

KakaoBank Corp.

Financial Statements

December 31, 2021 and 2020

(With Independent Auditors' Report Thereon)

KakaoBank Corp.
Index
December 31, 2021 and 2020

	Page(s)
Independent Auditors' Report	1 - 4
Financial Statements	
Statements of Financial Position	5
Statements of Comprehensive Income	6
Statements of Changes in Equity	7
Statements of Cash Flows	8
Notes to the Financial Statements	9 - 104
Independent Auditors' Report on Internal Control over Financial Reporting	105 - 106
Report on the Operations of Internal Control over Financial Reporting	107

Independent Auditors' Report

(Based on a report originally issued in Korean)

To the Board of Directors and Shareholders of
KakaoBank Corp.

Opinion

We have audited the financial statements of KakaoBank Corp. ("the Company"), which comprise the statements of financial position as of December 31, 2021 and 2020, the statements of comprehensive income, changes in equity and cash flows for the years then ended, and notes, comprising significant accounting policies and other explanatory information.

In our opinion, the accompanying financial statements present fairly, in all material respects, the financial position of the Company as of December 31, 2021 and 2020, and its financial performance and its cash flows for the years then ended in accordance with Korean International Financial Reporting Standards ("K-IFRS").

We also have audited, in accordance with Korean Standards on Auditing (KSAs), the Company's Internal Control over Financial Reporting ("ICFR") as of December 31, 2021 based on the criteria established in Conceptual Framework for Designing and Operating Internal Control over Financial Reporting issued by the Operating Committee of Internal Control over Financial Reporting in the Republic of Korea, and our report dated March 4, 2022 expressed an unmodified opinion on the effectiveness of the Company's internal control over financial reporting.

Basis for Opinion

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

Key Audit Matter

Key audit matter is a matter that, in our professional judgment, was of most significance in our audit of the financial statement as of and for the year ended December 31, 2021. This matter was addressed in the context of our audit of the financial statements as a whole, and in forming our opinion thereon, and we do not provide a separate opinion on this matter.

Assessment of the allowance for credit losses for loans

As described in Notes 3.3.5, 7 and 25-2.8 to the financial statements, the Company recognized an allowance for credit losses using the Expected Credit Loss (ECL) impairment model for loans at amortized cost amounting to KRW 141,054 million as of December 31, 2021. A lifetime ECL is recognized for those loans that have experienced a Significant Increase in Credit Risk (SICR) since initial recognition or are credit impaired, otherwise a 12-month ECL is recognized.

The Company estimates the Probability of Default (PD), the Loss Given Default (LGD) and the impact of Forward-Looking Information (FLI) to measure the allowance for credit losses for loans and applies them as inputs to the ECL impairment model. PD and LGD are estimated for each asset class considering various factors such as product type of loans, borrower's source of income, internal credit rating, period of past due and loan period.

We identified the following risks in relation to the assessment of the allowance for credit losses for loans as a key audit matter, considering variety of complex inputs and potential errors in assumptions, involvement of a high degree of management estimation and judgments and significant impact on business performance.

- Risks that the calculation of 12 month and lifetime PD, the calculation of LGD, and the evaluation of FLI incorporated in the measurement of collective ECL is inappropriate due to fraud or error

The following are the primary procedures we performed to address this key audit matter.

- We tested the controls related to the model for calculating the allowance for credit losses for collective assessment of impairment and calculating the impact of FLI, and the controls on the completeness and the accuracy of information for default and recovery in case of default.
- By involving credit risk specialists with specialized skills and knowledge, we evaluated the methodology related to the internal credit rating, which is the basis for calculating and applying PD, and tested a selection of loans whether the internal credit rating was calculated based on the criteria set by the Company.
- We assessed the methodology whether the PD was based on sufficient and reasonable historical data, and tested a selection of loans whether default and loss data used in the estimation were properly collected and utilized in accordance with internal control procedures. In addition, we assessed the accuracy of the applied PD and LGD for a selection of loans through recalculation.

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

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

In preparing the financial statements, management is responsible for assessing the Company'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 Company or to cease operations, or has no realistic alternative but to do so.

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

Auditor's Responsibilities for the Audit of the Financial Statements

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

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

- Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control.
- Evaluate the appropriateness of accounting policies used in the preparation of the financial statements and the reasonableness of accounting estimates and related disclosures made by management.

- Conclude on the appropriateness of management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Company's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditors' report to the related disclosures in the financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditors' report. However, future events or conditions may cause the Company to cease to continue as a going concern.
- Evaluate the overall presentation, structure and content of the financial statements, including the disclosures, and whether the financial statements represent the underlying transactions and events in a manner that achieves fair presentation.

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

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

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

The engagement partner on the audit resulting in this independent auditors' report is Woo-Sung Park.

KPMG Samjong Accounting Corp.

Seoul, Korea

March 4, 2022

This report is effective as of March 4, 2022, 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 financial statements and notes thereto. Accordingly, the readers of the audit report should understand that the above audit report has not been updated to reflect the impact of such subsequent events or circumstances, if any.

KakaoBank Corp.
Statements of Financial Position
December 31, 2021 and 2020

(In millions of Korean won)

	Notes	2021	2020
Assets			
Cash and due from financial institutions	4, 23, 25	₩ 1,219,158	₩ 1,195,937
Financial assets at fair value through profit or loss	5, 23, 25	1,501,913	250,093
Financial investments	6, 11, 23, 25	6,139,020	4,011,277
Loans	7, 23, 25	26,362,098	20,662,809
Property and equipment	8, 28	70,229	46,157
Intangible assets	9	33,460	44,878
Deferred tax assets	24	20,467	-
Net defined benefit assets	13	4,134	997
Other assets	10, 23, 25	689,589	437,842
Total assets		<u>₩ 36,040,068</u>	<u>₩ 26,649,990</u>
Liabilities			
Deposits	12, 23, 25	₩ 30,026,133	₩ 23,539,282
Provisions	14	26,010	22,415
Current tax liabilities	24	14,076	3,613
Other liabilities	15, 23, 25, 28	452,479	287,718
Total liabilities		<u>30,518,698</u>	<u>23,853,028</u>
Equity			
Share capital	16	2,375,796	2,038,265
Capital surplus	16	2,956,238	759,805
Capital adjustments	16, 17	26,784	4,921
Accumulated other comprehensive income (loss)	16	(27,749)	7,794
Retained earnings (accumulated deficit)	16, 31	190,301	(13,823)
(Provision of regulatory reserve for credit losses 2021 : ₩ nil, 2020 : ₩ nil)			
(Provision of unearned reserve for credit losses 2021 : ₩ (-)178,432, 2020 : ₩ (-)125,593)			
(Amount required to reserve for credit losses 2021 : ₩ (-)15,122, 2020 : ₩ (-)52,839)			
(Amounts estimated to be appropriated 2021 : ₩ (-)190,301, 2020 : ₩ nil)			
Total equity		<u>5,521,370</u>	<u>2,796,962</u>
Total liabilities and equity		<u>₩ 36,040,068</u>	<u>₩ 26,649,990</u>

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

KakaoBank Corp.
Statements of Comprehensive Income
Years Ended December 31, 2021 and 2020

<i>(In millions of Korean won, except per share amounts)</i>	Notes	2021	2020
Operating income			
Interest income	18, 23	₩ 785,985	₩ 599,390
Fee and commission income	19, 23	254,068	184,887
Gain related to financial assets at fair value through profit or loss	23	7,704	14,116
Gain related to financial investments	23	-	97
Other operating income	21	17,176	5,667
		<u>1,064,933</u>	<u>804,157</u>
Operating expenses			
Interest expenses	18, 23	164,685	191,360
Fee and commission expenses	19, 23	201,863	178,048
Loss related to financial investments	23	10	-
Selling and administrative expenses	20	285,988	200,585
Other operating expenses	21	63,197	50,720
		<u>715,743</u>	<u>620,713</u>
Provision for credit losses on financial assets	7, 10, 23, 25	<u>92,254</u>	<u>60,893</u>
Operating profit		256,936	122,551
Non-operating income	22	304	135
Non-operating expenses	22	514	354
Profit before income tax		256,726	122,332
Income tax expense	24	(52,602)	(8,696)
Profit for the year	16, 27, 31	<u>₩ 204,124</u>	<u>₩ 113,636</u>
<i>(Adjusted profit after provision of regulatory reserve for credit losses 2021 : ₩ 189,002 2020 : ₩ 60,797)</i>			
Other comprehensive income (loss)			
<i>Items that may be subsequently reclassified to profit or loss</i>			
Gain (loss) on valuation of financial assets at fair value through other comprehensive income	16, 23	(35,148)	6,503
<i>Items that will not be reclassified to profit or loss</i>			
Remeasurements of net defined benefit asset	13, 16	(395)	(1,481)
Other comprehensive income (loss) for the year, net of tax	23	<u>(35,543)</u>	<u>5,022</u>
Total comprehensive income for the year		<u>₩ 168,581</u>	<u>₩ 118,658</u>
Earnings per share (in Korean won)			
Basic earnings per share	27	₩ 467	₩ 309
Diluted earnings per share	27	464	309

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

KakaoBank Corp.
Statements of Changes in Equity
Years Ended December 31, 2021 and 2020

(In millions of Korean won)

	Share Capital	Capital Surplus	Capital Adjustments	Accumulated Other Comprehensive Income (Loss)	Retained Earnings (Accumulated Deficit)	Total
Balance at January 1, 2020	₩ 1,825,482	₩ -	₩ (22,074)	₩ 2,772	₩ (127,459)	₩ 1,678,721
Total comprehensive income						
Profit for the year	-	-	-	-	113,636	113,636
Other comprehensive income (loss)						
Gain on valuation of financial assets						
at fair value through other comprehensive income	-	-	-	6,503	-	6,503
Remeasurements of net defined benefit asset	-	-	-	(1,481)	-	(1,481)
Transactions with owners						
Issuance of shares	212,783	759,805	24,419	-	-	997,007
Share options	-	-	2,576	-	-	2,576
Balance at December 31, 2020	<u>₩ 2,038,265</u>	<u>₩ 759,805</u>	<u>₩ 4,921</u>	<u>₩ 7,794</u>	<u>₩ (13,823)</u>	<u>₩ 2,796,962</u>
Balance at January 1, 2021	₩ 2,038,265	₩ 759,805	₩ 4,921	₩ 7,794	₩ (13,823)	₩ 2,796,962
Total comprehensive income						
Profit for the year	-	-	-	-	204,124	204,124
Other comprehensive income (loss)						
Loss on valuation of financial assets						
at fair value through other comprehensive income	-	-	-	(35,148)	-	(35,148)
Remeasurements of net defined benefit asset	-	-	-	(395)	-	(395)
Transactions with owners						
Issuance of shares	337,531	2,196,433	-	-	-	2,533,964
Share options	-	-	21,863	-	-	21,863
Balance at December 31, 2021	<u>₩ 2,375,796</u>	<u>₩ 2,956,238</u>	<u>₩ 26,784</u>	<u>₩ (27,749)</u>	<u>₩ 190,301</u>	<u>₩ 5,521,370</u>

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

KakaoBank Corp.
Statements of Cash Flows
Years Ended December 31, 2021 and 2020

<i>(In millions of Korean won)</i>	Note	2021	2020
Cash flows from operating activities			
Profit for the year	₩	204,124	₩ 113,636
Adjustment of profit (loss) items			
Interest income		(785,985)	(599,390)
Interest expenses		164,685	191,360
		<u>(621,300)</u>	<u>(408,030)</u>
Adjustment for non-cash items			
Provision for credit losses on financial assets		92,254	60,893
Loss related to financial assets at fair value through profit or loss		(1,913)	(93)
Loss (gain) related to financial investments		10	(97)
Loss on retirement of property and equipment		187	-
Depreciation		27,836	24,384
Amortization		18,789	18,715
Income tax expense		52,602	8,696
Post-employment benefits		7,612	5,546
Share-based payment expenses		1,419	2,576
Provisions		2,837	6,769
Net gain on relating to leases		(1)	(1)
Net loss (gain) on foreign currency translation		(3)	4
		<u>201,629</u>	<u>127,392</u>
Change in operating assets and liabilities			
Increase in due from financial institutions		(22,931)	(969,424)
Increase in financial assets at fair value through profit or loss		(1,249,907)	(250,000)
Increase in loans		(5,837,733)	(1,568,024)
Increase in net defined benefit assets		(11,270)	(8,255)
Increase in other assets		(178,440)	(102,736)
Increase in deposits		6,486,850	2,827,375
Decrease in provisions		(426)	(100)
Increase in other liabilities		136,021	29,830
		<u>(677,836)</u>	<u>(41,334)</u>
Income taxes paid		(11,854)	(1,937)
Interest received		772,145	626,310
Interest paid		(162,416)	(247,074)
Net cash inflow (outflow) from operating activities		<u>(295,508)</u>	<u>168,963</u>
Cash flows from investing activities			
Disposal of financial investments		733,000	1,288,469
Acquisition of financial investments		(2,908,574)	(2,418,777)
Disposal of property and equipment		7	-
Acquisition of property and equipment		(13,763)	(17,342)
Acquisition of intangible assets		(6,901)	(4,260)
Decrease in leasehold deposits provided		1,247	1,760
Increase in leasehold deposits provided		(12,662)	(2,416)
Increase in advance payments		(915)	(4,755)
Net cash outflow from investing activities		<u>(2,208,561)</u>	<u>(1,157,321)</u>
Cash flows from financing activities			
Increase in borrowings		2,700,000	2,440,000
Decrease in borrowings		(2,700,000)	(2,440,000)
Decrease in lease liabilities		(10,648)	(8,180)
Proceeds from issuance of shares		2,562,831	997,007
Cost for issuance of shares		(31,851)	-
Share options exercised		(15,976)	-
Net cash inflow from financing activities		<u>2,504,356</u>	<u>988,827</u>
Effect of exchange rate fluctuations on cash and cash equivalents held		3	(4)
Net increase in cash and cash equivalents		290	465
Cash and cash equivalents at the beginning of the year	4	6,358	5,893
Cash and cash equivalents at the end of the year	4	<u>₩ 6,648</u>	<u>₩ 6,358</u>

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

KakaoBank Corp.
Notes to the Financial Statements
December 31, 2021 and 2020

1. The Company

KakaoBank Corp.(the "Company") is an internet-only bank that provides non-face-to-face banking services through electronic financial transaction method. The Company provides innovative customer service combining finance and IT technology, which is differentiated from common commercial banking service. The Company's headquarters is located at 231, Pangyoyeok-ro, Bundang-Gu, Seongnam-si, Gyeonggi-do, Korea. The Company operates five mobile banking centers and three data processing centers to provide customer services to the customers.

The Company was established on January 22, 2016. The Company launched for the service on July 27, 2017, after obtaining an approval of internet-only bank business on April 5, 2017. The Company changed its name from KakaoBank of Korea Corp. to KakaoBank Corp. on June 1, 2020. The Company was listed on the KOSPI Market of the Korea Exchange on August 6, 2021.

The initial capital of the Company is amounted to ₩900 million and as at December 31, 2021, the Company's capital has increased to ₩2,375,796 million through issuance of shares. Shareholders as at December 31, 2021, are as follows:

	Number of ordinary shares (in shares)	Percentage of ownership (%)
Kakao Corp.	129,533,725	27.26
Korea Value Asset Management Co., Ltd.	110,484,081	23.25
Kookmin Bank	38,097,959	8.02
National Pension Service	20,960,312	4.41
Korea Investment Holdings Co., Ltd.	19,049,643	4.01
Seoul Guarantee Insurance Co., Ltd.	15,239,183	3.21
Ebay Inc.	13,739,183	2.89
Skyblue Luxury Investment Pte.Ltd.	11,084,483	2.33
Keto Holdings, L.P.	10,640,000	2.24
IPB Ltd.	10,640,000	2.24
YES24 Co., Ltd	5,681,393	1.20
Others ¹	90,009,275	18.94
	475,159,237	100.00

¹ Includes employee shares ownership association and other minority shareholders.

KakaoBank Corp.
Notes to the Financial Statements
December 31, 2021 and 2020

2. Basis of Preparation

The Company prepares statutory financial statements in accordance with International Financial Reporting Standards as adopted by the Republic of Korea (“K-IFRS”), as prescribed in the Act on External Audit of Stock Companies.

The financial statements of the Company have been prepared in accordance with K-IFRS. K-IFRS is 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 2021 were approved for issue by the Board of Directors on February 9, 2022 and are subject to the approval of shareholders at their Annual General Meeting on March 29, 2022.

2.1 Measurement Basis

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

- Financial assets at fair value through profit or loss are measured at fair value
- Financial assets at fair value through other comprehensive income are measured at fair value
- Share-based payments are measured at fair value
- Net defined benefit liabilities (assets) are recognized at the net of total the present value of net defined benefit obligations less fair value of plan assets.

2.2 Functional and Presentation Currency

The financial statements of the Company are prepared in functional currency of the primary economic environment in which the Company operates. The financial statements are presented in Korean won, which is the Company’s functional and presentation currency.

KakaoBank Corp.
Notes to the Financial Statements
December 31, 2021 and 2020

2.3 Use of Estimates and Judgment

The preparation of the financial statements in conformity with K-IFRS requires management to make judgments, estimates and assumptions that affect the application of accounting policies and the reported amounts of assets, liabilities, income and expenses. Management's estimates of outcomes may differ from actual outcomes if management's estimates and assumptions based on management's best judgment at the end of the reporting date are different from the actual environment.

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

Information about critical judgments of management in applying accounting policies that have the most significant effect on the amounts recognized in the financial statements and assumptions and estimation uncertainties that have a significant risk of resulting in a material adjustment within the next financial period is as follows:

Provisions for Credit Losses (allowances for loan losses and provisions for unused loan commitments)

The Company determines and recognizes allowances for losses on financial assets at amortized cost and fair value through other comprehensive income through impairment test and recognizes provisions for unused loan commitments. The provisions for credit losses are determined by the methodology and assumptions used for estimating collectively assessed allowances for groups of loans and unused loan commitments.

The spread of COVID-19 in 2021 is having a significant impact on the domestic and international economy. As a result, the Company considered the negative impact on its financial position and financial performance, and calculated the forward-looking information by reflecting the impact from the spread of COVID-19 on economic factors.

Net defined benefit liability (asset)

Net defined benefit liability (asset) depends on numerous factors, especially variation in discount rate that are determined based on an actuarial basis.

Income taxes

The Company recorded, based on its best estimate, current taxes and deferred taxes that the Company will be liable in the future for the operating results as at the financial year end. However, the final tax outcome in the future may be different from the amounts that were initially recorded. Such differences will impact the current and deferred tax assets and liabilities in the period in which such determination is made.

KakaoBank Corp.
Notes to the Financial Statements
December 31, 2021 and 2020

3. Significant Accounting Policies

The significant accounting policies applied in the preparation of these financial statements are set out below. The significant accounting policies applied in the preparation of these financial statements are the same as those that applied to the financial statements for the year ended December 31, 2020, except for the new and amended standards and interpretations for the first time for their annual reporting period commenced January 1, 2021 as explained in Note 3.17.

3.1 Foreign Currency Translation

Foreign currency transactions are translated into the functional currency using the exchange rates at the dates of the transactions or at the year-end if they are subject to remeasurements. Foreign exchange gains and losses resulting from the settlement of such transactions and from the translation of monetary assets and liabilities are recognized in profit or loss.

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

3.2 Cash and Cash Equivalents

The Company classifies an investment as cash and cash equivalents only when it has a maturity of three months or less. Equity investments are excluded from cash equivalents unless they are, in substance, cash equivalents, for example in the case of preferred shares acquired within a short period of their maturity and with a specified redemption date.

KakaoBank Corp.
Notes to the Financial Statements
December 31, 2021 and 2020

3.3 Financial Assets

The Company recognizes financial assets in the statement of financial position when the Company becomes a party to the contractual provisions of the instrument. Regular way purchases and sales of financial assets (i.e. a purchase or sale of a financial asset under a contract whose terms require delivery of the asset within the time frame established generally by regulation or convention in the marketplace concerned) are recognized on trade-date, the date on which the Company commits to purchase or sell the asset.

3.3.1 Classification

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

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

The classification depends on the Company'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 Company 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 Company has made an irrevocable election at the time of initial recognition to account for the equity investment at fair value through other comprehensive income. Gains or losses arising from a change in the fair value for investments in equity instruments that are not designated for fair value through other comprehensive income are recognized in profit or loss.

KakaoBank Corp.
Notes to the Financial Statements
December 31, 2021 and 2020

3.3.2 Measurement

At initial recognition, the Company 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 or the issuance of the financial liabilities. Transaction costs of financial assets carried at fair value through profit or loss are expensed in profit or loss.

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

A. Debt instruments

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

Financial assets at 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 'interest income' in the statements of comprehensive income using the effective interest rate method.

Carrying amount of financial assets at amortized cost is calculated as net of allowances and measurement of allowances is explained in Note 3.3.5.

Financial assets at fair value through other comprehensive income

Assets that are held for collection of contractual cash flows and for selling the financial assets, where the assets' cash flows represent solely payments of principal and interest, are measured at fair value through other comprehensive income. Movements in the carrying amount are taken through other comprehensive income, except for the recognition of impairment loss (reversal of impairment loss), interest income and foreign exchange gains and losses which are recognized in profit or loss. When the financial asset is derecognized, the cumulative gain or loss previously recognized in other comprehensive income is reclassified from equity to profit or loss. Interest income from these financial assets using the effective interest rate method is included in 'interest income' in the statements of comprehensive income.

The measurement of allowances of financial assets at fair value through other comprehensive income is explained in Note 3.3.5.

KakaoBank Corp.
Notes to the Financial Statements
December 31, 2021 and 2020

Financial assets at 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 comprehensive income within 'gain or loss related to financial assets at fair value through profit or loss' in the year in which it arises.

B. Equity instruments

The Company subsequently measures all equity investments at fair value. Where the Company's management has elected to present fair value gains and losses on equity investments in other comprehensive income, there is no subsequent reclassification of fair value gains and losses to profit or loss following the derecognition of the investment. Dividend income from such investments continue to be recognized in profit or loss 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 'gain (loss) related to financial assets at fair value through profit or loss' in the statement of comprehensive income as applicable. Impairment loss (reversal of impairment loss) on equity investments measured at fair value through other comprehensive income are not recognized separately from other changes in fair value.

3.3.3 Derecognition of financial assets

Financial assets are derecognized when the contractual rights to the cash flows from the financial assets expire or the rights to receive the contractual cash flows have been transferred from the financial assets as well as substantially all the risks and rewards of ownership of the financial assets are also transferred, or all the risks and rewards of ownership of the financial assets are neither substantially transferred nor retained and the Company has not retained control. If the Company retains control of financial assets, the Company continues to recognize the financial asset to the extent of its continuing involvement in the financial asset and recognized as a separate asset or liability.

If the Company transfers the contractual rights to receive the cash flows of the financial asset, but retains substantially all the risks and rewards of ownership of the financial asset, the Company continues to recognize the transferred asset in its entirety and recognize a financial liability for the consideration received.

KakaoBank Corp.
Notes to the Financial Statements
December 31, 2021 and 2020

The Company writes off the loan instruments and debt securities in its entirety or to a portion thereof when the principal and interest are determined to be no longer recoverable. In general, the Company considers write-off when it is determined that the debtor does not have sufficient resources or income to cover the principal and interest, and this write-off decision is made in accordance with internal policy, if necessary, approved by external regulators. After the write-off, the Company has a right to collect the written-off loans continuously according to the internal policy.

3.3.4 Offsetting of financial assets and liabilities

A financial asset and a financial liability are offset and the net amount is presented in the statement of financial position when, and only when, the Company currently has a legally enforceable right to offset the recognized amounts and intends either to settle on a net basis, or to realize the asset and settle the liability simultaneously.

3.3.5 Expected credit loss of financial assets

The Company measures expected credit loss and recognizes loss allowance at the end of the reporting period for financial assets at amortized cost and fair value through other comprehensive income with the exception of financial assets at fair value through profit or loss.

Expected credit losses are estimated at present value of probability-weighted amount that is determined by evaluating a range of possible outcomes. The Company measures expected credit losses by reflecting reasonable and supportable information that is reasonably available at the reporting date without undue cost or effort, including information about past events, current conditions and forecasts of future economic conditions.

The approaches of measuring expected credit losses in accordance with K-IFRS are as follows:

- General approach: for financial assets not subject to the below approach and unused loan commitments on off-balance sheet
- Credit-impaired approach: for financial assets that are credit-impaired at the time of acquisition

Application of general approach is differentiated depending on whether credit risk has increased significantly after initial recognition. After initial recognition, loss allowances for the assets without significant increase in credit risk are measured at the amount of 12 month expected credit losses, whereas the loss allowances for the assets with significant increase in credit risk are measured at the amount of lifetime expected credit losses. Lifetime is presumed to be a period to the contractual maturity date of financial assets (the expected life of financial assets).

KakaoBank Corp.
Notes to the Financial Statements
December 31, 2021 and 2020

The Company determines, but are not limited to, whether the credit risk has increased significantly using the following.

- More than 30 days past due
- Classification of precautionary or below in accordance with Regulations on Supervision of Banking Business
- Indicators of bad credit determined using the delinquency information and credit information of borrowers
- Seizure of deposits held by the borrower

After initial recognition, if estimated future cash flows of financial assets are affected a result of one or more of the following items, the Company deemed financial assets impaired:

- 90 days or more past due
- Financial assets classified as unprofitable loans
- Write-off or sales of financial assets resulting from deterioration of credit
- Decrease in debt due to debt restructuring
- Borrowers took bankruptcy or similar procedures to avoid, or postpone payments of loans
- Registration of borrowers on the overdue and bankruptcy information management list according to the general credit information management regulations of Credit Information Service
- Death of Borrowers

A. Forward-looking information

The Company reflects forward-looking information using information related to future economic conditions, when it measures the expected credit losses.

The Company assumes the risk component has a correlation with the economic cycle and calculates the expected credit loss by reflecting information related to the macroeconomic fluctuations on the risk components.

Information on economic fluctuations used to measure expected credit losses is calculated as a probability weight for each scenario based on the Cyclical Component of Coincident Index released by KOSTAT(Statistics Korea).

KakaoBank Corp.
Notes to the Financial Statements
December 31, 2021 and 2020

B. Measuring expected credit losses on financial assets at amortized cost

The expected credit losses on financial assets at amortized cost are measured as the difference between the asset's contractual terms of cash flow and the present value of estimated future cash flows discounted at the financial asset's original effective interest rate.

The Company estimates expected future cash flows for financial assets that are individually significant (individual assessment of impairment).

For financial assets that are not individually significant, the Company collectively estimates expected credit loss by grouping loans with homogeneous credit risk profile (collective assessment of impairment).

Individual assessment of impairment

Individual assessment of impairment losses is calculated by discounting the expected future cash flows of a loan at its original effective interest rate and comparing the resultant present value with the loan's current carrying amount. This process normally encompasses management's best estimate, such as operating cash flow of the borrower and net realizable value of any collateral held.

Collective assessment of impairment

Collective assessment of impairment losses is calculated by a estimation model based on historical loss experience. Such process incorporates factors such as type of collateral, product and borrowers, credit rating, portfolio size, default period and recovery period and applies Probability of Default (PD) on each (company of) asset and Loss Given Default (LGD) by each asset. Also, the expected credit loss model involves certain assumption to determine input based on loss experience and forward-looking information. These models and assumptions are periodically reviewed to reduce gap between loss estimate and actual loss experience.

Lifetime expected credit loss as at the end of the reporting period is calculated by product of carrying amount net of expected repayment, probability of default (PD) for each period and loss given default (LGD) adjusted by change in carrying amount.

C. Measuring expected credit losses on financial assets at fair value through other comprehensive income

A method of measurement of expected credit losses on financial assets at fair value through other comprehensive income is equal to the method of financial assets at amortized cost, except for changes in loss allowances that are recognized as other comprehensive income. Upon disposal or repayment of financial assets at fair value through other comprehensive income, the amount of loss allowances is reclassified from other comprehensive income to profit or loss.

KakaoBank Corp.
Notes to the Financial Statements
December 31, 2021 and 2020

3.4 Property and Equipment

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

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

	Estimated useful lives
Tools and equipment	5 years
Right-of-use assets ¹	2 ~ 5 years
Others	5 years

¹ Considering the lease contract period, the estimated useful life of right-of-use assets is determined from the commencement date of the lease to the earliest date of the end of the right-of-use assets' useful life or the end of the lease term.

The residual value, the useful life and the depreciation method applied to an asset are reviewed at least at each financial year end and, if expectations differ from previous estimates or if there has been a significant change in the expected pattern of consumption of the future economic benefits embodied in the asset, the changes are accounted for as a change in an accounting estimate.

3.5 Intangible Assets

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

Intangible assets are amortized using the straight-line method with no residual value over their estimated useful economic life from when the asset is available for use.

	Estimated useful lives
Software	5 years
Development costs	5 years
Others	5 ~ 7 years

The amortization period and the amortization method for intangible assets with a finite useful life are reviewed at least at each financial year end. Where an intangible asset is not being amortized because its useful life is considered to be indefinite, the Company carries out a review in each accounting period to confirm whether or not events and circumstances still support the assumption of an indefinite useful life. If they do not, the change from the indefinite to finite useful life is

KakaoBank Corp.
Notes to the Financial Statements
December 31, 2021 and 2020

accounted for as a change in an accounting estimate.

Expenditures on research activities or the research phase of an internal project are recognized in profit or loss as incurred. Development expenditures are capitalized only if the Company can demonstrate the technical feasibility of completing the intangible asset, its intention and ability to complete the intangible asset and use or sell it, the availability of adequate resources and probable future economic benefits, and the expenditure attributable to the intangible asset during its development can be measured reliably. Other development expenditures are recognized in profit or loss as incurred.

3.6 Impairment of Non-financial Assets

Goodwill, intangible assets that have an indefinite useful life, or intangible assets not yet available for use are tested annually for impairment. Non-financial assets, except for non-financial assets such as (i) deferred income tax assets, (ii) assets arising from employee benefits and (iii) non-current assets classified as held for sale, are tested for impairment whenever events or changes in circumstances indicate that the carrying amount may not be recoverable. An impairment loss is recognized for the amount by which the asset's carrying amount exceeds its recoverable amount (the recoverable amount is the higher of an asset's fair value less costs of disposal and value in use. Value in use is estimated by discounting the future cash flows expected to be derived from an asset or cash generating unit at a pre-tax rate that reflects current market assessments of the time value of money and the risks specific to the asset for which the future cash flow estimates have not been adjusted). The Company assesses whether there is any indication that an impairment loss recognized in prior periods for non-financial assets, other than goodwill, may no longer exist or may have decreased, and an impairment loss recognized in prior periods shall be reversed if, and only if, there has been a change in the estimates used to determine the asset's recoverable amount since the last impairment loss was recognized. The increased carrying amount of the assets other than goodwill attributable to a reversal of an impairment loss cannot exceed the carrying amount that would have been determined (net of amortization or depreciation) had no impairment loss been recognized for the asset in prior years. An impairment loss recognized for goodwill is not reversed in a subsequent period.

3.7 Financial Liabilities

In accordance with the substance of the contractual arrangement and the definitions of financial liabilities, the Company recognizes financial liabilities in the statement of financial position when the Company becomes a party to the contractual provisions of the financial liability. Transaction costs of financial liabilities at fair value through profit or loss are recognized in profit or loss.

KakaoBank Corp.
Notes to the Financial Statements
December 31, 2021 and 2020

3.7.1 Financial liabilities designated at fair value through profit or loss

The Company irrevocably designates certain financial liabilities upon initial recognition as at fair value through profit or loss when the designation eliminates or significantly reduces a measurement or recognition inconsistency (sometimes referred to as 'an accounting mismatch') that would otherwise arise from measuring assets or liabilities or recognizing the gains and losses on them on different bases, or a group of financial liabilities or financial assets is managed and its performance is evaluated on a fair value basis, in accordance with a documented risk management or investment strategy. The amount of the change in the fair value of financial liabilities at fair value through profit or loss that is attributable to changes in its own credit risk is recognized in other comprehensive income.

3.7.2 Financial liabilities at fair value through profit or loss

After 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 related to financial instrument at fair value through profit or loss.

3.7.3 Other financial liabilities

Non-derivative financial liabilities other than financial liabilities at fair value through profit or loss are classified as other financial liabilities. Other financial liabilities include deposits, debts, debentures and others. Upon of initial recognition, other financial liabilities are measured at fair value minus transaction costs that are directly attributable to the acquisition. Subsequent to initial recognition, other financial liabilities are measured at amortized cost using the effective interest method, and the interest expenses are recognized by applying the effective interest method.

3.7.4 Derecognition of financial liabilities

Financial liabilities are derecognized from the statement of financial position when the obligation specified in contract is discharged, cancelled or expired.

3.8 Share Capital

Ordinary share and preferred share are classified as equity and the incremental costs arising directly attributable to the equity transactions less their tax effects are deducted from equity.

3.9 Leases

The Company leases various offices, office supplies, computer operation equipment cars and others. Lease contracts are typically made for fixed periods of 2 to 5 years, but may have extension options. Lease terms are negotiated on an individual basis and contain a wide range of different terms and conditions. The lease contracts do not impose any other covenants, but leased assets may not be used as collateral for borrowing purposes.

KakaoBank Corp.
Notes to the Financial Statements
December 31, 2021 and 2020

For a contract that is, or contains, a lease, the Company accounts for each lease component within the contract as a lease separately from non-lease components of the contract. As a practical expedient, the lessee may elect, by class of underlying asset, not to separate non-lease components from lease components, and instead account for each lease component and any associated non-lease components as a single lease component.

Leases are recognized as a right-of-use asset and a corresponding liability at the commencement date at which the leased asset is available for use by the Company. Each lease payment is apportioned between the finance cost and the reduction of the outstanding liability. The finance cost is recognized in 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. The right-of-use asset is depreciated over the shorter of the asset's useful life and the lease term.

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

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

The lease payments are discounted using the interest rate implicit in the lease if that rate can be readily determined. If that rate cannot be readily 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 collaterals.

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

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

Payments associated with short-term leases and leases of low-value assets (e.g. underlying assets of \$ 5,000 or below) 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.

KakaoBank Corp.
Notes to the Financial Statements
December 31, 2021 and 2020

3.10 Employee Compensation and Benefits

3.10.1 Short-term employee benefits

Short-term employee benefits are employee benefits (other than termination benefits) that are due to be settled within 12 months after the end of the period in which the employees render the related service. The undiscounted amount of short-term employee benefits expected to be paid in exchange for that service is recognized in profit or loss when an employee has rendered service to the Company.

The expected costs of profit-sharing and bonus payments are recognized as liabilities when the Company has a present legal or constructive obligation to make such payments as a result of past events rendered by employees and a reliable estimate of the obligation can be made.

3.10.2 Other long-term employee benefits

The Company provides long-term employee benefits, which are entitled to employees who have been employed for longer than or equal to 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 Company recognizes service cost, net interest on other long-term employee benefits and remeasurements as profit or loss for the year. These liabilities are measured annually by independent qualified actuaries.

3.10.3 Post-employment Benefits: Net defined benefit plan

Generally, post-employment benefits are payable after the completion of employment, and the benefit amount depended on the employee's age, periods of service or salary levels. The liability recognized in the statement of financial position in respect of net defined benefit plans is the present value of the net defined benefit obligation at the end of the reporting period less the fair value of plan assets. The net defined benefit obligation is calculated annually by independent actuaries using the projected unit credit method. The present value of the net defined benefit obligation is determined by discounting the estimated future cash outflows using interest rates of high-quality corporate bonds that are denominated in the currency in which the benefits will be paid, and that have terms approximating to the terms of the related obligation. Remeasurement gains and losses arising from experience adjustments and changes in actuarial assumptions are recognized in the period in which they occur, directly in other comprehensive income. Changes in the present value of the net defined benefit obligation resulting from plan amendments, curtailments or settlements are recognized immediately in profit or loss as past service costs.

KakaoBank Corp.
Notes to the Financial Statements
December 31, 2021 and 2020

3.10.4 Post-employment Benefits: Defined contribution plan

For defined contribution plan, when an employee has rendered service to the Company during a period, the Company recognizes the contribution payable to a defined contribution plan in exchange for that service as profit or loss except in the case of their inclusion in the cost of an asset.

3.11 Share-based Payments

For equity-settled share-based payment transactions, if the fair value of the goods or services received cannot be measured reliably, the Company measures their value indirectly, by reference to the fair value of the equity instruments granted and recognizes these as employee benefits and equity over the vesting period. If the vesting condition of share options is other than service condition or market condition, the employee benefits recognized are adjusted to be determined based on the actual number of shares of that is vested.

For cash-settled share-based payment transactions, the Company measures the goods or services acquired and the liability incurred at the fair value and recognizes these as employee benefits and liabilities over the vesting period. Until the liability is settled, the Company remeasures the fair value of the liability at the end of each reporting period and at the date of settlement, with any changes in fair value recognized in employee benefits.

Share-based payment transactions with an option for the parties to choose between cash and equity settlement are accounted for based on the substance of the transaction. The Company determines that it has not present obligation to settle in cash. Therefore, the Company accounts for the transactions in accordance with an equity-settled share-based payment transaction.

KakaoBank Corp.
Notes to the Financial Statements
December 31, 2021 and 2020

3.12 Provisions

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

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

Provisions on unused credit lines of consumer and corporate loans are measured using a valuation model that applies the credit conversion factor, probability of default, loss given default and others.

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

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.

3.13 Revenue Recognition

The Company recognizes revenues in accordance with the following steps determined in accordance with K-IFRS 1115 '*Revenue from Contracts with Customers*'.

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

3.13.1 Interest income and expenses

Interest income and expense are recognized using the effective interest method in the statements of comprehensive income. The effective interest method is a method of calculating the amortized cost of a financial asset or a financial liability and of allocating the interest income or interest expense over the relevant period.

KakaoBank Corp.
Notes to the Financial Statements
December 31, 2021 and 2020

The effective interest rate is the rate that exactly discounts estimated future cash receipts or payments through the expected life of the financial instrument or, where appropriate, a shorter period, to the net carrying amount of the financial asset or financial liability. When calculating the effective interest rate, the Company estimates cash flows considering all contractual terms of the financial instrument but does not consider future credit losses. The calculation includes all fees and points paid or received between parties to the contract that are an integral part of the effective interest rate, transaction costs, and all other premiums or discounts. In those rare cases when it is not possible to estimate reliably the cash flows or the expected life of a financial instrument (or group of financial instruments), the Company uses the contractual cash flows over the full contractual term of the financial instrument (or group of financial instruments).

Interest on impaired financial assets is recognized using the rate of interest used to discount the future cash flows for the purpose of measuring the impairment loss.

3.13.2 Fee and commission Income

The Company recognizes financial service fees in accordance with the purpose of charging the fees and the accounting standard of the financial instrument related to the fees earned.

A. Fees that are a part of the effective interest of a financial instrument

The fees that are a part of the effective interest of a financial instrument include compensation for activities such as evaluating the borrower's financial condition, evaluating and recording guarantees, collateral and other security arrangements, negotiating the terms of the instrument, preparing and processing documents and closing the transaction, and origination fees received on issuing financial liabilities at amortized cost. Such fees are generally treated as adjustments of effective interest. However, fees relating to the creation or acquisition of a financial instrument at fair value through profit or loss are recognized as revenue immediately.

B. Fees related to performance obligations in the contract satisfied over time

As control over related goods and services of fees and commission income of performance obligation contracts transfer over time, commission income is recognized over the period of performance obligations. Fees and commission income, including asset management fees and commission fees are recognized as the related services are rendered.

C. Fees earned at a point in time

Fees earned at a point in time are recognized when a customer obtains controls of a promised asset and the Company satisfies a performance obligation. Commission on negotiation or participation in negotiation for the third party such as trading stocks or other securities, arranging transfer and acquisition of business is recognized as revenue when the transaction has been completed.

KakaoBank Corp.
Notes to the Financial Statements
December 31, 2021 and 2020

3.13.3 Net gains/losses on financial instruments at fair value through profit or loss

Net gains/losses on financial instruments at fair value through profit or loss include profit or loss (including changes in fair value, dividends, and gain/loss from foreign currency translation) from following financial instruments:

- Gain or loss from financial instruments at fair value through profit or loss, excluding interest income calculated by the effective interest rate
- Gain or loss from derivatives for trading, including derivatives for hedging that does not meet the criteria for hedge accounting

3.13.4 Dividend income

Dividend income is recognized in profit or loss when the right to receive payment is established.

3.14 Income Tax Expenses

The tax expense for the period consists of current and deferred tax. Current and deferred tax is recognized in profit or loss, except to the extent that it relates to items recognized in other comprehensive income or directly in equity. In this case, the tax is also recognized in other comprehensive income or directly in equity, respectively. The tax expense is measured at the amount expected to be paid to the taxation authorities, using the tax rates (and tax laws) that have been enacted or substantively enacted by the end of the reporting period.

Deferred income tax is recognized as the tax consequences when recovery or settlement of the carrying amount of assets and liabilities arise, on temporary differences arising between the tax bases of assets and liabilities and their carrying amounts in the financial statements. However, deferred income tax is not accounted for if it arises from initial recognition of goodwill, or 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 tax assets are recognized only if it is probable that future taxable amounts will be available to utilize those deductible temporary differences.

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

KakaoBank Corp.
Notes to the Financial Statements
December 31, 2021 and 2020

3.15 Earnings Per Share

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

3.16 Operating Segments

According to K-IFRS 1108 '*Operating Segments*', the Company omitted disclosure for operating segment as the Company has a single segment. The chief operating decision-maker is responsible for allocating resources and assessing performance of the operating segments and the Board of Directors that makes strategic decisions is considered as the chief operating decision-maker.

3.17 New and amended standards and interpretation adopted by the Company

The Company has applied the following standards and amendments for the first time for their annual reporting period commenced January 1, 2021.

3.17.1 Amendments to K-IFRS No.1116 '*Leases*' - The practical expedient for the exemption, discount or deferral of rent related to COVID-19

As a practical expedient, a lessee may elect not to assess whether a rent concession occurring as a direct consequence of the COVID-19 pandemic is a lease modification. A lessee that makes this election shall account for any change in lease payments resulting from the rent concession the same way it would account for the change applying this Standard if the change were not a lease modification. The amendments do not have a significant impact on the Company's financial statements.

3.17.2 Amendments to K-IFRS No.1109 '*Financial Instruments*', K-IFRS No.1039 '*Financial Instruments: Recognition and Measurement*', K-IFRS No.1107 '*Financial Instruments: Disclosure*', K-IFRS No.1104 '*Insurance Contracts*' and K-IFRS No.1116 '*Leases*' – Interest Rate Benchmark Reform

In relation to interest rate benchmark reform, the amendments provide a practical expedient allowing entities to change the effective interest rate instead of changing the carrying amount and apply hedge accounting without discontinuance although the interest rate benchmark is replaced in hedging relationship. These amendments do not have a significant impact on the Company's financial statements.

KakaoBank Corp.
Notes to the Financial Statements
December 31, 2021 and 2020

3.18 New standards and interpretations not yet adopted by the Company

The following new accounting standards and interpretations have been published that are not mandatory for December 31, 2021 reporting periods and have not been early adopted by the Company.

3.18.1 Amendments to K-IFRS No.1037 '*Provisions, Contingent Liabilities and Contingent Assets*' – Onerous Contracts: Cost of Fulfilling a Contract

The amendments clarify that the direct costs of fulfilling a contract include both the incremental costs of fulfilling the contract and an allocation of other costs directly related to fulfilling contracts when assessing whether the contract is onerous. The amendments should be applied for annual periods beginning on or after January 1, 2022, and earlier application is permitted. The Company does not expect that these amendments have a significant impact on the financial statements.

3.18.2 Amendments to K-IFRS No.1012 '*Income Taxes*' – Deferred Tax Related to Assets and Liabilities Arising from a Single Transaction

The amendments narrow the scope of the deferred tax recognition exemption so that it no longer applies to transactions that, on initial recognition, give rise to equal taxable and deductible temporary differences. The amendments should be applied for annual periods beginning on or after January 1, 2023, and earlier application is permitted. The Company does not expect that these amendments have a significant impact on the financial statements.

Following amendments to K-IFRS are not expected to give a significant impact on the Company.

- Amendments to K-IFRS No. 1103 '*Business Combination*' – Reference to the Conceptual Framework
- Improvements to K-IFRS 2018-2020
- Amendments to K-IFRS No. 1016 '*Property, Plant and Equipment*' – Proceeds before intended use
- Amendments to K-IFRS No.1001 '*Presentation of Financial Statements*' - Classification of Liabilities as Current or Non-current
- K-IFRS No.1117 '*Insurance Contract*' and its amendments
- Amendments to K-IFRS No.1001 '*Presentation of Financial Statements*' – Accounting Policy Disclosure
- Amendments to K-IFRS No.1008 '*Accounting Policies, Changes in Accounting Estimates and Errors*' – Definition of Accounting Estimates

KakaoBank Corp.
Notes to the Financial Statements
December 31, 2021 and 2020

4. Cash and Due from Financial Institutions

Details of cash and due from financial institutions as of December 31, 2021 and 2020, are as follows:

<i>(In millions of Korean won)</i>	<u>2021</u>		<u>2020</u>	
Cash and cash equivalents				
Cash	₩	6,587	₩	6,245
Demand deposits		61		113
		<u>6,648</u>		<u>6,358</u>
Due from financial institutions in Korean won				
Time deposits		-		826
Reserve deposits		1,212,510		1,188,753
		<u>1,212,510</u>		<u>1,189,579</u>
	₩	<u>1,219,158</u>	₩	<u>1,195,937</u>

Restricted deposits as of December 31, 2021 and 2020, are as follows:

<i>(In millions of Korean won)</i>	Financial Institutions	<u>2021</u>		<u>2020</u>		Reason for restriction
Due from financial institutions in Korean won						
Time deposits	Shinhan Bank	₩	-	₩	826	Pledged as head office rental deposit
Reserve deposits	Bank of Korea		1,212,510		1,188,753	Bank of Korea Act
		₩	<u>1,212,510</u>	₩	<u>1,189,579</u>	

5. Financial assets at fair value through profit or loss

Details of financial assets at fair value through profit or loss as of December 31, 2021 and 2020, are as follows:

<i>(In millions of Korean won)</i>	<u>2021</u>		<u>2020</u>	
Financial assets at fair value through profit or loss				
Debt securities				
Beneficiary certificates	₩	1,501,913	₩	250,093

KakaoBank Corp.
Notes to the Financial Statements
December 31, 2021 and 2020

6. Financial Investments

Details of financial investments as of December 31, 2021 and 2020, are as follows:

<i>(In millions of Korean won)</i>	<u>2021</u>	<u>2020</u>
Financial assets at fair value through other comprehensive income		
Debt securities		
Government bonds	₩ 2,300,520	₩ 1,548,850
Financial bonds	1,037,539	592,239
Corporate bonds	864,476	529,524
	<u>4,202,535</u>	<u>2,670,613</u>
Financial assets at amortized cost		
Debt securities		
Government bonds	1,006,108	900,194
Corporate bonds	930,377	440,470
	<u>1,936,485</u>	<u>1,340,664</u>
	<u>₩ 6,139,020</u>	<u>₩ 4,011,277</u>

There is no impairment loss on financial investments for the years ended December 31, 2021 and 2020.

KakaoBank Corp.
Notes to the Financial Statements
December 31, 2021 and 2020

7. Loans

Details of loans as of December 31, 2021 and 2020, are as follows:

<i>(In millions of Korean won)</i>	2021		2020	
Loans	₩	26,461,423	₩	20,709,597
Deferred loan origination fees and costs		41,729		43,717
		26,503,152		20,753,314
Less: Allowances for loan losses		(141,054)		(90,505)
	₩	<u>26,362,098</u>	₩	<u>20,662,809</u>

Changes in the allowances for loan losses for the years ended December 31, 2021 and 2020, are as follows:

<i>(In millions of Korean won)</i>	2021		2020	
Beginning balance	₩	90,505	₩	57,134
Provision		92,025		60,840
Written-off		(44,113)		(29,205)
Unwinding Effect		(440)		(164)
Recoveries of amounts previously written-off		3,077		1,900
Ending balance	₩	<u>141,054</u>	₩	<u>90,505</u>

Changes in the deferred loan origination fees and costs for the years ended December 31, 2021 and 2020, are as follows:

<i>(In millions of Korean won)</i>	2021		2020	
Beginning balance	₩	43,717	₩	39,363
Increase		77,139		70,786
Decrease		(79,127)		(66,432)
Ending balance	₩	<u>41,729</u>	₩	<u>43,717</u>

KakaoBank Corp.
Notes to the Financial Statements
December 31, 2021 and 2020

8. Property and Equipment

Details of property and equipment as of December 31, 2021 and 2020, are as follows:

(In millions of Korean won)

		2021		
		Acquisition cost	Accumulated depreciation	Carrying amount
Tools and equipment	₩	80,145	₩ (44,133)	₩ 36,012
Right-of-use assets		53,801	(20,126)	33,675
Others		7,447	(6,905)	542
	₩	<u>141,393</u>	<u>₩ (71,164)</u>	<u>₩ 70,229</u>

(In millions of Korean won)

		2020		
		Acquisition cost	Accumulated depreciation	Carrying amount
Tools and equipment	₩	65,666	₩ (30,479)	₩ 35,187
Right-of-use assets		24,562	(14,978)	9,584
Others		7,291	(5,905)	1,386
	₩	<u>97,519</u>	<u>₩ (51,362)</u>	<u>₩ 46,157</u>

Changes in property and equipment for the years ended December 31, 2021 and 2020, are as follows:

(In millions of Korean won)

		2021					
		Beginning balance	Acquisitions	Depreciation	Disposal	Others ¹	Ending balance
Tools and equipment	₩	35,187	₩ 15,160	₩ (14,141)	₩ (194)	₩ -	₩ 36,012
Right-of-use assets		9,584	36,762	(12,694)	(19)	42	33,675
Others		1,386	157	(1,001)	-	-	542
	₩	<u>46,157</u>	<u>₩ 52,079</u>	<u>₩ (27,836)</u>	<u>₩ (213)</u>	<u>₩ 42</u>	<u>₩ 70,229</u>

¹Increase due to changes in provision for asset retirement obligation and changes in the discount rate.

KakaoBank Corp.
Notes to the Financial Statements
December 31, 2021 and 2020

(In millions of
Korean won)

	2020				
	Beginning balance	Acquisitions	Depreciation	Others ¹	Ending balance
Tools and equipment	₩ 30,209	₩ 16,656	₩ (11,678)	₩ -	₩ 35,187
Right-of-use assets	14,328	2,933	(8,737)	1,060	9,584
Others	2,582	2,773	(3,969)	-	1,386
	<u>₩ 47,119</u>	<u>₩ 22,362</u>	<u>₩ (24,384)</u>	<u>₩ 1,060</u>	<u>₩ 46,157</u>

¹Increase due to changes in provision for asset retirement obligation and changes in the discount rate.

The amount of contractual commitments for the acquisition of property and equipment as of December 31, 2021 is ₩3,888 million. The amounts paid and to be paid are ₩400 million and ₩3,488 million as of December 31, 2021, respectively. There are no amount of contractual commitments for the acquisition of property and equipment as of December 31, 2020.

9. Intangible Assets

Details of intangible assets as of December 31, 2021 and 2020, are as follows:

(In millions of Korean won)

	2021		
	Acquisition cost	Accumulated amortization	Carrying amount
Development costs	₩ 69,051	₩ (58,147)	₩ 10,904
Software	30,170	(20,066)	10,104
Others ¹	12,496	(44)	12,452
	<u>₩ 111,717</u>	<u>₩ (78,257)</u>	<u>₩ 33,460</u>

¹ Intangible assets of ₩12,286 million which are not subject to amortization due to its indefinite useful life are included, because there is no foreseeable limit to the period over which the assets are expected to be utilized.

KakaoBank Corp.
Notes to the Financial Statements
December 31, 2021 and 2020

(In millions of Korean won)

	2020					
	Acquisition cost		Accumulated amortization		Carrying amount	
Development costs	₩	68,506	₩	(44,433)	₩	24,073
Software		27,494		(15,011)		12,483
Others ¹		8,346		(24)		8,322
	₩	104,346	₩	(59,468)	₩	44,878

¹ Intangible assets of ₩8,293 million which are not subject to amortization due to its indefinite useful life are included, because there is no foreseeable limit to the period over which the assets are expected to be utilized.

Changes in intangible assets for the years ended December 31, 2021 and 2020, are as follows:

(In millions of Korean won)

	2021							
	Beginning balance		Acquisitions		Amortization		Ending balance	
Development costs	₩	24,073	₩	545	₩	(13,714)	₩	10,904
Software		12,483		2,676		(5,055)		10,104
Others		8,322		4,150		(20)		12,452
	₩	44,878	₩	7,371	₩	(18,789)	₩	33,460

(In millions of Korean won)

	2020							
	Beginning balance		Acquisitions		Amortization		Ending balance	
Development costs	₩	36,381	₩	1,308	₩	(13,616)	₩	24,073
Software		13,462		4,113		(5,092)		12,483
Others		6,551		1,778		(7)		8,322
	₩	56,394	₩	7,199	₩	(18,715)	₩	44,878

The contractual amount for acquisition of intangible assets as of December 31, 2021 and 2020, is ₩984 million and ₩679 million, respectively. The amounts paid and to be paid are ₩392 million and ₩592 million as of December 31, 2021, respectively, and ₩394 million and ₩285 million as of December 31, 2020, respectively.

KakaoBank Corp.
Notes to the Financial Statements
December 31, 2021 and 2020

10. Other Assets

Details of other assets as of December 31, 2021 and 2020, are as follows:

<i>(In millions of Korean won)</i>	2021	2020
Other financial assets		
Other receivables	₩ 41,535	₩ 532
Accrued income	144,133	82,210
Guarantee deposits	15,960	4,747
Domestic exchange settlement debits	475,828	342,076
Financial suspense payments	30	92
Security deposits	77	34
Less: Allowances for loan losses	(343)	(130)
Present value discount	(328)	(80)
	<u>676,892</u>	<u>429,481</u>
Other assets		
Prepaid expenses	6,464	4,681
Others	6,233	3,680
	<u>12,697</u>	<u>8,361</u>
	<u>₩ 689,589</u>	<u>₩ 437,842</u>

Changes in allowances for losses on other assets for the years ended December 31, 2021 and 2020, are as follows:

<i>(In millions of Korean won)</i>	2021	2020
Beginning balance	₩ 130	₩ 92
Provisions	229	53
Written-off	(26)	(18)
Recoveries of amounts previously written-off	10	3
Ending balance	<u>₩ 343</u>	<u>₩ 130</u>

KakaoBank Corp.
Notes to the Financial Statements
December 31, 2021 and 2020

11. Assets Pledged as Collateral and Provided as Collateral

Details of assets pledged as collateral as of December 31, 2021 and 2020, are as follows:

<i>(In millions of Korean won)</i>	<u>2021</u>	<u>2020</u>	Reason for the pledge
Securities			
Financial assets at fair value through other comprehensive income	₩ 191,429	₩ -	Settlement risk of Bank of Korea
Financial assets at amortized cost	<u>834,563</u>	<u>519,105</u>	Settlement risk of Bank of Korea
	<u>₩ 1,025,992</u>	<u>₩ 519,105</u>	

The fair values of collateral available to sell or repledge, regardless of debtor's default, as of December 31, 2021 and 2020, are as follows:

<i>(In millions of Korean won)</i>	<u>2021</u>		<u>2020</u>	
	Fair value of collateral	Fair value of collateral sold or repledged	Fair value of collateral	Fair value of collateral sold or repledged
Securities	₩ 630,085	-	₩ 407,070	-

12. Deposits

Details of deposits as of December 31, 2021 and 2020, are as follows:

<i>(In millions of Korean won)</i>	<u>2021</u>		<u>2020</u>	
Demand deposits				
Demand deposits in Korean won	₩ 17,593,564		₩ 13,009,421	
Time deposits				
Time deposits in Korean won		<u>12,432,569</u>		<u>10,529,861</u>
	<u>₩ 30,026,133</u>		<u>₩ 23,539,282</u>	

KakaoBank Corp.
Notes to the Financial Statements
December 31, 2021 and 2020

13. Net Defined Benefit Assets and Liabilities

The Company operates net defined benefit plans based on the service period of employees.

Details of net defined benefit liabilities (assets) recognized in the statements of financial position as of December 31, 2021 and 2020, are as follows:

<i>(In millions of Korean won)</i>	<u>2021</u>	<u>2020</u>
Present value of defined benefit obligations	₩ 23,528	₩ 17,377
Fair value of plan assets	(27,662)	(18,374)
Net defined benefit assets ¹	<u>₩ (4,134)</u>	<u>₩ (997)</u>

¹ The amount of the surplus of plan asset is similar to the expected value of economic benefit available of surplus, the asset ceiling is not recognized.

Changes in the defined benefit obligations for the years ended December 31, 2021 and 2020, are as follows:

<i>(In millions of Korean won)</i>	<u>2021</u>	<u>2020</u>
Beginning balance	₩ 17,377	₩ 10,404
Current service cost	7,645	5,556
Interest expense	571	320
Remeasurements:		
Actuarial loss from change in demographic assumptions	-	403
Actuarial loss from change in financial assumptions	(1,809)	862
Actuarial loss from experience adjustments	2,080	681
Payments	(2,336)	(849)
Ending balance	<u>₩ 23,528</u>	<u>₩ 17,377</u>

KakaoBank Corp.
Notes to the Financial Statements
December 31, 2021 and 2020

Changes in the fair value of plan assets for the years ended December 31, 2021 and 2020, are as follows:

<i>(In millions of Korean won)</i>	<u>2021</u>		<u>2020</u>	
Beginning balance	₩	18,374	₩	10,722
Interest income		604		330
Remeasurements:				
Return on plan assets (excluding amounts included in interest income)		(250)		(84)
Contributions of employer		11,300		8,200
Payments		(2,366)		(794)
Ending balance	₩	<u>27,662</u>	₩	<u>18,374</u>

Plan assets as at December 31, 2021 and 2020, consist of:

<i>(In millions of Korean won)</i>	<u>2021</u>				<u>2020</u>			
	<u>Assets quoted in an active market</u>		<u>Assets not quoted in an active market</u>		<u>Assets quoted in an active market</u>		<u>Assets not quoted in an active market</u>	
ELB of Mirae Asset Daewoo Co., Ltd.	₩	-	₩	13,307	₩	-	₩	3,400
DLB of Korea Investment & Securities Co., Ltd.		-		2,700		-		1,800
ELB of Meritz Securities Co., Ltd.		-		4,000		-		-
DB Type time deposits of Standard Chartered Bank Korea Ltd.		-		7,655		-		-
ELB of Shinhan Investment Corp.		-		-		-		10,174
GIC of Prudential Life Insurance Company of Korea		-		-		-		3,000
Cash equivalents		-		-		-		-
	₩	-	₩	<u>27,662</u>	₩	-	₩	<u>18,374</u>

The significant actuarial assumptions as of December 31, 2021 and 2020, are as follows:

<i>(in percentage, %)</i>	<u>2021</u>		<u>2020</u>	
Discount rate (expected yield)	3.81	3.34	High-grade corporate bonds	
Salary growth rate	2.00 +	2.00 +		
	Promotion rate	Promotion rate		

KakaoBank Corp.
Notes to the Financial Statements
December 31, 2021 and 2020

The sensitivity of the present value of defined benefit obligation to changes in the principal assumptions is:

<i>(In millions of Korean won)</i>	<u>2021</u>		<u>2020</u>	
Discount rate				
1% point increase	₩	(3,452)	₩	(2,635)
1% point decrease		4,248		3,262
 <i>(In millions of Korean won)</i>				
Salary growth rate				
1% point increase	₩	4,287	₩	3,274
1% point decrease		(3,539)		(2,690)

Expected maturity analysis of undiscounted pension benefits as of December 31, 2021 and 2020, is as follows:

<i>(In millions of Korean won)</i>	<u>2021</u>					
	Less than 1 year	Between 1-2 years	Between 2-5 years	Between 5-10 years	Over 10 years	Total
Salary payments	₩ 671	₩ 897	₩ 3,730	₩ 11,424	₩ 362,451	₩ 379,173

<i>(In millions of Korean won)</i>	<u>2020</u>					
	Less than 1 year	Between 1-2 years	Between 2-5 years	Between 5-10 years	Over 10 years	Total
Salary payments	₩ 519	₩ 715	₩ 2,764	₩ 7,856	₩ 273,653	₩ 285,507

The weighted average duration of the defined benefit obligation for the years ended December 31, 2021 and 2020 is 16.85 years and 17.39 years, respectively.

Expected contributions to plan assets for the year beginning on January 1, 2022, is estimated to be approximately ₩3,884 million.

KakaoBank Corp.
Notes to the Financial Statements
December 31, 2021 and 2020

14. Provisions

Details of provisions as of December 31, 2021 and 2020, are as follows:

<i>(In millions of Korean won)</i>	2021		2020	
Provisions for asset retirement obligation	₩	4,567	₩	3,384
Provisions for unused loan commitments		7,501		8,464
Long-term employee benefits		13,942		10,567
	₩	26,010	₩	22,415

Changes in provisions for the years ended December 31, 2021 and 2020, are as follows:

<i>(In millions of Korean won)</i>	2021									
	Provisions for asset retirement obligation ¹		Provisions for unused loan commitments		Long-term employee benefits		Provisions for litigation		Total	
Beginning balance	₩	3,384	₩	8,464	₩	10,567	₩	-	₩	22,415
Unwinding of discount		38		-		-		-		38
Effect of changes in discount rate		41		-		-		-		41
Provisions (reversal)		1,104		(963)		3,637		164		3,942
Used during year		-		-		(262)		(164)		(426)
Ending balance	₩	4,567	₩	7,501	₩	13,942	₩	-	₩	26,010

<i>(In millions of Korean won)</i>	2020							
	Provisions for asset retirement obligation ¹		Provisions for unused loan commitments		Long-term employee benefits		Total	
Beginning balance	₩	1,994	₩	4,396	₩	8,006	₩	14,396
Unwinding of discount		40		-		-		40
Effect of changes in discount rate		1,115		-		-		1,115
Provisions		235		4,068		2,661		6,964
Used during year		-		-		(100)		(100)
Ending balance	₩	3,384	₩	8,464	₩	10,567	₩	22,415

¹ Provisions for asset retirement obligation are present value of estimated costs to be incurred for asset retirement obligation of the leased properties. Actual expenses are expected to be incurred at the end of each lease contract and two to five years of depreciation period of leased properties are used as discount period.

KakaoBank Corp.
Notes to the Financial Statements
December 31, 2021 and 2020

15. Other Liabilities

Details of other liabilities as of December 31, 2021 and 2020, are as follows:

<i>(In millions of Korean won)</i>	2021	2020
Other financial liabilities		
Other payables	₩ 178,627	₩ 113,362
Accrued expenses	82,961	81,093
Domestic exchange settlement credits	110,974	62,550
Liabilities incurred from agency relationship	8,023	5,922
Lease liabilities	35,074	8,497
Prepaid cards	29,565	11,081
Agency	620	-
Others	88	63
	<u>445,932</u>	<u>282,568</u>
Other liabilities		
Unearned revenue	581	295
Withholding taxes	5,961	4,849
Others	5	6
	<u>6,547</u>	<u>5,150</u>
	<u>₩ 452,479</u>	<u>₩ 287,718</u>

KakaoBank Corp.
Notes to the Financial Statements
December 31, 2021 and 2020

16. Equity

Details of equity as of December 31, 2021 and 2020, are as follows:

<i>(In millions of Korean won)</i>	<u>2021</u>	<u>2020</u>
Share capital		
Ordinary shares	₩ 2,375,796	₩ 2,038,265
Capital surplus		
Share premium	2,956,238	759,805
Capital adjustments		
Share options	26,784	4,921
Accumulated other comprehensive income		
Gain (loss) on valuation of financial assets at fair value through other comprehensive income	(23,813)	11,335
Remeasurements of net defined benefit asset	(3,936)	(3,541)
Accumulated deficit		
Accumulated deficit before appropriation	190,301	(13,823)
	<u>₩ 5,521,370</u>	<u>₩ 2,796,962</u>

Details of share capital as of December 31, 2021 and 2020, are as follows:

<i>(in shares)</i>	<u>2021</u>	<u>2020</u>
	Ordinary shares	Ordinary shares
Number of shares authorized ¹	1,000,000,000	800,000,000
Par value	₩ 5,000	₩ 5,000
Number of shares issued	475,159,237	407,653,037
Share capital	₩ 2,375,796 million	₩ 2,038,265 million

¹ The number of shares authorized became 1,000,000,000 shares as the amendment to Articles of Incorporation on change of the number of shares authorized, was approved at the 5th general shareholder's meeting on March 30, 2021.

KakaoBank Corp.
Notes to the Financial Statements
December 31, 2021 and 2020

Changes in number of shares issued for the years ended December 31, 2021 and 2020, are as follows:

<i>(in shares)</i>	2021	2020
	Ordinary shares	Ordinary shares
Beginning	407,653,037	365,096,442
Issuance of shares	65,450,000	42,556,595
Share options exercised	2,056,200	-
Ending	475,159,237	407,653,037

Changes in accumulated other comprehensive income for the years ended December 31, 2021 and 2020, are as follows:

(In millions of Korean won)

	2021		2020	
	Gain (loss) on valuation of financial assets at fair value through other comprehensive income	Remeasurements of net defined benefit asset	Gain (loss) on valuation of financial assets at fair value through other comprehensive income	Remeasurements of net defined benefit asset
Beginning balance	₩ 11,335	₩ (3,541)	₩ 4,832	₩ (2,060)
Increase (decrease) due to fair value measurement	(45,516)	(521)	9,080	(2,030)
Adjustments for reclassification				
Increase (decrease) due to disposal	(853)	-	(321)	-
Tax effect	11,221	126	(2,256)	549
Ending balance	₩ (23,813)	₩ (3,936)	₩ 11,335	₩ (3,541)

KakaoBank Corp.
Notes to the Financial Statements
December 31, 2021 and 2020

Changes in retained earnings(the disposition of accumulated deficit) for the years ended December 31, 2021 and 2020, is as follows:

<i>(In millions of Korean won)</i>	2021 (Expected date of disposition : March 29, 2022)	
	<u>₩</u>	<u></u>
Undisposed retained earnings carried over from prior year	₩	(13,823)
Profit for the year		204,124
Regulatory Reserve for Credit Losses		190,301
Undisposed retained earnings to be carried forward	₩	<u>-</u>

<i>(In millions of Korean won)</i>	2020 (Disposition date : March 30, 2021)	
	<u>₩</u>	<u></u>
Undisposed accumulated deficit carried over from prior year	₩	(127,459)
Profit for the year		113,636
Undisposed accumulated deficit to be carried forward	₩	<u>(13,823)</u>

KakaoBank Corp.
Notes to the Financial Statements
December 31, 2021 and 2020

17. Share-based Payments

Details of share-based payment arrangements that existed for the year ended December 31, 2021, are as follows:

	Series 1-01	Series 1-02	Series 1-03
Grant date	March 25, 2019	March 25, 2019	March 25, 2019
Number of granted shares	550,000	2,890,000	1,760,000
Granted type ¹	Share-based payment with an option	Share-based payment with an option	Share-based payment with an option
Exercise price (in Korean won)	₩5,000	₩5,000	₩5,000
Exercisable period	March 25, 2021 ~ March 25, 2026	1 st (50%): March 25, 2021 ~ March 25, 2026 2 nd (50%): March 26, 2022 ~ March 25, 2026	1 st (30%): March 25, 2021 ~ March 25, 2026 2 nd (30%): March 26, 2022 ~ March 25, 2026 3 rd (40%): March 26, 2023 ~ March 25, 2026
Vesting conditions ²	Services fulfillment: 2 years	Services fulfillment: 2~3 years	Services fulfillment: 2~4 years

¹ The Company's share-based payment arrangements are share-based payment transactions with an option in which the Company can choose among issuance of new shares or treasury shares or cash for the difference amount between the exercise price and market price. The arrangements are accounted for equity-settled share-based payment transactions because there is no obligation to settle in cash at the grant date.

² Vesting conditions for type of series 1-03 include the Company's performance condition.

KakaoBank Corp.
Notes to the Financial Statements
December 31, 2021 and 2020

The changes in the number of share options for the years ended December 31, 2021 and 2020, are as follows:

<i>(in shares)</i>	2021		
	Series 1-01	Series 1-02	Series 1-03
Beginning	540,000	2,890,000	1,240,000
Lost the right	-	(10,000)	-
Exercised ¹	(530,000)	(1,430,200)	(372,000)
Ending	<u>10,000</u>	<u>1,449,800</u>	<u>868,000</u>
Number of exercisable shares	10,000	14,800	-
Exercise price (in Korean won)	₩ 5,000	₩ 5,000	₩ 5,000

¹ The share price of the share options exercised during the year ended December 31, 2021, is ₩30,369, as of its exercise date.

<i>(in shares)</i>	2020		
	Series 1-01	Series 1-02	Series 1-03
Beginning	550,000	2,890,000	1,760,000
Grant	-	-	-
Lost the right	(10,000)	-	(520,000)
Ending	<u>540,000</u>	<u>2,890,000</u>	<u>1,240,000</u>
Number of exercisable shares	-	-	-
Exercise price (in Korean won)	₩ 5,000	₩ 5,000	₩ 5,000

The weighted average remaining contractual maturity of share options outstanding at the end of the reporting period is 4.23 years.

KakaoBank Corp.
Notes to the Financial Statements
December 31, 2021 and 2020

The valuation model, assumptions and variables to measure the cost of the share options granted for the year ended December 31, 2021 are as follows:

<i>(in Korean won)</i>	<u>Series 1-01</u>	<u>Series 1-02</u>	<u>Series 1-03</u>
Option pricing model	A binominal model	A binominal model	A binominal model
Fair value of share option	₩ 1,451	₩ 1,451	₩ 1,451
Fair value of shares ¹	₩ 5,022	₩ 5,022	₩ 5,022
Exercise price	₩ 5,000	₩ 5,000	₩ 5,000
Risk-free interest rate ²	1.86%	1.86%	1.86%
Volatility ³	22.61%	22.61%	22.61%

¹ Shareholder's surplus cash flow model from income approach is used in valuation of shares.

² Yield rate of government bonds corresponding to remaining contractual maturity (days) is used.

³ Annualized average price of daily volatility over the past one year of similar company is used.

The cost of the share options granted incurred during the years ended December 31, 2021 and 2020, is as follows:

<i>(In millions of Korean won)</i>	<u>2021</u>	<u>2020</u>
The cost of the share options granted	₩ 1,419	₩ 2,576

KakaoBank Corp.
Notes to the Financial Statements
December 31, 2021 and 2020

18. Net Interest Income and Expenses

Details of interest income and expenses for the years ended December 31, 2021 and 2020, are as follows:

(in millions of Korean won)

	<u>2021</u>	<u>2020</u>
Interest income		
Due from financial institutions	₩ 280	₩ 334
Loans	710,408	539,264
Financial investments	73,947	58,791
Others	1,350	1,001
	<u>785,985</u>	<u>599,390</u>
Interest expenses		
Deposits	164,029	190,877
Debts	50	122
Others	606	361
	<u>164,685</u>	<u>191,360</u>
Net interest income	<u>₩ 621,300</u>	<u>₩ 408,030</u>

KakaoBank Corp.
Notes to the Financial Statements
December 31, 2021 and 2020

19. Net fee and Commission Income and Expenses

Fee and commission income and expenses for the years ended December 31, 2021 and 2020, are as follows:

(in millions of Korean won)

	2021	2020
Fee and commission income		
Remittance related fees	₩ 2,766	₩ 2,478
Card related fees	148,277	122,730
Electronic finance related fees	5,290	4,252
Firm banking related fees	13,541	8,711
Loan-linked related fees	30,332	20,744
Accounts-linked related fees	39,338	16,365
Others	14,524	9,607
	<u>254,068</u>	<u>184,887</u>
Fee and commission expenses		
Lending activity related fees	9,761	8,178
Card activity related fees	101,733	91,078
Deposit activity related fees	2,840	1,176
Foreign currency activity related fees	188	120
Electronic finance related fees	836	853
CD/ATM fees	55,908	51,939
Stamp taxes	3,906	4,629
Others	26,691	20,075
	<u>201,863</u>	<u>178,048</u>
Net fee and commission income	<u>₩ 52,205</u>	<u>₩ 6,839</u>

KakaoBank Corp.
Notes to the Financial Statements
December 31, 2021 and 2020

20. Selling and Administrative Expenses

Details of selling and administrative expenses for the years ended December 31, 2021 and 2020, are as follows:

(in millions of Korean won)

	2021		2020	
Employee benefits				
Short-term employee benefits	₩	106,132	₩	67,096
Long-term employee benefits		3,637		2,661
Post-employment benefits - defined benefit plan		7,612		5,546
Post-employment benefits - defined contribution plan		678		270
Share-based payment expenses		1,419		2,576
		<u>119,478</u>		<u>78,149</u>
Depreciation		27,836		24,384
Amortization		18,789		18,715
Other administrative expenses				
Welfare expenses		23,540		15,030
Rental expenses		5,022		5,316
Advertising expenses		18,071		5,307
Computer operation expenses		25,316		21,198
Taxes and dues		10,794		7,873
Travel expenses		254		199
Communication expenses		3,574		2,576
Supplies expenses		534		1,054
Service contract expenses		30,459		19,284
Others		2,321		1,500
		<u>119,885</u>		<u>79,337</u>
	₩	<u>285,988</u>	₩	<u>200,585</u>

KakaoBank Corp.
Notes to the Financial Statements
December 31, 2021 and 2020

21. Other Operating Income and Expenses

Details of other operating income and expenses for the years ended December 31, 2021 and 2020, are as follows:

(in millions of Korean won)

	<u>2021</u>	<u>2020</u>
Other operating income		
Gain on foreign exchange transactions	₩ 4,524	₩ 3,556
Reversal for unused loan commitments	963	-
Gain on sales of loan	11,620	2,038
Others	69	73
	<u>₩ 17,176</u>	<u>₩ 5,667</u>
Other operating expenses		
Foreign currency transaction loss	₩ -	₩ 4
Deposit insurance expenses	46,503	39,044
Contribution to Housing Finance Credit Guarantee Fund	15,302	7,464
Provision for unused loan commitments	-	4,068
Provision for litigation	164	-
Others	1,228	140
	<u>₩ 63,197</u>	<u>₩ 50,720</u>

KakaoBank Corp.
Notes to the Financial Statements
December 31, 2021 and 2020

22. Non-operating Income and Expenses

Details of non-operating income and expenses for years ended December 31, 2021 and 2020, are as follows:

(in millions of Korean won)

	<u>2021</u>	<u>2020</u>
Non-operating income		
Others	₩ 304	₩ 135
Non-operating expenses		
Donation	₩ 253	₩ 329
Loss on retirement of property and equipment	187	-
Others	74	25
	<u>₩ 514</u>	<u>₩ 354</u>

KakaoBank Corp.
Notes to the Financial Statements
December 31, 2021 and 2020

23. Financial Instruments by Category

Carrying amounts of financial assets and liabilities by category as of December 31, 2021 and 2020, are as follows:

(in millions of Korean won)

	2021									
	Financial assets at fair value through profit or loss		Financial assets at fair value through other comprehensive income		Financial assets at amortized cost		Financial liabilities at amortized cost		Total	
Financial assets										
Cash and due from financial institutions	₩	-	₩	-	₩	1,219,158	₩	-	₩	1,219,158
Financial assets at fair value through profit or loss		1,501,913		-		-		-		1,501,913
Financial investments		-		4,202,535		1,936,485		-		6,139,020
Loans		-		-		26,362,098		-		26,362,098
Other financial assets		-		-		676,892		-		676,892
	₩	1,501,913	₩	4,202,535	₩	30,194,633	₩	-	₩	35,899,081
Financial liabilities										
Deposits	₩	-	₩	-	₩	-	₩	30,026,133	₩	30,026,133
Other financial liabilities		-		-		-		410,858		410,858
	₩	-	₩	-	₩	-	₩	30,436,991	₩	30,436,991

KakaoBank Corp.
Notes to the Financial Statements
December 31, 2021 and 2020

(in millions of Korean won)

2020

	Financial assets at fair value through profit or loss	Financial assets at fair value through other comprehensive income	Financial assets at amortized cost	Financial liabilities at amortized cost	Total
Financial assets					
Cash and due from financial institutions	₩ -	₩ -	₩ 1,195,937	₩ -	₩ 1,195,937
Financial assets at fair value through profit or loss	250,093	-	-	-	250,093
Financial investments	-	2,670,613	1,340,664	-	4,011,277
Loans	-	-	20,662,809	-	20,662,809
Other financial assets	-	-	429,481	-	429,481
	<u>₩ 250,093</u>	<u>₩ 2,670,613</u>	<u>₩ 23,628,891</u>	<u>₩ -</u>	<u>₩ 26,549,597</u>
Financial liabilities					
Deposits	₩ -	₩ -	₩ -	₩ 23,539,282	₩ 23,539,282
Other financial liabilities	-	-	-	274,071	274,071
	<u>₩ -</u>	<u>₩ -</u>	<u>₩ -</u>	<u>₩ 23,813,353</u>	<u>₩ 23,813,353</u>

KakaoBank Corp.
Notes to the Financial Statements
December 31, 2021 and 2020

Net gains or losses on each category of financial instruments for the years ended December 31, 2021 and 2020, are as follows:

(in millions of
Korean won)

	2021					
	Net interest income (expense)	Net fee and commission income (expense)	Provision for credit losses	Others	Total	Other comprehensive income (loss)
Financial assets						
Financial assets at fair value through profit or loss	₩ -	₩ -	₩ -	₩ 7,704	₩ 7,704	₩ -
Financial assets at fair value through other comprehensive income	45,673	-	-	(10)	45,663	(35,148)
Financial assets at amortized cost	740,312	(6,534)	(92,254)	11,620	653,144	-
	<u>₩ 785,985</u>	<u>₩ (6,534)</u>	<u>₩ (92,254)</u>	<u>₩ 19,314</u>	<u>₩ 706,511</u>	<u>₩ (35,148)</u>

Financial liabilities

Financial liabilities at amortized cost	₩ (164,293)	₩ (3,260)	₩ -	₩ -	₩ (167,553)	₩ -
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(in millions of
Korean won)

	2020					
	Net interest income (expense)	Net fee and commission income (expense)	Provision for credit losses	Others	Total	Other comprehensive income
Financial assets						
Financial assets at fair value through profit or loss	₩ -	₩ -	₩ -	₩ 14,116	₩ 14,116	₩ -
Financial assets at fair value through other comprehensive income	33,545	-	-	97	33,642	6,503
Financial assets at amortized cost	565,845	(1,577)	(60,893)	2,038	505,413	-
	<u>₩ 599,390</u>	<u>₩ (1,577)</u>	<u>₩ (60,893)</u>	<u>₩ 16,251</u>	<u>₩ 553,171</u>	<u>₩ 6,503</u>

Financial liabilities

Financial liabilities at amortized cost	₩ (191,092)	₩ (1,106)	₩ -	₩ -	₩ (192,198)	₩ -
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KakaoBank Corp.
Notes to the Financial Statements
December 31, 2021 and 2020

24. Income Tax Expense and Deferred Tax

Income tax expense for the years ended December 31, 2021 and 2020, consists of:

<i>(in millions of Korean won)</i>	<u>2021</u>		<u>2020</u>	
Current tax	₩	22,316	₩	10,403
Additional payments of income taxes		1		-
Changes in deferred tax due to temporary differences ¹		(20,467)		-
Income tax recognized directly in equity		50,752		(1,707)
Income tax expense	<u>₩</u>	<u>52,602</u>	<u>₩</u>	<u>8,696</u>

¹ No deferred tax assets have been recognized, due to the uncertainty of realization for the year ended December 31, 2020.

An analysis of the net profit before income tax and income tax expense for the years ended December 31, 2021 and 2020, is as follows:

<i>(in millions of Korean won)</i>	<u>2021</u>		<u>2020</u>	
Profit before income tax expense	₩	256,726	₩	122,332
Tax at the applicable tax rate ¹		61,666		29,143
Non-taxable income		-		-
Non-deductible expense		111		65
Adjustment to tax of previous years		1		-
Other adjustments		(9,176)		(20,512)
Unrecognized deferred tax asset		(9,075)		(20,318)
Effect of tax rate and others		(101)		(194)
Income tax expense	<u>₩</u>	<u>52,602</u>	<u>₩</u>	<u>8,696</u>
Average effective tax rate (%)		20.49%		7.11%

¹ Applicable tax rate for ₩200 million and below is 11%, for over ₩200 million to ₩20 billion is 22%, and for over ₩20 billion is 24.2%.

KakaoBank Corp.
Notes to the Financial Statements
December 31, 2021 and 2020

The movements of temporary differences and deferred tax assets (liabilities) for the years ended and as at December 31, 2021 and 2020, are as follows:

(in millions of Korean won)

	2021				
	Beginning balance	Profit or loss	Other comprehensive income	Others	Ending balance
Provisions for asset retirement obligation	₩ 429	₩ 373	₩ -	₩ -	₩ 802
Post-employment pension	(242)	(884)	126	-	(1,000)
Accrued interest	(11,282)	(7,805)	-	-	(19,087)
Leasehold guarantee deposits	19	60	-	-	79
Unsettled provision	4,605	584	-	-	5,189
Financial assets at fair value through profit or loss (gain (loss) on valuation)	(23)	(440)	-	-	(463)
Financial assets at fair value through other comprehensive income (gain (loss) on valuation)	(3,619)	-	11,221	-	7,602
Financial assets at fair value through other comprehensive income (interest amortization)	741	(198)	-	-	543
Financial assets at amortized cost (interest amortization)	(1,295)	(374)	-	-	(1,669)
Unused annual leave	391	(3)	-	-	388
Reversal of regular welfare expense	1	(1)	-	-	-
Legal fiction of instant depreciation	672	(77)	-	(8)	587
Deferred incentive bonuses for executive	160	128	-	-	288
Deferred loan origination costs	(173)	(58)	-	-	(231)
Right-of-use assets	(1,930)	(5,916)	-	-	(7,846)
Lease liabilities	2,056	6,432	-	-	8,488
Lawsuit expenses	8	(1)	-	-	7
Bad debt expense	46	3	-	-	49
Car for business use	12	10	-	-	22
Share option	1,191	(13,975)	39,405	-	26,621
	<u>(8,233)</u>	<u>(22,142)</u>	<u>50,752</u>	<u>(8)</u>	<u>20,369</u>
Tax losses	17,090	(17,088)	-	(2)	-
Unused tax credit, etc.	227	(129)	-	-	98
	<u>17,317</u>	<u>(17,217)</u>	<u>-</u>	<u>(2)</u>	<u>98</u>
	<u>₩ 9,084</u>	<u>₩ (39,359)</u>	<u>₩ 50,752</u>	<u>₩ (10)</u>	<u>₩ 20,467</u>

KakaoBank Corp.
Notes to the Financial Statements
December 31, 2021 and 2020

(in millions of Korean won)

	2020				
	Beginning balance	Profit or loss	Other comprehensive income (capital adjustments)	Others	Ending balance
Provisions for asset retirement obligation	₩ 235	₩ 171	₩ -	₩ 23	₩ 429
Post-employment pension	(70)	(714)	549	(7)	(242)
Accrued interest	(5,906)	(4,785)	-	(591)	(11,282)
Leasehold guarantee deposits	22	(5)	-	2	19
Unsettled provision	2,728	1,604	-	273	4,605
Financial assets at fair value through profit or loss (gain (loss) on valuation)	-	(23)	-	-	(23)
Financial assets at fair value through other comprehensive income (gain (loss) on valuation)	(1,363)	136	(2,256)	(136)	(3,619)
Financial assets at fair value through other comprehensive income (interest amortization)	206	514	-	21	741
Financial assets at amortized cost (interest amortization)	(917)	(286)	-	(92)	(1,295)
Unused annual leave	178	195	-	18	391
Reversal of regular welfare expense	-	1	-	-	1
Legal fiction of instant depreciation	6	665	-	1	672
Deferred incentive bonuses for executive	63	91	-	6	160
Deferred loan origination costs	(133)	(27)	-	(13)	(173)
Right-of-use assets	(2,948)	1,313	-	(295)	(1,930)
Lease liabilities	3,049	(1,298)	-	305	2,056
Lawsuit expenses	4	4	-	-	8
Bad debt expense	42	-	-	4	46
Car for business use	5	6	-	1	12
Share option	516	623	-	52	1,191
	<u>(4,283)</u>	<u>(1,815)</u>	<u>(1,707)</u>	<u>(428)</u>	<u>(8,233)</u>
Tax losses	30,731	(16,713)	-	3,072	17,090
Unused tax credit, etc.	384	(83)	-	(74)	227
	<u>31,115</u>	<u>(16,796)</u>	<u>-</u>	<u>2,998</u>	<u>17,317</u>
	<u>₩ 26,832</u>	<u>₩ (18,611)</u>	<u>₩ (1,707)</u>	<u>₩ 2,570</u>	<u>₩ 9,084</u>
Amount excluded in recognition of deferred tax assets (liabilities) ¹	₩ 26,832	₩ (20,318)	₩ -	₩ 2,570	₩ 9,084
Amount included in recognition of deferred tax assets (liabilities)	₩ -	₩ 1,707	₩ (1,707)	₩ -	₩ -

¹ No deferred tax assets have been recognized, due to the uncertainty of realization.

KakaoBank Corp.
Notes to the Financial Statements
December 31, 2021 and 2020

The deferred tax relating to items that are charged or credited directly to equity for the years ended December 31, 2021 and 2020, is as follows:

<i>(in millions of Korean won)</i>	2021		2020		Increase (decrease) in tax effect
	Amount before income tax	Tax effect	Amount before income tax	Tax effect	
Financial assets at fair value through other comprehensive income (gain (loss) on valuation)	₩ (31,415)	₩ 7,602	₩ 14,954	₩ (3,619)	₩ 11,221
Remeasurements of net defined benefit liability (asset)	(5,193)	1,257	(4,672)	1,131	126
Share options	(162,829)	39,405	-	-	39,405

<i>(in millions of Korean won)</i>	2020		2019		Increase (decrease) in tax effect
	Amount before income tax	Tax effect	Amount before income tax	Tax effect	
Financial assets at fair value through other comprehensive income (gain (loss) on valuation)	₩ 14,954	₩ (3,619)	₩ 6,195	₩ (1,363)	₩ (2,256)
Remeasurements of net defined benefit liability (asset)	(4,672)	1,131	(2,642)	582	549

Details of unrecognized deductible temporary differences, tax losses and unused tax credit as at December 31 2020, are as follows:

<i>(in millions of Korean won)</i>	2020
Deductible temporary differences	₩ -
Tax losses ¹	70,618
Tax credit ¹	98
Deduction of donation ¹	534
	<u>₩ 71,250</u>

KakaoBank Corp.
Notes to the Financial Statements
December 31, 2021 and 2020

¹ The maturity of unused tax losses, tax credit, and deduction of donation is as follows:

<i>(in millions of Korean won)</i>	<u>2020</u>
2021	₩ -
2022	-
2023	-
2024	-
2026	1
2027	43,034
2028	27,768
2029	118
2030	329
	<u>₩ 71,250</u>

25. Financial Instruments Risk Management

25-1. Overview of Risk Management

25-1.1 Risk Management

The financial risks that the Company is exposed to are credit risk, interest rate risk in the banking book, operational risk and others. The Company manages risk by type, nature, size, and complexity of the risk.

This note regarding financial risk management provides information about the risks that the Company is exposed to, including the objectives, policies and processes for managing the risks, the methods used to measure the risks, and capital management. Additional quantitative information is disclosed throughout the financial statements.

25-1.2 Risk Management Organization

Board of Directors

The Board of Directors is the ultimate decision-making authority that establishes and amends risk management standards, appoints and dismisses risk management committee, reviews and resolves matters of the Board Risk Committee subject to resolution.

KakaoBank Corp.
Notes to the Financial Statements
December 31, 2021 and 2020

Board Risk Committee

The Board Risk Committee, on behalf of the Board of Directors, is the top decision-making authority regarding risk management. The Board Risk Committee establishes comprehensive risk management policies such as the recognition, measurement and control of all the risks faced by the Company, including the basic policies and strategies for risk management and setting risk limit of internal capital by risk category. They are monitoring compliance.

Executive Risk Committee

The Executive Risk Committee is a consultative group which reviews matters delegated by the Board Risk Committee. The Executive Risk Committee is responsible for organizing and managing the risks that may arise in the Company management, as well as supporting the Board of Directors (including the Committee) and management.

Risk Management Chief

The Risk Management Chief assists the Board Risk Committee, establishes risk management policies and strategies, manages risk management reporting process, examines and improves risk management regulations and processes, monitors the compliance of risk management criteria, and works on other tasks entrusted from the Board Risk Committee.

Risk Management Group

The Risk Management Group is responsible for managing specific policies, procedures and work processes relating to the Company's risk management.

25-2. Credit Risk

25-2.1 Overview of Credit Risk

Credit risk is the risk of financial loss to the Company if a counterparty to a financial instrument fails to meet its contractual obligations, and arises from the on- and off-balance sheet items such as loans and investment debt securities.

25-2.2 Credit Risk Management

To measure the probability of default on the counterparty, the Company uses the credit rating system developed in a statistical method to give a credit rating to the borrower and measures the Credit risk by considering exposure at default and the loss given default. The credit rating system is used not only to give credit rating to new borrowers, but also to monitor the changes in credit rating of existing borrowers periodically to roll over the loan automatically, reserve for provide allowance for bad debts, and select symptoms of bad credit.

For loan products which need to mitigate credit risk, the Company has concluded insurance contract payment agreements with Seoul Guarantee Insurance Co., Ltd., and has a guarantee agreement with Korea Housing Finance Corporation and National Happiness Fund. The Company is preparing to launch various loan products including residential mortgage loans for portfolio diversification.

The Company has organized a credit risk management team that focuses on credit risk management in accordance with the Company's credit risk management policy. The Company's credit risk management team which are independent from the operating department, are responsible for establishing risk management rules and guideline, developing and monitoring credit evaluation models, measuring the credit risk, reviewing credit, measuring the credit risk internal capital, adjusting credit limits, managing operating risk and others.

KakaoBank Corp.
Notes to the Financial Statements
December 31, 2021 and 2020

25-2.3 Maximum Exposure to Credit Risk

The maximum exposure to credit risk of financial assets is the carrying amount after considering the provision for credit losses, which represents the uncertainty that the net value of financial assets varies according to the variation of the specific risk factor prior to considering the collateral held or other credit reinforcement.

The Company's maximum exposures of financial instruments, excluding equity securities, to credit risk without consideration of collateral values as of December 31, 2021 and 2020, are as follows:

<i>(in millions of Korean won)</i>	2021		2020	
On-balance sheet items				
Due from financial institutions	₩	1,212,571	₩	1,189,692
Loans		26,362,098		20,662,809
Financial assets at fair value through profit or loss		1,501,913		250,093
Financial investments		6,139,020		4,011,277
Other financial assets		676,892		429,481
		<u>35,892,494</u>		<u>26,543,352</u>
Off-balance sheet items				
Unused loan commitments		7,798,289		8,148,713
	₩	<u>43,690,783</u>	₩	<u>34,692,065</u>

25-2.4 Credit Risk of Loans

The Company maintains an allowance for loan losses associated with credit risk on loans to manage its credit risk.

Loans are categorized as of December 31, 2021 and 2020, are as follows:

<i>(in millions of Korean won)</i>	2021		2020	
	Amount	%	Amount	%
Neither past due nor impaired	₩ 26,407,456	99.64	₩ 20,689,375	99.69
Past due but not impaired	23,485	0.09	9,850	0.05
Impaired	72,211	0.27	54,089	0.26
	<u>26,503,152</u>	<u>100.00</u>	<u>20,753,314</u>	<u>100.00</u>
Allowance	<u>(141,054)</u>		<u>(90,505)</u>	
Carrying amount	<u>₩ 26,362,098</u>		<u>₩ 20,662,809</u>	

Past-due represents a situation where counterparty cannot pay principal and interest on the payment

KakaoBank Corp.
Notes to the Financial Statements
December 31, 2021 and 2020

date as stated in the contract. Impairment losses are incurred if there is an objective evidence of impairment and that loss event has an impact on the estimated future cash flows that can be reliably estimated. The Company considers that there is an objective evidence of impairment if overdue of payments for 90 and more than 90 days and trouble debt restructuring.

Credit qualities of loans that are past due but not impaired as of December 31, 2021 and 2020, are as follows:

<i>(in millions of Korean won)</i>	<u>2021</u>	<u>2020</u>
1~29 days	₩ 14,852	₩ 6,633
30~59 days	6,115	2,030
60~89 days	2,518	1,187
	<u>₩ 23,485</u>	<u>₩ 9,850</u>

Impaired loans as of December 31, 2021 and 2020, are as follows:

<i>(in millions of Korean won)</i>	<u>2021</u>	<u>2020</u>
Loans	₩ 72,211	₩ 54,089
Allowance		
Collectively assessed allowance	(35,006)	(32,357)
	<u>₩ 37,205</u>	<u>₩ 21,732</u>

KakaoBank Corp.
Notes to the Financial Statements
December 31, 2021 and 2020

A quantification of the extent to which collateral and other credit enhancements mitigate credit risk as of December 31, 2021 and 2020, are as follows:

(in millions of Korean won)

	2021					
		12-month expected credit losses (stage 1)	Expected lifetime credit losses			
				Non-impaired assets (stage 2)	Impaired assets (stage 3)	
Guarantee insurance securities of Seoul Guarantee Insurance Co., Ltd.	₩	2,683,833	₩	24,551	₩	9,605
Guarantee insurance securities of Korea Housing Finance Corporation		8,629,522		18,909		14,007
Credit Guarantee of National Happiness Fund		66,666		12,764		3,547

(in millions of Korean won)

	2020					
		12-month expected credit losses (stage 1)	Expected lifetime credit losses			
				Non-impaired assets (stage 2)	Impaired assets (stage 3)	
Guarantee insurance securities of Seoul Guarantee Insurance Co., Ltd.	₩	2,198,372	₩	25,171	₩	7,593
Guarantee insurance securities of Korea Housing Finance Corporation		4,133,398		6,952		3,776
Credit Guarantee of National Happiness Fund		13,861		1,988		14

25-2.5 Credit Risk Concentration by Region

As the Company has only domestic operating activities, the regional information is not presented.

25-2.6 Details of Debt Securities

Debt securities that are neither past due nor impaired as of December 31, 2021 and 2020, are as follows:

(in millions of Korean won)

	2021		2020	
Financial investments	₩	6,139,020	₩	4,011,277

KakaoBank Corp.
Notes to the Financial Statements
December 31, 2021 and 2020

25-2.7 Details of Debt Securities Categorized by the Credit Ratings

Details of securities categorized by the credit rating as of December 31, 2021 and 2020 are as follows:

(in millions of Korean won)

	2021		
	Financial assets at fair value through other comprehensive income	Financial assets at amortized cost	Total
AAA	₩ 924,577	₩ 930,377	₩ 1,854,954
No rating			
Government bonds	2,300,520	1,006,108	3,306,628
Monetary stabilization bonds	977,438	-	977,438
	<u>₩ 4,202,535</u>	<u>₩ 1,936,485</u>	<u>₩ 6,139,020</u>

(in millions of Korean won)

	2020		
	Financial assets at fair value through other comprehensive income	Financial assets at amortized cost	Total
AAA	₩ 549,719	₩ 440,470	₩ 990,189
No rating			
Government bonds	1,548,850	900,194	2,449,044
Monetary stabilization bonds	572,044	-	572,044
	<u>₩ 2,670,613</u>	<u>₩ 1,340,664</u>	<u>₩ 4,011,277</u>

KakaoBank Corp.
Notes to the Financial Statements
December 31, 2021 and 2020

25-2.8 Changes in Provision for Credit Losses

Changes in provision for credit losses for the years ended December 31, 2021 and 2020, are as follows:

(in millions of Korean won)

	2021							
	12-month expected credit losses (stage 1)			Expected lifetime credit losses			Total	
			Non-impaired assets (stage 2)		Impaired assets (stage 3)			
Loans								
Beginning	₩	52,079	₩	6,069	₩	32,357	₩	90,505
Transfer to allowance stages								
Transfer to stage 2		(801)		847		(46)		-
Transfer to stage 3		(2,134)		(2,964)		5,098		-
Transfer to stage 1		2,174		(2,017)		(157)		-
Others		-		-		(41,476)		(41,476)
Provision of allowance		47,381		5,413		39,231		92,025
Ending	₩	98,699	₩	7,348	₩	35,007	₩	141,054
Other financial assets								
Beginning	₩	86	₩	31	₩	13	₩	130
Transfer to allowance stages								
Transfer to stage 2		(2)		2		-		-
Transfer to stage 3		(6)		(22)		28		-
Transfer to stage 1		5		(5)		-		-
Others		-		-		(16)		(16)
Provision of allowance		174		45		10		229
Ending	₩	257	₩	51	₩	35	₩	343
Unused loan commitments								
Beginning	₩	8,389	₩	75	₩	-	₩	8,464
Transfer to allowance stages								
Transfer to stage 2		(22)		22		-		-
Transfer to stage 3		(47)		(12)		59		-
Transfer to stage 1		50		(50)		-		-
Provision (reversal) of allowance		(934)		26		(55)		(963)
Ending	₩	7,436	₩	61	₩	4	₩	7,501

KakaoBank Corp.
Notes to the Financial Statements
December 31, 2021 and 2020

(in millions of Korean won)

	2020							
	12-month expected credit losses (stage 1)		Expected lifetime credit losses			Total		
			Non-impaired assets (stage 2)		Impaired assets (stage 3)			
Loans								
Beginning	₩	34,011	₩	2,585	₩	20,538	₩	57,134
Transfer to allowance stages								
Transfer to stage 2		(516)		561		(45)		-
Transfer to stage 3		(1,097)		(1,787)		2,884		-
Transfer to stage 1		393		(313)		(80)		-
Others		-		-		(27,469)		(27,469)
Provision of allowance		19,288		5,023		36,529		60,840
Ending	₩	52,079	₩	6,069	₩	32,357	₩	90,505
Other financial assets								
Beginning	₩	64	₩	22	₩	6	₩	92
Transfer to allowance stages								
Transfer to stage 2		(1)		1		-		-
Transfer to stage 3		(3)		(17)		20		-
Transfer to stage 1		1		(1)		-		-
Others		-		-		(15)		(15)
Provision of allowance		25		26		2		53
Ending	₩	86	₩	31	₩	13	₩	130
Unused loan commitments								
Beginning	₩	4,383	₩	13	₩	-	₩	4,396
Transfer to allowance stages								
Transfer to stage 2		(14)		14		-		-
Transfer to stage 3		(18)		(1)		19		-
Transfer to stage 1		6		(6)		-		-
Provision (reversal) of allowance		4,032		55		(19)		4,068
Ending	₩	8,389	₩	75	₩	-	₩	8,464

KakaoBank Corp.
Notes to the Financial Statements
December 31, 2021 and 2020

25-2.9 Changes in Gross Carrying Amount

Changes in gross carrying amount for the years ended December 31, 2021 and 2020, are as follows:

(in millions of Korean won)

	2021						
	12-month expected credit losses (stage 1)	Expected lifetime credit losses		Total			
		Non-impaired assets (stage 2)	Impaired assets (stage 3)				
Due from financial institutions							
Beginning	₩ 1,189,692	₩ -	₩ -	₩ -	₩ -	₩ -	₩ 1,189,692
Net increase (recognition, collection and others)	22,879	-	-	-	-	-	22,879
Ending	₩ 1,212,571	₩ -	₩ -	₩ -	₩ -	₩ -	₩ 1,212,571
Loans							
Beginning	₩ 20,640,105	₩ 59,121	₩ 54,088	₩ -	₩ -	₩ -	₩ 20,753,314
Transfer to allowance stages							
Transfer to stage 2	(46,389)	46,629	(240)	-	-	-	-
Transfer to stage 3	(73,144)	(15,120)	88,264	-	-	-	-
Transfer to stage 1	26,738	(26,013)	(725)	-	-	-	-
Net increase (decrease) (recognition, collection and others)	5,801,425	17,589	(25,063)	-	-	-	5,793,951
Written-off	-	-	(44,113)	-	-	-	(44,113)
Ending	₩ 26,348,735	₩ 82,206	₩ 72,211	₩ -	₩ -	₩ -	₩ 26,503,152
Debt securities at amortized cost							
Beginning	₩ 1,340,664	₩ -	₩ -	₩ -	₩ -	₩ -	₩ 1,340,664
Net increase (recognition, collection and others)	595,821	-	-	-	-	-	595,821
Ending	₩ 1,936,485	₩ -	₩ -	₩ -	₩ -	₩ -	₩ 1,936,485
Debt securities at fair value through other comprehensive income							
Beginning	₩ 2,670,613	₩ -	₩ -	₩ -	₩ -	₩ -	₩ 2,670,613
Net increase (recognition, collection and others)	1,531,922	-	-	-	-	-	1,531,922
Ending	₩ 4,202,535	₩ -	₩ -	₩ -	₩ -	₩ -	₩ 4,202,535
Other financial assets							
Beginning	₩ 429,468	₩ 192	₩ 31	₩ -	₩ -	₩ -	₩ 429,691
Transfer to allowance stages							
Transfer to stage 2	(84)	84	-	-	-	-	-
Transfer to stage 3	(140)	(79)	219	-	-	-	-
Transfer to stage 1	65	(65)	-	-	-	-	-

KakaoBank Corp.
Notes to the Financial Statements
December 31, 2021 and 2020

Net increase (decrease) (recognition, collection and others)		247,568		138		(136)		247,570
Written-off		-		-		(26)		(26)
Ending	₩	676,877	₩	270	₩	88	₩	677,235

Unused loan commitments

Beginning	₩	8,154,106	₩	3,071	₩	-	₩	8,157,177
Transfer to allowance stages								
Transfer to stage 2		(4,019)		4,019		-		-
Transfer to stage 3		(4,474)		(264)		4,738		-
Transfer to stage 1		1,816		(1,816)		-		-
Net decrease (recognition, collection and others)		(351,977)		(2,179)		(4,732)		(358,888)
Ending	₩	7,795,452	₩	2,831	₩	6	₩	7,798,289

(in millions of Korean won)

2020

		12-month expected credit losses (stage 1)	Expected lifetime credit losses		Total			
			Non-impaired assets (stage 2)	Impaired assets (stage 3)				
Due from financial institutions								
Beginning	₩	220,155	₩	-	₩	-	₩	220,155
Net increase (recognition, collection and others)		969,537		-		-		969,537
Ending	₩	1,189,692	₩	-	₩	-	₩	1,189,692
Loans								
Beginning	₩	19,178,152	₩	39,336	₩	33,435	₩	19,250,923
Transfer to allowance stages								
Transfer to stage 2		(42,069)		42,320		(251)		-
Transfer to stage 3		(61,213)		(11,414)		72,627		-
Transfer to stage 1		16,211		(15,992)		(219)		-
Net increase (decrease) (recognition, collection and others)		1,549,024		4,871		(22,299)		1,531,596
Written-off		-		-		(29,205)		(29,205)
Ending	₩	20,640,105	₩	59,121	₩	54,088	₩	20,753,314
Debt securities at amortized cost								
Beginning	₩	1,150,757	₩	-	₩	-	₩	1,150,757
Net increase (recognition, collection and others)		189,907		-		-		189,907
Ending	₩	1,340,664	₩	-	₩	-	₩	1,340,664
Debt securities at fair value through other comprehensive income								
Beginning	₩	1,726,375	₩	-	₩	-	₩	1,726,375

KakaoBank Corp.
Notes to the Financial Statements
December 31, 2021 and 2020

Net increase (recognition, collection and others)		944,238		-		-		944,238
Ending	₩	2,670,613	₩	-	₩	-	₩	2,670,613
Other financial assets								
Beginning	₩	312,963	₩	147	₩	15	₩	313,125
Transfer to allowance stages								
Transfer to stage 2		(94)		94		-		-
Transfer to stage 3		(137)		(65)		202		-
Transfer to stage 1		39		(39)		-		-
Net increase (decrease) (recognition, collection and others)		116,697		55		(168)		116,584
Written-off		-		-		(18)		(18)
Ending	₩	429,468	₩	192	₩	31	₩	429,691
Unused loan commitments								
Beginning	₩	5,852,960	₩	2,276	₩	-	₩	5,855,236
Transfer to allowance stages								-
Transfer to stage 2		(3,591)		3,591		-		-
Transfer to stage 3		(4,103)		(157)		4,260		-
Transfer to stage 1		1,255		(1,255)		-		-
Net increase (decrease) (recognition, collection and others)		2,307,585		(1,384)		(4,260)		2,301,941
Ending	₩	8,154,106	₩	3,071	₩	-	₩	8,157,177

25-2.10 Exposure by Credit Risk Rating

Details of exposure by credit risk rating as of December 31, 2021 and 2020, are as follows:

(in millions of Korean won)

	2021							
	12-month expected credit losses (stage 1)	Expected lifetime credit losses			Total			
		Non-impaired assets (stage 2)	Impaired assets (stage 3)					
Due from financial institutions¹								
Grade 1	₩	1,212,510	₩	-	₩	-	₩	1,212,510
Grade 2		61		-		-		61
		1,212,571		-		-		1,212,571
Provision for credit losses		-		-		-		-
Carrying amount	₩	1,212,571	₩	-	₩	-	₩	1,212,571

Loans²

KakaoBank Corp.
Notes to the Financial Statements
December 31, 2021 and 2020

Grade 1	₩	19,944,593	₩	3,487	₩	-	₩	19,948,080
Grade 2		2,116,456		2,884		-		2,119,340
Grade 3		2,795,746		9,860		-		2,805,606
Grade 4		676,708		13,582		-		690,290
Grade 5		215,232		52,393		72,211		339,836
No rating ³		600,000		-		-		600,000
		<u>26,348,735</u>		<u>82,206</u>		<u>72,211</u>		<u>26,503,152</u>
Provision for credit losses		<u>(98,699)</u>		<u>(7,348)</u>		<u>(35,007)</u>		<u>(141,054)</u>
Carrying amount	₩	<u>26,250,036</u>	₩	<u>74,858</u>	₩	<u>37,204</u>	₩	<u>26,362,098</u>
Debt securities at amortized cost¹								
Grade 1	₩	<u>1,936,485</u>	₩	<u>-</u>	₩	<u>-</u>	₩	<u>1,936,485</u>
		<u>1,936,485</u>		<u>-</u>		<u>-</u>		<u>1,936,485</u>
Provision for credit losses		<u>-</u>		<u>-</u>		<u>-</u>		<u>-</u>
Carrying amount	₩	<u>1,936,485</u>	₩	<u>-</u>	₩	<u>-</u>	₩	<u>1,936,485</u>
Debt securities at fair value through other comprehensive income¹								
Grade 1	₩	<u>4,202,535</u>	₩	<u>-</u>	₩	<u>-</u>	₩	<u>4,202,535</u>
		<u>4,202,535</u>		<u>-</u>		<u>-</u>		<u>4,202,535</u>
Provision for credit losses		<u>-</u>		<u>-</u>		<u>-</u>		<u>-</u>
Carrying amount	₩	<u>4,202,535</u>	₩	<u>-</u>	₩	<u>-</u>	₩	<u>4,202,535</u>
Other financial assets⁴								
Grade 1	₩	133,718	₩	5	₩	-	₩	133,723
Grade 2		3,098		5		-		3,103
Grade 3		4,769		23		-		4,792
Grade 4		1,584		39		-		1,623
Grade 5		589		198		78		865
No rating		533,119		-		10		533,129
		<u>676,877</u>		<u>270</u>		<u>88</u>		<u>677,235</u>
Provision for credit losses		<u>(257)</u>		<u>(51)</u>		<u>(35)</u>		<u>(343)</u>
Carrying amount	₩	<u>676,620</u>	₩	<u>219</u>	₩	<u>53</u>	₩	<u>676,892</u>
Unused loan commitments²								
Grade 1	₩	7,354,322	₩	460	₩	-	₩	7,354,782
Grade 2		241,110		344		-		241,454
Grade 3		187,558		587		-		188,145
Grade 4		11,198		659		-		11,857
Grade 5		1,264		781		6		2,051
		<u>7,795,452</u>		<u>2,831</u>		<u>6</u>		<u>7,798,289</u>
Provision for credit losses		<u>(7,436)</u>		<u>(61)</u>		<u>(4)</u>		<u>(7,501)</u>
Carrying amount	₩	<u>7,788,016</u>	₩	<u>2,770</u>	₩	<u>2</u>	₩	<u>7,790,788</u>

KakaoBank Corp.
Notes to the Financial Statements
December 31, 2021 and 2020

(in millions of Korean won)

2020

		12-month expected credit losses (stage 1)	Expected lifetime credit losses		Total	
			Non-impaired assets (stage 2)	Impaired assets (stage 3)		
Due from financial institutions¹						
Grade 1	₩	1,189,579	₩	-	₩	1,189,579
Grade 2		113		-		113
		<u>1,189,692</u>		<u>-</u>		<u>1,189,692</u>
Provision for credit losses		-		-		-
Carrying amount	₩	<u>1,189,692</u>	₩	<u>-</u>	₩	<u>1,189,692</u>
Loans²						
Grade 1	₩	17,466,787	₩	3,610	₩	17,470,397
Grade 2		1,203,241		2,553		1,205,794
Grade 3		1,078,653		6,332		1,084,985
Grade 4		398,192		11,642		409,834
Grade 5		96,932		34,984	54,088	186,004
No rating ³		396,300		-	-	396,300
		<u>20,640,105</u>		<u>59,121</u>	<u>54,088</u>	<u>20,753,314</u>
Provision for credit losses		<u>(52,079)</u>		<u>(6,069)</u>	<u>(32,357)</u>	<u>(90,505)</u>
Carrying amount	₩	<u>20,588,026</u>	₩	<u>53,052</u>	₩	<u>20,662,809</u>
Debt securities at amortized cost¹						
Grade 1	₩	1,340,664	₩	-	₩	1,340,664
		<u>1,340,664</u>		<u>-</u>		<u>1,340,664</u>
Provision for credit losses		-		-		-
Carrying amount	₩	<u>1,340,664</u>	₩	<u>-</u>	₩	<u>1,340,664</u>
Debt securities at fair value through other comprehensive income¹						
Grade 1	₩	2,670,613	₩	-	₩	2,670,613
		<u>2,670,613</u>		<u>-</u>		<u>2,670,613</u>
Provision for credit losses		-		-		-
Carrying amount	₩	<u>2,670,613</u>	₩	<u>-</u>	₩	<u>2,670,613</u>
Other financial assets⁴						
Grade 1	₩	77,491	₩	6	₩	77,497
Grade 2		1,978		5		1,983
Grade 3		1,708		15		1,723
Grade 4		646		31		677
Grade 5		177		135	31	343
No rating		347,388		-	-	347,388
		<u>429,388</u>		<u>192</u>	<u>31</u>	<u>429,611</u>

KakaoBank Corp.
Notes to the Financial Statements
December 31, 2021 and 2020

Provision for credit losses		(86)		(31)		(13)		(130)
Carrying amount	₩	429,302	₩	161	₩	18	₩	429,481
Unused loan commitment²								
Grade 1	₩	7,826,973	₩	510	₩	-	₩	7,827,483
Grade 2		194,753		345		-		195,098
Grade 3		120,691		588		-		121,279
Grade 4		10,072		632		-		10,704
Grade 5		1,617		996		-		2,613
		8,154,106		3,071		-		8,157,177
Provision for credit losses		(8,389)		(75)		-		(8,464)
Carrying amount	₩	8,145,717	₩	2,996	₩	-	₩	8,148,713

¹ Criteria of GRADE of due from financial institutions and securities are as follows:

Grade 1	External credit rating AAA Government and public bonds/Debt securities guaranteed by Government or loss-compensated, and due from Bank of Korea
Grade 2	External credit rating AA
Grade 3	External credit rating A
Grade 4	External credit rating BBB
Grade 5	External credit rating BB
Grade 6	External credit rating B
Grade 7	External credit rating CCC
Grade 8	External credit rating CC
Grade 9	External credit rating C
Grade 10	External credit rating D

² Criteria of GRADE of loans and unused loan commitments are as follows:

Grade 1	0.75% and less than 0.75% of probability of default
Grade 2	1.35% and less than 1.35% of probability of default
Grade 3	5% and less than 5% of probability of default
Grade 4	10% and less than 10% of probability of default
Grade 5	100% and less than 100% of probability of default

³ For reverse repurchase agreements assets, the ones whose credit evaluation for the counterparty is not available are classified as no rating, and in this case, the Company recognizes provisions individually. As of December 31, 2021, and 2020, the reverse repurchase agreements assets of the Company are under the condition of acquiring prime collateral such as national bond. Therefore, the Company did not recognize provisions because the Company decided that these are considered to have extremely low credit risk.

KakaoBank Corp.
Notes to the Financial Statements
December 31, 2021 and 2020

⁴Among other financial assets, the Company classified Grade of accrued interest and suspense credit receivable according to the information in the original accounts, and other items are classified as no rating.

25-2.11 Exposure by Counterparty

Details of exposure by industry as of December 31, 2021 and 2020, are as follows:

(in millions of Korean won)

	2021		
	Gross carrying amount	Provision for credit losses	Carrying amount
Due from financial institutions			
Government and public institution	₩ 1,212,510	₩ -	₩ 1,212,510
Banks	61	-	61
	<u>1,212,571</u>	<u>-</u>	<u>1,212,571</u>
Loans			
Other financial institutions	₩ 600,000	₩ -	₩ 600,000
Retail	25,903,152	(141,054)	25,762,098
	<u>₩ 26,503,152</u>	<u>₩ (141,054)</u>	<u>₩ 26,362,098</u>
Debt securities at fair value through profit or loss			
Other financial institutions	₩ 1,501,913	₩ -	₩ 1,501,913
Debt securities at amortized cost			
Government and public institution	₩ 1,936,485	₩ -	₩ 1,936,485
Debt securities at fair value through other comprehensive income			
Government and public institution	₩ 4,202,535	₩ -	₩ 4,202,535
Other financial assets			
Government and public institution	₩ 109,480	₩ -	₩ 109,480
Banks	24,717	-	24,717
Other financial institutions	492,593	-	492,593
Corporate and others	15,819	(10)	15,809
Retail	34,626	(333)	34,293
	<u>₩ 677,235</u>	<u>₩ (343)</u>	<u>₩ 676,892</u>
Unused loan commitments			
Retail	₩ 7,798,289	₩ (7,501)	₩ 7,790,788

KakaoBank Corp.
Notes to the Financial Statements
December 31, 2021 and 2020

(in millions of Korean won)

	2020		
	Gross carrying amount	Provision for credit losses	Carrying amount
Due from financial institutions			
Government and public institution	₩ 1,188,753	₩ -	₩ 1,188,753
Banks	939	-	939
	<u>₩ 1,189,692</u>	<u>₩ -</u>	<u>₩ 1,189,692</u>
Loans			
Government and public institution	₩ 140,000	₩ -	₩ 140,000
Other financial institutions	256,300	-	256,300
Retail	20,357,014	(90,505)	20,266,509
	<u>₩ 20,753,314</u>	<u>₩ (90,505)</u>	<u>₩ 20,662,809</u>
Debt securities at fair value through profit or loss			
Other financial institutions	₩ 250,093	₩ -	₩ 250,093
Debt securities at amortized cost			
Government and public institution	₩ 1,340,664	₩ -	₩ 1,340,664
Debt securities at fair value through other comprehensive income			
Government and public institution	₩ 2,670,613	₩ -	₩ 2,670,613
Other financial assets			
Government and public institution	₩ 59,759	₩ -	₩ 59,759
Banks	35,898	-	35,898
Other financial institutions	306,194	-	306,194
Corporate and others	5,303	-	5,303
Retail	22,457	(130)	22,327
	<u>₩ 429,611</u>	<u>₩ (130)</u>	<u>₩ 429,481</u>
Unused loan commitments			
Retail	<u>₩ 8,157,177</u>	<u>₩ (8,464)</u>	<u>₩ 8,148,713</u>

As the Company is doing business only in Korea, the information on details of exposure by country is not presented.

KakaoBank Corp.
Notes to the Financial Statements
December 31, 2021 and 2020

25-3. Liquidity Risk

25-3.1 Overview of Liquidity Risk

Liquidity risk is the risk of insolvency due to a disparity of contract maturity between assets and liabilities, the risk of loss in the cash flow of bank assets due to market price reduction following market crisis.

25-3.2 Liquidity Risk Management

The liquidity coverage ratio (LCR), the management guidance rate of the Financial Supervisory Service, and the net stable funding ration (NSFR) are calculated and managed by the ALM Risk Management System and also calculated and monitored daily. For internal management, the Board Risk Committee sets and manages a limit on liquidity risks separately from the regulatory levels of the supervisory authorities, and reports their compliance to the Executive Risk Committee every month. Depending on the scenarios resulting from the liquidity crisis situation, the analysis is reported to the Executive Risk Committee on a quarterly basis and the plan for the crisis are reported also at least annually. The Company also establish and monitor early alarm indicators, report their results to the Executive Risk Committee on a monthly basis, and establish contingency funding plan for liquidity crisis.

Details of remaining contractual maturity of financial liabilities as of December 31, 2021 and 2020, are as follows:

(in millions of Korean won)

	2021							
	Financial liabilities						Off-balance sheet items	
	Deposits		Others		Total		Unused loan commitments	
Up to 1 month	₩	19,421,977	₩	328,890	₩	19,750,867	₩	7,798,289
1~3 months		2,857,613		1,840		2,859,453		-
3~6 months		2,703,938		2,589		2,706,527		-
6~12 months		4,072,065		5,185		4,077,250		-
1~5 years		1,146,459		26,129		1,172,588		-
Over 5 years		-		-		-		-
	₩	30,202,052	₩	364,633	₩	30,566,685	₩	7,798,289

KakaoBank Corp.
Notes to the Financial Statements
December 31, 2021 and 2020

(in millions of Korean won)

		2020					
		Financial liabilities			Off-balance sheet items		
		Deposits	Others	Total	Unused loan commitments		
Up to 1 month	₩	14,634,471	₩ 194,051	₩ 14,828,522	₩	8,157,177	
1~3 months		2,484,039	1,047	2,485,086		-	
3~6 months		2,149,207	1,892	2,151,099		-	
6~12 months		3,286,166	2,640	3,288,806		-	
1~5 years		1,137,788	1,966	1,139,754		-	
Over 5 years		-	-	-		-	
	₩	23,691,671	₩ 201,596	₩ 23,893,267	₩	8,157,177	

The time period classification above was subdivided based on the judgment of management. The amounts disclosed above include undiscounted contractual principal and interest to be paid and the Company classified the amounts as the earliest due date for our payment obligation. The unused loan commitments provided by the Company has an agreed contractual maturity, but payments should be made immediately if requested by the counterparty.

25-4. Market Risk

25-4.1 Overview of Market Risk

Market risk is the risk of losses that may arise due to fluctuation in market price, such as interest rates, equity prices, and foreign exchange rates, and will affect the Company's income or the value of its trading portfolios. The Company may be exposed to market risks by possessing net foreign currency position, marketable securities, derivatives, and other financial instruments assets and liabilities with inherent market risks. The Company manages market risks by separating them into trading positions and non-trading positions, depending on the holding purpose and characteristics of financial instruments.

The purpose of managing market risks is to pursue profitability and stability simultaneously by determining the maximum possible loss in assets and liabilities exposed to fluctuation in market prices, such as interest rates, stock prices and exchange rates and managing the loss within the allowable limit of the Company.

KakaoBank Corp.
Notes to the Financial Statements
December 31, 2021 and 2020

25-4.2 Management of Market Risk

Market Risk Management for Trading Positions

A trading position is the position of a financial instrument held with the intention of trading or to reduce or eliminate the risk of other trading positions.

The Company measures and manages the market risk associated with our trading position by dividing it into general market risks and individual risks. General market risk refers to the risk of loss of target position due to changes in the general level of market prices such as interest rate, stock price, and exchange rate. Individual risk refers to the risk of loss of target position due to changes in credit risk of bonds and equity issuers as well as changes in general market prices. The Company measures the general market risk and individual risk using the standardized approach in accordance with the "Detailed Regulations on Supervision of Banking Business" <Appendix 3-2> "Standard for Calculation of Capital-to-Equity Ratio for Credit, Operating and Market Risk-Weighted Assets" as stipulated in Chapter 2, and reports it to the Executive Risk Committee.

The Company established the "Trading Book Procedure" and "Market Risk Management Procedure" as internal guidelines for market risk management in the Executive Risk Committee. The "Trading Policy Guideline" sets out the basic principles of the definition and characteristics of trading positions, the range of financial instruments to be controlled, the control procedure, and valuation. In the "Market Risk Management Procedure," the Company has established workflows and procedures for systematically and efficiently recognizing, measuring, reporting and managing market risks arising from holding trading positions.

The Company limits the range of financial instruments that can be treated as trading positions to interest rate risk positions (derivatives positions whose interest rates are based on the underlying assets). In the case of expanding the range of financial instruments subject to changes in business plans, the details of financial instruments, transaction departments, and management limits and others should be documented and approved by management.

As of the reporting date, the trading position for market risk management is the foreign currency denominated spot exchange position that occurred as the Company started trading foreign currency.

KakaoBank Corp.
Notes to the Financial Statements
December 31, 2021 and 2020

The details of the currency conversion of financial instruments denominated in foreign currency as of December 31, 2021 and 2020, are as follows:

<i>(in millions of Korean won)</i>	2021		2020	
Cash and due from financial institutions				
USD	₩	11	₩	21
JPY		6		11
EUR		6		12
GBP		6		12
Others		32		57
	₩	61	₩	113

Market Risk Management for Non-trading Positions

The market risk for non-trading positions is the interest rate risk arising from the maturity mismatch between interest-bearing assets and interest-bearing debt due to interest rate fluctuations. The Company measures and manages interest rate risk using the standard method as stipulated in Chapter 2 of the "Detailed Regulations on Supervision of Banking Business" (Attachment 9-1) "Standard for Calculation of Interest Rate Risk.". The Company sets limits on, and manages Δ EVE (Change in Economic Value of Equity) that represents fluctuation in net asset value resulted from interest rate shock scenarios and Δ NII (Changes in Net Interest Income) that represents changes in net interest income resulted from interest rate shock scenarios. The Company monitors and analyzes the changing factors, and reports their results to the Executive Risk Committee on a monthly basis.

The measurement results of risk as of December 31, 2021 and 2020, are as follows:

<i>(in millions of Korean won)</i>	2021		2020	
Δ EVE	₩	267,180	₩	117,367
Δ NII		72,488		18,031

KakaoBank Corp.
Notes to the Financial Statements
December 31, 2021 and 2020

25-5. Operating Risk

25-5.1 Overview of Operating Risk

The Company defines operational risk as risk of loss resulting from inadequate or failed internal processes, people, systems and external events. Operation risks include legal risks, but do not include strategy and reputation risks. The legal risks include, but are not limited to, exposures to fines, penalties and punitive damages and personal agreements resulting from surveillance actions.

25-5.2 Management of Operating Risk

Through the operating risk management system, the Company systemically manages the general risk management tools such as Risk & Control Self Assessment (RCSA) and KRI (Key Risk Indicator), the calculation of operating risk-required equity capital, operating risk events, and loss data, and reports the related matters to management (Executive Risk Committee) periodically.

25-6. Capital Risk

The Company shall comply with the capital adequacy standards set forth by the financial supervisory authorities. The capital adequacy standards for domestic banks are based on Basel III accord as presented by the Basel Committee on Banking Supervision in the Bank for International Settlements. The Company has been regulated by the minimum capital ratio under the Regulation on Supervision of Banking Business since January 1, 2020.

Pursuant to the regulation, the Company shall maintain the common equity capital ratio at 4.5% or above, Tier 1 capital ratio at 6.0% or above and total capital ratio at 8.0% or above. In addition, in order to enhance the ability to absorb losses of equity capital held, the Company needs to increase capital conservation buffer by 0.625% each year from 2020 to 2023. Taken together, in 2023 and after, the Company shall maintain the common equity capital ratio at 7.0% or above, Tier 1 capital ratio at 8.5% or above and total capital ratio at 10.5% or above.

KakaoBank Corp.
Notes to the Financial Statements
December 31, 2021 and 2020

Details of the Company's capital ratio as of December 31, 2021 and 2020, are as follows:

<i>(in millions of Korean won)</i>	2021		2020	
Equity Capital				
Common equity Tier I capital	₩	5,463,310	₩	2,751,088
Tier II capital		114,071		66,777
	₩	5,577,381	₩	2,817,865
Risk-weighted assets				
Credit risk-weighted assets	₩	14,875,569	₩	13,620,000
Operating risk-weighted assets		771,297		449,548
	₩	15,646,866	₩	14,069,548
Common equity Tier 1 capital ratio (%)		34.92%		19.55%
Tier 1 capital ratio (%)		34.92%		19.55%
Total capital ratio (%)		35.65%		20.03%

In addition to the capital ratio, the Company conducts a capital adequacy assessment to assess whether the Company has adequate capital to manage the significant risks.

The assessment of the capital adequacy is conducted by calculating the amount of capital (internal capital) necessary to cover the important risks that the Company faces when taking into account its operating environment, business goals, crisis situation, etc. The assessment is to ensure that the available capital of the bank (substantially available capital to compensate for management losses) can be maintained at an appropriate level that exceeds the required capital.

The Company determines internal capital limits(Risk appetite) within the range of available capital in consideration of the size and quality of current and future available capital, level of risk tolerance, and business strategy and sets a limit for each type of risk (credit, market, operation, interest rate, etc.) by dividing the internal capital limit determined considering business strategy and characteristics by type of risk. Monthly monitoring is conducted to ensure that each risk type is managed within the limits set for each type of risk, and the results of the monitoring are reported to the Board Risk Committee and the Executive Risk Committee. In case of exceeding the limit of internal capital, the Company manages the adequacy of its capital by restricting the limits for each type of risk, resetting internal capital limits, establishing a risk reduction plan, and raising capital. Countermeasures of the risk are reviewed and approved by the Board Risk Committee and the Executive Risk Committee.

KakaoBank Corp.
Notes to the Financial Statements
December 31, 2021 and 2020

As a part of the assessment and management of the capital adequacy, the Company regularly conducts risk situation analysis (Stress testing), which assesses whether the Company can maintain equity capital at adequate level during financial crisis, such as the market shock and diagnoses potential vulnerabilities.

25-7. Fair Value Disclosures

The fair value of financial instruments traded in active markets is based on quoted market prices at the end of the reporting period.

If the fair value of financial instruments that are not traded in an active market, fair value is measured by using a valuation obtained from independent third-party valuation service. The Company uses diverse valuation techniques using reasonable assumptions based on relative market conditions at the end of each reporting period.

The Company classifies and discloses fair value of financial instruments into the following three-level hierarchy:

- Level 1: Financial instruments measured at quoted prices in active markets are classified as level 1.
- Level 2: Financial instruments measured using valuation techniques based on inputs that are observable in the market are classified as level 2.
- Level 3: Financial instruments measured using valuation techniques where one or more significant inputs are not observable in the market are classified as level 3.

25-7.1 Financial Instruments Measured at Amortized Cost

The method of measuring the fair value of financial instruments measured at amortized cost is as follows:

Measurement methods of fair value

Cash and due from financial institutions	The carrying amount is reasonable approximation of fair values and most deposits have floating interest rate or a short-term maturity. Therefore, the carrying amount is regarded as representative of fair value.
Loans	DCF(Discounted Cash Flow) Model is used to determine the fair value of loans.
Debt securities at amortized cost	The fair value is measured at the lower value of the unit prices of the recent trading days provided by FN Pricing and NICE Pricing & Information Inc. The fair value is determined by using DCF(Discounted Cash Flow) Model of independent third-party pricing services.
Deposits and debts	The carrying amount of demand deposits is regarded as representative of fair value because they are payable on demand. The fair value of other deposits and borrowings is measured by discounting the contractual cash

KakaoBank Corp.
Notes to the Financial Statements
December 31, 2021 and 2020

flows at the market interest rate that takes into account the residual risk.

Other financial
assets and
liabilities

The carrying amounts are reasonable approximation of fair values, without using the DCF(Discounted Cash Flow) Model. These financial instruments are temporary accounts derived from other various transactions and their maturities are relatively short or not defined.

Carrying amount and fair value of financial instruments at amortized cost as of December 31, 2021 and 2020, are as follows:

(in millions of Korean
won)

	2021							
	Carrying amount				Fair value			
	Balance	Unamortized balance ¹	Allowance	Total	Balance	Unamortized balance ¹	Allowance	Total
Assets								
Cash and due from financial institutions								
Cash and cash equivalents	₩ 6,648	₩ -	₩ -	₩ 6,648	₩ 6,648	₩ -	₩ -	₩ 6,648
Due from financial institutions	1,212,510	-	-	1,212,510	1,212,510	-	-	1,212,510
	<u>1,219,158</u>	<u>-</u>	<u>-</u>	<u>1,219,158</u>	<u>1,219,158</u>	<u>-</u>	<u>-</u>	<u>1,219,158</u>
Financial investments	1,936,485	-	-	1,936,485	1,936,485	-	-	1,927,294
Loans	26,461,423	41,729	(141,054)	26,362,098	26,461,423	41,729	(141,054)	26,428,376
Other financial assets	677,563	(328)	(343)	676,892	677,563	(328)	(343)	676,892
	<u>₩ 30,294,629</u>	<u>₩ 41,401</u>	<u>₩ (141,397)</u>	<u>₩ 30,194,633</u>	<u>₩ 30,294,629</u>	<u>₩ 41,401</u>	<u>₩ (141,397)</u>	<u>₩ 30,251,720</u>
Liabilities								
Deposits	₩ 30,026,133	₩ -	₩ -	₩ 30,026,133	₩ 30,026,133	₩ -	₩ -	₩ 30,011,726
Other financial liabilities	445,932	-	-	445,932	445,932	-	-	445,932
	<u>₩ 30,472,065</u>	<u>₩ -</u>	<u>₩ -</u>	<u>₩ 30,472,065</u>	<u>₩ 30,472,065</u>	<u>₩ -</u>	<u>₩ -</u>	<u>₩ 30,457,658</u>

¹Unamortized balance consist of deferred loan origination costs and present value discount.

KakaoBank Corp.
Notes to the Financial Statements
December 31, 2021 and 2020

(in millions of Korean won)

	2020									
	Carrying amount									
	Balance		Unamortized balance ¹		Allowance		Total		Fair value	
Assets										
Cash and due from financial institutions										
Cash and cash equivalents	₩	6,358	₩	-	₩	-	₩	6,358	₩	6,358
Due from financial institutions		1,189,579		-		-		1,189,579		1,189,579
		<u>1,195,937</u>		<u>-</u>		<u>-</u>		<u>1,195,937</u>		<u>1,195,937</u>
Financial investments		1,340,664		-		-		1,340,664		1,360,262
Loans		20,709,597		43,717		(90,505)		20,662,809		20,675,158
Other financial assets		429,691		(80)		(130)		429,481		429,481
	₩	<u>23,675,889</u>	₩	<u>43,637</u>	₩	<u>(90,635)</u>	₩	<u>23,628,891</u>	₩	<u>23,660,838</u>
Liabilities										
Deposits	₩	23,539,282	₩	-	₩	-	₩	23,539,282	₩	23,551,177
Other financial liabilities		282,568		-		-		282,568		282,568
	₩	<u>23,821,850</u>	₩	<u>-</u>	₩	<u>-</u>	₩	<u>23,821,850</u>	₩	<u>23,833,745</u>

¹Unamortized balance consist of deferred loan origination costs and present value discount.

KakaoBank Corp.
Notes to the Financial Statements
December 31, 2021 and 2020

Fair value hierarchy classifications of the financial instruments not measured at fair value but for which the fair value is disclosed as of December 31, 2021 and 2020, are as follows:

(in millions of Korean won)

	2021			
	Level 1	Level 2	Level 3	Total
Assets				
Cash and due from financial institutions				
Cash and cash equivalents	₩ 6,587	₩ 61	₩ -	₩ 6,648
Due from financial institutions	-	1,212,510	-	1,212,510
	<u>6,587</u>	<u>1,212,511</u>	<u>-</u>	<u>1,219,158</u>
Financial investments				
Debt securities	1,002,137	925,157	-	1,927,294
Loans				
Retails	-	-	25,828,376	25,828,376
Reverse repurchase agreements	-	-	600,000	600,000
	-	-	<u>26,428,376</u>	<u>26,428,376</u>
Other financial assets	-	-	676,892	676,892
	<u>₩ 1,008,724</u>	<u>₩ 2,137,728</u>	<u>₩ 27,105,268</u>	<u>₩ 30,251,720</u>
Liabilities				
Deposits	₩ -	₩ 17,651,279	₩ 12,360,447	₩ 30,011,726
Other financial liabilities	-	-	445,932	445,932
	<u>₩ -</u>	<u>₩ 17,651,279</u>	<u>₩ 12,806,379</u>	<u>₩ 30,457,658</u>

(in millions of Korean won)

	2020			
	Level 1	Level 2	Level 3	Total
Assets				
Cash and due from financial institutions				
Cash and cash equivalents	₩ 6,245	₩ 113	₩ -	₩ 6,358
Due from financial institutions	-	1,189,579	-	1,189,579
	<u>6,245</u>	<u>1,189,692</u>	<u>-</u>	<u>1,195,937</u>
Financial investments				
Debt securities	914,936	445,326	-	1,360,262
Loans				
Retails	-	-	20,278,858	20,278,858
Reverse repurchase agreements	-	-	396,300	396,300
	-	-	<u>20,675,158</u>	<u>20,675,158</u>
Other financial assets	-	-	429,481	429,481
	<u>₩ 921,181</u>	<u>₩ 1,635,018</u>	<u>₩ 21,104,639</u>	<u>₩ 23,660,838</u>
Liabilities				
Deposits	₩ -	₩ 13,060,831	₩ 10,490,346	₩ 23,551,177
Other financial liabilities	-	-	282,568	282,568
	<u>₩ -</u>	<u>₩ 13,060,831</u>	<u>₩ 10,772,914</u>	<u>₩ 23,833,745</u>

KakaoBank Corp.
Notes to the Financial Statements
December 31, 2021 and 2020

Valuation techniques and inputs used in the fair value measurements as of December 31, 2021 and 2020, are as follows:

<i>(in millions of Korean won)</i>	Level	2021		2020		Valuation techniques	Inputs
Assets							
Cash and cash equivalents ¹	Level 2	₩	61	₩	113	-	-
Due from financial institutions ¹	Level 2		1,212,510		1,189,579	-	-
Debt securities at amortized cost	Level 2		925,157		445,326	Discounted cash flow	Discount rate
Retail loans	Level 3		25,828,376		20,278,858	Discounted cash flow	Credit spreads, Other spreads, Interest rate
Reverse repurchase agreements ¹	Level 3		600,000		396,300	-	-
Other financial assets ¹	Level 3		676,892		429,481	-	-
		₩	29,242,996	₩	22,739,657		
Liabilities							
Deposits ¹	Level 2	₩	17,651,279	₩	13,060,831	-	-
Deposits	Level 3		12,360,447		10,490,346	Discounted cash flow	Other spreads, Interest rate
Other financial liabilities ¹	Level 3		445,932		282,568	-	-
		₩	30,457,658	₩	23,833,745		

¹ Valuation techniques and inputs of the financial instruments whose carrying amount is a reasonable approximation of fair value, are not disclosed.

KakaoBank Corp.
Notes to the Financial Statements
December 31, 2021 and 2020

25-7.2 Financial Instruments Measured at Fair Value

Fair value of financial instruments by fair value hierarchy

Fair value hierarchy of the financial instruments that are measured at fair value as of December 31, 2021 and 2020, are as follows:

(in millions of Korean won)

	2021			
	Level 1	Level 2	Level 3	Total
Financial assets				
Financial assets at fair value through profit or loss				
Debt securities	₩ -	₩ 1,501,913	₩ -	₩ 1,501,913
Financial assets at fair value through other comprehensive income				
Debt securities	3,277,958	924,577	-	4,202,535
	<u>₩ 3,277,958</u>	<u>₩ 2,426,490</u>	<u>₩ -</u>	<u>₩ 5,704,448</u>

(in millions of Korean won)

	2020			
	Level 1	Level 2	Level 3	Total
Financial assets				
Financial assets at fair value through profit or loss				
Debt securities	₩ -	₩ 250,093	₩ -	₩ 250,093
Financial assets at fair value through other comprehensive income				
Debt securities	2,120,894	549,719	-	2,670,613
	<u>₩ 2,120,894</u>	<u>₩ 799,812</u>	<u>₩ -</u>	<u>₩ 2,920,706</u>

There is no transfer between levels 1 and 2 of financial asset measured at fair value for the years ended December 31, 2021 and 2020.

KakaoBank Corp.
Notes to the Financial Statements
December 31, 2021 and 2020

Valuation techniques and the inputs

Valuation techniques and inputs used in level 2 fair value measurements as of December 31, 2021 and 2020, are as follows:

<i>(in millions of Korean won)</i>	Valuation techniques	<u>2021</u>		<u>2020</u>		Inputs
Financial Assets at fair value through profit or loss	Net asset value	₩	1,501,913	₩	250,093	Price of underlying assets
Financial Assets at fair value through other comprehensive income	Discounted cash flow		924,577		549,719	Discount rate
		₩	<u>2,426,490</u>	₩	<u>799,812</u>	

There are no financial instruments classified as level 3 as of December 31, 2021 and 2020.

KakaoBank Corp.
Notes to the Financial Statements
December 31, 2021 and 2020

25-8. Offsetting Financial Assets and Financial Liabilities

As the law allows for the right to offset and the contract settle it net in cash, domestic exchange settlement debits and domestic exchange settlement credits transactions are shown in its net settlement balance in the statement of financial position.

The following table presents the financial assets that are offset, or subject to enforceable master netting arrangements and other similar agreements as of December 31, 2021 and 2020.

(in millions of Korean won)

		2021						
		Gross amounts of recognized financial assets	Gross amounts of recognized financial liabilities set off	Net amounts presented in the statement of financial position	Amounts not offset		Net amount	
					Financial instruments	Cash collateral received		
Domestic exchange settlement debits	₩	1,635,270	₩ (1,159,442)	₩ 475,828	₩ -	₩ -	₩ 475,828	

(in millions of Korean won)

		2020						
		Gross amounts of recognized financial assets	Gross amounts of recognized financial liabilities set off	Net amounts presented in the statement of financial position	Amounts not offset		Net amount	
					Financial instruments	Cash collateral received		
Domestic exchange settlement debits	₩	1,318,421	₩ (976,345)	₩ 342,076	₩ -	₩ -	₩ 342,076	

KakaoBank Corp.
Notes to the Financial Statements
December 31, 2021 and 2020

The following table presents the recognized financial liabilities that are offset, or subject to enforceable master netting arrangements and other similar agreements as of December 31, 2021 and 2020.

(in millions of Korean won)

		2021					
		Gross amounts of recognized financial liabilities	Gross amounts of recognized financial assets set off	Net amounts presented in the statement of financial position	Amounts not offset		Net amount
					Financial instruments	Cash collateral pledged	
Domestic exchange settlement credits	₩	1,270,416	₩ (1,159,442)	₩ 110,974	₩ (110,974)	₩ -	-

(in millions of Korean won)

		2020					
		Gross amounts of recognized financial liabilities	Gross amounts of recognized financial assets set off	Net amounts presented in the statement of financial position	Amounts not offset		Net amount
					Financial instruments	Cash collateral pledged	
Domestic exchange settlement credits	₩	1,038,895	₩ (976,345)	₩ 62,550	₩ (62,550)	₩ -	-

26. Contingencies and Commitments

As of December 31, 2021, the Company has filed 12 lawsuits (affirmation of the existence of loans) as a plaintiff, involving aggregate claim of ₩506 million, and faces 14 lawsuits (affirmation of the non-existence of debts), as a defendant, involving aggregate damages of ₩642 million. As of December 31, 2021, provisions for litigation is not recognized as the final result of the lawsuit as a defendant cannot be reasonably predicted.

There are no purchase commitment and residual cash deficiency support agreement (excluding acquisition of assets and capital expenditure commitments) at the date of issuance as of December 31, 2021 and 2020.

KakaoBank Corp.
Notes to the Financial Statements
December 31, 2021 and 2020

27. Earnings per share

Earnings per share for the years ended December 31, 2021 and 2020, are as follows:

<i>(in millions of Korean won/Shares)</i>	2021	2020
Profit for the year	₩ 204,124	₩ 113,636
Profit available for ordinary shares <i>(in shares)</i>	204,124	113,636
Weighted average number of ordinary shares outstanding <i>(in shares)</i>	436,971,123	367,334,893
Basic earnings per share <i>(in Korean won)</i> ¹	₩ 467	₩ 309

¹ Diluted earnings per share are equal to basic earnings per share for year ended December 31, 2020.

KakaoBank Corp.
Notes to the Financial Statements
December 31, 2021 and 2020

Weighted average number of ordinary shares outstanding for the years ended December 31, 2021 and 2020, are as follows:

<i>(in Shares)</i>	2021			
	Period	Number of shares	Day	Weight
Number of common shares outstanding	January 1, 2021 ~ December 31, 2021	407,653,037	365	148,793,358,505
Exercise of share options	March 30, 2021 ~ December 31, 2021	1,997,200	277	553,224,400
Issuance of shares	July 30, 2021 ~ December 31, 2021	65,450,000	155	10,144,750,000
Exercise of share options	November 09, 2021 ~ December 31, 2021	59,000	53	3,127,000
	Subtotal(①)			159,494,459,905
	Weighted average number of common shares outstanding(②=①/365)			436,971,123

<i>(in Shares)</i>	2020			
	Period	Number of shares	Day	Weight
Number of common shares outstanding	January 1, 2020 ~ December 31, 2020	365,096,442	366	133,625,297,772
Issuance of shares (6th)	November 13, 2020 ~ December 31, 2020	10,640,000	49	521,360,000
Issuance of shares (8th)	December 8, 2020 ~ December 31, 2020	10,640,000	24	255,360,000
Issuance of shares (7th)	December 30, 2020 ~ December 31, 2020	21,276,595	2	42,553,190
	Subtotal(①)			134,444,570,962
	Weighted average number of common shares outstanding(②=①/366)			367,334,893

Diluted earnings per share for the year ended December 31, 2021 is as follows:

<i>(in millions of Korean won)</i>	2021	
Profit for the year	₩	204,124
Profit attributable to the ordinary equity holders		204,124
Weighted average number of ordinary shares outstanding		436,971,123
Adjustment		
Share options		2,540,645
Adjusted weighted average number of shares for diluted earnings per share <i>(in shares)</i>		439,511,768
Diluted earnings per share <i>(in Korean won)</i>	₩	464

KakaoBank Corp.
Notes to the Financial Statements
December 31, 2021 and 2020

28. Leases

Details of right-of-use assets as of December 31, 2021 and 2020, are as follows:

(in millions of Korean won)

	2021					
	Acquisition cost		Accumulated depreciation		Carrying amount	
Buildings	₩	53,143	₩	(19,913)	₩	33,230
Vehicles		658		(213)		445
	₩	53,801	₩	(20,126)	₩	33,675

(in millions of Korean won)

	2020					
	Acquisition cost		Accumulated depreciation		Carrying amount	
Buildings	₩	24,307	₩	(14,835)	₩	9,472
Vehicles		255		(143)		112
	₩	24,562	₩	(14,978)	₩	9,584

The above right-of-use assets are included in 'property and equipment' in the statements of financial position.

Changes in right-of-use for the years ended December 31, 2021 and 2020, are as follows:

(In millions of Korean won)

	2021					
	Beginning balance	Acquisitions	Depreciation	Disposal	Others¹	Ending balance
Buildings	₩ 9,472	₩ 36,245	₩ (12,529)	₩ -	₩ 42	₩ 33,230
Vehicles	₩ 112	₩ 517	₩ (165)	₩ (19)	₩ -	₩ 445
	₩ 9,584	₩ 36,762	₩ (12,694)	₩ (19)	₩ 42	₩ 33,675

¹Increase due to changes in provision for asset retirement obligation and changes in the discount rate.

KakaoBank Corp.
Notes to the Financial Statements
December 31, 2021 and 2020

(In millions of
Korean won)

	2020									
	Beginning balance		Acquisitions		Depreciation		Others ¹		Ending balance	
Buildings	₩	14,153	₩	2,907	₩	(8,648)	₩	1,060	₩	9,472
Vehicles		175		26		(89)		-		112
	₩	14,328	₩	2,933	₩	(8,737)	₩	1,060	₩	9,584

¹Increase due to changes in provision for asset retirement obligation and changes in the discount rate.

Details of lease liabilities as of December 31, 2021 and 2020, are as follows:

(In millions of Korean won)

	2021		2020	
Buildings	₩	34,625	₩	8,376
Vehicles		449		121
	₩	35,074	₩	8,497

The above lease liabilities are included in 'other liabilities' in the statements of financial position.

Changes in lease liabilities for the years ended December 31, 2021 and 2020, are as follows:

(In millions of
Korean won)

	2021											
	Beginning balance		Increase		Payments		Amortization		Others		Ending balance	
Buildings	₩	8,376	₩	36,374	₩	(10,471)	₩	346	₩	-	₩	34,625
Vehicles		121		518		(177)		8		(21)		449
	₩	8,497	₩	36,892	₩	(10,648)	₩	354	₩	(21)	₩	35,074

(In millions of
Korean won)

	2020											
	Beginning balance		Increase		Payments		Amortization		Others		Ending balance	
Buildings	₩	13,682	₩	2,618	₩	(8,094)	₩	224	₩	(54)	₩	8,376
Vehicles		178		26		(86)		3		-		121
	₩	13,860	₩	2,644	₩	(8,180)	₩	227	₩	(54)	₩	8,497

KakaoBank Corp.
Notes to the Financial Statements
December 31, 2021 and 2020

Details of remaining contractual maturity of lease liabilities as of December 31, 2021 and 2020, are as follows:

<i>(In millions of Korean won)</i>	2021		2020	
Less than 1 month	₩	992	₩	1,073
1~3 months		1,840		1,047
3~6 months		2,589		1,892
6~12 months		5,185		2,640
1~5 years		26,129		1,966
5 years more		-		-
	₩	<u>36,735</u>	₩	<u>8,618</u>

Expense relating to leases of low-value assets amounts to ₩331 million and ₩394 million during years ended December 31, 2021 and 2020, respectively.

Expense relating to short-term leases amounts to ₩477 million and ₩1,586 million during years ended December 31, 2021 and 2020, respectively.

Leases for data center contain variable payments terms that are linked to the white space usage (including computer equipment) in the center. Variable payment terms are used for minimizing costs paid for unused underlying assets. Variable lease payments that depend on usage are recognized in profit or loss in the period in which the condition that triggers those payments occurs.

Expense relating to variable lease payments not included in lease liabilities amounts to ₩806 million and ₩919 million during years ended December 31, 2021 and 2020, respectively. The relative size of variable lease payments against the fixed lease payments is approximately 52.96% and 84.58% during years ended December 31, 2021 and 2020, respectively.

29. Supplemental Cash Flow Information

Significant non-cash transactions for the years ended December 31, 2021 and 2020, are as follows:

<i>(in millions of Korean won)</i>	2021		2020	
Gain (Loss) on valuation of financial assets at fair value through other comprehensive income	₩	(46,369)	₩	8,759
Remeasurements of net defined benefit liability (asset)		(521)		(2,030)
Reclassification from advance payments to property and equipment		-		(2,087)
Reclassification from advance payments to intangible assets		(470)		(2,939)
Written-off of loans		(44,113)		(29,205)
Acquisition of right-of-use assets		38,317		2,933
Recognition of lease liabilities		(521)		(2,030)

KakaoBank Corp.
Notes to the Financial Statements
December 31, 2021 and 2020

Changes in liabilities arising from financial activities for the years ended December 31, 2021 and 2020, are as follows:

	Lease liabilities			
	2021		2020	
<i>(in millions of Korean won)</i>				
Beginning balance	₩	8,497	₩	13,860
Cash flows		(10,648)		(8,180)
Acquisitions		36,892		2,644
Amortization		354		227
Others		(21)		(54)
Ending balance	₩	35,074	₩	8,497

30. Related Party Transactions

Details of related parties are as follows:

Type	2021
Significant influence on the Company	Kakao Corp. Korea Investment Holdings Co., Ltd. Korea Value Asset Management Co.,Ltd.
Other related parties	Korea Investment & Securities Co., Ltd. Korea Investment Savings Bank Kakaopay Corp. Kakaopay securities Corp. DK techin Corp. Kakaospace Corp. Kakao VX Corp. Kakao Enterprise Corp. Kakao Mobility Corp. Kakao Games Corp. Ground X Corp. Kakao Style Corp. Kakao Entertainment Corp.
Others ¹	Wyatt Co., Ltd. Kakao Impact Foundation

¹ Although the entity is not the related party of the Company in accordance with K-IFRS No.1024, the entity belongs to the Large Enterprise Group in accordance with the Monopoly Regulation and Fair Trade Act.

KakaoBank Corp.
Notes to the Financial Statements
December 31, 2021 and 2020

Details of significant receivables and payables arising from related party transactions as of December 31, 2021 and 2020, are as follows:

(in millions of Korean won)

Type	Name of entity	Receivables /Payables	2021		2020	
			₩		₩	
Significant influence on the Company	Kakao Corp.	Other assets ¹	₩	9,020	₩	903
		Lease liabilities ²		2,852		85
		Other liabilities		861		462
Other related parties	Korea Investment & Securities Co., Ltd	Deposits		858		1,028
		Other liabilities		51		39
	Kakaopay Corp.	Other assets		8		53
	Kakaospace Corp.	Other liabilities		60		59
	Kakao Commerce Corp.	Other assets		-		11
	Kakao Mobility Corp.	Other assets		55		-
		Deposits		17		-
	Kakao Enterprise Corp.	Other liabilities		23		19
	Kakao Style Corp.	Deposits		73		-
	Ground X Corp.	Other liabilities		2		-
Key management		Deposits		4,399		486
		Other liabilities		2,180		392

¹ Net carrying amount after deducting present value discount of leasehold deposits

² Initially measured right-of-use assets relating to lease transactions amount to ₩2,965 million and ₩315 million as of December 31, 2021 and 2020, respectively.

KakaoBank Corp.
Notes to the Financial Statements
December 31, 2021 and 2020

Details of profit and loss arising from transactions with related parties for the years ended December 31, 2021 and 2020, are as follows:

(in millions of Korean won)

Type	Name of entity	Profit/loss	2021	2020
		Interest income	₩ 12	₩ 4
		Fee and commission income	64	-
Significant influence on the Company	Kakao Corp.	Interest expenses	46	5
		Fee and commission expenses	4,388	2,654
		Selling and administrative expenses ¹	2,865	1,416
Other related parties		Interest income	65	-
	Korea Investment & Securities Co., Ltd	Fee and commission income	16,500	10,024
		Interest expenses	3	2
		Fee and commission expenses	55	42
	Korea Investment Savings Bank	Fee and commission income	2,857	3,595
		Fee and commission income	8,485	5,047
	Kakaopay Corp.	Selling and administrative expenses	4	-
	DK techn Corp.	Selling and administrative expenses	2,129	1,964
		Fee and commission expenses	767	1,112
	Kakaospace Corp.	Selling and administrative expenses	-	5
	Kakao VX Corp.	Selling and administrative expenses	46	17
		Fee and commission expenses	22	22
	Kakao Commerce Corp. ²	Selling and administrative expenses	56	93

KakaoBank Corp.
Notes to the Financial Statements
December 31, 2021 and 2020

	Kakao Enterprise Corp.	Fee and commission expenses	251	77
	Kakaopay securities Corp.	Interest income	68	-
	Kakao Mobility Corp.	Fee and commission income	9	-
		Fee and commission expenses	165	11
	Kakao Entertainment Corp.	Fee and commission income	45	-
		Selling and administrative expenses	23	-
	Kakao Games Corp.	Fee and commission income	200	-
		Selling and administrative expenses	220	-
	Ground X Corp.	Fee and commission income	121	-
		Fee and commission expenses	15	-
	Kakao Style Corp.	Fee and commission income	119	-
Other	Wyatt Co., Ltd.	Fee and commission income	28	50
	Kakao Impact Foundation	Non-operating expenses	15	-
Key management		Interest expenses	18	7
		Selling and administrative	2	-

¹ Lease payments deducted from lease liabilities amounting to ₩2,719 million and ₩552 million during years ended December 31, 2021 and 2020, respectively are excluded.

² Excluded in the related party list as being merged to Kakao at Sep 1, 2021, and above transactions were made up until the date of merger.

KakaoBank Corp.
Notes to the Financial Statements
December 31, 2021 and 2020

Significant borrowing transactions with related parties for the years ended December 31, 2021 and 2020, are as follows:

(in millions of Korean won)

Type	Name of entity	Details	2021					Ending
			Beginning	Borrowing	Repayments	Others ¹		
Significant influence on the Company	Kakao Corp.	Lease liabilities	₩ 85	₩ 5,440	₩ (2,719)	₩ 46	₩ 2,852	
Key management		Deposits ²	393	4,385	(533)	(12)	4,233	

¹ Others of deposits are effects resulted from changes in non-executive directors and others of lease liabilities are effects from amortization of lease liabilities.

² Transactions from deposits on demand are excluded.

(in millions of Korean won)

Type	Name of entity	Details	2020					Ending
			Beginning	Borrowing	Repayments	Others ¹		
Significant influence on the Company	Kakao Corp.	Lease liabilities	₩ 154	₩ 479	₩ (552)	₩ 4	₩ 85	
Key management		Deposits ²	24	1,470	(1,472)	371	393	

¹ Others of deposits are effects resulted from changes in non-executive directors and others of lease liabilities are effects from amortization of lease liabilities.

² Transactions from deposits on demand are excluded.

Details of transfers in accordance with financing agreements for the years ended December 31, 2021 and 2020, are as follows:

(in millions of Korean won)

Type	Name of entity	Details	2021		2020	
			₩	₩	₩	₩
Significant influence on the Company	Kakao Corp.	Issuance of shares	₩ -	₩ -	₩ -	₩ 167,643
	Korea Investment Holdings Co., Ltd	Issuance of shares	-	-	-	24,667
	Korea Value Asset Management Co.,Ltd.	Issuance of shares	-	-	-	142,976
			₩ -	₩ -	₩ -	₩ 335,286

KakaoBank Corp.
Notes to the Financial Statements
December 31, 2021 and 2020

There are no acceptances and guarantees and unused commitments provided to related parties as of December 31, 2021 and 2020.

There are no collaterals provided to the related parties and provided by the related parties as of December 31, 2021 and 2020.

Details of debt securities transactions through related parties for the years ended December 31, 2021 and 2020, are as follows:

(in millions of Korean won)

Type	Name of entity	Details	2021		2020	
Other related parties	Korea Investment & Securities Co., Ltd	Purchase of debt securities	₩	512,429	₩	272,829
	Kakaopay securities Corp.	Purchase of debt securities		685,816		440,733
		Sale of debt securities		-		30,227

The compensation to key management for the years ended December 31, 2021 and 2020, consists of:

(in millions of Korean won)

	2021		2020	
Salaries and short-term compensation	₩	3,917	₩	1,582
Post-employment benefits		169		111
Share-based payment expenses		15,888		418
	₩	19,974	₩	2,111

Key management consists of the directors (including non-executive directors) of the Company who have the rights and responsibilities over the Company's business planning, managing, and supervision.

KakaoBank Corp.
Notes to the Financial Statements
December 31, 2021 and 2020

31. Regulatory Reserve for Credit Losses

Measurement and Disclosure of Regulatory Reserve for Credit Losses are required in accordance with Articles 29.1 through 29.2 of Regulation on Supervision of Banking Business.

Details of regulatory reserve for credit losses as of December 31, 2021 and 2020, are as follows:

<i>(in millions of Korean won)</i>	<u>2021</u>	<u>2020</u>
Beginning	₩ -	₩ -
Estimated amounts subject to provision	190,301	-
Ending ¹	<u>₩ 190,301</u>	<u>₩ -</u>

¹ The Company did not appropriate reserve for credit losses since the Company had undisposed accumulated deficit as of December 31, 2020.

Details of amount required to reserve for credit losses and adjusted profit after provision of regulatory reserve for credit losses for the years ended December 31, 2021 and 2020, are as follows:

<i>(in millions of Korean won, except per share amounts)</i>	<u>2021</u>	<u>2020</u>
Amount required to reserve for credit losses	₩ 15,122	₩ 52,839
Adjusted profit after provision of regulatory reserve for credit losses	189,002	60,797
Adjusted basic earnings per share after provision of regulatory reserve for credit losses (in Korean won)	433	166
Adjusted diluted earnings per share after provision of regulatory reserve for credit losses (in Korean won)	430	165

Independent Auditors' Report on Internal Control over Financial Reporting
(English Translation of a Report Originally Issued in Korean)

To the Board of Directors and Shareholders of
KakaoBank Corp.

Opinion on Internal Control over Financial Reporting

We have audited KakaoBank Corp.'s (the Company) internal control over financial reporting ("ICFR") as of December 31, 2021 based on the criteria established in the Conceptual Framework for Designing and Operating ICFR ("ICFR Design and Operation Framework") issued by the Operating Committee of Internal Control over Financial Reporting in the Republic of Korea (the "ICFR Committee").

In our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2021, based on ICFR Design and Operation Framework.

We also have audited, in accordance with Korean Standards on Auditing (KSAs), the financial statements of the Company, which comprise the statements of financial position as of December 31, 2021 and 2020, the statements of comprehensive income, changes in equity and cash flows for the years then ended, and notes, comprising significant accounting policies and other explanatory information, and our report dated March 4, 2022 expressed an unmodified opinion on those financial statements.

Basis for Opinion

We conducted our audit in accordance with KSAs. Our responsibilities under those standards are further described in the Auditors' Responsibilities for the Audit of the Internal Control over Financial Reporting section of our report. We are independent of the Company in accordance with the ethical requirements that are relevant to our audit of the internal control over financial reporting in Republic of Korea, and we have fulfilled our other ethical responsibilities in accordance with these requirements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Responsibilities of Management and Those Charged with Governance for the Internal Control over Financial Reporting

The Company's management is responsible for designing, operating and maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying 'Report on the Operations of Internal Control over Financial Reporting.'

Those charged with governance are responsible for overseeing the Company's internal control over financial reporting.

Auditors' Responsibilities for the Audit of the Internal Control over Financial Reporting

Our responsibility is to express an opinion on the Company's internal control over financial reporting based on our audit. We conducted our audit in accordance with KSAs. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects.

Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk.

Definition and Limitations of Internal Control over Financial Reporting

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with Korean International Financial Reporting Standards ("K-IFRS"). A company's internal control over financial reporting 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 company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with K-IFRS, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation 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 auditors' report is Woo-Sung Park.

KPMG Samjong Accounting Corp.

Seoul, Korea

March 4, 2022

This report is effective as of March 4, 2022, 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 internal control over financial reporting. Accordingly, the readers of the audit report should understand that the above audit report has not been updated to reflect the impact of such subsequent events or circumstances, if any.

Report on the Operations of Internal Control over Financial Reporting

To the Shareholders, Board of Directors and Audit Committee of KakaoBank Corp.

We, as the President and the Internal Control over Financial Reporting (“ICFR”) Officer (“IACO”) of KakaoBank Corp. (“the Company”), assessed the status of the design and operation of the Company’s Internal Control over Financial Reporting for the year ended December 31, 2021.

The Company’s management, including ourselves, is responsible for the design and operation of ICFR. We evaluated whether the Company effectively designed and operated its ICFR to prevent and detect errors or frauds which may cause misstatements in the preparation and disclosure of reliable financial statements. We used the ‘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”) as the criteria for design and operation of the Company’s ICFR.

Based on the assessment of the operational status of the ICFR, we concluded that the Company’s ICFR is designed and operated effectively as of December 31, 2021, in all material respects, in accordance with the ‘Conceptual Framework for Designing and Operating Internal Control over Financial Reporting’.

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 statement which might cause material misunderstanding, and we have reviewed and verified this report with sufficient care.

February 16, 2022

Yoon Hyeong, *President*

Lee Chul, *Internal Control over Financial Reporting Officer*