KRAFTON, INC. AND SUBSIDIARIES

Consolidated Financial Statements

December 31, 2022 and 2021

(With Independent Auditors' Report Thereon)

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Independent Auditors' Report

Based on a report originally issued in Korean

To the Board of Directors and Shareholders Krafton, Inc.

Opinion

We have audited the consolidated financial statements of Krafton, Inc. and its subsidiaries (the "Group"), which comprise the consolidated statement of financial position as of December 31, 2022, the consolidated statements of comprehensive income, changes in equity and cash flows for the year then ended, and notes, comprising a summary of significant accounting policies and other explanatory information.

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

Basis for Opinion

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

Key Audit Matter

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

Impairment Testing of Cash-Generating Units (The Unknown Worlds Entertainment, Inc.)

Reasons For the Decision as a Key Audit Matter

The Group performs impairment test for cash-generating units including goodwill every year. Management's significant judgment is involved in measuring the recoverable amount of cash-generating units including goodwill, such as future cash flows, discount rates and growth rates of cash-generating units

As described in Note 14 to the consolidated financial statements, the carrying amounts of goodwill and other intangible assets for the Unknown Worlds Entertainment, Inc. in the Group's consolidated financial statements are KRW 480,286 million and KRW 303,993 million, respectively. The recoverable amount of this cash-generating units varies significantly depending on how management determines the valuation model and unobservable input variables. We determined the impairment testing of cash-generating units of the Unknown Worlds Entertainment, Inc. as a key audit matter considering the uncertainty of these accounting estimates and the significance of cash-generating units of Unknown Worlds Entertainment, Inc.'s carrying amount.

How the Key Audit Matter Was Addressed in the Audit

We performed audit procedures including the followings to address the key audit matter.:

- Understanding of the Group's policies, processes, and internal controls for accounting for impairment of cash-generating units such as goodwill
- Evaluating the qualifications and independence of external experts engaged by the Group
- Testing the internal controls over management's review and approval of future cash flows estimates and evaluations for impairment testing.
- Evaluating the appropriateness of the valuation model used by management to estimate value in use.
- Evaluating the reasonableness of major assumptions such as discount rates and growth rates used by management in estimating value in use.
- Evaluating whether there is bias in the estimate by comparing the cash flows used in the estimate with actual performance and performing a retrospective review.

Other Matters

The consolidated financial statements of the Group for the year ended December 31, 2021, were audited by another auditor who expressed an unmodified opinion on thereon on March 14, 2022.

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

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

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

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

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

Auditors' Responsibilities for the Audit of the Consolidated Financial Statements

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

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

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

that may cast significant doubt on the Group's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditors' report to the related disclosures in the consolidated financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditors' report. However, future events or conditions may cause the Group to cease to continue as a going concern.

- Evaluate the overall presentation, structure and content of the consolidated financial statements, including the disclosures, and whether the consolidated financial statements represent the underlying transactions and events in a manner that achieves fair presentation.
- Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business
 activities within the Group to express an opinion on the consolidated financial statements. We are
 responsible for the direction, supervision and performance of the group audit. We remain solely responsible
 for our audit opinion.

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

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

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

The engagement partner on the audit resulting in this independent auditor's report is Chang-Bum Ahn.

KPMG Samjong Accounting Corp.

Seoul, Korea March 13, 2023

This report is effective as of March 13, 2023, the audit report date. Certain subsequent events or circumstances, which may occur between the audit report date and the time of reading this report, could have a material impact on the accompanying consolidated financial statements and notes thereto. Accordingly, the readers of the audit report should understand that the above audit report has not been updated to reflect the impact of such subsequent events or circumstances, if any.

KRAFTON, Inc. and its Subsidiaries Consolidated Statements of Financial Position As of December 31, 2022 and December 31, 2021

(in thousands of Korean Won)	ousands of Korean Won) Notes		ecember 31, 2022	December 31, 2021		
Assets						
Current assets						
Cash and cash equivalents	5,6	₩	674,689,124	₩ 3,019,311,210		
Current portion of financial assets at fair value through						
profit or loss	5,6,10		2,450,603,157	-		
Trade receivables	4,5,6,7		525,559,384	530,729,987		
Other current financial assets	4,5,6,7,8,13		187,228,498	57,523,863		
Other current assets	7		49,169,338	45,730,971		
Current tax assets			5,356,353	436,551		
			3,892,605,854	3,653,732,582		
Non-current assets						
Investments in associates	12		425,296,870	394,620,013		
Financial assets at fair value			,,			
through profit or loss	5,6,10		142,676,249	84,851,005		
Financial assets at fair value through other comprehensive income						
	5,6,11		83,396,737	109,880,530		
Property and equipment	13		223,076,984	243,749,482		
Intangible assets	14		860,519,983	911,377,596		
Investment properties	15		202,173,260	183,259,225		
Other non-current financial						
assets	5,6,7,8,13		74,102,107	35,782,143		
Other non-current assets	7		28,483,970	4,658,866		
Deferred tax assets	26		96,220,118	95,071,948		
Derivative assets	5,6		1,759,509	844,177		
		\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	2,137,705,787	2,064,094,985		
Total assets		₩	6,030,311,641	₩ 5,717,827,567		

KRAFTON, Inc. and its Subsidiaries

Consolidated Statements of Financial Position (Con'd)

As of December 31, 2022 and December 31, 2021

(in thousands of Korean Won)	Notes	Dec	ember 31, 2022	December 31, 2021
Liabilities				
Current liabilities				
Current long-term borrowings	4,5,6,16	₩	7,000,000	₩ -
Other current financial liabilities	4,5,6,9,13		270,962,535	382,490,328
Other current liabilities	9,22		88,569,014	104,238,483
Current provisions	18		2,902,828	37,529,676
Current tax liabilities			41,750,587	113,929,752
			411,184,964	638,188,239
Non-current liabilities				
Financial liabilities at fair value				
through profit or loss	4,5,6		234,747,389	207,824,890
Net defined benefit liability	17		13,876,873	17,755,435
Provisions	18		13,834,890	12,607,875
Other non-current financial				
liabilities	4,5,6,9,13		181,131,349	159,157,016
Deferred tax liabilities	26		62,686,038	74,049,803
			506,276,539	471,395,019
Total liabilities			917,461,503	1,109,583,258
Equity			_	
Share capital	20		4,908,155	4,896,705
Consolidated capital surplus	20		1,447,758,601	3,839,098,492
Other components of equity	20,21		191,628,447	206,327,037
Consolidated retained earnings			3,467,581,310	557,809,705
Equity attributable to owners of the Parent Company			5,111,876,513	4,608,131,939
Non-controlling Interest			973,625	112,370
Total equity			5,112,850,138	4,608,244,309
Total liabilities and equity		₩	6,030,311,641	₩ 5,717,827,567

KRAFTON, Inc. and its Subsidiaries Consolidated Statements of Comprehensive Income Years Ended December 31, 2022 and 2021

(in thousands of Korean Won)	Notes	Decer	nber 31, 2022	December 31, 2021		
Revenue	22	₩	1,854,016,091	₩	1,885,351,811	
Operating costs	23		1,102,409,521		1,234,743,757	
Operating profit			751,606,570		650,608,054	
Other income	24		282,902,545		156,642,659	
Other expenses	24		341,450,257		49,005,447	
Finance income	25		33,720,934		10,875,420	
Finance costs	25		7,599,150		6,976,300	
Share of net loss of associates and joint ventures			.,000,.00		0,0.0,000	
accounted for using the equity method	12		(35,303,721)		(974,916)	
Profit before income tax			683,876,921		761,169,470	
Income tax expense	26		168,702,206		230,914,305	
Continuing Operations Net Income			515,174,714		530,255,165	
Discontinued Operations Net Income			(15,020,682)		(10,377,542)	
Profit for the year		₩	500,154,032	₩	519,877,623	
			,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	
Other comprehensive income (loss) Items that will not be reclassified to profit or loss Gain (loss) on valuation of financial assets at fair value through other comprehensive income Remeasurements of net defined benefit liability Items that may be subsequently reclassified to profit or loss	17		(45,707,882) 7,247,992		22,657,183 (3,658,675)	
Equity adjustments of investments in associates			1,847,300		436,869	
Exchange differences on translation of foreign operations		14/	73,872,832	14/	(1,658,622)	
Other comprehensive income for the year, net of tax		₩	37,260,242	₩	17,776,755	
Total comprehensive income for the year		₩	537,414,274	₩	537,654,378	
Profit for the year is attributable to:						
Owners of the Parent Company						
Continuing Profit for the year		₩	515,174,715	₩	530,255,201	
Discontinuing Loss for the year			(15,020,682)		(10,377,542)	
Profit for the year attributable to owners of the Parent Comp	anv	₩	500,154,033	₩	519,877,659	
Non-controlling interests	,					
Continuing Loss for the year		₩	(1)	₩	(36)	
Discontinuing Loss for the year		••	(.,	•••	(00)	
Loss for the year attributable to owners of the Non-						
controlling interests		₩	(1)	₩	(36)	
Ç		₩	500,154,032	₩	519,877,623	
Total comprehensive income for the year is attributable to:						
Owners of the Parent Company		₩	537,453,338	₩	537,654,413	
Non-controlling interests			(39,064)		(36)	
		₩	537,414,274	₩	537,654,377	
Earnings per share (in Korean Won)	27					
Basic earnings per share						
Continuing Basic earnings per share		₩	10,986	₩	12,262	
Discontinuing Basic loss per share			(320)		(240)	
Basic earnings per share		₩	10,666	₩	12,022	
Diluted earnings per share						
Continuing Diluted earnings per share		₩	10,893	₩	12,017	
Discontinuing Diluted loss per share			(317)		(236)	
Diluted earnings per share		₩	10,576	₩	11,781	
Zilatoa dariirigo por dilato			10,010		11,701	

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

KRAFTON, Inc. and its Subsidiaries Consolidated Statements of Changes in Equity Years Ended December 31, 2022 and 2021

Equity attributable to owners of the Parent Company														
						Other								
Consolidated Components Consolidated											Non-controlling			
(in thousands of Korean Won)	Sh	are Capital	С	apital surplus		of Equity	R	etained earnings		Subtotal		Interest		Total
Balance at January 1, 2021	₩	4,278,519	₩	1,003,771,195	₩	168,113,934	₩	37,932,046	₩	1,214,095,694	₩		₩	1,214,095,694
Total comprehensive income														
Profit for the year		-		-		-		519,877,658		519,877,658		(36)		519,877,622
Gain on valuation of financial														
assets at fair value through other														
comprehensive income		-		-		22,657,183		-		22,657,183		-		22,657,183
Remeasurements of net defined														
benefit liability		-		-		(3,658,675)		-		(3,658,675)		-		(3,658,675)
in associates		-		-		436,869		-		436,869		-		436,869
Exchange differences on														
translation of foreign operations		-		-		(1,658,622)		-		(1,658,622)		-		(1,658,622)
Transactions with shareholders recogn	nized di	irectly to equit	у											
Paid-in capital increase		562,400		2,771,641,092		-		-		2,772,203,492		-		2,772,203,492
Changes in scope of consolidation		-		-		-		-		-		71,915		71,915
Paid-in capital increase of														
Subsidiaries		-		(43)		-		-		(43)		43		-
Exercise and forfeiture of share														
options		55,786		57,233,631		(56,524,681)		-		764,736		-		764,736
Share-based payment expenses		-		-		15,662,244		-		15,662,244		40,448		15,702,692
Gain on disposal of treasury shares		-		6,452,617		-		-		6,452,617		-		6,452,617
Gift of shares		<u>-</u>		<u>-</u>		61,298,785		<u>-</u>		61,298,785		<u>-</u>		61,298,785
Balance at December 31, 2021	₩	4,896,705	₩	3,839,098,492	₩	206,327,037	₩	557,809,704	₩	4,608,131,938	₩	112,370	₩	4,608,244,308

Equity attributable to owners of the Parent Company														
	Other													
	Consolidated Components Consolidated										Non-controlling			
(in thousands of Korean Won)	Sha	are Capital	C	apital surplus		of Equity	Ret	ained earnings		Subtotal		Interest		Total
Balance at January 1, 2022	₩	4,896,705	₩	3,839,098,492	₩	206,327,037	₩	557,809,704	₩	4,608,131,938	₩	112,370	₩	4,608,244,308
Total comprehensive income														
Profit for the year		-		-		-		500,154,034		500,154,034		(1)		500,154,033
Loss on valuation of financial assets at fair value through other														
comprehensive income		_		_		(45,707,882)		_		(45,707,882)		_		(45,707,882)
Remeasurements of net defined						(10,101,002)				(10,707,002)				(10,707,002)
benefit liability		_		_		7,247,992		_		7,247,992		_		7,247,992
Equity adjustments of investments						, ,				, ,				, ,
in associates		_		_		1,847,300		_		1,847,300		_		1,847,300
Exchange differences on						,- ,				,- ,				,- ,
translation of foreign operations		-		-		73,911,894		-		73,911,894		(39,062)		73,872,832
Transactions with shareholders recog	nized	-		-		-		-		-		-		-
Acquisition of Subsidiaries		-		(28,468,465)		-		-		(28,468,465)		804,916		(27,663,549)
Paid-in capital increase of				(4.4)						444				
Subsidiaries Exercise and forfeiture of share		-		(11)		-		-		(11)		11		-
options		11,450		(3,575,249)		(2,806,340)		_		(6,370,139)		_		(6,370,139)
Share-based payment expenses		- 1,100		(5,570,210)		12,107,231		-		12,107,231		95,391		12,202,622
Gift of shares		-		50,321,406		(61,298,785)		-		(10,977,379)		-		(10,977,379)
Transfer to Capital Reserve				(2,409,617,572)				2,409,617,572						<u> </u>
Balance at December 31, 2022	₩	4,908,155	₩	1,447,758,601	₩	191,628,447	₩	3,467,581,310	₩	5,111,876,513	₩	973,625	₩	5,112,850,138

KRAFTON, Inc. and its Subsidiaries Consolidated Statements of Cash Flows Years Ended December 31, 2022 and 2021

(in thousands of Korean Won)	Note		2022	2021
Cash flows from operating activities				
Cash generated from operations	28	₩	726,268,047	₩ 920,225,495
Interest received			32,121,549	9,828,624
Interest paid			(1,495,945)	(11,764,359)
Dividends received			388,196	570,827
Income taxes paid			(244,579,322)	(204,952,411)
Net cash flows provided by operating			(=::,e:e,e==)	(== :,===, : : :)
activities			512,702,525	713,908,176
Cash flows from investing activities				
Decrease in short-term financial instruments			52,700,774	14,610,000
Collection of short-term loans			14,083,064	71,237
Decrease in long-term financial instruments			45,242	764,790
Collection of long-term loans			694,759	-
Disposal of financial assets at fair value through profit or loss			2 022 420 025	14 700 606
			3,933,438,835	14,708,686
Decrease in deposits			544,461	3,121,132
Collection of lease receivables			4,500,492	1,348,076
Disposal of property and equipment			193,793	785,455
Disposal of intangible assets			6,788,107	12,132,589
Receipt of government subsidies			-	360,000
Decrease in long-term advanced payments			_	222,033
Increase in short-term financial instruments			(42,689,598)	(4,000,000)
Increase in short-term loans			(740,000)	(1,000,000)
Increase in long-term financial instruments			(35,842,445)	(1,926,092)
Increase in long-term loans			(98,335,825)	(521,136)
Acquisition of financial assets at fair value			,	, ,
through profit or loss			(6,500,426,043)	(44,299,585)
Acquisition of financial assets at fair value			,	,
through other comprehensive income			(36,872,105)	(6,132,399)
Increase in deposits			(5,729,728)	(20,598,245)
Termination of lease contract			(129,194)	(480,656)
Acquisition of property and equipment			(26,583,974)	(61,268,951)
Acquisition of intangible assets			(1,972,471)	(3,596,250)
Acquisition of investment properties			(7,116,998)	(106,803,541)
Return of government subsidies			(902,950)	-
Acquisition of investments in associates			(54,595,070)	(378,798,523)
Cash outflow due to business combination			(43,667,488)	(618,663,815)
Increase in long-term advanced payments			(20,337,208)	(213,658)
Increase in derivative assets			(2,067)	-
Decrease in derivative liabilities				(520,159)
Net cash flows used in				
investing activities		₩	(2,862,953,637)	₩ (1,199,699,012)

KRAFTON, Inc. and its Subsidiaries Consolidated Statements of Cash Flows, (Cont'd) Years Ended December 31, 2022 and 2021

(in thousands of Korean Won)	Note 2022		2021		
Cash flows from financing activities					
Increase in leasehold deposits received	₩	5,621,862	₩ 2,545,207		
Increase in short-term borrowings		7,000,000	-		
Increase in paid-in capital		-	2,772,203,492		
Exercise of share options		112,986	764,736		
Increase in non-controlling interests		-	8		
Repayment of short-term borrowings		(400,000)	(445)		
Repayment of current portion of					
long-term borrowings		(135,232)	(1,526,000)		
Repayment of long-term borrowings		(553,617)	-		
Decrease in leasehold deposits received Repayment of financial liabilities at fair value		(4,490,958)	(780,016)		
through profit or loss		(11,642,400)	-		
Repayment of lease liabilities		(51,605,836)	(37,050,016)		
Net cash flows provided by (used in)					
financing activities		(56,093,195)	2,736,156,966		
Net increase(decrease) in cash and cash					
equivalents		(2,406,344,307)	2,250,366,130		
Cash and cash equivalents at the beginning of the year		3,019,311,210	719,846,888		
Effects of exchange rate changes on			, ,		
cash and cash equivalents		61,722,221	49,098,192		
Cash and cash equivalents at the end of		· · ·	· · ·		
the year	₩	674,689,124	₩ 3,019,311,210		

1. General Information

These consolidated financial statements are prepared in accordance with Korean International Financial Reporting Standards ("KIFRS") 1110, Consolidated Financial Statements. Krafton, Inc. (the "Company" or the "Parent Company") consolidates its 30 subsidiaries (collectively referred to as the "Group").

1.1 The Company

The Group was incorporated in the Republic of Korea on March 26, 2007 to engage in software development and related subsidiary businesses. The Group's headquarters is located in 231, Teheran-ro, Gangnam-gu, Seoul. The Company changed its name from Bluehole, Inc. into Krafton, Inc. on November 30, 2018.

The Company has been listed on the KOSPI Market of the Korea Exchange (KRX) since August 10, 2021.

As of December 31, 2022, the Company's share capital amounts to ordinary shares of $\mbox{$W$}$ 4,908 million, through exercise of share options, increases in paid-in capital and 5-for-1 share split effective from May 4, 2021. As of December 31, 2022, the Company's shareholders are as follows:

Number of shares	Percentage of ownership
7,133,651	14.53%
6,641,640	13.53%
3,087,545	6.29%
2,167,418	4.42%
30,051,291	61.23%
49,081,545	100.00%
	7,133,651 6,641,640 3,087,545 2,167,418 30,051,291

1.2 Subsidiaries

Details of the consolidated subsidiaries as of December 31, 2022 and December 31, 2021, are as follows:

		Location	Ownership in by the Com December 31, 2022		Closing month	Main business
						Development and distribution of
Krafton, Inc.	Bluehole Studio, Inc.	Korea	100	100	December	software
	En Masse Entertainment, Inc.	U.S.A.	100	100	December	Distribution of game software
						Development and distribution of
	Rising Wings, Inc.	Korea	100	100	December	mobile game and application
						Development and distribution of
	PUBG Santa Monica, Inc.	U.S.A.	100	100	December	game software
						Development and distribution of
	PUBG Amsterdam B.V.	Netherland	100	100	December	game software
						Development and distribution of
	PUBG Shanghai	China	100	100	December	game
	LCD DTE LTD	0:	400	400		Consulting advisory and
	KP PTE. LTD.	Singapore	100	100	December	investment
	Striking Distance Studios, Inc.	U.S.A.	100	100	December	Development of software
	DUDG IADAN Composition	laman	100	100	Daaamahan	Development and services of
	PUBG JAPAN Corporation	Japan	100	100	December	game
	Striking Distance Studios	Chain	100	100	Docombor	Development of game coffware
	Spain, S.L.	Spain U.S.A	100	100		Development of game software Investment
	KRAFTON Ventures, Inc.	U.S.A U.S.A				
	PUBG Entertainment, Inc. PUBG INDIA PRIVATE	U.S.A	100	100	December	Production of video contents
	LIMITED	India	99.9	99.9	March	Development and distribution of game software
	SDS Interactive Canada Inc.	Canada	100	100		Development of game software
	SDS Interactive Garlada Inc.	Cariaua	100	100	December	Database search, development
	Between Us Co. Ltd. ²	Korea	_	100	December	and sales
	201110011100001121					Development and distribution of
	Dream Motion, Inc.	Korea	100	100	December	software
						Development and distribution of
	Thingsflow Inc.	Korea	89.8	81.5	December	software
						Development and sales of
	Tiptoe Games, Inc.	Korea	100	100	December	software
	Krafton Global GP, LLC	U.S.A	100	100	December	Investment
	Krafton Global, LP	U.S.A	100	100	December	Investment
	Unknown Worlds					
	Entertainment, Inc.	U.S.A	100	100	December	Development of game software
						Development and distribution of
	5minlab Corp. ³	Korea	100	-	December	software
	Neon Giant AB ³	Sweden	72.9	-	December	Development of game software
	KRAFTON MONTREAL	0 1	400			
DUDO O- 1	STUDIO, INC. ³	Canada	100	-	December	Development of game software
PUBG Santa	DUDC Mod Clame LLC	11.5.4	100	100	Doormher	Development and distribution of software
Monica, Inc. KRAFTON	PUBG Mad Glory, LLC	U.S.A.	100	100	December	SUILWAIE
Ventures, Inc.	Krafton Ventures, L.L.C.	U.S.A	100	100	December	Investment
, ontaios, ino.	Tagitori vontaroo, L.L.O.	0.5.71	100	100	December	

			by the Con					
		Location	December 31, 2022	December 31, 2021	Closing month	Main business		
Kooffee Verture	Krafton Ventures Fund, L.P.	U.S.A	99	99	December	Investment		
Krafton Ventures L.L.C. En Masse	, Krafton Ventures Fund, L.P.	U.S.A	1	1	December	Investment		
Entertainment, Inc. PUBG	En Masse Entertainment Texas, Inc. ⁵	U.S.A	100	100	December	Development of game software		
Entertainment,	Indestructible Frying Pan,							
Inc.	LLC	U.S.A	100	100	December	Production of video contents Development and sales of mobile		
Thingsflow Inc. Unknown Worlds	Thingsflow Inc.	Japan	100	100	December	application		
Entertainment,	Unknown Worlds							
Inc.	Entertainment, Ltd (UK)	U.K	100	100	December	Development of game software Development and distribution of		
5minlab Corp.	740Games Inc. 3, 4	Korea	-	-	December	online game		

¹ Means the simple combined share rate of the shares held by the Group and its Subsidiaries.

² During the year ended December 31, 2022, it was dissolved due to merge with Thingsflow Inc. which is the one of the group.

³ During the year ended December 31, 2022, it was included in the consolidation scope due to new investments entered into by the group.

⁴ During the year ended December 31, 2022, it was dissolved due to liquidation.

⁵ During the year ended December 31, 2022, Bonus XP, .Inc. was renamed to En Masse Entertainment Texas, Inc.

1.3 Summarized Financial Information of Subsidiaries

(in thousands of

En Masse Entertainment

PUBG

Inc.

Texas, Inc. 4

Entertainment,

Frying Pan, LLC PUBG INDIA PRIVATE

Indestructible

LIMITED

381,003

196,138

4,485,338

5,776,114

Summarized financial information of subsidiaries as of December 31, 2022 and 2021 and for the years ended December 31, 2022 and 2021, are as follows:

Korean won) **December 31, 2022**¹ Other **Total** Non-Non-Profits from Profits from Comprehe Comprehe Current current Current current **Continuing Discontinue** nsive nsive **Subsidiary Assets Assets** Liabilities Liabilities Revenue Operation d Operation Income Income Bluehole Studio. ₩4,252,582 ₩4,083,745 ₩10,531,061 ₩4,590,251 ₩18,188,319 ₩ (7,007,860) - ₩1,140,842 ₩ (5,867,018) Inc. En Masse Entertainment, 259,268 10,368,222 53,506,353 (20,960)(238,892) (3,435,907) (3,695,759)Inc. Rising Wings, Inc. 5,983,945 45,391,859 5,969,611 11,839,920 1,501,660 2,790,918 4,827,647 1,289,258 **PUBG Santa** 21,343,619 7,917,676 12,954,224 45,532 50,183,273 5,052,029 584,606 5,636,635 Monica, Inc. **PUBG Amsterdam** 16,622,840 4,740,958 10,936,222 20,702 26,507,405 (742,560)65,099 (677,461)B.V. PUBG Shanghai 13,570,456 2,445,846 9,392,744 1,084,790 6,466,198 (5,404,957)2,386 (5,402,571)PUBG Mad Glory, 5,974,428 6,027,814 2,617,778 2,107,827 22,130,838 1,686,214 290,146 1,976,360 LLC KP PTE. LTD. 4,171,237 2,540,131 106,799 633,650 6,131,626 (119,811)6,011,815 Striking Distance 123,116,595 21,704,544 84,170,816 19,592,164 190,904,723 27,305,793 968,727 28,274,520 Studios. Inc. **PUBG JAPAN** 4,938,585 3,099,928 2,997,163 3,440,418 8,611,929 403,900 (102,052)301,848 Corporation Striking Distance Studios Spain, 1,192,730 1,802,264 619,319 840,562 2,606,366 (111,259)9,184 (102,075)S.L. **KRAFTON** 30,934 2,416,830 599,049 (624, 166)14,758 (609,408)Ventures, Inc. Krafton Ventures, 54,783 23,549 237 (2,390)3,718 1,328 L.L.C. Krafton Ventures 792,581 3,775,842 148 2,248,192 2,246,948 109,730 2,356,678 Fund. L.P.

4,066,044

302,261

6,852,539

- (13,372,671)

20,323

(2,791)

(130,305)

(432,427) (13,805,098)

(39,394)

(4,261)

(287,922)

(59,717)

(1,470)

(157,617)

24,455,824

1,095,366

26.344

2,803,941

(in thousands of Korean won)

December 31, 2022¹

Korean won)				Dec	ember 51,	ZUZZ '			
Subsidiary	Current Assets	Non- current Assets	Current Liabilities	Non- current Liabilities	Revenue	Profits from Continuing Operation	Discontinue	Other Comprehe nsive Income	Total Comprehe nsive Income
SDS Interactive Canada Inc.	4,348,100	-	3,531,949	-	3,529,998	216,147	-	(18,475)	197,672
Between Us Co. Ltd. ²	-	-	-	-	798,081	(60,755)	-	-	(60,755)
Dream Motion, Inc.	8,026,537	263,825	629,587	182,928	3,949,159	795,378	-	140,051	935,429
Thingsflow Inc.	2,928,611	2,578,621	11,873,511	2,475,976	9,740,269	(6,031,273)	-	159,200	(5,872,073)
Tiptoe Games, Inc.	46,152	9,442	6,712	4,894	-	(48,057)	-	-	(48,057)
Krafton Global GP, LLC	252,579	-	762	-	-	(1,674)	-	14,092	12,418
Krafton Global, LP	1,632,626	-	762	-	-	(296,281)	-	111,343	(184,938)
Thingsflow Inc.	174,500	-	9,436	-	-	(124,719)	-	(19,280)	(143,999)
Unknown Worlds Entertainment, Inc.	108,113,473	2,677,393	26,366,544	-	47,796,599	19,793,458	-	3,691,645	23,485,103
Unknown Worlds Entertainment, Ltd (UK)	-	-	-	-	-	-	-	-	-
5minlab Corp. ³	20,799,238	3,018,578	2,066,111	2,018,717	1,172,283	(6,114,634)	-	-	(6,114,634)
740Games Inc. 2, 3	7,354	-	-	-	-	(471)	-	-	(471)
Neon Giant AB ³ KRAFTON	2,564,060	1,415,299	630,488	520,435	-	-	-	(144,258)	(144,258)
MONTREAL STUDIO, INC. ³	5,612,264	-	43,397	-	-	(46,032)	-	(28,701)	(74,733)

¹ Intercompany transactions have not been eliminated in the summarized financial information above.

² The financial information shown herein is the financial information included in the consolidated financial statements prior to exclusion from the consolidation scope.

³ During the year ended December 31, 2022, it was included in the consolidation scope due to new investments entered into by the Group.

⁴ During the year ended December 31, 2022, Bonus XP, Inc. was renamed to En Masse Entertainment Texas, Inc.

1.3 Summarized Financial Information of Subsidiaries, (cont'd)

(in thousands of Korean won)	December 31, 2021 ¹								
Subsidiary	Current Assets	Non- current Assets	Current Liabilities	Non- current Liabilities	Revenue	Profits from Continuing Operation	Discontinue	Other Comprehe nsive Income	Total Comprehe nsive Income
Bluehole Studio, Inc. En Masse	₩8,436,551	₩4,897,785	₩26,971,879	₩6,223,638	₩19,724,992	₩ (25,486,435)	-	₩ (1,728,833)	₩ (27,215,268)
En Masse Entertainment, Inc.	483,507	10,368,222	50,252,251	-	(2,473)	(4,281,723)	-	(5,800,078)	(10,081,801)
Rising Wings, Inc.	3,854,327	5,950,067	40,838,157	11,602,042	18,585,468	(24,812,697)	-	(537)	(24,813,234)
PUBG Santa Monica, Inc.	17,624,015	11,106,333	13,800,392	4,323,399	32,920,220	2,900,707	-	1,584,293	4,485,000
PUBG Amsterdam B.V.	20,369,014	3,366,864	12,017,895	1,046,230	24,296,089	6,900,749	-	(76,984)	6,823,765
Red Sahara Studio Inc. ²	27,605	136,141	17,108,518	20,642	24,815	762,233	-	-	762,233
PUBG Shanghai	14,009,723	3,661,846	4,285,052	2,219,651	15,742,019	3,563,027	-	1,614,912	5,177,939
PUBG Mad Glory, LLC	9,592,690	3,502,487	4,248,850	3,510,455	19,796,651	(1,187,609)	-	483,380	(704,229)
KP PTE. LTD.	32,654	591,861	72,661	592,750	-	12,136	-	(7,923)	4,213
Striking Distance Studios, Inc.	31,433,033	14,633,701	6,314,967	19,687,949	76,528,307	636,358	-	2,943,617	3,579,975
PUBG JAPAN Corporation	4,025,107	2,445,604	1,815,435	2,941,666	8,111,904	(1,121,152)	-	(39,313)	(1,160,465)
Striking Distance Studios Spain, S.L.	2,748,058	1,174,821	943,208	1,282,482	2,740,525	(132,407)	-	11,225	(121,182)
KRAFTON Ventures, Inc.	41,293	2,416,830	-	-	-	(9,261)	-	598,165	588,904
Krafton Ventures, L.L.C.	53,219	23,549	-	-	-	(2,821)	-	14,785	11,964
Krafton Ventures Fund, L.P. En Masse	1,197,520	1,014,077	-	-	-	(18,965)	-	365,650	346,685
Entertainment Texas, Inc. ⁴	4,669,912	2,638,477	16,040,253	1,298,967	964,681	-	(8,568,319)	(804,833)	(9,373,152)
PUBG Entertainment,	948	-	860,783	-	-	(532,403)	-	(88,937)	(621,340)
Inc. Indestructible Frying Pan, LLC	-	-	22,082	-	-	(3,004)	-	(3,336)	(6,340)
PUBG INDIA PRIVATE	2,925,385	72,627	807,584	-	2,923,982	(808,565)	-	96,803	(711,762)

LIMITED

(in thousands of Korean won)

December 31, 2021¹

(Norcall Woll)				DCC	ciliber or,	2021			
Subsidiary	Current Assets	Non- current Assets	Current Liabilities	Non- current Liabilities	Revenue	Profits from Continuing Operation	Discontinue	Other Comprehe nsive Income	Total Comprehe nsive Income
SDS Interactive Canada Inc. ³	534,376	-	485,797	-	534,376	48,580	-	-	48,580
Between Us Co. Ltd. ³	1,601,978	2,367,963	1,074,159	99,811	1,525,837	(7,796,281)	-	-	(7,796,281)
Dream Motion, Inc. ³	7,952,114	420,958	1,683,563	309,034	4,776,066	859,845	-	39,575	899,420
Thingsflow Inc. 3	5,631,325	832,082	10,446,055	1,753,778	2,631,610	(1,035,050)	-	(93,044)	(1,128,094)
Tiptoe Games, Inc. ³	90,488	12,069	3,078	7,433	-	(7,954)	-	-	(7,954)
Krafton Global GP, LLC ³	-	-	-	-	-	-	-	-	-
Krafton Global, LP ³	1,576,787	-	1,675,186	-	-	(94,989)	-	(6,819)	(101,808)
Thingsflow Inc. ³ Unknown Worlds	309,062	-	-	-	-	(10)	-	(17,538)	(17,548)
Entertainment, Inc. ³	111,137,576	261,850	32,248,786	19,750,173	6,361,014	2,967,719	-	(537,642)	2,430,077
Unknown Worlds Entertainment, Ltd (UK) ³	-	-	-	-	-	-	-	-	-

¹ Intercompany transactions have not been eliminated in the summarized financial information above.

² The amounts are based on the financial information included in the consolidated financial statements before the exclusion from the scope of consolidation.

³ During the year ended December 31, 2021, it was included in the consolidation scope due to new investments entered into by the Group.

⁴ During the year ended December 31, 2022, Bonus XP, Inc. was renamed to En Masse Entertainment Texas, Inc.

1.4 Changes in Scope for Consolidation

Subsidiaries newly included or excluded in the consolidation scope for the years ended December 31, 2022 and 2021, are as follows:

	December 31, 2022				
	Subsidiary	Reason			
Included	5minlab Corp.	Purchased			
	740Games Inc.	Purchased			
	Neon Giant AB	Purchased			
	KRAFTON MONTREAL STUDIO, INC.	Newly established			
Excluded	Between Us Co. Ltd.	Merge			
	740Games Inc.	Liquidation			

	December 31, 2021				
	Subsidiary	Reason			
Included	Between Us Co. Ltd.	Newly established			
	SDS Interactive Canada Inc.	Newly established			
	Tiptoe Games, Inc.	Newly established			
	Krafton Global GP, LLC	Newly established			
	Krafton Global, LP	Newly established			
	Dream Motion, Inc.	Purchased			
	Thingsflow Inc. (Domestic)	Purchased			
	Thingsflow Inc. (Japan)	Purchased			
	Unknown Worlds Entertainment, Inc.	Purchased			
	Unknown Worlds Entertainment, Ltd (UK)	Purchased			
Excluded	Red Sahara Studio Inc.	Bankruptcy declaration			

2. Significant Accounting Policies

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

2.1 Basis of Preparation

The Group maintains its accounting records in Korean won and prepares statutory consolidated financial statements in the Korean language (Hangul) in accordance with KIFRS. The accompanying consolidated financial statements have been condensed, restructured and translated into English from the Korean language consolidated financial statements. In the event of any differences in interpreting the consolidated financial statements or the independent auditor's report thereon, Korean version, which is used for regulatory reporting purposes, shall prevail.

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

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

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

- · Certain financial assets and liabilities (including derivative instruments), certain classes of property, plant and equipment and investment properties measured at fair value
- · Assets held for sale measured at fair value less costs to sell, and
- Defined benefit pension plans plan assets measured at fair value.

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

2.2 Changes in Accounting Policy and Disclosures

2.2.1 New and amended standards and interpretations adopted by the Group

The Group has applied the following standards and interpretations for the first time for their annual reporting period commencing January 1, 2022.

2.2 Changes in Accounting Policy and Disclosures, (cont'd)

(a) Amendment to KIFRS 1116 Leases - Covid-19 - Related Rent Concessions provided after June 30, 2021

The application of the practical expedient, in which 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, is extended to lease payments originally due on or before June 30, 2022. A lessee shall apply the practical expedient consistently to eligible contracts with similar characteristics and in similar circumstances. The amendment does not have a significant impact on the consolidated financial statements.

(b) Amendments to KIFRS 1103 Business Combinations – Reference to the Conceptual Framework

The amendments were updated so that it refers to the amended conceptual framework for financial reporting for assets and liabilities recognized upon business combination. However, the amendments add an exception for the recognition of liabilities and contingent liabilities within the scope of KIFRS 1037 *Provisions, Contingent Liabilities and Contingent Assets*, and KIFRS 2121 *Levies*. The amendments also confirm that contingent assets should not be recognized at the acquisition date. The amendment does not have a significant impact on the consolidated financial statements.

(c) Amendments to KIFRS 1016 Property, Plant and Equipment - Proceeds before intended use

The amendments prohibit an entity from deducting from the cost of an item of property, plant and equipment any proceeds from selling items produced while the entity is preparing the asset for its intended use. Instead, the entity will recognize the proceeds from selling such items, and the costs of producing those items, in profit or loss. The amendment does not have a significant impact on the consolidated financial statements.

(d) Amendments to KIFRS 1037 Provisions, Contingent Liabilities and Contingent Assets - Onerous Contracts: Cost of Fulfilling a Contract

The amendments clarify that the cost of fulfilling a contract comprises the costs that relate directly to the contract, and that costs that relate directly to a contract consist of both the incremental costs of fulfilling that contract and an allocation of other costs that relate directly to fulfilling contracts. The amendment does not have a significant impact on the consolidated financial statements.

(e) Annual improvements to KIFRS 2018-2020

Annual improvements of KIFRS 2018-2020 Cycle should be applied for annual periods beginning on or after January 1, 2022, and earlier application is permitted. The amendment does not have a significant impact on the consolidated financial statements.

- KIFRS 1101 First time Adoption of Korean International Financial Reporting Standards Subsidiaries that are first-time adopters
- KIFRS 1109 Financial Instruments Fees related to the 10% test for derecognition of

2.2 Changes in Accounting Policy and Disclosures, (cont'd)

financial liabilities

• KIFRS 1041 Agriculture – Measuring fair value

2.2.2 New standards and interpretations not yet adopted by the Group

The new and amended standards and interpretations that are issued, but not yet effective, up to the date of issuance of the Group's consolidated financial statements are disclosed below. The Group intends to adopt these new and amended standards and interpretations, if applicable, when they become effective.

(a) Amendments to KIFRS 1001 Presentation of Financial Statements - Classification of Liabilities as Current or Non-current

The amendments clarify that liabilities are classified as either current or non-current, depending on the substantive rights that exist at the end of the reporting period. Classification is unaffected by the likelihood that an entity will exercise right to defer settlement of the liability or the expectations of management. Also, the settlement of liability includes the transfer of the entity's own equity instruments, however, it would be excluded if an option to settle them by the entity's own equity instruments if compound financial instruments is met the definition of equity instruments and recognized separately from the liability. The amendments should be applied for annual periods beginning on or after January 1, 2024, and earlier application is permitted. The Group is assessing the impact of these amendments on the consolidated financial statements.

(b) KIFRS 1001 Presentation of Financial Statements - Disclosure of Accounting Policies

The amendments to *KIFRS* 1001 define and require entities to disclose their material accounting policies. The amendments should be applied for annual periods beginning on or after January 1, 2023, and earlier application is permitted. The Group is assessing the impact of these amendments on the consolidated financial statements.

(c) KIFRS 1008 Accounting policies, changes in accounting estimates and errors - Definition of Accounting Estimates

The amendments define accounting estimates and clarify how to distinguish them from changes in accounting policies. The amendments should be applied for annual periods beginning on or after January 1, 2023, and earlier application is permitted. The Group does not expect these amendments to have a significant impact on the consolidated financial statements.

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

The amendments include an additional condition to the exemption to initial recognition of an asset or liability that a transaction does not give rise to equal taxable and deductible temporary differences at the time of the transaction. The amendments should be applied for annual periods.

2.2 Changes in Accounting Policy and Disclosures, (cont'd)

beginning on or after January 1, 2023, and earlier application is permitted. The Group does not expect these amendments to have a significant impact on the consolidated financial statements

(e) New Standard: KIFRS 1117 Insurance Contract

KIFRS 1117 Insurance Contracts replaces KIFRS 1104 Insurance Contracts. This Standard estimates future cash flows of an insurance contract and measures insurance liabilities using discount rates applied with assumptions and risks at the measurement date. The entity recognizes insurance revenue on an accrual basis including services (insurance coverage) provided to the policyholder by each annual period. In addition, investment components (Refunds due to termination/maturity) repaid to a policyholder even if an insured event does not occur, are excluded from insurance revenue, and insurance financial income or expense and the investment income or expense are presented separately to enable users of the information to understand the sources of income or expenses. This Standard should be applied for annual periods beginning on or after January 1, 2023, and earlier application is permitted for entities that applied KIFRS 1109 Financial Instruments. The Group does not expect these amendments to have a significant impact on the consolidated financial statements.

Under the revisions to the standards, companies applying KIFRS 1117 for the first time can apply optional classification adjustments ('overlay') to comparative periods. Such classification adjustments can be applied to all financial assets, including those without a connection to contracts within the scope of KIFRS 1117. Companies applying classification adjustments to financial assets should present comparative information as if they had applied the classification and measurement requirements of KIFRS 1109 to those assets, and such classification adjustments can be applied on an item-by-item basis.

(f) New Standard: KIFRS 1001 'Presentation of Financial Statements' – Disclosure of gains and losses on financial liabilities with exercise price adjustment conditions

For financial instruments, all or part of which are classified as financial liabilities which have conditions that adjust the exercise price depending on the issuer's share price, the standard requires the disclosure of the carrying amount of those financial liabilities and the related gains and losses. The amendment is effective for annual periods beginning on or after January 1, 2023, and earlier application is permitted. The Group does not expect these amendments to have a significant impact on the consolidated financial statements.

2.3 Consolidation

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

(a) Subsidiaries

2.3 Consolidation, (cont'd)

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

Subsidiaries are fully consolidated from the date on which control is transferred to the Group. They are deconsolidated from the date that control ceases.

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

The excess of consideration transferred, amount of any non-controlling interest in the acquired entity and acquisition-date fair value of any previous equity interest in the acquired entity over the fair value of the net identifiable assets acquired is recoded as goodwill. If those amounts are less than the fair value of the net identifiable assets of the business acquired, the difference is recognized directly in the profit or loss as a bargain purchase.

Intercompany transactions, balances and unrealized gains on transactions between group companies are eliminated. Unrealized losses are also eliminated unless the transaction provides evidence of an impairment of the transferred asset. Accounting policies of subsidiaries have been changed where necessary to ensure consistency with the policies adopted by the Group.

(b) Associates

Associates are entities over which the Group has significant influence but not control or joint control. Investments in associates are accounted for using the equity method of accounting, after initially being recognized at cost. Unrealized gains on transactions between the Group and its associates are eliminated to the extent of the Group's interest in the associates. If there is an objective evidence of impairment for the investment in the associate, the Group recognizes the difference between the recoverable amount of the associate and its book value as impairment loss.

(c) Joint arrangements

A joint arrangement, wherein two or more parties have joint control, is classified as either a joint operation or a joint venture. A joint operator recognizes its direct right to the assets, liabilities, revenues and expenses of joint operations and its share of any jointly held or incurred assets, liabilities, revenues and expenses. Interests in joint ventures are accounted for using the equity method, after initially being recognized at cost in the consolidated statement of financial position.

2.4 Foreign Currency Translation

(a) Functional and presentation currency

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

(b) Transactions and balances

Foreign currency transactions are translated into the functional currency using the exchange rates at the dates of the transactions. Foreign exchange gains and losses resulting from the settlement of such transactions and from the translation of monetary assets and liabilities denominated in foreign currencies at year end exchange rates are generally recognized in profit or loss.

Foreign exchange gains and losses that relate to cash and cash equivalents, long and short-term financial instruments, loans, borrowings and others are presented in the statement of profit or loss, within finance income and finance expenses. All other foreign exchange gains and losses are presented in the statement of profit or loss within other income or other expenses.

Non-monetary items that are measured at fair value in a foreign currency are translated using the exchange rates at the date when the fair value was determined. Translation differences on assets and liabilities carried at fair value are reported as part of the fair value gain or loss. Translation differences on non-monetary assets and liabilities such as available-for-sale equities are recognized in other comprehensive income for fair value gain or loss.

The functional currency of all the foreign operations are different from the presentation currency of the Group. Assets and liabilities of each foreign operation's statement of financial position presented are translated at the closing rate at the end of the reporting date, and income and expenses for each statement of comprehensive income are translated at average exchange rates.

Exchange differences arising from the translation of the net investment in foreign operations are recognized in other comprehensive income and presented as a separate component of equity. When a foreign operation is partially disposed of or sold, the exchange differences that were recorded in equity are recognized in the statement of profit or loss.

(c) Translation of financial statements of overseas subsidiaries

Items on the statements of financial position are translated at the closing rate at the end of the reporting period, except historical exchange rate applied to equity accounts. Items on the statements of comprehensive are translated at average exchange rates. All resulting exchange differences are recognized in other comprehensive income and allocated to equity attributable to owners of the parent and non-controlling interests. Differences allocated to equity attributable to owners of the parent are presented on the consolidated statements of financial position as other component of equity (exchange differences).

2.4 Foreign Currency Translation, (cont'd)

(d) Presentation of Integrated Foreign Exchange Differences

In accordance with Paragraph 29 of KIFRS 1001, The Group presents foreign exchange differences, including those recognized in other gains or losses and foreign currency translation differences, as integrated foreign exchange gains or losses.

2.5 Cash and Cash Equivalents

Cash and cash equivalents include cash on hand, demand deposits, and short-term highly liquid investments that are readily convertible to a known amount of cash and are subject to an insignificant risk of change in value.

2.6 Revenue Recognition

(a) Identification of performance obligation

The Group engages in game publishing business which it provides a right to access the game, and updating, planning, developing and maintaining services of game to customers. A publishing contract with a customer is identified as a single performance obligation since the benefits from the sales of game is significantly restricted without updating services. On the other hand, virtual item sales through online and mobile games are classified as a single performance obligation.

In addition, the Group recognizes royalty revenue by providing a license of the Group's intellectual property (IP) to publishing companies. The Group determines to recognize as a single performance obligation for providing updates and technical support services for incidental to the game service.

(b) A performance obligation is satisfied over time

Game revenue consists of (i) revenue from providing a right to access games and (ii) revenue from sales of game items, and is deferred and recognized over the expected period of use, since the Group is required to provide games with updates during the period.

In addition, the group recognizes royalty revenue from providing a license for the Group's IP. According to KIFRS 1115, royalty revenue from providing a right to access the entity's IP is recognized over the license period. However, the Group recognizes revenue for a sales-based or usage-based royalty promised in exchange for a license of intellectual property when the subsequent sale or usage occurs.

(c) Costs incurred to fulfill a contract

Costs to fulfill a contract are capitalized only if (i) the costs relate directly to the contract or to an anticipated contract that the Group can specifically identify; (ii) the costs generate or enhance resources of the Group that will be used in satisfying (or in continuing to satisfy) performance obligations in the future; and (iii) the costs are expected to be recovered. The capitalized costs are recognized as contract costs over service providing period under reasonable method.

2.6 Revenue Recognition, (cont'd)

(d) Contract assets and contract liabilities

A contract asset is the Group's right to receive consideration for goods or services transferred to a customer, and a contract liability is defined as the Group's obligation to transfer goods or services to the customer in proportion to the consideration received by the Group (or due consideration). The Group offsets the contract assets and contract liabilities arising from one contract and presents them in the consolidated statement of financial position in net terms.

2.7 Financial Assets

(a) Classification

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

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

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

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

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

(b) Measurement

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

2.7 Financial Assets, (cont'd)

A. Debt instruments

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

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

B. Equity instruments

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

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

2.7 Financial Assets, (cont'd)

(c) Impairment

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

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

(d) Recognition and derecognition

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

If a transfer does not result in derecognition because the Group has retained substantially all the risks and rewards of ownership of the transferred asset, the Group continues to recognize the transferred asset in its entirety and recognizes a financial liability for the consideration received. The Group classified the financial liability as "borrowings" in the consolidated statement of financial position.

(e) Offsetting

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

2.8 Derivative Instruments

Derivatives are initially recognized at fair value on the date when a derivative contract is entered into and are subsequently remeasured at their fair value at the end of each reporting period. Changes in the fair value of any derivative instrument that does not qualify for hedge accounting are recognized immediately in profit or loss within 'other income (expenses)' based on the nature of transactions.

2.9 Trade Receivables

Trade receivables are recognized initially at the amount of consideration that is unconditional, unless they contain significant financing components when they are recognized at fair value. Trade receivables are subsequently measured at amortized cost using the effective interest method, less loss allowance.

2.10 Property and Equipment

Property and equipment are stated at historical cost less accumulated depreciation. Historical cost includes expenditure that is directly attributable to the acquisition of the items. The estimated costs of dismantling and removing an asset and restoring the site on which it is located are also included in the historical cost.

Depreciation of all property and equipment 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
Fixtures	3 - 7 years
Facilities	5 - 7 years

The assets' depreciation method, residual values and useful lives are reviewed, and adjusted if appropriate, at the end of each reporting period.

2.11 Government Grants

Grants from the government are recognized at their fair value where there is a reasonable assurance that the grant will be received and the Group will comply with all attached conditions. Government grants related to assets are presented in the statement of financial position by deducting the grant in arriving at the carrying amount of the asset, and government grants related to income are deferred and later deducted from the related expense.

2.12 Intangible Assets

Intangible assets are initially recognized at its historical cost and carried at cost less accumulated amortization and accumulated impairment losses.

Software development costs that are internally generated are recognized as intangible assets when the criteria; such as, technically feasible, generate probable future economic benefits and other, are met. Customer contracts acquired in a business combination are recognized at fair value at the acquisition date. Membership rights that have an indefinite useful life are not subject to amortization because there is no foreseeable limit to the period over which the assets are expected to be utilized. The Group amortizes intangible assets with a limited useful life using the straight-line method over the following periods.

Estimated useful lives

Industrial property rights Software Membership rights Other intangible assets Goodwill 5 - 10 years 2 - 5 years The Period of membership 2 - 11 years Indefinite

2.12 Intangible Assets, (cont'd)

Goodwill arising from the business combination is measured as the excess of the acquisition cost over the identifiable assets required, the liabilities assumed and contingent liabilities in the fair value of the asset acquired and the liabilities assumed. Goodwill is initially recognized at acquisition cost and carried at cost less accumulated impairment losses.

2.13 Investment Properties

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

2.14 Impairment of Non-financial Assets

Goodwill and intangible assets that have an indefinite useful life are not subject to amortization and are tested annually for impairment, or more frequently if events or changes in circumstances indicate that they might be impaired. 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. Non-financial assets other than goodwill that suffered an impairment are reviewed for possible reversal of the impairment at the end of each reporting period.

2.15 Financial Liabilities

(a) Classification and measurement

The Group classifies non-derivative financial liabilities, except for financial liabilities at fair value through profit or loss, financial guarantee contracts and financial liabilities that arise when a transfer of financial assets does not qualify for derecognition, as financial liabilities carried at amortized cost and present as 'trade payables', 'borrowings', and 'other financial liabilities' in the statement of financial position. Interest expenses recognized from financial liabilities are recognized in the statement of profit or loss as 'finance costs'.

Financial liabilities are classified at fair value through profit or loss when the financial liability is contingent consideration that may be paid by an acquirer as a part of a business combination, or held for trading, or it is designated at fair value through profit or loss upon initial recognition.

2.15 Financial Liabilities, (cont'd)

The Group may, at initial recognition, irrevocably designate a financial liability as a financial liability measured at fair value through profit or loss in the following cases:

- Such designation eliminates or significantly reduces a measurement or recognition inconsistency that would otherwise arise;
- The financial liability forms part of a group of financial assets or financial liabilities or both, which is managed and its performance is evaluated on a fair value basis, in accordance with the Group's documented risk management or investment strategy, and information about the group is provided internally on that basis; or
- It forms part of a contract containing one or more embedded derivatives, and KIFRS 1109 Financial Instruments: Recognition and Measurement permits the entire hybrid contract to be designated at fair value through profit or loss.

Financial liabilities at fair value through profit or loss are stated at fair value, with any valuation gain or loss arising from changes in fair value, excluding the portion designated as hedge relationships, recognized in profit or loss. Interest expenses paid for the financial liabilities at fair value through profit or loss are recognized as 'gain or loss on financial liabilities at fair value through profit or loss' included in the 'other income and expenses'.

However, for financial liabilities designated as financial liabilities measured at fair value through profit or loss, the amount of the change in the liability's fair value attributable to changes in its credit risk is recognized in other comprehensive income, unless this treatment of the credit risk component creates or enlarges a measurement mismatch. Other changes in the liability's fair value is recognized in profit or loss. The amount recognized as other comprehensive income is not subsequently reclassified to profit or loss, but rather transferred to retained earnings when financial liabilities are derecognized.

(b) Derecognition

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

2.16 Employee Benefits

(a) Post-employment benefits

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

For defined contribution plans, the Group pays contribution to publicly or privately administered pension insurance plans on mandatory, contractual or voluntary basis. The contribution is recognized as employee benefit expense when they are due.

A defined benefit plan is a pension plan that is not a defined contribution plan. While the Group operates a defined contribution as its primary post-employment benefit plan, the Group pays additional amounts to the employees if each employee's investment results on the contributed amount is less than the payment amount under defined benefit plan, according to the separate agreement with the employees. The Group measures the additional amount payable to the employees in the same manner as the Group measures defined benefit obligation. Generally, postemployment 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 consolidated statement of financial position in respect of defined benefit pension plans is the present value of the defined benefit obligation at the end of the reporting period less the fair value of plan assets. The defined benefit obligation is calculated annually by independent actuaries using the projected unit credit method. The present value of the defined benefit obligation is determined by discounting the estimated future cash outflows using interest rates of high-quality corporate bonds 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 defined benefit obligation resulting from plan amendments or curtailments are recognized immediately in profit or loss as past service costs.

(b) Other long-term employee benefits

Certain entities within the Group provide long-term employee benefits that are entitled to employees with long-term service. The expected costs of these benefits are accrued over the period of employment using the same accounting methodology as used for defined benefit pension plans. The Group recognizes service cost, net interest on other long-term employee benefits and remeasurements as profit or loss for the year. These liabilities are valued annually by an independent qualified actuary.

In addition, the Group entered into an agreement to pay performance-based incentives in proportion to the sales performance to the executives and employees, including the key developers, who can contribute to the Group's long-term growth. Performance-based incentives are estimated using actuarial valuation method.

(c) Share-based payments

Equity-settled share-based payment is recognized at fair value of equity instruments granted, and

2.16 Employee Benefits, (cont'd)

employee benefit expense is recognized over the vesting period. At the end of each period, the Group revises its estimates of the number of options that are expected to vest based on the non-market vesting and service conditions. It recognizes the impact of the revision to original estimates, if any, in profit or loss, with a corresponding adjustment to equity.

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

The Group operates a cash-settled share-based payment and a share-based payment with cash alternatives to compensate the difference between the market price and the exercise price of stock options in return for services provided by employees. The total amount to be recognized as an expense during the vesting period is determined based on the fair value of the share options granted taking into account the terms of service. In addition, the fair value of the liability is remeasured at the end of each reporting period and settlement date until the liability is settled, and changes in fair value are recognized in profit or loss.

2.17 Provisions

Provisions are measured at the present value of management's best estimate of the expenditure required to settle the present obligation at the end of the reporting period, and the increase in the provision due to the passage of time is recognized as interest expense.

2.18 Dividends

Dividends declared are recognized as liabilities at a point in time when approved by the institution prescribed by the Commercial Law.

2.19 Current and Deferred Tax

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 income tax expense is measured at the amount expected to be paid to the taxation authorities, using the tax rates (and tax laws) that have been enacted or substantively enacted as of the end of the reporting period. Management periodically evaluates positions taken in tax returns with respect to situations in which applicable tax regulation is subject to interpretation, and considers whether it is probable that a taxation authority will accept an uncertain tax treatment. The Group measures its tax balances either based on the most likely amount or the expected value, depending on which method provides a better prediction of the resolution of the uncertainty.

2.19 Current and Deferred Tax, (cont'd)

The Group applies the consolidated tax return, where the Parent Company and all domestic subsidiaries on which the Parent Company completely controls over, as a single taxation unit, report and pay income tax based on the total amount of income arising from the entities. The Group evaluates realizability of the temporary differences considering future taxable income of each companies that consist the taxation unit. The changes in deferred tax assets (liabilities) are recognized in income tax expenses (benefits) after excluding the amounts related to accounts directly reflected in equity.

Deferred tax is provided in full, using the liability method, on temporary differences arising between the tax bases of assets and liabilities and their carrying amounts in the financial statements. However, deferred tax is not accounted for if it arises from initial recognition of an asset or liability in a transaction other than a business combination that at the time of the transaction affects neither accounting profit 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 temporary differences and losses.

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

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 Group has a legally enforceable right to offset and intends either to settle on a net basis.

2.20 Leases

(a) Lessor

Lease income from operating leases where the Group is a lessor is recognized in income on a straight-line basis over the lease term. Initial direct costs incurred in obtaining an operating lease are added to the carrying amount of the underlying asset and recognized as an expense over the lease term on the same basis as the lease income. The respective leased assets are included in the consolidated statement of financial position based on their nature.

(b) Lessee

The Group has entered into various lease agreements including leases of offices. Lease contracts are typically entered into for fixed periods of 4 to 6 years, but may have extension options as described in (c) below.

2.20 Leases, (cont'd)

Contracts may contain both lease and non-lease components. The Group allocates the consideration in the contract to the lease and non-lease components based on their relative standalone prices. However, for leases of real estate for which the Group is lessee, the Group applies the practical expedient which has elected not to separate lease and non-lease components and instead accounts for these as a single lease component.

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

The Group determines the lease term as the non-cancellable period of a lease, together with both (a) periods covered by an option to extend the lease if the lessee is reasonably certain to exercise that option; and (b) periods covered by an option to terminate the lease if the lessee is reasonably certain not to exercise that option. When the lessee and the lessor each has the right to terminate the lease without permission from the other party, the Group should consider a termination penalty in determining the period for which the contract is enforceable.

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

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

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

2.20 Leases, (cont'd)

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

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

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

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

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

(c) Extension and termination options

Extension and termination options are included in several property and equipment leases across the Group. These terms are used to maximize operational flexibility in terms of managing contracts. The majority of extension and termination options held are exercisable only by the Group and not by the respective lessor.

2.21 Segment Reporting

Information of each operating segment is reported in a manner consistent with the internal business segment reporting provided to the chief operating decision-maker. The chief operating decision-maker, who is responsible for allocating resources and assessing performance of the operating segments, has been identified as the Management Committee that makes strategic decisions.

2.22 Earnings Per Share

The Group presents in the consolidated statement of comprehensive income basic and diluted earnings per share attributable to the ordinary shareholders of the Group. Basic earnings per share is calculated by dividing profit or loss attributable to ordinary shareholders of the Group by the weighted average number of ordinary shares outstanding during the period. For the purpose of calculating diluted earnings per share, the Group adjusts profit or loss attributable to ordinary shareholders of the Group, and the weighted average number of shares outstanding, for the effects of all dilutive potential ordinary shares.

2.23 Share Capital

When the Group purchases its ordinary shares, the acquisition cost including direct transaction costs are deducted from equity until the redemption or reissuance of treasury shares.

Consideration received on the subsequent or issue of treasury shares is credited to equity.

2.24 Business Combination

Acquisitions of businesses are accounted for using the acquisition method. The consideration transferred in a business combination is measured at fair value, which is calculated as the sum of the acquisition-date fair values of the assets transferred by the Group, liabilities incurred by the Group to the former owners of the acquiree and the equity interests issued by the Group in exchange for control of the acquiree. Acquisition-related costs are generally recognized in profit or loss as incurred.

At the acquisition date, the identifiable assets acquired and the liabilities assumed are recognized at their fair value at the acquisition date, except that:

- Deferred tax assets or liabilities and liabilities or assets related to employee benefit arrangements are recognized and measured in accordance with KIFRS 1012 *Income Taxes* and KIFRS 1019 *Employee Benefits*, respectively;
- Liabilities or equity instruments related to share-based payment arrangements of the acquiree or share-based payment arrangements of the Group entered in to replace share-based payment arrangements of the acquiree are measured in accordance with KIFRS 1102 *Share-based Payment* at the acquisition date; and
- Assets that are classified as held for sale in accordance with KIFRS 1105 *Non-current Assets Held for Sale and Discontinued Operations* are measured in accordance with that Standard.

Goodwill is measured as the excess of the sum of the fair value of the consideration transferred over the net of the acquisition-date amounts of the identifiable assets acquired and the liabilities assumed. If, after reassessment, the net of the acquisition-date amounts of the identifiable assets acquired and liabilities assumed exceeds the sum of fair value of the consideration transferred, the excess is recognized immediately in profit or loss as a bargain purchase gain.

2.25 Business Combination under Common Control

The Group applies the book value method to account for business combinations of entities under common control. Identifiable assets acquired and liabilities assumed in a business combination are measured at their book values as measured on the consolidated financial statements of the ultimate parent company. However in the case where no financial statements are prepared, the assets and liabilities of the acquiree are measured at book value. In addition, the difference between the sum of consolidated book values of the assets and liabilities transferred and accumulated other comprehensive income; and the consideration paid is recognized as capital surplus.

2.26 Discontinued Operations

The Group classifies business units that have already been disposed or being up for sale and fall under one of the following as discontinued operation.

- Separated major business segments or operating regions
- The part of a single plan to dispose of separated major business segments or operating regions
- The Subsidiaries acquired solely for sale

If there are discontinued operations, the Group restarts the financial statement as if the operation were discontinued from the beginning of the comparative period presented in the total comprehensive income statement.

2.27 Approval of Issuance of the Financial Statements

The consolidated financial statements for the year ended December 31, 2022 were approved for issuance by the Board of Directors of the Company on February 7, 2023 and final approval will be obtained from the shareholders at their Annual General Meeting on March 28, 2023.

3. Critical Accounting Estimates and Assumptions

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

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

(a) Revenue recognition

Game revenue consists of (i) revenue from sales of a right to access games and (ii) revenue from sales of items, and is deferred and recognized over the respective expected period of use. The Group estimates the expected period of use by analyzing customer's behavior pattern considering the attributes of the item and game, and it can be changed significantly according to changes of market and customer behavior pattern.

3. Critical Accounting Estimates and Assumptions, (cont'd)

(b) Fair value of financial instruments

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

(c) Impairment of financial assets

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

(d) Goodwill

Goodwill is tested for impairment on an annual basis. The recoverable amount of a cash generating unit (CGU) is determined based on value-in-use calculations (Note 14).

(e) Net defined benefit liability

The present value of net defined benefit liability depends on several factors that are determined on an actuarial basis using a number of assumptions including the discount rate.

(f) Income taxes

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

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

(g) Leases

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

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

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

4. Financial Risk Management

4.1 Financial Risk Factors

(a) The Group is exposed to market risk, credit risk and liquidity risk (market risk refers to foreign exchange risk, interest rate risk and market risk for equity securities). The Group establishes and operates financial risk management policy in place to actively manage these risk factors. The Group's financial assets that are under financial risk management are composed of cash and cash equivalents, trade receivables, other financial instruments at amortized cost, financial instruments at fair value through other comprehensive income and financial instruments at fair value through profit or loss. The Group's financial liabilities under financial risk management are composed of trade and other payables, and borrowings.

(b) Market risk

A. Foreign exchange risk

The Group is exposed to foreign exchange risk arising from international operations and transactions with different foreign currencies. Most widely used foreign currencies are the US Dollar, Euro, Japanese Yen and others. The risks of foreign currency exposure to receivables and payables are periodically evaluated, managed and reported.

Monetary financial assets and liabilities denominated in foreign currency as of December 31, 2022 and 2021, are summarized as follows:

(in thousands of Korean won)	December 31, 2022							
	USD		EUR		JPY		Others	
Financial assets denominated in foreign currency Financial liabilities	₩ 797,025,003	₩	5,431,320	₩	1,915,311	₩	14,132,404	
denominated in foreign currency	46,156,073		372,978		49,565		3,145,590	
(in thousands of Korean won)	won) December 31, 2021							
	USD		EUR		JPY		Others	
Financial assets denominated in foreign currency Financial liabilities	₩ 1,097,780,132	₩	2,810,642	₩	1,871,151	₩	14,968,364	
denominated in foreign currency	54,829,142		4,146,170		204,882		5,713,729	

4. Financial Risk Management, (cont'd)

The table below summarizes the impact of weakened/strengthened Korean won on the Group's profit before income tax. The analysis is based on the assumption that Korean won has weakened/strengthened by 5% with all other variables held constant.

(in thousands of Korean won)	December 31, 2022					
	Strengthened Weakened					
Assets denominated in foreign currency	₩ (40,925,202) ₩ 40,925,202					
Liabilities denominated in foreign currency	2,486,210 (2,486,210)					
Net effect	₩ (38,438,992) ₩ 38,438,992					
(in thousands of Korean won)	December 31, 2021					
	Strengthened Weakened					
Assets denominated in foreign currency	₩ (55,871,514) ₩ 55,871,514					
Liabilities denominated in foreign currency	3,244,696 (3,244,696)					
Net effect	₩ (52,626,818) ₩ 52,626,818					

B. Interest rate risk

The Group implements certain measures including monitoring interest rate trends periodically and others in order to manage the uncertainties arising from changes in interest rate. There are no financial assets and liabilities exposed to interest rate risk as of December 31, 2022.

C. Price risk

The effects on the consolidated statement of comprehensive income when price per share of listed share fluctuates by approximately 1% as of December 31, 2022 and 2021, are as follows:

(in thousands of Korean won)	Dec	ember 31, 2022	De	cember 31, 2021
Changes in other comprehensive income when price per share of listed shares fluctuates by approximately 1% (after deduction of tax effects)	₩	346,965	₩	724,071

(c) Credit risk

Credit risk arises in connection with the normal course of transactions and investing activities, where clients or other parties fail to discharge an obligation.

4. Financial Risk Management, (cont'd)

Credit risk also arises from cash and cash equivalents, savings and derivative instruments transactions with financial institutions. To mitigate or eliminate certain of those exposures, the

Group transacts only with highly rated financial institutions. The maximum amount exposed to credit risks by each financial instrument is its book value.

A. Trade receivables

The Group applies the simplified approach to measure the loss allowance at an amount equal to lifetime expected credit losses for trade receivables. To measure the expected credit losses, trade receivables have been grouped based on shared credit risk characteristics and the days past due. The expected credit losses include forward looking information. The loss allowance provision as of December 31, 2022, is determined as follows:

(in	thousands of
K	orean won)

Korean won)			December 31, 2022									
	Less than 90 days past due and within due	_	ess than days past due	_	ess than days past due	_	ess than year past due	-	More than year past due		npaired ceivables	Total
Expected loss rate	0.49%		44.98%		100.00%		100.00%		98.95%		100.00%	
Gross carrying amount	₩ 527,934,471	₩	377,252	₩	127,144	₩	521,688	₩	1,781,569	₩	259	₩ 530,742,383
Loss allowance provision	(2,569,115)		(169,698)		(127,144)		(521,688)		(1,762,894)		(259)	(5,150,798)

The amounts recognized in profit or loss within 'impairment loss' in relation to the impairment of trade receivables for the years ended December 31, 2022 and 2021, are as follows:

(in thousands of Korean won)	December 31, 2022			December 31, 2021		
Operating costs	₩	3,271,519	₩	961,724		

B. Other financial assets at amortized cost

All of other financial assets at amortized costs other than trade receivables are considered to be low credit risk when they have a low risk of default and the issuer has a strong capacity to meet its contractual cash flow obligations in the near term, and thus the loss allowance provision recognized was limited to 12 months expected losses during the year. However, when a significant increase in credit risk is identified, the loss allowance provision for lifetime expected credit losses should be recognized.

4. Financial Risk Management, (cont'd)

The amounts recognized in profit or loss in relation to the impairment of other financial assets at amortized costs for the years ended December 31, 2022 and 2021, are as follows:

(in thousands of Korean won)	Decem	ber 31, 2022	December 31, 2021		
Other Expenses(Incomes)	₩	(10,742)	₩	(292,189)	

(d) Liquidity risk

The ultimate responsibility for our liquidity risk management lies with the Board of Directors, which establishes basic policies to properly manage short-term and mid to long-term funding and liquidity management regulations. The Group maintains liquidity risk by maintaining sufficient reserves and borrowing limits, by continually monitoring forecast cash flows and actual cash flows, and by matching the maturity structure of financial assets and financial liabilities.

The table below summarizes the details of the Group's financial liabilities classified into relevant maturity groupings based on the remaining period as of December 31, 2022 and 2021, to the contractual maturity date:

(in thousands of			Decembe	er 31, 2022		
Korean won)		Contractual	Less than	Between		
	Book value	cash flows	1 year	1 and 5 years	Over 5 years	Total
Borrowings	₩ 7,000,000	₩ 7,000,000	₩ 7,000,000	₩ -	₩ -	₩ 7,000,000
Account payable	35,101	35,101	35,101	-	-	35,101
Other payables	94,012,394	94,022,842	93,841,299	181,543	-	94,022,842
Accrued expenses	154,048,273	154,048,273	119,874,076	34,126,174	48,023	154,048,273
Lease liabilities	196,823,999	213,859,555	65,167,789	148,179,459	512,307	213,859,555
Leasehold deposits received	7,174,118	8,162,580	776,711	7,211,196	174,673	8,162,580
Financial liabilities at fair value through profit or loss	234,747,389	317,500,045	-	291,319,724	26,180,321	317,500,045
	₩ 693,841,274	₩ 794,628,396	₩ 286,694,976	₩ 481,018,096	₩ 26,915,324	₩ 794,628,396

(in thousands of	December 31, 2021					
Korean won)	Book value	Contractual cash flows	Less than 1 year	Between 1 and 5 years	Over 5 years	Total
Account payable	₩ 795	₩ 795	₩ 795	₩ -	₩ - +	₩ 795
Other payables	82,865,927	82,927,189	62,192,192	20,734,997	-	82,927,189
Accrued expenses	278,925,255	278,925,255	261,621,889	17,303,366	-	278,925,255

(in thousands of			December 31	, 2021		
Korean won)	Book value	Contractual cash flows	Less than 1 year	Between 1 and 5 years	Over 5 years	Total
Lease liabilities	173,203,471	186,540,291	55,080,045	127,230,410	4,229,836	186,540,291
Leasehold deposits received	6,651,895	7,060,079	4,500,958	2,364,983	194,138	7,060,079
Financial liabilities at fair	207 024 000	202 220 007		202 200 007		202 220 007
value through profit or loss	207,824,890	303,220,907	-	303,220,907	-	303,220,907
	₩ 749,472,233	₩ 858,674,516	₩ 383,395,879	₩ 470,854,663	₩ 4,423,974	₩ 858,674,516

4.2 Capital Risk Management

The Group's objectives when managing capital are to safeguard the Group's ability to continue as a going concern. The Group considers the debt ratio, and it is calculated by dividing the Group's total liabilities by its total equity presented in the consolidated financial statements.

Debt-to-equity ratios as of December 31, 2022 and 2021, are as follows:

(in thousands of Korean won)	December 31, 2022	December 31, 2021
Debt (A)	₩ 917,461,503	₩ 1,109,583,259
Equity (B)	5,112,850,138	4,608,244,309
Debt-to-equity ratio (A/B)	17.94%	24.08%

5. Fair Value Measurement

(a) The carrying amount and fair value of financial assets and liabilities as of December 31, 2022 and December 31, 2021, are as follows:

(in thousands of Korean won)	December	r 31, 2022	December 31, 2021			
	Carrying amount	Fair value	Carrying amount	Fair value		
Financial assets measured at fair	· value					
Current portion of financial assets at fair value through profit or loss	₩ 2,450,603,157	₩ 2,450,603,157	₩ -	₩ -		
Financial assets at fair value through profit or loss	142,676,249	142,676,249	84,851,005	84,851,005		
Financial assets at fair value through other comprehensive income	83,396,737	83,396,737	109,880,530	109,880,530		
Derivative assets	1,759,509	1,759,509	844,177	844,177		
Financial assets measured at am	ortized cost					
Cash and cash equivalents	674,689,124	674,689,124	3,019,311,210	3,019,311,210		
Trade receivables	525,559,384	525,559,384	530,729,987	530,729,987		
Other current financial assets	175,183,486	175,183,486	54,186,910	54,186,910		
Other non-current financial assets	40,288,565	40,288,565	30,795,939	30,795,939		
Other financial assets						
Current lease receivables	12,045,012	12,045,012	3,336,953	3,336,953		
Non-current lease receivables	33,813,542	33,813,542	4,986,204	4,986,204		
	₩ 4,140,014,765	₩ 4,140,014,765	₩ 3,838,922,915	₩ 3,838,922,915		
(in thousands of Korean won)	Decembe	r 31, 2022	Decembe	er 31, 2021		
	Carrying amount	Fair value	Carrying amount	Fair value		
Financial liabilities measured at f	air valuo					
Financial liabilities at fair value through profit or loss	₩ 234,747,389	₩ 234,747,389	₩ 207,824,890	₩ 207,824,890		
Financial liabilities measured at a	mortized cost					
Current portion of long-term borrowings	7,000,000	7,000,000	-	-		
Other current financial liabilities ¹	213,889,685	213,889,685	327,984,126	327,984,126		
Other non-current financial liabilities ²	41,380,200	41,380,200	40,459,747	40,459,747		
Other financial liabilities						
0		57,072,850	54,506,202	54,506,202		
Current lease liabilities	57,072,850	31,012,030	,,	, ,		
Non-current lease liabilities	57,072,850 139,751,149	139,751,149	118,697,269	118,697,269		

¹ The amount includes liabilities related to employee compensation and share-based payment of ₩81,434,321 thousand (December 31, 2021: ₩199,900,517 thousand).

5. Fair Value Measurement, (cont'd)

(b) Fair value measurement of assets and liabilities measured at fair value

A. Fair value hierarchy and fair value measurement

The fair value is defined as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants. The fair value measurement is to estimate the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date under current market conditions. When measuring fair value using valuation techniques, the Group maximizes the use of market information and minimizes the use of unobservable inputs.

The Group categorize asset and liabilities measured at fair value by fair value hierarchy levels, and defined levels are as follows:

- Level 1: Unadjusted quoted prices in active markets for identical assets or liabilities accessible at the measurement date
- Level 2: Inputs other than quoted prices included within Level 1 that are directly or indirectly observable for the asset or liability
- Level 3: Unobservable inputs for the asset or liability

The fair value of financial instruments traded in active markets is based on quoted prices at the end of reporting period. It is regarded as an active market if quoted prices are readily and regularly available from exchange markets, dealers, brokers, industry groups, pricing services, or regulatory agencies, and those prices represent actual and regularly occurring market transactions on an arm's length basis. The quoted price used for financial assets held by the Group is the closing price as of the end of reporting period. These instruments are categorized in 'Level 1'. Instruments included in 'Level 1' are classified as financial assets at fair value through other comprehensive income.

The fair value of financial instruments that are not traded in an active market is determined by using valuation techniques. The fair value of assets and liabilities is determined by using an internal valuation model developed by the Group or by an independent external pricing service. The Group uses discounted cash flow techniques and establishes an assumption based on the market condition as of the end of the reporting period. These valuation techniques maximize the use of observable market data where it is available and rely as little as possible on entity specific estimates. If all significant inputs required to fair value an instrument are observable, the instrument is included in 'Level 2'.

If one or more of the significant inputs is not based on observable market data, the instrument is included in 'Level 3'. Assets and liabilities included in 'Level 3' use cost-based approach, Net asset valuation model, binomial model.

5. Fair Value Measurement, (cont'd)

B. Financial assets and liabilities measured at fair value

Fair value hierarchy classifications of the financial assets and liabilities that are measured at fair value as of December 31, 2022 and 2021, are as follows:

	December 31, 2022									
(in thousands of Korean won)		Level 1		Level 2		Level 3		Total		
Financial assets measured at	fair va	alue								
Financial assets at fair value through profit or loss	₩	-	₩	2,450,603,157	₩	142,676,249	₩	2,593,279,406		
Financial assets at fair value through other comprehensive income		47,857,220		-		35,539,517		83,396,737		
Derivative assets		-		-		1,759,509		1,759,509		
Financial liabilities measured	at faiı	value								
Financial liabilities at fair value through profit or loss	₩	-	₩	-	₩	234,747,389	₩	234,747,389		
	December 31, 2021									
(in thousands of Korean won)		Level 1		Level 2		Level 3		Total		
Financial assets measured at	fair va	alue								
Financial assets at fair value through profit or loss	₩	-	₩	-	₩	84,851,005	₩	84,851,005		
Financial assets at fair value through other comprehensive income		99,871,898		-		10,008,632		109,880,530		
Derivative assets		-		-		844,177		844,177		
Financial liabilities measured	at faiı	· value								
Financial liabilities at fair value through profit or loss	₩	-	₩	-	₩	207,824,890	₩	207,824,890		

5. Fair Value Measurement, (cont'd)

Valuation techniques and inputs used in the fair value measurements categorized within Level 2 and Level 3 of the fair value hierarchy as of December 31, 2022 and 2021, are as follows:

(in thousands of	Fair v	alue		Valuation techniques	_
Korean won)	December 31, 2022	December 31, 2021	Level	December 31, December 2022 31, 2021	
	₩ 2,450,603,157	₩ -	2	Discounted - cash flow	Discount rate considering credit rating
Financial assets at	90,666,601	54,311,033	3	Net asset valuation mode	Fair value of the investee's assets
fair value through profit or loss	3,808,972	5,364,494	3	Binomial model(T-F)	Annualized variability of stock prices(54.10%) and others
	48,200,676	25,175,478	3	Cost-based approach1	Acquisition cost
Financial assets at fair value through other comprehensive income	35,539,517	10,008,632	3	Cost-based approach ¹	Acquisition cost
Derivative assets	1,759,509	844,177	3	Binomial model (T-F) -	Annualized variability of stock prices(56.41%~63.38%) and others
Financial liabilities at fair value through profit or loss	234,747,389	207,824,890	3	Discounted cash flow ²	Estimated revenue of the investee company, discount rate considering credit rating(5.89%~16.05%) and others

¹ For financial assets at fair value through profit or loss held by the Group, the costs are deemed the best estimate of the fair value, since (i) the Group cannot obtain sufficient information for measuring fair value; and (ii) there are no significant changes in the value of investee during the past or the current year.

C. Valuation processes for fair value measurements categorized as Level 2 and Level 3

Each finance department of the Group's segments is responsible for fair value measurements, which include fair value measurements categorized as Level 2 and Level 3, for the purpose of financial reporting. The department periodically reports the fair value valuation process and its outcome on reporting schedule at the end of each reporting period.

Sensitivity analysis of financial instruments is performed to measure the favorable and unfavorable changes in the fair value of financial instruments which are affected by the unobservable parameters, using a statistical technique. When the fair value is affected by more than two input parameters, the calculation is based on the most favorable or most unfavorable amount.

² The discounted cash flow method was applied to evaluate only the cash flows included in the contract terms.

5. Fair Value Measurement, (cont'd)

The results of the sensitivity analysis for the effect on profit or loss from changes in inputs for each financial instrument classified as Level 3 for the years ended December 31, 2022 and 2021, are as follows:

(in thousands of Korean won)

Decem	ber	31,	2022
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,											
		Favorable	cha	anges		Unfavorable changes					
	Pro	fit (loss)		Equity	Р	rofit (loss)		Equity			
Financial assets at fair value through profit or loss	₩	240,187	₩	-	₩	(190,486)	₩	-			
Derivative assets		151,911		-		(150,797)		-			
Financial liabilities at fair value through profit or loss		5,872,212		1,397,227		(6,099,896)		(1,480,241)			

^(*) Sensitivity analysis for derivatives related to equity instruments were performed by increasing and decreasing the correlation between the stock price and the variability by 10%.

(in thousands of Korean won)

December 31, 2021

WOII)	Describer 01, 2021											
	Favorable changes					Unfavorable changes						
	Pro	fit (loss)		Equity		Pı	ofit (loss)		Equity			
Financial assets at fair value through profit or loss	₩	459,161	₩		-	₩	(414,881)	₩		-		
Derivative assets		145,440			-		(160,041)			-		
Financial liabilities at fair value through profit or loss		7,092,918			-		(7,329,674)			-		

^(*) Sensitivity analysis for derivatives related to equity instruments were performed by increasing and decreasing correlation between the stock price and the variability by 10%.

The changes in Level 3 classified assets and liabilities measured at fair value during the year ended December 31, 2022 are as follows

(in thousands of Korean won)		Beginning Balance	Acquisition	Disposal	Valuation	Exchange rate differences	Business Combi -nations	Ending Balance
Financial assets at fair value through profit or loss	₩	84,851,005 ₩	39,412,029 ₩	(2,467,590) ₩	20,816,916 ₩	63,889 ₩	- W	142,676,249
Financial assets at fair value through other comprehensive		10,008,632	24,872,104	-	664,944	(6,163)	-	35,539,517

(in thousands of Korean won)	Beginning Balance	Acquisition	Disposal	Valuation	Exchange rate differences	Business Combi -nations	Ending Balance
Derivative assets	844,177	1,701,185	-	(785,814)	(39)	-	1,759,509
Financial liabilities at fair value through profit or loss	207,824,890	-	-	(4,444,646)	-	31,367,145	234,747,389

(c) Offsetting financial assets and financial liabilities

The Group recognizes both trade receivables from and payables to platform providers, which satisfy the criteria for offsetting described in KIFRS 1032 paragraph 42. Therefore, the trade receivables are presented in net basis in the consolidated financial statements of the Group. Trade payables which are offset with trade receivables amount to $\mbox{$W$}$ 23,718 million (December 31, 2021: $\mbox{$W$}$ 14,301 million) as of December 31, 2022.

6. Financial Instruments by Category

6.1 Carrying Amounts of Financial Instruments by Category

Carrying amounts of financial assets and liabilities by category as of December 31, 2022 and 2021, are as follows:

(in thousands of Korean won)		December 31, 2022	December 31, 2021			
Financial assets						
Financial assets at fair value: Current financial assets at fair value through profit or loss	₩	2,450,603,157	₩	-		
Financial assets at fair value through profit or loss		142,676,249		84,851,005		
Financial assets at fair value through other comprehensive income		83,396,737		109,880,530		
Derivative assets		1,759,509		844,177		
Financial assets at amortized cost:						
Cash and cash equivalents		674,689,124		3,019,311,210		
Trade receivables		525,559,384		530,729,987		
Other current financial assets		175,183,486		54,186,910		
Other non-current financial assets		40,288,565		30,795,939		
Other financial assets:						
Current lease receivables		12,045,012		3,336,953		
Non-current lease receivables		33,813,542		4,986,204		
	₩	4,140,014,765	₩	3,838,922,915		
(in thousands of Korean won)		December 31, 2022	D	ecember 31, 2021		
Financial liabilities						
Financial liabilities at fair value: Financial liabilities at fair value through profit or loss	₩	234,747,389	₩	207,824,890		
Financial liabilities at amortized cost:						
Short-term borrowings		7,000,000		-		
Other current financial liabilities		213,889,685		327,984,126		
Other non-current financial liabilities		41,380,200		40,459,747		
Other financial liabilities:		-		-		
Current lease liabilities		57,072,850		54,506,202		
Non-current lease liabilities		139,751,149		118,697,269		
	₩	693,841,273	₩	749,472,234		
Fair value of financial instruments is ed	1 4	41		£		

Fair value of financial instruments is equal to the carrying amounts, except for equity instruments that do not have a quoted price in an active market and whose fair value cannot be measured reliably.

6.2 Net Gains or Losses by Category of Financial Instruments

Net gains or losses on each category of financial instruments for the years ended December 31, 2022 and 2021, are as follows:

(in thousands of Korean won)	Dece	mber 31, 2022	December 31, 2021		
Dividend income:					
Financial assets at fair value through profit or loss	₩	349,946	₩	229,827	
Interest income/expenses: 1					
Financial assets at amortized cost		32,849,846		10,704,497	
Financial liabilities at amortized cost		(472,104)		(375,480)	
Other financial assets		871,749		170,941	
Other financial liabilities		(6,982,937)		(6,450,493)	
Gain on disposal:					
Financial assets at amortized costs		12,566		19,655	
Financial assets at fair value through profit or loss		(47,252,211)		891,732	
Current derivative liabilities		-		253,841	
Financial liabilities at fair value through profit or loss		(3,166,305)		(555,013)	
Gain (loss) on valuation:					
Financial assets at fair value through profit or loss		(10,242,090)		20,971,111	
Financial assets at fair value through other comprehensive income		(45,707,882)		22,657,183	
Financial liabilities at fair value through profit or loss		2,399,315		(1,795,706)	
Derivative assets		(785,814)		(234,972)	
Net impairment loss:					
Trade receivables		(3,271,519)		(961,724)	
Financial assets at amortized cost		10,742		292,189	
Net gain (loss) on foreign currency translation					
Trade receivables		46,244,865		58,432,911	
Financial assets at amortized costs		94,369,357		50,023,441	
Financial liabilities at amortized costs		(856,422)		(3,993,950)	
	₩	58,371,102	₩	150,279,990	
4		41 34444		. /222/	

¹ Includes net gains or losses classified as discontinued operations ₩44,101 thousand (2021: ₩6,560 thousand) during the year ended December 31, 2022.

7. Trade Receivables, Other Financial Assets and Other Assets

Details of trade receivables, other financial assets and other assets as of December 31, 2022 and 2021, are as follows:

(in thousands of December 3	31, 2022 December 31, 2021
Korean won) Provision	n for
Gross amount impairme	nent Net amount Net amount
Trade receivables ₩ 530,710,182 ₩ (5,150 Other current financial assets	0,798) ₩ 525,559,384 ₩ 530,729,987
Short-term financial 52,085,285 instruments	- 52,085,285 32,200,958
Short-term loans 84,404,081 (22	2,000) 84,382,081 -
Other receivables 32,087,073 (689)	9,989) 31,397,084 16,019,476
Accrued income 1,228,727	- 1,228,727 498,681
Deposits 6,090,309	- 6,090,309 5,467,795
Lease receivables 12,045,012	- 12,045,012 3,336,953
187,940,487 (711	1,989) 187,228,498 57,523,863
Other current assets	
Advanced payments 11,715,938	- 11,715,938 7,886,073
Prepaid expenses 36,531,054	- 36,531,054 37,250,958
Others 922,346	- 922,346 593,940
49,169,338	- 49,169,338 45,730,971
237,109,825 (711	1,989) 236,397,836 103,254,834
Other non-current financial assets	
Long-term trade 32,201 receivables	- 32,201 -
Long-term loans 982,375	- 982,375 982,626
Long-term accrued 121,333 income	- 121,333 -
Long-term financial 7,869,061 instruments	- 7,869,061 2,085,635
Deposits 31,283,596	- 31,283,596 27,727,678
Lease receivables 33,813,541	- 33,813,541 4,986,204
74,102,107	- 74,102,107 35,782,143
Other non-current assets	
Advanced payments 28,483,970	- 28,483,970 4,658,866
102,586,077	- 102,586,077 40,441,009
₩ 870,406,084 ₩ (5,862	2,787) ₩ 864,543,297 ₩ 674,425,830
(in thousands of December 3	31, 2022 December 31, 2021
Korean won) Provision	
Gross amount impairme	nent Net amount Net amount
· · ·	2,787) ₩ 859,901,833 ₩ 670,287,469
Related party 4,641,464 receivables	- 4,641,464 4,138,361
₩ 870,406,084 ₩ (5,862	2,787) W 864,543,297 W 674,425,830

7. Trade Receivables, Other Financial Assets and Other Assets, (cont'd)

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

(in thousands of				D	ece	mber 31, 202	2			
Korean won)							С	hanges in		
		Provision						scope of		
	В	Beginning	(1	reversal)		Write-off	СО	nsolidation		Ending
Trade receivables	₩	1,937,792	₩	3,271,519	₩	(58,771)	₩	257	₩	5,150,797
Other assets (current)										
Financial assets:										
Short-term loan		-		-		-		22,000		22,000
Other receivables		1,159,957		1,073		(471,041)		-		689,989
Accrued income Other assets (non- current)		1,341,081		57,216		(1,398,297)		-		-
Financial assets:										
Long-term loans		15,220,000		(69,031)		(15,150,969)		-		_
	₩	19,658,830	₩	3,260,777	₩	(17,079,078)	₩	22,257	₩	5,862,786
(in thousands of				п)ece	mber 31, 202	1			
Korean won)	-			_	-			hanges in		
			Р	rovision			scope of			
	В	Seginning	(1	reversal)		Write-off		consolidation		Ending
Trade receivables	₩	1,074,448	₩	961,724	₩	(128,651)	₩	30,271	₩	1,937,792
Other assets (current)										
Financial assets:										
Short-term loan		9,500		-		(9,500)		-		-
Other receivables		923,136		3,240		(223,075)		456,656		1,159,957
Accrued income		323,713		-		(323,713)		1,341,081		1,341,081
Other assets (non-										
current)										
Financial assets:										
Long-term loans		6,200,000		(298,290)		(5,901,710)		15,220,000		15,220,000
Other long-term financial assets		-		2,861		(2,861)		-		-
	₩	8,530,797	₩	669,535	₩	(6,589,510)	₩	17,048,008	₩	19,658,830

As of December 31, 2022, fair values of trade receivables, other current assets and other noncurrent assets are equal to their book value. The maximum exposure of trade and other receivables to credit risk is the book value of receivables mentioned above.

8. Restricted Financial Instruments

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

(in thousands of Korean won)	of		December 31, 2022		cember 31, 2021	Restriction	
Short-term financial instruments	Korean Securities and Financial Services INDUSTRIAL BANK OF KOREA	₩	30,000,000	₩	-	Provided as collateral ¹ Provided as collateral ²	
	Woori Bank		-		4,490,958	Provided as collateral ³	
Long-term financial instruments	Shinhan Bank Woori Bank Woori Bank		1,787,649 5,578,034 100,000		1,787,649 - -	Provided as collateral ³ Provided as collateral ³ Provided as collateral ²	
		₩	37,665,683	₩	6,278,607		

¹ Pledged as a collateral for ESOP Loans (Note 19).

² Pledged as a collateral for company credit card limit (Note 19).

³ Pledged as a collateral for leasehold deposits received (Note 19).

9. Other Liabilities

Details of other liabilities as of December 31, 2022 and 2021, are as follows:

(in thousands of Korean won)	Dece	ember 31, 2022	December 31, 2021
Other liabilities (current)			
Financial liabilities:			
Account payables	₩	35,101	₩ 795
Other payables		93,830,850	62,165,698
Accrued expenses ¹		119,874,076	261,591,282
Lease liabilities		57,072,850	54,506,202
Current portion of leasehold deposits received		149,658	4,226,351
		270,962,535	382,490,328
Contract liabilities and other liabilities:			
Withholdings		9,238,922	12,080,334
Unearned revenue		74,815,028	89,569,327
Advance receipts		3,702,505	1,795,621
Others		812,559	793,201
		88,569,014	104,238,483
Other liabilities (non-current)			
Financial liabilities:			
Long-term other payables		181,543	20,700,229
Long-term accrued expenses ²		34,174,197	17,333,974
Leasehold deposits received		7,024,460	2,425,544
Lease liabilities		139,751,149	118,697,269
		181,131,349	159,157,016
	₩	540,662,898	₩ 645,885,827

 $^{^1}$ Includes liabilities related to employee benefit and share-based payment amounting to $\mbox{$W$}$ 81,434,321 thousand (December 31, 2021: $\mbox{$W$}$ 199,900,517 thousand).

 $^{^2}$ Includes liabilities related to employee benefit and share-based payment amounting to orall 33,502,392 thousand (December 31, 2021:: orall 16,157,962 thousand).

10. Financial Assets at Fair Value through Profit or Loss

Details of financial assets at fair value through profit or loss as of December 31, 2022 and 2021, are as follows:

(in thousands of	December 31, 2022									
Korean won)	Acquicition	Accumulated								
	Acquisition cost	gain (loss) on valuation	Book value	Current	Non-current					
Beneficiary certificates:										
BITKRAFT Esports										
Ventures Fund I, LP	₩ 1,159,002	₩ (16,783)		-	₩ 1,142,219					
MAKERS FUND LP ESDF INTERNATIONAL	2,979,747	23,621,595	26,601,342	-	26,601,342					
HOLDINGS LLC. LAGUNA Young	513,328	(513,328)	-	-	-					
Entrepreneur Fund No. 1 KNET VALUE-UP Venture	1,500,000	(630)	1,499,370	-	1,499,370					
Investment	4,878,224	10,148,443	15,026,667	-	15,026,667					
KJ& The 1st Game Fund	1,000,000	-	1,000,000	-	1,000,000					
Kowloon Nights Fund LP	5,207,527	2,036,459	7,243,986	-	7,243,986					
Lumikai Fund I	1,547,283	67,022	1,614,305	-	1,614,305					
Progression Fund I, L.P.	512,756	41,688	554,444	-	554,444					
WindWalk Games Corp.	895,125	-	895,125	-	895,125					
NPTK Emerging Asia Fund										
1 Private Equity Fund	1,111,200	-	1,111,200	-	1,111,200					
Hashed Venture Fund 1	2,000,000	-	2,000,000	-	2,000,000					
Makers Fund II LP Future Innovation Private Equity Joint Venture	1,727,053	2,069,541	3,796,594	-	3,796,594					
Company 3 Impact Collective Korea	18,106,400	1,027,739	19,134,139	-	19,134,139					
Fund	500,000	-	500,000	-	500,000					
BITKRAFT Ventures Fund										
II, L.P.	1,334,430	59,600	1,394,030	-	1,394,030					
Hashed Venture Fund 2	1,400,000	-	1,400,000	-	1,400,000					
Intudo Ventures III, LP	1,434,850	70,069	1,504,919	-	1,504,919					
China Ventures Fund II, L.P.	16,086,357	2,777,516	18,863,873	_	18,863,873					
3one4 Capital - Fund III	3,910,264	20,708	3,930,972	_	3,930,972					
Griffin Gaming Partners II,	0,010,201	20,100	0,000,012		0,000,0.2					
L.P.	952,068	36,426	988,494	-	988,494					
Progression Fund 2	194,760	(4,665)	190,095	-	190,095					
Venture Reality Fund II LP	745,020	15,360	760,380	-	760,380					
Pantera Blockchain		(== 400)	4 00= 000							
Offshore Fund LP	1,324,760	(57,460)	1,267,300	-	1,267,300					
Hiro Capital II SCSp	735,165	7,995	743,160	-	743,160					
GALAXY INTERACTIVE FUND II, LP	1,309,600	(42,300)	1,267,300	_	1,267,300					
Lifelike Capital Fund LP	1,320,300	(53,000)	1,267,300	_	1,267,300					
TBT Global Growth No.3	1,020,000	(00,000)	1,201,000	_	1,207,000					
Investment Association	1,500,000	- 57	1,500,000	-	1,500,000					

(in thousands of	December 31, 2022								
Korean won)		Accumulated							
	Acquisition	gain (loss) on		_					
	cost	valuation	Book value	Current	Non-current				
SISU VENTURES III LP	777,600	(17,220)	760,380	-	760,380				
Discretionary Investment service agreement	2,481,662,163	(31,059,006)	2,450,603,157	2,450,603,157					
Artistfirst		(31,039,000)	443,555	2,450,603,157	443,555				
Moonrise Fund	443,555	-	•	-	•				
Redeemable convertible preference shares:	443,555	-	443,555	-	443,555				
Super Awesome Inc.	500,000	(500,000)	-	-	-				
Hidden Sequence Co., Ltd.	2,976,787	832,185	3,808,972	-	3,808,972				
21 Studios, Inc	999,999	280,766	1,280,765	-	1,280,765				
Scatter Lab Co., Ltd.	1,000,013	-	1,000,013	-	1,000,013				
CINAMON, Inc. Cold Brew Tech Private	3,999,984	-	3,999,984	-	3,999,984				
Limited	6,074,646	-	6,074,646	-	6,074,646				
Simple Agreement for Future Equity:									
Unplay Inc.	4,401,600	33,950	4,435,550	-	4,435,550				
Trioscope Inc	2,106,300	(205,350)	1,900,950	-	1,900,950				
Creators Collective	126,730	-	126,730	-	126,730				
Multiverse	63,365	-	63,365	-	63,365				
Juice Technologies	253,460	-	253,460	-	253,460				
13904580 Canada Inc.	190,095	-	190,095	-	190,095				
Gameplay Galaxy Inc.	126,730	-	126,730	-	126,730				
Frag Pulse Inc	253,460	-	253,460	-	253,460				
One Zero Co., Limited.	253,460	-	253,460	-	253,460				
Moonveil Entertainment	63,365		63,365		63,365				
	₩ 2,582,602,086	₩ 10,677,320	₩ 2,593,279,406	₩ 2,450,603,157	₩ 142,676,249				

(in thousands of Korean	December 31, 2021								
won)		Accumulated							
	Acquisition	gain (loss) on							
	cost	valuation	Book value	Current	Non-current				
Convertible bonds:									
Super Awesome Inc.	₩ 500,000	₩ (500,000)	₩ -	₩ -	₩ -				
Beneficiary certificates:									
BITKRAFT Esports Ventures Fund I, LP	1,045,815	(87,175)	958,640	-	958,640				
MAKERS FUND LP	4,402,513	10,699,348	15,101,861	_	15,101,861				
ESDF INTERNATIONAL			10, 101,001		10,101,001				
HOLDINGS LLC.	513,328	(513,328)	-	-	-				
LAGUNA Young	1,500,000	(630)	1,499,370	-	1,499,370				
Entrepreneur Fund No. 1 KNET VALUE-UP Venture	4,878,224	9,129,311	14,007,535	_	14,007,535				
Investment	4 000 000				4 000 000				
KJ& The 1 st Game Fund	1,000,000		1,000,000	-	1,000,000				
Kowloon Nights Fund LP	5,534,046	175,311	5,709,357	-	5,709,357				
Lumikai Fund I	771,034	9,715	780,749	-	780,749				
Progression Fund I, L.P.	433,813	10,750	444,563	-	444,563				
WindWalk Games Corp.	895,125	-	895,125	-	895,125				
NPTK Emerging Asia Fund	4 444 000				4 444 000				
1 Private Faulty Fund	1,111,200	-	1,111,200	-	1,111,200				
Private Equity Fund Hashed Venture Fund 1	2,000,000	_	2,000,000	_	2,000,000				
Makers Fund II LP	1,597,108	88,016	1,685,124	_	1,685,124				
Future Innovation Private	1,557,100	00,010	1,000,124		1,000,124				
Equity Joint Venture	18,106,400	427,239	18,533,639	_	18,533,639				
Company 3	, ,	,	-,,		•				
Impact Collective Korea	500,000		500,000	_	500,000				
Fund	300,000	-	300,000		300,000				
BITKRAFT Ventures Fund	344,220	11,430	355,650	-	355,650				
II, L.P.	000 000				000 000				
Hashed Venture Fund 2	800,000	-	800,000	-	800,000				
Intudo Ventures III, LP	292,925	3,450	296,375	-	296,375				
China Ventures Fund II, L.P.	11,537,145	78,263	11,615,408	-	11,615,408				
Moonrise Fund	177,825	_	177,825	_	177,825				
Redeemable convertible	111,020		177,020		177,020				
preference shares: Hidden Sequence Co., Ltd.	2,976,787	1,106,942	4,083,729	_	4,083,729				
21 Studios, Inc	999,999	280,766	1,280,765	_	1,280,765				
Scatter Lab Co., Ltd.	1,000,013	200,700	1,000,013		1,000,013				
Simple Agreement for Future	1,000,013	-	1,000,013	-	1,000,013				
Equity:									
Sonantic	599,152	-	599,152	-	599,152				
Creators Collective	118,550	-	118,550	-	118,550				
Multiverse	59,275	-	59,275	-	59,275				
Juice Technologies	237,100		237,100		237,100				
	₩ 63,931,597	₩ 20,919,408	₩ 84,851,005	₩ –	₩ 84,851,005				

11. Financial Assets at Fair Value through Other Comprehensive Income

Details of financial assets at fair value through other comprehensive income as of December 31, 2022 and 2021, are as follows:

(in thousands of								
Korean won)			Ac	cumulated				
	Acquisition cost		gain on valuation		В	ook value	Non-current	
Unlisted equity securities:								
Bunch. Live	₩	2,380,400	₩	-	₩	2,380,400	₩	2,380,400
APPETIZER GAMES CO., LTD.		20,000		-		20,000		20,000
AccelByte Inc.		1,132,399		134,900		1,267,299		1,267,299
SVA ZEPETO METAVERSE I PTE. LTD		5,000,000		598,604		5,598,604		5,598,604
Moloco Inc.		1,107,100		160,200		1,267,300		1,267,300
PLAYERUNKNOWN PRODUCTIONS B.V		5,117,432		(48,394)		5,069,038		5,069,038
Covenant.dev		2,225,089		(30,408)		2,194,681		2,194,681
LILA GAMES INC.		1,212,598		54,700		1,267,298		1,267,298
Mythos Studios LLC		13,909,500		347,625		14,257,125		14,257,125
AMAZEVR INC		1,436,497		(169,200)		1,267,297		1,267,297
Sword and Wand Inc.		648,000		(14,350)		633,650		633,650
Brinkbound Games Inc		63,364		-		63,364		63,364
Night Street Games		253,461		-		253,461		253,461
Listed equity securities:								
Kakao Games Corp.		10,000,121		18,739,745		28,739,866		28,739,866
Neptune Company		10,029,497		5,457,226		15,486,723		15,486,723
Blitzway Co.,Ltd.		10,000,001		(6,369,370)		3,630,631		3,630,631
	₩	64,535,459	₩	18,861,278	₩	83,396,737	₩	83,396,737

(in thousands of	
Korean won)	

Korean won)	Acquisition cost		Accumulated gain on valuation		Book value		Non-current	
Unlisted equity securities:								
Bunch. Live	₩	2,380,400	₩	-	₩	2,380,400	₩	2,380,400
APPETIZER GAMES CO., LTD.		20,000		-		20,000		20,000
AccelByte Inc.		1,132,399		53,100		1,185,499		1,185,499
SVA ZEPETO METAVERSE I PTE. LTD		5,000,000		237,233		5,237,233		5,237,233
Moloco Inc.		1,107,100		78,400		1,185,500		1,185,500
Listed equity securities:								
Kakao Games Corp.		10,000,121		48,573,849		58,573,970		58,573,970
Neptune Company		10,029,497		31,268,431		41,297,928		41,297,928
	₩	29,669,517	₩	80,211,013	₩	109,880,530	₩	109,880,530

12. Investments in Associates

Set out below are the associates of the Group as of December 31, 2022 and 2021.

		December 31, 20	022
	Percentage of ownership	Location	Date of financial statements
Shinhan Alpha REIT Co., Ltd. ^{1,2}	1.35%	Korea	December 31
1Up Ventures, L.P.	33.53%	U.S.A	December 31
Hidden Sequence Co., Ltd. ¹	13.57%	Korea	December 31
Smart Krafton-BonAngels Fund ³	54.55%	Korea	December 31
Nodwin Gaming Private Limited ¹	15.00%	India	December 31
Un Note Co., Ltd. ¹	8.75%	Korea	December 31
Loco Interactive Pte Limited ¹	11.41%	India	December 31
Nasadiya Technologies Private Limited ¹	18.53%	India	December 31
Mirae Asset Maps General Private Real Estate Investment Trust 66	42.96%	Korea	December 31
Tamatem Inc. 1,4	13.61%	Virgin Islands	December 31
Seoul Auction Blue Co., Ltd ^{1, 4}	5.33%	Korea	December 31
XXBLUE Co., Ltd ^{1, 4}	10.26%	Korea	December 31
Nautilus Mobile App Private Limited ⁴	31.91%	India	December 31
Mebigo Labs Private Limited 1,4	12.20%	India	December 31
Smart KNB Booster Fund 3,4	75.86%	Korea	December 31
NIRVANANA ⁴	33.33%	Korea	December 31
1Up Ventures Fund II, L.P ⁴	47.51%	U.S.A	December 31

¹ Although the Group holds less than 20%, the Group classified the entities as associates, as the Group is considered to have significant influences over the entity as the Group participates in same or similar level of Board of Directors.

² Shinhan Alpha REIT Co., Ltd. has six-month fiscal periods, which end March 31 and September 30. The financial statements were adjusted to one-year period from January 1, 2022 to December 31, 2022, using the interim financial statements ending December 31, 2022.

³ Although the Group holds more than 50%, due to legal and contractual restrictions on the investor's rights, the conditions for having control are not met. However, the Group classified it as investments in associates, as the Group is able to exercise significant influence over the entity. ⁴ During the year ended December 31, 2022, the entity was included in the scope of subsidiaries or associates due to new investments made by the Group.

12. Investments in Associates, (cont'd)

	December 31, 2021						
	Percentage of ownership	Location	Date of financial statements				
Shinhan Alpha REIT Co., Ltd. ^{1,2} 1Up Ventures, L.P. ³	1.91% 33.42%	Korea U.S.A	December 31 December 31				
Hidden Sequence Co., Ltd. ¹	13.57%	Korea	December 31				
Smart Krafton-BonAngels Fund ⁴	54.55%	Korea	December 31				
Nodwin Gaming Private Limited ¹	15.00%	India	December 31				
Un Note Co., Ltd. ¹	12.57%	Korea	December 31				
Loco Interactive Pte Limited ¹	12.38%	India	December 31				
Nasadiya Technologies Private Limited ¹	17.10%	India	December 31				
Mirae Asset Maps General Private Real Estate Investment Trust 66 ⁴	74.36%	Korea	December 31				

¹ Although the Group holds less than 20% of shares, the Group classified the investment as an associate, as the Group has significant influence over the investee.

² Shinhan Alpha REIT Co., Ltd. has six-month fiscal periods, which end March 31 and September 30. The financial statements were adjusted to one-year period from January 1, 2022 to December 31, 2022, using the interim financial statements ending December 31, 2021.

³ 1Up Ventures, L.P. was reclassified from financial assets at fair value through profit or loss to investments in associates as the Group obtained a significant influence.

⁴ Although the Group holds more than 50%, the Group classified the investment as an associate, as the Group does not satisfy the requirement of having control and has significant influence over the investee.

12. Investments in Associates, (cont'd)

Details of valuation of investments in associates that are accounted for using the equity method for the years ended December 31, 2022 and 2021, are as follows:

(in thousands of Korean			December 31, 2022							
won)				Share of other						
				5	Share of profit c	omprehensiv				
					(loss) of	e loss of	Impairme			
	Beginning	Acquisition	Transfer	Dividend	associates	associates	nt loss 1	Ending		
Shinhan Alpha REIT Co., Ltd.	₩ 4,073,869	₩ - ₩	-	₩ (387,398) ₩	∀ 1,058,502 ₩	f (752) ₩		₩ 4,744,221		
1Up Ventures, L.P.	8,193,813	3,080,000	-	-	289,805	2,265,760	-	13,829,378		
Hidden Sequence Co., Ltd.	1,886,734	-	-	-	(207,601)	-	-	1,679,133		
Smart Krafton-BonAngels Fund	10,010,521	360,000	-	-	(128,622)	(821,676)	-	9,420,223		
Nodwin Gaming Private Limited	25,589,477	-	-	-	183,147	611,499	-	26,384,123		
Un Note Co., Ltd.	1,414,377	-	-	-	(797,502)	(712)	-	616,163		
Loco Interactive Pte Limited	2,798,966	4,097,888	801,874	-	(1,437,877)	229,752	(6,490,603)	-		
Nasadiya Technologies Private Limited	50,828,553	-	-	-	(5,764,027)	85,518	-	45,150,044		
Mirae Asset Maps General Private Real Estate Investment Trust 66	289,823,703	-	-	-	(19,430,123)	-	-	270,393,580		
Tamatem Inc.	-	604,822	7,123,732	-	(400,711)	407,500	-	7,735,343		
Seoul Auction Blue Co., Ltd	-	2,999,945	-	-	(231,776)	98,987	-	2,867,156		
XXBLUE Co., Ltd	-	4,999,772	_	_	251,298	-	-	5,251,070		
Nautilus Mobile App Private Limited	-	6,546,036	-	-	73,346	(94,613)	-	6,524,769		
Mebigo Labs Private Limited	-	13,175,608	-	-	(1,097,754)	(427,297)	-	11,650,557		
Smart KNB Booster Fund	-	11,000,000	-	-	(737,702)	-	-	10,262,298		
NIRVANANA	-	3,000,000	2,000,000	-	(435,521)	-	-	4,564,479		
1Up Ventures Fund II, L.P		4,731,000		<u> </u>		(506,667)	<u>-</u>	4,224,333		
	₩ 394,620,013	₩ 54,595,071 W	9,925,606	₩ (387,398) ₩	∀ (28,813,118) ∀	1,847,299 ₩	(6,490,603) ₩	425,296,870		

¹ The Group recognized impairment loss since the recoverable amount of investments in subsidiaries was less than their carrying amount.

12. Investments in Associates, (cont'd)

(in thousands of	December 31, 2021								
Korean won)	Beginning	Acquisition	Transfer		Dividend	Share of profit (loss) of associates	Share of other comprehensive loss of associates	Ending	
Shinhan Alpha REIT Co., Ltd.	₩ 4,388,609	₩ -	₩	- \	∜ (341,000)	₩ 33,862	₩ (7,602)	₩ 4,073,869	
1Up Ventures, L.P.	6,770,537	935,750		-	-	(286,453)	773,979	8,193,813	
Hidden Sequence Co., Ltd.	1,950,955	-		-	-	(64,221)	-	1,886,734	
Smart Krafton-BonAngels Fund	3,590,435	6,600,000		-	-	(179,914)	-	10,010,521	
Nodwin Gaming Private Limited	-	25,615,890		-	-	29,156	(55,569)	25,589,477	
Un Note Co., Ltd.	-	1,478		-	-	1,412,899	-	1,414,377	
Loco Interactive Pte Limited	-	3,407,400		-	-	(385,748)	(222,686)	2,798,966	
Nasadiya Technologies Private Limited	-	52,238,006		-	-	(1,358,200)	(51,253)	50,828,553	
Mirae Asset Maps General Private Real Estate Investment Trust 66	-	290,000,000		- 	-	(176,297)		289,823,703	
	₩ 16,700,536	₩ 378,798,524	₩	- ₩	∜ (341,000)	₩ (974,916)	₩ 436,869	₩ 394,620,013	

12. Investments in Associates, (cont'd)

The table below provides summarized financial information of the associates as of and for the years ended December 31, 2022 and 2021:

(in thousands of Korean won)				Decemb	er 31, 2022				
	Current Assets	Non-current Assets	Current Liabilities	Non-current Liabilities	Revenue	Profit (loss) from Continuing Operation	Profit (loss) from Discontinue d Operation	Other Comprehens ive Income	Total Comprehen sive Income
Shinhan Alpha REIT Co., Ltd. ¹	₩ 38,273,032 ₩	1,874,589,003 ₩	411,625,117 ∀	t 1,031,515,919	₩ 74,616,104	₩ 8,927,257	₩ -	₩ - +	₩ 8,927,257
1Up Ventures, L.P.	5,391,402	35,855,166	43	-	-	1,070,288	-	6,244,113	7,314,401
Hidden Sequence Co., Ltd.	13,173,305	2,277,122	12,177,922	8,060,842	13,698,836	(1,463,260)	-	-	(1,463,260)
Smart Krafton-BonAngels Fund	392,136	16,994,327	116,054	-	6,190	(235,808)	-	(1,506,405)	(1,742,213)
Nodwin Gaming Private									
Limited	40,023,832	21,525,407	25,505,444	5,401,691	40,841,403	209,734	-	3,310,740	3,520,474
Un Note Co., Ltd.	1,436,471	10,556,312	4,914,573	38,503	333,457	(6,255,601)	-	-	(6,255,601)
Loco Interactive Pte Limited	31,693,578	2,941,415	4,603,595	2,652,602	117,248	(30,227,952)	-	(7,932,389)	(38,160,341)
Nasadiya Technologies Private Limited	13,757,246	11,256,893	1,796,200	4,663,507	6,679,053	(33,556,643)	-	409,664	(33,146,979)
Mirae Asset Maps General Private Real Estate									
Investment Trust 66	41,454,564	1,304,439,262	16,529,459	700,000,000	2,355,117	(35,942,790)	-	-	(35,942,790)
Tamatem Inc.	21,064,295	533,727	1,604,122	631,720	28,809,149	(3,522,018)	-	2,912,373	(609,645)
Seoul Auction Blue Co., Ltd	25,390,717	2,769,565	7,712,688	(68,405)	13,043,602	(4,791,168)	-	-	(4,791,168)
XXBLUE Co., Ltd	6,231,701	934,334	3,700,541	(115,879)	1,900,885	(2,783,600)	-	-	(2,783,600)
Nautilus Mobile App Private									
Limited	7,552,854	159,015	750,652	132,903	4,209,531	55,296	-	(296,455)	(241,159)
Mebigo Labs Private Limited	33,519,415	572,230	5,521,646	64,450	5,393,994	(18,765,005)	-	(3,511,086)	(22,276,091)
Smart KNB Booster Fund	14,113,985	-	586,410	-	156,239	(972,425)	-	-	(972,425)
NIRVANANA	606,547	1,223,594	752,767	200,000	5,000	(4,123,626)	-	-	(4,123,626)
1Up Ventures Fund II, L.P	8,892,221	-	-	-	-	-	-	(1,066,533)	(1,066,533)

¹ The financial information of Shinhan Alpha REIT Co., Ltd. relating to profit or loss is adjusted to one-year period from January 1, 2022 to December 31, 2022.

(in thousands of Korean won)	December 31, 2021								
	Current I	Non-current	Current	Profit (loss) from Continuing	Profit (loss) from Discontinue	Other Comprehens	Total Comprehe nsive		
	Assets	Assets	Liabilities	Liabilities	Revenue	Operation	d Operation	ive Income	Income
Shinhan Alpha REIT Co., Ltd. ¹	₩ 52,792,035 ₩	1,852,725,440 ₩	178,571,390 ₩	1,383,119,294	₩ 62,105,548	₩ 7,038,375	₩ -	₩ - ₩	∀ 7,038,375
1Up Ventures, L.P.	3,202,821	21,326,137	11,262	-	-	(986,133)	-	1,690,817	704,684
Hidden Sequence Co., Ltd.	9,661,229	1,312,402	6,648,728	7,649,979	18,657,593	(406,615)	-	-	(406,615)
Smart Krafton-BonAngels	3,614,309	14,852,917	114,605	-	-	(329,842)	-	-	(329,842)

(in thousands of Korean won)	December 31, 2021								
	Current Assets	Non-current Assets	Current Liabilities	Non-current Liabilities	Revenue	Profit (loss) from Continuing Operation	Profit (loss) from Discontinue d Operation	Other Comprehens ive Income	Total Comprehe nsive Income
Fund									
Nodwin Gaming Private									
Limited	20,517,300	14,303,228	11,003,243	152,609	11,261,080	194,351	-	(370,414)	(176,063)
Un Note Co., Ltd.	4,648,369	10,866,609	4,189,950	71,371	9,679,601	8,778,745	-	-	8,778,745
Loco Interactive Pte Limited	7,425,839	2,965,670	1,855,678	7,008,272	37,966	(5,451,525)	-	(3,651,798)	(9,103,323)
Nasadiya Technologies									
Private Limited	45,479,473	7,164,767	1,924,681	2,858,852	495,614	(7,942,534)	-	(299,718)	(8,242,252)
Mirae Asset Maps General Private Real Estate									
Investment Trust 66	24,009,785	366,014,550	261,424	-	-	(237,089)	-	-	(237,089)

¹ The financial information of Shinhan Alpha REIT Co., Ltd. relating to profit or loss is adjusted to one-year period from January 1, 2021 to December 31, 2021.

The table below provides a reconciliation of the summarized financial information presented to the carrying amount of its interest in the associate as of December 31, 2022 and 2021.

(in thousands of Korean	December 31, 2022									
won)	Net assets attributable to ordinary shares	Percentage of ownership	Equity accounted interest	Investment difference	Book amount					
Shinhan Alpha REIT Co., Ltd.	₩ 350,266,406	1.35%	₩ 4,744,221	₩ -	₩ 4,744,221					
1Up Ventures, L.P.	41,246,524	33.53%	13,829,959	(581)	13,829,378					
Hidden Sequence Co., Ltd.	(4,954,993)	13.57%	(672,361)	2,351,494	1,679,133					
Smart Krafton-BonAngels Fund	17,270,409	54.55%	9,420,223	-	9,420,223					
Nodwin Gaming Private Limited	28,961,668	15.00%	4,344,780	22,039,343	26,384,123					
Un Note Co., Ltd.	7,039,707	8.75%	616,163	-	616,163					
Loco Interactive Pte Limited	32,842,658	11.41%	3,747,398	2,743,205	-					
Nasadiya Technologies Private Limited	12,831,135	18.53%	2,194,167	42,955,877	45,150,044					
Mirae Asset Maps General Private Real Estate Investment Trust 66	629,364,368	42.96%	270,393,580	-	270,393,580					
Tamatem Inc.	19,362,181	13.61%	2,635,497	5,099,846	7,735,343					
Seoul Auction Blue Co., Ltd	19,694,790	5.33%	1,050,371	1,816,785	2,867,156					
XXBLUE Co., Ltd	3,581,373	10.26% 66	367,306	4,883,764	5,251,070					

(in thousands of Korean	December 31, 2022										
won)	Net assets attributable to ordinary shares	Percentage of ownership	Equity accounted interest	Investment difference	Book amount						
Nautilus Mobile App Private Limited	6,828,314	31.91%	2,179,249	4,345,520	6,524,769						
Mebigo Labs Private Limited	28,505,549	12.20%	3,477,055	8,173,502	11,650,557						
Smart KNB Booster Fund	13,527,575	75.86%	10,262,298	-	10,262,298						
NIRVANANA	877,374	33.33%	292,428	4,272,051	4,564,479						
1Up Ventures Fund II, L.P	8,892,221	47.51%	4,224,333	-	4,224,333						
(in thousands of Korean	December 31, 2021										
won)	Net assets attributable to ordinary shares	Percentage of ownership	Equity accounted interest	Investment difference	Book amount						
Shinhan Alpha REIT Co., Ltd.	₩ 213,186,023	1.91%	₩ 4,073,868	₩ -	₩ 4,073,868						
1Up Ventures, L.P.	24,517,697	33.42%	8,193,814	-	8,193,814						
Hidden Sequence Co., Ltd.	(3,425,070)	13.57%	(464,760)	2,351,494	1,886,734						
Smart Krafton-BonAngels Fund	18,352,621	54.55%	10,010,521	-	10,010,521						
Nodwin Gaming Private Limited	23,664,676	15.00%	3,550,135	22,039,343	25,589,478						
Un Note Co., Ltd.	11,253,656	12.57%	1,414,377	-	1,414,377						
Loco Interactive Pte Limited	450,587	12.38%	55,761	2,743,205	2,798,966						
Nasadiya Technologies Private Limited	47,860,708	17.10%	8,184,343	42,644,209	50,828,552						
Mirae Asset Maps General Private Real Estate Investment Trust 66	389,762,911	74.36%	289,823,703	-	289,823,703						

Fair value of investments in associates that has a quoted market price as of December 31, 2022 and 2021, are as follows:

(in thousands of		Decembe	er 31, 2022	December 31, 2021				
Korean won)	Company	Fair value	Book value	Fair value	Book value			
Associates	Shinhan Alpha REIT Co., Ltd.	₩ 6,570,000	₩ 4,744,221	₩ 7,950,000	₩ 4,073,869			

13. Property and Equipment and Leases

Details of property and equipment as of December 31, 2022 and 2021, are as follows:

(in thousands of Korean	December 31, 2022										
won)	Fixtures			Facilities		Right-of-use assets		Construction-in- progress		Total	
Acquisition cost	₩	66,398,922	₩	57,413,791	₩	265,505,185	₩	5,386,218	₩	394,704,116	
Accumulated depreciation		(31,109,249)		(23,897,796)		(116,024,311)		-		(171,031,356)	
Accumulated impairment		(26,424)		-		(217,352)		-		(243,776)	
Government grants ¹		_		(352,000)		-				(352,000)	
	₩	35,263,249	₩	33,163,995	₩	149,263,522	₩	5,386,218	₩	223,076,984	

¹ There are no unfulfilled conditions or other contingencies related to the government grants as of December 31, 2022.

(in thousands of Korean	December 31, 2021										
won)	Fixtures			Facilities		Right-of-use assets		Construction-in- progress		Total	
Acquisition cost Accumulated depreciation Accumulated impairment	₩	49,841,802 (19,676,816)	₩	54,777,289 (17,276,410)	₩	253,092,869 (91,451,018) (203,323)	₩	15,924,670 - -	₩	373,636,630 (128,404,244) (203,323)	
Government grants ¹				(1,279,581)		<u>-</u>		_		(1,279,581)	
	₩	30,164,986	₩	36,221,298	₩	161,438,528	₩	15,924,670	₩	243,749,482	

¹ There are no unfulfilled conditions or other contingencies related to the government grants as of December 31, 2021.

13. Property and Equipment and Leases, (cont'd)

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

(in thousands of	December 31, 2022									
Korean won)	Fixtures			Facilities		Right-of-use assets		onstruction- n-progress	Total	
Beginning	₩	30,164,986	₩	36,221,298	₩	161,438,528	₩	15,924,670	₩	243,749,482
Acquisitions		15,522,347		7,013,111		80,020,425		4,329,970		106,885,853
Disposals		(645,555)		(1,528,031)		(1,690,944)		(7,212)		(3,871,742)
Depreciation		(12,051,619)		(10,952,702)		(51,868,399)		-		(74,872,720)
Return of government subsidies		-		799,940		-		-		799,940
Transfers ¹		1,687,053		1,213,309		(39,261,176)		(14,940,511)		(51,301,325)
Increase due to business combination		135,272		12,523		208,806		90,630		447,231
Impairment loss		(26,424)		-		-		-		(26,424)
Exchange fluctuations		477,189		384,547		416,282		(11,329)		1,266,689
Ending	₩	35,263,249	₩	33,163,995	₩	149,263,522	₩	5,386,218	₩	223,076,984

¹ Long-term advance payment of \forall 503,568 thousand is reclassified to fixtures and facilities, Construction in-progress of \forall 618 thousand and \forall 12,542,402 thousand is reclassified to intangible assets and investment properties, respectively, for the year ended December 31, 2022.

(in thousands of	December 31, 2021										
Korean won)	Vehicles	Fixtures	Facilities	Right-of-use assets	Construction- in-progress	Total					
Beginning	₩ -	₩ 17,535,941	₩ 17,791,772	₩ 81,274,386	₩ 23,759,311	₩ 140,361,410					
Acquisitions	-	20,177,174	25,443,716	118,149,324	4,738,438	168,508,652					
Disposals	(19,360)	(739,081)	(1,730,332)	(2,288,833)	-	(4,777,606)					
Depreciation	(2,670)	(8,140,551)	(7,235,884)	(45,711,316)	-	(61,090,421)					
Transfers ¹	22,030	789,868	1,420,823	8,754,796	(12,604,872)	(1,617,355)					
Changes in the scope of consolidation	-	(59,945)	-	-	-	(59,945)					
Increase due to business combination	-	69,639	35,150	115,005	-	219,794					
Exchange fluctuations		531,941	496,053	1,145,166	31,793	2,204,953					
Ending	₩ -	₩ 30,164,986	₩ 36,221,298	₩ 161,438,528	₩ 15,924,670	₩ 243,749,482					

¹ Construction in-progress of ₩ 1,972,797 thousand and ₩ 8,399,354 thousand is reclassified to intangible assets and investment properties, respectively, for the year ended December 31, 2021

13. Property and Equipment and Leases, (cont'd)

Leases

A. Amounts recognized in the consolidated statements of financial position

Lease related amounts recognized in the consolidated statements of financial position are as follows:

(in thousands of Korean won)	December 31, 2022			December 31, 2021		
Right-of-use assets ¹						
Properties	₩	149,110,074	₩	161,438,529		
Vehicles		153,450		-		
	<u></u>	149,263,524		161,438,529		
Lease receivables ²						
Current		12,045,012		3,336,953		
Non-current		33,813,542		4,986,204		
		45,858,554		8,323,157		
	₩	195,122,078	₩	169,761,686		
Lease liabilities ³						
Current	₩	57,072,850	₩	54,506,202		
Non-current		139,751,149		118,697,269		
	₩	196,823,999	₩	173,203,471		

¹ Included in the 'property and equipment' of the consolidated statements of financial position.

Additions to the right-of-use assets for the year ended December 31, 2022 amounts to \forall 80,020,425 thousand (2021: \forall 118,149,324 thousand).

² Included in the 'other current financial assets' and 'other non-current financial assets' of the consolidated statements of financial position.

³ Included in the 'other current financial liabilities' and 'other non-current financial liabilities' of the consolidated statements of financial position.

13. Property and Equipment and Leases, (cont'd)

5,447,194 ₩

The Group has entered into a sublease contract for part of the right-of-use assets and classified them as operating leases. The future lease payments that the Group is expected to receive, are as follows:

(in thousands of Korean won)

₩

December 31, 2022

	Total contractual cash flows		Less than 1 years	Between 1 and 5 years		Total
₩	11,940	₩	11,940	₩	- ₩	11,940
			December 3	1, 2021		
	Total Contractual cash flows		Less than 1 years	Between 1 and 5 years		Total

B. Amounts recognized in the consolidated statements of comprehensive income

5,429,154 ₩

Lease related amounts recognized in the consolidated statements of comprehensive income are as follows:

18,040

5,447,194

(in thousands of Korean won)	Dece	ember 31, 2022	Dec	ember 31, 2021
Revenue from sublease lease (included in revenue) Interest income relating to lease receivables (included in finance income)	₩	5,683,984 871,749	₩	8,124,522 170,941
Total Revenue	₩	6,555,733	₩	8,295,463
Depreciation of right-of-use assets				
Properties	₩	51,824,943	₩	45,711,316
Vehicles		43,455		-
Interest expense relating to lease liabilities (included in finance costs)		6,982,978		6,450,493
Expense relating to short-term leases (included in operating costs)		728,976		1,035,821
Expense relating to leases of low-value assets (included in operating costs)		244,443		251,086
Total Expense	₩	59,824,795	₩	53,448,716

The total cash outflow for leases for the year ended December 31, 2022 amounts to \$59,562,234 thousand (2021: \$44,787,416 thousand).

14. Intangible Assets

Intangible assets as of December 31, 2022 and 2021, consist of:

(in thousands of Korean won)	December 31, 2022									
	Acquisition cost			Accumulated nortization and pairment loss	Book value					
Software	₩	35,652,107	₩	(26,842,371)	₩	8,809,736				
Industrial property rights		1,622,613		(945,045)		677,568				
Membership rights		1,373,669		(104,152)		1,269,517				
Goodwill		691,577,631		(150,844,212)		540,733,419				
Other intangible assets		403,350,807		(94,321,064)		309,029,743				
	₩	1,133,576,827	₩	(273,056,844)	₩	860,519,983				

(in thousands of Korean won)	December 31, 2021								
	Acc	uisition cost	am	accumulated ortization and pairment loss		Book value			
Software	₩	27,740,670	₩	(19,004,847)	₩	8,735,823			
Industrial property rights		1,459,865		(671,849)		788,016			
Membership rights		1,373,669		(34,717)		1,338,952			
Goodwill		594,075,913		(62,774,958)		531,300,955			
Other intangible assets		375,056,342		(5,842,492)		369,213,850			
	₩	999,706,459	₩	(88,328,863)	₩	911,377,596			

14. Intangible Assets, (cont'd)

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

(in thousands	December 31, 2022											
of Korean won)	Software		Industrial property rights		Membership rights		Goodwill		Other intangible assets	Total		
Beginning balance	₩	8,735,823	₩	788,016	₩	1,338,951	₩	531,300,955	₩ 369,213,851	₩ 911,377,596		
Acquisitions		1,327,478		23,598		-		-	90,507	1,441,583		
Disposals		(4)		-		-		-	(580,504)	(580,508)		
Amortization		(2,791,238)		(270,450)		(69,434)		-	(28,684,226)	(31,815,348)		
Impairment loss		(10,180)		-		-		(88,069,254)	(61,074,760)	(149,154,194)		
Transfers ¹		81,125		130,109		-		-	(80,507)	130,727		
Increase due to business combination		1,514,032		6,295		-		55,774,951	460,413	57,755,691		
Exchange rate differences		(47,300)		-				41,726,767	29,684,969	71,364,436		
Ending balance	₩	8,809,736	₩	677,568	₩	1,269,517	₩	540,733,419	₩ 309,029,743	₩ 860,519,983		

¹ Construction in-progress of ₩ 618 thousand was reclassified to software and long-term advanced payments of ₩ 130,109 thousand was reclassified to industrial property rights during the year ended December 31, 2022.

(in thousands	December 31, 2021											
of Korean won)	Software		Industrial property rights		Membership rights		Goodwill		Other intangible assets		Total	
Beginning balance	₩	5,963,963	₩	745,041	₩	679,323	₩	-	₩	4,254,998	₩ .	11,643,325
Acquisitions		3,298,523		116,968		694,345		-		180,759		4,290,595
Disposals		-		(39,119)		-		-		(858)		(39,977)
Amortization		(2,585,596)		(236,490)		(34,717)		-		(2,977,564)	(5,834,367)
Impairment loss		-		-		-		(26,535,136)		-		(26,535,136)
Transfers ¹ Business Combination and		1,972,797		194,135		-		-		-		2,166,932
changes in the scope of consolidation		62,316		7,060		-		557,836,091	(367,443,869		925,349,336
Exchange rate differences		23,820		421		_		-		312,647		336,888
Ending balance	₩	8,735,823	₩	788,016	₩	1,338,951	₩	531,300,955	₩ 3	369,213,851	₩	911,377,596

¹ Construction in-progress of \forall 1,972,797 thousand was reclassified to software and long-term advanced payments of \forall 194,135 thousand was reclassified to industrial property rights during the year ended December 31, 2021.

14. Intangible Assets, (cont'd)

Impairment Tests for Goodwill

The Group performed an impairment test on CGUs including goodwill at the end of the year. The recoverable amount of the CGUs has been determined based on value-in-use calculations. These calculations use pre-tax cash flow projections based on financial budgets approved by management covering a five-year period. The following table sets out the key assumptions for calculating the value-in-use of the major CGUs as of December 31, 2022.

Key assumptions

	Unknown Worlds Entertainment, Inc.	Others
Average operating margin ¹	43.70%	7.78%~33.72%
Average sales growth rate ¹	22.80%	24.24%~87.55%
Permanent growth rate ²	1.00%	1.00%
discount rate ³	8.80%	14.62%~16.17%

¹ Weighted average sales growth rate and operating profit ratio is used to estimate cash flows for five years and is determined based on the Group's expectations of sales and operating profit in the future.

Impairment test results for CGUs for the year Unknown Worlds Entertainment, Inc. and other CGUs impairment losses of $\mbox{$W$}$ 133,852,771 thousand and $\mbox{$W$}$ 15,327,846 thousand were recognized, respectively, as the carrying amount exceeded the recoverable amount.

The recoverable amount of the cash-generating unit of the Group is determined based on the key assumptions used in the goodwill impairment test. The effects of the changes in the assumptions in excess of the carrying amount are as follows:

(in thousands of Korean won)	Change in pre-tax discount rate						
	Incr	ease by 1%	Dec	crease by 1%			
Excess portion of goodwill's recoverable amount							
Unknown Worlds Entertainment, Inc.	₩	96,730,817	₩	(72,946,557)			
Others		1,319,718		(1,514,805)			

² The long-term growth rate is a weighted average growth rate used for estimating cash flows for a year that exceeds the forecast period. This growth rate does not exceed the expected growth rate in the industry report specific to the industry in which the CGUs operates.

³ The discount rates used are reflect specific risks relating to the relevant operating segments.

15. Investment Properties

Details of investment properties as of December 31, 2022 and 2021, are as follows:

(in thousands of Korean won)	December 31, 2022							
	Acquisition Cost	Accumulated depreciation	Book value					
Land	₩ 173,699,223	₩ -	₩ 173,699,223					
Buildings	29,861,829	(1,387,792)	28,474,037					
	₩ 203,561,052	₩ (1,387,792)	₩ 202,173,260					
(in thousands of Korean won)	Acquisition	ecember 31, 202 Accumulated	1					
	Cost	depreciation	Book value					
Land	Cost ₩ 156,224,557	·	Book value ₩ 156,224,557					
Land Buildings		₩ -						

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

(in thousands of Korean won)	December 31, 2022							
		Land		Buildings		Total		
Beginning balance	₩	156,224,557	₩	27,034,668	₩	183,259,225		
Acquisitions		6,284,592		832,406		7,116,998		
Depreciation		-		(745,365)		(745,365)		
Transfers ¹		11,190,074		1,352,328		12,542,402		
Ending balance	₩	173,699,223	₩	28,474,037	₩	202,173,260		

¹ Construction in-progress of ₩12,542,402 thousand is reclassified to investment properties during the year ended December 31, 2022.

15. Investment Properties, (cont'd)

(in thousands of Korean won)	December 31, 2021							
		Land		Buildings		Total		
Beginning balance	₩	59,278,258	₩	9,400,873	₩	68,679,131		
Acquisitions		89,338,959		17,464,582		106,803,541		
Transfers ¹		7,607,340		792,014		8,399,354		
Depreciation		_		(622,801)		(622,801)		
Ending balance	₩	156,224,557	₩	27,034,668	₩	183,259,225		

¹ Construction in-progress of ₩8,399,354 thousand was reclassified to investment properties during the year ended December 31, 2021.

During the year, rental income earned from operating leases of investment property is \forall 145 million(2021: \forall 48 million), and there are no direct operating expenses (including repairs and maintenance) from property that generated rental income. Direct operating expenses (including repairs and maintenance) from property that did not generate rental income are \forall 377 million(2021: \forall 82 million).

Fair value of investment properties as at December 31, 2022, is \forall 277,469 million (2021: \forall 167,105 million). The valuation of investment properties is performed by an independent valuer.

16. Short-term Borrowings

Details of Short-term borrowings as of December 31, 2022 and 2021, are as follows:

(in thousands of

Korean won)	Creditor	Interest rate(%)	Due date	December 31, 2022	December 31, 2021
		4.60	2023-06-02	₩ 1,000,000	₩ -
		4.60	2023-07-06	1,000,000	-
	CEO of Rising	4.60	2023-08-07	1,000,000	-
Working capital		4.60	2023-09-06	1,000,000	-
	Wings	4.60	2023-10-12	1,000,000	-
		4.60	2023-11-03	1,000,000	-
		4.60	2023-12-12	1,000,000	-
				₩ 7,000,000	₩ -

17. Net Defined Benefit Liabilities

Details of net defined benefit liabilities recognized in the statements of financial position as of December 31, 2022 and 2021, are as follows:

(in thousands of Korean won)	December 31, 2022		Decem	ber 31, 2021
Present value of defined benefit obligations	₩	15,185,450	₩	17,755,435
Fair value of plan assets		(1,308,577)		-
Net defined benefit liability		13,876,873		17,755,435

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

(in thousands of Korean won)	De	cember 31, 2022	De	cember 31, 2021
Beginning	₩	17,755,435	₩	14,809,815
Changes in the scope of consolidation		1,874,020		635,464
Current service cost		6,498,281		4,268,159
Interest expense		464,732		302,415
Benefit payments		(1,699,530)		(1,744,052)
Remeasurements:				
Actuarial gain(loss) from change in financial assumptions		(8,482,972)		(1,405,701)
Actuarial gain(loss) from experience adjustments		(1,247,084)		4,520,912
Actuarial gain(loss)loss from change in demographic assumptions		35,397		1,917,076
Past service cost and gains or losses on settlements		-		(5,546,660)
Others		(12,829)		(1,993)
Ending	₩	15,185,450	₩	17,755,435

17. Net Defined Benefit Liabilities (cont'd)

Changes in the Fair value of plan assets for the year ended December 31, 2022, are as follows:

(in thousands of Korean won)	December 31, 2022	
Beginning	₩	-
Increase due to business combination		542,850
Interest income		25,182
Retirement benefit payment		(168,385)
User's contribution		921,911
Remeasurements:		-
Income from plan assets (excluding the amount included in interest income)		(12,981)
Ending	₩	1,308,577

The amounts recognized in the consolidated statements of comprehensive income related to defined benefit plan for the years ended December 31, 2022 and 2021, are as follows:

(in thousands of Korean won)	Dec	ember 31, 2022	De	cember 31, 2021
Current service cost	₩	6,498,281	₩	4,268,159
Interest expense		439,550		302,415
Past service cost and gains or losses on settlements		_		(5,546,660)
	₩	6,937,831	₩	(976,086)

The significant actuarial assumptions as of December 31, 2022 and 2021, are as follows:

(in percentage, %)	December 31, 2022	December 31, 2021
Discount rate	5.25% - 7.31%	2.89% - 3.13%
Salary growth rate	3.78% - 10.00%	3.78% - 8.05%

Discount rate is measured by reference to corporate bond rated AA+. Mortality rate for defined benefit pension plan announced by Korea Insurance Development Institute is adopted, and the retirement rate is measured by reference to the historical record of retirement.

17. Net Defined Benefit Liabilities (cont'd)

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

(in thousands of Korean won)	1%p increase		1%p decrease		
Discount rate	₩	(2,869,041)	₩	2,787,933	
Salary growth rate		2,699,266		(2,842,777)	

Details of remeasurements incurred related to defined benefit plan for the years ended December 31, 2022 and 2021, are as follows:

(in thousands of Korean won)	De	cember 31, 2022	De	cember 31, 2021
Remeasurements of net defined benefit liability	₩	(9,694,659)	₩	5,032,287
Remeasurement factors of plan assets		(12,981)		-
Income tax effect		2,459,648		(1,373,612)
Remeasurements of net defined benefit liability, after tax	₩	(7,247,992)	₩	3,658,675

The weighted average duration of the defined benefit obligation is $5 \sim 12$ years. The expected maturity analysis of undiscounted pension benefits as of December 31, 2022, is as follows:

(in thousands of Korean won)	L	ess than 1 year		etween 2 years		Between 2-5 years		Over 5 years		Total
Pension benefits	₩	1,486,401	₩	668,147	₩	2,396,063	₩	14,316,160	₩	18,866,771

The expense recognized in the current year in relation to the defined contribution plan amounted to $\pm 120,822$ thousand(2021: $\pm 14,644,743$ thousand).

The Group provides benefits to employees who have provided services for a long-term. The Group measures the long-term employee benefit liabilities using actuarial assumptions.

18. Provisions

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

(in thousands of Korean won)	December 31, 2022				
	Provision for restoration costs		Othe	er provisions	
Beginning	₩	12,607,875	₩	37,529,676	
Increase due to business combination		-		-	
Additions		1,242,733		3,379,732	
Reversal		-		(38,006,580)	
Exchange rate differences		(15,718)		-	
Ending	₩	13,834,890	₩	2,902,828	
Current portion		-		2,902,828	
Non-current portion		13,834,890		_	

(in thousands of Korean won)	December 31, 2021					
		ovision for oration costs	Other provisions			
Beginning	₩	5,289,452	₩	44,762,724		
Increase due to business combination		8,914		-		
Additions		8,135,030		3,955,347		
Reversal		-		(11,188,395)		
Others ¹		(821,378)		-		
Exchange rate differences		(4,143)		-		
Ending	₩	12,607,875	₩	37,529,676		
Current portion		-		37,529,676		
Non-current portion		12,607,875				

¹ Includes the reduction in the obligation for restoration at the end of the lease period due to the new sub-lease contract

19. Contingencies and Commitments

As of December 31, 2022, the Group is providing game services to end-users through contracts with the following major platform operators:

Game	Counterparty	Service region
PLAYERUNKNOWN'S BATTLEGROUNDS (PC)	Valve Corporation Epic Games, Inc.	Worldwide
	Hangzhou Shunwang Technology Co., Ltd.	China (except for Hong Kong, Macau and Taiwan)
	Qingfeng(Beijing) Technology Co.,Ltd.	China (except for Hong Kong, Macau and Taiwan)
Thunder Tier One (PC)	Valve Corporation	Worldwide
MOONBREAKER (PC)	Valve Corporation	Worldwide
The Callisto Protocol (PC)	Valve Corporation Epic Games, Inc.	Worldwide
The Callisto Protocol (Console)	•	Worldwide
PLAYERUNKNOWN'S	Google	Korea, Japan, India
BATTLEGROUNDS (Mobile)	Apple	Korea, Japan, India
	Samsung Electronics	Korea
	Coda Payments Pte.Ltd	India
PUBG NEW STATE (Mobile)	Google	Worldwide
	Apple	Worldwide
	Samsung Electronics	Worldwide
PLAYERUNKNOWN'S BATTLEGROUNDS (Stadia)	Google	Part of Europe and U.S.A
Subnautica, Subnautica: Below Zero(PC)	Valve Corporation Epic Games, Inc	Worldwide

The Group has contracts with more than 10 domestic and foreign companies including the above contracts, and the contract period is 1~3 years or longer.

The Group collects considerations for game services from the end-users through the platform providers and pays a certain percentage of revenue generated from the end-users as a fee in exchange for using their platform.

19. Contingencies and Commitments, (cont'd)

Major publishing contracts of the Group as of December 31, 2022, are as follows:

Game	Counterparty	Service region
PLAYERUNKNOWN'S	Microsoft Corporation	Worldwide
BATTLEGROUNDS (Console)	Sony Interactive Entertainment LLC	Worldwide
PLAYERUNKNOWN'S BATTLEGROUNDS(PC)	Kakao Games Corp.	Korea
PLAYERUNKNOWN'S BATTLEGROUNDS (Mobile)	Tencent Technology (Shenzhen) Company Limited	China
BATTLEGROUNDS (WODILE)	Proxima Beta Pte. Limited	Worldwide
The Callisto Protocol (Console)	Microsoft Corporation Sony Interactive Entertainment LLC	Worldwide
	Microsoft Corporation	
Subnautica, Subnautica: Below	Sony Interactive Entertainment LLC	
Zero(Console)	Nintendo Co., Ltd.	Worldwide
2010(00113010)	Bandai Namco Entertainment	
	America INC.	

Major other contracts of the Group as of December 31, 2022, are as follows:

Game	Counterparty	Service region
PLAYERUNKNOWN'S BATTLEGROUNDS	Beijing Kuaishou Technology Ltd. Guangzhou Huya Information Technology Ltd.	China China

The Group has entered into a license agreement with Epic Games International S.a.r.l. for the "Unreal Engine" required to drive the game, which the Group is obliged to pay a certain percentage of revenue as royalties.

As of December 31, 2022, there are six litigation cases filed against the Group (relating to claim for damages related to stock options, lawsuits related to india services, lawsuits related to incentives, lawsuits related to real estate registration, lawsuits related to delivery refusal and lawsuits related to in-game account suspension) and eight litigations (relating to claim for damages of purchased IT assets and others) filed by the Group. The Group's management believes that the ultimate results of these cases will not have a significant impact on the consolidated financial statements of the Group and the results of the cases cannot be reliably estimated as of December 31, 2022.

19. Contingencies and Commitments, (cont'd)

As of December 31, 2022, the Group has been provided guarantees up to \forall 1,909 million from Seoul Guarantee Insurance Co., Ltd. in connection with the repayment of contributions for supporting the workplace nursery installation and up to USD2,522 thousand from Citibank N.A in connection with the office rent payment.

As of December 31, 2022, the payment guarantees and collateral provided by the Group in relation to its subsidiaries are as follows.

(in USD)		Beneficiary of		Guaranteed
Subsidiaries	Description	guarantee	Currency	amount
Striking Distance Studios, Inc.	Payment guarantee related to rent	Sunset Building Company, LLC	USD	2,280,000
PUBG Santa Monica, Inc.	Payment guarantee related to rent	Water Garden Realty Holdings LLC etc.	USD	813,600
PUBG Santa Monica, Inc., PUBG Mad Glory LLC, Striking Distance Studios, Inc	Corporate card issuance guarantee	Citibank N.A.	USD	600,000
PUBG Mad Glory, LLC	Office Rent Guarantee	25 West Main Office LLC	USD	1,807,624

As of December 31, 2022, \(\psi 7,366\) million of financial instruments are provided as collateral related to leasehold deposits received from sublessee of Greits Pangyo(formerly, Krafton Tower), \(\psi 30,000\) million of financial instruments are provided as collateral related to loan for Employee Stock Ownership Plan (ESOP) and \(\psi 300\) million of financial instruments are provided as collateral related to corporate cards.

The Group has entered into an agreement to pay performance-based incentives in proportion to the sales performance to executives and employees, including key developers, who can contribute to the Group's long-term growth.

On June 25, 2021, the Group entered into a shareholder agreement with existing shareholders in relation to the acquisition of redeemable convertible preferred stock and common stock of Thingsflow Inc. The main conditions of the contract are summarized as follows:

Type	Contents
Put option	Existing shareholders can request the purchase of all the remaining shares within 3 months from the expiration date of the sale if the IPO is not completed by the deadline for the sale, or if the existing shareholders are unable to sell 50% or more of the shares held to a third party.
Call option	During the exercise period of the put option, the Group's call option contract allows the sale of all shares held by the existing shareholders at an amount equivalent to 120% of the put option exercise price.
Others	Existing shareholders cannot sell, transfer, set up as collateral, or other dispositions without prior written consent within the disposition restriction period.

Type Contents

The Group retains the preferred right to purchase all or part of the shares held by the existing shareholders even after the existing shareholders have obtained prior signed consent or after the disposition restriction period has expired.

On November 23, 2022, the Group entered into a shareholder agreement with existing shareholders including employees holding stock options in relation to the acquisition of preferred stock and common stock of Neon Giant AB. The main terms and conditions of the contract are summarized as follows:

Type Contents

Drag Along Right After 2 years after the date the contract is entered into, if the Company disposes its

entire shares to a third-party purchaser, the Company shall have the right to require

other shareholders to sell its shares to such third-party purchaser.

Tag Along Right After 5 years after the date the contract is entered into, if a one or more than one

shareholder desires to sell 60% of investee company shares, other shareholders

shall have the right to participate in the sale of their shares at the same price.

Put and Call Employees who have stock options have a call option that grants them to sell Options 50% of their shares after full vesting and exercise, at the per-share acquisition

50% of their shares after full vesting and exercise, at the per-share acquisition price of the original share purchase agreement. Also, the Company has a put

option that grants it to purchase the shares of the employees who have the

stock options under the same condition.

Put option The First put option: Existing shareholders hold a put option that allows them to

sell up to 50% of their shares at a value obtained by applying a specific multiple to the performance index for one year after the release of a specific

game.

The second put option: Existing shareholders hold a put option that allows them to sell up to 100% of their remaining shares after exercising the first put option at

a value obtained by applying a specific multiple to the maximum value of 12

months of performance indicators from 2023 to 2029.

Call option After the second put option expires, the Company holds a call option that allows

the Company to purchase existing shareholders' stocks at a value obtained by

applying a specific multiple to the annual performance indicator.

backup call If an existing shareholder voluntarily resigns or resigns for legitimate reasons, the option above-mentioned put option will expire, and the Company holds a call option that

above-mentioned put option will expire, and the Company holds a call option that allows the Company to purchase all remaining shares of the existing shareholders at a value obtained by applying a specific multiple to the performance indicators

for the 12 months prior to the exercise of the backup call option.

The Group has entered into an agreement with the associate, Mirae Asset Maps General Private Equity Investment Trust No.66, regarding the business facilities and living facilities to be developed by the associate on 333-16 Seongsu-dong 2-ga, Seongdong-gu, Seoul, and 4 lots of land. Under the agreement, the Group has entered into responsible lease agreement for 10 years from completion of construction, and have the pre-emptive purchase right at the appraised value at a specific time.

20. Equity

(a) Share capital

Details of share capital as of December 31, 2022 and 2021, are as follows:

(In Korean won and In shares)	December 31, 2022	December 31, 2021
Authorized number of shares	300,000,000	300,000,000
Par value in Korean won	₩ 100	₩ 100
Issued and outstanding number of shares		
Ordinary shares	49,081,545	48,967,045

(b) Changes in share capital and capital surplus

Changes in share capital and consolidated capital surplus for the years ended December 31, 2022 and 2021, are as follows:

(in thousands of Korean won)

Share capital	
₩	4,278,519
	55,786
	562,400
₩	4,896,705
₩	4,896,705
	11,450
₩	4,908,155
	₩ ₩

20. Equity, (cont'd)

(in thousands of Korean		Capita	l surplus	
won)	Share premium	Other capital surplus	Gain on disposal of treasury shares	Total
Balance at January 1, 2021	₩ 1,001,694,447	₩ 2,076,748	₩ -	₩ 1,003,771,195
Exercise of share options and others	57,233,632	-	-	57,233,632
Disposal of treasury shares	-	-	6,452,617	6,452,617
Paid-in capital increase	2,771,641,092	-	-	2,771,641,092
Paid-in capital increase of subsidiaries		(43)		(43)
Balance at December 31, 2021	₩ 3,830,569,171	₩ 2,076,705	₩ 6,452,617	₩ 3,839,098,493
Balance at January 1, 2022 Acquisition of subsidiaries	₩ 3,830,569,171	₩ 2,076,705 (28,468,465)	₩ 6,452,617	₩ 3,839,098,493 (28,468,465)
Paid-in capital increase of subsidiaries	-	(12)	-	(12)
Exercise and expiry of stock options	2,338,585	(5,913,834)	-	(3,575,249)
Gift of shares ¹	-	50,321,406	-	50,321,406
Transfer of capital reserve	(2,409,617,572)			(2,409,617,572)
Balance at December 31, 2022	₩ 1,423,290,184	₩ 18,015,800	₩ 6,452,617	₩ 1,447,758,601

¹ During the year ended December 31, 2022, a shareholder of the Parent company has donated the Parent company's shares to executives and employees free of charge. Accordingly, the Parents company applied share-based payment accounting, and reclassified the ₩ 50,321,406 thousand of other capital which had been recognized during vesting period to other capital surplus at the completion of the donation.

(c) Other components of equity

Other components of equity as of December 31, 2022 and 2021, consist of:

(in thousands of Korean won)	Decer	mber 31, 2022	Decer	mber 31, 2021
Treasury shares ¹	₩	-	₩	-
Share-based payments (Note 21)		56,137,075		46,836,184
Other capital adjustments		47,444,118		108,742,903
Gain on valuation of financial assets at fair value through other comprehensive income (Note 11)		13,948,770		59,656,652
Remeasurements of net defined benefit liability (Note 17)		(2,202,779)		(9,450,771)
Equity adjustments of investments in associates		1,656,829		(190,471)
Exchange differences on translation of foreign operations		74,644,434		732,540
	₩	191,628,447	₩	206,327,037

¹ The acquisition cost of treasury shares is ₩0.

21. Share-based Payments

The terms and conditions of stock options granted by Krafton, Inc. as of December 31, 2022, are as follows:

(in Korean won, except number of shares)		18 th -1	18 th -2	18 th -3	19 th -2
Type of arrangement	Equ	uity-settled	Equity-settled	Equity-settled	Equity-settled
Grantee	En	nployees	Employees	Employees	Employees
Date of grant	Mar	. 30, 2017	Mar. 30, 2017	Mar. 30, 2017	Oct. 20, 2017
No. of shares granted		58,815	158,810	136,125	354,375
Outstanding shares as December 31, 2021	,	35,000	35,000	30,000	20,240
No. of shares exercised during the year	;	35,000	35,000	30,000	-
Outstanding shares as December 31, 2022	of	-	-	-	20,240
Exercise price	∀	∀ 1,003	₩ 1,003	₩ 1,003	₩ 1,452
Vesting conditions		on of services late of vesting	Provision of services to the date of vesting	Provision of services to the date of vesting	Provision of services to the date of vesting
Date of vesting	Ар	r. 1, 2019	Apr. 1, 2020	Apr. 1, 2021	Oct. 20, 2020
Date of expiration	Mar	. 31, 2026	Mar. 31, 2026	Mar. 31, 2026	Oct. 19, 2026
(in Korean won, except number of shares)	19 th -3	19 th -5	20 th	21 th	22 th
number of shares) Type of arrangement	Equity-settled	Equity-sett	led Equity-settle	d Equity-settled	Equity-settled
number of shares) Type of arrangement Grantee	Equity-settled Employees	Equity-sett Employee	led Equity-settle	d Equity-settled Employees	Equity-settled Employees
number of shares) Type of arrangement Grantee Date of grant	Equity-settled Employees Oct. 20, 2017	Equity-sett Employee Oct. 20, 20	led Equity-settle es Employees Jul. 1, 2019	d Equity-settled Employees Aug. 1, 2019	Equity-settled Employees Oct. 1, 2019
number of shares) Type of arrangement Grantee Date of grant No. of shares granted	Equity-settled Employees Oct. 20, 2017 303,750	Equity-sett Employee Oct. 20, 20 150,000	led Equity-settle es Employees Jul. 1, 2019 37,500	d Equity-settled Employees Aug. 1, 2019 29,500	Equity-settled Employees Oct. 1, 2019 6,500
number of shares) Type of arrangement Grantee Date of grant No. of shares granted Outstanding shares as of December 31, 2021	Equity-settled Employees Oct. 20, 2017	Equity-sett Employee Oct. 20, 20	led Equity-settle es Employees Jul. 1, 2019	d Equity-settled Employees Aug. 1, 2019	Equity-settled Employees Oct. 1, 2019
number of shares) Type of arrangement Grantee Date of grant No. of shares granted Outstanding shares as	Equity-settled Employees Oct. 20, 2017 303,750	Equity-sett Employee Oct. 20, 20 150,000	led Equity-settle es Employees Jul. 1, 2019 37,500	d Equity-settled Employees Aug. 1, 2019 29,500	Equity-settled Employees Oct. 1, 2019 6,500
number of shares) Type of arrangement Grantee Date of grant No. of shares granted Outstanding shares as of December 31, 2021 No. of shares exercised during the year No. of shares cancelled during the year	Equity-settled Employees Oct. 20, 2017 303,750	Equity-sett Employee Oct. 20, 20 150,000 14,500	led Equity-settle es Employees Jul. 1, 2019 37,500	d Equity-settled Employees Aug. 1, 2019 29,500	Equity-settled Employees Oct. 1, 2019 6,500
number of shares) Type of arrangement Grantee Date of grant No. of shares granted Outstanding shares as of December 31, 2021 No. of shares exercised during the year No. of shares cancelled during the year Outstanding shares as	Equity-settled Employees Oct. 20, 2017 303,750	Equity-sett Employee Oct. 20, 20 150,000 14,500	led Equity-settle es Employees 17 Jul. 1, 2019 37,500 37,500	d Equity-settled Employees Aug. 1, 2019 29,500 29,400	Equity-settled Employees Oct. 1, 2019 6,500 6,500
number of shares) Type of arrangement Grantee Date of grant No. of shares granted Outstanding shares as of December 31, 2021 No. of shares exercised during the year No. of shares cancelled during the year	Equity-settled Employees Oct. 20, 2017 303,750 303,750	Equity-sett Employee Oct. 20, 20 150,000 14,500	led Equity-settle es Employees Jul. 1, 2019 37,500 37,500	d Equity-settled Employees Aug. 1, 2019 29,500 29,400 29,400 ₩ 44,000	Equity-settled Employees Oct. 1, 2019 6,500 6,500 - 6,500 - 5,500 - 4,44,000
number of shares) Type of arrangement Grantee Date of grant No. of shares granted Outstanding shares as of December 31, 2021 No. of shares exercised during the year No. of shares cancelled during the year Outstanding shares as of December 31, 2022 Exercise price	Equity-settled Employees Oct. 20, 2017 303,750 303,750 - 303,750 ₩ 1,452 Provision of	Equity-sett Employee Oct. 20, 20 150,000 14,500	Equity-settle Employees Jul. 1, 2019 37,500 37,500 - 37,500 - 37,500 Provision of	Equity-settled Employees Aug. 1, 2019 29,500 29,400 - 29,400 - W 44,000 Provision of	Equity-settled Employees Oct. 1, 2019 6,500 6,500 - 6,500 - W 44,000 Provision of
number of shares) Type of arrangement Grantee Date of grant No. of shares granted Outstanding shares as of December 31, 2021 No. of shares exercised during the year No. of shares cancelled during the year Outstanding shares as of December 31, 2022	Equity-settled Employees Oct. 20, 2017 303,750 303,750 - 303,750 W 1,452	Equity-sett Employee Oct. 20, 20 150,000 14,500	led Equity-settle es Employees 117 Jul. 1, 2019 37,500 37,500 - 37,500 - 37,500 - 2 \times 44,000 of Provision of e date services to the of g	d Equity-settled Employees Aug. 1, 2019 29,500 29,400 - 29,400 W 44,000 Provision of date services to the da of vesting	Equity-settled Employees Oct. 1, 2019 6,500 6,500 - 6,500 - 4,44,000 Provision of te services to the date of vesting
number of shares) Type of arrangement Grantee Date of grant No. of shares granted Outstanding shares as of December 31, 2021 No. of shares exercised during the year No. of shares cancelled during the year Outstanding shares as of December 31, 2022 Exercise price	Equity-settled Employees Oct. 20, 2017 303,750 303,750 - 303,750 W 1,452 Provision of services to the	Equity-sett Employee Oct. 20, 20 150,000 14,500	led Equity-settle es Employees 17 Jul. 1, 2019 37,500 37,500 — 37,500 — 444,000 of Provision of e date services to the eg of vesting Jun. 30, 2021 (3020 Jun. 30, 2022 (3020 Jun. 3020 Jun	d Equity-settled Employees Aug. 1, 2019 29,500 29,400 - 29,400 - 29,400 Provision of date services to the da of vesting 85%) Jul. 31, 2021 (35%) 35%) Jul. 31, 2022 (35%)	Equity-settled Employees Oct. 1, 2019 6,500 6,500 - 6,500 - \$\fomale 44,000\$ Provision of te services to the date

21. Share-based Payments, (cont'd)

(in Korean won, except number of					
shares)	23 rd	24 th	25 th	26 th	27 th
Type of arrangement	Equity-settled Cash-settled	Equity-settled Cash-settled	Equity-settled	Equity-settled	Equity-settled
Grantee	Employees	Employees	Employees	Employees	Employees
Date of grant	Nov. 5, 2020	Nov. 5, 2020	Mar. 31, 2021	Mar. 31, 2021	Mar. 31, 2021
No. of shares granted	50,000	650,000	178,750	2,500	60,000
Outstanding shares as of December 31, 2021	50,000	650,000	175,000	2,500	-
No. of shares granted during the year	-	-	-	-	60,000
No. of shares cancelled during the year	-	-	23,000	-	-
Outstanding shares as of December 31, 2022	50,000	650,000	152,000	2,500	60,000
Exercise price	₩ 144,000	₩ 144,000	₩ 190,000	₩ 190,000	₩ 279,310
Vesting conditions	Provision of services to the date of vesting	Achievement of the target share price after IPO	Provision of services to the date of vesting	Provision of services to the date of vesting	Provision of services to the date of vesting
Date of vesting	Nov. 5, 2022(35%) Nov. 5, 2023(35%) Nov. 5, 2024(30%)	25% each upon achievement of the target share price after IPO	Mar. 31, 2023(35%) Mar. 31, 2024(35%) Mar. 31, 2025(30%)		Mar. 31, 2024(35%) Mar. 31, 2025(35%) Mar. 31, 2026(30%)
Date of expiration	Nov. 4, 2032	Nov. 4, 2032	Mar. 30, 2028	Mar. 30, 2025(70%) Mar. 30, 2027(30%)	Mar. 30, 2029

¹ The Parent company conducted a share split by lowering the par value from ₩500 to ₩100 on May 4, 2021, as the effective date. Accordingly, the quantity and exercise price of stock options have been adjusted.

21. Share-based Payments, (cont'd)

The terms and conditions of stock options granted by Thingsflow Inc. as of December 31, 2022, are as follows:

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The terms and conditions of stock options granted by Neon Giant AB as of December 31, 2022, are as follows:

(in Swedish Krona,, except number of shares)	1 st	2 nd	3 rd	4 th
Type of arrangement	Equity-settled	Equity-settled	Equity-settled	Equity-settled
Grantee	Employees	Employees	Employees	Employees
Date of grant	Aug. 22, 2019	Aug. 23, 2019	Jan. 4, 2021	May. 31, 2021
No. of shares granted	333	2,350	300	500
Outstanding shares as of business combination	333	2,350	300	500
Outstanding shares as of December 31, 2022	333	2,350	300	500
Exercise price	1SEK	1SEK	1SEK	1SEK
	Provision of	Provision of	Provision of	Provision of
Vesting conditions	services to the date of vesting	services to the date of vesting	services to the date of vesting	services to the date of vesting
Date of vesting	Aug. 22, 2022	Aug. 23, 2022	Jan. 4, 2024	May. 31, 2024
Date of expiration	Aug. 22, 2024	Aug. 23, 2024	Jan. 4, 2026	May. 31, 2026

21. Share-based Payments, (cont'd)

The terms and conditions of performance-based incentives by Krafton, Inc. as of December 31, 2022, are as follows:

(in Korean won, except number of shares)	2 nd	3 rd -0	3 rd -1	3 rd -2
Date of grant	Oct. 31, 2017	Dec. 22, 2017	Dec. 22, 2017	Feb. 1, 2018
Type of arrangement	Equity-linked Cash Compensation	Equity-linked Cash Compensation	Equity-linked Cash Compensation	Equity-linked Cash Compensation
No. of shares granted	23,063	28,000	26,188	3,750
Outstanding shares as of December 31, 2022	9,000	6,000	7,490	1,125
Exercise price	₩ 1,452	₩ 1,452	₩ 1,452	₩ 1,452
Vesting conditions	Provision of services to the date of vesting	Provision of services to the date of vesting	Provision of services to the date of vesting	Provision of services to the date of vesting
Type of arrangement	Cash	Cash	Cash	Cash
Date of vesting	Nov. 1, 2019(35%) Nov. 1, 2020(35%) Nov. 1, 2021(30%)	Dec. 23, 2019(35%) Dec. 23, 2020(35%) Dec. 23, 2021(30%) 4 years from date of	Dec. 23, 2019(35%) Dec. 23, 2020(35%) Dec. 23, 2021(30%)	Feb. 2, 2020(35%) Feb. 2, 2021(35%) Feb. 2, 2022(30%)
Date of expiration	4 years from date of vesting	vesting	4 years from date of vesting	4 years from date of vesting
(in Korean won, except number of shares)	4 th -1	4 th -2	5 th -1	5 th -2
•	Mar. 31, 2018	Mar. 31, 2018	Jun. 30, 2018	Jun. 30, 2018
number of shares) Date of grant Type of arrangement	Mar. 31, 2018 Equity-linked Cash Compensation	Mar. 31, 2018 Equity-linked Cash Compensation	Jun. 30, 2018 Equity-linked Cash Compensation	Jun. 30, 2018 Equity-linked Cash Compensation
number of shares) Date of grant Type of arrangement No. of shares granted	Mar. 31, 2018 Equity-linked	Mar. 31, 2018 Equity-linked	Jun. 30, 2018 Equity-linked	Jun. 30, 2018 Equity-linked
number of shares) Date of grant Type of arrangement No. of shares granted Outstanding shares as of	Mar. 31, 2018 Equity-linked Cash Compensation	Mar. 31, 2018 Equity-linked Cash Compensation	Jun. 30, 2018 Equity-linked Cash Compensation	Jun. 30, 2018 Equity-linked Cash Compensation
number of shares) Date of grant Type of arrangement No. of shares granted	Mar. 31, 2018 Equity-linked Cash Compensation 56,500	Mar. 31, 2018 Equity-linked Cash Compensation 48,250	Jun. 30, 2018 Equity-linked Cash Compensation 6,250	Jun. 30, 2018 Equity-linked Cash Compensation 7,500
number of shares) Date of grant Type of arrangement No. of shares granted Outstanding shares as of December 31, 2022	Mar. 31, 2018 Equity-linked Cash Compensation 56,500 19,250	Mar. 31, 2018 Equity-linked Cash Compensation 48,250 14,000	Jun. 30, 2018 Equity-linked Cash Compensation 6,250 1,750 W 14,000 Provision of services	Jun. 30, 2018 Equity-linked Cash Compensation 7,500 7,500
number of shares) Date of grant Type of arrangement No. of shares granted Outstanding shares as of December 31, 2022 Exercise price	Mar. 31, 2018 Equity-linked Cash Compensation 56,500 19,250 W 14,000 Provision of services to the date of vesting Cash	Mar. 31, 2018 Equity-linked Cash Compensation 48,250 14,000 W 44,000 Provision of services to the date of vesting Cash	Jun. 30, 2018 Equity-linked Cash Compensation 6,250 1,750 W 14,000 Provision of services to the date of vesting Cash	Jun. 30, 2018 Equity-linked Cash Compensation 7,500 7,500 W 58,000 Provision of services to the date of vesting Cash
number of shares) Date of grant Type of arrangement No. of shares granted Outstanding shares as of December 31, 2022 Exercise price Vesting conditions	Mar. 31, 2018 Equity-linked Cash Compensation 56,500 19,250 W 14,000 Provision of services to the date of vesting	Mar. 31, 2018 Equity-linked Cash Compensation 48,250 14,000 W 44,000 Provision of services to the date of vesting	Jun. 30, 2018 Equity-linked Cash Compensation 6,250 1,750 W 14,000 Provision of services to the date of vesting	Jun. 30, 2018 Equity-linked Cash Compensation 7,500 7,500 ₩ 58,000 Provision of services to the date of vesting

21. Share-based Payments, (cont'd)

(in Korean won, except number of shares)	6 th -1	6 th -2	7 th	8 th
Date of grant	Aug. 1, 2018	Aug. 1, 2018	Aug. 31, 2018	Sep. 30, 2018
Type of arrangement	Equity-linked Cash Compensation	Equity-linked Cash Compensation	Equity-linked Cash Compensation	Equity-linked Cash Compensation
No. of shares granted	55,725	5,000	25,000	6,250
Outstanding shares as of December 31, 2022	51,225	1,500	2,500	4,500
Exercise price	₩ 44,000	₩ 58,000	₩ 44,000	₩ 44,000
Vesting conditions	Provision of services to the date of vesting	Provision of services to the date of vesting		Provision of services to the date of vesting
Type of arrangement	Cash	Cash	Cash	Cash
Date of vesting	Aug. 2, 2020(20%) Aug. 2, 2021(30%) Aug. 2, 2022(20%) Aug. 2, 2023(30%)	Aug. 2, 2020(35%) Aug. 2, 2021(35%) Aug. 2, 2022(30%)	Sep. 1, 2020(35%) Sep. 1, 2021(35%) Sep. 1, 2022(30%)	Oct. 1, 2020(35%) Oct. 1, 2021(35%) Oct. 1, 2022(30%)
Date of expiration	4 years from date of vesting	4 years from date of vesting	4 years from date of vesting	4 years from date of vesting

(in Korean	won,	except number of
shares)		

13th-1

Date of grant Type of arrangement	Nov. 12, 2018 Equity-linked Cash Compensation	Jan. 2, 2020 Equity-linked Cash Compensation
No. of shares granted	7,500	6,500
Outstanding shares as of December 31, 2022	2,250	4,500
Exercise price	₩ 78,000	₩ 1,452
Vesting conditions	Provision of services to the date of vesting	Provision of services to the date of vesting
Type of arrangement	Cash	Cash
Date of vesting	Nov. 13, 2020(35%) Nov. 13, 2021(35%) Nov. 13, 2022(30%)	Dec. 23, 2020(54%) Dec. 23, 2021(46%)
Date of expiration	4 years from date of vesting	4 years from date of vesting

9th

¹ The Parent company conducted a share split by lowering the par value from ₩500 to ₩100 on May 4, 2021, as the effective date. Accordingly, the quantity and exercise price of performance-based incentives have been adjusted.

² According to the terms of the performance-based incentives granted by the Group to its executives and employees, the compensation has been changed to be granted in accordance with the stock price at the time of exercise after the listing.

21. Share-based Payments, (cont'd)

The terms and conditions of restricted stock unit as of December 31, 2022, are as follows:

(in Korean won, except number of shares)	1 st	2 nd -1	2 nd -2	2 nd -3	2 nd -4
Date of grant	Apr. 1, 2022	Apr. 1, 2022	Apr. 1, 2022	Apr. 1, 2022	Apr. 1, 2022
Type of arrangement	Equity-settled	Cash-settled	Cash-settled	Cash-settled	Cash-settled
No. of shares granted	1,000	24,375	19,175	4,225	6,500
Outstanding shares as of December 31, 2022	1,000	11,250	8,850	1,950	6,500
Exercise price	_	₩ 44,000	₩ 44,000	₩ 44,000	₩ 190,000
	Provision of	Provision of	Provision of	Provision of	Provision of
Vesting conditions	services to the	services to the	services to the date	services to the date	services to the date
	date of vesting	date of vesting	of vesting	of vesting	of vesting
Type of arrangement	Stock	Cash	Cash	Cash	Cash
Date of vesting	Apr.1,2023 (35%) Apr.1,2024 (35%) Apr.1,2025 (30%)	Jun.30,2022 (54%) Jun.30,2023 (46%)		Sep.30,2022 (54%) Sep.30,2023 (46%)	Apr.1, 2023 (35%) Apr.1, 2024 (35%) Apr.1, 2025 (30%)
Date of expiration	_	_	_	_	-

(in Korean won, except number of shares)	3 rd	4 th -1	4 th -2	4 th -3	4 th -3 (Market performance conditions added)
Date of grant Type of arrangement	May. 2, 2022 Equity-settled	Jun. 1, 2022 Equity-settled	Jun. 1, 2022 Cash-settled	Jun. 1, 2022 Equity-settled	Jun. 1, 2022 Equity-settled
No. of shares granted	1,000	35,540	6,990	27,000	18,000
Outstanding shares as of December 31, 2022	1,000	35,180	4,310	27,000	18,000
					Provision of
	Provision of	Provision of	Provision of	Provision of	services to the date
Vesting conditions	services to the	services to the	services to the date	services to the date	5
	date of vesting	date of vesting	of vesting	of vesting	achievement of the target share price
Type of arrangement	Stock	Stock	Cash	Stock	Stock
					Satisfy the period of
	May.2,2023 (35%)	Jun.1,2023 (35%)	Jun.1,2023 (35%)	Jun.1,2023 (35%)	continued service,
Date of vesting	May.2,2024 (35%)	Jun.1,2024 (35%)	Jun.1,2024 (35%)	Jun.1,2024 (35%)	and upon
	May.2,2025 (30%)	Jun.1,2025 (30%)	Jun.1,2025 (30%)	Jun.1,2025 (30%)	achievement of the
					target share price
Data of audication					Jun.1, 2025 (35%) Jun.1, 2026 (35%)
Date of expiration	_	_	_	_	Jun.1, 2027 (30%)
					Juli. 1, 2027 (30 %)

21. Share-based Payments, (cont'd)

(in Korean won, except 5th number of shares) Date of grant Oct. 10, 2022 Type of arrangement Cash-settled 2,000 No. of shares granted Outstanding shares as of 2,000 December 31, 2022 Provision of services to Vesting conditions the date of vesting Type of arrangement Cash Oct.10,2023 (35%) Oct.10,2024 (35%) Date of vesting Oct.10,2025 (30%) Date of expiration

Changes in the number of share options(Krafton, Inc.) granted and weighted average exercise price for the years ended December 31, 2022 and 2021, are as follows:

(in Korean won,	Decembe	r 31, 2022	Decembe	December 31, 2021		
except number of shares)	Granted number	Weighted average exercise price	Granted number	Weighted average exercise price		
Beginning	1,389,390	₩ 99,57	3 1,769,750	₩ 59,554		
Grant	60,000	279,31	0 181,250	190,000		
Forfeit / Expired	(96,400)	78,83	4 (3,750)	190,000		
Exercise	(114,500)	1,06	0 (557,860)	1,389		
Ending	1,238,490	₩ 119,00	3 1,389,390	₩ 99,573		

¹ The Parent company conducted a share split by lowering the par value from ₩500 to ₩100 on May 4, 2021, as the effective date. Accordingly, the quantity and exercise price of performance-based incentives have been adjusted.

Changes in the number of share options(Thingsflow Inc.) granted and weighted average exercise price for the years ended December 31, 2022 and 2021, are as follows:

(in Korean won,	December 31, 2022			December 31, 2021		
except number of shares)	Granted number		Weighted average exercise price	Granted number		Weighted average exercise price
Beginning	850	₩	99,174	-	₩	-
Increased by business combination	-		-	850		99,174
Ending	850	₩	99,174	850	₩	99,174

21. Share-based Payments, (cont'd)

Changes in the number of share options(Neon Giant AB) granted and weighted average exercise price for the year ended December 31, 2022 are as follows:

(in Swedish Krona, except	December 31, 2022				
number of shares)	Granted number	Weighted average exercise price			
Beginning	-	-			
Increased by business combination	3,483	1			
Ending	3,483	1			

Changes in the number of equity-linked compensation granted and weighted average exercise price for the years ended December 31, 2022 and 2021, are as follows:

(in Korean won, except number of shares)	December 31, 2022			December 31, 2021		
	Granted number		Weighted average exercise price	Granted number		Weighted average exercise price
Beginning	224,930	₩	27,821	280,295	₩	27,818
Exercise	(92,340)		22,173	(55,365)		27,805
Ending	132,590	₩	31,754	224,930	₩	27,821

Changes in the number of restricted stock unit for the year ended December 31, 2022, are as follows:

(in Korean won, except	December 31, 2022					
number of shares)	Granted number		ghted average sercise price			
Beginning	-	₩	-			
Grant	145,805		22,887			
Forfeit / Expired	(3,040)		-			
Exercise	(25,725)		44,000			
Ending	117,040	₩	18,841			

As of December 31, 2022, 341,490 of share options of Krafton, inc. are exercisable and the weighted average exercise price is $\mbox{$W$}$ 8,757. As of December 31, 2022, 60 of share options of Thingsflow Inc. are exercisable and the weighted average exercise price is $\mbox{$W$}$ 99,174. Also as of December 31, 2022, 2,683 of share options of Neon Giant AB are exercisable and the weighted average exercise price is 1 SEK.

21. Share-based Payments, (cont'd)

As of December 31, 2022, 115,873 of performance-based incentives are exercisable and the weighted average exercise price is \(\pi\) 29,987.

As of December 31, 2022, there are no exercisable restricted stock unit.

The Group measured the cost of the share options granted as of December 31, 2022 and 2021, by fair value using the binomial model method. The related assumptions and variables to measure the cost of the stock options granted are as follows:

(in Korean won)	D	ecember 31, 2022	De	December 31, 2021		
Weighted average fair value of share options granted during the year	₩	96,894	₩	92,629		
Weighted average share price at grant date	₩	275,500	₩	241,811		
Price volatility		50.17%		41.90%		
Risk-free interest rate	2	2.36%~2.85%	0	.92%~1.46%		

The Group measured the cost of the share options granted as of December 31, 2022 and 2021, by fair value using the binomial model and Monte Carlo method. The related assumptions and variables to measure the cost of the stock options granted are as follows:

(in Korean won)	Dec	cember 31, 2022	December 31, 2021		
Weighted average fair value of share options granted during the year	₩	75,310	₩	153,904	
Weighted average share price at grant date	₩	168,000	₩	460,000	
Price volatility		53.22%		57.22%	
Risk-free interest rate	3.	73%~3.80%	0.	97%~2.21%	

The Group measured the cost of the performance-based incentives granted as of December 31, 2022 and 2021, by fair value using the Monte Carlo method. The related assumptions and variables to measure the cost of performance-based incentives granted are as follows:

(in Korean won)	December 31, 2022		De	ecember 31, 2021
Weighted average fair value of share options granted during the year	₩	136,977	₩	439,496
Weighted average share price at grant date	₩	168,000	₩	460,000
Price volatility		53.22%		57.22%
Risk-free interest rate	3.	.66%~3.79%	(0.97%~1.65%

21. Share-based Payments, (cont'd)

The Group measured the cost of the restricted stock unit granted for the year ended December 31, 2022, by fair value using the binomial model and Monte Carlo method. The related assumptions and variables to measure the cost of the restricted stock unit granted are as follows:

(in Korean won)		December 31, 2022
Weighted average fair value of share options granted during the year	₩	239,080
Weighted average share price at grant date	₩	259,627
Price volatility		48.70%~50.19%
Risk-free interest rate		1.84%~3.85%

The Group measured the cost of restricted stock unit granted as of December 31, 2022, by fair value using the binomial model. The related assumptions and variables to measure the cost of restricted stock unit granted are as follows:

(in Korean won)	December 31, 2022			
Weighted average fair value of share options granted during the year	₩	113,630		
Weighted average share price at grant date	₩	168,000		
Price volatility		53.22%		
Risk-free interest rate		3.71%~3.78%		

Details of the expenses in relation to the share options and performance-based incentives granted to employees of the Group for the years ended December 31, 2022 and 2021, are as follows:

(in thousands of Korean won)	December 31, 2022		December 31, 2021			
Total share-based payment		_				
expenses						
Operating costs ¹	₩	(63,555,367)	₩	167,027,026		
	₩	(63,555,367)	₩	167,027,026		

¹During the year ended December 31, 2022, a shareholder of the Company has donated the Company's shares to executives and employees free of charge. Accordingly, the Group applied share-based payment accounting, and recognized ₩(-)11,077,720 thousand in share-based payment expenses which was caused from changes in the fair value of the shares and the elapsed vesting period during the year ended December 31, 2022.

22. Revenue from Contracts with Customers and Contract Assets and Liabilities

(a) Revenue from contracts with customers

The Group earns revenue as follows:

(in thousands of Korean won)	December 31, 2022		Dec	cember 31, 2021
Revenue from contracts with customers	₩	1,848,186,907	₩	1,877,177,637
Revenue from other sources		5,829,184		8,174,174
	₩	1,854,016,091	₩	1,885,351,811

The Group derives revenue from the transfer of goods and services over time or at a point in time in the following major services:

(in thousands of Korean won)	December 31, 2022	December 31, 2021
Transfer over time		
PC	₩ 431,275,205	5 ₩ 394,354,597
Mobile	1,252,650,309	9 1,417,152,228
Console	29,731,075	18,360,662
Others	26,046,650	41,713,576
Transfer at a point in time		
PC	33,702,947	4,092,379
Mobile	122,573	-
Console	74,350,126	1,271,027
Others	6,137,206	8,407,342
	₩ 1,854,016,091	₩ 1,885,351,811

Details of the Group's revenue by geographic areas for the years ended December 31, 2022 and 2021, are as follows:

(in thousands of Korean won)		December 31, 2022			December	r 31, 2021
		Revenue	Ratio		Revenue	Ratio
Asia	₩	1,485,121,336	80.10%	₩	1,630,503,547	86.48%
Korea		103,037,703	5.56%		121,784,536	6.46%
America / Europe		251,885,758	13.59%		106,778,008	5.66%
Others		13,971,294	0.75%		26,285,720	1.40%
	₩	1,854,016,091	100.00%	₩	1,885,351,811	100.00%

22. Revenue from Contracts with Customers and Contract Assets and Liabilities, (cont'd)

(b) Contract liabilities

The Group has recognized the following assets and liabilities related to contracts with customers:

(in thousands of Korean won)	December 31, 2022	December 31 2021	,
Contracts liabilities (unearned revenue)	₩ 74,815,028	₩ 89,569,3	27

(c) Significant changes in contract assets and liabilities

Contract liabilities are unearned revenue recognized over time, and the amount changes when there are new customers and time elapses.

(d) Revenue recognized in relation to contract liabilities

The following table shows how much of the revenue recognized in the current and prior reporting periods relates to contract liabilities.

(in thousands of Korean won)		December 31, 2022		December 31, 2021	
Revenue recognized that was included in the contract liability balance at the beginning of the year	₩	69,286,211	₩	67,749,770	

23. Operating Costs

Operating costs for the years ended December 31, 2022 and 2021, are as follows:

(in thousands of Korean won)	December 31, 2022		Dece	mber 31, 2021				
Application fees / Cost of sales	₩	207,130,496	₩	192,892,963				
Salaries and bonuses		282,922,754		289,296,575				
Post-employment benefits		23,058,654		13,688,656				
Employee benefits		58,831,686		42,007,725				
Travel		7,977,365		2,958,788				
Depreciation		74,241,864		60,921,930				
Depreciation – Investment properties		745,365		622,801				
Amortization		29,632,116		3,900,442				
Insurance		9,109,810		3,805,971				
Supplies	2,238,389			4,897,867				
Commissions and fees	325,252,471			359,390,874				
Advertising	129,652,967			82,215,634				
Share-based payment expenses	(63,555,367)		(63,555,367)		(63,555,367)			167,027,026
Bad debts expense	3,271,519			961,724				
Others		11,899,432		10,154,781				
	₩	1,102,409,521	₩	1,234,743,757				

24. Other Income and Expenses

Other income and expenses for the years ended December 31, 2022 and 2021, are as follows:

(in thousands of Korean won)	December 31, 2022		De	ecember 31, 2021
Other income				
Gain on foreign exchange	₩	196,604,362	₩	117,696,580
Gain on disposal of property and equipment		112,761		22,573
Gain on disposal of leases		3,778,585		934,733
Gain on disposal of intangible assets		6,207,603		12,092,613
Gain on valuation of other investment assets		12,566		19,655
Gain on disposal of financial assets at fair value through profit or loss		19,093,865		891,732
Gain on valuation of financial assets at fair value through profit or loss		43,185,227		21,058,286
Gain on valuation of financial liabilities at fair value through profit or loss		12,373,852		-
Gain on transactions of derivative instruments		-		253,841
Dividend income		349,946		229,827
Reversal other impairment loss		-		308,519
Others		1,183,778		3,134,300
	₩	282,902,545	₩	156,642,659
Other expenses				
Loss on foreign exchange	₩	56,846,563	₩	13,234,178
Loss on disposal of property and equipment		1,193,802		904,513
Loss on impairment of property and equipment		26,424		-
Loss on disposal of leases		117,181		357,045
Impairment loss on intangible assets		149,154,193		26,535,136
Loss on disposal of intangible assets		4		1
Other impairment loss		(10,742)		16,330
Loss on valuation of financial assets at fair value through profit or loss		53,427,317		87,175
Loss on disposal of financial assets at fair value through profit or loss		66,346,075		-
Loss on valuation of financial liabilities at fair value through profit or loss		9,974,538		1,795,706
Loss on transactions of financial liabilities at fair value through profit or loss		3,166,305		555,013
Loss on valuation of derivative instruments		785,814		234,972
Donations		302,786		4,220,134
Loss on transactions of investments in subsidiaries		-		73,665
Others		119,997		991,579
	₩	341,450,257	₩	49,005,447

25. Finance Income and Costs

Finance income and finance costs for the years ended December 31, 2022 and 2021, are as follows:

(in thousands of Korean won)	December 31, 2022		December 31, 2021	
Finance income				
Interest income	₩	33,720,563	₩	10,875,115
Financial guarantee income		370		305
	₩	33,720,933	₩	10,875,420
Finance costs		_		_
Interest expenses	₩	7,577,465	₩	6,954,371
Financial guarantee expenses		21,685		21,929
	₩	7,599,150	₩	6,976,300

26. Income Tax Expense

Income tax expense for the years ended December 31, 2022 and 2021, consists of:

(in thousands of Korean won)	De	ecember 31, 2022	De	ecember 31, 2021
Current tax	₩	174,003,856	₩	265,977,548
Deferred tax due to temporary differences		(18,979,272)		(25,804,697)
Income tax expense charged directly to equity		13,219,143		(9,664,670)
Income tax expense	₩	168,243,727	₩	230,508,181
Income tax expense for continuing operations		168,702,206		230,914,305
Income tax expense for discontinued operations		(458,479)		(406,124)

Reconciliation between profit before income tax and income tax expense for the years ended December 31, 2022 and 2021, are as follows:

(in thousands of Korean won)	De	cember 31, 2022	De	cember 31, 2021
Net profit before income tax in continuing operations	₩	683,876,920	₩	761,169,471
Net loss before income tax expense from discontinued operations		(15,479,161)		(10,783,667)
Profit before income tax		668,397,759		750,385,804
Income tax based on statutory tax rate		173,447,384		195,994,096
Adjustments:				
Income not subject to tax		7,291,304		13,617,350
Tax credit and others		(11,090,757)		(15,008,248)
Foreign tax credit		1,381,144		29,794,709
Claim for rectification		(2,378,394)		6,156,287
Additional tax on corporate income		(373,268)		5,243,268
Others		(33,686)		(5,289,281)
Income tax expense	₩	168,243,727	₩	230,508,181
Effective tax rate		25.17%		30.43%

26. Income Tax Expense, (cont'd)

Changes in the temporary differences and related deferred tax assets and liabilities for the years ended December 31, 2022 and 2021, are as follows:

(in thousands of	December 31, 2022														
Korean won)	Temporary differences and others							Deferred tax assets (liabilities)							
	E	3eginning	Increase or decrease due to business combination	Increase (decrease)		Ending		Beginning	d	ease or decrease ue to business combination		Increase (decrease)	Ending		
Post-employment benefit obligation	₩	17,184,697 ₩	1,898,032 ₩	(3,140,273)	₩	15,942,456	₩	4,725,792	₩	521,959	₩	(1,037,650) ₩	4,210,101		
Plan assets		-	(530,097)	(778,480)		(1,308,577)		-		(145,777)		(214,082)	(359,859)		
Accrued income		(878,811)	-	(74,363)		(953,174)		(241,673)		-		(10,776)	(252,449)		
Unearned revenue		69,465,164	-	50,849		69,516,013		19,102,920		-		(722,243)	18,380,677		
Deferred expenses		(12,741,386)	-	(2,902,298)		(15,643,684)		(3,503,881)		-		(642,406)	(4,146,287)		
Accrued expenses		154,584,015	597,675	(56,667,836)		98,513,854		42,510,604		163,056		(16,570,767)	26,102,893		
Right-of-use assets		(144,932,096)	(264,984)	9,684,822		(135,512,258)		(39,856,326)		(69,832)		4,079,946	(35,846,212)		
Lease liabilities		155,730,697	2,110,991	22,892,833		180,734,521		42,825,942		475,319		4,527,722	47,828,983		
Lease receivables		(9,273,955)	-	(36,829,218)		(46,103,173)		(2,550,338)		-		(9,667,003)	(12,217,341)		
Present value discounts		5,721,735	5,141	(1,880,731)		3,846,145		1,573,477		1,131		(555,619)	1,018,989		
Provision for impairment		94,750,422	476	(5,456,389)		89,294,509		26,056,366		131		(2,393,252)	23,663,245		
Depreciation		21,001	30,287	7,659,324		7,710,612		5,775		8,329		1,683,202	1,697,306		
Amortization		(353,272,715)	(460,413)	52,402,340		(301,330,788)		(70,367,604)		(101,291)		10,396,959	(60,071,936)		
Government grants		1,279,581	-	(927,581)		352,000		351,885		-		(258,605)	93,280		
Allowance for depreciation		(1,279,581)	-	927,581		(352,000)		(351,885)		-		258,605	(93,280)		
Accumulated depreciation		(3,250)	-	3,250		-		(894)		-		894	-		
Facilities		(624,286)	-	312,572		(311,714)		(171,679)		-		87,788	(83,891)		
Bad debt expenses		119,265	21,814	(21,814)		119,265		32,798		5,999		(7,192)	31,605		
Gain on valuation of financial															
assets at fair value through profit		(17,743,950)	-	202,413,388		184,669,438		(4,879,586)		-		53,816,987	48,937,401		
or loss															

(in thousands of				Decen	nber 3	31, 2022						
Korean won)		Temporary differ	ences and others	i	Deferred tax assets (liabilities)							
	Beginning	Increase or decrease due to business combination	Increase (decrease)	Ending	ı	Beginning	Increase or decrease due to business combination	Increase (decrease)	Ending			
Gain on valuation of financial assets at fair value through other comprehensive income	₩ (76,652,613) ₩	-	₩ 61,349,736	₩ (15,302,877)		(21,079,469)	-	17,024,207	(4,055,262)			
Investments in subsidiaries	51,040,728	1,907	(142,480,028)	(91,437,393)	₩	14,036,200	₩ 524	₩ (38,267,633) ₩	∀ (24,230,909)			
Investments in associates	(33,776,449)	-	41,628,179	7,851,730		(9,288,523)	-	11,369,232	2,080,709			
Provision for restoration costs	12,398,018	-	1,240,621	13,638,639		3,409,455	-	204,784	3,614,239			
Other provisions	37,529,676	-	(34,626,848)	2,902,828		10,320,661	-	(9,551,412)	769,249			
Financial guarantee liabilities	12,893	-	11,666	24,559		3,546	-	2,962	6,508			
Derivative instruments	5,127,343	11,779,683	(1,022,012)	15,885,014		1,410,019	3,239,413	(519,944)	4,129,488			
Impairment loss on intangible assets	425,618	4,164	(253,223)	176,559		117,045	1,145	(71,402)	46,788			
Bonuses	33,091	-	(33,091)	-		9,100	-	(9,100)	-			
Other receivables	(147,429)	-	-	(147,429)		(40,543)	-	1,474	(39,069)			
Commissions	147,490	-	-	147,490		40,560	-	(1,475)	39,085			
Long-term accrued expenses	5,326,466	-	(4,281,871)	1,044,595		1,464,778	-	(1,206,828)	257,950			
Share-based payment expenses	59,650,111	-	(30,868,838)	28,781,273		16,403,781	-	(8,776,744)	7,627,037			
Accounts payable	523,413	-	(183,545)	339,868		143,939	-	(53,874)	90,065			
Development costs	187,117	189,578	(188,347)	188,348		51,457	52,134	(52,731)	50,860			
Membership rights	42,155	-	(4,437)	37,718		11,593	-	(1,598)	9,995			
Unpaid interest	317,152	-	(317,152)	-		87,217	-	(87,217)	-			
Convertible redeemable preferred			1,326,725	1,326,725				291,879	291,879			
stock	-	-	1,320,723	1,320,723		-	-	291,079	291,079			
Others	17,601,338	(546,978)	128,401,628	145,455,988		4,840,368	(546,978)	8,479,617	12,773,007			
Tax losses	101,198,198	-	-	101,198,198		27,829,504	-	(1,011,981)	26,817,523			
Tax credits	9,796,052		1,145,334	10,941,386	_	9,796,052		425,829	10,221,881			
	₩ 148,886,915 ₩	14,837,276	₩ 208,512,473	₩ 372,236,664		74,828,433	3,605,262	20,960,553	99,394,248			
Unrecognized deferred assets						(53,806,288)	(4,254,948)	(7,798,932)	(65,860,168)			
-					₩	21,022,145	₩ (649,686)	₩ 13,161,621 ₩	∀ 33,534,080			

26. Income Tax Expense, (cont'd)

(in thousands of	December 31, 2021												
Korean won)	Temporary differences and others						Deferred tax assets (liabilities)						
	Beginning	Increase or decrease due to business combination	Increase (decrease)		Ending		Beginning	Increase or decrease due to business combination		Increase (decrease)	Ending		
Post-employment benefit obligation	₩ 14,731,026 ₩	- W	2,453,671	₩	17,184,697	₩	3,564,908	₩ .	- ₩	1,160,884 ₩	4,725,792		
Accrued income	(1,243,040)	-	364,229		(878,811)		(300,816)		-	59,143	(241,673)		
Unearned revenue	70,740,462	-	(1,275,298)		69,465,164		17,119,192		-	1,983,728	19,102,920		
Deferred expenses	(11,562,158)	-	(1,179,228)		(12,741,386)		(2,798,042)		-	(705,839)	(3,503,881)		
Accrued expenses	119,140,931	-	35,443,084		154,584,015		28,832,105		-	13,678,499	42,510,604		
Right-of-use assets	(81,364,562)	-	(63,567,534)		(144,932,096)		(19,690,224)		-	(20,166,102)	(39,856,326)		
Lease liabilities	94,002,142	-	61,728,555		155,730,697		22,748,518		-	20,077,424	42,825,942		
Lease receivables	(899,954)	-	(8,374,001)		(9,273,955)		(217,789)		-	(2,332,549)	(2,550,338)		
Present value discounts	2,528,904	-	3,192,831		5,721,735		611,995		-	961,482	1,573,477		
Provision for impairment	81,271,091	-	13,479,331		94,750,422		19,667,604		-	6,388,762	26,056,366		
Depreciation	18,350	-	2,651		21,001		4,441		-	1,334	5,775		
Amortization	44,448	(359,978,400)	6,661,237		(353,272,715)		10,756	(72,211,667))	1,833,307	(70,367,604)		
Government grants	1,145,763	-	133,818		1,279,581		277,275		-	74,610	351,885		
Allowance for depreciation	(1,145,763)	-	(133,818)		(1,279,581)		(277,275)		-	(74,610)	(351,885)		
Accumulated depreciation	(4,447)	-	1,197		(3,250)		(1,076)		-	182	(894)		
Facilities	(1,998,378)	-	1,374,092		(624,286)		(483,607)		-	311,928	(171,679)		
Bad debt expenses Gain on valuation of financial	119,265	-	-		119,265		28,862		-	3,936	32,798		
assets at fair value through profit or loss	1,990,294	-	(19,734,244)		(17,743,950)		481,651		-	(5,361,237)	(4,879,586)		

26. Income Tax Expense, (cont'd)

(in thousands of	December 31, 2021											
Korean won)	Te	emporary differ	ences and oth	ers		Deferred tax assets (liabilities)						
	Beginning	Increase or decrease due to business combination	Increase (decrease)	Ending		Beginning	Increase or decrease due to business combination	Increase (decrease)	Ending			
Gain on valuation of financial												
assets at fair value through other comprehensive income	₩ (45,401,326) ₩	- ₩	(31,251,287)	₩ (76,652,613)	₩	(10,987,121)	₩ -	₩ (10,092,348) ₩	(21,079,469)			
Investments in subsidiaries	(25,109,294)	-	76,150,022	51,040,728		(6,076,449)	-	20,112,649	14,036,200			
Investments in associates	865,517	-	(34,641,966)	(33,776,449)		209,455	-	(9,497,978)	(9,288,523)			
Provision for restoration costs	5,075,453	-	7,322,565	12,398,018		1,228,260	-	2,181,195	3,409,455			
Other provisions	44,762,724	-	(7,233,048)	37,529,676		10,832,579	-	(511,918)	10,320,661			
Financial guarantee liabilities	12,236	-	657	12,893		2,961	-	585	3,546			
Derivative instruments	774,000	-	4,353,343	5,127,343		187,308	-	1,222,711	1,410,019			
Impairment loss on intangible assets	1,090,077	-	(664,459)	425,618		263,799	-	(146,754)	117,045			
Bonuses	231,640	-	(198,549)	33,091		56,057	-	(46,957)	9,100			
Other receivables	(147,429)	-	-	(147,429)		(35,678)	-	(4,865)	(40,543)			
Commissions	12,877	-	134,613	147,490		3,116	-	37,444	40,560			
Long-term accrued expenses	-	-	5,326,466	5,326,466		-	-	1,464,778	1,464,778			
Share-based payment expenses	-	-	59,650,111	59,650,111		-	-	16,403,781	16,403,781			
accounts payable	-	-	523,413	523,413		-	-	143,939	143,939			
Development costs	-	-	187,117	187,117		-	-	51,457	51,457			
Membership rights	-	-	42,155	42,155		-	-	11,593	11,593			
unpaid interest	-	-	317,152	317,152		-	-	87,217	87,217			
Others	14,687,643		2,913,695	17,601,338		3,084,405	-	1,755,963	4,840,368			
Tax losses	113,568,314	-	(12,370,116)	101,198,198		27,483,532	-	345,972	27,829,504			
Tax credits	24,278,801		(14,482,749)	9,796,052	_	24,278,801	_	(14,482,749)	9,796,052			
	₩ 422,215,607 ₩	(359,978,400) ₩	86,649,708	₩ 148,886,915		120,109,503	(72,211,667)	26,930,597	74,828,433			
Unrecognized deferred assets						(52,680,388)	-	(1,125,900)	(53,806,288)			
					₩	67,429,115	₩ (72,211,667)		21,022,145			

Notes to the Consolidated Financial Statements, (Cont'd) December 31, 2022 and 2021

26. Income Tax Expense, (cont'd)

The analysis of deferred tax assets and liabilities as of December 31, 2022 and 2021, are as follows:

(in thousands of Korean won)	De	ecember 31, 2022	D	ecember 31, 2021
Deferred tax assets				
Deferred tax asset to be recovered within 12 months	₩	86,246,096	₩	73,628,566
Deferred tax asset to be recovered after more than 12 months		154,544,647		127,172,022
Deferred tax liabilities				
Deferred tax liability to be recovered within 12 months		(4,437,805)		(3,786,097)
Deferred tax liability to be recovered after more than 12 months		(202,818,858)		(175,992,346)
Deferred tax assets, net	₩	33,534,080	₩	21,022,145

The tax effect that is charged or credited directly to other comprehensive income (expenses) for the years ended December 31, 2022 and 2021, are as follows:

(in i	thousands	of	Korean
wo	on)		

won)		December 31, 202	22	December 31, 2021		
	Before tax	Tax effect	After tax	Before tax	Tax effect	After tax
Remeasurements of net defined benefit liability	₩ 9,681,677	₩ (2,433,685)	₩ 7,247,992	₩ (4,994,953) ₩ 1,373,612	₩ (3,621,341)
Gain (loss) on valuation of financial assets at fair value through other comprehensive income	(61,349,735)	15,641,853	(45,707,882)	31,251,286	6 (8,594,104)	22,657,182
Gain on disposal of treasury shares	-	-	-	8,900,16	(2,447,544)	6,452,617
Exchange differences on translation of foreign operations	(39,910)	10,975	(28,935)	(12,239	3,366	(8,873)
	₩ (51,707,968)	₩ 13,219,143	₩ (38,488,825)	₩ 35,144,25	₩ (9,664,670)	₩ 25,479,585

26. Income Tax Expense, (cont'd)

Details of deductible temporary differences unrecognized as deferred tax assets as of December 31, 2022 and 2021, are as follows:

(in thousands of Korean won)	Dec	cember 31, 2022	Ded	cember 31, 2021
Deductible temporary differences	₩	141,973,262	₩	94,461,033
Tax losses		101,198,198		101,198,198
Tax credits		4,759,172		4,169,105

As of December 31, 2022 and 2021, the Group recognized deferred tax assets only to the extent that it is probable that taxable profit will be available against which the deductible temporary differences can be utilized and the deferred tax deduction effect will be realized in the foreseeable future. In addition, deferred tax assets were not recognized for tax losses and tax credits.

As of December 31, 2022, The Group did not recognize deferred tax assets arising from the certain deductible (taxable) temporary differences associated with investments in subsidiaries and allowance for bad debt amounting to \forall 141,973,262 thousand, since it is probable that the temporary differences will not reverse in the foreseeable future.

The maturity of unused tax losses as of December 31, 2022 and 2021, is as follows:

Korean won)		December 31, 2022			December 31, 2021		
	-	Amount	Maturity		Amount	Maturity	
2013	₩	226,293	2023	₩	226,293	2023	
2014		397,454	2024		397,454	2024	
2015		8,363,136	2025		8,363,136	2025	
2016		3,185,434	2026		3,185,434	2026	
2017		40,280,291	2027		40,280,291	2027	
2018		48,745,590	2028		48,745,590	2028	
	₩ ′	101,198,198		₩	101,198,198		

27. Earnings per Share

Basic earnings per share is calculated by dividing the profit attributable to owners of the Group by the weighted average number of ordinary shares outstanding during the years ended December 31, 2022 and 2021, excluding treasury shares.

(a) Basic earnings per share

(in Korean won)	December 31, 2022		Dec	ember 31, 2021
Continuing operating profit of company holders	₩	515,174,715,858	₩	530,255,201,099
loss from discontinued operations of company holders		(15,020,682,339)		(10,377,542,753)
Profit attributable to the ordinary equity holders of the Company	₩	500,154,033,519	₩	519,877,658,346
(in shares)				
Weighted average number of ordinary shares outstanding		46,894,298		43,245,333
(in Korean won) Basic earnings per share from continuing operations		10,986		12,262
Basic loss per share from discontinued operations		(320)		(240)
Basic earnings per share ¹	₩	10,666	₩	12,022

¹ The Company conducted a share split by lowering the par value from ₩500 to ₩100 on May 4, 2021, as the effective date. Accordingly, comparative basic earnings per share and diluted earnings per share for the years ended December 31, 2022 and 2021, have been retrospectively adjusted.

(b) Diluted earnings per share

Diluted earnings per share are calculated by applying the weighted average number of outstanding ordinary shares adjusted to the assumption that all dilutive potential ordinary shares are converted into ordinary shares. The Group has one category of dilutive potential ordinary shares: share options(including restricted stock units). For the share options, a calculation is done to determine the number of shares that could have been acquired at fair value (determined as average market price for the year) based on the monetary value of the subscription rights attached to outstanding share options.

27. Earnings per Share (cont'd)

(in Korean won)	I	December 31, 2022	[December 31, 2021
Continuing operating profit of company holders	₩	515,174,715,858	₩	530,255,201,099
loss from discontinued operations of company holders		(15,020,682,339)		(10,377,542,753)
Profit attributable to the owners of the Company	₩	500,154,033,519	₩	519,877,658,346
(in shares) Weighted average number of ordinary shares in issue Adjustment for: Share options		46,894,298 398,033		43,245,333 881,545
Weighted average number of ordinary shares for diluted earnings per share		47,292,331		44,126,878
(in Korean won)				
Basic earnings per share from continuing operations		10,893		12,017
Basic loss per share from discontinued operations		(317)		(236)
Diluted earnings per share ¹	₩	10,576	₩	11,781

¹ The Company conducted a share split by lowering the par value from ₩500 to ₩100 on May 4, 2021, as the effective date. Accordingly, comparative basic earnings per share and diluted earnings per share for the years ended December 31, 2022 and 2021, have been retrospectively adjusted.

27. Earnings per Share (cont'd)

(c) Weighted average number of ordinary shares outstanding

Details of weighted average number of ordinary shares outstanding calculation for the years ended December 31, 2022 and 2021, are as follows:

(in shares)	December 31, 2022			
	Shares	Weight (Days)	Multiple	
Beginning	48,967,045	365	17,872,971,425	
Acquisition of treasury shares	(2,167,418)	365	(791,107,570)	
Exercise of share options	5,000	353	1,765,000	
Exercise of share options	100,000	326	32,600,000	
Exercise of share options	9,500	20	190,000	
			17,116,418,855	
Days			365	
Weighted average number of ordinary shares outstanding			46,894,298	

(in shares)	December 31, 2021				
	Shares	Weight (Days)	Multiple		
Beginning	42,785,185	365	15,616,592,525		
Acquisition of treasury shares	(2,192,760)	365	(800,357,400)		
Exercise of share options	1,000	348	348,000		
Exercise of share options	318,630	266	84,755,580		
Exercise of share options	169,255	222	37,574,610		
Disposal of treasury shares	25,342	212	5,372,504		
Paid-in capital increases	5,624,000	148	832,352,000		
Exercise of share options	53,375	136	7,259,000		
Exercise of share options	100	81	8,100		
Exercise of share options	5,000	80	400,000		
Exercise of share options	10,500	23 _	241,500		
		<u>-</u>	15,784,546,419		
Days		_	365		
Weighted average number of ordinary shares outstanding		<u>-</u>	43,245,333		

28. Statements of Cash Flows

(a) Cash generated from operations

(in thousands of Korean won)	December 31, 2022	December 31, 2021
Profit for the year	₩ 500,154,032	₩ 519,877,623
Adjustments for:		
Addition of expenses, etc. without cash outflow	550,685,754	548,353,608
Performance-based incentive	(3,422,067)	41,518,874
Post-employment benefits	6,937,832	(978,079)
Depreciation	74,872,719	61,090,420
Depreciation – investment properties	745,365	622,801
Amortization	31,815,348	5,834,367
Share-based payment expenses	(63,555,367)	167,027,026
Impairment loss	3,271,519	961,724
Loss on foreign exchange	35,840,551	1,774,722
Other impairment loss	(10,742)	16,330
Loss on disposal of investments in subsidiaries	-	73,665
Impairment loss on investment in associates	6,490,603	-
Loss on valuation of financial assets at fair value through profit or loss	53,427,317	87,175
Loss on disposal of financial assets at fair value through profit or loss	66,346,075	-
Loss on valuation of financial liabilities at fair value through profit or loss	9,974,538	1,795,706
Loss on disposal of financial liabilities at fair value through profit or loss	3,166,305	555,013
Loss on valuation of derivative instruments	785,814	234,972
Loss on disposal of property and equipment	2,202,777	904,513
Loss on impairment of property and equipment	26,424	-
Loss on disposal of intangible assets	568,991	1
Impairment loss on intangible assets	149,154,193	26,535,136
Loss on disposal of leases	117,181	357,045
Interest expenses	7,622,598	6,961,253
Financial guarantee expense	21,685	21,930
Loss on equity method	30,669,216	2,450,833
Other expense	(34,626,848)	-
Income tax expense	168,243,727	230,508,181
Deduction of income, etc. without cash inflow	(190,213,115)	(113,179,640)
Gain on foreign exchange	(69,447,048)	(62,257,334)
Reversal of other impairment loss	-	(308,519)
Gain on disposal of investments in subsidiaries	-	-
Gain on valuation of financial assets at fair value	(43,185,227)	(21,058,286)

(in thousands of Korean won) through profit or loss	December 31, 2022	December 31, 2021
Gain on disposal of financial assets at fair value through profit or loss	(19,093,865)	(891,732)
Gain on valuation of financial liabilities at fair value through profit or loss	(12,373,852)	-
Gain on transactions of derivative instruments	-	(253,841)
Gain on disposal of property and equipment	(112,761)	(22,573)
Gain on disposal of intangible assets	(6,207,603)	(12,092,613)
Gain on disposal of leases	(3,815,550)	(934,733)
Interest income	(33,720,563)	(10,875,438)
Dividend income	(349,946)	(229,827)
Gain on equity method	(1,856,099)	(1,475,917)
Other income	(50,601)	(2,778,827)
Change in operating assets and liabilities:	(134,358,624)	(34,826,096)
Trade receivables	(27,624,586)	(56,715,315)
Other receivables	(14,623,803)	(4,331,100)
Advance payment	(11,202,781)	(308,063)
Prepaid expenses	(6,856,854)	(1,749,519)
Long-term trade receivables	(32,201)	-
Long-term advance payment	(3,629,637)	-
Other assets	(244,580)	538,803
Trade payables	34,302	(13,485)
Other payables	27,951,068	40,907,775
Accrued expenses	(56,921,504)	(1,708,606)
Withholdings	4,528,193	1,010,765
Advance receipts	1,906,884	1,499,260
Unearned revenue	(14,663,959)	(4,618,886)
Long-term payables	(19,750,173)	19,750,173
Long-term accrued expenses	(10,780,065)	(22,815,899)
Provision for restoration costs	-	(75,898)
Other provisions	-	(4,474,180)
Payments of net defined benefit liability	(2,448,928)	(1,721,921)
Cash provided by(used in) operations	₩ 726,268,047	₩ 920,225,495

28. Statements of Cash Flows (cont'd)

(b) Non-cash transactions

(in thousands of Korean won)	December 31, 2022	December 31, 2021
Current portion of long-term financial instruments	₩ 30,000,000	₩ -
Reclassification from construction-in-progress	14,970,904	12,604,872
Increase in right-of-use assets	80,051,514	118,149,324
Reclassification to lease receivables from right-of-use assets	5,479,927	-
Current portion of lease receivables	8,708,059	2,958,582
Current portion of lease liabilities	2,503,848	21,815,736
Reclassification to investment in associates from advance payments	7,123,732	-
Change in other payables related to acquisition of property and equipment	422,792	10,610,400
Change in other payables related to acquisition of intangible assets	5,417	-
Reclassification to intangible assets from long-term advanced payments	633,677	194,135
Distribution of treasury shares as purchase consideration of investments in subsidiaries	-	8,900,161
Increase in financial liabilities at fair value through profit or loss related to acquisition of investments in subsidiaries	30,513,796	204,365,692
Increase in other payables related to acquisition of investments in subsidiaries	3,031,545	2,858,095
Reclassification to investment in associates from financial assets at fair value through profit or loss	801,875	-
Reclassification to investment in associates from financial assets at fair value through other comprehensive income	2,000,000	-

Notes to the Consolidated Financial Statements, (Cont'd) December 31, 2022 and 2021

28. Statements of Cash Flows, (cont'd)

(c) Changes in liabilities arising from financing activities

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

(in thousands of Korean won)

December 31, 2022

		Cash flows from	Non-cas	h flows		
	Beginning	financing activities	Amortization	Others	Ending	
Short-term borrowings	₩ -	₩ 6,600,000	₩ -	₩ 400,000	₩ 7,000,000	
Current portion of leasehold deposits received	4,226,351	(4,447,130)	274,607	95,830	149,658	
Leasehold deposits received	2,425,544	5,578,034	111,684	(1,090,802)	7,024,460	
Lease liabilities	173,203,471	(58,588,814)	6,982,978	75,226,364	196,823,999	
	₩ 179,855,366	(50,857,910)	7,369,269	74,631,392	210,998,117	

(in thousands of Korean won)

December 31, 2021

				h flows from		Non-cas	ws			
	i	Beginning		activities	Aı	mortization		Others	E	Ending
Short-term borrowings	₩	-	₩	(445)	₩	-	₩	445	₩	-
Current portion of leasehold deposits received		4,216,351		4,500,958		-		(4,490,958)		4,226,351
Current portion of long- term borrowings		1,000,000		(1,526,000)		-		526,000		-
Leasehold deposits received		92,779		(2,735,767)		380,280		4,688,252		2,425,544
Lease liabilities		86,437,209		(37,050,016)		6,450,493		117,365,785	17	3,203,471
	₩	91,746,339	₩	(36,811,270)	₩	6,830,773	₩	118,089,524	₩ 17	9,855,366

29. Related Party Transactions

As of December 31, 2022 and December 31, 2021, the subsidiaries of the Group are as follows:

Туре	December 31, 2022	December 31, 2021
Associates	Shinhan Alpha REIT Co., Ltd.	Shinhan Alpha REIT Co., Ltd.
	Hidden Sequence Co., Ltd.	Hidden Sequence Co., Ltd.
	1Up Ventures, L.P.	1Up Ventures, L.P.
	Smart Krafton-BonAngels Fund	Smart Krafton-BonAngels Fund
	Nodwin Gaming Private Limited	Nodwin Gaming Private Limited
	Un Note Co., Ltd	Un Note Co., Ltd
	Loco Interactive Pte Limited	Loco Interactive Pte Limited
	Nasadiya Technologies Private Limit ed	Nasadiya Technologies Private Lim ited
	Mirae Asset Maps General Private Re al Estate Investment Trust 66	Mirae Asset Maps General Private Real Estate Investment Trust 66
	Seoul Auction Blue Co., Ltd.	-
	XXBLUE Co., Ltd.	-
	Tamatem Inc.	-
	Nautilus Mobile App Private Limited	-
	Mebigo Labs Private Limited	-
	Smart KNB Booster Fund	-
	NIRVANANA	-
	1Up Ventures Fund II	-
Other related p arties	Chicken Dinner Industries, LLC ¹	Chicken Dinner Industries, LLC ¹
	VoyagerX, Inc	VoyagerX, Inc
	BonAngels Pacemaker Fund 2	BonAngels Pacemaker Fund 2

¹ For the year ended December 31, 2022, Spetznatz Helmet, LLC's name was changed to Chicken Dinner Industries, LLC.

Notes to the Consolidated Financial Statements, (Cont'd) December 31, 2022 and 2021

29. Related Party Transactions, (cont'd)

Significant transactions with related parties for the years ended December 31, 2022 and 2021, are as follows:

(in thousands of	December 31, 2022										
Korean won)		Revenue		Ex							
		Finance income ¹		Operating costs ²		Finance costs ^{1, 2}		Dividends			
Associates Shinhan Alpha REIT Co., Ltd.	₩	389,756	₩	254,023	₩	1,651,400	₩	387,398			
Nodwin Gaming Private Limited		-		361,630		-		-			
Tamatem Inc.		-		15,756		-		-			
NIRVANANA		1,389		-		-		-			
Sub Total	₩	391,145	₩	631,409	₩	1,651,400	₩	387,398			
Other Related Parties											
Voyager X, Inc	₩	-	₩	88,000	₩	-	₩	-			
Total	₩	391,145	₩	719,409	₩	1,651,400	₩	387,398			

¹ Includes lease related profit or loss.

(in thousands of	December 31, 2021											
Korean won)	Re	evenue		Expe								
	Financ	ce income ¹	Operating costs ²		Finar	nce costs ^{1, 2}	Dividends					
Associates Shinhan Alpha REIT Co., Ltd. Nodwin Gaming Private Limited	₩	395,595	₩	276,176 2,005,515	₩	1,726,717	₩	341,000				
Sub Total	₩	395,595	₩	2,281,691	₩	1,726,717	₩	341,000				
Other Related Parties												
Voyager X, Inc	₩	<u> </u>	₩	670,100	₩	<u> </u>	₩					
Total	₩	395,595	₩	2,951,791	₩	1,726,717	₩	341,000				

¹ Includes lease related profit or loss.

²There is no bad debt expense recognized for the year ended December 31, 2022

²There is no bad debt expense recognized for the year ended December 31, 2021

Notes to the Consolidated Financial Statements, (Cont'd) December 31, 2022 and 2021

29. Related Party Transactions, (cont'd)

Outstanding balances arising from sales/purchases of goods and services as of December 31, 2022 and 2021, are as follows:

(in thousands of	December 31, 2022									
Korean won)		Recei	vables		Payables					
	L	oans 1	Other I	Receivables1,2	Other Payables ²					
Associates										
Shinhan Alpha REIT	₩	<u>-</u>	₩	3,771,819	₩	61,956,634				
Co., Ltd.	••		•	0,,0.0		0.,000,00.				
Tamatem Inc.		-		114,057		-				
NIRVANANA		640,000		1,389		-				
Other Related										
Parties										
Chicken				111 100						
Dinnerndustries, LLC		<u> </u>		114,198		_				
Total	₩	640,000	₩	4,001,463	₩	61,956,634				

¹Receivables are the amount before deduction of allowance for bad debts, and there is no allowance for bad debts for receivables.

(in thousands of	December 31, 2021								
Korean won)		Receivables	Payables Other Payables ^{1,2}						
		Other Receivables ^{1,2}							
Associates Shinhan Alpha REIT Co., Ltd.	₩	4,040,999	₩	43,779,530					
Other Related Parties Chicken Dinner Industries, LLC		97,362		-					
Total	₩	4,138,361	₩	43,779,530					

¹Receivables are the amount before deduction of allowance for bad debts, and there is no allowance for bad debts for receivables.

² Includes lease related receivables or payables

² Includes lease related receivables or payables

Notes to the Consolidated Financial Statements, (Cont'd) December 31, 2022 and 2021

29. Related Party Transactions, (cont'd)

Financing transactions with related parties for the years ended December 31, 2022 and 2021, are as follows:

(in thousands	December 31, 2022															
of Korean won)		Loan	trans	sactions	Le	ase tr	ans	actions	С	ontribution	s in	cas	sh			
		Loans		Loans				Collectio Payment of Collection Payment o		lease		Payment of Capital	Return Capita			Acquisition of Convertible bonds
Associates																
Shinhan Alpha REIT Co., Ltd.	₩	-	₩	-	₩ 16,32	29,206	₩	- ₩	-	₩	-	₩	-			
1Up Ventures, L.P		-		-		-		-	3,080,000		-		-			
Smart Krafton- BonAngels Fund		-		-		-		-	360,000		-		-			
Loco Interactive Pte Limited		-		-		-		-	4,097,888		-		801,875			
Mebigo Labs Private Limited		-		-		-		-	4,744,122		-		-			
NIRVANANA		640,000		-				<u>-</u>	-				<u>-</u>			
Total	₩	640,000	₩		₩ 16,32	29,206	₩	- ₩	12,282,010			₩	801,875			

(in thousands of	December 31, 2021											
Korean won)		Lease tra	nsactions		Contributions in cash							
	Payment of lease liabilities		Collection of lease receivables		Payment of Capital			Return of Capital				
Associates Shinhan Alpha REIT Co., Ltd.	₩	15,875,229	₩	-	₩	-	₩		-			
1Up Ventures, L.P		-		-		935,750			-			
Smart Krafton-BonAngels Fund		-		-		6,600,000			-			
Nodwin Gaming Private Limited		-		-		25,615,890			-			
Un Note Co., Ltd.		-		-		1,478			-			
Loco Interactive Pte Limited		-		-		3,407,400			-			
Nasadiya Technologies Private Limited		-		-		52,238,006			-			
Mirae Asset Maps General Private Real Estate Investment Trust		-		-		290,000,000			-			
66 T. I. I.	₩	15 975 220	₩		₩	270 700 524	₩					
Total	V V	15,875,229	V V		V V	378,798,524	V V					

29. Related Party Transactions, (cont'd)

Key management includes registered directors and the executives who have significant authority and responsibility in respect to planning, operating and controlling of the Group's business activities. Compensation for key management for the years ended December 31, 2022 and 2021, consists of:

Decer	mber 31, 2022	December 31, 2021			
₩	1,460,286	₩	2,421,467		
	(29,448,623)		64,200,320		
	179,833		86,567		
₩	(27,808,504)	₩	66,708,354		
	₩	(29,448,623) 179,833	₩ 1,460,286 ₩ (29,448,623) 179,833		

In the event when Shinhan Alpha REIT Co., Ltd., a related party, proposes to sell Greits Pangyo(formerly, Krafton Tower), to a third party, the Group has a preemption right to purchase the real estate.

Tencent Technology (Shenzhen) Company Limited. (including subsidiaries) was excluded from related parties for the year ended December 31, 2021. The Group recognized revenue and operating costs amounting to $\forall 1,096,903,623$ thousand and $\forall 43,411,154$ thousand respectively, from transactions with Tencent for the year ended December 31, 2021.

The Group purchased 3,433 convertible redeemable preferred stocks held by BonAngels Pacemaker Fund 2, a related party, at \forall 1,280,001 thousand during the year ended December 31, 2021.

30. Operating Segment

The Group has a single operating segment. The financial information reported to the Chief Executive Officer is identical to the disclosed consolidated financial statements.

Revenue per revenue stream for the years ended December 31, 2022 and 2021, are as follows:

(in thousands of Korean won)	Dece	ember 31, 2022	December 31, 2021			
PC	₩	464,978,152	₩	398,446,976		
Mobile		1,252,772,882		1,417,152,228		
Console		104,081,201		19,631,689		
Others		32,183,856		50,120,918		
	₩	1,854,016,091	₩	1,885,351,811		

30. Operating Segment (cont'd)

Revenue by geographical area for the years ended December 31, 2022 and 2021, are as follows:

(in thousands of Korean won)		December 31	, 2022		December 31, 2021			
		Revenue	Ratio		Revenue	Ratio		
Asia	₩	1,485,121,336	80.10%	₩	1,630,503,547	86.48%		
Korea		103,037,703	5.56%		121,784,536	6.46%		
America / Europe		251,885,758	13.59%		106,778,008	5.66%		
Other area		13,971,294	0.75%		26,285,720	1.40%		
	₩	1,854,016,091	100.00%	₩	1,885,351,811	100.00%		

Revenue derived from major external customer contributing more than 10% of the Group's revenue for the years ended December 31, 2022 and 2021, are as follows:

(in thousands of Korean won)	December 31, 2022		December 31, 2021			
Major customer(A)	₩	1,032,965,613	₩	1,179,832,120		

31. Business Combinations

As of February 18, 2022, the Group acquired a 100% shares of 5minlab Corp. for \forall 12,196,800 thousand through stock purchase to expand the new game development production line.

As of November 23, 2022, the Group acquired 72.92% of shares of Neon Giant AB at $\mbox{$W$}$ 31,993,523 thousand through share purchase in order to secure competent studios and strengthening global business synergies.

Details of the purchase consideration fair value of the assets and liabilities at the acquisition date due to the business combination are as follows:

(in thousands of Korean won)	5n	ninlab Corp. ¹	Neor	Giant AB ²		Total
I. Purchase consideration	₩	12,196,800	₩	31,993,523	₩	44,190,323
Cash		12,196,800		31,993,523		44,190,323
II. Non-controlling interest		-		804,916		804,916
III. Amounts recognized as identifiable assets and liabilities		(12,964,373)		2,972,695		(9,991,678)
Cash and cash equivalents		7,818		1,926,839		1,934,657
Trade receivables		168,932		-		168,932
Other current financial assets		26,559		729,426		755,985
Other current assets		311,307		38,569		349,876
Current tax assets		507		-		507
Property and equipment		409,430		37,802		447,232
Intangible assets		531,058		1,449,682		1,980,740
Other non-current financial assets		601,718		-		601,718

(in thousands of Korean won)	5minlab Co	orp. ¹ Ne	on Giant AB ²	Total
Current bonds and borrowings	(53	5,232)	-	(535,232)
Other financial liabilities	(3,74	3,818)	(202,075)	(3,945,893)
Other current liabilities	(12	0,601)	(104,635)	(225,236)
Current tax liabilities		-	(355,935)	(355,935)
Bonds and borrowings	(2,99	2,977)	-	(2,992,977)
Current financial liabilities at fair value through profit or loss	(6,03	6,735)	-	(6,036,735)
Net defined benefit liability	(1,33	1,170)	-	(1,331,170)
Other non-current financial liabilities	(15	9,878)	-	(159,878)
Deferred tax liabilities	(10	1,291)	(546,978)	(648,269)
IV. Goodwill(I+ II - III) ¹	₩ 25,16	61,173 ₩	29,825,744	₩ 54,986,917

¹The Group recognized the goodwill as the difference between the purchase consideration and the net asset value measured at the fair value at the acquisition date. For a period not exceeding one year from the date of the business combination, if the Group has newly obtained information on facts and circumstances that existed as of the date of the business combination, the amount of fair value recognized at the date of the business combination may change to reflect the information that would have affected the fair value measurement of the acquired company.

²The Group attempted to evaluate the fair value of acquired assets and assumed liabilities through an independent agency, but as of December 31, 2022, this has not been completed. Therefore, the values of net assets and goodwill below are tentatively determined based on information available to date, and are newly acquired by the Group for a period not exceeding one year from the date of the business combination on the facts and circumstances that existed at the date of the business combination. Information may change in the future if available. The Group plans to complete business combination accounting within the measurement period and disclose the results.

Revenue and net profit generated by the acquired company after incorporation into the Group are as follows:

(in thousands of Korean won)	5	minlab Corp.	Neon G	iant AB	Total
Revenue	₩	1,172,283	₩	- ₩	1,172,283
Net loss		(6,115,105)		-	(6,115,105)

If the acquired company was included in the scope of consolidation from January 1, 2022, revenue and net income to be additionally included in the consolidated statement of comprehensive income are as follows:

5	Minlab Corp.	Nec	on Giant AB		Total
₩	337,807	₩	4,507,567	₩	4,845,374 (4,969,682)
		,		₩ 337,807 ₩ 4,507,567	₩ 337,807 ₩ 4,507,567 ₩

31. Business Combinations, (cont'd)

The Group entered into a contract for contingent consideration to be paid in conjunction with the performance after the acquisition while acquiring a subsidiary 5minlab Corp.. and Unknown Worlds Entertainment, Inc. The contingent consideration recognized is $\mbox{$W$}$ 193,491,364 and $\mbox{$W$}$ 7,652,150 thousand.

The Group acquired Unknown Worlds Entertainment, Inc. on December 9, 2021, and attempted to evaluate the fair value of acquired assets, assumed liabilities, and purchase consideration of Unknown Worlds Entertainment, Inc. as of the acquisition date through an independent agency. The performance could not be completed by the end of the previous year.

For the financial year ended December 31, 2022, the Group completed an independent assessment of Unknown Worlds Entertainment, Inc.'s fair value of assets acquired, liabilities acquired and purchase consideration. Items adjusted in accordance with KIFRS 1103, paragraph 45 are as follows:

(in thousands of Korean won)		mount before adjustment		ljustment amount		Amount after adjustment
I. Purchase consideration	₩	844,670,857	₩	10,515,176	₩	855,186,033
Cash		650,820,341		-		650,820,341
Financial liabilities		193,850,516		10,515,176		204,365,692
II. Non-controlling interest		-		-		-
III. Recognition of assets acquired and liabilities assumed		56,701,568		287,766,733		344,468,301
Cash and cash equivalents		66,602,629		-		66,602,629
Trade receivables		2,608,267		-		2,608,267
Other current financial assets		859,250		-		859,250
Other current assets		113,142		-		113,142
Current financial assets at fair value through profit or loss		179,010		-		179,010
Property and equipment		24,528		-		24,528
Intangible assets		62,316		359,978,400		360,040,716
Other financial liabilities		(563,801)		-		(563,801)
Other current liabilities		(10,372,638)		-		(10,372,638)
Current tax liabilities		(2,811,135)		-		(2,811,135)
Deferred tax liabilities		-		(72,211,667)		(72,211,667)
IV. Goodwill(I+ II - III) ¹	₩	787,969,289	₩ (277,251,557)	₩	510,717,732

As acquired assets, assumed liabilities and purchase consideration are adjusted, the reconciliation of differences in the statement of financial position as of December 31, 2021 is as follows.

(in thousands of Korean won)		nount before adjustment	adjusti	ment amount		Amount after adjustment
I. Current assets	₩	3,653,732,582	₩	-	₩	3,653,732,582
II. Non-Current Assets		1,981,368,142		82,726,843		2,064,094,985
Intangible assets		828,650,753		82,726,843		911,377,596

(in thousands of Korean won)		mount before adjustment	adjus	tment amount	_	Amount after adjustment
Total assets		5,635,100,724		82,726,843		5,717,827,567
I. Current liabilities		638,188,238		-		638,188,238
II. Non-Current Liabilities		388,668,177		82,726,843		471,395,020
Current financial liabilities at fair value through profit or loss		197,309,714		10,515,176		207,824,890
Deferred tax liabilities		1,838,136		72,211,667		74,049,803
Total liabilities	₩	1,026,856,415	₩	82,726,843	₩	1,109,583,258
Total equity	₩	4,608,244,309	₩	-	₩	4,608,244,309
Total Liabilities and Equity	₩	5,635,100,724	₩	82,726,843	₩	5,717,827,567

32. Discontinued Operation

The Group sold the game development business of En Masse Entertainment Texas, Inc. (formerly Bonus XP, Inc.), one of its subsidiaries, and classified the profit and loss and cash flow of the business as discontinued operations. The consolidated statements of comprehensive income for the period presented for comparison as at the end of 2022 have been restated to show discontinued operations separated from continuing operations.

For the financial years ended December 31, 2022 and 2021, Profits from discontinued operations are as follows:

(in thousands of Korean won)		ember 31, 2022	December 31, 2021	
Profit or loss from discontinued operations due to business performance in discontinued operations:				
Revenue	₩	218,434	₩	964,681
Operating Expenses		14,141,668		11,933,484
Operating Loss	₩	(13,923,234)	₩	(10,968,803)
Other income		32,299		200,394
Other Expenses		3,127		8,698
Financial profit		1,031		323
Financial cost		45,132		6,883
Net loss before tax expense	₩	(13,938,163)	₩	(10,783,667)
Corporate tax revenue		(458,479)		(406,124)
Loss from discontinued operations after tax	₩	(13,479,684)	₩	(10,377,543)
Profit or loss from discontinued operations on disposal of discontinued operating segments:				_
Other costs		1,540,997		
Loss from discontinued operations after tax	₩	(15,020,681)	₩	(10,377,543)

For the financial year ended December 31, 2022 and 2021, Net cash flow related to discontinued operations is as follows:

(in thousands of Korean won)	December 31, 2022		Decei	mber 31, 2021
Cash flow from operating activities	₩	(11,229,877)	₩	(8,481,054)
Cash flow from investing activities		(748,337)		(1,019,592)
Cash flow from financing activities		(383,776)		(84,757)
Net cash flow from discontinued operations	₩	(12,361,990)	₩	(9,585,403)

Changes in the financial position of the consolidated company due to the disposition of discontinued operations are as follows.

(in thousands of Korean won)	Amount		
Cash and Cash Equivalents	₩	922,590	
Property and equipment		2,401,771	
Other non-current financial assets		30,051	
Other current liabilities		(377,254)	
Other non-current liabilities		(1,047,871)	
Decrease in net worth	₩	1,929,287	
Disposal price		387,585	
Disposal of Cash and Cash Equivalents		922,590	
Net cash outflow	₩	(535,005)	

33. Uncertainties Arising from COVID-19

In order to contain the spread of Coronavirus disease 2019 ("COVID-19"), various preventive and regulatory measures have been implemented globally, including restrictions on travel. As a result, the global economy has been impacted extensively. In addition, governments have announced various policies to aid and provide relief from the impact of COVID-19.

The Group's business is mainly accessible by customers through personal computers and mobile platforms. Potential areas which might be impacted by COVID-19 include recoverability of trade receivables, impairment of tangible and intangible assets, and others. The Group has reasonably estimated the impact of COVID-19 in preparing the consolidated financial statements.

However, at this stage, significant uncertainties exist in estimating the duration and severity of COVID-19 as well as the ultimate impact of COVID-19 on the Group's consolidated financial statements.