cash-settled share-based compensation based on the fair value of share options granted by considering condition of service provision. The amount of liability is re-estimated at the end of each reporting period and at the settlement date until the liability is settled.

(11) Revenue recognition

As points provided to customers provide material rights that customers would not have received without entering into the contract, the promise to provide points is a separate performance obligation. The transaction price is allocated to products and points on a relative stand-alone selling price basis. Management estimates the stand-alone selling price of points based on the discount applied when points are redeemed, and likelihood of point redemption expected on the basis of past experience. The standalone selling price of products are estimated based on the retail price.

KAKAO CORP. and Subsidiaries
Notes to the Consolidated Financial Statements
December 31, 2023 and 2022

(12) Leases

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

For leases of office, vehicles and machinery, the following factors are normally the most relevant:

- If there are significant penalties to terminate (or not extend), the Group is typically reasonably certain to extend (or not terminate).
- If any leasehold improvements are expected to have a significant remaining value, the Group is typically reasonably certain to extend (or not terminate).
- Otherwise, the Group considers other factors including historical lease durations and the costs and business disruption required to replace the leased asset.

Most extension options in offices, vehicles and machinery leases have not been included in the lease liability, because the Group could replace the assets without significant cost or business disruption.

The lease term is reassessed if an option is actually exercised (or not exercised) or the Group becomes obliged to exercise (or not exercise) it. The assessment of reasonable certainty is only revised if a significant event or a significant change in circumstances occurs, which affects this assessment, and that is within the control of the lessee.

(13) Fair value of assets and liabilities from business combination

The fair value of identifiable assets and liabilities acquired in a business combination is measured based on management's assumptions about the selection of valuation methods and input variables.

KAKAO CORP. and Subsidiaries

Notes to the Consolidated Financial Statements

December 31, 2023 and 2022

4. Financial Risk Management

(1) Financial risk factors

The Group's activities expose it to a variety of financial risks: market risk (including interest rate risk, price risk and foreign exchange risk), credit risk and liquidity risk. The Group's overall risk management program focuses on the unpredictability of financial markets and seeks to minimize potential adverse effects on the Group's financial performance.

1) Market risk

i) Interest rate risk

Interest rate risk is defined as the risk that the interest income or expenses arising from deposits and borrowings will fluctuate because of changes in future market interest rate. The interest rate risk mainly arises through floating rate deposits and borrowings. The objective of interest rate risk management lies in maximizing corporate value by minimizing uncertainty caused by fluctuations in interest rates.

As at December 31, 2023, if the market interest rate of floating rate deposits had increased/decreased by 1.0%p with other variables held constant, the effect on profit before income tax for the year ended December 31, 2023, would have been increased/decreased by ₩ 21,367 million (2022: ₩ 15,442 million) and ₩ 18,521 million (2022: ₩ 17,071 million) due to increased/decreased interest income of floating rate deposits and borrowings, respectively.

ii) Price risk

The Group invests in debt and equity securities for managing liquidity, operational needs and others. The Group's investment portfolio consists of direct and indirect investments in listed and non-listed securities.

As at December 31, 2023, if all other variables were constant and the value of marketable equity had increased or decreased by 5.0%, gain and loss on valuation of equity securities at fair value (before income tax) and other comprehensive income (before income tax) would have been increased or decreased by ₩ 41,974 million (2022: ₩ 35,448 million).

Impacts of investment financial instruments of the Group on profit or loss and other comprehensive income are described in Note 10.

iii) Foreign exchange risk

Foreign exchange risk is defined as the risk that the fair value of financial instruments or future cash flows fluctuate because of changes in foreign exchange rates. Foreign exchange risk arises from financial instruments presented in currencies other than functional currency. Therefore, foreign exchange risk does not arise from non-monetary financial instruments or financial instruments presented in functional currency.

KAKAO CORP. and Subsidiaries

Notes to the Consolidated Financial Statements

December 31, 2023 and 2022

The Group's exposure to foreign currency risk at the end of the reporting period, expressed in Korean won, was as follows:

(in millions of Korean won)	2023													
	USD		JPY		CNY		EUR		GBP		HKD		NZD	
Financial assets														
Cash and cash equivalents	₩	114,530	₩	43,314	₩	6,042	₩	423	₩	16	₩	-	₩	-
Short-term financial instruments		20,160		-		886		-		-		-		-
Trade receivables		53,815		100,763		11,634		18,013		-		1		-
Other financial asset		205,505		22,962		-		12,126		-		-		-
	₩	394,010	₩	167,039	₩	18,562	₩	30,561	₩	16	₩	1	₩	-
Financial liabilities														
Trade and other payables	₩	13,612	₩	87,915	₩	324	₩	1,192	₩	29	₩	-	₩	-
Other financial liabilities		101,488		31,977		3,450		12,126		-		-		-
	₩	115,100	₩	119,892	₩	3,774	₩	13,318	₩	29	₩	-	₩	-
(in millions of Korean won)	2023													
	IDR		SGD		THB		TWD		VND		CAD		BRL	
Financial assets														
Cash and cash equivalents	₩	15	₩	79	₩	-	₩	60	₩	-	₩	4	₩	-
Short-term financial instruments		-		-		-		-		-		-		-
Trade receivables		307		-		-		62		-		1		-
Other financial asset		-		-		-		-		-		-		-
	₩	322	₩	79	₩	-	₩	122	₩	-	₩	5	₩	-
Financial liabilities														
Trade and other payables	₩	11	₩	-	₩	458	₩	27	₩	4	₩	-	₩	-
Other financial liabilities		-		-		-		-		-		-		-
	₩	11	₩	-	₩	458	₩	27	₩	4	₩	-	₩	-

If the Korean won has weakened/strengthened by 5% with all other variables held constant, the effect on profit before income tax for the year ended December 31, 2023, would have been increased/decreased by ₩ 17,905 million (2022: ₩ 12,633 million).

KAKAO CORP. and Subsidiaries

Notes to the Consolidated Financial Statements

December 31, 2023 and 2022

2) Credit risk

Credit risk arises from cash and cash equivalents, derivative financial instruments and deposits with banks or financial institutions, as well as credit exposures to customers, including outstanding receivables.

i) Risk management

For banks and financial institutions, only independently rated parties with a minimum rating of 'A' are accepted.

If corporate customers are independently rated, these ratings are used. Otherwise, if there is no independent rating, risk control assesses the credit quality of the customer, taking into account its financial position, past experience and other factors.

There are no significant concentrations of credit risk, whether through exposure to individual customers, specific industry sectors and/or regions.

The Group's investments in debt instruments are considered to be low risk investments.

ii) Security

Some trade receivables are provided with guarantees or credit enhancements such as letters of credit that may require performance if the counterparty fails to comply with the contract.

iii) Impairment of financial assets

The Group has two types of financial assets that are subject to the expected credit loss model:

- trade receivables for sales of goods and provision of services, and
- other financial assets carried at amortized cost.

While cash equivalents are also subject to the impairment requirement, the identified impairment loss was immaterial.

- Non-financial services business

A. Trade receivables

The Group applies the simplified approach to measuring expected credit losses which uses a lifetime expected allowance for credit losses for all trade receivables.

To measure the expected credit losses, trade receivables have been grouped based on shared credit risk characteristics and the days past due. The expected credit losses include forward-looking information.

On that basis, the allowance for credit losses as at December 31, 2023 was determined as follows for trade receivables:

KAKAO CORP. and Subsidiaries
Notes to the Consolidated Financial Statements
December 31, 2023 and 2022

<i>(in millions of Korean won)</i>	Current	Within 3 months past due	Within 6 months past due	Within 9 months past due	More than 9 months past due	Total
Trade receivables						
Expected loss rate	0.27%	7.46%	18.29%	19.84%	45.08%	3.66%
Gross carrying amount	₩ 568,096	₩ 21,077	₩ 9,307	₩ 9,603	₩ 37,594	₩ 645,678
Allowance for credit losses	(1,522)	(1,572)	(1,702)	(1,905)	(16,949)	(23,651)

Trade receivables are excluded when collection is no longer reasonably anticipated. Indicators that can no longer reasonably anticipate recovery include failure to comply with the debt adjustment with the Group and others.

Impairment on trade receivables is presented net amount of bad debt expenses in the consolidated income statement. The subsequent collection of the written off amount is recognized as a deduction for the same account.

Movements in the allowance for credit losses provision for trade receivables for the years ended December 31, 2023 and 2022, are as follows:

<i>(in millions of Korean won)</i>	2023	2022
Beginning balance	₩ 12,390	₩ 8,072
Changes in scope of consolidation	(13)	(133)
Increase in allowance for credit losses recognized in profit or loss during the year	15,042	4,783
Reversal	(2,488)	(38)
Write-off	(912)	(1,107)
Reclassification	(420)	843
Others (effects of exchange rate changes)	52	(30)
Ending balance	₩ 23,651	₩ 12,390

Maximum exposure to credit risk of the Group as at December 31, 2023 are the entire carrying amounts.

KAKAO CORP. and Subsidiaries
Notes to the Consolidated Financial Statements
December 31, 2023 and 2022

B. Other financial assets at amortized cost

Other financial assets at amortized cost include non-trade receivables, loans and other receivables.

Movements in allowance for credit losses for other financial assets at amortized cost for the years ended December 31, 2023 and 2022, are as follows:

<i>(in millions of Korean won)</i>	2023		2022	
Beginning balance	₩	38,812	₩	43,442
Increase in allowance for credit losses recognized in profit or loss during the year		18,602		996
Others (changes in scope of consolidation and effects of exchange rate changes)		10,160		(5,626)
Ending balance	₩	<u>67,575</u>	₩	<u>38,812</u>

All financial assets at amortized costs other than lease receivables are considered to have low credit risk, and the allowance for credit losses recognized during the period was, therefore, limited to 12 months expected losses. Financial instruments are considered to be low credit risk when they have a low risk of default and the issuer has a strong capacity to meet its contractual cash flow obligations in the near term.

Bad debt expenses recognized in profit or loss in relation to impaired financial assets for the years ended December 31, 2023 and 2022, are as follows:

<i>(in millions of Korean won)</i>	2023		2022	
Trade receivables				
Changes in loss allowance of trade receivables	₩	15,042	₩	4,783
Other financial assets				
Changes in loss allowance of other financial assets		18,602		996
Other current assets				
Changes in loss allowance of other current assets		(11,660)		5,016
	₩	<u>21,984</u>	₩	<u>10,795</u>

KAKAO CORP. and Subsidiaries
Notes to the Consolidated Financial Statements
December 31, 2023 and 2022

Maximum exposure to credit risk of the Group as at December 31, 2023 and 2022, are as follows:

<i>(in millions of Korean won)</i>	2023	2022
Cash equivalents	₩ 5,268,550	₩ 4,780,115
Short-term financial instruments	1,661,509	1,210,213
Trade receivables	622,027	440,899
Current derivative financial assets	220	351
Non-current derivative financial assets	12,340	6,211
Financial assets at fair value through profit or loss	370,706	1,067,722
Other current financial assets	575,469	361,873
Long-term financial instruments	12,992	10,132
Other non-current financial assets	289,480	269,788
	<u>₩ 8,813,294</u>	<u>₩ 8,147,304</u>

- Financial services business

A. Other financial assets at amortized cost

Other financial assets at amortized cost include non-trade receivables, loans and other receivables.

Movements in allowance for credit losses for other financial assets at amortized cost for the years ended December 31, 2023 and 2022, are as follows:

<i>(in millions of Korean won)</i>	2023	2022
Beginning balance	₩ 265	₩ 265
Increase in allowance for credit losses recognized in profit or loss during the year	687	-
Reversal	(229)	-
Ending balance	<u>₩ 723</u>	<u>₩ 265</u>

Maximum exposure to credit risk of the Group as at December 31, 2023 and 2022, are as follows:

<i>(in millions of Korean won)</i>	2023	2022
Cash equivalents	₩ 120,412	₩ 55,665
Deposits	108,797	66,511
Financial assets at fair value through profit or loss	677,902	496,616
Financial assets at amortized cost	68,037	16,175
Other financial assets	71,055	15,590
	<u>₩ 1,046,203</u>	<u>₩ 650,558</u>

KAKAO CORP. and Subsidiaries

Notes to the Consolidated Financial Statements

December 31, 2023 and 2022

3) Liquidity Risk

Cash flow forecasting is performed by the Group finance department. The Group finance department monitors rolling forecasts of the Group's liquidity requirements to ensure it has sufficient cash to meet operational needs while always maintaining sufficient headroom on its undrawn committed borrowing facilities so that the Group does not breach borrowing limits or covenants (where applicable) on any of its borrowing facilities. Such forecasting takes into consideration the Group's debt financing plans, covenant compliance, compliance with internal statement of financial position ratio targets and, if applicable external regulatory or legal requirements.

- Non-financial services business

Details of the Group's liquidity risk analysis as at December 31, 2023 and 2022, are as follows:

(in millions of Korean won)

	2023			
	Less than 1 year	Between 1 and 2 years	Over 2 years	Total
Trade and other payables	₩ 1,799,199	₩ -	₩ -	₩ 1,799,199
Short-term and long-term borrowings ¹	1,708,461	712,534	158,811	2,579,807
Derivative financial liabilities	8,196	-	-	8,196
Other current financial liabilities	142,293	-	-	142,293
Brokerage deposits	1,413,998	-	-	1,413,998
Deposits received	521,689	-	-	521,689
Short-term lease liabilities	289,961	-	-	289,961
Non-current trade and other payables	-	5,839	61,830	67,669
Other non-current financial liabilities	-	922	160,893	161,814
Long-term lease liabilities	-	264,047	2,042,064	2,306,111
Financial guarantee liabilities ²	65,080	-	-	65,080
Financing arrangements ²	19,763	-	-	19,763
	<u>₩ 5,968,639</u>	<u>₩ 983,342</u>	<u>₩ 2,423,599</u>	<u>₩ 9,375,580</u>

¹ For convertible bonds and exchangeable bonds, total cash flow is disclosed with the contractual early repayment date as maturity.

² Cash flows from financial guarantee contracts and financing arrangements that are not presented in the consolidated financial statements are presented.

KAKAO CORP. and Subsidiaries
Notes to the Consolidated Financial Statements
December 31, 2023 and 2022

(in millions of Korean won)

	2022			
	Less than 1 year	Between 1 and 2 years	Over 2 years	Total
Trade and other payables	₩ 1,373,954	₩ -	₩ -	₩ 1,373,954
Short-term and long-term borrowings ¹	1,127,965	105,870	1,073,221	2,307,056
Derivative financial liabilities	34,075	3,540	-	37,616
Other current financial liabilities	38,623	-	-	38,623
Deposits received	442,303	-	-	442,303
Short-term lease liabilities	248,075	-	-	248,075
Non-current trade and other payables	-	84,577	26,015	110,592
Other non-current financial liabilities	-	482	25,138	25,620
Long-term lease liabilities	-	119,157	2,062,091	2,181,248
Financial guarantee liabilities ²	907	5,552	-	6,459
	<u>₩ 3,265,902</u>	<u>₩ 319,178</u>	<u>₩ 3,186,466</u>	<u>₩ 6,771,546</u>

¹ For convertible bonds and exchangeable bonds, total cash flow is disclosed with the contractual early repayment date as maturity.

² Cash flows from financial guarantee contracts that are not presented in the consolidated financial statements are presented.

The table above analyses the Group's non-derivative financial liabilities into relevant maturity. The amounts disclosed in the table are the contractual undiscounted cash flows including interest.

- Financial services business

Details of the Group's liquidity risk analysis as at December 31, 2023 and 2022, are as follows:

(in millions of Korean won)

	2023			
	Less than 1 year	Between 1 and 2 years	Over 2 years	Total
Deposits received	₩ 714,931	₩ -	₩ -	₩ 714,931
Other financial liabilities	88,019	-	-	88,019
Lease liabilities	436	369	1,023	1,829
	<u>₩ 803,387</u>	<u>₩ 369</u>	<u>₩ 1,023</u>	<u>₩ 804,779</u>

(in millions of Korean won)

	2022			
	Less than 1 year	Between 1 and 2 years	Over 2 years	Total
Deposits received	₩ 394,287	₩ -	₩ -	₩ 394,287
Other payables	15,821	-	-	15,821
Other financial liabilities	18,087	-	-	18,087
Lease liabilities	1,481	697	256	2,434
	<u>₩ 429,676</u>	<u>₩ 697</u>	<u>₩ 256</u>	<u>₩ 430,630</u>

KAKAO CORP. and Subsidiaries

Notes to the Consolidated Financial Statements

December 31, 2023 and 2022

(2) Capital risk management

The Group's objectives when managing capital are to maintain an optimal capital structure. The Group monitors financial ratios such as debt-to-capital ratio, which is calculated by dividing total liabilities by total equity.

The debt-to-capital ratios as at December 31, 2023 and 2022, are as follows:

<i>(in millions of Korean won)</i>	2023		2022	
Total liabilities (A)	₩	11,321,370	₩	9,447,827
Total equity (B)		13,858,599		13,515,717
Debt-to-capital ratio (A/B)		81.69%		69.90%

(3) Offsetting financial assets and financial liabilities

The following table presents the recognized financial assets that are offset, or subject to enforceable master netting arrangements and other similar agreements but not offset, as at December 31, 2023 and 2022.

(in millions of Korean won)		2023									
		Gross assets		Gross liabilities set off		Net amounts presented in the consolidated statement of financial position		Amounts not offset		Net amount	
Non-trade receivables ¹		₩	319,347	₩	253,002	₩	66,344	₩	35,975	₩	30,370

(in millions of Korean won)	2023									
	Gross liabilities		Gross assets set off		Net amounts presented in the consolidated statement of financial position		Amounts not offset		Net amount	
Non-trade payables ¹	₩	320,652	₩	253,002	₩	67,650	₩	35,975	₩	31,675

¹ The amount of sales/purchase due to difference in consignment sales and settlement was offset and calculated.

KAKAO CORP. and Subsidiaries
Notes to the Consolidated Financial Statements
December 31, 2023 and 2022

(in millions of
Korean won)

	2022				
	Gross assets	Gross liabilities set off	Net amounts presented in the consolidated statement of financial position	Amounts not offset	Net amount
Trade receivables ¹	₩ 1	₩ -	₩ 1	₩ -	₩ 1
Non-trade receivables ²	84,682	73,432	11,250	-	11,250

(in millions of
Korean won)

	2022				
	Gross liabilities	Gross assets set off	Net amounts presented in the consolidated statement of financial position	Amounts not offset	Net amount
Non-trade payables ²	₩ 84,682	₩ 56,963	₩ 27,719	₩ -	₩ 27,719

¹ The amount presented includes the amount after offsetting trade receivables from media reps and agency fee.

² The amount of sales/purchase due to difference in consignment sales and settlement was offset and calculated.

5. Fair Value

(1) Fair value of financial instruments

There are no significant changes in the business environment and economic environment that affect the fair value of the Group's financial assets and financial liabilities during the current year.

(2) Fair value hierarchy

The Group classifies financial instruments into three levels specified in the standard in order to provide information on the reliability of inputs used to measure fair value. The Group classifies fair value measurements using a fair value hierarchy that reflects the significance of the inputs used in measurements.

- Quoted prices (unadjusted) in active markets for identical assets or liabilities that an entity can access at the measurement date. The quoted market price incorporates the market's assumptions with respect to changes in economic climate such as rising interest rates and inflation, as well as changes due to ESG risk (Level 1).
- All inputs other than quoted prices included in level 1 that are observable (either directly that is, prices, or indirectly that is, derived from prices) for the asset or liability (Level 2).

KAKAO CORP. and Subsidiaries
Notes to the Consolidated Financial Statements
December 31, 2023 and 2022

- Unobservable inputs for the asset or liability. This is the case for unlisted equity securities and for instruments where ESG risk gives rise to a significant unobservable adjustment (Level 3).

If the inputs used to measure the fair value of an asset or a liability might be categorized in different levels of the fair value hierarchy, then the fair value measurement is categorized in its entirety in the same level of the fair value hierarchy as the lowest level input that is significant to the entire measurement. And, the Group recognizes the movements within levels of fair value hierarchy at the end of the reporting period in which changes occur.

Fair value hierarchy classifications of the financial instruments that are measured at fair value as at December 31, 2023 and 2022, are as follows:

- Non-financial services business

(in millions of Korean won)

	2023			
	Level 1	Level 2	Level 3	Total
Financial assets				
Financial assets at fair value through profit or loss	₩ 2,164	₩ 67,612	₩ 569,671	₩ 639,448
Financial assets at fair value through other comprehensive income	836,863	-	822,005	1,658,868
Derivative financial assets	-	5,289	7,272	12,560
	<u>₩ 839,028</u>	<u>₩ 72,901</u>	<u>₩ 1,398,948</u>	<u>₩ 2,310,876</u>
Financial liabilities				
Financial liabilities at fair value through profit or loss	₩ -	₩ -	₩ 215,487	₩ 215,487
Derivative financial liabilities	-	-	8,196	8,196
	<u>₩ -</u>	<u>₩ -</u>	<u>₩ 223,682</u>	<u>₩ 223,682</u>

There were no transfers between levels for fair value measurements during the current year.

(in millions of Korean won)

	2022			
	Level 1	Level 2	Level 3	Total
Financial assets				
Financial assets at fair value through profit or loss ¹	₩ 2,367	₩ 140,614	₩ 924,741	₩ 1,067,722
Financial assets at fair value through other comprehensive income ^{2,3}	706,350	-	743,217	1,449,567
Derivative financial assets ⁴	-	-	6,562	6,562
	<u>₩ 708,717</u>	<u>₩ 140,614</u>	<u>₩ 1,674,521</u>	<u>₩ 2,523,851</u>
Financial liabilities				
Derivative financial liabilities	₩ -	₩ -	₩ 37,616	₩ 37,616
	<u>₩ -</u>	<u>₩ -</u>	<u>₩ 37,616</u>	<u>₩ 37,616</u>

¹ During 2022, the Group acquired shares of Smart Korea's UTC BioHealthcare Venture Investment

KAKAO CORP. and Subsidiaries
Notes to the Consolidated Financial Statements
December 31, 2023 and 2022

Fund and others.

² During 2022, the Group acquired 806,400 shares of the former shares of the Japanese content company, Kadokawa Corporation.

³ During 2022, the Group lost significant influence over Dunamu Inc. and reclassified the 5,181,167 shares held to financial assets at fair value through other comprehensive income.

⁴ During 2022, the stock options of Grip Company held by the Group was classified as derivative financial asset.

- Financial services business

(in millions of Korean won)

		2023			
		Level 1	Level 2	Level 3	Total
Financial assets					
Financial assets at fair value through profit or loss	₩	456	₩ 674,177	₩ 3,269	₩ 677,902
Financial liabilities					
Financial liabilities at fair value through profit or loss		-	-	14,890	14,890

(in millions of Korean won)

		2022			
		Level 1	Level 2	Level 3	Total
Financial assets					
Financial assets at fair value through profit or loss	₩	236	₩ 494,161	₩ 2,219	₩ 496,616
Financial liabilities					
Financial liabilities at fair value through profit or loss		-	-	15,073	15,073

KAKAO CORP. and Subsidiaries
Notes to the Consolidated Financial Statements
December 31, 2023 and 2022

Changes in level 3 for fair value measurements for the years ended December 31, 2023 and 2022, are as follows:

- Non-financial services business

(in millions of Korean won)

	2023					
	Financial assets at fair value through profit or loss	Financial assets at fair value through other comprehensive income	Financial liabilities at fair value through profit or loss	Derivative financial assets	Derivative financial liabilities	
Beginning balance	₩ 924,741	₩ 743,217	₩ -	₩ 6,562	₩ 37,616	
Acquisitions	425,467	5,618	-	4,252	1,762	
Disposals	(760,682)	(30,106)	-	-	(24,639)	
Total profit or loss						
Amount recognized in profit or loss	(59,715)	-	(3,401)	1,746	(8,820)	
Amount recognized in other comprehensive income	-	101,222	-	-	-	
Changes in scope of consolidation	38,973	1,861	2,521	-	2,277	
Others ¹	887	193	216,366	(5,289)	-	
Ending balance	₩ 569,671	₩ 822,005	₩ 215,487	₩ 7,272	₩ 8,196	

¹ Others include accounts transfer due to changes in the percentage of ownership of financial assets at fair value held by the Group.

(in millions of Korean won)

	2022					
	Financial assets at fair value through profit or loss	Financial assets at fair value through other comprehensive income	Financial liabilities at fair value through profit or loss	Derivative financial assets	Derivative financial liabilities	
Beginning balance	₩ 606,932	₩ 52,509	₩ 542,900	₩ 352	₩ 11,912	
Acquisitions	3,604,220	528,280	-	6,562	26,334	
Disposals	(3,285,100)	(489,592)	-	-	-	
Total profit or loss						
Amount recognized in profit or loss	(3,920)	-	-	(352)	(630)	
Amount recognized in other comprehensive income	-	(988,169)	-	-	-	
Changes in scope of consolidation	(568)	(2,179)	-	-	-	
Others ¹	3,177	1,642,368	(542,900)	-	-	
Ending balance	₩ 924,741	₩ 743,217	₩ -	₩ 6,562	₩ 37,616	

KAKAO CORP. and Subsidiaries

Notes to the Consolidated Financial Statements

December 31, 2023 and 2022

¹ Others include accounts transfer due to changes in the percentage of ownership of financial assets at fair value held by the Group.

- Financial services business

(in millions of Korean won)

	2023		2022	
	Financial assets at fair value through profit or loss	Financial liabilities at fair value through profit or loss	Financial assets at fair value through profit or loss	Financial liabilities at fair value through profit or loss
Beginning balance	₩ 2,219	₩ 15,073	₩ 1,547	₩ 17,748
Acquisitions	990	-	700	-
Disposals	-	-	(204)	-
Amount recognized in profit or loss	60	(183)	176	(2,676)
Ending balance	₩ 3,269	₩ 14,890	₩ 2,219	₩ 15,073

(3) Valuation techniques and the inputs

The fair value of financial instruments traded in active markets is based on quoted market prices at the statement of financial position date. A market is regarded as active if quoted prices are readily and regularly available from an exchange, dealer, broker, a company in the same industry, pricing service, or regulatory agency, and those prices represent actual and regularly occurring market transactions on an arm's length basis. The quoted market price used for financial assets held by the Group is the current bid price. These instruments are included in Level 1. Instruments included in Level 1 consist primarily of KOSPI and KOSDAQ equity investments classified as trading securities or available-for-sale.

The fair value of financial instruments that are not traded in an active market (for example, over-the-counter derivatives) is determined by using valuation techniques. These valuation techniques maximize the use of observable market data where it is available and rely as little as possible on entity specific estimates. If all significant inputs required to fair value an instrument are observable, the instrument is included in Level 2.

If one or more of the significant inputs is not based on observable market data, the instrument is included in Level 3.

Valuation techniques and inputs used in the fair value measurements categorized within Level 2 and Level 3 of the fair value hierarchy as at December 31, 2023, are as follows. The Group periodically reviews the adjustments of evaluation by determining the adequacy of unobservable inputs with significant risks.

KAKAO CORP. and Subsidiaries
Notes to the Consolidated Financial Statements
December 31, 2023 and 2022

- Non-financial services business

(in millions of Korean won)

		2023			
		Fair value	Level	Valuation techniques	Inputs
Financial assets at fair value through profit or loss					
Beneficiary certificates	₩	67,612	2	Present value technique and others	Discount rate and others
Non-listed equity securities		266,577	3	DCF model, Net asset value method and others	Net asset value, discount rate, estimated cash flow and others
Beneficiary certificates and others		303,094	3	DCF model and others	Discount rate, estimated cash flow and others
	₩	637,283			
Financial assets at fair value through other comprehensive income					
Non-listed equity securities and others	₩	822,005	3	DCF model, Net asset value method and others	Net asset value, discount rate, estimated cash flow and others
	₩	822,005			
Financial liabilities at fair value through profit or loss					
Other financial liabilities	₩	215,487	3	DCF model and others	Discount rate, estimated cash flow and others
	₩	215,487			
Derivative financial assets					
Forward exchange and others	₩	5,289	2	DCF model	Discount rate and others
Call options and others		7,272	3	Binominal tree method	Probability of risk neutral, price of underlying assets and others
	₩	12,560			
Derivative financial liabilities					
Put options and others	₩	8,196	3	Binominal tree method	Probability of risk neutral, price of underlying assets and others
	₩	8,196			

KAKAO CORP. and Subsidiaries
Notes to the Consolidated Financial Statements
December 31, 2023 and 2022

- Financial services business

(in millions of Korean won)

(in millions of Korean won)		2023			
	Fair value	Level	Valuation techniques		Inputs
Financial assets at fair value through profit or loss					
Other deposits	₩ 674,177	2	Market approach	Interest rate and others	
Convertible bonds	443	3	Income approach	Stock price of underlying assets and others	
Equity securities	1,816	3	DCF model and Present value technique	Estimated cash flow and others	
Joint fund for damages	1,010	3	Present value technique	-	
	<u>₩ 677,446</u>				
Financial liabilities at fair value through profit or loss					
Contingent consideration ¹	₩ 14,890	3	DCF model	Estimated cash flow and others	

¹ Consideration committed to pay to non-interest shareholders of Kakaopay Securities Corp., a subsidiary.

(4) Valuation processes and sensitivity analysis for fair value measurements categorized as Level 3

The financial division of the Group performs the fair value measurements required for financial reporting purposes, including level 3 fair values. This division reports to the Chief Financial Officer ("CFO") and the Audit Committee, and discusses valuation processes and results with CFO and Audit Committee at least once every year depending on the materiality.

The results of the sensitivity analysis for the effect on profit or loss (before income tax) or other comprehensive income (before income tax) from changes in fair value (1%) for each financial instrument for the year ended December 31, 2023, are as follows:

- Non-financial services business

(in millions of Korean won)	Favorable changes	Unfavorable changes
Financial assets¹		
Financial assets at fair value through profit or loss	₩ 7,036	₩ (5,945)
Financial assets at fair value through other comprehensive income	14,701	(9,124)
Derivative financial assets	211	(171)
	<u>₩ 21,949</u>	<u>₩ (15,241)</u>

¹ Sensitivity analysis on the change of fair value is calculated by increasing or decreasing the discount rate, which is a major unobservable input, by 1% or increasing or decreasing the volatility of the underlying asset by 10%.

KAKAO CORP. and Subsidiaries
Notes to the Consolidated Financial Statements
December 31, 2023 and 2022

- Financial services business

<i>(in millions of Korean won)</i>		Favorable changes		Unfavorable changes
Financial liabilities				
Financial liabilities at fair value through profit or loss ¹	₩	15,622	₩	(14,198)

¹ The fair value of contingent consideration is calculated by increasing or decreasing the investee company's cost of capital, which is a major unobservable input, by 1%.

6. Segment Information

The financial information reported to the chief operating decision-maker to allocate resources to operating segment and to evaluate the performance of operating segment is consistent with the disclosed financial statements.

The following summary describes the operations of each reportable segment.

- (1) Kakao Corp.: Advertising, platform based service provision
- (2) Kakao Games Corp.: Game development and publishing
- (3) Kakao Entertainment Corp.: Entertainment management and contents production and distribution
- (4) Kakao Mobility Corp.: Database information provision
- (5) Kakaopay Corp.: Mobile platform based financial services
- (6) Kakao Piccoma Corp.: Platform provision and webtoon distribution
- (7) SM Entertainment Co., Ltd.: Entertainment management and contents production and distribution
- (8) Others: Application software development and distribution

KAKAO CORP. and Subsidiaries

Notes to the Consolidated Financial Statements

December 31, 2023 and 2022

(in millions of Korean won)

	2023				
	Kakao Corp.	Kakao Games Corp.	Kakao Entertainment Corp.	Kakao Mobility Corp.	Kakaopay Corp. ¹
Revenue	₩ 2,499,600	₩ 1,025,086	₩ 1,873,535	₩ 601,811	₩ 615,363
Revenue from intercompany transactions	(186,952)	(28,627)	(99,930)	(13,754)	(158,224)
Net revenue	₩ 2,312,648	₩ 996,458	₩ 1,773,605	₩ 588,057	₩ 457,139
Segment profit (loss) before tax	₩ 201,283	₩ (365,122)	₩ (1,242,184)	₩ (46,479)	₩ (5,646)
Segment profit (loss)	102,109	(322,406)	(1,223,466)	(124,183)	(22,907)
Segment assets	11,354,868	3,471,016	3,305,195	1,437,546	3,966,487
Segment liabilities	4,171,696	1,845,489	1,878,486	417,741	2,031,711
Segment depreciation	237,431	34,614	36,390	92,688	27,719
Segment amortization	20,199	61,407	69,077	2,698	18,881

¹ ₩ 70,158 million of financial services business revenue is included.

(in millions of Korean won)

	2023				
	Kakao Piccoma Corp.	SM Entertainment Co., Ltd.	Others	Consolidation adjustments	Total
Revenue	₩ 577,215	₩ 756,076	₩ 319,598	₩ (711,282)	₩ 7,557,002
Revenue from intercompany transactions	(10,565)	(15,327)	(197,902)	711,282	-
Net revenue	₩ 566,650	₩ 740,749	₩ 121,695	₩ -	₩ 7,557,002
Segment profit (loss) before tax	₩ 2,578	₩ 89,670	₩ (248,765)	₩ (33,575)	₩ (1,648,240)
Segment profit (loss)	(25,251)	59,671	(257,075)	(3,161)	(1,816,669)
Segment assets	858,097	1,540,974	3,233,013	(3,987,228)	25,179,969
Segment liabilities	181,836	631,576	791,648	(628,813)	11,321,370
Segment depreciation	9,918	15,600	46,975	(12,104)	489,231
Segment amortization	462	3,786	7,711	87,204	271,424

KAKAO CORP. and Subsidiaries

Notes to the Consolidated Financial Statements

December 31, 2023 and 2022

(in millions of Korean won)

	2022				
	Kakao Corp.	Kakao Games Corp.	Kakao Entertainment Corp.	Kakao Mobility Corp.	Kakaopay Corp. ¹
Revenue	₩ 2,456,591	₩ 1,147,693	₩ 1,864,791	₩ 483,692	₩ 521,364
Revenue from intercompany transactions	(175,869)	(32,542)	(86,466)	(8,101)	(150,139)
Net revenue	₩ 2,280,722	₩ 1,115,151	₩ 1,778,324	₩ 475,591	₩ 371,226
Segment profit (loss) before tax	₩ 1,872,117	₩ (194,688)	₩ (592,334)	₩ (29,681)	₩ (7,631)
Segment profit (loss)	1,611,790	(196,108)	(629,795)	(27,695)	26,830
Segment assets	10,791,496	3,873,942	3,454,284	1,546,540	3,331,422
Segment liabilities	3,720,642	1,859,048	1,835,250	403,512	1,423,163
Segment depreciation	206,634	19,936	29,257	61,918	25,446
Segment amortization	18,255	63,555	99,175	2,395	13,737

¹ ₩ 49,772 million of financial services business revenue is included.

(in millions of Korean won)

	2022				
	Kakao Piccoma Corp.	KAKAO G Corp.	Others	Consolidation adjustments	Total
Revenue	₩ 531,245	₩ 106,364	₩ 319,691	₩ (632,689)	₩ 6,798,742
Revenue from intercompany transactions	(3,011)	(28)	(176,533)	632,689	-
Net revenue	₩ 528,234	₩ 106,336	₩ 143,158	₩ -	₩ 6,798,742
Segment profit (loss) before tax	₩ 60,479	₩ 93,223	₩ (68,978)	₩ 136,428	₩ 1,268,935
Segment profit (loss)	33,592	85,920	(116,542)	279,037	1,067,029
Segment assets	826,467	367,280	2,642,504	(3,870,392)	22,963,544
Segment liabilities	139,620	101,674	531,219	(566,302)	9,447,827
Segment depreciation	5,690	3,547	28,783	(15,414)	365,798
Segment amortization	265	704	5,415	265	203,766

For the years ended December 31, 2023 and 2022, the Group's revenues are primarily generated in Korea, and the most of non-current assets held by the group are located in Korea.

The geographic information below analyses the Group's revenue by the Company's country of domicile and other countries except for domestic revenues.

(in millions of Korean won)

	Korea	Asia	North America	Europe	Others	Total
Revenue	₩ 6,080,792	₩ 958,520	₩ 313,433	₩ 148,110	₩ 56,147	₩ 7,557,002

There was no external customer contributing more than 10% of the total revenue for the years ended December 31, 2023 and 2022.

KAKAO CORP. and Subsidiaries
Notes to the Consolidated Financial Statements
December 31, 2023 and 2022

7. Financial Instruments by Category

- Non-financial services business

Carrying amounts of financial assets and liabilities by category as at December 31, 2023 and 2022, are as follows:

<i>(in millions of Korean won)</i>	2023	2022
Financial assets		
Financial assets at fair value through profit or loss	₩ 639,448	₩ 1,067,722
Financial assets at fair value through other comprehensive income	1,658,868	1,449,567
Financial assets at amortized cost		
Cash and cash equivalents	5,268,779	4,780,244
Trade receivables	622,027	440,899
Short-term financial instruments	1,661,509	1,210,213
Long-term financial instruments	12,992	10,132
Other current financial assets	575,469	361,873
Other non-current financial assets	289,480	269,788
	<u>8,430,257</u>	<u>7,073,150</u>
Derivative financial assets		
Current derivative financial assets	220	351
Non-current derivative financial assets	12,340	6,211
	<u>12,560</u>	<u>6,562</u>
	<u>₩ 10,741,133</u>	<u>₩ 9,597,001</u>

<i>(in millions of Korean won)</i>	2023	2022
Financial liabilities		
Financial liabilities at fair value through profit or loss	₩ 215,487	₩ -
Financial liabilities at amortized cost		
Trade and other payables	1,799,199	1,373,954
Short-term borrowings	1,629,452	1,096,884
Deposits received	521,689	442,303
Brokerage deposits	1,413,998	-
Other current financial liabilities ¹	55,066	38,623
Non-current trade and other payables	67,666	110,592
Long-term borrowings	845,628	1,176,181
Other non-current financial liabilities ¹	33,506	25,620
	<u>6,366,203</u>	<u>4,264,158</u>
Derivative financial assets		
Current derivative financial assets	8,196	34,075
Non-current derivative financial assets	-	3,540
	<u>8,196</u>	<u>37,616</u>
	<u>₩ 6,589,885</u>	<u>₩ 4,301,773</u>

KAKAO CORP. and Subsidiaries

Notes to the Consolidated Financial Statements

December 31, 2023 and 2022

¹ As at December 31, 2023, the Group recognized non-controlling interests in fund with maturity as financial liabilities amounting to ₩ 24,254 million (2022: ₩ 35,735 million).

Net gains or losses on each category of financial instruments for the years ended December 31, 2023 and 2022, are as follows:

(in millions of Korean won)	2023					
	Gain (loss) on valuation (other comprehensive income (loss))	Gain (loss) on valuation / sales (profit or loss)	Interest income (expenses)	Dividend income	Impairment loss (reversal)	Gain (loss) on foreign currency translation and transaction
Financial assets						
Financial assets at fair value through profit or loss	₩ -	₩ (42,016)	₩ 935	₩ 2,752	₩ -	₩ (1)
Financial assets at fair value through other comprehensive income	137,433	-	-	26,827	-	-
Financial assets at amortized cost and other financial assets	-	-	185,378	-	(3,252)	(1,856)
Derivative financial assets	-	5,644	-	-	-	-
Financial liabilities						
Financial liabilities at fair value through profit or loss	-	-	(6)	-	-	28
Financial liabilities at amortized cost	-	-	(95,937)	-	-	(2,242)
Derivative financial liabilities	-	7,548	-	-	-	-
(in millions of Korean won)	2022					
	Gain (loss) on valuation (other comprehensive income (loss))	Gain (loss) on valuation / sales (profit or loss)	Interest income (expenses)	Dividend income	Impairment loss (reversal)	Gain (loss) on foreign currency translation and transaction
Financial assets						
Financial assets at fair value through profit or loss	₩ -	₩ 31,201	₩ 91	₩ 5,941	₩ -	₩ 2
Financial assets at fair value through other comprehensive income	(1,728,675)	10,409	-	50,273	20	-
Financial assets at amortized cost and other financial assets	-	-	118,694	-	(872)	(23,896)
Derivative financial assets	-	1,065	-	-	-	-
Financial liabilities						
Financial liabilities at fair value through profit or loss	-	(211,173)	-	-	-	-
Financial liabilities at amortized cost	-	-	(47,385)	-	-	(206)
Derivative financial liabilities	-	(23,964)	-	-	-	-

KAKAO CORP. and Subsidiaries
Notes to the Consolidated Financial Statements
December 31, 2023 and 2022

- Financial services business

Carrying amounts of financial assets and liabilities by category as at December 31, 2023 and 2022, are as follows:

<i>(in millions of Korean won)</i>	2023	2022
Financial assets		
Financial assets at fair value through profit or loss	₩ 677,902	₩ 496,616
Financial assets at amortized cost		
Cash and cash equivalents	120,412	55,665
Deposits	108,797	66,511
Financial assets at amortized costs	67,375	16,175
Other financial assets	71,055	15,590
	<u>367,640</u>	<u>153,942</u>
	<u>₩ 1,045,541</u>	<u>₩ 650,558</u>

<i>(in millions of Korean won)</i>	2023	2022
Financial liabilities		
Financial liabilities at fair value through profit or loss	₩ 14,890	₩ 15,073
Financial liabilities at amortized cost		
Deposits received	714,931	394,287
Other financial liabilities	73,129	18,036
	<u>788,061</u>	<u>412,323</u>
	<u>₩ 802,950</u>	<u>₩ 427,396</u>

KAKAO CORP. and Subsidiaries
Notes to the Consolidated Financial Statements
December 31, 2023 and 2022

Net gains or losses on each category of financial instruments for the years ended December 31, 2023 and 2022, are as follows:

(in millions of Korean won)

	2023			
	Gain (loss) on valuation / sales (profit or loss)	Interest income (expenses)	Dividend income	Gain (loss) on foreign currency translation and transaction
Financial assets				
Financial assets at fair value through profit or loss	₩ 20,975	₩ 513	₩ 6	₩ 5,888
Financial assets at amortized cost	-	8,693	-	-
Derivative financial assets	(1,784)	-	-	-
Financial liabilities				
Financial liabilities at fair value through profit or loss	183	-	-	-
Financial liabilities at amortized cost and other financial liabilities	-	(11,414)	-	-

(in millions of Korean won)

	2022			
	Gain (loss) on valuation / sales (profit or loss)	Interest income (expenses)	Dividend income	Gain (loss) on foreign currency translation and transaction
Financial assets				
Financial assets at fair value through profit or loss	₩ 2,429	₩ 7,711	₩ 1	₩ 3,035
Financial assets at amortized cost	-	4,484	-	-
Derivative financial assets	(844)	-	-	-
Financial liabilities				
Financial liabilities at fair value through profit or loss	2,676	-	-	-
Financial liabilities at amortized cost and other financial liabilities	-	(1,456)	-	-

KAKAO CORP. and Subsidiaries

Notes to the Consolidated Financial Statements

December 31, 2023 and 2022

8. Cash and Cash Equivalents, Short-term and Long-term Financial Instruments and Restricted Financial Instruments

Cash and cash equivalents comprise cash on hand, demand deposits and short-term, highly liquid investments that are readily convertible to known amounts of cash which are subject to an insignificant risk of changes in value.

- Non-financial services business

Details of cash and cash equivalents and short-term and long-term financial instruments as at December 31, 2023 and 2022, are as follows:

<i>(in millions of Korean won)</i>	2023		2022	
Cash in bank and on hand and others	₩	5,268,779	₩	4,780,244
Short-term financial instruments		1,661,509		1,210,213
Long-term financial instruments – time deposits and others		12,992		10,132
	₩	<u>6,943,280</u>	₩	<u>6,000,589</u>

¹ See Note 38 for information about restricted deposits and payment guarantees.

In addition, the Group's deposits of ₩ 33,388 million are pledged as collateral in relation to employees' bank loans (Note 38).

KAKAO CORP. and Subsidiaries
Notes to the Consolidated Financial Statements
December 31, 2023 and 2022

- Financial services business

Details of cash and cash equivalents and deposits as at December 31, 2023 and 2022, are as follows:

<i>(in millions of Korean won)</i>	2023		2022	
Cash and cash equivalents	₩	120,412	₩	55,665
General instrument deposit		4,000		4,000
Separate investment deposit		8,300		25,200
Foreign currency separate investment deposit		5,025		7,903
Deposit for trading shares in foreign currency (trust)		83,437		22,399
Market derivatives transaction deposit		3,000		2,000
Deposit for opening a checking account		2		2
Other deposits		5,033		5,008
	₩	<u>229,209</u>	₩	<u>122,176</u>

Details of restricted financial instruments as at December 31, 2023 and 2022, are as follows:

<i>(in millions of Korean won)</i>	Financial institution	2023		2022		Restriction
General instrument deposit	Hana Bank	₩	4,000	₩	4,000	Collateral for overdraft and net settlement agency arrangement
Long-term financial instruments deposit	Hana Bank		2		2	Deposit for opening a checking account
Derivatives transaction deposit	Samsung Futures Inc.		3,000		2,000	Market derivatives transaction deposit
		₩	<u>7,002</u>	₩	<u>6,002</u>	

Details of financial instruments that are reserved in accordance with the related laws as at December 31, 2023 and 2022 are as follows:

<i>(in millions of Korean won)</i>	Category	2023		2022		Purpose
Deposit	Separate investment deposit ¹	₩	8,300	₩	25,200	Separate depositing of customer's deposit
	Foreign currency separate investment deposit ¹		5,025		7,903	Separate depositing of customer's deposit
	Other deposits		2,500		1,500	Korea Exchange and securities market margin
Financial assets at fair value through profit or loss	Separate investment deposit (trust) ¹		674,177		395,127	Separate depositing of customer's deposit
	Joint funds for damages ²		1,010		1,010	Korea Exchange and Korea Securities Depository
		₩	<u>691,012</u>	₩	<u>430,739</u>	

KAKAO CORP. and Subsidiaries

Notes to the Consolidated Financial Statements

December 31, 2023 and 2022

¹ In accordance with Paragraph 4 in Article 74 of Financial Investment Services and Capital Markets Act, the Group separated customer's deposit and placed it in deposits with Korea Securities Finance Corp. in order to return the customer's deposit or to meet the demand of the customers. The deposits shall not be transferred to or provided as collateral and shall not be offset or seized by anyone.

² In accordance with Article 394 and Article 303 of Financial Investment Services and Capital Markets Act, the Group set aside the joint funds for damages in Korea Exchange and Korea Securities Depository to jointly compensate for losses incurred from default arising from transactions on the securities market.

9. Credit Quality of Financial Assets

The credit quality of financial assets that are neither past due nor impaired can be assessed by reference to external credit ratings (if available) or to historical information about counterparty default rates.

Cash and cash equivalents are all deposited in the financial institutions with high credit ratings.

10. Financial Assets

- Non-financial services business

(1) Financial assets at fair value through profit or loss and derivative financial assets

Financial assets mandatorily measured at fair value through profit or loss and derivative financial assets include the following classes of financial assets:

<i>(in millions of Korean won)</i>	2023		2022	
Financial assets at fair value through profit or loss				
Non-current				
Beneficiary securities and fund	₩	159,017	₩	224,747
Listed shares		2,164		2,367
Unlisted equity securities		266,577		54,497
Compound financial instruments		56,994		220,467
		<u>484,753</u>		<u>502,078</u>
Current				
Beneficiary securities and fund		145,541		140,614
Compound financial instruments		9,154		425,030
		<u>154,695</u>		<u>565,644</u>
	₩	<u>639,448</u>	₩	<u>1,067,722</u>
Derivative financial assets				
Current derivative financial assets	₩	220	₩	351

KAKAO CORP. and Subsidiaries
Notes to the Consolidated Financial Statements
December 31, 2023 and 2022

Non-current derivative financial assets	12,340	6,211
	₩ 12,560	₩ 6,562

The amounts recognized in profit or loss are as follows:

<i>(in millions of Korean won)</i>	2023	2022
Gain (loss) on financial assets at fair value through profit or loss	₩ (38,330)	₩ 37,235
Gain (loss) on derivative financial assets	5,644	1,065

(2) Financial assets at fair value through other comprehensive income

Equity investments at fair value through other comprehensive income comprise the following individual investments:

<i>(in millions of Korean won)</i>	2023	2022
Non-current		
Listed equity securities		
FNC ENTERTAINMENT	₩ 3,263	₩ 3,510
SK TELECOM CO., LTD.	192,709	182,323
SK Square Co., Ltd.	130,796	83,426
Kadokawa Corporation	329,517	287,688
Action Square Co., Ltd.	2	3
VAIV company Inc	7,070	9,400
Krafton Corp.	161,333	139,999
ITOXI Corp.	71	-
ezCaretech Co., LTD.	8,459	-
KeyHolder Inc	3,643	-
	836,863	706,350
Unlisted equity securities ¹	822,005	743,217
	₩ 1,658,868	₩ 1,449,567

¹ Shares of Dunamu Inc. amounting to ₩ 743,841 million (2022: ₩ 639,388 million) are included in unlisted equity securities.

The amounts recognized in the statements of comprehensive income are as follows:

<i>(in millions of Korean won)</i>	2023	2022
Gain (loss) on financial assets at fair value through other comprehensive income	₩ 26,827	₩ 60,703
Other comprehensive income (loss) on financial assets at fair value through other comprehensive income	137,433	(1,728,675)

KAKAO CORP. and Subsidiaries
Notes to the Consolidated Financial Statements
December 31, 2023 and 2022

Upon disposal of these equity investments, any balance within the accumulated other comprehensive income (loss) for these equity investments is reclassified to retained earnings and is not reclassified to profit or loss.

(3) Trade receivables, other current financial assets and other non-current financial assets

Trade receivables and allowance for doubtful accounts as at December 31, 2023 and 2022, are as follows:

<i>(in millions of Korean won)</i>	2023		2022	
Trade receivables	₩	645,678	₩	453,289
Less: loss allowance (Note 4)		(23,651)		(12,390)
Trade receivables - net	₩	<u>622,027</u>	₩	<u>440,899</u>

There is no collateral held by the Group.

Details of other current financial assets, other non-current financial assets and loss allowance as at December 31, 2023 and 2022, are as follows:

<i>(in millions of Korean won)</i>	2023		2022	
Other current financial assets				
Non-trade receivables	₩	486,509	₩	315,916
Accrued revenues		35,792		21,324
Short-term loans receivable		23,488		13,084
Short-term loans to employees		2,081		2,333
Leasehold deposits		29,312		9,457
Others		13,037		5,951
		<u>590,220</u>		<u>368,065</u>
Other non-current financial assets				
Long-term non-trade receivables		37,394		32,803
Long-term accrued revenues		91		-
Long-term loans receivable		27,581		31,848
Long-term loans to employees		2,349		300
Leasehold deposits		187,140		157,646
Others		87,750		79,811
		<u>342,304</u>		<u>302,408</u>
		932,524		670,474
Less: loss allowance (Note 4)		(67,575)		(38,812)
	₩	<u>864,949</u>	₩	<u>631,661</u>

KAKAO CORP. and Subsidiaries
Notes to the Consolidated Financial Statements
December 31, 2023 and 2022

- Financial services business

(1) Financial assets at fair value through profit or loss

Financial assets mandatorily measured at fair value through profit or loss include the following classes of financial assets:

<i>(in millions of Korean won)</i>	2023	2022
Financial assets at fair value through profit or loss		
Equity securities	₩ 2,272	₩ 1,040
Convertible bonds	443	405
Separate investment deposit (trust)	674,177	395,127
Debt securities	-	99,035
Joint funds for damages	1,010	1,010
	<u>₩ 677,902</u>	<u>₩ 496,616</u>

The amounts recognized in profit or loss are as follows:

<i>(in millions of Korean won)</i>	2023	2022
Gain (loss) on financial assets at fair value through profit or loss	₩ 27,382	₩ 13,177

(2) Other financial assets

<i>(in millions of Korean won)</i>	2023	2022
Other financial assets		
Non-trade receivables	₩ 69,707	₩ 14,096
Accrued revenues	1,937	1,073
Leasehold deposits	134	687
	<u>71,778</u>	<u>15,855</u>
Less: loss allowance (Note 4)	<u>(723)</u>	<u>(265)</u>
	<u>₩ 71,055</u>	<u>₩ 15,590</u>

KAKAO CORP. and Subsidiaries
Notes to the Consolidated Financial Statements
December 31, 2023 and 2022

11.Contract Assets and Liabilities

(1) Contract assets, incremental costs, contract liabilities and refund liabilities

1) Details of contract assets (other current assets), incremental costs (other current and non-current assets), and contract liabilities and refund liabilities (other current and non-current liabilities), recognized in relation to contracts with customers, as at December 31, 2023 and 2022, are as follows:

<i>(in millions of Korean won)</i>		2023		2022
Contract assets	₩	39,717	₩	46,497
Incremental costs		9,588		7,685
Contract liabilities		448,340		336,426
Refund liabilities		-		722

2) Significant changes in contract assets, incremental costs, contract liabilities and refund liabilities

There are significant changes in contract liabilities as at December 31, 2023 compared to those as at December 31, 2022 due to acquisition of control over SM Entertainment Co., Ltd. during the year ended December 31, 2023.

(2) Expenses and revenue recognized in relation to incremental costs and contract liabilities

The following table shows how much of the revenue and expenses recognized in the current reporting period relates to carried-forward incremental costs and contract liabilities.

<i>(in millions of Korean won)</i>		2023		2022
Expenses recognized that was included in the contract assets balance at the beginning of the year				
Incremental costs	₩	5,955	₩	5,526
Revenue recognized that was included in the contract liabilities balance at the beginning of the year				
Contract liabilities		306,190		315,652

(3) Classification of revenue from contracts with customers

1) Non-financial services business

<i>(in millions of Korean won)</i>		2023		2022
Timing of revenue recognition				
At a point in time	₩	5,182,361	₩	3,259,091
Over time		2,304,483		3,489,879
	₩	<u>7,486,844</u>	₩	<u>6,748,970</u>

KAKAO CORP. and Subsidiaries
Notes to the Consolidated Financial Statements
December 31, 2023 and 2022

2) Financial services business

<i>(in millions of Korean won)</i>	2023		2022	
Type of revenue				
Commission revenue	₩	22,375	₩	25,475
Gain on valuation and sales of financial instruments		21,727		3,178
Gain on transaction of derivatives		3,188		2,770
Interest income		9,206		12,221
Gain on foreign currency translation		8,016		6,100
Insurance revenue		5,594		14
Other operating income		52		15
	₩	<u>70,158</u>	₩	<u>49,772</u>

12.Trade and Other Payables

Trade and other payables as at December 31, 2023 and 2022, are as follows:

<i>(in millions of Korean won)</i>	2023		2022	
Trade and other payables				
Trade payables	₩	241,859	₩	94,417
Non-trade payables		1,552,121		1,274,889
Withhold deposits received		5,219		4,648
		<u>1,799,199</u>		<u>1,373,954</u>
Non-current trade and other payables				
Long-term non-trade payables		67,268		110,504
Withhold deposits received		397		88
		<u>67,666</u>		<u>110,592</u>
	₩	<u>1,866,865</u>	₩	<u>1,484,545</u>

KAKAO CORP. and Subsidiaries
Notes to the Consolidated Financial Statements
December 31, 2023 and 2022

13. Other Financial Liabilities

(1) Non-financial services business

Other financial liabilities as at December 31, 2023 and 2022, are as follows:

<i>(in millions of Korean won)</i>	2023	2022
Other current financial liabilities		
Accrued expenses	₩ 139,224	₩ 37,783
Leasehold deposit received	-	340
Financial liabilities at fair value through profit or loss ¹	2,521	-
Others	547	500
	<u>142,293</u>	<u>38,623</u>
Brokerage deposits	1,413,998	-
Deposits received	521,689	442,303
Other non-current financial liabilities		
Long-term accrued expenses	146,271	13,098
Long-term leasehold deposit received	14,494	11,023
Others	1,000	1,500
	<u>161,765</u>	<u>25,620</u>
	<u>₩ 2,239,745</u>	<u>₩ 506,547</u>

¹ Financial liabilities at fair value through profit or loss include the convertible preferred shares issued by a subsidiary and its details are as follows.

<i>(in millions of Korean won)</i>	Details
Issuer	Ocean Drive Studio Corp.
Date of issue	June 1, 2020
Value at issue	₩ 3,010
Conversion period	From the day after issuance date to the day before 10 years from issuance date (if not converted within the existence period, converted the day after the expiration of the existence period)
Conversion rate	1 preferred share for 1 ordinary share (includes certain adjustments in IPO offering price)

KAKAO CORP. and Subsidiaries
Notes to the Consolidated Financial Statements
December 31, 2023 and 2022

(2) Financial services business

Other financial liabilities as at December 31, 2023 and 2022, are as follows:

<i>(in millions of Korean won)</i>	2023	2022
Other financial liabilities		
Accrued expenses	₩ 3,088	₩ 2,216
Non-trade payables	70,041	15,924
Financial liabilities at fair value through profit or loss ¹	14,890	15,073
	88,019	33,213
Deposits received	714,931	394,287
	₩ 802,950	₩ 427,500

14. Other Assets and Liabilities

(1) Non-financial services business

Other assets as at December 31, 2023 and 2022, are as follows:

<i>(in millions of Korean won)</i>	2023	2022
Other current assets		
Advance payments	₩ 346,976	₩ 126,165
Prepaid expenses	92,892	84,888
Prepaid value added tax	9,407	7,185
Corporate tax refund receivable	12,405	9,921
Others	6,418	8,020
	468,099	236,180
Other non-current assets		
Long-term advance payments	245,155	339,399
Long-term prepaid expenses	10,519	13,970
Others	-	400
	255,674	353,770
	₩ 723,773	₩ 589,950

KAKAO CORP. and Subsidiaries
Notes to the Consolidated Financial Statements
December 31, 2023 and 2022

Other liabilities as at December 31, 2023 and 2022, are as follows:

<i>(in millions of Korean won)</i>	2023	2022
Other current liabilities		
Advances from customers	₩ 227,079	₩ 1,349,633
Deferred revenues	97,112	66,117
Withholdings	183,455	167,554
Value added tax payable	86,978	62,261
Short-term employee benefits liabilities	207,122	156,061
Others	472	116
	<u>802,219</u>	<u>1,801,743</u>
Other non-current liabilities		
Long-term advances from customers	16,499	27,261
Long-term deferred revenues	20,814	41,406
Long-term employee benefits liabilities	614	1,439
Others	693	-
	<u>38,620</u>	<u>70,105</u>
	<u>₩ 840,839</u>	<u>₩ 1,871,849</u>

KAKAO CORP. and Subsidiaries
Notes to the Consolidated Financial Statements
December 31, 2023 and 2022

(2) Financial services business

Other assets as at December 31, 2023 and 2022, are as follows:

<i>(in millions of Korean won)</i>	2023	2022
Other assets		
Advance payments	₩ 14	₩ 15,094
Prepaid expenses	1,826	1,808
Prepaid value added tax	217	278
	<u>₩ 2,057</u>	<u>₩ 17,181</u>

Other liabilities as at December 31, 2023 and 2022, are as follows:

<i>(in millions of Korean won)</i>	2023	2022
Other liabilities		
Advances from customers	₩ -	₩ 289
Deferred revenues	88	133
Withholdings	1,555	1,093
Value added tax payable	242	334
Short-term employee benefits liabilities	2,793	4,040
	<u>₩ 4,679</u>	<u>₩ 5,890</u>

KAKAO CORP. and Subsidiaries
Notes to the Consolidated Financial Statements
December 31, 2023 and 2022

15. Inventories

Details of inventories as at December 31, 2023 and 2022, are as follows:

<i>(in millions of Korean won)</i>	2023	2022
Merchandise	₩ 92,533	₩ 123,085
Less: Valuation allowance for merchandise	(7,217)	(4,854)
Finished goods	24,490	4,631
Less: Valuation allowance for finished goods	(8,827)	(554)
Raw materials	28,116	34,561
Less: Valuation allowance for raw materials	(2,277)	(2,240)
Others	11,839	5,699
Less: Valuation allowance for others	(12)	-
	<u>₩ 138,644</u>	<u>₩ 160,328</u>

Inventories recognized as an expense during the year ended December 31, 2023, amounted to ₩ 493,281 million (2022: ₩ 483,433 million). These were included in 'operating expenses'.

Details of loss on abandonment and valuation of inventories included in operating expenses for the years ended December 31, 2023 and 2022, are as follows:

<i>(in millions of Korean won)</i>	2023	2022
Loss on valuation	₩ 5,765	₩ 61
Loss on abandonment	552	-
	<u>₩ 6,317</u>	<u>₩ 61</u>

KAKAO CORP. and Subsidiaries

Notes to the Consolidated Financial Statements

December 31, 2023 and 2022

16. Investments in Associates and Joint Ventures

Investments in associates and joint venture as at December 31, 2023 and 2022, are as follows:

(in millions of Korean won)

(in millions of Korean won)

		2023			2022
	Location	Percentage of ownership ¹⁵	Acquisition cost	Book amount	Book amount
Associates					
Addcredit Corp. ¹²	Korea	-	₩ -	₩ -	-
Adlock Advertainment ³	Korea	12.8%	1,000	1,132	1,132
Anycall Mobility Corp.	Korea	20.0%	1,000	1,085	1,026
ATU e-sports Growth PE Fund	Korea	25.1%	5,499	5,204	5,308
Caring Corp. ³	Korea	8.6%	3,142	2,613	8,057
CLAIR, Inc. ¹²	Korea	-	-	-	210
CNT TECH CO., LTD. ³	Korea	18.2%	5,001	7,479	6,948
CHEQUER GLOBAL, Inc. ³	USA	10.2%	400	-	-
DAUM Venture Fund ⁸	Korea	39.5%	1,186	-	-
Deleo Korea Co., Ltd. ^{3,8}	Korea	9.0%	3,000	-	162
DGT Mobility. ¹¹	Korea	35.1%	3,095	5,152	4,664
DIGISONIC CO., LTD. ³	Korea	10.0%	100	36	55
D&C MEDIA CO., LTD.	Korea	22.9%	33,789	42,635	42,426
DEVOTION FOODS Inc. ³	Korea	17.7%	3,000	-	2,155
DAEWON C.I. INC ³	Korea	19.8%	15,048	11,328	10,303
DOZN CO., LTD ³	Korea	9.7%	547	3,355	2,276
325 E&C	Korea	40.0%	2,400	1,140	1,819
EASYGO CO., LTD.	Korea	20.0%	100	92	92
G&G ENTERPRISE CO., LTD. ³	Korea	11.5%	2,924	-	3,112
GC Social Media Marketing, Inc.	USA	39.4%	3,578	3,463	3,570
GOOD GANG LABS PTE. LTD. ^{2,3}	Singapore	11.1%	2,586	2,610	-
Haksan Publinshing Co., Ltd. ³	Korea	19.8%	14,653	6,150	11,632
Wyatt Co., Ltd ²	Korea	38.9%	70,321	29,526	7,121
Helios KDBC Video Digital Contents No. 1	Korea	42.2%	4,442	4,142	4,269
Highup Entertainment	Korea	40.0%	4,000	3,927	3,510
LEEMITELEESYUN CULTURE INDUSTRIAL JEONMUNHOESA INC. ⁸	Korea	20.0%	4	-	-
InnoSignal CO., LTD. ³	Korea	14.5%	100	187	185
Japle Co., Ltd. ¹³	Korea	-	-	-	-
JASON GROUP Co., Ltd. ³	Korea	13.1%	29,997	16,928	17,236
KakaoBank Corp. ⁹	Korea	27.2%	788,748	1,694,798	1,589,134
Korea Credit Data	Korea	22.4%	4,246	9,126	20,423

KAKAO CORP. and Subsidiaries
Notes to the Consolidated Financial Statements
December 31, 2023 and 2022

(in millions of Korean won)

	Location	2023			2022
		Percentage of ownership ¹⁵	Acquisition cost	Book amount	Book amount
K Cube NEO Fund ³	Korea	15.6%	2,520	1,878	1,981
Kakao Growth Hacking Fund ^{3,9}	Korea	15.3%	14,400	12,844	14,349
KIF-Kakao Wooribank Technology Financing Fund ^{3,9}	Korea	19.7%	10,500	23,239	22,180
Loadstars ⁸	Korea	22.3%	82	-	11
LUXROBO CO., LTD. ³	Korea	6.6%	3,385	940	1,348
MANNACEA ⁸	Korea	21.9%	10,000	-	113
Keytalk AI Inc. ^{3,8}	Korea	14.1%	5,000	-	-
Neptune Co., Ltd.	Korea	41.1%	383,191	178,810	193,064
Ocean Drive Studio Corp. ^{8,14}	Korea	-	-	-	3,359
Socialbean Co., Ltd ³	Korea	2.1%	999	476	40
Super Comics.	Korea	20.0%	2,000	1,089	1,392
Second Dive ³	Korea	19.8%	10,000	9,234	7,761
Skelter Labs, Inc. ^{3,8}	Korea	10.9%	2,501	-	369
Seoul Media Comics, INC.	Korea	22.2%	10,000	7,461	7,374
S&T Solution Co.,Ltd.	Korea	20.0%	1,245	1,057	1,100
Stage five Co., Ltd. ¹⁷	Korea	7.5%	60,495	16,135	64,019
Kakao-Shinhan 1st TNYT Fund ³	Korea	19.4%	5,970	3,805	4,747
TOROOO Inc. ³	Korea	19.9%	2,500	89	66
Tide Square Co., Ltd.	Korea	22.4%	26,464	1,824	7,015
Teins Valley	Korea	32.5%	500	435	404
UNION K-Culture Contents Investment Fund ^{2,9}	Korea	33.3%	6,667	7,039	7,865
MUSTIT. CO., Ltd. ³	Korea	4.4%	9,992	4,618	5,723
Kakao Style Corp. ⁶	Korea	50.9%	173,437	125,917	132,611
UTC Kakao SK Telecom ESG Fund ²	Korea	48.2%	10,000	9,495	5,710
HongKong TXKP Limited	Hong Kong	49.0%	23,196	21,060	23,581
Nubility ³	Korea	7.5%	2,000	1,089	1,556
Reality Magic	Korea	21.1%	5,556	-	4,557
The M Company. ⁵	Korea	-	-	-	1,167
Autonomous A2Z ^{2,3,11}	Korea	10.5%	11,000	7,640	5,229
Humanscape ³	Korea	17.8%	17,028	4,875	15,078
Grip Company	Korea	48.5%	177,077	94,774	164,121
Metaverse Entertainment	Korea	23.0%	12,000	7,639	9,152
Atwater Capital Partners I, L.P.	USA	38.0%	1,181	1,905	1,753
Romance Crew ⁸	Korea	20.0%	40	-	-
Bluepoint Discovery Venture Fund No.2 ²	Korea	20.8%	2,000	1,887	738

KAKAO CORP. and Subsidiaries
Notes to the Consolidated Financial Statements
December 31, 2023 and 2022

(in millions of Korean won)

	Location	2023			2022
		Percentage of ownership ¹⁵	Acquisition cost	Book amount	Book amount
TNK Factory	Korea	34.9%	38,302	40,075	39,910
Galux ³	Korea	4.8%	5,001	3,960	4,210
RECON Labs. ³	Korea	2.0%	500	142	382
e.Form Works ³	Korea	19.3%	733	4	-
LOVO INC. ³	USA	17.3%	4,107	2,338	4,183
Atwater Soundtrack SPV, LP	USA	26.6%	3,746	4,096	5,110
HitchMED Co., Ltd.	Korea	27.0%	1,725	179	1,447
Mediasphere CO., LTD. ^{2,3}	Korea	15.0%	300	11	-
MORE VISION	Korea	20.0%	1,500	1,755	1,676
Love Alarm Culture Industry Special Purpose Company Ltd. ^{9,13}	Korea	-	-	-	10
Catchers Cultural Industry Company ¹⁴	Korea	-	-	-	1
GRAYGO Corp.	Korea	34.1%	68,247	31,154	71,005
TheCheat	Korea	23.6%	2,509	2,568	2,545
Siebert Financial Corp. ²	USA	20.4%	23,255	22,810	-
altimobility Corp. ^{3,8}	Korea	11.8%	5,600	-	2,882
TEEware Corp. ²	Korea	24.8%	2,004	1,707	1,301
Let's go Together Kakao Games Win-win Fund ²	Korea	38.7%	8,000	7,712	5,942
Jeju-vision Venture Investment Association No.1.	Korea	21.9%	300	289	300
Enolink Holdings, Inc. ³	USA	7.4%	7,264	4,158	6,348
Girl Rivers Cultural Industry Company Ltd. ⁸	Korea	30.0%	3	-	1
YANADU. ^{3,8}	Korea	17.0%	5,842	-	-
KLleon Inc. ³	USA	12.6%	2,618	1,960	640
GOLF VX CORP. ^{2,6}	USA	50.0%	2,549	2,445	-
Haotoon China Co., Ltd ²	China	22.0%	876	852	-
PT Green Wind Culture ²	China	40.2%	135	110	-
SM BRAND MARKETING Co., LTD. ^{7,14}	Korea	-	-	-	-
Galaxia SM, INC. ^{3,7}	Korea	12.6%	8,837	12,722	-
ESTEEM ^{3,7}	Korea	18.5%	1,964	2,396	-
Baljeonso Co.,Ltd. ^{5,7}	Korea	-	-	-	-
MYSTIC STORY INC. ^{7,8}	Korea	20.7%	-	-	-
Dreamus Company ^{3,7}	Korea	13.4%	33,740	35,563	-
SPEEKER CO., LTD. ^{5,7}	Korea	-	-	-	-
UAM CO., LTD. ^{5,7}	Korea	-	-	-	-

KAKAO CORP. and Subsidiaries
Notes to the Consolidated Financial Statements
December 31, 2023 and 2022

(in millions of Korean won)

	Location	Percentage of ownership ¹⁵	2023	2022	
			Acquisition cost	Book amount	Book amount
SM Universe Co., Ltd. ^{7,14}	Korea	-	-	-	-
MILLION MARKET CO., LTD. ^{5,7}	Korea	-	-	-	-
DEAR U Co., Ltd. ⁷	Korea	33.7%	367,853	256,698	-
Studio Flow, Inc. ⁷	Korea	31.6%	29,424	22,749	-
KIDS NOTE, INC ¹⁶	Korea	48.4%	29,690	27,520	-
UJUMUNBANGGU CO., LTD. ^{2,3}	Korea	9.1%	800	754	-
SNCO SOFTWARE PTE. LTD. ²	Singapore	35.1%	1,018	987	-
DOZN GLOBAL PTE. LTD. ^{2,3,18}	Singapore	15.8%	99	92	-
YUMOBILRITISAMO INVESTMENT LIMITED PARTNERSHIP ²	Korea	36.6%	5,000	4,988	-
KDBC-FP Technext Investment Association No.1 ³	Korea	22.2%	3,575	3,537	-
Others (72 companies) 2,3,4,5,8,9,11,12,13	Korea and others	2.0%~49.0%	65,466	32,993	43,074
			<u>2,739,415</u>	<u>2,928,682</u>	<u>2,647,325</u>
Joint ventures			-	-	-
DAUM KAKAO PHILIPPINES CORP. ⁸	Philippines	50.0%	1,072	-	-
PHI digital healthcare Inc.	Korea	50.0%	5,000	4,451	4,574
SPLYT GROUP LTD. ^{2,8,10}	UK	49.0%	-	-	-
The Celebrity Inc. ^{5,7}	Korea	-	-	-	-
FITNESSCANDY CO., LTD. ^{2,7,10}	Korea	49.0%	3,281	1,127	-
CHANGWON CULTURE BOKHAP TOWN CO., LTD. ^{7,10}	Korea	18.2%	370	353	-
SM True Company Limited ^{7,10}	Thailand	49.0%	5,517	6,626	-
			<u>15,240</u>	<u>12,557</u>	<u>4,574</u>
			<u>₩ 2,754,655</u>	<u>₩ 2,941,239</u>	<u>₩ 2,651,898</u>

¹ All investments in associates and joint venture are all unlisted securities excluding D&C MEDIA CO., LTD., Neptune Co., Ltd., KakaoBank Corp., Galaxia SM, INC., DEAR U Co., Ltd., Siebert Financial Corp.

² Newly and additionally acquired during 2023.

³ Although the Group holds less than 20% of equity shares, the Group is considered to have a significant influence as the Group holds voting power to participate in the investee's Board of Directors.

⁴ Small-sized entities invested by KAKAO Venture Fund, Kakao digital contents Fund, Kakao Game Growth Share Fund, KAKAO CCVC Jeju Creative Economy Innovative Fund, Kakao Copilot Fund No.

KAKAO CORP. and Subsidiaries
Notes to the Consolidated Financial Statements
December 31, 2023 and 2022

1 and Kakao Copilot Fund No. 2 with the ownership percentage of 2.0%~49.0% and classified as associates as the Group is considered to have a significant influence.

⁵ Entirely disposed during 2023.

⁶ Although the equity interest exceeds 50%, considering related agreements, the Group has significant influence over the investee, thus recognized it as an associate.

⁷ As the Group acquired the control over SM Entertainment Co., Ltd. during 2023, its associates are newly included.

⁸ The use of equity method was ceased due to a decrease in the carrying amount resulted from sluggish sales.

⁹ Dividends received from investees were deducted from the book amount of investments in associates.

¹⁰ Although the Group holds less than 50% of equity shares, the entities were recognized as joint ventures as the Group has a joint control over the entities.

¹¹ Partially disposed during 2023.

¹² Reclassified to a financial asset at fair value through profit or loss from an associate due to loss of significant influence during 2023.

¹³ Liquidated during 2023.

¹⁴ Reclassified to a subsidiary from an associate due to acquisition of additional shares during 2023.

¹⁵ Presented as substantial percentage of ownership considering treasury shares.

¹⁶ Reclassified from a subsidiary to an associate due to loss of control during 2023.

¹⁷ Investments in associates are partially reclassified to assets held for sale. Equity shares held by the Group including shares reclassified to assets held for sale are 33.8%.

¹⁸ As Kakaopay Corp., a subsidiary, and DOZN CO., LTD, an associate of Kakaopay Corp. concurrently own the entity, it was presented as effective percentage of ownership of Kakaopay Corp..

KAKAO CORP. and Subsidiaries
Notes to the Consolidated Financial Statements
December 31, 2023 and 2022

Changes in carrying amounts of investments in associates and joint venture for the years ended December 31, 2023 and 2022 are as follows:

(in millions of
Korean won)

(in millions of Korean won)

2023																				
	Beginning balance		Changes in scope of consolidation		Acquisition		Disposal		Dividends		Impairment		Reclassifi- cation		Profits (losses) of associates accounted for using equity method	Share of other comprehensive income (loss) of associates	Others ¹	Ending balance		
Associates																				
Adlock Advertainment	₩	1,132	₩	-	₩	-	₩	-	₩	-	₩	-	₩	-	₩	-	₩	-	₩	1,132
Anycall Mobility Corp		1,026		-		-		-		-		-		-	59		-	-	1,085	
ATU e-sports Growth PE Fund		5,308		-		-		-		-		-		-	(103)		-	-	5,204	
Caring Corp.		8,057		-		-		-		-		-		-	276		-	(5,720)	2,613	
CLAIR, Inc. ¹²		210		-		-		-		-		-	(88)		(123)		-	-	-	
CNT TECH CO., LTD.		6,948		-		-		-		-		-		-	364		166	-	7,479	
Deleo Korea Co., Ltd. ⁶		162		-		-		-		-		-		-	(162)		-	-	-	
DGT mobility. ⁴		4,664		-		-		(577)		-		-		-	1,065		-	-	5,152	
DIGISONIC CO., LTD.		55		-		-		-		-		-		-	(20)		-	-	36	
D&C MEDIA CO., LTD.		42,426		-		-		-		-		-		-	437		2	(229)	42,635	
DEVOTION FOODS Inc.		2,155		-		-		-		-		(1,780)		-	(666)		-	291	-	
DAEWON C.I. INC.		10,303		-		-		-		-		-		-	1,025		-	-	11,328	
DOZN CO., LTD		2,276		-		-		-		-		-		-	1,111		-	(32)	3,355	
325 E&C		1,819		-		-		-		-		(735)		-	56		-	-	1,140	
EASYGO CO., LTD.		92		-		-		-		-		-		-	-		-	-	92	
e.Form Works		-		-		-		-		-		-		-	(596)		-	600	4	
G&G ENTERPRISE CO., LTD.		3,112		-		-		-		-		(2,444)		-	(668)		-	-	-	
GC SOCIAL MEDIA MARKETING, INC.		3,570		-		-		-		-		-		-	(172)		65	-	3,463	
GOOD GANG LABS PTE.		-		-		2,610		-		-		-		-	-		-	-	2,610	

KAKAO CORP. and Subsidiaries
Notes to the Consolidated Financial Statements
December 31, 2023 and 2022

(in millions of
Korean won)

	2023										Ending balance
	Beginning balance	Changes in scope of consolidation	Acquisition	Disposal	Dividends	Impairment	Reclassifi- cation	Profits (losses) of associates accounted for using equity method	Share of other comprehen- sive income (loss) of associates	Others ¹	
LTD. ²											
Haksan Publinshing Co., Ltd.	11,632	-	-	-	-	(4,538)	-	(770)	(173)	-	6,150
Wyatt co., Ltd ³	7,121	-	28,089	-	-	(9,523)	-	3,628	82	129	29,526
Helios KDBC Video Digital Contents No. 1	4,269	-	-	-	-	-	-	(128)	-	-	4,142
Highup Entertainment	3,510	-	-	-	-	-	-	417	-	-	3,927
InnoSignal CO., LTD.	185	-	-	-	-	-	-	2	-	-	187
JASON GROUP Co., Ltd.	17,236	-	-	-	-	-	-	(309)	-	-	16,928
KakaoBank Corp. ⁸	1,589,134	-	-	-	(10,363)	-	-	92,895	25,224	(2,093)	1,694,798
Korea Credit Data	20,423	-	-	-	-	-	-	(11,667)	(562)	932	9,126
K Cube NEO Fund	1,981	-	-	-	-	-	-	(117)	15	-	1,878
Kakao Growth Hacking Fund ⁸	14,349	-	-	-	(1,600)	-	-	95	-	-	12,844
KIF-Kakao Wooribank Technology Financing Fund ⁸	22,180	-	-	-	(9,939)	-	-	9,087	1,910	-	23,239
Loadstars ⁶	11	-	-	-	-	-	-	(11)	-	-	-
LUXROBO CO., LTD.	1,348	-	-	-	-	-	-	(458)	21	29	940
MANNACEA ⁶	113	-	-	-	-	-	-	(129)	16	-	-
Neptune Co., Ltd.	193,064	-	-	-	-	-	-	(18,090)	4,302	(466)	178,810
Ocean Drive Studio Corp. ^{6,9}	3,359	-	-	-	-	-	-	(3,359)	-	-	-
Socialbean Co., Ltd	40	-	-	-	-	-	-	103	-	333	476
Super Comics.	1,392	-	-	-	-	-	-	(303)	-	-	1,089

KAKAO CORP. and Subsidiaries
Notes to the Consolidated Financial Statements
December 31, 2023 and 2022

(in millions of
Korean won)

	2023										
	Beginning balance	Changes in scope of consolidation	Acquisition	Disposal	Dividends	Impairment	Reclassifi- cation	Profits (losses) of associates accounted for using equity method	Share of other comprehen- sive income (loss) of associates	Others ¹	Ending balance
Second Dive	7,761	-	-	-	-	-	-	1,474	-	-	9,234
Skelter Labs, Inc. ⁶	369	-	-	-	-	-	-	(369)	(1)	1	-
Seoul Media Comics, INC.	7,374	-	-	-	-	-	-	87	-	-	7,461
S&Tsolution Co.,Ltd.	1,100	-	-	-	-	-	-	(43)	-	-	1,057
Stage five Co., Ltd. ¹³	64,019	-	-	-	-	-	(41,121)	(4,458)	(16)	(2,290)	16,135
Kakao-Shinhan 1st TNYT Fund	4,747	-	-	-	-	-	-	(941)	(1)	-	3,805
TOROOO Inc.	66	-	-	-	-	-	-	(41)	-	64	89
Tide Square Co., Ltd.	7,015	-	-	-	-	-	-	(5,012)	(179)	-	1,824
Teins Valley	404	-	-	-	-	-	-	31	-	-	435
UNION K-Culture Contents Investment Fund ^{3,8}	7,865	-	2,500	-	(3,333)	-	-	7	-	-	7,039
MUSTIT. CO., Ltd.	5,723	-	-	-	-	-	-	(1,105)	-	-	4,618
Kakao Style Corp.	132,611	-	-	-	-	-	-	(4,867)	(1,603)	(224)	125,917
UTC Kakao SK Telecom ESG Fund ³	5,710	-	4,000	-	-	-	-	(215)	-	-	9,495
HongKong TXKP Limited	23,581	-	-	-	-	-	-	(2,960)	440	-	21,060
Nubility	1,556	-	-	-	-	-	-	(524)	-	57	1,089
Reality Magic	4,557	-	-	-	-	(4,084)	-	(474)	-	-	-
The M Company ⁵	1,167	-	-	(1,167)	-	-	-	-	-	-	-
Autonomous A2Z ^{3,4}	5,229	-	5,000	(347)	-	-	-	(4,250)	203	1,805	7,640
Humanscape	15,078	-	-	-	-	-	-	(8,051)	36	(2,188)	4,875
Grip Company	164,121	-	-	-	-	(58,460)	-	(9,844)	-	(1,043)	94,774
Metaverse Entertainment	9,152	-	-	-	-	(5,905)	-	(3,842)	59	8,175	7,639
Atwater Capital Partners I,	1,753	-	-	-	-	-	-	185	29	(62)	1,905

KAKAO CORP. and Subsidiaries
Notes to the Consolidated Financial Statements
December 31, 2023 and 2022

(in millions of
Korean won)

	2023										
	Beginning balance	Changes in scope of consolidation	Acquisition	Disposal	Dividends	Impairment	Reclassifi- cation	Profits (losses) of associates accounted for using equity method	Share of other comprehen- sive income (loss) of associates	Others ¹	Ending balance
L.P.											
Bluepoint Discovery Venture Fund No.2 ³	738	-	1,200	-	-	-	-	(51)	-	-	1,887
TNK Factory	39,910	-	-	-	-	-	-	166	(1)	-	40,075
Galux	4,210	-	-	-	-	-	-	(556)	306	-	3,960
RECON Labs.	382	-	-	-	-	-	-	(240)	-	-	142
LOVO Inc.	4,183	-	-	-	-	(1,810)	-	(76)	44	(3)	2,338
Atwater Soundtrack SPV, LP	5,110	-	-	-	-	-	-	(1,122)	108	-	4,096
HitchMED Co., Ltd.	1,447	-	-	-	-	(586)	-	(682)	-	-	179
Mediasphere CO., LTD. ²	-	-	300	-	-	-	-	(289)	-	-	11
MORE VISION	1,676	-	-	-	-	-	-	79	-	-	1,755
Love Alarm Culture Industry Special Purpose Company Ltd. ^{8,10}	10	-	-	(1)	(7)	-	-	(1)	-	-	-
Catchers Cultural Industry Company. ⁹	1	(1)	-	-	-	-	-	(6)	-	5	-
GRAYGO Corp.	71,005	-	-	-	-	(37,543)	-	(2,309)	-	-	31,154
TheCheat	2,545	-	-	-	-	-	-	23	-	-	2,568
Siebert Financial Corp. ²	-	-	23,255	-	-	-	-	428	(873)	-	22,810
altimobility Corp. ⁶	2,882	-	-	-	-	-	-	(2,882)	-	-	-
TEEware Corp. ³	1,301	-	649	-	-	-	-	(285)	43	-	1,707
Let's go Together Kakao Games Win-win Fund ³	5,942	-	2,000	-	-	-	-	(230)	-	-	7,712
Jeju-vision Venture Investment Association	300	-	-	-	-	-	-	(11)	-	-	289

KAKAO CORP. and Subsidiaries
Notes to the Consolidated Financial Statements
December 31, 2023 and 2022

(in millions of
Korean won)

	2023										
	Beginning balance	Changes in scope of consolidation	Acquisition	Disposal	Dividends	Impairment	Reclassifi- cation	Profits (losses) of associates accounted for using equity method	Share of other comprehen- sive income (loss) of associates	Others ¹	Ending balance
No.1.											
Enolink Holdings, Inc.	6,348	-	-	-	-	-	-	(6,170)	2,929	1,052	4,158
Girl Rivers Cultural Industry Company Ltd. ⁶	1	-	-	-	-	-	-	(1)	-	-	-
KLleon Inc. ¹⁵	640	-	-	-	-	-	1,018	194	25	83	1,960
GOLF VX CORP. ²	-	-	2,549	-	-	-	-	(136)	31	-	2,445
Haatoon China Co., Ltd ²	-	-	882	-	-	-	-	32	(63)	-	852
PT Green Wind Culture ²	-	-	135	-	-	-	-	-	(24)	-	110
SM BRAND MARKETING Co., LTD. ^{7,9}	-	-	-	-	-	-	-	355	11	(366)	-
Galaxia SM, INC. ⁷	-	8,837	-	-	-	-	-	428	3,457	-	12,722
ESTEEM ⁷	-	1,964	-	-	-	-	-	14	-	417	2,396
Dreamus Company ⁷	-	33,740	-	-	-	-	-	(455)	3	2,274	35,563
SPEEKER CO., LTD. ^{5,7}	-	220	-	(226)	-	-	-	6	-	-	-
UAM CO., LTD. ^{5,7}	-	13	-	(13)	-	-	-	-	-	-	-
MILLION MARKET CO., LTD. ^{5,7}	-	282	-	(336)	-	-	-	54	-	-	-
DEAR U Co., Ltd. ⁷	-	367,853	-	-	-	(115,624)	-	5,527	(420)	(638)	256,698
Studio Flow, Inc. ⁷	-	29,424	-	-	-	(6,168)	-	(523)	15	-	22,749
KIDS NOTE, INC ¹¹	-	-	-	-	-	-	29,690	(1,984)	(186)	-	27,520
UJUMUNBANGGU CO., LTD. ²	-	-	800	-	-	-	-	(45)	-	-	754
SNCO SOFTWARE PTE. LTD. ²	-	-	1,018	-	-	-	-	(46)	15	-	987
DOZN GLOBAL PTE. LTD ²	-	-	99	-	-	-	-	(6)	(1)	-	92

KAKAO CORP. and Subsidiaries
Notes to the Consolidated Financial Statements
December 31, 2023 and 2022

(in millions of
Korean won)

(in millions of Korean won)

	2023										
	Beginning balance	Changes in scope of consolidation	Acquisition	Disposal	Dividends	Impairment	Reclassification	Profits (losses) of associates accounted for using equity method	Share of other comprehensive income (loss) of associates	Others ¹	Ending balance
YUMOBILRITISAMO INVESTMENT LIMITED PARTNERSHIP ²	-	-	5,000	-	-	-	-	(12)	-	-	4,988
KDBC-FP Technext Investment Association No.1 ¹⁴	-	-	-	-	-	-	3,575	(38)	-	-	3,537
Others (83 companies) <small>2,3,4,5,6,7,8,10,12</small>	43,074	-	6,100	(8,262)	(889)	(507)	(493)	(11,433)	541	4,861	32,993
	2,647,325	442,332	86,186	(10,930)	(26,131)	(249,707)	(7,418)	5,275	35,995	5,755	2,928,682
Joint ventures											
DAUM KAKAO PHILIPPINES CORP. ⁶	-	-	-	-	-	-	-	-	-	-	-
PHI digital healthcare Inc.	4,574	-	-	-	-	-	-	(123)	-	-	4,451
SPLYT GROUP LTD. ^{2,6}	-	-	-	-	-	-	-	-	-	-	-
The Celebrity Inc. ^{5,7}	-	-	-	-	-	-	-	-	-	-	-
FITNESSCANDY CO., LTD ^{3,7}	-	1,958	1,323	-	-	-	-	(2,153)	-	-	1,127
CHANGWON CULTURE BOKHAP TOWN CO., LTD. ⁷	-	370	-	-	-	-	-	(17)	-	-	353
SM True Company Limited ⁷	-	5,517	-	-	-	-	-	978	130	-	6,626
	4,574	7,845	1,323	-	-	-	-	(1,314)	130	-	12,557
	₩ 2,651,898	₩ 450,177	₩ 87,509	₩ (10,930)	₩ (26,131)	₩ (249,707)	₩ (7,418)	₩ 3,960	₩ 36,125	₩ 5,755	₩ 2,941,239

KAKAO CORP. and Subsidiaries
Notes to the Consolidated Financial Statements
December 31, 2023 and 2022

¹ Others include gain or loss on disposal from changes in percentage of ownership with maintaining significant influence during 2023.

² Newly acquired and established during 2023.

³ Additionally acquired during 2023.

⁴ Partially disposed during 2023.

⁵ Entirely disposed during 2023.

⁶ The use of equity method was ceased due to a decrease in the carrying amount resulted from sluggish sales.

⁷ As the Group acquired the control over SM Entertainment Co., Ltd. during 2023, its associates are newly included.

⁸ Dividends received from investees were deducted from the book amount of investments in associates.

⁹ Reclassified to a subsidiary from an associate due to acquisition of additional shares during 2023.

¹⁰ Excluded from associates due to liquidation during 2023.

¹¹ Reclassified from a subsidiary to an associate due to loss of control during 2023.

¹² Reclassified to a financial asset at fair value through profit or loss from an associate due to loss of significant influence during 2023.

¹³ Investments in associates are partially reclassified to assets held for sale.

¹⁴ Reclassified to associates from financial assets measured at fair value through profit or loss as the Group acquired significant influence during 2023.

¹⁵ Reclassified to associates as the condition under conditional acquisition shares recognized as financial assets measured at fair value through profit or loss has been met.

KAKAO CORP. and Subsidiaries

Notes to the Consolidated Financial Statements

December 31, 2023 and 2022

(in millions of
Korean won)

	2022									
	Beginning balance	Changes in scope of consolidation	Acquisition	Disposal	Impairment	Reclassifi- cation	Profits (losses) of associates accounted for using equity method	Share of other comprehen- sive income (loss) of associates	Others ¹	Ending balance
Associates										
Addcredit Corp. ⁶	₩ 30	₩ -	₩ -	₩ -	₩ (30)	₩ -	₩ -	₩ -	₩ -	-
Dunamu Inc. ^{4,5}	514,249	-	-	(7,703)	-	(2,067,743)	16,345	1,193	1,543,659	-
CNT TECH CO., LTD.	5,418	-	-	-	-	-	1,188	614	(271)	6,948
Tide Square Co., Ltd. ¹²	-	-	-	-	-	-	(6,990)	(854)	14,859	7,015
KakaoBank Corp.	1,540,065	-	-	-	-	-	68,225	(16,790)	(2,366)	1,589,134
Korea Credit Data	1,678	-	-	-	-	-	(7,254)	-	25,999	20,423
Kakao Style Corp.	163,382	-	-	-	-	-	(31,335)	948	(383)	132,611
UTC Kakao SK Telecom ESG Fund ³	1,925	-	4,000	-	-	-	(215)	-	-	5,710
Humanscape	20,400	-	-	-	-	-	(1,100)	(4,448)	227	15,078
Grip Company ⁸	180,000	-	-	-	-	(2,922)	(12,913)	(43)	-	164,121
D&C MEDIA CO., LTD.	41,495	-	-	-	-	-	921	10	-	42,426
DAEWON C.I. INC.	9,780	-	-	-	-	-	528	(5)	-	10,303
Haksan Publinshing Co., Ltd.	10,595	-	-	-	-	-	1,081	(44)	-	11,632
Seoul Media Comics, INC.	6,764	-	-	-	-	-	610	-	-	7,374
Super Comics.	1,708	-	-	-	-	-	(316)	-	-	1,392
HongKong TXKP Limited	22,888	-	-	-	-	-	(904)	1,597	-	23,581
325 E&C	2,006	-	-	-	-	-	(186)	-	-	1,819
UNION K-Culture Contents Investment Fund	6,973	-	-	-	-	-	892	-	-	7,865
EDAM Entertainment Corp. ⁷	12,098	(41,600)	-	-	-	-	659	-	28,843	-
Highup Entertainment	3,480	-	-	-	-	-	30	-	-	3,510
Helios KDBC Video Digital	2,170	-	2,202	-	-	-	(102)	-	-	4,269

KAKAO CORP. and Subsidiaries
Notes to the Consolidated Financial Statements
December 31, 2023 and 2022

(in millions of
Korean won)

	2022									
	Beginning balance	Changes in scope of consolidation	Acquisition	Disposal	Impairment	Reclassifi- cation	Profits (losses) of associates accounted for using equity method	Share of other comprehen- sive income (loss) of associates	Others ¹	Ending balance
Contents No. 1 ³										
Metaverse Entertainment	11,680	-	-	-	-	-	(3,072)	(15)	559	9,152
Atwater Capital Partners I, L.P. ³	709	-	470	-	-	-	504	69	-	1,753
Wyatt co., Ltd	20,053	-	-	-	-	-	(13,018)	87	-	7,121
MANNACEA	1,090	-	-	-	-	-	(977)	-	-	113
Deleo Korea Co., Ltd. ⁶	3,000	-	-	-	(303)	-	(2,535)	-	-	162
YANADU. ¹⁴	3,044	-	-	-	-	-	(5,862)	-	2,819	-
LINEWALKS Inc. ⁷	3,071	(2,857)	-	-	-	-	(174)	-	(41)	-
Daeyoung Chaevi CO., Ltd	7,500	-	-	-	-	-	-	-	-	7,500
Adlock Advertainment	1,132	-	-	-	-	-	-	-	-	1,132
Stage five Co., Ltd. ⁴	91,473	-	-	(18,505)	-	-	(2,100)	(11)	(6,839)	64,019
DEVOTION FOODS Inc. ⁶	3,000	-	-	-	(229)	-	(616)	-	-	2,155
JASON GROUP Co., Ltd. ⁶	29,396	-	-	-	(11,370)	-	(774)	(16)	-	17,236
MUSTIT. CO., Ltd.	7,926	-	-	-	-	-	(5,253)	-	3,051	5,723
Nubility	1,435	-	-	-	-	-	(663)	-	784	1,556
CLEON CO., LTD. ¹⁸	1,600	-	-	-	-	(651)	(949)	-	-	-
KLleon Inc. ¹⁸	-	-	-	-	-	651	(11)	-	-	640
Bluepoint Discovery Venture Fund No.2	788	-	-	-	-	-	(50)	-	-	738
TNK Factory	38,105	-	-	-	-	-	1,347	261	197	39,910
Atwater Soundtrack SPV, LP ²	-	-	3,746	-	-	-	1,178	186	-	5,110
Japle Co., Ltd. ⁶	130	-	-	-	(31)	-	(99)	-	-	-
KIDSPAY CO. Ltd. ¹³	46	-	-	(22)	-	-	(24)	-	-	-

KAKAO CORP. and Subsidiaries
Notes to the Consolidated Financial Statements
December 31, 2023 and 2022

(in millions of
Korean won)

	2022									
	Beginning balance	Changes in scope of consolidation	Acquisition	Disposal	Impairment	Reclassifi- cation	Profits (losses) of associates accounted for using equity method	Share of other comprehen- sive income (loss) of associates	Others ¹	Ending balance
Ocean Drive Studio Corp.	11,852	-	-	-	-	-	(8,493)	-	-	3,359
Second Dive	8,728	-	-	-	-	-	(967)	-	-	7,761
Neptune Co., Ltd. ^{3,6,10}	296,893	-	88,493	-	(157,822)	21,853	(20,238)	(35,576)	(538)	193,064
Reality Magic	5,328	-	-	-	-	-	(770)	-	-	4,557
Brokk Sindri ¹³	-	-	-	-	-	-	-	-	-	-
Loadstars ³	70	-	67	-	-	-	(125)	-	-	11
Teins Valley	531	-	-	-	-	-	(127)	-	-	404
RPG Gate Corp. ¹⁷	416	(352)	-	-	-	-	(64)	-	-	-
GC SOCIAL MEDIA MARKETING, INC. ³	1,118	-	2,561	-	-	-	(45)	(63)	-	3,570
DIGISONIC CO., LTD.	165	-	-	-	-	-	(206)	-	97	55
InnoSignal CO., LTD.	189	-	-	-	-	-	(4)	-	-	185
EASYGO CO., LTD.	93	-	-	-	-	-	(1)	-	-	92
DOZN CO., LTD.	1,199	-	-	-	-	-	1,082	-	(6)	2,276
The M Company	1,060	-	-	-	-	-	107	-	-	1,167
DGT mobility. ³	2,994	-	1,000	-	-	-	670	-	-	4,664
S&T Solution Co.,Ltd.	1,093	-	-	-	-	-	7	-	-	1,100
Anycall Mobility Corp	1,018	-	-	-	-	-	8	-	-	1,026
Kakao-Shinhan 1st TNYT Fund	5,076	-	-	-	-	-	(331)	2	-	4,747
Kakao Growth Hacking Fund ³	12,557	-	3,200	-	-	-	(1,408)	-	-	14,349
KIF-Kakao Wooribank Technology Financing Fund ¹⁶	18,722	-	-	(2,550)	-	-	4,069	1,939	-	22,180

KAKAO CORP. and Subsidiaries
Notes to the Consolidated Financial Statements
December 31, 2023 and 2022

(in millions of
Korean won)

	2022									
	Beginning balance	Changes in scope of consolidation	Acquisition	Disposal	Impairment	Reclassifi- cation	Profits (losses) of associates accounted for using equity method	Share of other comprehen- sive income (loss) of associates	Others ¹	Ending balance
K Cube NEO Fund	1,732	-	-	-	-	-	249	-	-	1,981
ATU e-sports Growth PE Fund	5,499	-	-	-	-	-	(192)	-	-	5,308
PEOPLESFUND COMPANY ⁵	255	-	-	-	-	-	(909)	(162)	816	-
LUXROBO CO., LTD.	3,602	-	-	-	-	-	(1,680)	8	(583)	1,348
Skelter Labs, Inc.	1,447	-	-	-	-	-	(2,192)	75	1,039	369
TOROOO Inc.	201	-	-	-	-	-	(288)	-	153	66
Galux	5,001	-	-	-	-	-	(564)	-	(226)	4,210
RECON Labs.	500	-	-	-	-	-	(136)	-	18	382
Autonomous A2Z	6,933	-	-	-	-	-	(1,705)	-	-	5,229
CLAIR, Inc.	297	-	-	-	-	-	(130)	-	43	210
G&G ENTERPRISE CO., LTD. ⁶	4,174	-	-	-	(1,030)	-	(34)	2	-	3,112
Socialbean Co., Ltd	136	-	-	-	-	-	(96)	-	-	40
Caring Corp. ⁴	2,968	-	-	(638)	-	-	(1,729)	-	7,456	8,057
e.Form Works ¹⁴	733	-	-	-	-	-	(833)	-	100	-
LOVO INC.	4,107	-	-	-	-	-	(347)	229	194	4,183
Romance Crew ¹⁴	40	-	-	-	-	-	(40)	-	-	-
HitchMED Co., Ltd. ²	-	-	1,725	-	-	-	(277)	(1)	-	1,447
MORE VISION ²	-	-	1,500	-	-	-	176	-	-	1,676
Love Alarm Culture Industry Special Purpose Company Ltd. ²	-	-	3	-	-	-	7	-	-	10
Catchers Cultural Industry Company. ²	-	-	3	-	-	-	(2)	-	-	1

KAKAO CORP. and Subsidiaries
Notes to the Consolidated Financial Statements
December 31, 2023 and 2022

(in millions of
Korean won)

	2022									
	Beginning balance	Changes in scope of consolidation	Acquisition	Disposal	Impairment	Reclassifi- cation	Profits (losses) of associates accounted for using equity method	Share of other comprehen- sive income (loss) of associates	Others ¹	Ending balance
GRAYGO Corp. ¹⁵	-	68,247	-	-	-	-	(2,360)	-	5,118	71,005
TheCheat ⁹	-	-	1,499	-	-	1,009	37	-	-	2,545
altimobility Corp. ²	-	-	5,600	-	-	-	(2,718)	-	-	2,882
TEEware Corp. ²	-	-	1,375	-	-	-	(33)	123	(164)	1,301
Let's go Together Kakao Games Win-win Fund ²	-	-	6,000	-	-	-	(58)	-	-	5,942
Jeju-vision Venture Investment Association No. 1. ²	-	-	300	-	-	-	-	-	-	300
Enolink Holdings, Inc. ²	-	-	7,264	-	-	-	(617)	(299)	-	6,348
Girl Rivers Cultural Industry Company Ltd. ²	-	-	3	-	-	-	(2)	-	-	1
Others (69 companies) ^{2,3,4,6}	25,952	-	16,552	(5,738)	(1,499)	(1,300)	(9,698)	(97)	11,402	35,574
	<u>3,204,956</u>	<u>23,438</u>	<u>147,563</u>	<u>(35,156)</u>	<u>(172,313)</u>	<u>(2,049,103)</u>	<u>(56,994)</u>	<u>(51,081)</u>	<u>1,636,015</u>	<u>2,647,325</u>
Joint ventures										
DAUM KAKAO										
PHILIPPINES CORP. ⁶	182	-	-	-	(182)	-	-	-	-	-
Asankakao Medical Data Co., Ltd. ¹³	4,269	-	-	(4,127)	-	-	(142)	-	-	-
PHI digital healthcare Inc. ^{6,11}	6,395	-	-	(83)	(1,245)	-	(493)	-	-	4,574
	<u>10,846</u>	<u>-</u>	<u>-</u>	<u>(4,210)</u>	<u>(1,427)</u>	<u>-</u>	<u>(635)</u>	<u>-</u>	<u>-</u>	<u>4,574</u>
	<u>₩ 3,215,802</u>	<u>₩ 23,438</u>	<u>₩ 147,563</u>	<u>₩ (39,367)</u>	<u>₩ (173,740)</u>	<u>₩ (2,049,103)</u>	<u>₩ (57,629)</u>	<u>₩ (51,081)</u>	<u>₩ 1,636,015</u>	<u>₩ 2,651,898</u>

¹ Others include gain or loss on disposal from changes in percentage of ownership with maintaining significant influence during 2022.

KAKAO CORP. and Subsidiaries
Notes to the Consolidated Financial Statements
December 31, 2023 and 2022

² Newly acquired and established during 2022.

³ Additionally acquired during 2022.

⁴ Partially disposed during 2022.

⁵ Reclassified to a financial instrument at fair value through profit or loss from an associate due to loss of significant influence during 2022.

⁶ Due to decrease in sales, the recoverable amount is less than the carrying amount as at December 31, 2022, thus, the Group recognized the amount of difference as an impairment loss during 2022.

⁷ Reclassified to a subsidiary from an associate due to acquisition of additional shares during 2022.

⁸ Reclassified to a derivative asset from a stock purchase right related to stocks held by the Group during 2022.

⁹ Reclassified to associates from financial instruments measured at fair value through other comprehensive income as the Group acquired significant influence through additional acquisitions during 2022.

¹⁰ Converted to 1,135,202 common shares as exercising the remaining convertible bond conversion right during 2022.

¹¹ Spun off during 2022.

¹² Resumed the use of the equity method, due to the amount of change in capital incurred by the investees exceeded the loss incurred during discontinued period of the equity method.

¹³ Entirely disposed during 2022.

¹⁴ The use of equity method was ceased due to a decrease in the carrying amount resulted from sluggish sales.

¹⁵ Reclassified from a subsidiary to an associate due to loss of control during 2022.

¹⁶ The Group recovered some of the principal of investment through the first distribution during 2022.

¹⁷ Excluded from the Group's associate due to loss of control on Ad (x) Inc. during 2022.

¹⁸ Flipped shares to KLeon Inc., a U.S. corporation during 2022.

KAKAO CORP. and Subsidiaries

Notes to the Consolidated Financial Statements

December 31, 2023 and 2022

Fair value of investments in associates that has a quoted market price as at December 31, 2023 and 2022, is as follows:

(in millions of Korean won)

	2023		2022	
	Fair value	Book amount	Fair value	Book amount
Associates				
KakaoBank Corp.	₩ 3,691,711	₩ 1,694,798	₩ 3,147,670	₩ 1,589,134
Neptune Co., Ltd.	126,687	178,810	193,064	193,064
D&C MEDIA CO., LTD.	71,278	42,635	64,179	42,426
Galaxia SM, INC.	9,149	12,722	-	-
Dreamus Company	29,649	35,563	-	-
DEAR U Co., Ltd.	256,698	256,698	-	-
Siebert Financial Corp ¹	17,493	22,810	-	-

¹ Listed in NASDAQ in USA

The tables below provide a reconciliation of the summarized financial information presented to the carrying amount of its interest in material associates and joint venture.

(in millions of Korean won)

	Net assets at the end of the year (a) ¹	Group's share in % (b) ²	2023			Book amount
			Group's share in KRW(a*b)	Goodwill and others ³		
KakaoBank Corp.	₩ 6,103,755	27.2%	₩ 1,657,975	₩ 36,823	₩ 1,694,798	
Neptune Co., Ltd. ⁴	366,450	41.1%	150,490	28,320	178,810	
D&C MEDIA CO., LTD. ⁴	78,802	22.9%	18,055	24,580	42,635	
DEAR U Co.,Ltd.	162,327	33.7%	54,684	202,014	256,698	
Kakao Style Corp. ⁵	14,460	49.4%	7,144	118,773	125,917	
TNK Factory ⁵	76,864	32.4%	24,897	15,178	40,075	
Grip Company	128,583	48.5%	62,302	32,472	94,774	

¹ Net assets after adjustment of share options and others

² Adjusted equity interest percentage considering preferred shares and others

³ The amount may decrease due to amortization as the share price of PPA is included.

⁴ The equity interest percentage excluding treasury shares is used.

⁵ The Group's share in net asset is calculated by taking into account of conditions of the investing companies' preferred shares.

KAKAO CORP. and Subsidiaries

Notes to the Consolidated Financial Statements

December 31, 2023 and 2022

(in millions of Korean won)

	2022				
	Net assets at the end of the year (a)	Group's share in % (b)	Group's share in KRW(a*b)	Goodwill and others	Book amount
KakaoBank Corp.	₩ 5,706,214	27.2%	₩ 1,550,450	38,684	₩ 1,589,134
Stage five Co., Ltd. ¹	21,336	31.3%	6,681	57,338	64,019
D&C MEDIA CO., LTD. ²	72,954	23.3%	16,992	25,434	42,426
Neptune Co., Ltd. ²	392,388	41.3%	161,998	31,066	193,064
Kakao Style Corp. ¹	33,741	53.4%	18,005	114,606	132,611
Grip Company	148,050	48.8%	72,295	91,825	164,121

¹ The Group's share in net asset is calculated by taking into account of conditions of the investing companies' preferred shares.

² The equity interest percentage excluding treasury shares is used.

A summary of financial information on the associates and joint venture for the years ended December 31, 2023 and 2022, is as follows:

(in millions of Korean won)

	2023							
	KakaoBank Corp.	Neptune Co., Ltd.	D&C MEDIA CO., LTD.	DEAR U Co., Ltd.	Kakao Style Corp.	TNK Factory	Grip Company	Total
Current assets	₩ -	₩ 73,242	₩ 59,946	₩ 147,355	₩ 58,083	₩ 32,911	₩ 144,262	₩ 515,799
Non-current assets	-	336,116	37,755	43,258	26,545	55,869	6,503	506,045
Assets of financial service business	54,488,157	-	-	-	-	-	-	54,488,157
Current liabilities	-	33,757	15,891	16,856	65,969	26,380	14,319	173,173
Non-current liabilities	-	12,625	1,660	4,243	3,317	2,207	5,264	29,314
Liabilities of financial service business	48,370,463	-	-	-	-	-	-	48,370,463
Revenue	2,494,045	99,747	60,679	75,692	165,097	36,928	18,201	2,950,389
Profit (loss) for the year	354,912	(17,992)	3,096	26,190	(18,381)	959	(19,616)	329,168
Other comprehensive income (loss)	92,278	(927)	-	(377)	(29)	-	-	90,944
Total comprehensive income (loss)	447,190	(18,919)	3,096	25,812	(18,410)	959	(19,616)	420,112

KAKAO CORP. and Subsidiaries

Notes to the Consolidated Financial Statements

December 31, 2023 and 2022

(in millions of Korean won)	2022						
	KakaoBank Corp.	Stage five Co., Ltd.	D&C MEDIA CO.,LTD.	Neptune Co., Ltd.	Kakao Style Corp.	Grip Company	Total
Current assets	₩ -	₩ 20,502	₩ 61,362	₩ 48,712	₩ 69,508	₩ 164,656	₩ 364,740
Non-current assets	-	12,338	33,666	384,133	28,922	7,156	466,215
Assets of financial service business	39,516,079	-	-	-	-	-	39,516,079
Current liabilities	-	198,668	16,721	20,110	59,545	17,047	312,090
Non-current liabilities	-	2,998	2,679	23,504	4,514	5,139	38,834
Liabilities of financial service business	33,800,969	-	-	-	-	-	33,800,969
Revenue	1,605,801	85,672	61,242	29,356	101,841	13,132	1,897,044
Profit (loss) for the year	263,091	(22,898)	5,367	(159,966)	(50,043)	(26,824)	8,727
Other comprehensive income (loss)	(74,267)	237	-	1,413	1,008	44	(71,566)
Total comprehensive income (loss)	188,823	(22,661)	5,367	(158,553)	(49,035)	(26,780)	(62,839)

The tables below provide unrecognized share of losses of associates and joint ventures, both for the reporting period and cumulatively, because the Group has stopped recognizing its share of losses of associates and joint ventures when applying the equity method for 19 investees.

(in millions of Korean won)	2023		2022	
	Unrecognized loss	Unrecognized accumulated losses	Unrecognized loss	Unrecognized accumulated losses
SPLYT GROUP LTD.	₩ 3,815	₩ 3,815	₩ -	₩ -
Others	12,905	19,636	2,124	7,427
	₩ 16,720	₩ 23,451	₩ 2,124	₩ 7,427

KAKAO CORP. and Subsidiaries
Notes to the Consolidated Financial Statements
December 31, 2023 and 2022

17. Property and Equipment

(1) Non-financial services business

Changes in property and equipment for the years ended December 31, 2023 and 2022, are as follows:

(in millions of Korean won)	2023									
	Land	Buildings	Structures	Machinery and equipment	Vehicles	Furniture	Construc- tion in progress	Total		
Opening net book amount	₩ 109,896	₩ 49,790	₩ 12,810	₩ 299,418	₩ 9,026	₩ 223,352	₩ 181,104	₩	885,397	
Acquisition	11,692	19,302	4,371	205,662	1,798	64,208	282,600		589,633	
Changes in scope of consolidation	44,513	9,899	5,462	504	1,445	19,513	15,920		97,256	
Disposals	-	(1,728)	(469)	(717)	(1,819)	(7,033)	-		(11,766)	
Depreciation	-	(2,362)	(6,649)	(119,705)	(3,493)	(84,478)	-		(216,686)	
Impairment	-	-	-	-	-	(69)	(330)		(400)	
Transfer	(4,835)	55,332	1,435	3,858	121	9,128	(83,292)		(18,254)	
Others ¹	(1,889)	(770)	(24)	(3)	9	(634)	183		(3,129)	
Closing net book amount	₩ 159,378	₩ 129,463	₩ 16,937	₩ 389,016	₩ 7,087	₩ 223,987	₩ 396,184	₩	1,322,051	
December 31, 2023										
Acquisition cost	₩ 159,378	₩ 150,423	₩ 44,499	₩ 844,180	₩ 18,417	₩ 467,239	₩ 396,510	₩	2,080,647	
Government grants	-	-	-	(300)	(58)	(2,447)	-		(2,805)	
Accumulated depreciation	-	(20,960)	(27,563)	(454,865)	(11,272)	(240,732)	-		(755,391)	
Accumulated impairment	-	-	-	-	-	(74)	(326)		(400)	
Net book amount	₩ 159,378	₩ 129,463	₩ 16,937	₩ 389,016	₩ 7,087	₩ 223,987	₩ 396,184	₩	1,322,051	

¹ Others include currency translation effects.

(in millions of Korean won)	2022															
	Land		Buildings		Structures		Machinery and equipment		Vehicles		Furniture		Construc- tion in progress		Total	
Opening net book amount	₩	98,630	₩	47,369	₩	6,612	₩	241,637	₩	10,726	₩	104,652	₩	45,290	₩	554,916
Acquisition		3,223		2,706		2,591		138,349		3,255		97,521		218,409		466,054
Changes in scope of consolidation		8,823		1,563		7,764		8,538		9		1,019		540		28,255
Disposals		(1,007)		(56)		(176)		(300)		(1,335)		(14,024)		(94)		(16,991)
Depreciation		-		(1,730)		(3,862)		(92,846)		(3,630)		(60,020)		-		(162,088)
Impairment		-		-		-		-		-		(17)		-		(17)
Transfer		256		-		(120)		3,978		(7)		86,184		(82,179)		8,112
Others ¹		(30)		(62)		-		62		9		8,038		(862)		7,156
Closing net book amount	₩	109,896	₩	49,790	₩	12,810	₩	299,418	₩	9,026	₩	223,352	₩	181,104	₩	885,397

KAKAO CORP. and Subsidiaries
Notes to the Consolidated Financial Statements
December 31, 2023 and 2022

(in millions of
Korean won)

	2022							
	Land	Buildings	Structures	Machinery and equipment	Vehicles	Furniture	Construction in progress	Total
December 31, 2023								
Acquisition cost	₩ 109,896	₩ 62,449	₩ 30,500	₩ 671,788	₩ 18,925	₩ 390,786	₩ 181,104	₩ 1,465,448
Government grants	-	-	-	(390)	(76)	(1,963)	-	(2,428)
Accumulated depreciation	-	(12,659)	(17,690)	(371,981)	(9,823)	(165,464)	-	(577,616)
Accumulated impairment	-	-	-	-	-	(6)	-	(6)
Net book amount	₩ 109,896	₩ 49,790	₩ 12,810	₩ 299,418	₩ 9,026	₩ 223,352	₩ 181,104	₩ 885,397

¹ Others include currency translation effects.

(2) Financial services business

(in millions of Korean won)

	2023	
	Furnitures	Total
Opening net book amount	₩ 15,037	₩ 15,037
Acquisition	4,529	4,529
Disposals	(239)	(239)
Depreciation	(4,494)	(4,494)
Transfer ¹	45	45
Closing net book amount	₩ 14,878	₩ 14,878
December 31, 2023		
Acquisition cost	₩ 25,001	₩ 25,001
Accumulated depreciation	(10,122)	(10,122)
Net book amount	₩ 14,878	₩ 14,878

¹ The amount classified as long-term advance payments as at December 31, 2022 was reclassified as property and equipment during 2023.

(in millions of Korean won)

	2022			
	Land	Buildings	Furniture ¹	Total
Opening net book amount	₩ 239	₩ 515	₩ 11,028	₩ 11,782
Acquisition	-	-	7,544	7,544
Disposals	(239)	(513)	(76)	(827)
Depreciation	-	(2)	(3,459)	(3,461)
Closing net book amount	₩ -	₩ -	₩ 15,037	₩ 15,037
December 31, 2023				
Acquisition cost	₩ -	₩ -	₩ 20,912	₩ 20,912
Accumulated depreciation	-	-	(5,875)	(5,875)
Net book amount	₩ -	₩ -	₩ 15,037	₩ 15,037

KAKAO CORP. and Subsidiaries
Notes to the Consolidated Financial Statements
December 31, 2023 and 2022

¹ Construction in progress are included.

(3) Some land and buildings of the Group's property and equipment are provided as collateral in relation to the loan agreement (Note 38).

(4) During the year, the Group has capitalized borrowing costs amounting to ₩ 10,129 million on property and equipment that are qualifying assets. The capitalization rate of borrowings used to determine the amount of borrowing costs to be capitalized is 3.71%.

(5) The amount that the Group entered into contractual commitments for the acquisition of land and investments in plant and equipment is ₩ 371,543 million.

18. Investment Property

(1) Changes in investment properties for the years ended December 31, 2023, and 2022, are as follows:

(in millions of Korean won)

	2023		
	Land	Buildings	Total
Opening net book amount	₩ -	₩ 20,878	₩ 20,878
Changes in scope of consolidation	7,112	15,143	22,255
Depreciation	-	(2,212)	(2,212)
Transfer	1,854	29,727	31,581
Others	1,472	(167)	1,306
Closing net book amount	₩ 10,438	₩ 63,369	₩ 73,807
December 31, 2023			
Acquisition cost	₩ 10,438	₩ 68,569	₩ 79,007
Accumulated depreciation	-	(5,200)	(5,200)
Net book amount	₩ 10,438	₩ 63,369	₩ 73,807

(in millions of Korean won)

	2022	
	Buildings	
Opening net book amount	₩	101,296
Depreciation		(404)
Transfer		(80,015)
Closing net book amount	₩	20,878
December 31, 2023		
Acquisition cost	₩	22,112
Accumulated depreciation		(1,234)
Net book amount	₩	20,878

KAKAO CORP. and Subsidiaries
Notes to the Consolidated Financial Statements
December 31, 2023 and 2022

(2) The Group provides some of the right-of-use assets held as lease users to third parties as operating leases, classifying the right-of-use assets as investment properties, and amortizing the operating lease period by a fixed number of years.

(3) During the current term, rental income from operating leases generated from investment real estate is ₩ 2,456 million, and related operating expenses (including maintenance and repair costs) are ₩ 982 million. These revenues and expenses are included in operating income and operating expenses, respectively.

19. Intangible Assets

(1) Non-financial services business

Changes in intangible assets for the years ended December 31, 2023 and 2022 are as follows:

(in millions of Korean won)	2023						Total
	Goodwill	Development costs	Industrial property rights	Exclusive rights	Membership / Brand	Other intangible assets ²	
Opening net book amount	₩ 4,477,204	₩ 228	₩ 38,425	₩ 49,290	₩ 411,010	₩ 1,046,195	₩ 6,022,352
Acquisition	-	-	2,335	4,285	18,909	154,109	179,638
Changes in scope of consolidation	1,058,042	-	3,587	367,766	194,045	43,193	1,666,632
Disposal	-	-	(255)	(507)	(3,944)	(82,689)	(87,395)
Amortization	-	(92)	(9,997)	(89,139)	(6,329)	(148,803)	(254,359)
Impairment	(1,483,358)	-	(40,003)	(15,153)	(10,079)	(333,616)	(1,882,210)
Transfer ¹	(2,789)	-	811	-	9,902	8,120	16,044
Others	16,538	8	29	3,778	(174)	7,627	27,805
Closing net book amount	₩ 4,065,637	₩ 144	₩ (5,068)	₩ 320,319	₩ 613,339	₩ 694,136	₩ 5,688,508
December 31, 2023							
Acquisition cost	₩ 7,246,999	₩ 18,402	₩ 88,485	₩ 480,453	₩ 702,586	₩ 1,666,593	₩ 10,203,519
Government grants	-	-	(3)	-	-	(217)	(220)
Accumulated amortization	-	(18,034)	(53,461)	(139,017)	(72,778)	(546,134)	(829,423)
Accumulated impairment	(3,181,362)	(224)	(40,090)	(21,117)	(16,469)	(426,106)	(3,685,369)
Net book amount	₩ 4,065,637	₩ 144	₩ (5,068)	₩ 320,319	₩ 613,339	₩ 694,136	₩ 5,688,508

¹ Long-term advance payments which qualify for recognizing assets are reclassified into intangible assets.

² Includes ₩ 93,434 million of crypto assets held by the Group as at December 31, 2023.

KAKAO CORP. and Subsidiaries
Notes to the Consolidated Financial Statements
December 31, 2023 and 2022

(in millions of
Korean won)

	2022						Total
	Goodwill	Development costs	Industrial property rights	Exclusive rights	Membership / Brand	Other intangible assets ²	
Opening net book amount	₩ 4,900,150	₩ 204	₩ 70,081	₩ 57,561	₩ 386,296	₩ 933,503	₩ 6,347,795
Acquisition	-	218	1,357	959	32,428	231,746	266,709
Changes in scope of consolidation	176,394	42	(45)	11,722	(427)	(121,105)	66,582
Disposal	-	(156)	(193)	(6)	(3,457)	(70,055)	(73,867)
Amortization	-	(278)	(9,364)	(15,658)	(32,053)	(134,360)	(191,714)
Impairment	(701,516)	(856)	(6)	(5,282)	(11,305)	(17,936)	(736,901)
Transfer ¹	29,572	1,036	(24,291)	-	31,940	130,751	169,007
Others	72,604	17	885	(6)	7,589	93,650	174,741
Closing net book amount	<u>₩ 4,477,204</u>	<u>₩ 228</u>	<u>₩ 38,425</u>	<u>₩ 49,290</u>	<u>₩ 411,010</u>	<u>₩ 1,046,195</u>	<u>₩ 6,022,352</u>
December 31, 2023							
Acquisition cost	₩ 6,203,922	₩ 18,434	₩ 79,579	₩ 95,623	₩ 487,380	₩ 1,518,406	₩ 8,403,343
Government grants	-	-	(3)	-	-	(111)	(114)
Accumulated amortization	-	(17,982)	(41,071)	(40,369)	(68,854)	(378,761)	(547,037)
Accumulated impairment	<u>(1,726,718)</u>	<u>(224)</u>	<u>(80)</u>	<u>(5,964)</u>	<u>(7,515)</u>	<u>(93,339)</u>	<u>(1,833,840)</u>
Net book amount	<u>₩ 4,477,204</u>	<u>₩ 228</u>	<u>₩ 38,425</u>	<u>₩ 49,290</u>	<u>₩ 411,010</u>	<u>₩ 1,046,195</u>	<u>₩ 6,022,352</u>

¹ Long-term advance payments which qualify for recognizing assets are reclassified into intangible assets.

² Includes ₩ 85,337 million of crypto assets held by the Group as at December 31, 2023.

Management reviews sales performance based on region and type of sales and manages goodwill at sales level.

KAKAO CORP. and Subsidiaries
Notes to the Consolidated Financial Statements
December 31, 2023 and 2022

(2) Financial services business

Changes in intangible assets for the years ended December 31, 2023 and 2022 are as follows:

(in millions of Korean won)

	2023				
	Development costs	Other intangible assets	Goodwill	Membership	Total
Opening net book amount	₩ 46,403	₩ 9,864	₩ 12,567	₩ 1,727	₩ 70,561
Acquisition	4,771	7,155	-	37	11,964
Disposal	-	-	-	-	-
Amortization	(14,211)	(2,755)	-	(99)	(17,065)
Transfer	4,842	10,071	-	6	14,919
Others	-	47	-	(47)	-
Closing net book amount	₩ 41,805	₩ 24,383	₩ 12,567	₩ 1,624	₩ 80,379
December 31, 2023					
Acquisition cost	₩ 72,809	₩ 32,612	₩ 12,567	₩ 1,624	₩ 119,612
Accumulated amortization	(31,004)	(8,229)	-	-	(39,233)
Net book amount	₩ 41,805	₩ 24,383	₩ 12,567	₩ 1,624	₩ 80,379

(in millions of Korean won)

	2022				
	Development costs	Other intangible assets	Goodwill	Membership	Total
Opening net book amount	₩ 10,829	₩ 9,260	₩ 12,567	₩ 572	₩ 33,228
Acquisition	7,028	2,837	-	1,581	11,446
Disposal	-	(1)	-	(511)	(512)
Amortization	(9,706)	(2,225)	-	(121)	(12,052)
Transfer ¹	38,252	200	-	-	38,452
Closing net book amount	₩ 46,403	₩ 10,071	₩ 12,567	₩ 1,520	₩ 70,561
December 31, 2023					
Acquisition cost	₩ 63,196	₩ 15,385	₩ 12,567	₩ 1,727	₩ 92,875
Accumulated amortization	(16,793)	(5,314)	-	(206)	(22,314)
Net book amount	₩ 46,403	₩ 10,071	₩ 12,567	₩ 1,520	₩ 70,561

¹ Reclassified the amounts classified prepayments before 2022 as intangible assets during 2022.

KAKAO CORP. and Subsidiaries
Notes to the Consolidated Financial Statements
December 31, 2023 and 2022

(3) The following is a summary of goodwill allocation for cash generating units ("CGU"s) operated by management for the years ended December 31, 2023 and 2022:

(in millions of Korean won)	2023					
	Beginning balance	Increase ¹	Changes in scope of consolidation	Impairment ²	Other adjustments ³	Ending balance
Internet portal service and other service	₩ 1,081,856	₩ -	₩ -	₩ -	₩ -	₩ 1,081,856
Music service	231,361	-	-	(231,361)	-	-
Other mobile service	977,328	31,623	(2,667)	(613,017)	13,545	406,811
Game business	1,424,472	71,154	-	(184,280)	27	1,311,373
Commerce service	270,913	-	-	-	-	270,913
Financial services	12,567	-	-	-	-	12,567
Entertainment service	491,275	958,023	-	(454,645)	32	994,684
	<u>₩ 4,489,771</u>	<u>₩ 1,060,799</u>	<u>₩ (2,667)</u>	<u>₩ (1,483,304)</u>	<u>₩ 13,604</u>	<u>₩ 4,078,204</u>

¹ Includes the increased amount due to business combination of SM Entertainment Co., Ltd., Ocean Drive Studio Corp. and others and adjustments due to the finalization of consideration allocation of goodwill which increased through business combination in 2022.

² Includes the impairment amounting to ₩ 280,430 million for SM Entertainment Co., Ltd., ₩ 459,788 million for TAPAS ENTERTAINMENT, INC. (formerly, Radish Media, Inc.), ₩ 142,955 million for Lionheart Studio Corp., ₩ 231,361 million for Melon business division and others.

³ Included foreign currency effects from acquisition of foreign companies.

(in millions of Korean won)	2022				
	Beginning balance	Changes in scope of consolidation ¹	Impairment ²	Other adjustments ³	Ending balance
Internet portal service and other service	₩ 1,081,856	₩ -	₩ -	₩ -	₩ 1,081,856
Music service	302,079	-	(70,718)	-	231,361
Other mobile service	1,356,976	150,908	(602,457)	71,900	977,328
Game business	1,418,770	(24,574)	-	30,277	1,424,472
Commerce service	270,913	-	-	-	270,913
Financial services	12,567	-	-	-	12,567
Entertainment service	469,556	50,061	(28,342)	-	491,275
	<u>₩ 4,912,717</u>	<u>₩ 176,394</u>	<u>₩ (701,516)</u>	<u>₩ 102,177</u>	<u>₩ 4,489,771</u>

¹ Includes the amounts increased through the acquisition of equity shares in KM Park CO., Ltd. and EDAM Entertainment Corp. during 2022.

KAKAO CORP. and Subsidiaries

Notes to the Consolidated Financial Statements

December 31, 2023 and 2022

² Includes the amount of impairment of TAPAS ENTERTAINMENT, INC. (formerly, Radish Media, Inc.) during 2022.

³ Includes foreign currency effects from acquisition of foreign companies.

(4) The Group annually tests impairment of its goodwill. The recoverable amounts of CGU or CGUs are the higher of fair value, less costs to sell, or value in use. These calculations use cash flow projections after tax based on mid- and long-term business plan approved by management.

Cash flows beyond the business plan are extrapolated using the estimated long-term growth rates stated below. These growth rates do not exceed the expected long-term average growth rate of the industry report.

The following table sets out major assumption, operating profit rate, revenue growth rate, perpetual growth rate and discount rate used in the value-in-use calculations for those CGUs that have significant goodwill allocated to them. Additionally, where there has been an impairment loss in a CGU, the recoverable amount is also presented below.D

(in millions of Korean won)	2023						
	Internet portal service and other service ¹	Music service	Other mobile service	Game business	E-commerce service ²	Financial services ³	Entertain- ment service
Operating profit rate	15.6% ~ 18.9%	5.9% ~ 6.6%	(-)590.4% ~ 42.3%	(-)150.1% ~ 70.9%	23.5% ~ 34.2%	(-)51.6% ~ 34.1%	(-)187.1% ~ 19.6%
Revenue growth rate	3.5% ~ 6.6%	(-)10.1% ~ 0.6%	(-)31.1% ~ 203.4%	(-)35.5% ~ 145.5%	7.6% ~ 9.3%	21.7% ~ 97.2%	(-)54.1% ~ 742.2%
Perpetual growth rate	1.0%	0.0%	0.0% ~ 1.0%	0.0% ~ 1.0%	1.0%	1.0%	0.0% ~ 1.0%
Discount rate	10.2%	14.8%	12.3% ~ 16.5%	12.8% ~ 15.8%	10.1%	15.1%	10.3% ~ 16.6%
Recoverable amount	N/A	₩ 157,979	₩ 1,391,792	₩ 2,813,415	N/A	N/A	₩ 3,714,928

¹ If a perpetual growth rate is lower than the management's estimate by 0.5%, the value in use will be reduced by 3.6%. If post-tax discount rate used in estimation is higher than the management's estimate by 1.0%, the value in use will be reduced by 9.5%.

² If a perpetual growth rate is lower than the management's estimate by 0.5%, the value in use will be reduced by 3.8%. If post-tax discount rate used in estimation is higher than the management's estimate by 1.0%, the value in use will be reduced by 10.0%.

³ If a perpetual growth rate is lower than the management's estimate by 0.5%, the value in use will be reduced by 1.8%. If post-tax discount rate used in estimation is higher than the management's estimate by 1.0%, the value in use will be reduced by 9.8%.

KAKAO CORP. and Subsidiaries
Notes to the Consolidated Financial Statements
December 31, 2023 and 2022

(in millions of
Korean won)

	2022			
	Internet portal service and other service ¹	Music service	Financial services	Other mobile service, game business, commerce service, other contents service, entertainment service and others
Operating profit rate	13.2% ~ 24.0%	10.3% ~ 11.9%	(-)51.9% ~ 33.6%	(-)309.2% ~ 85.6%
Revenue growth rate	6.9% ~ 8.0%	1.9% ~ 7.3%	27.2% ~ 68.4%	(-)80.9% ~ 246.6%
Perpetual growth rate	1.0%	1.0%	1.0%	0.0% ~ 1.0%
Discount rate	10.5%	12.8%	15.6%	8.4% ~ 17.3%

¹ When estimating the recoverable amount, if a perpetual growth rate applied to CGU is lower than the management's estimate by 0.5%, the recoverable amount will be reduced by 3.4%. If the discount rate applied to the estimation is higher than the management's estimate by 0.5%, the recoverable amount will decrease by 5.2%.

These assumptions were used for each cash flow generation unit within the operating segment.

The discount rate is the discount rate that reflects the specific risk associated with the segment to which the CGUs (group) belongs.

As a result of impairment assessment for goodwill, the Group determined that the carrying amount of the internet portal service and other service and financial services and e-commerce service cash-generating units will exceed the recoverable amount, and did not recognize impairment loss on goodwill.

KAKAO CORP. and Subsidiaries
Notes to the Consolidated Financial Statements
December 31, 2023 and 2022

(5) Crypto assets

The Group owns crypto assets for various business purposes.

The Group was allocated the token in return for provision of services by participating in establishment of the platform of crypto assets, Klaytn and BORA, and token development process as a developer company. However, there is no amount recognized as book amount.

Status of acquisition and amount and quantity on hand of crypto assets are as follows:

(in thousands of Korean won and in unit)

Name	Listing status ¹	Quantity				Fair value (per unit) ²	
		December 31, 2022	Acquisition	Disposal	December 31, 2023	December 31, 2023	December 31, 2022
KLAY	Listed	₩ 972,344	₩ 267,974	₩ (43,737)	₩ 1,196,581	₩ -	₩ -
BORA	Listed	339,691	18,116	(42,885)	314,922	-	-
BTC	Listed	-	-	-	-	55,388	21,931
ETH	Listed	-	-	-	-	2,944	1,600
USDC	Listed	2,318	2,855	(2,712)	2,461	1	1
USDT	Listed	1,270	1,165	(350)	2,086	1	1
WEMIX	Listed	6,535	139	-	6,674	4	1
ISK	Listed	14,435	19,501	-	33,935	-	-
MBX	Listed	6,000	434	(291)	6,142	1	2
OAS	Listed	50,000	-	-	50,000	-	-
Others	-	799,615	909,160	(11,431)	1,697,344	-	-

¹ Listed in domestic and overseas exchanges such as BINANCE.COM, BITHUMB.COM and others.

² Calculated using monthly average market price as at the end of the reporting period provided by COINMARKETCAP.COM.

The amount recognized as impairment loss on intangible assets is ₩ 18,734 million (2022: ₩ 2,952 million) for the year ended December 31, 2023.

KAKAO CORP. and Subsidiaries

Notes to the Consolidated Financial Statements

December 31, 2023 and 2022

(in millions of Korean won)

Name	Line item	Valuation Technique	Acquisition Methods	2023			2022		
				Acquisition cost	Accumulated impairment	Book amount	Acquisition cost	Accumulated impairment	Book amount
KLAY	Intangible assets	Cost method	Paid acquisition, Block rewards and others	₩ 52,932	₩ (947)	₩ 51,986	₩ 50,120	₩ (947)	₩ 49,173
BORA	Intangible assets	Cost method	Paid acquisition	1,394	(186)	1,208	1,204	(365)	839
BTC	Intangible assets	Cost method	Paid acquisition	160	-	160	98	-	98
ETH	Intangible assets	Cost method	Paid acquisition	3,166	-	3,166	2,942	-	2,942
USDC	Intangible assets	Cost method	Paid acquisition	3,669	(1,147)	2,522	1,435	-	1,435
USDT	Intangible assets	Cost method	Paid acquisition	3,838	(433)	3,405	3,569	(433)	3,136
WEMIX	Intangible assets	Cost method	Paid acquisition, Block rewards	8,006	-	8,006	3,382	-	3,382
ISK	Intangible assets	Cost method	Paid acquisition	3,666	-	3,666	3,042	-	3,042
MBX	Intangible assets	Cost method	Paid acquisition	1,289	-	1,289	1,267	-	1,267
OAS	Intangible assets	Cost method	Paid acquisition, Block rewards and others	35,675	(17,649)	18,026	11,906	(1,207)	10,699

Acquired crypto assets were sold by exchange transaction with crypto assets, and the amount recognized as gain (loss) on sales of intangible assets is ₩ (-)228 million (2022: ₩ 61,160 million) for the year ended December 31, 2023.

(in millions of Korean won and in unit)

	2023 ¹				2022 ¹			
	Disposal quantity	Disposal amount	Book amount	Gain (loss) on sales	Disposal quantity	Disposal amount	Book amount	Gain (loss) on sales
KLAY ²	₩ 2,963	₩ 718	₩ 668	₩ 50	₩ 3,215	₩ 562	₩ 361	₩ 201
ETH	-	6	6	-	-	-	-	-
USDC	2,712	3,526	3,527	(1)	1,226	1,582	1,583	(1)
USDT	350	448	433	15	1,005	1,299	1,273	26
WEMIX	-	-	-	-	10,800	71,366	3,557	67,809
ISK	-	-	-	-	3,000	728	684	44
MBX	291	154	154	1	-	-	-	-
Others	11,431	2,761	3,053	(292)	493,033	1,923	8,841	(6,918)

¹ Disposal status excluding BORA

² Disposal status of quantity acquired by Block rewards

The fair value of crypto assets held by the Group as at December 31, 2023 is changing significantly after December 31, 2023, however, the effect of these significant changes on the financial statements cannot be estimated as at the reporting date. The possible adjustments due to such uncertainty are not reflected in the Group's financial statements.

KAKAO CORP. and Subsidiaries
Notes to the Consolidated Financial Statements
December 31, 2023 and 2022

20. Leases

(1) Non-financial services business

1) Amounts recognized in the consolidated statements of financial position

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

<i>(in millions of Korean won)</i>	2023	2022
Right-of-use assets		
Properties	₩ 1,608,970	₩ 1,599,597
Machinery	147,536	105,873
Vehicles	14,395	10,121
	<u>₩ 1,770,900</u>	<u>₩ 1,715,592</u>

<i>(in millions of Korean won)</i>	2023	2022
Lease liabilities		
Current	₩ 284,615	₩ 244,391
Non-current	1,730,858	1,643,416
	<u>₩ 2,015,473</u>	<u>₩ 1,887,807</u>

Additions to the right-of-use assets during the 2023 financial year were ₩ 55,308 million (2022: ₩ 316,358 million). The amount does not include any right-of-use asset that have been derecognized due to sublease.

KAKAO CORP. and Subsidiaries
Notes to the Consolidated Financial Statements
December 31, 2023 and 2022

2) Amounts recognized in the consolidated statements of comprehensive income

The consolidated statements of comprehensive income show the following amounts relating to leases:

<i>(in millions of Korean won)</i>	2023		2022	
Depreciation of right-of-use assets				
Properties	₩	202,078	₩	162,504
Machinery		56,497		43,182
Vehicles		5,747		4,548
	₩	<u>264,322</u>	₩	<u>210,234</u>
Interest expense on lease liabilities (included in finance cost)	₩	74,698	₩	62,238
Expense relating to short-term leases (included in operating expenses)		9,938		4,458
Expense relating to leases of low-value assets that are not short-term leases (included in operating expenses)		3,508		1,575
Expense relating to variable lease payments not included in lease liabilities (included in operating expenses)		45,284		18,500
Income from subleases of right-of-use assets		6,659		6,584

The total cash outflow for leases in 2023 was ₩ 347,696 million (2022: ₩ 209,292 million).

3) Changes in lease liabilities

Changes in lease liabilities for the years ended December 31, 2023 and 2022, are as follows:

<i>(in millions of Korean won)</i>	2023		2022	
Beginning balance	₩	1,887,807	₩	1,487,685
Changes in scope of consolidation		104,092		(106,556)
Increase		264,311		665,778
Payments		(288,804)		(184,759)
Disposals		(23,416)		(31,554)
Amortization of present value discounts		74,698		62,238
Others		(3,215)		(5,025)
Ending balance	₩	<u>2,015,473</u>	₩	<u>1,887,807</u>

KAKAO CORP. and Subsidiaries
Notes to the Consolidated Financial Statements
December 31, 2023 and 2022

4) Maturity analysis of lease receivables

The following table sets out a maturity analysis of lease receivables, showing the undiscounted lease payments to be received after the reporting date.

<i>(in millions of Korean won)</i>		2023
Less than one year	₩	13,474
One to two years		26,977
Two to three years		26,849
Three to four years		26,746
Four to five years		24,155
More than five years		5,139
Total undiscounted lease receivables		123,338
Unearned finance income		(27,683)
Net investment in the lease	₩	95,655

The following table sets out a maturity analysis of lease payments, showing the undiscounted lease payments to be received after the reporting date.

<i>(in millions of Korean won)</i>		2023
Less than one year	₩	26,138
One to two years		26,003
Two to three years		25,283
Three to four years		25,727
Four to five years		24,790
More than five years		83,702
	₩	211,642

(2) Financial services business

1) Amounts recognized in the consolidated statements of financial position

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

<i>(in millions of Korean won)</i>		2023		2022
Right-of-use assets				
Properties	₩	691	₩	1,282
Machinery		1,244		1,625
Vehicles		321		186
	₩	2,256	₩	3,093

KAKAO CORP. and Subsidiaries
Notes to the Consolidated Financial Statements
December 31, 2023 and 2022

<i>(in millions of Korean won)</i>	2023	2022
Lease liabilities	₩ 1,711	₩ 2,327

Deductions in the right-of-use assets during the 2023 financial year were ₩ 837 million (2022: ₩ 8,107 million). The amount does not include any right-of-use asset that have been derecognized due to sublease.

2) Amounts recognized in the consolidated statements of comprehensive income

The consolidated statements of comprehensive income shows the following amounts relating to leases:

<i>(in millions of Korean won)</i>	2023	2022
Depreciation of right-of-use assets		
Properties	₩ 570	₩ 792
Machinery	806	513
Vehicles	140	173
	<u>₩ 1,516</u>	<u>₩ 1,478</u>
Interest expense on lease liabilities (included in finance cost)	₩ 83	₩ 101
Expense relating to short-term leases (included in operating expenses)	135	354
Expense relating to leases of low-value assets that are not short-term leases (included in operating expenses)	1,139	985

The total cash outflow for leases in 2023 was ₩ 2,567 million (2022: ₩ 4,355 million).

3) Changes in lease liabilities

Changes in lease liabilities for the years ended December 31, 2023 and 2022, are as follows:

<i>(in millions of Korean won)</i>	2023	2022
Beginning balance	₩ 2,327	₩ 10,266
Increase	995	6,395
Payments	(1,455)	(3,017)
Disposals	(81)	(1,449)
Amortization of present value discounts	83	101
Others	(158)	(9,969)
Ending balance	<u>₩ 1,711</u>	<u>₩ 2,327</u>

KAKAO CORP. and Subsidiaries

Notes to the Consolidated Financial Statements

December 31, 2023 and 2022

21. Borrowings and Bonds

Short-term borrowings as at December 31, 2023 and 2022, are as follows:

(in millions of Korean won)

Category	Creditor	Annual interest rate (%) as at December 31, 2023	Latest maturity	2023	2022
Exchangeable bonds ¹	12 th foreign currency exchangeable bonds	-	-	₩ -	₩ 28,768
	Discount on issuance of bonds			-	(57)
				-	28,710
Convertible bonds ^{2,3}	1 st non-guaranteed, non-interested private convertible bonds	0.0%	March 2026	463,354	-
	Discount on issuance of bonds			(1,688)	-
				461,667	-
Convertible bonds ^{3,4}	4 th private convertible bonds	0.0%	March 2027	10,000	-
	Conversion right adjustments			(5,401)	-
				4,599	-
Debentures	Corporate bonds	4.6%	July 2024	100,000	-
	Discount on issuance of bonds			(82)	-
				99,918	-
Loans for operation capital	NongHyup Bank	-	-	-	8,340
Loans for operation capital ⁵	Shinhan Bank	3.1%~5.8%	May 2024 ~ March 2027	353,085	77,900
Loans for operation capital	Woori Bank	5.1%~5.5%	January 2024 ~ May 2024	35,000	30,019
Loans for operation capital	Kookmin Bank	4.9%~7.1%	April 2024 ~ November 2024	175,000	192,271
Loans for operation capital ⁵	KB Securities, Korea Development Bank and others	1.0%~9.0%	January 2024 ~ March 2029	208,380	265,603
Commercial paper	Shinhan Bank and others	4.9%~5.4%	January 2024 ~ May 2024	279,000	425,000
Financial institutions and others	Individual and others	3.0%~4.6%	January 2024 ~ August 2024	2,082	55,923
Redeemable convertible preferred shares and others ^{3,6}				10,722	13,118
				₩ 1,629,452	₩ 1,096,884

¹ \$22,700,000 of the 12th foreign currency exchangeable bonds were repaid as it matured during the year ended December 31, 2023.

² Convertible bonds issued by Kakao Games Corp., a subsidiary.

³ It was classified as short-term borrowings as the investor's early redemption right matures within one year.

⁴ Convertible bonds issued by KEYEAST Co., Ltd., a subsidiary.

KAKAO CORP. and Subsidiaries

Notes to the Consolidated Financial Statements

December 31, 2023 and 2022

⁵ Included the amount to be redeemed within one year among long-term borrowings with a condition of installment redemption.

⁶ Included ₩ 1,009 million of convertible bonds issued by the subsidiary in 2022.

Long-term borrowings and long-term lease liabilities as at December 31, 2023 and 2022, are as follows:

(in millions of Korean won)		Annual interest rate (%) as at December 31, 2023	Latest maturity date	2023	2022
Category	Creditor				
Loans for operation capital	Kookmin Bank	5.3%	June 2025	₩ 189,736	₩ 179,710
Loans for operation capital	Woori Bank	5.3%~5.7%	June 2025 ~ September 2026	93,504	45,941
Loans for operation capital	Industrial Bank of Korea and others	1.0%~7.2%	January 2025 ~ March 2029	512,388	389,859
Convertible bonds	Hana Bank and others	-	-	-	460,918
Debentures	Corporate bonds	-	-	-	99,753
Others	Ryan Mobility 1 st Co.	5.4%	October 2025	50,000	-
				<u>₩ 845,628</u>	<u>₩ 1,176,181</u>

Movements in the borrowings for the years ended December 31, 2023 and 2022, are as follows:

(in millions of Korean won)	2023	2022
Beginning balance	₩ 2,273,065	₩ 1,811,882
Changes in scope of consolidation	19,297	19,282
Additions	1,588,091	1,974,150
Repayments	(1,447,761)	(1,561,148)
Conversion to ordinary shares	-	(41,699)
Amortization of present value discounts	3,679	6,101
Others ¹	38,709	64,497
Ending balance	<u>₩ 2,475,080</u>	<u>₩ 2,273,065</u>

¹ Others include currency translation effects.

Details of convertible bonds issued by the Group are as follows:

Details

Type ¹	1 st non-guaranteed, non-interested private convertible bonds		
Principal amount	₩ 500,000 million		
Interest rate	Coupon rate	0%	
	Yield rate	0%	

KAKAO CORP. and Subsidiaries
Notes to the Consolidated Financial Statements
December 31, 2023 and 2022

Details

Date of issuance	March 31, 2021
Date of maturity ²	March 31, 2026
Conversion price (<i>in Korean won</i>)	₩ 52,100
Conversion period	From one year after the date of issuance to one month before the maturity date of repayment
Conversion price adjustments	Adjusted in the event of issuance of stock-related bonds below the market price, capital increase with and without consideration, stock dividends and other occasions prescribed in the agreement
Investor's early redemption right (Put Option)	Allows for request every six months from the date 3 years after the issuance date
Issuer's early redemption right (Call Option)	Allows for request from the date 12 months after the issuance date until the date 54 months after issuance

¹ Convertible bonds issued by Kakao Games Corp., a subsidiary of the Parent Company.

² It was classified as short-term borrowings as the investor's early redemption right matures within one year.

In addition to the above, as at December 31, 2023, there was one convertible bond issued by a subsidiary, KEYEAST Co., Ltd., and the amount of ₩ 4,599 million was recorded in short-term borrowings.

Details of redeemable convertible preferred shares issued by subsidiaries as at December 31, 2023, are as follows:

<i>(in millions of Korean won)</i>		Details			
	METABORA Co., Ltd.	METABORA Co., Ltd.	METABORA Co., Ltd.	METABORA Co., Ltd.	
Date of issue	May 2018	August 2019	July 2020	April 2021	
Value at issue	₩ 7,000	₩ 2,300	₩ 1,000	₩ 3,900	
Dividend rate for preferred shares	1% of face value	1% of issue value	1% of issue value	1% of issue value	
Guaranteed yield upon redemption	8%	5%	5%	5%	
Conversion period	From the day after issuance date to the day before 10 years from issuance date	From the day after payment date to the day before 10 years from payment date	From the day after payment date to the day before 10 years from payment date	From the day after payment date to the day before 10 years from payment date	
Conversion rate	1 preferred share for 1 ordinary share (includes certain adjustments in IPO offering price)	1 preferred share for 1 ordinary share (includes certain adjustments in IPO offering price)	1 preferred share for 1 ordinary share (includes certain adjustments in IPO offering price)	1 preferred share for 1 ordinary share (includes certain adjustments in IPO offering price)	
Redemption period	Redeemable from one year after issuance date	Redeemable from three years after payment date	Redeemable from three years after payment date	Redeemable from three years after payment date	

KAKAO CORP. and Subsidiaries
Notes to the Consolidated Financial Statements
December 31, 2023 and 2022

22. Net Defined Benefit Liabilities

Non-financial services business

Details of net defined benefit liabilities (assets) recognized in the statements of financial position as at December 31, 2023 and 2022, are as follows:

<i>(in millions of Korean won)</i>	2023	2022
Present value of defined benefit obligations	₩ 396,058	₩ 302,208
Fair value of plan assets	(434,032)	(353,143)
Net defined benefit assets	<u>₩ (37,974)</u>	<u>₩ (50,934)</u>

Movements in the defined benefit obligations for the years ended December 31, 2023 and 2022, are as follows:

<i>(in millions of Korean won)</i>	2023	2022
Beginning balance	₩ 302,208	₩ 248,131
Increase due to change in scope of consolidation	18,648	871
Current service cost	78,506	71,578
Past service cost	2,980	1,421
Interest expense	16,345	7,502
Remeasurements:		
Actuarial loss arising from change in demographic assumptions	1,393	1,799
Actuarial loss (gain) arising from change in financial assumptions	16,025	(38,245)
Actuarial loss arising from experience adjustments	10,535	37,350
Payments from plans	(50,270)	(27,540)
Transfer from (to) affiliated companies	(283)	268
Others	(28)	(925)
Ending balance	<u>₩ 396,058</u>	<u>₩ 302,208</u>

KAKAO CORP. and Subsidiaries
Notes to the Consolidated Financial Statements
December 31, 2023 and 2022

Movements in the fair value of plan assets for the years ended December 31, 2023 and 2022, are as follows:

<i>(in millions of Korean won)</i>	2023		2022	
Beginning balance	₩	353,143	₩	254,428
Increase (decrease) due to change in scope of consolidation		18,522		(1,047)
Interest income		19,257		7,688
Contribution		87,978		120,729
Payments from plans		(43,676)		(25,138)
Transfer from (to) affiliated companies		3,621		(158)
Remeasurements:				
Return on plan assets (excluding amounts included in interest income)		(5,214)		(2,434)
Others		401		(925)
Ending balance	₩	<u>434,032</u>	₩	<u>353,143</u>

The amounts recognized in the consolidated statements of comprehensive income for the years ended December 31, 2023 and 2022, are as follows:

<i>(in millions of Korean won)</i>	2023		2022	
Current service cost	₩	78,506	₩	71,578
Past service cost		2,980		1,421
Net interest cost		(2,912)		(186)
	₩	<u>78,574</u>	₩	<u>72,812</u>

Total service cost from defined benefit plan amounting to ₩ 78,574 million and ₩ 72,812 million is included in operating expenses for the years ended December 31, 2023 and 2022, respectively. In addition, total service cost from defined contribution plan was ₩ 24,895 million and ₩ 11,397 million for the years ended December 31, 2023 and 2022, respectively.

The significant actuarial assumptions as at December 31, 2023 and 2022, are as follows:

<i>(in percentage, %)</i>	2023	2022
Discount rate	4.13% ~ 5.80%	3.50% ~ 6.51%
Salary growth rate	3.00% ~ 7.20%	3.56% ~ 7.20%

KAKAO CORP. and Subsidiaries
Notes to the Consolidated Financial Statements
December 31, 2023 and 2022

The sensitivity of the defined benefit liabilities to changes in the principal assumptions is:

<i>(in percentage)</i>	Changes in principal assumption	Changes in the amount of liabilities
Discount rate	1% decrease/ 1% increase	6.4% increase / 6.7% decrease
Salary growth rate	1% decrease/ 1% increase	6.0% decrease / 5.5% increase

A decrease in corporate bond yields will increase defined benefit liabilities, although this will be partially offset by an increase in the value of the plans' bond holdings.

The above sensitivity analyses are based on a change in an assumption while holding all other assumptions constant. In practice, this is unlikely to occur, and changes in some of the assumptions may be correlated. The sensitivity of the defined benefit obligation to changes in principal actuarial assumptions is calculated using the projected unit credit method, the same method applied when calculating the defined benefit obligations recognized on the consolidated statement of financial position.

Plan assets as at December 31, 2023 and 2022, consist of:

<i>(in millions of Korean won)</i>	2023	2022
Equity linked bond	₩ -	₩ 3,296
Time deposits	180,753	185,015
Financial instruments with fixed rate	190,778	159,464
Interest guarantee insurance	2,372	3,940
Others	60,130	1,427
	<u>₩ 434,032</u>	<u>₩ 353,143</u>

Management of the Group estimates ₩ 81,249 million will be contributed to plan assets in the next fiscal year.

The weighted average duration of the defined benefit obligation is 4.49 ~ 11.48 years.

The Group annually reviews the level of fund accumulated in the plan and operates a policy to compensate for any deficit in the fund.

KAKAO CORP. and Subsidiaries
Notes to the Consolidated Financial Statements
December 31, 2023 and 2022

Financial services business

Details of net defined benefit liabilities (assets) recognized in the statements of financial position as at December 31, 2023 and 2022, are as follows:

<i>(in millions of Korean won)</i>	2023	2022
Present value of defined benefit obligations	₩ 5,439	₩ 2,608
Fair value of plan assets	(6,651)	(2,898)
Net defined benefit assets	₩ (1,212)	₩ (289)

Movements in the defined benefit obligations for the years ended December 31, 2023 and 2022, are as follows:

<i>(in millions of Korean won)</i>	2023	2022
Beginning balance	₩ 2,608	₩ 1,480
Current service cost	1,885	1,199
Interest expense	141	50
Past service cost	447	-
Remeasurements:		
Actuarial loss (gain) arising from change in demographic assumptions	(68)	35
Actuarial loss (gain) arising from change in financial assumptions	260	(736)
Actuarial loss arising from experience adjustments	805	754
Payments from plans	(1,133)	(315)
Transfer from affiliated companies	494	141
Ending balance	₩ 5,439	₩ 2,608

Movements in the fair value of plan assets for the years ended December 31, 2023 and 2022, are as follows:

<i>(in millions of Korean won)</i>	2023	2022
Beginning balance	₩ 2,898	₩ 1,142
Interest income	148	33
Contribution	4,265	1,876
Payments from plans	(1,145)	(297)
Remeasurements:		
Return on plan assets (excluding amounts included in interest income)	(9)	2
Transfer from affiliated companies	494	141
Ending balance	₩ 6,651	₩ 2,898

KAKAO CORP. and Subsidiaries
Notes to the Consolidated Financial Statements
December 31, 2023 and 2022

The amounts recognized in the consolidated statements of comprehensive income for the years ended December 31, 2023 and 2022, are as follows:

<i>(in millions of Korean won)</i>	2023	2022
Current service cost	₩ 1,885	₩ 1,199
Net interest cost	(7)	17
Past service cost	447	-
	<u>₩ 2,325</u>	<u>₩ 1,216</u>

Total service cost from defined benefit plan amounting to ₩ 2,325 million and ₩ 1,216 million is included in operating expenses for the years ended December 31, 2023 and 2022, respectively. In addition, total service cost from defined contribution plan was ₩ 550 million and ₩ 607 million for the years ended December 31, 2023 and 2022, respectively.

The significant actuarial assumptions as at December 31, 2023 and 2022, are as follows:

<i>(in percentage, %)</i>	2023	2022
Discount rate	5.05% ~ 5.57%	6.03%~6.13%
Salary growth rate	4.00%	4.00%

The sensitivity of the defined benefit liabilities to changes in the principal assumptions is:

<i>(in percentage)</i>	Changes in principal assumption	Changes in the amount of liabilities
Discount rate	1% decrease/ 1% increase	7.0% increase / 6.0% decrease
Salary growth rate	1% decrease/ 1% increase	6.3% decrease / 7.0% increase

A decrease in corporate bond yields will increase defined benefit liabilities, although this will be partially offset by an increase in the value of the plans' bond holdings.

The above sensitivity analyses are based on a change in an assumption while holding all other assumptions constant. In practice, this is unlikely to occur, and changes in some of the assumptions may be correlated. The sensitivity of the defined benefit obligation to changes in principal actuarial assumptions is calculated using the projected unit credit method, the same method applied when calculating the defined benefit obligations recognized on the consolidated statement of financial position.

KAKAO CORP. and Subsidiaries
Notes to the Consolidated Financial Statements
December 31, 2023 and 2022

Plan assets as at December 31, 2023 and 2022, consist of:

<i>(in millions of Korean won)</i>	2023	2022
Interest guarantee insurance	₩ 3,819	₩ 1,873
Others	2,833	1,025
	<u>₩ 6,651</u>	<u>₩ 2,898</u>

Management of the Group estimates ₩ 3,058 million will be contributed to plan assets in the next fiscal year.

The weighted average duration of the defined benefit obligation is 5.25 ~ 8.64 years.

The Group annually reviews the level of fund accumulated in the plan and operates a policy to compensate for any deficit in the fund.

23. Other Long-term and Short-term Employee Benefits Liabilities

The Group classifies paid absences recognized in respect of service rendered by employees in the current period and long-term paid absences that are expected to be settled within 12 months after the end of the reporting period in which the employees render the related services as short-term employee benefits liabilities, and the amounts that are expected to be settled after 12 months are classified as long-term employee benefits liabilities.

Details of other long-term and short-term employee benefits liabilities as at December 31, 2023 and 2022, are as follows:

Non-financial services business

<i>(in millions of Korean won)</i>	2023	2022
Short-term employee benefits liabilities	₩ 207,122	₩ 156,061
Long-term employee benefits liabilities	70,612	73,168

Financial services business

<i>(in millions of Korean won)</i>	2023	2022
Long-term and short-term employee benefits liabilities	₩ 7,278	6,885

KAKAO CORP. and Subsidiaries
Notes to the Consolidated Financial Statements
December 31, 2023 and 2022

24. Tax Expense and Deferred Income Tax

Income tax expense for the years ended December 31, 2023 and 2022, consists of:

<i>(in millions of Korean won)</i>	2023	2022
Current tax:		
Current tax on profit for the year	₩ 238,564	₩ (108,938)
Adjustments in respect of prior years	14,688	19,013
Current tax charged directly to equity	(4,201)	(4,201)
Total current tax	<u>249,051</u>	<u>(94,126)</u>
Deferred income tax:		
Origination and reversal of temporary differences	87,482	(566,994)
Decrease in temporary differences due to change in scope of consolidation	(201,925)	(3,902)
Deferred income tax charged or credited directly to equity	33,821	866,928
Total deferred income tax	<u>(80,622)</u>	<u>296,032</u>
Income tax expense	<u>₩ 168,429</u>	<u>₩ 201,906</u>

Reconciliation between actual income tax expense and amount computed by applying the statutory tax rate to profit before income tax for the years ended December 31, 2023 and 2022, is as follows:

<i>(in millions of Korean won)</i>	2023	2022
Profit (loss) before income tax expense	₩ (1,648,240)	₩ 1,268,900
Income tax expense computed at statutory tax rate	(380,743)	293,116
Tax effects of:		
Income not subject to tax	(33,246)	(141,914)
Expenses not deductible for tax purposes	101,786	152,779
Changes in valuation allowance of deferred income tax asset	470,343	49,445
Adjustments in respect of prior years	14,688	19,013
Effects of the tax system for recirculation of corporate income	(9,100)	5,087
Tax credits	4,701	(175,621)
Income tax expense	<u>₩ 168,429</u>	<u>₩ 201,906</u>

KAKAO CORP. and Subsidiaries

Notes to the Consolidated Financial Statements

December 31, 2023 and 2022

The tax effect relating to components of other comprehensive income (expenses) for the years ended December 31, 2023 and 2022, is as follows:

(in millions of Korean won)	2023			2022		
	Before tax	Tax effect	After tax	Before tax	Tax effect	After tax
Other comprehensive income						
Gains (losses) on valuation of equity instruments at fair value through other comprehensive income	₩ 184,061	₩ (46,628)	₩ 137,433	₩ (2,250,879)	₩ 529,078	₩ (1,721,801)
Remeasurements of net defined benefit liabilities	(34,173)	7,570	(26,603)	(3,389)	1,145	(2,244)
Share of other comprehensive income (loss) of associates	36,125	(2,823)	33,302	(51,081)	533	(50,549)
Foreign currency translation adjustments	(41,989)	(18)	(42,007)	49,085	(4,285)	44,799
	<u>₩ 144,024</u>	<u>₩ (41,900)</u>	<u>₩ 102,124</u>	<u>₩ (2,256,264)</u>	<u>₩ 526,470</u>	<u>₩ (1,729,794)</u>

The aggregate current and deferred income tax relating to items that are charged or credited directly to equity for the years ended December 31, 2023 and 2022, is as follows:

(in millions of Korean won)	2023			2022		
	Before tax	Tax effect	After tax	Before tax	Tax effect	After tax
Other reserves						
Gains (losses) on sales of treasury stock	₩ 16,547	₩ (4,201)	₩ 12,346	₩ 16,547	₩ (4,201)	₩ 12,346
Other component of equity	-	(3,166)	-	-	20,164	-
Others	-	78,886	-	(1,380,573)	320,293	(1,060,280)
	<u>₩ 16,547</u>	<u>₩ 71,519</u>	<u>₩ 12,346</u>	<u>₩ (1,364,026)</u>	<u>₩ 336,256</u>	<u>₩ (1,047,934)</u>

Deferred income tax assets (liabilities) recognized in the consolidated statements of financial position as at December 31, 2023 and 2022, are as follows:

(in millions of Korean won)	2023	2022
Deferred income tax assets		
Deferred income tax asset to be recovered after more than 12 months	₩ 1,181,053	₩ 1,138,082
Deferred income tax asset to be recovered within 12 months	105,409	174,506
	<u>1,286,462</u>	<u>1,312,588</u>
Deferred income tax liabilities		

KAKAO CORP. and Subsidiaries
Notes to the Consolidated Financial Statements
December 31, 2023 and 2022

Deferred income tax liability to be recovered after more than 12 months	(1,460,326)	(1,415,645)
Deferred income tax liability to be recovered within 12 months	(26,223)	(9,550)
	<u>(1,486,550)</u>	<u>(1,425,195)</u>
Deferred income tax liabilities, net	₩ <u>(200,088)</u>	₩ <u>(112,606)</u>

The gross movement in the deferred income tax assets (liabilities) for the years ended December 31, 2023 and 2022, are as follows:

<i>(in millions of Korean won)</i>	2023	2022
Beginning balance	₩ (112,606)	₩ (679,600)
Changes in scope of consolidation	(201,925)	(3,902)
Deferred income tax charged to profit or loss	80,622	(296,032)
Deferred income tax charged to other comprehensive income	(41,900)	526,470
Deferred income tax charged to other equity	75,721	340,457
Ending balance	₩ <u>(200,088)</u>	₩ <u>(112,606)</u>

The movements in deferred income tax assets and liabilities for the years ended December 31, 2023 and 2022, without taking into consideration the offsetting of balances within the same tax jurisdiction, are as follows:

<i>(in millions of Korean won)</i>	2023					
	Beginning balance	Changes in scope of consolidation	Income statement	Other comprehensive income	Other equity	Ending balance
Deferred income tax liabilities						
Accrued revenue	₩ (7,105)	₩ (300)	₩ (2,515)	₩ -	₩ -	₩ (9,920)
Property and equipment	(7,280)	-	1,261	-	-	(6,019)
Intangible assets	(290,773)	(204,688)	120,534	-	-	(374,927)
Financial assets at fair value through profit or loss	(43,578)	-	8,737	-	-	(34,841)
Financial assets at fair value through other comprehensive income	(163,382)	-	(3,159)	(46,628)	-	(213,169)
Plan assets	(67,615)	-	(12,002)	-	-	(79,617)
Derivative financial instruments	(1,362)	-	(872)	-	-	(2,234)
Lease	(526,910)	(15,593)	77,589	-	-	(464,913)
Investments in subsidiaries and associates	(321,149)	(16,752)	69,678	(2,823)	-	(271,047)
Goodwill	(10,737)	-	10,737	-	-	-

KAKAO CORP. and Subsidiaries
Notes to the Consolidated Financial Statements
December 31, 2023 and 2022

Others	14,696	-	(44,541)	(18)	-	(29,863)
	(1,425,195)	(237,334)	225,448	(49,470)	-	(1,486,550)
Deferred income tax assets						
Property and equipment	9,510	1,800	3,139	-	-	14,448
Advances from customers	7,183	-	2,083	-	-	9,266
Other intangible assets	15,349	-	4,777	-	-	20,126
Allowance for doubtful accounts	8,265	4,717	(869)	-	-	12,113
Accrued expenses	35,199	3,648	(3,256)	-	-	35,591
Provisions	18,000	-	3,852	-	-	21,852
Government grants	548	-	106	-	-	655
Defined benefit liabilities	56,569	138	7,408	7,570	-	71,684
Other long-term employee benefits liabilities	26,743	-	12,625	-	-	39,367
Financial assets at fair value through profit or loss	3,927	-	13,684	-	-	17,610
Financial assets at fair value through other comprehensive income	2,896	415	2,971	-	-	6,281
Derivative financial instruments	4,618	-	(841)	-	-	3,777
Lease	542,502	23,175	(68,491)	-	-	497,186
Share-based compensation	39,305	-	989	-	(3,166)	37,128
Others	541,975	1,517	(123,004)	-	78,886	499,374
	1,312,588	35,409	(144,826)	7,570	75,721	1,286,462
Deferred income tax assets (liabilities), net	₩ (112,606)	₩ (201,925)	₩ 80,622	₩ (41,900)	₩ 75,721	₩ (200,088)

(in millions of Korean won)

		2022					
	Beginning balance	Changes in scope of consolidation	Income statement	Other comprehensive income	Other equity	Ending balance	
Deferred income tax liabilities							
Accrued revenue	₩ (8,869)	₩ 2	₩ 1,761	₩ -	₩ -	₩ (7,105)	
Property and equipment	(82,977)	-	75,697	-	-	(7,280)	
Intangible assets	(162,745)	(4,432)	(123,596)	-	-	(290,773)	
Financial assets at fair value through profit or loss	(37,088)	-	(6,490)	-	-	(43,578)	

KAKAO CORP. and Subsidiaries
Notes to the Consolidated Financial Statements
December 31, 2023 and 2022

Financial assets at fair value through other comprehensive income	(170,686)	(156)	(521,618)	529,078	-	(163,382)
Plan assets	(48,334)	(9)	(19,273)	-	-	(67,615)
Derivative financial instruments	(1,245)	-	(117)	-	-	(1,362)
Lease	(272,237)	(13,696)	(240,977)	-	-	(526,910)
Investments in subsidiaries and associates	(338,340)	(22)	16,681	533	-	(321,149)
Goodwill	(39,732)	-	28,995	-	-	(10,737)
Others	(175,787)	(639)	195,407	(4,285)	-	14,696
	<u>(1,338,039)</u>	<u>(18,950)</u>	<u>(593,530)</u>	<u>525,325</u>	<u>-</u>	<u>(1,425,195)</u>
Deferred income tax assets						
Property and equipment	8,915	-	596	-	-	9,510
Advances from customers	8,510	-	(1,327)	-	-	7,183
Other intangible assets	15,982	83	(715)	-	-	15,349
Allowance for doubtful accounts	3,707	19	4,539	-	-	8,265
Accrued expenses	22,581	380	12,238	-	-	35,199
Provisions	14,953	263	2,784	-	-	18,000
Government grants	-	-	548	-	-	548
Defined benefit liabilities	45,503	438	10,628	-	-	56,569
Other long-term employee benefits liabilities	31,681	-	(6,083)	1,145	-	26,743
Financial assets at fair value through profit or loss	424	(8)	3,510	-	-	3,927
Financial assets at fair value through other comprehensive income	2,379	-	517	-	-	2,896
Derivative financial instruments	5,668	-	(1,050)	-	-	4,618
Lease	343,853	13,689	184,961	-	-	542,502
Share-based compensation	103,980	-	(84,839)	-	20,164	39,305
Others	50,303	186	171,193	-	320,293	541,975
	<u>658,439</u>	<u>15,049</u>	<u>297,498</u>	<u>1,145</u>	<u>340,457</u>	<u>1,312,588</u>
Deferred income tax assets (liabilities), net	<u>₩ (679,600)</u>	<u>₩ (3,902)</u>	<u>₩ (296,032)</u>	<u>₩ 526,470</u>	<u>₩ 340,457</u>	<u>₩ (112,606)</u>

The Group did not recognize deferred income tax asset of ₩ 482,013 million as at December 31,

KAKAO CORP. and Subsidiaries

Notes to the Consolidated Financial Statements

December 31, 2023 and 2022

2023, related to the investments in subsidiaries and associates considering the possibility of realization (scheduled not to be disposed of, etc.). As at December 31, 2023, the deferred income tax assets of unrecognized deductible temporary differences arising from subsidiaries' net loss carryforwards and others amount to ₩ 59,723 million.

Impact of Pillar Two income taxes

Under the Pillar Two legislation, the Group is liable to pay a top-up tax for the difference between their GloBE effective tax rate per jurisdiction and the 15% minimum rate. However, although the average effective tax rate is below 15%, the Group might not be exposed to paying Pillar Two income taxes. Therefore, even for those entities with an accounting effective tax rate above 15%, there may still be Pillar Two tax implications. Due to the complexities in applying the legislation, the impact of the legislation is not yet reasonably estimable. Each entity within the Group is reviewing the impact on financial statements with tax specialists.

25. Provisions

Non-financial services business

Changes in provisions for the years ended December 31, 2023 and 2022, are as follows:

(in millions of Korean won)

		2023					
	Beginning balance	Changes in scope of consolidation	Increase	Decrease	Foreign currency exchange rate differences	Ending balance	
Current							
Provision for mileage	₩ 10,764	₩ (36)	₩ 62	₩ (1,018)	₩ -	₩ 9,771	
Provision for restoration	1,204	20	223	(787)	-	660	
Provision for returns	2,311	2	2,441	(2,258)	-	2,496	
Other provisions	6,295	-	8,034	(6,515)	(89)	7,724	
	20,574	(14)	10,760	(10,579)	(89)	20,652	
Non-current							
Provision for mileage	226	-	150	(60)	-	316	
Provision for restoration	66,982	8,201	8,629	(2,939)	(227)	80,646	
Other provisions	2,944	-	-	(2,944)	-	-	
	70,152	8,201	8,780	(5,944)	(227)	80,962	
	₩ 90,726	₩ 8,187	₩ 19,540	₩ (16,523)	₩ (316)	₩ 101,614	

(in millions of Korean won)

		2022					
	Beginning balance	Changes in scope of consolidation	Increase	Decrease	Foreign currency exchange	Ending balance	

KAKAO CORP. and Subsidiaries
Notes to the Consolidated Financial Statements
December 31, 2023 and 2022

							rate differences					
Current												
Provision for mileage	₩	1,022	₩	7,581	₩	2,528	₩	(366)	₩	-	₩	10,764
Provision for restoration		449		6		1,126		(376)		(1)		1,204
Provision for returns		2,251		366		3,229		(3,534)		-		2,311
Other provisions		7,521		(624)		6,683		(7,285)		-		6,295
		11,243		7,329		13,565		(11,561)		(1)		20,574
Non-current												
Provision for mileage		-		-		226		-		-		226
Provision for restoration		51,934		(1,308)		19,407		(3,114)		63		66,982
Other provisions		-		2,944		-		-		-		2,944
		51,934		1,637		19,632		(3,114)		63		70,152
	₩	63,177	₩	8,966	₩	33,197	₩	(14,675)	₩	61	₩	90,726

Financial services business

(in millions of
Korean won)

	2023				
	Beginning balance	Unwinding of discount	Reversal	Used	Ending balance
Provision for restoration	₩ 1,124	₩ 14	₩ (132)	₩ (161)	₩ 845

(in millions of
Korean won)

	2022				
	Beginning balance	Unwinding of discount	Reversal	Increase	Ending balance
Provision for restoration	₩ 1,151	₩ 17	₩ (175)	₩ 131	₩ 1,124

26. Derivative Financial Instruments

The carrying amounts of derivative financial assets, liabilities and commitments as at December 31, 2023 and 2022, are as follows:

(a) Derivative financial assets

(in millions of Korean won)

	2023	2022
Call option (Grip Company)	₩ 220	₩ 3,156
Put option (HIGROUND Co., Ltd.)	4,252	-
Put option (JELLYFISH Entertainment CO., LTD.)	2,800	-
Currency forward	5,289	1,574
Call option (Super Comics)	-	351

KAKAO CORP. and Subsidiaries
Notes to the Consolidated Financial Statements
December 31, 2023 and 2022

Call option (A)	-	1,481
	₩ 12,560	₩ 6,562

(b) Derivative financial liabilities

<i>(in millions of Korean won)</i>	2023	2022
Redemption right and conversion right (METABORA Co., Ltd.) ¹	₩ 3,137	₩ 8,708
Early redemption right and conversion right (KEYEAST Co., Ltd.) ²	2,821	-
Call option (Mono Labs Co., Ltd.)	1,762	-
Put option (A)	475	1,071
Early redemption right and conversion right (Life MMO Corp.)	-	3,265
Convertible bond's early redemption right (XLGAMES Inc.)	-	68
Put option (Wyatt co., Ltd)	-	24,503
	₩ 8,196	₩ 37,616

¹ Redemption right and conversion right granted to redeemable convertible preferred shares issued by METABORA Co., Ltd. (Note 21).

² Redemption right and conversion right granted to convertible bonds issued by KEYEAST Co., Ltd. (Note 21).

The carrying amount of each financial liability classified as a liability whose exercise price is subject to change due to the issuer's share price and related gains and losses are as follows:

<i>(in millions of Korean won)</i>	2023	acquisition cost
Derivative financial liabilities		
Redemption right and conversion right (METABORA Co., Ltd.)	₩ 3,137	₩ 4,723
Early redemption right and conversion right (KEYEAST Co., Ltd.)	2,821	5,543
Put option (A)	475	1,831
	₩ 6,434	12,097

For the year ended December 31, 2023, losses from continuing operations before tax are ₩ (-)1,648,240 million, and net losses excluding gains and losses of valuation of the financial liabilities are ₩ (-) 1,639,352 million.

KAKAO CORP. and Subsidiaries

Notes to the Consolidated Financial Statements

December 31, 2023 and 2022

27. Share Capital and Share Premium

As at December 31, 2023, the Parent Company's the total number of ordinary shares issued is 444,849,878 shares.

The Parent Company retired its treasury shares of 500,000 shares by appropriating retained earnings in the previous period. Therefore, the total par value of capital shares issued differs from the total par value of capital shares outstanding.

(in millions of Korean won, except for number of shares and par value)

Stocks issued							
Number of stocks issued (in shares)	Par value (in Korean won)	Total par value		Issued capital		Difference	
444,849,878	₩ 100	₩ 44,485	₩	44,535	₩	50	

During 2023, the Parent Company retired 1,897,441 treasury shares held by the Parent Company upon the resolution at the Board of Directors' meeting on March 28, 2023, and recognized the difference between the acquisition price and par value of ordinary shares as loss from capital reduction.

The Parent Company may grant share options to its employees and directors of the Parent Company and its affiliates who contribute or have capabilities to contribute to the establishment, management, overseas business and technical innovation of the Group, with the resolution of special shareholders meeting or board of directors up to 15% of total number of issued shares. As at December 31, 2023, the number of outstanding share options among granted is 6,628,437 shares (Note 28).

The Parent Company is authorized to issue convertible bonds and bonds with warrants into registered ordinary shares for up to the total par value of ₩ 500 billion to investors other than current shareholders, with the resolution of the board of directors. As at December 31, 2023, there is no convertible bonds issued.

The Parent Company may issue various classes of shares which are different in respect of their particulars as to the dividend, voting rights, conversion and redemption rights up to 50% of the total number of shares issued. The Parent Company has only issued ordinary shares and no other classes having the above conditions as at December 31, 2023.

KAKAO CORP. and Subsidiaries
Notes to the Consolidated Financial Statements
December 31, 2023 and 2022

Changes in share capital and share premium during the years ended December 31, 2023 and 2022, are as follows:

<i>(in millions of Korean won, except number of shares)</i>		Number of ordinary shares (in shares)		Share capital		Share premium		Total
Date	Description							
January 1, 2022	Beginning balance	446,405,990	₩	44,641	₩	5,706,165	₩	5,750,805
	Exercise of share							
January 24, 2022	options	56,061		6		1,622		1,627
	Exercise of share							
February 22, 2022	options	160,845		16		4,366		4,382
	Exercise of share							
March 23, 2022	options	147,510		15		4,392		4,406
	Exercise of share							
April 25, 2022	options	1,057,477		106		26,210		26,315
	Retirement of							
May 3, 2022	treasury shares ¹	(3,239,741)		(324)		-		(324)
	Exercise of share							
May 24, 2022	options	734,355		73		29,751		29,825
	Exercise of share							
June 23, 2022	options	125,794		13		5,603		5,616
	Exercise of share							
July 25, 2022	options	201,335		20		8,409		8,430
	Exercise of share							
August 24, 2022	options	161,556		16		5,983		5,999
	Exercise of share							
September 21, 2022	options	10,479		1		515		516
	Exercise of share							
October 24, 2022	options	14,327		1		539		541
	Exercise of share							
November 22, 2022	options	74,399		7		2,958		2,965
	Exercise of share							
December 22, 2022	options	13,302		1		579		580
December 31, 2022	Ending balance	<u>445,923,689</u>	₩	<u>44,592</u>	₩	<u>5,797,092</u>	₩	<u>5,841,684</u>
January 1, 2023	Beginning balance	445,923,689	₩	44,592	₩	5,797,092	₩	5,841,684
	Exercise of share							
January 19, 2023	options	90,536		9		2,928		2,938
	Exercise of share							
February 21, 2023	options	74,203		7		2,097		2,105
	Exercise of share							
March 23, 2023	options	68,319		7		2,129		2,135
	Exercise of share							
April 25, 2023	options	184,381		18		4,572		4,590
	Retirement of							
May 3, 2023	treasury shares ¹	(1,897,441)		(190)		-		(190)
	Exercise of share							
May 23, 2023	options	160,519		16		6,458		6,474
	Exercise of share							
June 21, 2023	options	159,084		16		3,714		3,730
	Exercise of share							
July 25, 2023	options	87,800		9		3,093		3,102

KAKAO CORP. and Subsidiaries

Notes to the Consolidated Financial Statements

December 31, 2023 and 2022

(in millions of Korean won, except number of shares)

Date	Description	Number of ordinary shares (in shares)	Share capital	Share premium	Total
August 23, 2023	Exercise of share options	69,942	7	2,607	2,614
September 21, 2023	Exercise of share options	64,412	6	2,474	2,480
October 25, 2023	Exercise of share options	10,526	1	387	388
November 22, 2023	Exercise of share options	253,190	25	8,561	8,586
December 21, 2023	Exercise of share options	100,718	10	4,425	4,435
December 31, 2023	Ending balance	<u>445,349,878</u>	<u>₩ 44,535</u>	<u>₩ 5,840,538</u>	<u>₩ 5,885,073</u>

¹ During 2023 and 2022, retired treasury shares held by the Parent Company and recognized the difference between the acquisition price and the par value as loss from capital reduction.

As at December 31, 2023, the number of treasury shares held by the Parent Company is 6,643,783 shares.

28. Share-based Compensations

Details of the share options as at December 31, 2023, are as follows:

(a) Share-based compensation transactions with cash alternatives

Grant method: Issuance of new ordinary shares, treasury shares or payment of cash. The Group will determine in its discretion grant method at the time of exercise and accounted as equity-settled share option based on the assumption that it will be granted based on the issuance of new shares or grant of treasury shares in the future.

- Vesting condition and exercisable period:

Description

18 th , 21 st , 22 nd , 24 th , 41 st tranches	The requisite service period is two years, exercisable from two years to seven years after grant date limited to 50% of granted quantity. The requisite service period of remaining 50% of granted quantity is three years, exercisable from three years to seven years after grant date.
19 th , 25 th tranches	The requisite service period is two years, exercisable from two years to seven years after grant date limited to 50% of granted quantity. The requisite service period of remaining 50% of granted quantity is three years, exercisable from three years to seven years after grant date. It is exercisable only when it happens the average price of the shares calculated at the end of each month within two years to four years from grant date exceeds 150% of exercise price. If the

KAKAO CORP. and Subsidiaries
Notes to the Consolidated Financial Statements
December 31, 2023 and 2022

27 th , 31 st , 32 nd tranches	<p>average price of the shares calculated at the end of each month within two years to four years from grant date exceeds 200% of exercise price, all of granted quantity could be exercisable.</p> <p>The requisite service period is two years, exercisable from two years to seven years after grant date limited to 30% of granted quantity. The requisite service period of remaining 30% of granted quantity is three years, exercisable from three years to seven years after grant date.</p> <p>The requisite service period of remaining 40% of granted quantity is four years, exercisable from four years to seven years after grant date.</p> <p>It is exercisable only when it happens the average price of the shares calculated at the end of each month within two years to seven years from grant date exceeds 150% of exercise price. If the average price of the shares calculated at the end of each month within two years to seven years from grant date exceeds 200% of exercise price, all of granted quantity could be exercisable.</p>
28 th , 30 th , 35 th , 36 th , 37 th , 38 th , 42 nd , 43 rd , 44 th , 45 th tranches	<p>The requisite service period is two years, exercisable from two years to seven years after grant date limited to 30% of granted quantity. The requisite service period of remaining 30% of granted quantity is three years, exercisable from three years to seven years after grant date. The requisite service period of remaining 40% of granted quantity is four years, exercisable from four years to seven years after grant date.</p>

(b) Equity-settled share option

- Type of shares issued through exercise of share option: Registered ordinary shares.
- Grant method: Issuance of new ordinary shares, treasury shares.
- Vesting condition and exercisable period:

Description

33 rd , 48 th , 49 th tranches	<p>The requisite service period is two years, exercisable from two years to seven years after grant date limited to 50% of granted quantity. The requisite service period of remaining 50% of granted quantity is three years, exercisable from three years to seven years after grant date.</p>
34 th , 46 th , 47 th tranches	<p>The requisite service period is two years, exercisable from two years to seven years after grant date limited to 30% of granted quantity. The requisite service period of remaining 30% of granted quantity is three years, exercisable from three years to seven years after grant date. The requisite service period of remaining 40% of granted quantity is four years, exercisable from four years to seven years after grant date.</p>
50 th tranches	<p>The requisite service period is two years, exercisable from two years to seven years after grant date limited to 100% of granted quantity.</p>

(c) Cash-settled share option

- Vesting condition and exercisable period:

KAKAO CORP. and Subsidiaries
Notes to the Consolidated Financial Statements
December 31, 2023 and 2022

	Description
5 th tranches	The requisite service period is two years, exercisable from two years to seven years after grant date limited to 50% of granted quantity. The requisite service period of remaining 50% of granted quantity is three years, exercisable from three years to seven years after grant date.
7 th , 9 th , 10 th tranches	The requisite service period is two years, exercisable from two years to seven years after grant date limited to 30% of granted quantity. The requisite service period of remaining 30% of granted quantity is three years, exercisable from three years to seven years after grant date. The requisite service period of remaining 40% of granted quantity is four years, exercisable from four years to seven years after grant date.

(d) Grant of treasury shares

- Vesting condition and exercisable period:

	Grant date	Description
2nd tranches	October 1, 2021	Treasury shares granted under individual conditions will be given only to those who have served as an employee from the date of grant until the date of payment under individual conditions.
3rd tranches	November 3, 2021	30% of shares are granted on the initial grant date. 30% of shares are granted at one year after the initial grant date. 40% of shares are granted at two years after the initial grant date. However, if the requisite service period (one year after each grant date) is not met, cash equivalent to the amount paid must be returned.

In addition to the aforementioned equity-settled share options, the Group granted equity-settled share options in relation to the shares of its subsidiaries such as KAKAO BRAIN Corp., Kakao Games Corp., XLGAMES Inc., Lionheart Studio Corp., Sena Technologies Co., Ltd., Kakao VX, METABORA Co., Ltd., Ocean Drive Studio Corp., Groud X Corp., Kakao Enterprise Corp., Kakao Piccoma Corp., Kakao Mobility Corp., Kakao healthcare Corp., Kakaopay Corp., SM Culture & Contents Co., Ltd., HANEUL DAMDA CO., LTD., DREAMMAKER Entertainment Ltd., KEYEAST Co., Ltd., Stream Media Corporation, Beyond Live Corporation, SM BRAND MARKETING Co., LTD., Kakao Entertainment Corp., SamyangCNC Co.,Ltd, KW Books, Inc., TAPAS ENTERTAINMENT, INC., STARSHIP ENTERTAINMENT CORP., Kross Pictures Corp., EDAM Entertainment Corp., Daon Creative inc. and KM parking and space Corp.

KAKAO CORP. and Subsidiaries

Notes to the Consolidated Financial Statements

December 31, 2023 and 2022

Details of the Parent Company's share-based compensation transactions with cash alternatives and equity-settled share options outstanding as at December 31, 2023, are as follows:

(In Korean won, except number of shares)				Number of shares (in shares)						
Tranche	Grant date ³	Exercise price (in Korean won)	Outstanding as at January 1, 2023	Granted	Forfeited	Exercised	Adjusting quantities for treasury shares retirements ¹	Outstanding as at December 31, 2023 ²	Exercisable as at December 31, 2023	
18th	March 2, 2017	₩ 17,267	84,919	-	-	47,737	359	36,823	36,823	
19th	March 2, 2017	17,267	337,538	-	-	297,754	676	39,108	39,108	
21th	May 2, 2017	17,925	77,459	-	-	28,848	293	48,318	48,318	
22th	September 28, 2017	26,604	17,037	-	-	7,282	60	9,695	7,853	
24th	August 31, 2018	24,962	287,035	-	-	70,186	1,182	215,667	202,447	
25th	August 31, 2018	24,962	74,477	-	-	42,712	241	31,524	31,524	
27th	May 16, 2019	25,168	62,000	-	-	8,000	230	53,770	53,770	
28th	May 16, 2019	25,168	983,421	-	-	353,539	3,936	625,946	583,047	
30th	May 6, 2020	35,011	2,753,016	-	23,224	262,689	11,669	2,455,434	1,190,640	
31th	May 6, 2020	35,011	660,571	-	-	106,134	2,763	551,674	519,416	
32th	September 24, 2020	76,109	49,637	-	-	-	212	49,425	-	
33th	May 4, 2021	115,361	395,703	-	14,086	-	2,106	379,511	182,201	
34th	September 1, 2021	152,022	99,274	-	49,425	-	424	49,425	14,827	
35th	March 22, 2019	28,243	233,201	-	-	78,251	886	154,064	146,741	
36th	July 2, 2019	28,243	7,546	-	-	6,515	33	998	998	
37th	October 17, 2019	28,243	15,867	-	-	6,339	67	9,461	9,461	
38th	November 15, 2019	28,243	13,029	-	587	7,553	41	4,848	4,848	
41th	September 3, 2018	58,628	2,504	-	-	91	12	2,401	2,401	
42th	May 9, 2019	62,721	5,442	-	404	-	26	5,012	5,012	
43th	November 15, 2019	64,642	18,392	-	808	-	83	17,501	17,271	
44th	June 23, 2020	75,528	58,958	-	5,076	-	283	53,599	32,112	
45th	March 5, 2021	225,216	10,226	-	879	-	47	9,300	2,788	
46th	November 3, 2021	125,619	482,036	-	149,073	-	2,028	330,935	99,263	
47th	December 15, 2021	124,851	319,930	-	26,968	-	1,429	291,533	76,658	
48th	March 29, 2022	102,393	534,402	-	20,778	-	2,924	510,700	-	
49th	March 28, 2023	62,174	-	667,700	22,184	-	3,538	641,978	-	
50th	March 28, 2023	62,174	-	50,000	-	-	213	49,787	-	
			7,583,620	717,700	313,492	1,323,630	35,761	6,628,437	3,307,527	

KAKAO CORP. and Subsidiaries

Notes to the Consolidated Financial Statements

December 31, 2023 and 2022

¹ During 2023, the number of grants and exercise prices were adjusted due to the retirement of treasury shares.

² Outstanding shares include the number of spun-off movers (138,229 shares of Kakao Entertainment Corp.).

³ It is prepared based on the initial grant date for the 35th~45th, tranches, which were succeeded from the merger with Kakao Commerce Co., Ltd.

Compensation costs of the Parent Company's share-based compensation transactions with cash alternatives and equity-settled share options are calculated by applying a fair value approach using Binomial model and LSMC (Least Square Monte-Carlo) model. The related assumptions are as follows:

Tranche		Fair value of option at grant date ² (in Korean won)		Weighted average share price at grant date (in Korean won)	Price volatility	Dividend yield	Expected option life	Risk-free interest rate
18 th	₩	3,052	₩	17,060	11%	0.00%	2~3 years	2.14%
19 th		1,759		17,060	11%	0.17%	2~3 years	2.14%
21 th		3,876		18,520	11%	0.16%	2~3 years	2.13%
22 th		6,274		27,900	11%	0.11%	2~3 years	2.30%
24 th		5,517		25,000	14%	0.12%	2~3 years	2.25%
25 th		1,071		25,000	14%	0.12%	2~3 years	2.25%
27 th		2,174		26,700	12%	0.10%	2~4 years	1.80%
28 th		6,070		26,700	12%	0.10%	2~4 years	1.80%
30 th		16,882		39,900	33%	0.06%	2~4 years	1.40%
31 th		8,499		39,900	33%	0.06%	2~4 years	1.40%
32 th		10,120		70,400	36%	0.04%	2~4 years	1.28%
33 th		50,904		115,500	38%	0.03%	2~3 years	1.99%
34 th		63,011		150,400	35%	0.02%	2~4 years	1.86%
35 ^{th1}		6,143		27,917	15%	0.00%	2~4 years	1.91%
36 ^{th1}		5,775		27,921	15%	0.00%	2~4 years	1.57%
37 ^{th1}		5,759		27,921	15%	0.00%	2~4 years	1.55%
38 ^{th1}		5,929		27,921	15%	0.00%	2~4 years	1.72%
41 ^{th1}		12,978		56,945	16%	0.00%	2~3 years	2.24%
42 ^{th1}		22,311		62,018	30%	0.00%	2~4 years	1.82%
43 ^{th1}		26,787		63,912	37%	0.00%	2~4 years	1.72%
44 ^{th1}		16,859		74,669	18%	0.00%	2~4 years	1.24%
45 ^{th1}		55,644		222,634	19%	0.00%	2~4 years	1.70%
46 th		54,761		124,500	38%	0.02%	2~4 years	2.41%
47 th		49,400		118,500	37%	0.03%	2~4 years	2.14%
48 th		49,477		105,500	38%	0.03%	2~3 years	2.94%
49 th		29,259		60,700	42%	0.09%	2~3 years	3.29%
50 th		29,229		60,700	42%	0.09%	2 years	3.29%

¹ For the 35th~45th, tranches, which were succeeded from the merger with Kakao Commerce Corp., the fair value and the weighted average share price are adjusted by the ratio agreed upon at the time

KAKAO CORP. and Subsidiaries

Notes to the Consolidated Financial Statements

December 31, 2023 and 2022

of the merger.

² During 2023, the fair value was adjusted for the retirement of treasury shares.

Details of the Parent Company's cash-settled share options outstanding as at December 31, 2023, are as follows:

(In Korean won, except number of shares)

Tranche	Grant date	Exercise price (in Korean won)	Number of shares (in shares)					Outstanding as at December 31, 2023	Exercisable as at December 31, 2023
			Outstanding as at January 1, 2023	Granted	Forfeited	Exercised	Adjusting quantities for treasury shares retirements ¹		
5 th	August 31, 2018	₩ 24,962	9,927	-	-	-	43	9,884	9,884
7 th	May 16, 2019	25,168	5,957	-	-	-	26	5,931	5,931
9 th	September 1, 2021	152,022	24,818	-	-	-	106	24,712	7,413
10 th	October 13, 2022	58,087	110,000	-	-	-	469	109,531	-
			150,702	-	-	-	644	150,058	23,228

¹ During 2023, the number of grants and exercise prices were adjusted due to the retirement of treasury shares.

In addition to the aforementioned cash-settled share options, the Group granted cash-settled share options in relation to the shares of its subsidiaries such as Kakao Entertainment Corp., Kakaopay Corp. and Kakaopay Securities Corp.

The fair value of the Group's cash-settled share options was determined using Binomial model and LSMC (Least Square Monte- Carlo) option pricing model. The related assumptions are as follows:

Tranche	Fair value of option at the evaluation date (in Korean won)		Share price at the evaluation date (in Korean won)		Price volatility	Dividend yield	Expected option life	Risk-free interest rate
5th	₩	29,871	₩	54,300	34%	0.11%	2~3 years	3.22%
7th		29,851		54,300	34%	0.11%	2~4 years	3.16%
9th		2,346		54,300	34%	0.11%	2~4 years	3.16%
10th		14,223		54,300	34%	0.11%	2~4 years	3.15%

KAKAO CORP. and Subsidiaries

Notes to the Consolidated Financial Statements

December 31, 2023 and 2022

Details of the Parent Company's share options of granted treasury shares outstanding as at December 31, 2023, are as follows:

(In Korean won, except number of shares)

Tranche	Grant date	Disclosure date for sale	Closing price at grant date (in Korean won)	Number of shares (in shares)					Adjusting quantities for treasury shares retirements ¹	Outstanding as at December 31, 2023 ²
				Outstanding as at January 1, 2023	Granted	Forfeited	Exercised			
2 nd	October 1, 2021	December 15, 2021	116,500	217,774	-	14,049	128,958	406		74,361
	November 3, 2021	November 3, 2021	124,500	98,501	-	1,152	41,893	504		54,952
3 rd				316,275	-	15,201	170,851	910		129,313

¹ During 2023, the number of grants and exercise prices were adjusted due to the retirement of treasury shares.

Share-based compensation recognized as expenses for the years ended December 31, 2023 and 2022, are as follows:

(in millions of Korean won)

	2023	2022
Share-based compensation transactions with cash alternatives and equity-settled share option	₩ 74,869	₩ 126,897
Cash-settled share option	955	(860)
Grant of treasury shares	8,416	32,527
	₩ 84,240	₩ 158,565

KAKAO CORP. and Subsidiaries
Notes to the Consolidated Financial Statements
December 31, 2023 and 2022

29. Other Components of Equity

Other components of equity as at December 31, 2023 and 2022, are as follows:

<i>(in millions of Korean won)</i>	2023	2022
Treasury shares	₩ (1,034)	₩ (1,034)
Loss from capital reduction	(127,921)	(80,996)
Share options	141,955	128,491
Other capital adjustments	(5,430)	(5,430)
	<u>₩ 7,571</u>	<u>₩ 41,031</u>

As at December 31, 2023, the Group holds 6,643,783 treasury shares for the purpose of stabilizing share prices and enhancing shareholder value, and the amount is accounted for as other components of equity.

30. Accumulated Other Comprehensive Income (Loss)

Accumulated other comprehensive income (loss) as at December 31, 2023 and 2022, consists of:

<i>(in millions of Korean won)</i>	2023	2022
Foreign currency translation adjustments, net of tax	₩ 45,457	₩ 66,035
Share of other comprehensive income (loss) of associates, net of tax	8,965	(20,172)
Losses on valuation of equity instruments at fair value through other comprehensive income	(1,069,118)	(1,278,872)
Net financial gain on insurance contract assets (liabilities) through other comprehensive income	-	-
Remeasurement of defined benefit obligation, net of tax	(35,718)	(16,657)
	<u>₩ (1,050,415)</u>	<u>₩ (1,249,666)</u>

KAKAO CORP. and Subsidiaries
Notes to the Consolidated Financial Statements
December 31, 2023 and 2022

Changes in accumulated other comprehensive income (loss) for the years ended December 31, 2023 and 2022, are as follows, and the changes in the table represents amount net of tax.

(in millions of Korean won)	2023			
	Beginning balance	Increase (Decrease)	Reclassification to retained earnings	Ending balance
Foreign currency translation adjustments, net of tax	₩ 66,035	₩ (20,578)	₩ -	₩ 45,457
Share of other comprehensive income (loss) of associates, net of tax	(20,172)	29,136	-	8,965
Gains (losses) on valuation of equity instruments at fair value through other comprehensive income	(1,278,872)	138,269	71,485	(1,069,118)
Net financial gain on insurance contract assets (liabilities) through other comprehensive income	-	-	-	-
Remeasurement of defined benefit obligation, net of tax	(16,657)	(18,631)	(430)	(35,718)
	₩ (1,249,666)	₩ 128,197	₩ 71,055	₩ (1,050,415)

(in millions of Korean won)	2022			
	Beginning balance	Increase (Decrease)	Reclassification to retained earnings	Ending balance
Foreign currency translation adjustments, net of tax	₩ 36,333	₩ 29,702	₩ -	₩ 66,035
Share of other comprehensive income (loss) of associates, net of tax	12,688	(32,859)	-	(20,172)
Gains (losses) on valuation of equity instruments at fair value through other comprehensive income	338,075	(1,615,956)	(991)	(1,278,872)
Remeasurement of defined benefit obligation, net of tax	(15,271)	(1,381)	(5)	(16,657)
	₩ 371,825	₩ (1,620,495)	₩ (996)	₩ (1,249,666)

KAKAO CORP. and Subsidiaries
Notes to the Consolidated Financial Statements
December 31, 2023 and 2022

31. Retained Earnings

Retained earnings as at December 31, 2023 and 2022, consist of:

<i>(in millions of Korean won)</i>	2023	2022
Legal reserves ¹	₩ 20,603	₩ 17,983
Other reserve	5	200
Unappropriated retained earnings	1,901,528	3,013,205
	<u>₩ 1,922,137</u>	<u>₩ 3,031,388</u>

¹ The Commercial Code of the Republic of Korea requires the Parent Company to appropriate for each financial period, as a legal reserve, an amount equal to a minimum of 10% of cash dividends paid until such reserve equals 50% of its issued share capital. The reserve is not available for cash dividends payment but may be transferred to share capital or used to reduce accumulated deficit.

32. Operating Expenses

Operating expenses for the years ended December 31, 2023 and 2022, are as follows:

<i>(in millions of Korean won)</i>	2023	2022
Salaries	₩ 1,382,857	₩ 1,214,658
Post-employment benefits	106,148	86,032
Share-based compensation	84,240	158,565
Employee benefits	252,166	219,683
Travel and transportation expense	30,087	18,394
Taxes and dues	30,783	21,732
Rental expenses	41,653	25,576
Commission expenses	834,863	684,389
Sales-related expenses	2,492,915	2,170,934
Cost of goods sold	493,281	483,433
Advertising expenses	399,885	410,098
Depreciation	478,459	365,798
Amortization	271,424	203,766
Bad debt expenses	1,040	10,795
Expenses for events	5,961	7,097
Others	190,382	148,400
	<u>₩ 7,096,144</u>	<u>₩ 6,229,351</u>

KAKAO CORP. and Subsidiaries
Notes to the Consolidated Financial Statements
December 31, 2023 and 2022

33. Other Non-operating Income and Expenses

Details of other non-operating income and expenses for the years ended December 31, 2023 and 2022, are as follows:

(in millions of Korean won)	2023		2022	
Other non-operating income				
Gains on sales of property and equipment	₩	3,919	₩	8,091
Gains on sales of intangible assets		3,232		90,938
Gains on sales of investments in associates ¹		109,714		1,701,991
Gain on sales of investments in joint ventures		-		30
Gains on sales of investments in subsidiaries		21,133		163,539
Gains on foreign currency transactions		9,742		6,989
Gains on foreign currency translation		1,529		1,784
Miscellaneous income		38,864		37,916
Rent income		262		174
Reversal of impairment losses on investments in associates		263		2
Reversal of provision for restoration		1,137		430
Government grant income		80		292
Reversal of other provision		1,023		-
Gains on change in lease		646		247
Gain on debt forgiveness		-		303
Reversal of other allowance for doubtful account		653		803
Others		129		-
	₩	192,325	₩	2,013,527
Other non-operating expenses				
Losses on sales of property and equipment	₩	4,963	₩	27,525
Losses on sales of intangible assets		18,821		43,445
Losses on abandonment of property and equipment, and intangible assets		4,236		3,078
Impairment losses on property and equipment		3,036		871
Impairment losses on intangible assets		1,882,210		735,708
Impairment losses on investments in associates		249,970		173,740
Losses on sales of investments in associates		15,430		24,322
Losses on sales of investments in subsidiaries		4,986		6,531
Donations		30,853		24,822
Commission expenses		39,559		13,306
Losses on foreign currency transactions		13,614		9,536
Losses on foreign currency translation		2,213		1,441
Miscellaneous losses		22,816		45,443
Losses on change in lease		45		2

KAKAO CORP. and Subsidiaries
Notes to the Consolidated Financial Statements
December 31, 2023 and 2022

Other bad debt expenses	21,598	1,675
Increase of other provision	73	-
Others	-	14
	<u>₩ 2,314,424</u>	<u>₩ 1,111,461</u>

¹During the year ended December 31, 2022, the Group lost significant influence on Dunamu Inc. and reclassified its shares as financial assets measured by fair value through other comprehensive income, including about ₩1,532.6 billion in difference between the existing carrying amount and the fair value at the time of reclassification.

34. Finance Income and Costs

Finance income and costs for the years ended December 31, 2023 and 2022, are as follows:

<i>(in millions of Korean won)</i>	2023	2022
Finance income		
Interest income	₩ 190,163	₩ 122,729
Dividend income	29,580	56,214
Gain on valuation of derivatives	19,747	4,697
Gain on transaction of derivatives	68	47
Gain on valuation of financial assets at fair value through profit or loss	38,108	68,503
Gain on valuation of financial liabilities at fair value through profit or loss	183	2,676
Gain on sales of financial assets at fair value through profit or loss	31,570	5,863
Gain on sales of financial assets at fair value through other comprehensive income	-	14,150
Gain on foreign currency transactions	2,476	9,378
Gain on foreign currency translation	4,398	48,256
Fund finance income	1,143	10,237
Other finance income	-	20
	<u>₩ 317,437</u>	<u>₩ 342,770</u>
Finance costs		
Interest expense	₩ 162,778	₩ 109,871
Losses on valuation of derivatives	6,623	27,490
Loss on transaction of derivatives	-	152
Loss on foreign currency transactions	4,529	70,439
Loss on foreign currency translation	1,860	11,294
Loss on valuation of financial assets at fair value through profit or loss	107,836	33,057
Loss on sales of financial assets at fair value through profit or loss	3,858	10,108

KAKAO CORP. and Subsidiaries
Notes to the Consolidated Financial Statements
December 31, 2023 and 2022

Loss on sales of financial liabilities at fair value through profit or loss	-	211,173
Loss on sales of financial assets at fair value through other comprehensive income	-	3,741
Loss on repayment of debentures	-	1,167
Fund finance costs	19,242	3,820
Other finance costs	1,670	5,349
	<u>₩ 308,396</u>	<u>₩ 487,663</u>

35. Earnings per Share

Basic earnings per share is calculated by dividing the profit attributable to equity holders of the Parent Company by the weighted average shares outstanding during the financial year excluding treasury shares.

Basic earnings per share for the years ended December 31, 2023 and 2022, is calculated as follows:

<i>(in millions of Korean won)</i>	2023	2022
Profit (loss) attributable to the ordinary equity holders of the Parent Company	₩ (1,012,551)	₩ 1,358,017
Weighted average shares <i>(in shares)</i>	<u>437,420,901 shares</u>	<u>435,564,814 shares</u>
Basic earnings (losses) per share <i>(in Korean won)</i>	<u>₩ (2,315)</u>	<u>₩ 3,118</u>

Diluted earnings per share is calculated by adjusting the weighted average number of ordinary shares outstanding to assume conversion of all dilutive potential ordinary shares. The Parent Company has share options, exchangeable bonds and convertible bonds as dilutive potential ordinary shares. For the share options, a calculation is done to determine the number of shares that could have been acquired at fair value (determined as the average annual market share price of the Parent Company's shares) based on the monetary value of the subscription rights attached to outstanding share options. The number of shares calculated as above is compared with the number of shares that would have been issued assuming the share options are exercised.

The exchangeable bonds before the redemption date are assumed to have been converted into ordinary shares, and the net profit is adjusted to eliminate the interest expense less the tax effect.

KAKAO CORP. and Subsidiaries
Notes to the Consolidated Financial Statements
December 31, 2023 and 2022

Diluted earnings per share for the years ended December 31, 2023 and 2022, is calculated as follows:

<i>(in millions of Korean won, except number of shares and per share data)</i>	2023	2022
Profit (loss) attributable to ordinary equity holders of the Parent Company	₩ (1,012,551)	₩ 1,358,017
Interest expense on exchangeable bonds (net of tax)	-	1,377
Adjustment of net profit to consider potential ordinary shares	-	(2,181)
	<u>(1,012,551)</u>	<u>1,357,212</u>
<i>(in shares)</i>		
Weighted average shares in issue	437,420,901	435,564,814
Adjustment for:		
Share options	-	4,171,404
Exchangeable bonds	-	2,895,724
Weighted average number of diluted potential ordinary shares	-	7,067,128
Weighted average shares for diluted earnings per share	<u>437,420,901</u>	<u>442,631,942</u>
<i>(in Korean won)</i>		
Diluted earnings per share ¹	₩ (2,315)	₩ 3,066

Anti-dilutive effect occurs during the year ended December 31, 2023. Therefore, basic earnings per share is identical to diluted earnings per share.

36. Dividends

Dividends paid by the Parent Company for the years ended December 31, 2023 and 2022, are ₩ 26,202 million (₩ 60 per share) and ₩ 22,990 million (₩ 53 per share), respectively.

A dividend in respect of the year ended December 31, 2023, of ₩ 61 per share, amounting to a total dividend of ₩ 26,740 million, is to be proposed to shareholders at the annual general meeting on March 28, 2024. These financial statements do not reflect this dividend payable.

KAKAO CORP. and Subsidiaries
Notes to the Consolidated Financial Statements
December 31, 2023 and 2022

37. Cash Generated from Operations

Details of cash generated from operations for the years ended December 31, 2023 and 2022, are as follows:

<i>(in millions of Korean won)</i>	2023		2022	
Profit (loss) before income tax	₩	(1,648,240)	₩	1,268,935
Adjustments for:				
Bad debt expense		1,040		10,795
Depreciation		489,231		377,665
Amortization		271,424		203,766
Impairment losses on intangible assets		1,882,210		735,706
Impairment losses on property and equipment		3,036		871
Losses on sales of property and equipment		443		19,191
Losses on abandonment of property and equipment		4,235		3,078
Loss (gain) on disposal of intangible assets		15,589		(47,493)
Post-employment benefits		81,125		74,029
Share-based compensation		84,240		158,742
Interest income		(199,369)		(134,950)
Interest expense		174,192		111,327
Dividend income		(29,585)		(56,215)
Loss (profit) of associates and joint ventures accounted for using equity method		(3,960)		57,629
Losses on sales of investments in associates		15,430		24,322
Gains on sales of investments in associates		(109,714)		(1,702,021)
Gains on sales of investments in subsidiaries		(21,133)		(163,539)
Losses on sales of investments in subsidiaries		4,986		6,531
Impairment losses on investments in associates		249,707		173,740
Gains on sales of financial assets at fair value through profit or loss		(31,570)		(5,863)
Losses on sales of financial assets at fair value through profit or loss		3,858		10,108
Gains on valuation of financial assets at fair value through profit or loss		(41,151)		(69,817)
Losses on valuation of financial assets at fair value through profit or loss		107,840		33,095
Gains on valuation of financial liabilities at fair value through profit or loss		(183)		(2,676)
Loss on sales of financial liabilities at fair value through profit or loss		-		211,173
Gain on sales of financial assets at fair value through other comprehensive income		-		(14,150)
Loss on sales of financial assets at fair value through other comprehensive income		-		3,741
Gains on valuation of derivatives		(19,747)		(4,697)

KAKAO CORP. and Subsidiaries
Notes to the Consolidated Financial Statements
December 31, 2023 and 2022

Losses on valuation of derivatives	6,623	27,490
Gains on transaction of derivatives	(68)	(47)
Loss on transaction of derivatives	-	152
Other bad debt expenses	20,944	872
Other long-term employee benefits	25,530	23,977
Gains on foreign exchange translations	(7,173)	(53,324)
Losses on foreign exchange translations	4,794	13,760
Losses on abandonment of inventories	552	429
Others	17,444	99,069
Changes in operating assets and liabilities		
Trade receivables	(108,007)	(69,034)
Inventories	43,477	(73,437)
Other current financial assets	(61,347)	(94,915)
Other current assets	(78,818)	(81,391)
Other non-current financial assets	(938)	5,906
Other non-current assets	9,121	11,892
Trade and other payables	363,809	64,245
Other current liabilities	73,620	(38,837)
Other current financial liabilities and deposits received	76,231	(20,324)
Other non-current liabilities	(3,293)	9,494
Other non-current financial liabilities	(67)	(14,250)
Net defined benefit liabilities	(98,108)	(121,094)
Other long-term employee benefits liabilities	(6,077)	(2,957)
Other financial assets (financial services business)	(327,684)	181,466
Other assets (financial services business)	34	(185)
Deposits received (financial services business)	320,029	(204,853)
Net defined benefit liabilities (financial services business)	(4,253)	(1,881)
Other financial liabilities (financial services business)	53,743	(11,199)
Other liabilities (financial services business)	895	(6,584)
Others	(4,413)	7,765
Cash generated from operations	₩ 1,600,533	₩ 935,230

Significant transactions not affecting cash flows for the years ended December 31, 2023 and 2022, are as follows:

<i>(in millions of Korean won)</i>	2023	2022
Provision for restoration to specific property and equipment account	₩ 4,566	₩ 4,253
Write-offs of trade receivables	912	1,107
Increase in non-trade payables related to acquisition of property and equipment	19,012	20,742

KAKAO CORP. and Subsidiaries
Notes to the Consolidated Financial Statements
December 31, 2023 and 2022

Decrease in non-trade receivables related to sales of property and equipment	(7,624)	(524)
Increase (decrease) in non-trade payables related to sales of intangible assets	(4,871)	212
Transfer from advanced payments and long-term advanced payments to property and equipment	1,049	7,413
Transfer from advanced payments and long-term advanced payments to intangible assets	11,692	169,319
Conversion of convertible bonds	-	36,410
Conversion of redeemable convertible preferred shares	-	5,290
Transfer to current portion of long-term borrowings	563,852	53,057
Increase in non-trade payables related to payment of lease liabilities	3,191	22,739
Transfer from investments in associates to financial assets at fair value through other comprehensive income ¹	88	524,083
Transfer from investments in associates to investments in subsidiaries	53,909	-

¹ During 2022, reclassified the shares of Dunamu Inc. as financial assets at fair value through other comprehensive income due to losing significant influence.

Changes in liabilities arising from financial activities for the years ended December 31, 2023 and 2022, are as follows:

(in millions of Korean won)

(in millions of Korean won)

	Liabilities from financing activities						
	Short-term borrowings		Long-term borrowings		Lease liabilities		Total
At January 1, 2022	₩	(1,258,828)	₩	(553,054)	₩	(1,497,952)	₩ (3,309,834)
Acquisitions – leases		-		-		(672,172)	(672,172)
Disposal – lease		-		-		33,003	33,003
Cash flows		296,089		(709,091)		187,776	(225,227)
Exchange differences		(68,727)		2,556		14,994	(51,176)
Change in scope of consolidation		(12,882)		(6,400)		106,556	87,275
Transfer from/to current portion		(53,057)		53,057		-	-
Unwind of discount		(4,391)		(861)		(62,339)	(67,592)
Conversion to ordinary shares		5,290		36,410		-	41,699
Others		(379)		1,204		-	825
At December 31, 2022	₩	(1,096,884)	₩	(1,176,181)	₩	(1,890,134)	₩ (4,163,200)
At January 1, 2023	₩	(1,096,884)	₩	(1,176,181)	₩	(1,890,134)	₩ (4,163,200)
Acquisitions – leases		-		-		(265,307)	(265,307)
Disposal – lease		-		-		23,497	23,497
Cash flows		58,658		(198,988)		290,259	149,930
Exchange differences		(1,596)		(33,973)		3,374	(32,195)
Change in scope of consolidation		(19,256)		(42)		(104,092)	(123,390)
Transfer from/to current		(563,852)		563,852		-	-

KAKAO CORP. and Subsidiaries
Notes to the Consolidated Financial Statements
December 31, 2023 and 2022

portion				
Unwind of discount	(3,382)	(297)	(74,781)	(78,460)
Others	(3,140)	-	-	(3,140)
At December 31, 2023	₩ (1,629,452)	₩ (845,628)	₩ (2,017,185)	₩ (4,492,265)

38. Commitments and Contingencies

The Group has provided the following guarantees as at December 31, 2023 and 2022:

<i>(in millions of Korean won)</i>		Amount		Guaranteed item
Beneficiary	Guarantor	2023		
Employees ¹	Shinhan Bank	₩	3,080	Employee loans
Customers ²	Korea Investment Savings Bank, etc.		62,000	Guarantee for sales instalment
		₩	65,080	

¹ The Group provided its employees payment guarantee with banks for the employees' bank loans related to their welfare and the Group's deposits of ₩ 33,388 million are pledged as collateral.

² Debt guarantee provided for the customer's instalment amount for financial institutions among the purchase amounts. In relation to such debt guarantee financial instruments of ₩ 12,539 million of the Group are provided as collateral.

<i>(in millions of Korean won)</i>		Amount		Guaranteed item
Beneficiary	Guarantor	2022		
Employees ¹	Shinhan Bank	₩	5,552	Employee loans
Customers ²	Korea Investment Savings Bank, etc.		52,000	Guarantee for sales instalment
Kakao Games Europe B.V.	Hana Bank, etc.		729,648	Guarantee for loan payments
		₩	787,200	

¹ The Group provided its employees payment guarantee with banks for the employees' bank loans related to their welfare and the Group's deposits of ₩ 6,107 million are pledged as collateral.

² Debt guarantee provided for the customer's instalment amount for financial institutions among the purchase amounts. In relation to such debt guarantee financial instruments of ₩ 15,490 million of the Group are provided as collateral.

The Group has been provided the following guarantees by others as at December 31, 2023 and 2022:

<i>(in millions of Korean won)</i>		Amount		Beneficiary
Guarantor	Details	2023	2022	
Seoul Guarantee Insurance and others	Performance guarantee and others	₩ 323,897	₩ 177,759	Korea Financial Telecommunications & Clearings Institute, Korea Workers' Compensation & Welfare Service, etc.

KAKAO CORP. and Subsidiaries
Notes to the Consolidated Financial Statements
December 31, 2023 and 2022

Executive of subsidiaries ¹	Guarantee for borrowings and others	4,833	11,225	Korea Development Bank, etc.
Seoul Guarantee Insurance and others	Guarantee for payment of construction	371,910	918	Kakao Space Corp., etc.
		<u>₩ 700,640</u>	<u>₩ 189,902</u>	

¹ It includes amounts guaranteed by CEO and executives of subsidiaries.

As at December 31, 2023, the Group is involved in 54 lawsuits amounting to ₩ 106,101 million as a defendant or co-defendant. The Group recognizes related liabilities when it is highly probable that there will be an outflow of resources embodying economic benefits in order to fulfil obligations pursuant to law. The Group does not expect that these cases would have a material impact on its consolidated financial statements.

The Group's agreements with financial institutions and commitments as at December 31, 2023 and 2022, are as follows:

<i>(in millions of Korean won)</i>		2023	
Financial Institution	Agreements	Maximum limit	Amount executed
Kookmin Bank	Facility loans	₩ 5,000	₩ -
Kookmin Bank	Short-term borrowings	15,000	-
Kookmin Bank	Loans for operation capital	180,500	175,000
Kookmin Bank	Long-term borrowings	189,736	189,736
Kookmin Bank	Limit loan agreement	22,000	-
Kookmin Bank	Limit loans for operation capital	100,000	-
Korea Development Bank	Limit loan agreement	40,000	-
Volksbank	Short-term borrowings	357	357
Volksbank	Long-term borrowings	1,422	535
Industrial Bank of Korea	Short-term borrowings	500	500
Industrial Bank of Korea	Loans for small and medium-sized businesses	100	-
Industrial Bank of Korea	Limit loan agreement	201	-
NongHyup Bank	General loans	2,000	-
NongHyup Bank	Limit loan agreement	7,000	-
Korea Development Bank	Loans for operation capital	74,000	74,000
Shinhan Bank	Short-term borrowings	3,000	3,000
Shinhan Bank	Loans for operation capital	180,000	100,000

KAKAO CORP. and Subsidiaries
Notes to the Consolidated Financial Statements
December 31, 2023 and 2022

Shinhan Bank	Long-term borrowings	221,179	221,179
Shinhan Bank	Limit loan agreement	29,000	-
Shinhan Bank	Limit loans for operation capital	250,100	250,000
Shinhan Bank	General loans	85	85
Woori Bank	Loans for operation capital	35,000	35,000
Woori Bank	Long-term borrowings	102,249	93,504
Woori Bank	Limit loan agreement	1,240	-
Hana Bank	Loans for enterprise operating general fund	11,000	-
Hana Bank	Loans for operation capital	160,000	60,000
Hana Bank ¹	Loans for daily transactions	3,000	-
Hana Bank	Long-term borrowings	239,736	239,736
Hana Bank	Receivables secured loans	5,050	-
Korea Securities Finance Corp	Retail Banking loans	50,000	-
Korea Securities Finance Corp	Loans for acquisition	80,000	-
Korea Securities Finance Corp	Loans for daily transactions	30,000	-
Hanmi Bank	Short-term borrowings	6,724	-
Korea SMEs and Startups Agency	Office secured loans	1,137	1,137
Korea SMEs and Startups Agency	Long-term borrowings	975	17
Korea SMEs and Startups Agency	Limit loan agreement	58	-
Korea SMEs and Startups Agency	Current portion of long-term borrowings	33	33
The Export-Import Bank of Korea	Limit loan agreement	50,000	35,000
Citibank Korea Inc.	Loans for operation capital	50,000	50,000
KB Securities	Long-term borrowings	50,000	50,000
Hanmi Bank	Limit loan agreement	6,724	1,817
Sumitomo Mitsui Banking Corporation	Short-term borrowings	913	456
Shinhan Bank	Commercial paper	80,000	80,000
KB Securities	Commercial paper	155,000	155,000
SAMSUNG SECURITIES CO.,LTD	Commercial paper	30,000	30,000

¹ ₩ 4,000 million of time deposit and ₩ 2,000 million of MMT (Korea Securities Finance Corp) is held as collateral with respect to the agreement.

KAKAO CORP. and Subsidiaries
Notes to the Consolidated Financial Statements
December 31, 2023 and 2022

<i>(in millions of Korean won)</i>		2022	
Financial Institution	Agreements	Maximum limit	Amount executed
Kookmin Bank	Facility loans	₩ 4,000	₩ 1,000
Kookmin Bank	Short-term borrowings	15,000	15,000
Kookmin Bank	Loans for operation capital	80,000	15,800
Kookmin Bank	Limit loan agreement	22,000	-
Kookmin Bank	Limit loans for operation capital	10,000	-
Korea Development Bank	Limit loan agreement	40,000	-
Volksbank	Long-term borrowings	1,351	1,182
Industrial Bank of Korea	KOSME Loan Agreement	100	-
Industrial Bank of Korea	Long-term borrowings	500	500
NongHyup Bank	General Business Loans	2,000	2,000
NongHyup Bank	Limit loan agreement	4,000	-
Korea Development Bank	Loans for operation capital	3,000	2,600
Shinhan Bank	Loans for operation capital	36,000	8,300
Shinhan Bank	General loans	2,400	2,400
Shinhan Bank	Limit loan agreement	29,000	-
Shinhan Bank	Limit loans for operation capital	200,100	-
Shinhan Bank	Long-term borrowings	560	560
Woori Bank	KOSME Loan Agreement	19	19
Hana Bank ¹	Loans for enterprise operating general fund	11,000	11,000
Hana Bank	Receivables secured loans	40	-
Hana Bank	Loans for daily transactions	3,000	-
Korea Securities Finance Corp	Retail Banking loans	50,000	-
Korea Securities Finance Corp	Loans for acquisition	80,000	-
Korea Securities Finance Corp	Loans for daily transactions	30,000	-
Hanmi Bank	Short-term borrowings	6,337	5,449
Korea SMEs and Startups Agency	Long-term borrowings	1,300	1,300
Ryan Mobility 1 st Co.	Limit loan agreement	50,000	50,000
NongHyup Bank	Limit loan agreement	6,000	6,000

¹ ₩ 4,000 million of time deposit and ₩ 2,000 million of MMT (Korea Securities Finance Corp) is held as collateral with respect to the agreement.

KAKAO CORP. and Subsidiaries

Notes to the Consolidated Financial Statements

December 31, 2023 and 2022

In accordance with the shareholder agreements in relation to Kakaopay Corp., a subsidiary, if there are difficulties in management and operation of Kakaopay Corp. due to changes in governance structure, the non-controlling interest investors of the subsidiary may request the Group to purchase those shares at fair value for a period of time described in the agreements. Management of the Group believes that the Group can control prerequisites for investors to claim the purchase and therefore, as at December 31, 2023, the Group believes that the possibility for non-controlling interest investors to exercise the put option is remote.

In accordance with the agreements with non-controlling interests of some subsidiaries including Kakao Entertainment Corp., the Group is required to obtain a consent from investors, when the Group intends to dispose of the investments in subsidiaries within the period specified in the agreements through a transfer or other methods to third party other than stipulated manners in the agreements such as exercise of tagalong right.

Financial instruments restricted as at December 31, 2023 and 2022:

<i>(in millions of Korean won)</i>	2023		2022		
Cash and cash equivalents	₩	5,723	₩	395	Restrictions on withdrawals related to customer complaints
Short-term financial instruments and others		8,000		8,000	Withdrawal restriction in relation to firm banking ¹
		1,550		1,880	Pledged as collateral for Shinhan Card and etc. ²
		8,541		-	Pledged as collateral and guarantees for a contract
		1,407		1,407	Payment guarantee for office lease
		3,100		3,200	Pledged as collateral for a franchise contract
		1,810		500	Pledged as collateral for loan services
		2		2	Deposits for opening checking accounts and others
		5,450		11,000	Providing collateral for stock option loans
		30,000		50,000	Providing collateral for a shareholder association loan
		3,388		297	Payment guarantee for employee's loan
Long-term financial instruments and others		-		6,107	Payment guarantee for employee's loan
		15		15	Deposits
Deposits and financial assets at fair value through profit or loss		4,000		4,000	Provision of collateral for Hana Bank overdraft
		13,325		33,103	Separate investment deposit (ordinary deposit) ³
		3,000		2,000	Market derivative instrument transaction deposit
		2		2	Deposits for opening checking accounts and others
		3,510		2,510	Deposit for security transactions for Korea Exchange Market
		674,177		395,127	Separate investment deposit (financial asset) ³
	₩	<u>767,000</u>	₩	<u>519,545</u>	

KAKAO CORP. and Subsidiaries

Notes to the Consolidated Financial Statements

December 31, 2023 and 2022

¹ The withdrawal is restricted in relation to the firm banking contract with DGB Daegu Bank and Industrial Bank of Korea.

² Pledged as collateral in relation to covering expected loss incurred to credit card companies about business cooperation agreements with Shinhan Card and other credit card companies for 'Automated Payment via Kakao Pay'.

³ Deposited separately at Korea Securities Finance Corp. to meet the customer's requests such as return of investment deposit under Section 4 of Article 74 of Financial Investment Services and Capital Markets Act. It cannot be transferred or provided as collateral and cannot be offset or seized by anyone.

The following assets are pledged as collateral in relation to guarantees for contract fulfilment and borrowings as at December 31, 2023:

<i>(in millions of Korean won)</i>	Book amount		Secured amount		Type of Guarantee	Secured party
Land, buildings and others	₩	17,444	₩	24,167	Collateral for facility loans	Shinhan Bank, Hana Bank, etc.

The Group grants the right to subscribe for new shares, preferential purchase rights, and tag- along rights to investment shares through shareholders' agreements concluded with external investors.

Kakaopay Corp., a subsidiary, entered into an agreement to pay incentives to shareholders of non-controlling interests of Kakaopay Securities Corp., a subsidiary, for earnings generated from fiscal year 2018 to 2021. These earnings are calculated in accordance with the agreement and incentives are paid in dividends and bonus through discussion between shareholders. The Group pays incentives unless the entity subject to payment recognizes net loss and to extent it is permitted under laws or regulations (including unenforceable guidelines and administrative guidance of government organization).

In relation to the equity investment of non-controlling shareholders of Kakao Entertainment Corp., a subsidiary, the Group entered into a shareholders' agreement granting right to purchase with the relevant non-controlling shareholders. If the Group fails to fulfill important obligations stipulated in the agreement or there is a change in the majority shareholder of KAKAO CORP., the non-controlling shareholder of the relevant subsidiary may request the Group to purchase the shares, issued by the subsidiary and held by the shareholder, for a period of time described in the agreements. The Group believes that the Group can control prerequisites for non-controlling shareholders to claim the purchase and therefore, as at December 31, 2023, the Group believes that the possibility for non-controlling interest investors to exercise the put option is remote.

On November 13, 2023, the Parent Company's executives were legally indicted for violating the Financial Investment Services and Capital Markets Act (purchase of shares for fixing market price purposes and, obligation to report on stocks held in bulk). The Parent Company was also indicted in accordance with the joint penalty provisions of related laws. The information mentioned above is currently under ongoing trial and has not been conclusively determined.

The Parent Company holds 27.2% of the voting shares of KakaoBank Corp., an Internet-only bank, in

KAKAO CORP. and Subsidiaries

Notes to the Consolidated Financial Statements

December 31, 2023 and 2022

accordance with Article 5 (Special Cases of Limits on Stockholding by Non-Financial Investor) of the Act On Special Cases Concerning Establishment And Operation Of Internet-only Banks.

Requirements for approval related to holding of shares thereof shall be determined in the attached Table in consideration of the following:

1. Investment capability, financial status, and social credibility;
2. Effect on concentration of economic power;
3. Appropriateness of a plan for shareholder composition;
4. Asset ratio of companies which engage in information and communications business;
5. Contribution plan for promotion of convergence between finance and information and communications technology, microfinance support, etc.

According to the Table, in order for the Parent Company to receive an exemption for special cases of limits on stockholding, the executive partner or the executive officer shall have no record of a criminal penalty equivalent to or heavier than a fine imposed for a violation of any of the statutes specified in finance-related statutes, the Monopoly Regulation and Fair Trade Act, the Punishment of Tax Offenses Act or the Aggravated Punishment of Specific Economic Crimes Act during the latest five years. However, if the severity of such violations is deemed minor by the Financial Services Commission, holding stocks in excess of limit under special cases is not prohibited.

In this case, due to the finance-related statutes (Capital Market Act), if criminal penalties equivalent to or heavier than a fine imposed are confirmed (the Supreme Court appeal confirmed), depending on the review by the Financial Services Commission, the application of the above special cases may not be possible.

In this case, the Parent Company may be required to dispose of its shares in KakaoBank Corp. that exceeds 10% of voting shares, in accordance with Article 15 (Limits on Stock-Holding by Same Person) of the Banking Act.

As at December 31, 2023, other commitments of the Group are as follows:

(1) Kakao Entertainment Corp., a subsidiary, has entered into shareholders' agreements with MORE VISION that requires Kakao Entertainment Corp. to sell the remaining shares held by the subsidiary when the counterparty expresses an intention to purchase for a period of two years from the date five years have passed since the investment contract was concluded. The selling price should be the larger amount between the amount evaluated by an external evaluation institution or ₩ 750 million per share.

(2) Kakao Entertainment Corp., a subsidiary, pledged shares held by some shareholders who have participated in the Group's paid-in capital increase as collateral. If some shareholders who participated in the subsidiary's paid-in capital increase want to sell their share before certain conditions are met, they are required to get the consent of the subsidiary.

(3) In accordance with the non-controlling interests of some subsidiaries and associates including STARSHIP ENTERTAINMENT CORP. and others, Kakao Entertainment Corp., a subsidiary, is required to obtain written consent from stakeholders and investors when Kakao Entertainment Corp. intends to dispose of all or part of investments in subsidiaries or associates by transfer, sale, providing

KAKAO CORP. and Subsidiaries

Notes to the Consolidated Financial Statements

December 31, 2023 and 2022

collateral, or other means before certain period or conditions are met.

(4) Some shareholders of subsidiaries and associates, including STARSHIP ENTERTAINMENT CORP., a subsidiary, and others, can request the Group to purchase share of subsidiaries and associates if the certain conditions are met in accordance with the shareholders' agreement.

(5) Kakao Entertainment Corp., a subsidiary, has lent money to an individual and, all the shares of subsidiaries owned by the individual is pledged as collateral.

(6) The Group holds the right to subscribe for new shares, preferential purchase rights, and tag-along rights in accordance with the terms of contracts with subsidiaries and associates.

(7) Kakao Entertainment Corp., a subsidiary, has entered into shareholders' agreement. According to the agreement, if Gleline Corp. achieves the agreed accumulated operating profit within 5 years starting from 2022, Kakao Entertainment Corp. has the right to purchase the remaining shares held by the counterparty at a price agreed between the parties.

(8) The Group has entered into a put option agreement in relation to its partial equity investments in some of subsidiaries and associates. According to the put option, if the counterparty intentionally neglects its obligation to disclose its qualification as a public company or violates contractual obligations, and the Group expresses its intention to sell its shares, the counterparty is obliged to purchase all, or part of the shares held by the Group at a price that adds a certain amount to the per-share acquisition price.

(9) Kakao Entertainment Corp., a subsidiary, has entered into an agreement for sale of shares with Legendaries Corp., a subsidiary. According to the agreement, if the counterparty expresses an intention to purchase for a period of two years from the date one year has passed since the conclusion of the share sale agreement, the party or a person designated by the counterparty must sell the remaining shares held by the subsidiaries at a price evaluated by an external evaluation agency.

(10) Kakao Entertainment Corp., a subsidiary, has the right to claim the purchase of all or part of shares of the counterparty held by the Group in the event that a specific lawsuit against JELLY FISH ENTERTAINMENT.CO., LTD, as a defendant, related to the equity investments, results in a confirmed loss verdict for JELLY FISH ENTERTAINMENT.CO., LTD.

(11) As at December 31, 2023, if there are legal violations, sanctions by regulatory authorities, or modifications of audit opinions regarding some non-controlling shareholders of Kakao Entertainment Corp., a subsidiary. The Group has an obligation to purchase all or part of the shares held by the non-controlling shareholders at a specific price. The Group has recorded the amount as a financial liability.

(12) As at December 31, 2023, Kakao Entertainment Corp., a subsidiary, is obligated to purchase certain shares held by the counterparty in connection with the purchase of shares of Feelyeon Management, Nextlevelstudio Inc. and PAGE LAB Inc. at an agreed price or a specific price at a certain time when the counterparty expresses its intention to sell, and the Group has recorded the amount as a financial liability.

KAKAO CORP. and Subsidiaries
Notes to the Consolidated Financial Statements
December 31, 2023 and 2022

(13) Under the shareholders' agreement concluded at the time of investment in Daon Creative inc., the counterparty has expressed its intention to sell the remaining shares it holds. At the end of the reporting period, the price to be purchased by the Group is being determined, and the financial effect has been reflected in the consolidated financial statements based on the best estimate.

(14) Kakao Entertainment Corp., a subsidiary, has committed to invest ₩ 6.4 billion to Helios KDBC Video Digital Contents No. 1, ₩ 4.4 billion was invested as at December 31, 2023, with a remaining investment commitment of ₩ 2 billion.

(15) Kakao Entertainment Corp., a subsidiary, has committed to invest ₩ 20 billion to Penture K-Content Investment Association, ₩ 6 billion was invested as at December 31, 2023, with a remaining investment commitment of ₩ 14 billion.

(16) As at December 31, 2023, the Group has entered a contract with Barunson Entertainment & Arts Corporation to receive an investment of ₩ 20 billion as a main investment and ₩ 10 billion as a partial investment for the movie produced by the Group. If the distribution of profits for the partial investment is less than the partial investment principal by the time the profit distribution period expires, the Group must pay the shortfall to Barunson Entertainment & Arts Corporation.

(17) Kakao Games Corp., a subsidiary, has the right to subscribe for new shares, preferential purchase rights, and drag-along rights to the shares of XL Games Inc., Ocean Drive Studio Corp., and Second Dive Corp. through shareholders' agreements, and in the case of XL Games Inc. and Ocean Drive Studio Corp., Kakao Games Corp. has entered into an agreement regarding the purchase rights of major shareholders.

(18) As at December 31, 2023, in shareholders' agreement entered into between Kakao Games Corp., a subsidiary, and stakeholders of XL Games Inc., even if the target company achieves the conditions for initial public offering, if the subsidiary opposes, the stakeholders can request the subsidiary to purchase all of their held shares for a period of time described in the agreements. Management of the subsidiary believes that a situation in which a purchase right can be made will not arise as it is possible to control the reasons that are conditions for the exercise of the purchase rights of stakeholders.

(19) With respect to Kakao VX, a subsidiary, under the terms of the new share acquisition agreement concluded with external investors, non-controlling shareholders of Kakao VX may request that Kakao VX and/or Kakao Games Corp. purchase their shares for a period of time described in the agreements, when Kakao VX and/or Kakao Games Corp. fails to perform important obligations stated in the contract due to willful misconduct or gross negligence. Management of the Group believes that a situation in which a purchase right can be made will not arise as it is possible to control the reasons that are conditions for the exercise of the purchase rights of investor.

(20) As at December 31, 2023, under the terms of the shareholders' agreement concluded between Kakao Games Corp., a subsidiary, and external investors of Kakao VX, the external investors of Kakao VX may request that Kakao VX purchase the shares they hold for a period of time described in the agreements if the subsidiary loses its status as a Kakao Group enterprise group. The Group believes it can control the terms of this agreement. In addition, the external investors have the right to participate in co-sale if the Group transfers its shares of Kakao VX to a third party other than an

KAKAO CORP. and Subsidiaries

Notes to the Consolidated Financial Statements

December 31, 2023 and 2022

affiliate of Kakao Games Corp.

(21) As at December 31, 2023, Kakao Games Corp., a subsidiary, has entered into the shareholders' agreement with stakeholders in relation to Lionheart Studio Corp.. The Group has pre-emptive purchase rights, tag-along rights, call option right for equity shares, pre-emptive purchaser rights for assets.

(22) As at December 31, 2023, if initial public offering of the target company is completed under shareholders' agreement entered into between Kakao Games Corp., a subsidiary, and the stakeholders of Lionheart Studio Corp., Kakao Games Corp. can request subsidiaries to purchase shares within a limit of 20% of the target company's issued shares held by stakeholders within 3 months from the date after 5 years have passed since the completion of the initial public offering. Kakao Games Corp., a subsidiary, recorded the amount as a financial liability. In addition, if there is disagreement or mutual agreement not to pursue an initial public offering, stakeholders may request the subsidiaries of the Group to purchase some or all of the target company's shares held by stakeholders. The Group's management believes that these cases can be controlled.

(23) As at December 31, 2023, Kakao Games Corp., a subsidiary, has covenants regarding preferential purchase rights, drag-along rights, and warrants in the shareholders' agreement entered into during the acquisition of Sena Technologies, Inc.

(24) As at December 31, 2023, in a share purchase agreement entered into between Kakao Games Corp., a subsidiary, and stakeholders of SENA Technologies, Inc., a subsidiary, even if the target company achieves the conditions for initial public offering, if the subsidiary opposes, the stakeholders can request the subsidiary to purchase all of their held shares for a period of time described in the agreements. The Group's management believes that these cases can be controlled.

(25) Kakao Games Corp., a subsidiary, has committed to invest ₩ 10 billion to Let's go Together Kakao Games Win-win Fund, ₩ 8 billion was invested as at December 31, 2023, with a remaining investment commitment of ₩ 2 billion.

(26) As at December 31, 2023, Kakao Games Corp., a subsidiary, has entered into shareholders' agreements with major shareholders and external investors of Ocean Drive Studio Corp.. According to the agreement, the major shareholders may request the subsidiaries to purchase all of the shares held by the entity when agreed-upon time is reached by all major shareholders. In addition, if percentage of ownership of the target company exceeds 50%, external investors may request to purchase all of the shares held for a period of time described in the agreements. The Group has recorded the amount related to the agreement as a financial liability.

(27) Kakao VX, a subsidiary, entered into a shareholders' agreement by concluding a contract to acquire shares of Teins Valley. According to this agreement, Kakao VX has the right to exercise a call option to purchase all or part of the issued shares of the target company held by major shareholders under certain conditions. However, the Group did not perform separate accounting treatment for this in the consolidated financial statements. If certain conditions are met according to this agreement, the subsidiary may exercise the call option.

(28) As at December 31, 2023, Kakao Games Corp., a subsidiary, has entered into investment

KAKAO CORP. and Subsidiaries

Notes to the Consolidated Financial Statements

December 31, 2023 and 2022

contract with external investors of METABORA Co., Ltd. Conditions such as pre-emptive purchase rights, drag-along rights, pre-emptive purchaser rights for assets and others are stipulated in the contract.

(29) As at December 31, 2023, Kakao Games Corp., a subsidiary, has entered into shareholders' agreements with major shareholders of Neptune Co., Ltd. In relation to conditions for the right to purchase for shares held by major shareholders in case of violation of agreement.

(30) Kakaopay Corp., a subsidiary, has committed to invest ₩ 3 billion to IMM Startup Venture Fund No. 1, ₩ 1.2 billion was invested as at December 31, 2023, with a remaining investment commitment of ₩ 1.8 billion.

(31) Kakaopay Corp., a subsidiary, acquired the shares of Paymint Inc., and classified it as a subsidiary for the year ended December 31, 2023. The share acquisition agreement includes an obligation to purchase the existing shareholders' shares at an agreed price at a certain point in time, and Kakaopay Corp., a subsidiary, recorded the amount as a financial liability.

(32) As the main transaction was terminated due to the failure of the secondary transaction with Siebert Financial Corp., and the related shareholders' agreement was amended and concluded, Kakaopay Corp., a subsidiary, has agreed to receive USD 500,000 quarterly from Siebert Financial Corp., starting from March 29, 2024 to June 30, 2026, for a total of USD 5,000,000.

(33) Kakao Mobility Corp., a subsidiary, has a separate decision-making body under the Board of Directors (the Committee), which is composed of the Parent Company and the non-controlling shareholder investors. As at December 31, 2023, pursuant to the shareholders' agreement, the non-controlling shareholder investors agreed to delay the exercise of its right to appoint a majority of the Committee. Accordingly, as at the date of these consolidated financial statements, the Parent Company has right to constitute the majority of the Committee.

(34) Kakao Enterprises Corp., a subsidiary of the Group, acquired shares of e.Form Works in the previous period, and classified them as investments in associates. The share acquisition contract includes a provision in which Kakao Enterprises Corp. will receive 20% of the shares of e.Form Works from Ion Communications Co., Ltd., the major shareholder of e.Form Works, depending on whether e.Form Works achieves the KPI.

(35) Kakao Enterprise Corp., a subsidiary of the Group, entered into a contract with Company A in the previous period, and grants put option to sell all of Company B's shares (78.29% of Company B's total issued shares) held by Company A from the 36th month to the 48th month after the acquisition of Company B's shares.

(36) Pursuant to provisions of Paragraph 1, Article 530-3 of the Commercial Code of the Republic of Korea, SM Culture & Contents Co., Ltd., a subsidiary, spun off the business division of WOOLLLOM ENTERTAINMENT by a resolution of the special shareholders meeting on March 4, 2016. SM Culture & Contents Co., Ltd. Assumes the responsibility to repay the before spin-off obligation of the spun-off company jointly and severally with the newly established company after spin-off according to provisions of Paragraph 1, Article 530-9 of the Commercial Code of the Republic of Korea. SM Culture & Contents Co., Ltd. Merged with SM Contents & Communications Co., Ltd. On December 31, 2027.

KAKAO CORP. and Subsidiaries

Notes to the Consolidated Financial Statements

December 31, 2023 and 2022

SM Contents & Communications Co., Ltd. Is a newly established corporation by a split-off from SK Planet Co., Ltd. On October 1, 2017. SM Culture & Contents Co., Ltd. Assumes the responsibility to repay the before spin-off obligation of the spun-off company jointly and severally with SK Planet Co., Ltd. After spin-off according to provisions of Paragraph 1, Article 530-9 of the Commercial Code of the Republic of Korea.

(37) The Group entered into shareholders' agreement granting a put option in relation to equity investment in STUDIO A Co., Ltd., a subsidiary, and the Group accounts for the amount as financial liabilities.

(38) The Group is exploring various methods to comply with the corrective order from Korean Communications Commission regarding violations of restriction on ownership of advertising sales agencies. At the end of the reporting period, the impact on the consolidated financial statements cannot presently be determined.

39. Business Combinations

In 2023, the Group acquired the shares of 44 companies including SM Entertainment Co., Ltd., which became its subsidiaries. Details of the percentage of ownership acquired, the consideration transferred, and goodwill recognized thereto are as follow:

<i>(in millions of Korean won)</i>	Percentage of ownership acquired (%)²		Consideration transferred		Goodwill
SM Entertainment Co., Ltd. And 29 entities ¹	40.5	₩	1,360,132	₩	846,169
SM Universe Co., Ltd.	70.3		5,695		3,029
Studio CLON	51.0		4,001		1,333
Catchers Cultural Industry Company	100.0		2		-
SM BRAND MARKETING Co., LTD. And 4 entities	84.4		107,427		98,601
FRIENDS GOLF HOLDINGS VN JOINT STOCK COMPANY	51.0		2,578		634
Ocean Drive Studio Corp. and one other entity	65.2		62,505		67,681
Music publishing segment	-		6,300		5,281
MonoTree Inc.	100.0		4,500		3,609
Paymint Inc. ^{1,3}	87.7		38,520		34,412
		₩	1,591,660	₩	1,060,750

¹ Presented as a provisional amount since the amount of consideration allocation related to the business combination has not been finalized at this time.

² Presented as substantial percentage of ownership considering treasury shares.

³ As it was determined that the Group had potential voting rights for the remaining interests, 100% of ownership has been reflected at the closing.

KAKAO CORP. and Subsidiaries

Notes to the Consolidated Financial Statements

December 31, 2023 and 2022

Details of the purchase consideration, the assets and liabilities recognized as a result of the acquisition, and fair value of the non-controlling interest at the acquisition date in relation to business combinations in 2023, are as follows:

(in millions of Korean won)

	SM Entertainment Co., Ltd. And 29 entities ¹		SM Universe Co., Ltd.		Studio CLON		Catchers Cultural Industry Company	SM BRAND MARKETING Co., LTD. And 4 entities ¹	
Consideration transferred									
Cash and cash equivalents ²	₩	1,360,132	₩	3,500	₩	4,001	₩	-	₩ 53,885
Fair value of equity interest held before the business combination		-		2,195		-		2	53,542
Total consideration	₩	1,360,132	₩	5,695	₩	4,001	₩	2	₩ 107,427
Assets acquired and liabilities assumed									
Cash and cash equivalents	₩	298,946	₩	2,087	₩	3,240	₩	398	₩ 6,414
Short-term financial instruments		228,208		-		1,513		-	4,400
Financial assets at fair value through profit or loss		46,403		-		-		-	-
Trade receivables		114,696		-		2,677		-	284
Investments in associates and joint ventures		504,372		-		-		-	-
Investment property		22,255		-		-		-	-
Inventories		20,523		-		-		-	6,166
Property and equipment		91,811		886		753		-	2,567
Right-of-use assets		88,958		2,988		693		-	2,015
Intangible assets		608,410		2		1,118		-	1,271
Deferred income tax assets		5,808		-		-		-	556
Other assets		178,181		885		590		1,192	6,667
Trade payables		(182,406)		(50)		-		-	(4,926)
Borrowings		(20,163)		(150)		(14)		-	-
Other financial liabilities		(42,731)		(58)		(2,318)		-	(1,695)
Derivative financial liabilities		(5,543)		-		-		-	-
Lease liabilities		(101,078)		(2,794)		(653)		-	(1,808)
Net defined benefit liabilities		(591)		-		(1,656)		-	-
Deferred income tax liabilities		(223,571)		-		(234)		-	-
Other liabilities		(173,593)		(4)		(478)		(1,587)	(8,912)
Net identifiable assets acquired		1,458,896		3,792		5,230		2	12,999
Non-controlling interest		(944,933)		(1,126)		(2,563)		-	(4,172)
Goodwill	₩	846,169	₩	3,029	₩	1,333	₩	-	₩ 98,601

¹ Presented as the amount in the consolidated financial statements including subsidiaries held at the time of business combination.

KAKAO CORP. and Subsidiaries

Notes to the Consolidated Financial Statements

December 31, 2023 and 2022

² For the year ended December 31, 2023, the Group acquired 1,167,400 shares of SM Entertainment Co., Ltd. Through the Korea Stock Exchange and recognized them as financial assets at fair value through other comprehensive income. The Group subsequently recognized gain or loss on valuation on the date of business combination and included the valuation amount in the consideration transferred.

(in millions of Korean won)

	FRIENDS GOLF HOLDINGS VN JOINT STOCK COMPANY		Ocean Drive Studio Corp. and one other entity ¹		Music publishing segment		MonoTree		Paymint Inc.	
Consideration transferred										
Cash and cash equivalents	₩	2,578	₩	34,823	₩	6,300	₩	4,500	₩	32,196
Fair value of equity interest held before the business combination		-		27,682		-		-		-
Contingent consideration		-		-		-		-		6,323
Total consideration	₩	2,578	₩	62,505	₩	6,300	₩	4,500	₩	38,520
Assets acquired and liabilities assumed										
Cash and cash equivalents	₩	1,509	₩	1,041	₩	-	₩	277	₩	697
Short-term financial instruments		-		2,000		-		-		3,400
Financial assets at fair value through profit or loss		-		1,003		-		-		-
Trade receivables		338		98		-		48		16
Inventories		1,364		-		-		-		-
Property and equipment		2,867		223		11		3		67
Right-of-use assets		-		343		859		271		143
Intangible assets		-		72		807		788		64
Other assets		828		887		154		66		244
Trade payables		(3,095)		(1,430)		-		-		(44)
Borrowings		-		(10,000)		-		-		-
Other financial liabilities		-		(2,521)		-		(6)		-
Lease liabilities		-		(365)		(729)		(194)		(143)
Net defined benefit liabilities		-		-		-		(108)		-
Deferred income tax liabilities		-		-		-		(165)		-
Other liabilities		-		(10,260)		(84)		(90)		(338)
Net identifiable assets acquired		3,812		(18,911)		1,019		891		4,108
Non-controlling interest		(1,868)		13,735		-		-		-
Goodwill	₩	634	₩	67,681	₩	5,281	₩	3,609	₩	34,412

¹ Presented as the amount in the consolidated financial statements including subsidiaries held at the time of business combination.

(1) Sales and net profit of subsidiaries after the acquisition date, which were included in the consolidation and reflected in the consolidated statement of comprehensive income during the year

KAKAO CORP. and Subsidiaries

Notes to the Consolidated Financial Statements

December 31, 2023 and 2022

ended December 31, 2023, were ₩ 756,966 million and ₩ 56,038 million, respectively.

(2) If the subsidiaries, included in subsidiaries through business combination, had been consolidated from the beginning of the current period, the Group's sales and net profit would have been ₩ 1,037,935 million and ₩ 63,943 million, respectively.

40. Related Parties Transactions

The Parent Company is the ultimate parent company that prepares consolidated financial statements. The list of related parties as at December 31, 2023 and 2022, is as follows:

2023	
Relationship	Related parties ¹
Associates	DAUM Venture Fund, CNT TECH CO., LTD., Creativecomms Corp., CNT Tech 1st Start-up Investment Fund, CNT Tech 2nd Start-up Investment Fund, CNT Tech 5th Startup Investment, CNT Tech 7th Start-up Investment Fund, Hacktokon Investment Fund No.1, AI Angel CNT Tech Personal Investment Fund, CNT Tech 11th Startup Investment Fund, CNT Tech 15th Start-up Investment Fund, CNT Tech Vine Supporters Investment Fund, Tide Square Co., Ltd., CC Partners, Allstay Co., Ltd., TIDESQUARE VIETNAM CO., LTD, Tidesquare Japan Co., Ltd, KakaoBank Corp., Korea Credit Data, Korea Merchant experience Co., Ltd., Korea Business Connect, ImU, Korea Payment Networks Limited, BOTTLED, Kakao Style Corp., CROQUIS Inc., UTC Kakao SK Telecom ESG Fund, G&G ENTERPRISE CO.,LTD., Socialbean Co., Ltd, SSANGN, WILDCAT, Caring Corp., Caring Community Care, CARING CARE CO., LTD., SEONHADA INC., Grip Company, GRIP US, INC., Jeju-vision Venture Investment Association No.1., KDBC-FP Technext Investment Association No.1, DEAR U Co., Ltd., Dreamus Company, Iriver Enterprise Ltd., Iriver China Co., Ltd., Dongguan Iriver Electronics Co., Ltd., Dolphiners Films, Life Design Company Inc., Galaxia SM, INC., ESTEEM, ESTEEM ENTERTAINMENT CO., LTD., MYSTIC STORY INC., Studio Flow, Inc., Voyageur Film, ORIGIN FILM Co., Ltd., koylaps, PABLO AIR CO.LTD, HitchMED Co., Ltd., Enolink Holdings, Inc., Kakao-Shinhan 1st TNYT Fund, Kakao Growth Hacking Fund, KIF-Kakao Wooribank Technology Financing Fund, D&C MEDIA CO.,LTD., D&C WEBTOON BIZ, THE ANT, Studio Boom, SOUL CREATIVE CO.,LTD, Keytalk AI Inc., GLAMAI INC., DAIWAON. C.I. INC, HAEDAM ENT CO.,LTD, Haksan Publinshing Co., Ltd., TOYOU DREAM, AniLand Co., Ltd., Studio Griffin Corp., SEOUL MEDIA.INC., LEEMITELEESYUN CULTURE INDUSTRIAL JEONMUNHOESA INC., Super Comics. , Trace Culture Business Limited, HongKong TXKP Limited, Chengdu Podoteng Technology Co., Ltd., 325E&C co., Ltd., UNION K-Culture Contents Investment Fund, Highup Entertainment, Helios KDBC Video Digital Contents No. 1, Metaverse Entertainment, Atwater Capital Partners I, L.P. , MORE VISION CO., LTD., GRAYGO Corp., Clove Corp., Girl Rivers Cultural Industry Company Ltd., Wyatt co., Ltd, MANNACEA , Farmit, Farmit II,, TANGRAM FACTORY AMERICA, INC Deleo Korea Co., Ltd., YANADU., Fixel Hub co, Ltd., Foxsoft co.ltd, Daeyoung Chaevi CO., Ltd, Adlock Advertainment, Stage five Co., Ltd., DEVOTION FOODS Inc., JASON GROUP Co., Ltd. , MUSTIT. CO., Ltd., Nubility, Klleon Inc., CLEON CO.,LTD, Bluepoint Discovery Venture Fund No.2, DIGISONIC CO., LTD., InnoSignal CO., LTD., CHEQUER GLOBAL, INC., CHEQUER, TNK Factory, Atwater Soundtrack SPV, LP, Humanscape, nexthealth, Humanscape US Inc., herit healthcare, Impian Asia, HUMANSCAPE VIETNAM COMPANY LIMITED, GENOSCAPE PTE.LTD., Kids Note Co., Ltd.,

KAKAO CORP. and Subsidiaries

Notes to the Consolidated Financial Statements

December 31, 2023 and 2022

	UJUMUNBANGGU CO.,LTD., ATU e-sports Growth PE Fund, LUXROBO CO., LTD., LUXROBO CO., LTD., e.Form Works, LOVO Inc., LOVO Korea., GOOD GANG LABS PTE. LTD., Skelter Labs, Inc., TOROOC Inc. , Galux, RECON Labs., MIDIEOSEUPIEO CO.,LTD., Second Dive, Neptune Co., Ltd., HNC Games, Nimble Neuron, MAGNET, NEXPORTS Corporation, PRETTYBUSY, Mammo6 Co., Ltd., Mammossix Asia Co., Ltd., PLAYHARD, treeplla Inc. , Ad X plus Co., Ltd, Ncrokey, CodeDog, Remake Digital Co., Ltd., Reality Magic, Together Kakao Games win-win fund, Loadstars , Teins Valley, GOLF VX CORP., GC SOCIAL MEDIA MARKETING, INC., SNCO SOFTWARE PTE.LTD., Romance Crew, K Cube NEO Fund, DGT mobility., S&Tsolution Co., Ltd. , Anycall Mobility Corp, altimobility Corp., Autonomous A2Z, YUMOBILRITISAMO INVESTMENT LIMITED PARTNERSHIP, EASYGO CO., LTD., DOZEN CO.,LTD, DOZN GLOBAL PTE. LTD., TheCheat Corp., Siebert Financial Corp., Muriel Siebert & Co., Inc., Siebert AdvisorNXT, Inc., Park Wilshire Companies, Inc., Siebert Technologies, LLC, RISE Financial Services, LLC, StockCross Digital Solutions, Ltd., TEEware, Haotoon China Co., Ltd, PT Green Wind Culture, GT ENT CO.,LTD. and others (73 companies)
Joint ventures	DAUM KAKAO PHILIPPINES CORP., PHI DIGITAL HEALTHCARE Inc., FITNESSCANDY CO., LTD., CHANGWON CULTURE BOKHAP TOWN CO., LTD., SPLYT GROUP LTD., SPLYT TECHNOLOGIES LTD., SPLYT SINGAPORE PTE. LTD., SPLYT MALAYSIA SDN. BHD., SPLYT USA INC., SM True Company Limited
Other related parties	Stage Asset Co., Ltd., K Cube Holdings Co., Ltd., New learn English Inc., Onyx K., NPLUTO, GOLF&FRIEND CO., LTD., KCUBE IMPACT Co., Ltd., H3 Corp., Brian Impact Foundation, Kakao Impact Foundation, Colorverse Inc, SUNYOUNG STORY. CO., LTD, Kakao Creative Foundation, Kakaobank Corporation Employee Welfare Fund, Kakao Entertainment Corp. Employee Welfare Fund, Beyond Studio City Inc., everysing korea, KHAKI HOLDINGS, LP, MOBILITY CO-INVEST, LIMITED PARTNERSHIP

¹Include associates and other related parties of Kakao Corp. and the entities that are not the related party in accordance with Korean IFRS 1024 but belong to the Large Enterprise Group to which the Group also belongs in accordance with the Monopoly Regulation and Fair-Trade Act.

2022	
Relationship	Related parties ¹
Associates	Addcredit Corp., DAUM Venture Fund, CNT TECH CO., LTD., Creativecomms Corp., CNT Tech 1st Start-up Investment Fund, CNT Tech 2nd Start-up Investment Fund, CNT Tech 3rd Start-up Investment Fund, CNT Tech 5th Startup Investment, CNT Tech 7th Start-up Investment Fund, Hacktokon Investment Fund No.1, AI Angel CNT Tech Personal Investment Fund, CNT Tech 11th Startup Investment Fund, CNT Tech 15th Start-up Investment Fund, CNT Tech Vine Supporters Investment Fund, Tide Square Co., Ltd., CC Partners, Allstay Co.,Ltd., Square Lab Inc., KakaoBank Corp., Korea Credit Data, KCD Marketing, Korea F&B Partners (formerly, Foodzim), Korea Business Connect (formerly, PERSONA), ImU, Korea Payment Networks Limited (formerly, Fiservkorea), ImU, Korea Payment Networks Limited altimobility Corp., Kakao-Shinhan 1st TNYT Fund, Kakao Style Corp., UTC Kakao SK Telecom ESG Fund, CLAIR, Inc., G&G ENTERPRISE CO.,LTD., Socialbean Co., Ltd, SSANGN, WILDCAT, Caring Corp., Caring Community Care, Humanscape, nexthealth, Humanscape US Inc., herit healthcare, Impian Asia, Grip Company, HitchMED Co., Ltd., Jeju-vision Venture Investment Association No.1., Enolink Holdings, Inc., Kakao Growth Hacking Fund, KIF-Kakao Wooribank Technology Financing Fund, D&C MEDIA CO.,LTD., D&C WEBTOON BIZ, THE ANT, Studio Boom, SOUL CREATIVE CO.,LTD, mycelebs, inc, GLAMAI INC., DAIWAON. C. I. INC, HAEDAM ENT CO.,LTD., Haksan Publinshing Co., Ltd., AniLand Co., Ltd., Studio Griffin Corp., SEOUL MEDIA.INC., LEEMITELEESYUN CULTURE INDUSTRIAL JEONMUNHOESA INC., Super Comics. , Trace Culture Business Limited, HongKong TXKP Limited, Chengdu Podoteng Technology Co.,

KAKAO CORP. and Subsidiaries

Notes to the Consolidated Financial Statements

December 31, 2023 and 2022

	Ltd., 325E&C co, Ltd., UNION K-Culture Contents Investment Fund, Highup Entertainment, Helios KDBC Video Digital Contents No. 1, Metaverse Entertainment, Atwater Capital Partners I, L.P., MORE VISION CO., LTD., Love Alarm Culture Industry Special Purpose Company Ltd., GRAYGO Corp., Maison de Baha Co., Ltd., Clove Corp., Catchers Cultural Industry Company, Girl Rivers Cultural Industry Company Ltd., Wyatt co., Ltd, MANNACEA , Farmit, Farmit II, TANGRAM FACTORY AMERICA, INC., Deleo Korea Co., Ltd., YANADU., Fixel Hub co., Ltd., Foxsoft co., Ltd., Daeyoung Chaevi CO., Ltd, Adlock Advertainment, Stage five Co., Ltd., DEVOTION FOODS Inc., JASON GROUP Co., Ltd. , MUSTIT. CO., Ltd., Nubility, kLleon Inc., CLEON CO.,LTD, Bluepoint Discovery Venture Fund No.2, DIGISONIC CO., LTD., InnoSignal CO., LTD., CHEQUER GLOBAL, Inc., TNK Factory, Atwater Whip SPV, LP, Japle Co., Ltd. , ATU e-sports Growth PE Fund I, LUXROBO CO., LTD., LUXROBO CO., LTD., e.Form Works, LOVO INC., LOVO Korea., Skelter Labs, Inc., TOROOC Inc. , Galux, RECON Labs., Ocean Drive Studio Corp., Second Dive, Neptune Co., Ltd., HNC Games, Nimble Neuron, MAGNET, NEXPORTS Corporation, PRETTYBUSY, Mammo6 Co., Ltd., PLAYHARD, treeplla Inc., Ad X plus Co., Ltd, NFLY Studio, Ncrokey, CodeDog, Reality Magic, Together Kakao Games win-win fund, Loadstars , Teins Valley, GC Social Marketing Inc., Romance Crew, K Cube NEO Fund, DGT mobility. , S&Tsolution Co., Ltd. , Anycall Mobility Corp , altimobility Corp., Autonomous A2Z, EASYGO CO., LTD., DOZEN CO.,LTD, The M Company, TheCheat Corp., TEEware and Others (69 companies)
Joint ventures	DAUMKAKAO PHILIPPINES CORP., PHI DIGITAL HEALTHCARE Inc.
Other related parties	Stage Asset Co., Ltd., K Cube Holdings Co., Ltd., New learn English Inc., Onyx K., PLUS 2 PERCENT, NPLUTO, GOLF&FRIEND CO., LTD., KCUBE IMPACT Co., Ltd, Future Contents Foundation (formerly, GAMERS FOUNDATION), H3 Corp., Brian Impact Foundation, Kakao Impact Foundation, Trace Culture Business Limited, Colorverse Inc(formerly, Puppy Red), SUNYOUNG STORY. CO., LTD, Kakao Creative Foundation, Kakaobank Corporation Employee Welfare Fund

¹Include associates and other related parties of Kakao Corp. and the entities that are not the related party in accordance with Korean IFRS 1024 but belong to the Large Enterprise Group to which the Group also belongs in accordance with the Monopoly Regulation and Fair-Trade Act.

Sales and purchases with related parties for the years ended December 31, 2023 and 2022, are as follows:

Transactions

(in millions of Korean won)

	2023					
	Revenue and others			Operating expenses and others		
	Revenue	Interest income	Other non-operating income	Commission expenses	Advertising expenses	Other non-operating expenses
Associates						
YANADU.	₩ 575	₩ -	₩ -	₩ 17	₩ -	₩ 10
Fixel Hub co., Ltd.	-	-	-	12	-	-
CLAIR, Inc. ²	39	-	-	-	-	7
CNT TECH CO., LTD.	584	-	-	10	24	-
Deleo Korea Co., Ltd.	-	-	-	16	-	-
DGT mobility.	60,707	-	-	3,075	31	244

KAKAO CORP. and Subsidiaries
Notes to the Consolidated Financial Statements
December 31, 2023 and 2022

D&C MEDIA CO., LTD.	2	-	-	6,940	-	-
DAIWAON. C. I. INC	60	-	-	1,857	-	9
DOZN CO., LTD.	962	-	-	3,962	-	6
325E&C co., ltd.	3	-	-	1,319	-	1
G&G ENTERPRISE CO., LTD.	83	-	-	-	-	-
Haksan Publinshing Co., Ltd.	13	-	-	3,264	-	-
Wyatt co., Ltd	2,338	-	-	5	-	-
JASON GROUP Co., Ltd.	3,752	-	-	675	-	-
KakaoBank Corp. ¹	26,943	3,029	-	15,023	20	159
Leferi	187	-	-	307	8	-
Keytalk AI Inc.	-	-	-	816	-	-
Stage five Co., Ltd.	2,107	6	-	11	-	-
Socialbean Co., Ltd	1,242	-	-	-	-	2
Super Comics.	36	64	-	1,392	-	66
SEOUL MEDIA.INC.	179	-	-	4,098	-	-
S&Tsolution Co., Ltd.	496	-	-	1,073	-	-
Tangram Factory, inc.	-	-	-	-	-	2
Tide Square Co., Ltd.	1,098	-	3	89	4	15
Cleaning Lab	319	-	-	5	-	78
CULTUREHERO	328	-	-	102	-	515
HUMART COMPANY(TR OST)	13	-	-	-	-	-
Korea Credit Data	191	-	-	-	4	-
Highup Entertainment	-	-	-	2,911	-	6,817
MUSTIT. CO., Ltd.	345	-	-	-	-	-
Daeyoung Chaevi CO., Ltd	3	-	-	1	2	1
Square Lab Inc. ²	43	-	-	-	-	-
LUXROBO CO., LTD.	-	-	-	-	-	-
LEEMITELEESY UN CULTURE INDUSTRIAL JEONMUNHO ESA INC.	12	-	-	-	-	-

KAKAO CORP. and Subsidiaries
Notes to the Consolidated Financial Statements
December 31, 2023 and 2022

Kakao Style Corp.	11,404	-	-	-	2,122	-
HongKong TXKP Limited	-	18	-	-	-	-
Force Teller	34	-	-	-	-	-
TNK Factory	1,569	-	-	351	2	-
Carrot Market	567	-	-	-	15	-
Atwater Capital Partners I, L.P.	-	-	-	21	-	-
e.Form Works	5	-	-	-	-	-
Code Squad	-	-	-	-	-	24
Time&Co	148	-	-	10	-	-
Humanscape	6	-	-	-	-	-
Caring Corp.	9	-	-	-	-	-
THE ANT	80	-	-	2,184	-	744
Grip Company	1,535	136	-	-	-	-
Teins Valley	-	-	-	116	-	-
GC Social Marketing Inc.	-	-	-	-	264	-
MORE VISION CO., LTD.	89	-	-	772	-	-
D&C WEBTOON BIZ	40	-	-	15,694	4	-
NEW WAVE COMMERCE	1	-	-	-	-	-
MOYO	30	-	-	-	-	-
Artificial Society Inc.	-	-	-	-	-	-
Neptune Co., Ltd.	114	176	-	7,325	-	-
Nimble Neuron	10	-	-	1,137	10	-
MAGNET	-	-	-	129	-	-
Ocean Drive Studio Corp. ³	-	344	-	-	-	-
K Cube NEO Fund	205	-	-	-	-	-
KIF-Kakao Wooribank Technology FinancingFund ¹	1,057	37	-	-	-	-
Kakao-Shinhan 1st TNYT Fund	386	-	-	-	-	-
Kakao Growth Hacking Fund ¹	1,436	-	-	-	-	-
TheCheat Corp.	-	-	-	124	-	-
GRAYGO Corp.	136	-	-	-	-	21
Nautilus	13	-	-	-	-	-
Nubility	-	-	-	-	-	-
DEVOTION FOODS Inc.	-	-	-	2	-	-
Clove Corp.	7	-	-	-	-	-
Reality Magic	-	-	-	49	-	-

KAKAO CORP. and Subsidiaries
Notes to the Consolidated Financial Statements
December 31, 2023 and 2022

TEEware	-	2	1	22	-	-
Adlock						
Advertainment	-	-	-	-	-	-
Bosalpim	5	-	-	-	-	-
Korea Payment Networks Limited	191	-	-	12	-	-
altimobility Corp.	14	-	-	15	-	-
Chengdu Podoteng Technology Co., Ltd.	2,290	-	-	43	-	-
BUNKER KIDS CO., LTD.	6	-	-	-	-	-
Exo Systems Inc.	-	-	-	-	-	-
HIGH LOCAL CO., LTD.	3	-	-	-	-	-
Girl Rivers Cultural Industry Company Ltd.	10	-	-	233	-	1,209
Ad X plus Co., Ltd	-	-	-	519	-	-
Korea Business Connect	79	-	-	-	-	-
Dreamus Company	19,489	-	6	24,391	7,853	-
ESTEEM	64	-	-	-	682	-
TOROOO INC.	-	-	-	-	-	-
Anycall Mobility Corp	392	-	-	637	-	-
DEAR U Co., Ltd.	2,235	-	-	-	-	42
SM BRAND MARKETING Co., LTD. ³	17,921	-	-	736	-	301
MIDIEOSEUPIE O CO., LTD.	2	-	-	-	-	-
MEDIR INC.	7	-	-	-	-	-
Kids Note Co., Ltd.	2,067	-	-	1,772	-	-
Second Dive	-	-	-	14,321	-	700
Allstay	-	-	-	-	-	-
SSANGN	-	-	-	-	-	-
CLEON CO.,LTD	-	-	-	-	-	-
Loonshot Company Inc.	-	-	-	-	-	-
SEONHADA INC.	-	-	-	-	-	-
AWINS ²	-	-	-	-	-	-
Kasa	5	-	-	-	-	-
CastingN	1	-	-	-	-	-
Love Alarm Culture Industry	-	-	-	-	-	2

KAKAO CORP. and Subsidiaries
Notes to the Consolidated Financial Statements
December 31, 2023 and 2022

Special Purpose Company Ltd. ^{1,2}						
Remake Digital Co., Ltd.	-	-	-	-	235	-
PT GREENWIND CULTURE	-	-	-	-	-	137
Galaxia SM, INC.	-	-	-	-	18	-
MYSTIC STORY INC.	1,829	-	-	3,242	205	-
Life Design Company Inc.	5,436	-	-	-	291	-
SM LIFESTYLE JOINT STOCK COMPANY ³	132	-	-	-	-	-
ESTEEM ENTERTAINMENT CO., LTD.	34	-	7	-	223	-
MILLION MARKET CO., LTD. ²	-	-	-	550	-	-
Urban Coconut Inc. ³	696	-	-	-	-	-
PT.SMBM INDONESIA CORPORA ³	884	-	-	-	-	-
PABLO AIR CO.LTD	2	-	-	-	-	-
Triggers Co., Ltd.	5	-	-	-	-	-
HitchMED Co., Ltd.	-	-	-	-	-	-
Studio Flow, Inc.	55	-	-	-	-	123
Catchers Cultural Industry Company ³	20	-	-	-	-	-
Metaverse Entertainment	-	-	-	225	-	13
GT ENT CO., LTD.	-	-	-	65	-	-
TOYOU DREAM	755	100	-	24,732	-	-
Siebert Financial Corp.	-	-	5,979	-	-	-
	<u>176,172</u>	<u>3,911</u>	<u>5,997</u>	<u>146,409</u>	<u>12,018</u>	<u>11,249</u>
Joint venture						
SPLYT TECHNOLOGIES LTD.	326	1,536	-	2	-	-
SM True Company Limited	3,957	-	-	-	-	-
FITNESSCANDY CO., LTD.	5	-	-	-	-	-
	<u>4,287</u>	<u>1,536</u>	<u>-</u>	<u>2</u>	<u>-</u>	<u>-</u>

KAKAO CORP. and Subsidiaries
Notes to the Consolidated Financial Statements
December 31, 2023 and 2022

Other related parties						
Kakao Impact Foundation	268	-	-	-	-	10,773
K Cube Holdings Co., Ltd.	7	8	-	-	-	-
Brian Impact Foundation	895	25	-	-	-	-
Colorverse Inc.	1	-	-	-	-	-
Gamein Foundation ²	-	-	1	-	-	-
Kakao Creative Foundation	-	-	10	-	-	2,004
Kakao Entertainment Corp. Employee Welfare Fund	-	-	-	-	-	5
	<u>1,171</u>	<u>32</u>	<u>11</u>	<u>-</u>	<u>-</u>	<u>12,783</u>
	<u>₩ 181,631</u>	<u>₩ 5,480</u>	<u>₩ 6,007</u>	<u>₩ 146,411</u>	<u>₩ 12,018</u>	<u>₩ 24,032</u>

¹ During the year ended December 31, 2023, the Group received dividends from associates and deducted the dividends from the book amount of investments in associates, which were not included in the above transaction amount.

² Excluded from the related parties during the year ended December 31, 2023, and the transaction amount up to the date of exclusion is presented.

³ Transferred from associates to subsidiaries as the control was acquired through additional acquisition during the year ended December 31, 2023, and the transaction amount up to the date of transition is presented.

(in millions of Korean won)

	2022					
	Revenue and others			Operating expenses and others		
	Revenue	Interest income	Other non-operating income	Commission expenses	Advertising expenses	Other non-operating expenses
Associates						
YANADU.	₩ 476	₩ -	₩ -	₩ 19	₩ 2	₩ 10
Fixel Hub co., Ltd.	-	-	-	30	-	-
CLAIR, Inc.	98	-	-	-	-	46
CNT TECH CO., LTD.	721	-	-	12	1	1
Deleo Korea Co., Ltd.	-	-	-	15	-	-
DGT mobility.	-	-	-	112	37	-
D&C MEDIA CO., LTD.	-	-	-	5,693	-	-
DAIWAON. C. I. INC	247	-	-	2,299	-	32
DOZN CO., LTD	621	-	-	3,594	-	-
325E&C co., Ltd.	-	-	-	1,062	10	1

KAKAO CORP. and Subsidiaries
Notes to the Consolidated Financial Statements
December 31, 2023 and 2022

G&G ENTERPRISE CO., LTD.	180	-	-	-	-	76
Haksan Publinshing Co., Ltd.	16	-	-	3,106	-	-
Wyatt co., Ltd	3,456	-	-	6	-	-
JASON GROUP Co., Ltd.	7,321	-	-	1,144	-	-
KakaoBank Corp.	22,617	2,984	-	11,616	72	182
Leferi	296	-	-	133	-	-
MANNACEA	1	-	-	-	-	-
mycelebs, inc	-	-	-	1,296	-	-
Stage five Co., Ltd.	1,965	-	-	-	-	-
Socialbean Co., Ltd	1,118	-	-	5	-	57
Super Comics.	74	43	-	1,384	-	112
SEOUL MEDIA.INC.	254	-	-	3,406	-	-
S&Tsolution Co., Ltd.	-	-	-	3	-	-
Tangram Factory, inc.	-	-	-	-	-	-
Tide Square Co., Ltd.	458	-	110	-	130	12
Shoe Lab	1	-	-	-	-	-
Cleaning Lab	346	-	-	3	-	-
CULTUREHERO	155	-	-	-	-	46
HUMART COMPANY(TR OST)	19	-	-	-	-	-
Korea Credit Data	903	-	-	-	-	-
Highup Entertainment	405	-	-	2,638	-	4,669
MUSTIT. CO., Ltd.	1,641	-	-	-	-	8
Allstay Co.,ltd.	31	-	-	-	-	-
Daeyoung Chaevi CO., Ltd	3	-	-	-	11	-
Square Lab Inc.	66	-	-	-	-	-
LUXROBO CO., LTD.	-	-	-	-	-	-
LEEMITELEESY UN CULTURE INDUSTRIAL						
JEONMUNHOES A INC.	12	-	-	-	-	-
Japle Co., Ltd.	1	-	-	12	-	-
Kakao Style Corp.	7,329	-	-	6	1,913	-
HongKong TXKP Limited	-	31	7	-	-	1

KAKAO CORP. and Subsidiaries
Notes to the Consolidated Financial Statements
December 31, 2023 and 2022

Force Teller	-	-	-	3	-	-
TNK Factory	1,783	-	-	461	154	-
Carrot Market	195	-	-	14	11	3
Atwater Capital Partners I, L.P.	-	-	-	77	-	-
Dreaming Darakbang	7	-	-	-	-	-
e.Form Works	1	-	-	1	-	-
Code Squad	-	-	-	-	-	345
Time&Co	49	-	-	-	-	-
Humanscape	-	-	-	-	-	-
Caring Corp.	8	-	-	-	-	-
KCD Marketing	2	-	-	101	-	-
Foodzim	6	-	-	-	-	-
THE ANT	74	-	-	4,132	-	-
Grip Company	852	89	230	12	-	-
Teins Valley	-	-	-	17	-	1
GC Social Marketing Inc.	-	-	-	-	155	-
MORE VISION CO., LTD.	-	-	-	948	-	-
D&C WEBTOON BIZ	67	-	-	15,559	2	-
SSANGN	-	-	-	-	-	-
21st market	-	-	-	-	-	-
NEW WAVE COMMERCE	2	-	-	-	-	-
MOYO	2	-	-	-	-	-
Artificial Society Inc.	-	-	-	-	-	-
PERSONA	90	-	-	1	-	-
Neptune Co., Ltd.	89	-	-	283	-	-
Nimble Neuron	736	-	-	571	23	-
MAGNET	-	-	-	234	-	-
Ocean Drive Studio Corp.	-	348	-	-	-	-
CastingN	-	-	-	-	-	90
K Cube NEO Fund	259	-	-	-	-	-
KIF-Kakao Wooribank Technology FinancingFund	1,212	-	-	-	-	-
Kakao-Shinhan 1st TNYT Fund	386	-	-	-	-	-
Kakao Growth Hacking Fund	1,942	-	-	-	-	-
TheCheat Corp.	-	-	-	49	-	-
GRAYGO Corp.	74	-	14	-	-	-
Nautilus	1	-	-	-	-	-
Nubility	-	-	-	-	-	-

KAKAO CORP. and Subsidiaries
Notes to the Consolidated Financial Statements
December 31, 2023 and 2022

DEVOTION						
FOODS Inc.	-	-	-	-	-	2
CLEON CO.,LTD	-	-	-	-	-	-
Loonshot						
Company Inc.	1	-	-	-	-	-
ImU	1	-	-	-	-	-
Clove Corp.	-	-	-	-	-	-
Reality Magic	-	-	-	43	10	-
TEEware	2,116	-	3	215	-	-
Bosalpim	-	-	-	-	-	-
Korea Payment						
Networks						
Limited	37	-	-	2	-	-
altimobility Corp.	22	-	-	-	-	-
Chengdu						
Podoteng						
Technology						
Co., Ltd.	4,145	-	-	-	-	-
FOR YOUR KIDS						
CO., LTD. ²	111	-	-	-	-	264
Dunamu Inc. ¹	103	-	-	40	-	-
EDAM						
Entertainment						
Corp. ³	244	-	21	5,016	1,701	1,576
PEOPLETUND						
COMPANY ¹	1,100	-	-	-	-	-
Dr. Kitchen ²	5	-	-	-	-	-
Dining Code ²	-	-	-	3	-	-
kasa ²	-	-	-	-	-	-
KIDSPAY co, ltd.						
²	-	-	-	-	-	-
Futurewiz ²	94	-	-	-	-	-
Le Corp. ²	-	-	-	-	-	-
	<u>66,647</u>	<u>3,496</u>	<u>386</u>	<u>65,377</u>	<u>4,231</u>	<u>7,534</u>
Joint venture						
Asankakao						
Medical Data						
Co., Ltd. ²	196	-	-	-	-	-
Other related parties						
Kakao Impact						
Foundation	211	-	-	-	-	12,035
K Cube Holdings						
Co., Ltd.	46	9	-	-	-	-
Brian Impact						
Foundation	412	13	-	-	-	-
Colorverse Inc.	3	-	-	-	-	-
GAMERS						
FOUNDATION	-	-	2	-	-	-
Kakao Creative						
Foundation	9	-	-	-	-	-
	<u>680</u>	<u>23</u>	<u>2</u>	<u>-</u>	<u>-</u>	<u>12,035</u>

KAKAO CORP. and Subsidiaries
Notes to the Consolidated Financial Statements
December 31, 2023 and 2022

₩	67,524	₩	3,518	₩	387	₩	65,377	₩	4,231	₩	19,569
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¹ During 2022, reclassified to financial assets at fair value through other comprehensive income from an associate and the transaction amount up to the date of reclassification is presented.

² During 2022, excluded from the Group's associate due to disposal and the transaction amount up to the date of disposal is presented.

³ It was included to a subsidiary of the Group during 2022, and the transaction amount before the inclusion is presented.

Outstanding balances arising from sales/purchases of goods and services as at December 31, 2023 and 2022, are as follows:

(in millions of Korean won)

	2023					
	Receivables			Payables		
	Trade receivables	Loans	Other receivables and others	Non-trade payables	Other payables	
Associates						
YANADU.	₩	-	₩	-	₩	9
CNT TECH CO., LTD.		-	-	-	509	-
Deleo Korea Co., Ltd.		-	-	-	2	-
DGT mobility.	6,646	-	-	-	-	877
D&C MEDIA CO.,LTD.	3	-	4,006	1,858	-	-
Doctor Brain Culture Industry Special Purpose Company Ltd.	23	-	-	-	-	-
DREAMSIDE Culture Industry Special Purpose Company Ltd.	-	-	400	-	-	-
DAIWAON. C. I. INC	-	-	841	120	-	3
DOZEN CO.,LTD	52	-	13	1,255	-	-
325E&C co,ltd.	-	-	2,036	-	-	21
G&G ENTERPRISE CO.,LTD.	-	-	-	1	-	-
Haksan Publinshing Co., Ltd.	-	-	2,165	199	-	7
Wyatt co., Ltd	98	-	-	930	-	175
JASON GROUP Co., Ltd.	-	-	-	53	-	-
KakaoBank Corp.	1,721	-	181,009	3,870	-	8,869
Stage five Co., Ltd.	765	-	2,013	-	-	301
Socialbean Co., Ltd	3	-	-	360	-	-
Super Comics.	-	1,500	685	190	-	-
SEOUL MEDIA.INC.	-	-	1,302	410	-	2
Tide Square Co., Ltd.	-	-	-	2,219	-	2
HUMART COMPANY(TROST)	1	-	-	8	-	-
CULTUREHERO	-	-	-	60	-	-
Cleaning Lab	-	-	-	146	-	-
Leferi	-	-	-	11	-	-
Neptune Co., Ltd.	714	4,500	176	882	-	995

KAKAO CORP. and Subsidiaries
Notes to the Consolidated Financial Statements
December 31, 2023 and 2022

Highup Entertainment	-	-	4,935	-	47
Kakao Growth Hacking Fund	1,436	-	-	-	-
Nimble Neuron	9	-	2,225	2,018	-
MUSTIT. CO., Ltd.	3	-	-	-	-
Daeyoung Chaevi CO., Ltd	-	-	-	9	-
HongKong TXKP Limited	-	387	-	-	-
Kakao Style Corp.	320	-	-	3,666	-
Force Teller	-	-	-	-	-
TNK Factory	111	-	2	2	-
Carrot Market	15	-	-	-	-
Time&Co	-	-	-	63	-
THE ANT	7	-	295	195	-
Metaverse Entertainment	-	-	115	26	1
Grip Company	37	-	3,995	483	773
MORE VISION CO., LTD.	58	-	-	65	-
D&C WEBTOON BIZ	4	-	-	512	-
Fixel Hub co.,ltd.	-	-	5	-	-
Threepoint ¹	3	50	-	-	-
Reality Magic	-	-	-	5	-
Second Dive	-	-	-	3,426	-
NEW WAVE COMMERCE	-	-	-	1	-
K Cube NEO Fund	205	-	-	-	-
KIF-Kakao Wooribank Technology Financing Fund	1,057	-	2,250	-	-
Teins Valley	-	-	8	10	-
TheCheat Corp.	-	-	-	12	-
GRAYGO Corp.	-	-	-	4	-
Nautilus	-	-	-	6	-
Kakao-Shinhan 1st TNYT Fund	96	-	-	-	-
e.Form Works	-	-	-	-	1
TEEware	-	451	-	-	-
Girl Rivers Cultural Industry Company Ltd.	-	-	-	12	-
Korea Payment Networks Limited	-	-	-	145	-
Chengdu Podoteng Technology Co., Ltd.	984	-	-	-	6,735
Clove Corp.	-	-	-	1	-
Dreamus Company	1,693	-	-	1,848	-
DEAR U Co.,Ltd.	4,469	-	-	-	-
Playhard	-	-	-	-	-
treeplla Inc.	-	-	24	-	-
S&Tsolution Co.,Ltd.	18	-	-	-	120
MIDIEOSEUPIEO CO.,LTD.	-	-	-	3	-

KAKAO CORP. and Subsidiaries
Notes to the Consolidated Financial Statements
December 31, 2023 and 2022

Anycall Mobility Corp	30	-	-	-	77
Galaxia SM, INC.	-	-	-	1	-
MYSTIC STORY INC.	303	-	-	-	-
Life Design Company Inc.	1,299	-	-	45	-
ESTEEM ENTERTAINMENT CO., LTD.	-	-	2,073	145	124
Kids Note Co., Ltd.	253	-	-	196	192
LEEMITELEESYUN CULTURE INDUSTRIAL					
JEONMUNHOESA INC.	7	-	-	-	-
PT GREENWIND CULTURE	-	-	-	27	-
ESTEEM	17	-	-	12	-
Studio Flow, Inc.	3	-	-	-	-
GT ENT CO.,LTD.	-	-	19	11	-
Romance Crew	-	-	4,300	-	-
TOYOU DREAM	1	5,000	2,944	1,103	117
Siebert Financial Corp.	-	-	6,008	-	-
	<u>22,465</u>	<u>11,888</u>	<u>223,846</u>	<u>27,143</u>	<u>19,439</u>
Joint ventures					
SPLYT TECHNOLOGIES LTD. ¹	326	17,027	31	1,536	1
SM True Company Limited	837	-	-	-	-
CHANGWON CULTURE BOKHAP TOWN CO.,LTD.	-	-	-	-	156
	<u>1,163</u>	<u>17,027</u>	<u>31</u>	<u>1,536</u>	<u>158</u>
Other related parties					
Kakao Impact Foundation	18	-	2	-	54
K Cube Holdings Co., Ltd.	-	-	308	-	1,571
Brian Impact Foundation	17	-	987	-	249
SUNYOUNG STORY. CO., LTD	-	-	1,200	-	-
Kakao Creative Foundation	-	-	1	-	-
	<u>35</u>	<u>-</u>	<u>2,499</u>	<u>-</u>	<u>1,874</u>
	<u>₩ 23,663</u>	<u>₩ 28,915</u>	<u>₩ 226,376</u>	<u>₩ 28,679</u>	<u>₩ 21,471</u>

¹ The Group accounted for the whole amounts of trade receivables and short-term loans as bad debts.

KAKAO CORP. and Subsidiaries
Notes to the Consolidated Financial Statements
December 31, 2023 and 2022

(in millions of Korean won)

	2022					
	Receivables			Payables		
	Trade receivables	Loans	Other receivables and others	Non-trade payables	Other payables	
Associates						
YANADU.	₩	- ₩	- ₩	15 ₩	24 ₩	-
CLAIR, Inc.	-	-	-	2	-	-
CNT TECH CO., LTD.	8	-	88	291	-	-
Deleo Korea Co., Ltd.	-	-	-	2	-	-
DGT mobility.	-	-	-	164	-	-
D&C MEDIA CO.,LTD.	-	-	2,014	211	-	-
Doctor Brain Culture Industry Special Purpose Company Ltd.	61	-	-	-	-	-
DREAMSIDE Culture Industry Special Purpose Company Ltd.	-	-	400	-	-	-
DAIWAON. C. I. INC	19	-	723	149	30	-
DOZEN CO.,LTD	61	-	-	842	-	-
325E&C co,ltd.	-	-	2,588	-	22	-
G&G ENTERPRISE CO.,LTD.	-	-	-	22	-	-
Haksan Publinshing Co., Ltd.	-	-	2,607	192	2	-
Wyatt co., Ltd	109	-	100	1,223	-	-
LEEMITELEESYUN CULTURE INDUSTRIAL JEONMUNHOESA INC.	3	-	-	-	-	-
JASON GROUP Co., Ltd.	-	-	-	100	-	-
KakaoBank Corp.	1,570	-	155,663	1,245	7,424	-
mycelebs, inc	-	-	325	90	-	-
Stage five Co., Ltd.	627	-	-	-	372	-
Socialbean Co., Ltd	7	-	-	406	1	-
Super Comics.	-	1,000	569	200	-	-
SEOUL MEDIA.INC.	-	-	982	259	-	-
Tide Square Co., Ltd.	11	-	24	1,841	-	-
HUMART COMPANY(TROST)	-	-	-	6	-	-
CULTUREHERO	-	-	-	20	-	-
Cleaning Lab	-	-	-	130	-	-
Leferi	-	-	-	47	-	-
Neptune Co., Ltd.	-	-	-	44	-	-
Highup Entertainment	-	-	2,431	-	24	-
Kakao Growth Hacking Fund	477	-	-	-	-	-
Nimble Neuron	-	-	2,787	307	-	-
MUSTIT. CO., Ltd.	3	-	-	-	-	-
Daeyoung Chaevi CO., Ltd	-	-	-	23	-	-
Square Lab Inc.	-	-	-	6	2	-

KAKAO CORP. and Subsidiaries
Notes to the Consolidated Financial Statements
December 31, 2023 and 2022

HongKong TXKP Limited	-	380	-	-	-
Autonomous A2Z	-	-	1	-	-
Kakao Style Corp.	86	-	31	3,430	-
Force Teller	-	-	-	-	-
TNK Factory	2	-	-	11	-
Carrot Market	29	-	34	-	-
Time&Co	-	-	-	46	-
THE ANT	-	-	149	204	100
Metaverse Entertainment	-	-	113	-	-
Grip Company	32	-	4,865	1,420	773
MORE VISION CO., LTD.	-	-	457	-	-
Love Alarm Culture Industry Spetial Purpose Company Ltd.	-	-	2,010	-	-
D&C WEBTOON BIZ	4	-	2,437	1,679	-
Fixel Hub co,ltd.	-	-	17	-	-
PERSONA	-	-	-	-	-
threepoint	3	50	50	-	-
Ocean Drive Studio Corp.	-	10,000	10,348	-	-
Reality Magic	-	-	427	11	-
MAGNET	-	-	-	29	-
Second Dive	-	-	2,800	-	-
NEW WAVE COMMERCE	-	-	-	1	-
K Cube NEO Fund	259	-	-	-	-
KIF-Kakao Wooribank Technology Financing Fund	1,212	-	-	-	-
Teins Valley	-	-	-	2	-
TheCheat Corp.	-	-	-	11	-
GRAYGO Corp.	14	-	-	16	200
Catchers Cultural Industry Company	-	-	280	-	-
Nautilus	-	-	-	10	-
Kakao-Shinhan 1st TNYT Fund	96	-	-	-	-
GC SOCIAL MEDIA MARKETING, INC..	-	-	-	16	-
Ad X plus Co., Ltd	345	-	-	-	-
e.Form Works	-	-	-	-	1
TEEware	-	-	-	211	-
Tangram Factory, inc.	-	-	-	-	-
Girl Rivers Cultural Industry Company Ltd.	-	-	530	-	-
Korea Payment Networks Limited	-	-	-	1	-
Chengdu Podoteng Technology Co., Ltd.	2,078	-	-	-	4,765
	<u>7,117</u>	<u>11,430</u>	<u>195,866</u>	<u>14,945</u>	<u>13,714</u>

KAKAO CORP. and Subsidiaries

Notes to the Consolidated Financial Statements

December 31, 2023 and 2022

Other related parties

Kakao Impact Foundation	15	-	239	-	42
K Cube Holdings Co., Ltd.	-	-	393	-	2,071
Brian Impact Foundation	19	-	1,266	-	249
Colorverse Inc.	-	-	-	-	-
GAMERS FOUNDATION	-	-	-	-	-
	34	-	1,898	-	2,362
	₩ 7,151	₩ 11,430	₩ 197,764	₩ 14,945	₩ 16,076

Fund transactions with related parties for the years ended December 31, 2023 and 2022, are as follows:

(in millions of
Korean won)

(in millions of Korean won)		2023																	
		Loan transactions								Finance lease transactions									
Contributions (Collections)		Beginning balance		Changes in scope of consolidation		Loans		Repayment		Exchange differences		Ending balance		Loans ¹		Amortization		Collection	
Associates																			
threepoint ²	₩	-	₩	50	₩	-	₩	-	₩	-	₩	-	₩	50	₩	-	₩	-	₩
Ocean Drive Studio Corp. ³		-		10,000		(10,000)		-		-		-		-		-		-	
HongKong TXKP Limited		-		380		-		10		(3)		-		387		-		-	
TOYOU DREAM		-		-		-		5,000		-		-		5,000		-		-	
Super Comics.		-		1,000		-		500		-		-		1,500		-		-	
TEEware		-		-		-		451		-		-		451		64		1	63
Grip Company		-		-		-		-		-		-		-		3,981		136	836
KakaoBank Corp.		-		-		-		-		-		-		-		103,670		3,028	9,707
SM BRAND MARKETING Co., LTD. ³		-		-		-		-		-		-		-		-		-	82
Neptune Co., Ltd.		-		-		-		4,500		-		-		4,500		-		-	-
UTC Kakao SK Telecom ESG Fund ⁴		4,000		-		-		-		-		-		-		-		-	-
MOYO ⁴		500		-		-		-		-		-		-		-		-	-
Medility Inc. ⁴		150		-		-		-		-		-		-		-		-	-
Bluepoint Discovery Venture Fund No.2 ⁴		1,200		-		-		-		-		-		-		-		-	-
UNION K-Culture Contents Investment Fund ⁴		2,500		-		-		-		-		-		-		-		-	-
Together Kakao Games win-win fund ⁴		2,000		-		-		-		-		-		-		-		-	-

KAKAO CORP. and Subsidiaries

Notes to the Consolidated Financial Statements

December 31, 2023 and 2022

Autonomous											
A2Z ⁴	5,000	-	-	-	-	-	-	-	-	-	-
Kakao Growth											
Hacking Fund ⁵	(1,600)	-	-	-	-	-	-	-	-	-	-
KIF-Kakao											
Wooribank											
Technology											
Financing Fund ⁵	(1,950)	-	-	-	-	-	-	-	-	-	-
Love Alarm											
Culture Industry											
Special Purpose											
Company Ltd. ^{5,6}	(3)	-	-	-	-	-	-	-	-	-	-
	11,797	11,430	(10,000)	10,461	(3)	-	11,888	107,715	3,165	10,688	
Associates											
SPLYT											
TECHNOLOGIE											
S LTD. ²	-	-	13,443	2,590	-	993	17,027	-	-	-	-
FITNESSCANDY											
CO.,LTD ⁴	1,323	-	-	-	-	-	-	-	-	-	-
	1,323	-	13,443	2,590	-	993	17,027	-	-	-	-
Other related parties											
Brian Impact											
Foundation	-	-	-	-	-	-	-	987	25	278	
K Cube Holdings											
Co., Ltd.	-	-	-	-	-	-	-	308	8	85	
	-	-	-	-	-	-	-	1,295	32	364	
	₩ 13,120	₩ 11,430	₩ 3,443	₩ 13,051	₩ (3)	₩ 993	₩ 28,915	₩ 109,010	₩ 3,197	₩ 11,052	

¹ The amount represents the ending balance of lease receivables to be received by maturity under the sub-lease agreement with the related party in 2023.

² The Group accounted for the whole amounts of loans as bad debts.

³ Transferred from associates to subsidiaries during the year ended December 31, 2023, and the transaction amount before transfer is presented.

⁴ The Group additionally acquired through capital increase with consideration during 2023.

⁵ The Group recovered some of the principal of investment through the distribution during 2023.

⁶ Excluded from the Group's associate during the year ended December 31, 2023, and the transaction amount before exclusion is presented.

(in millions of
Korean won)

		2022							
		Loan transactions					Finance lease transactions		
	Contributions (Collections)	Beginning balance	Changes in scope of consolidation	Loans	Repayment	Ending balance	Loans ¹	Amortization	Collection
Associates									
threepoint	₩	-	50	-	-	50	-	-	-
Ocean Drive									
Studio Corp.	-	-	-	10,000	-	10,000	-	-	-
HongKong TXKP	-	1,067	-	-	(687)	380	-	-	-

KAKAO CORP. and Subsidiaries

Notes to the Consolidated Financial Statements

December 31, 2023 and 2022

Limited										
Super Comics.	-	-	-	1,000	-	1,000	-	-	-	-
Kakao Growth Hacking Fund ²	3,200	-	-	-	-	-	-	-	-	-
KakaoBank Corp.	-	-	-	-	-	-	93,082	2,982	6,774	
Grip Company	-	-	-	-	-	-	4,817	89	413	
TEEware	-	-	-	-	-	-	80	1	7	
Helios KDBC Video Digital Contents No. 1 ²	2,202	-	-	-	-	-	-	-	-	-
Neptune Co., Ltd. ^{3,5}	110,346	-	-	-	-	-	-	-	-	-
UTC Kakao SK Telecom ESG Fund ²	4,000	-	-	-	-	-	-	-	-	-
Loadstars ²	67	-	-	-	-	-	-	-	-	-
KIF-Kakao Wooribank Technology Financing Fund ⁴	(2,550)	-	-	-	-	-	-	-	-	-
GC Social Marketing Inc. ²	2,561	-	-	-	-	-	-	-	-	-
Atwater Capital Partners I,L.P. ²	470	-	-	-	-	-	-	-	-	-
	120,296	1,117	-	11,000	(687)	11,430	97,979	3,073	7,194	
Other related parties										
Brian Impact Foundation	-	-	-	-	-	-	1,266	13	137	
K Cube Holdings Co., Ltd.	-	-	-	-	-	-	393	9	85	
Kakao Creative Foundation	500	-	-	-	-	-	-	-	-	-
	500	-	-	-	-	-	1,659	23	222	
	₩ 120,796	₩ 1,117	₩ -	₩ 11,000	₩ (687)	₩ 11,430	₩ 99,638	₩ 3,096	₩ 7,416	

¹ The amount represents the ending balance of lease receivables to be received by maturity under the sub-lease agreement with the related party in 2022.

²The Group additionally acquired through capital increase with consideration during 2022.

³ Converted to 1,135,202 ordinary shares as exercising conversion right during 2022.

⁴ The Group recovered some of the principal of investment through the first distribution during 2022.

⁵ During 2022, acquired 6,913,540 new shares as consideration through the merger and acquisition of Ad(x) Inc.

KAKAO CORP. and Subsidiaries
Notes to the Consolidated Financial Statements
December 31, 2023 and 2022

The compensation paid or payable to key management for the years ended December 31, 2023 and 2022, consists of:

<i>(in millions of Korean won)</i>	2023		2022	
Salaries	₩	5,425	₩	2,340
Post-employment benefits		116		87
Other long-term benefits		5		12
Share-based compensation		1,242		2,472
	₩	6,788	₩	4,910

41. Information for Non-controlling Interests

(1) Changes in accumulated non-controlling interests

The profit or loss allocated to non-controlling interests and accumulated non-controlling interests of subsidiaries that are material to the Group for the years ended December 31, 2023 and 2022, is as follows:

*(in millions of
Korean won)*

		2023					
	Non-controlling interest rate (%)	Accumulated non-controlling interests at the beginning of the year	Profit or loss allocated to non-controlling interests	Investment by non-controlling interests and disposal of shares	Others	Accumulated non-controlling interests at the end of the year	
Kakao Games Corp.	58.7	₩ 996,788	₩ (232,325)	₩ (34,624)	₩ 321,522	₩ 1,051,361	
Kakaopay Corp.	53.6	1,035,258	(16,410)	(3,420)	49,386	1,064,815	
Kakao Entertainment Corp.	33.9	494,858	(360,807)	458,471	22,204	614,726	
Kakao Mobility Corp.	42.7	495,207	(54,050)	130	1,025	442,312	
SM Entertainment Co., Ltd.	66.1	-	(124,582)	940,668	(7,137)	808,949	

*(in millions of
Korean won)*

		2022					
	Non-controlling interest rate (%)	Accumulated non-controlling interests at the beginning of the year	Profit or loss allocated to non-controlling interests	Investment by non-controlling interests and disposal of shares	Others	Accumulated non-controlling interests at the end of the year	

KAKAO CORP. and Subsidiaries
Notes to the Consolidated Financial Statements
December 31, 2023 and 2022

Kakao Games Corp.	58.6	₩ 1,150,543	₩ (70,678)	₩ 57,145	₩ (140,222)	₩ 996,788
Kakaopay Corp.	53.1	957,911	11,879	19,840	45,629	1,035,258
Kakao Entertainment Corp.	26.4	599,167	(156,901)	4,655	47,937	494,858
Kakao Mobility Corp.	42.7	355,986	(11,711)	2,501	148,430	495,207

(2) Summarized financial information on subsidiaries

Set out below is summarized financial information for each subsidiary that has non-controlling interests that are material to the Group. The amounts disclosed for each subsidiary are before inter-company eliminations.

Summarized consolidated statements of financial position

(in millions of Korean won)

	2023				
	Kakao Games Corp.	Kakaopay Corp.	Kakao Entertainment Corp.	Kakao Mobility Corp.	SM Entertainment Co., Ltd.
Current assets	₩ 1,020,760	₩ 2,385,238	₩ 1,152,707	₩ 633,038	₩ 858,316
Non-current assets	2,450,257	437,492	2,152,488	804,508	682,658
Assets of financial services business	-	1,143,756	-	-	-
Current liabilities	710,111	1,108,543	1,499,912	249,418	519,297
Non-current liabilities	1,135,377	95,780	378,575	168,322	112,279
Liabilities of financial services business	-	827,387	-	-	-
Equity	₩ 1,625,528	₩ 1,934,776	₩ 1,426,709	₩ 1,019,806	₩ 909,398

(in millions of
Korean won)

	2022			
	Kakao Games Corp.	Kakaopay Corp.	Kakao Entertainment Corp.	Kakao Mobility Corp.
Current assets	₩ 1,057,387	₩ 2,259,816	₩ 607,662	₩ 621,334
Non-current assets	2,816,555	315,950	2,846,622	925,206
Assets of financial services business	-	755,656	-	-
Current liabilities	267,339	873,830	1,489,036	276,811
Non-current liabilities	1,591,709	98,849	346,214	126,702
Liabilities of financial services business	-	450,483	-	-
Equity	₩ 2,014,893	₩ 1,908,260	₩ 1,619,034	₩ 1,143,028

KAKAO CORP. and Subsidiaries
Notes to the Consolidated Financial Statements
December 31, 2023 and 2022

Summarized consolidated statements of comprehensive income

(in millions of Korean won)

	2023				
	Kakao Games Corp.	Kakaopay Corp.	Kakao Entertainment Corp.	Kakao Mobility Corp.	SM Entertainment Co., Ltd.
Revenue	₩ 1,025,086	₩ 615,363	₩ 1,873,535	₩ 601,811	₩ 756,076
Profit (loss) for the year	(322,406)	(22,907)	(1,223,466)	(124,183)	59,671
Other comprehensive income	(21,253)	(4,455)	(7,340)	(832)	(9,230)
Total comprehensive income (loss)	₩ (343,659)	₩ (27,361)	₩ (1,230,806)	₩ (125,015)	₩ 50,441

(in millions of Korean won)

	2022			
	Kakao Games Corp.	Kakaopay Corp.	Kakao Entertainment Corp.	Kakao Mobility Corp.
Revenue	₩ 1,147,693	₩ 521,364	₩ 1,864,791	₩ 483,692
Profit (loss) for the year	(196,108)	26,830	(629,795)	(27,695)
Other comprehensive income	(209,030)	2,580	61,314	(1,036)
Total comprehensive income (loss)	₩ (405,138)	₩ 29,410	₩ (568,480)	₩ (28,731)

Summarized consolidated statements of cash flows

(in millions of Korean won)

	2023				
	Kakao Games Corp.	Kakaopay Corp.	Kakao Entertainment Corp.	Kakao Mobility Corp.	SM Entertainment Co., Ltd.
Cash flows from operating activities	₩ 124,621	₩ 253,114	₩ 110,013	₩ 103,507	₩ 84,386
Cash flows from (used in) investing activities	(53,998)	(417,165)	(818,378)	17,387	255,559
Cash flows from (used in) financing activities	(43,900)	(42,188)	1,064,187	(65,813)	(30,701)
Increase (decrease) in cash and cash equivalents	26,723	(206,239)	355,822	55,082	309,244
Cash and cash equivalents at beginning of period	626,770	1,463,509	211,258	390,592	-
Effects of exchange rate changes on cash and cash equivalents	225	(12)	565	-	(6,104)
Cash and cash equivalents at end of period	₩ 653,718	₩ 1,257,258	₩ 567,645	₩ 445,673	₩ 303,140

KAKAO CORP. and Subsidiaries
Notes to the Consolidated Financial Statements
December 31, 2023 and 2022

(in millions of Korean won)	2022							
	Kakao Games Corp.		Kakaopay Corp.		Kakao Entertainment Corp.		Kakao Mobility Corp.	
Cash flows from (used in) operating activities	₩	133,825	₩	(56,866)	₩	(44,597)	₩	96,998
Cash flows from (used in) investing activities		(963,585)		383,359		(138,474)		(298,344)
Cash flows from (used in) financing activities		644,073		(3,482)		151,884		(31,054)
Increase (decrease) in cash and cash equivalents		(185,687)		323,011		(31,187)		(232,400)
Cash and cash equivalents at beginning of period		808,676		1,140,415		239,614		622,992
Effects of exchange rate changes on cash and cash equivalents		3,781		83		2,832		-
Cash and cash equivalents at end of period	₩	626,770	₩	1,463,509	₩	211,258	₩	390,592

(3) Transactions with Non-controlling Interests

Effects of transactions with non-controlling interests on the equity attributable to equity holders of the Parent Company for the years ended December 31, 2023 and 2022, are as follows:

(in millions of Korean won)	2023		2022	
Capital increase of a subsidiary ^{1,2}	₩	649,759	₩	21,204
Others ³		(65,279)		(44,343)
Net effect on equity	₩	584,480	₩	(23,138)

¹ During 2023, Kakao Entertainment Corp., a subsidiary, decided to increase capital through allotment to a third party. Total amount of the capital increase is ₩ 1,153,980 million. As a result, the Group's interests in Kakao Entertainment Corp. decreased from 73.6% to 66.1%. Due to the above transaction, the non-controlling interest increased by ₩ 502,221 million as at the date of capital increase and the share capital attributed to the equity holders of the Group increased by ₩ 651,759 million.

² During 2023, Seoul Arena Co., Ltd, a subsidiary, decided to increase capital through allotment to a third party. Total amount of the capital increase is ₩ 2,000 million. As a result, the Group's interests in Seoul Arena Co., Ltd decreased from 100.0% to 98.0%. Due to the above transaction, the non-controlling interest increased by ₩ 2,000 million as at the date of capital increase and the share capital attributed to the equity holders of the Group decreased by ₩ 2,000 million.

KAKAO CORP. and Subsidiaries

Notes to the Consolidated Financial Statements

December 31, 2023 and 2022

42. Assets Held for sale

Details of assets of disposal group classified as held for sale as at December 31, 2023, are as follows:

<i>(in millions of Korean won)</i>		2023
Property and equipment ¹	₩	7,928
Investment property		494
Investments in associates ²		41,121
	₩	<u>49,543</u>

¹ The Group classified property and equipment of ₩ 7,928 million (land of ₩ 6,621 million, buildings of ₩ 1,280 million and tools and equipment ₩ 27 million) held by the Group as assets held for sale during the year ended December 31, 2023.

² Management of the Group decided to sell some of equity securities of Stage five Co., Ltd., an associate, for the year ended December 31, 2023. The contract was signed on December 18, 2023, and the sale is scheduled to proceed within one year.

There are no gains or losses recognized in relation to items classified as held for sale.

43. Events After the Reporting Period

The Seoul Southern District Prosecutors' Office ("Prosecution") is conducting an investigation in allegations of breach of trust by executives of a subsidiaries in connection with the acquisition of shares in Baram Pictures Corp.. At the end of the reporting period, the outcome of the prosecution investigation and its impact on financial statements cannot be predicted.

The amount exercised for the first early redemption claim (exercise period: January 31, 2024 - March 4, 2024) related to the convertible bonds issued by the subsidiaries is ₩ 370,854 million, and the scheduled early redemption date based on the exercise is April 1, 2024.

Pursuant to the resolution of the Board of Directors' meeting held on January 11, 2024 and February 7, 2024, the Parent Company disposed of 5,729 and 1,067 shares of treasury shares, respectively, for the purpose of employee bonuses on January 16, 2024 and February 27, 2024.

The Parent Company, according to the approval of the Board of Directors' meeting held on February 14, 2024, plans to retire 1,966,496 shares of treasury shares.

**Independent Auditor's Report on
Internal Control over Financial Reporting for Consolidation Purposes**

(English Translation of a Report Originally Issued in Korean)

To the Board of Directors and Shareholders of
KAKAO CORP.

Opinion on Internal Control over Financial Reporting for Consolidation Purposes

We have audited Internal Control over Financial Reporting (ICFR) of KAKAO CORP. and its subsidiaries (collectively referred to as the "Group") for consolidation purposes as at December 31, 2023, based on *Conceptual Framework for Designing and Operating Internal Control over Financial Reporting*.

In our opinion, the Group maintained, in all material respects, effective ICFR for consolidation purposes as at December 31, 2023, based on *Conceptual Framework for Designing and Operating Internal Control over Financial Reporting*.

We also have audited, in accordance with Korean Standards on Auditing, the consolidated financial statements of the Group, which comprise the consolidated statement of financial position as at December 31, 2023, and the consolidated statement of comprehensive income, consolidated statement of changes in equity and consolidated statement of cash flow for the year then ended, and notes to the consolidated financial statements including material accounting policy information, and our report dated March 20, 2024 expressed an unqualified opinion.

Basis for Opinion on Internal Control over Financial Reporting for Consolidation Purposes

We conducted our audit in accordance with Korean Standards on Auditing. Our responsibilities under these standards are further described in the *Auditor's Responsibilities for the Audit of Internal Control over Financial Reporting for consolidation purposes* section of our report. We are independent of the Group in accordance with the ethical requirements of the Republic of Korea that are relevant to our audit of ICFR for consolidation purposes and we have fulfilled our other ethical responsibilities in accordance with the ethical requirements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

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

Management is responsible for designing, implementing and maintaining effective ICFR for consolidation purposes, and for its assessment about the effectiveness of ICFR for consolidation purposes, included in the accompanying Management's Report on the Effectiveness of Internal Control over Financial Reporting for Consolidation Purposes.

Those charged with governance have the responsibilities for overseeing ICFR for consolidation purposes.

Auditor's Responsibilities for the Audit of Internal Control over Financial Reporting for Consolidation Purposes

Our responsibility is to express an opinion on ICFR for consolidation purposes of the Group based on

our audit. We conducted the audit in accordance with Korean Standards on Auditing. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective ICFR for consolidation purposes was maintained in all material respects.

An audit of ICFR for consolidation purposes involves performing procedures to obtain audit evidence about whether a material weakness exists. The procedures selected depend on the auditor's judgment, including the assessment of the risks that a material weakness exists. An audit includes obtaining an understanding of ICFR for consolidation purposes and testing and evaluating the design and operating effectiveness of ICFR for consolidation purposes based on the assessed risk.

Definition and Inherent Limitations of Internal Control over Financial Reporting for Consolidation Purposes

An entity's ICFR for consolidation purposes is a process effected by those charged with governance, management, and other personnel, designed to provide reasonable assurance regarding the preparation of reliable consolidated financial statements in accordance with International Financial Reporting Standards as adopted by the Republic of Korea. An entity's ICFR for consolidation purposes includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the entity; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of consolidated financial statements in accordance with International Financial Reporting Standards as adopted by the Republic of Korea, and that receipts and expenditures of the entity are being made only in accordance with authorizations of management and directors of the entity; and (3) provide reasonable assurance regarding prevention, or timely detection and correction of unauthorized acquisition, use, or disposition of the entity's assets that could have a material effect on the consolidated financial statements.

Because of its inherent limitations, ICFR for consolidation purposes may not prevent, or detect and correct, misstatements. Also, projections of any assessment of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

The engagement partner on the audit resulting in this independent auditor's report is Seung Whan Lee, Certified Public Accountant.

/s/ Samil PricewaterhouseCoopers

Seoul, Korea
March 20, 2024

This report is effective as at March 20, 2024, the audit report date. Certain subsequent events or circumstances, which may occur between the audit report date and the time of reading this report, could have a material impact on the Group's ICFR for consolidation purposes thereto. Accordingly, the readers of the audit report should understand that there is a possibility that the above audit report may have to be revised to reflect the impact of such subsequent events or circumstances, if any.

**Management's Report on the Effectiveness of
Internal Control over Financial Reporting for Consolidation Purposes**

(English Translation of a Report Originally Issued in Korean)

To the Shareholders, Board of Directors and Audit Committee
of KAKAO CORP.

We, as the Chief Executive Officer (CEO) and the Internal Control over Financial Reporting Officer of KAKAO CORP. (the Company), assessed the effectiveness of the design and operation of the Company's Internal Control over Financial Reporting (ICFR) for consolidation purposes for the year ended December 31, 2023.

The Company's management, including ourselves, is responsible for designing and operating ICFR for consolidation purposes. We assessed the design and operating effectiveness of ICFR for consolidation purposes in the prevention and detection of an error or fraud which may cause material misstatements in the preparation and disclosure of reliable consolidated financial statements. We designed and operated ICFR for consolidation purposes in accordance with *Conceptual Framework for Designing and Operating Internal Control over Financial Reporting* established by the Operating Committee of Internal Control over Financial Reporting in Korea (the ICFR Committee). And, we conducted an evaluation of ICFR for consolidation purposes based on *Best Practice Guidance for Evaluating and Reporting Internal Control over Financial Reporting* established by the ICFR Committee.

Based on the assessment results, we believe that the Company's ICFR for consolidation purposes, as at December 31, 2023, is designed and operating effectively, in all material respects, in accordance with *Conceptual Framework for Designing and Operating Internal Control over Financial Reporting*. Although the consolidated financial statements for the year ended December 31, 2022, were restated during the year ended December 31, 2023, it was confirmed that all corrections were made by establishing and executing appropriate remediation procedures within the year ended December 31, 2023.

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

March 15, 2024

Hong Euntaek,
Chief Executive Officer

Oh Seyong,
Internal Control over Financial Reporting Officer