LG Uplus Corp. and Subsidiaries
Consolidated Financial Statements
December 31, 2018 and 2017

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Independent Auditor's Report

(English Translation of a Report Originally Issued in Korean)

To the Board of Directors and Shareholders of
LG Uplus Corp.

Opinion

We have audited the accompanying consolidated financial statements of LG Uplus Corp. and its subsidiaries (collectively referred to as the "Group"), which comprise the consolidated statements of financial position as at December 31, 2018 and 2017, and the consolidated statements of profit or loss, consolidated statements of comprehensive income, consolidated statements of changes in equity and consolidated statements of cash flows for the years then ended, and notes to the consolidated financial statements, including a summary of significant accounting policies.

In our opinion, the accompanying consolidated financial statements present fairly, in all material respects, the consolidated financial position of the Group as at December 31, 2018 and 2017, and its consolidated financial performance and its consolidated cash flows for the years then ended in accordance with International Financial Reporting Standards as adopted by the Republic of Korea (Korean IFRS).

Basis for Opinion

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

Key Audit Matters

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

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(a) Revenue recognition of telecommunication service recorded in the billing system

As explained in Note 2 of the consolidated financial statement, the Group recognizes revenue when separate performance obligation is identified in the contract and obligation is performed. There is an inherent risk around the telecommunication service revenue from numerous customers recorded given the complexity of the billing system. The Group relies on the complex billing system in providing telecommunication service, and also calculating, billing, cash collection and accounting for the related service revenue. Therefore, we focused on testing the occurrence of revenue for telecommunication service that comprised of 67% of the total revenue.

Based on the understanding and evaluation of the Group's internal controls, we performed the following control testing and substantive testing including the following procedures.

- Understand and evaluate the revenue recognition process, the accounting policy, and the related controls over telecommunication service revenue
- IT general control test for billing system and other related systems including accounting system
- Testing the interfaces to confirm accuracy of relevant information including billing and cash receipt information between the billing system and the accounting system
- Testing the effectiveness of the Group's controls that the subscription information is accurately recorded in the system and the billing and cash receipt is made based on such information
- Testing the accuracy of registration and termination of new customers and terminated customers in the system on a selected sample basis
- Substantive testing for the contracts, the usage records, the calculation and billing of the customer bills, cash receipts and revenue recognition for the selected customers

(b) The effects of initial adoption of Korean IFRS 1115 'Revenue from Contracts with Customers'

As explained in the note 36.2 of the consolidated financial statement, the Group initially adopted Korean IFRS 1115 for the year ended December 31, 2018. The cumulative effects of the adoption of Korean IFRS1115 were reflected in the beginning balance of retained earnings. Since the new standard significantly influenced on the accounting treatment of the telecommunication industry, we concluded that the calculation of the effects of initial adoption completely and accurately, and disclosing the relevant information in the financial statement would be critical. Therefore, we focused on the audit procedures to review the effects of initial adoption of the Korean IFRS 1115 completely and accurately, and also disclosed the information properly.

Based on the understanding and evaluation of the Group's internal controls over the initial adoption of Korean IFRS 1115, we performed the following control testing and substantive testing including the following procedures.

- Review completeness of effect analysis of initial adoption of new standard performed by the Group
- Understand and evaluate the evaluation procedures performed by the Group to assess the effects of the new standard
- Assess whether the Group's new accounting policy corresponds to the Korean IFRS 1115
- Review whether the system has appropriately changed to calculate the effects of the adoption of the new system accurately
- Substantive testing the cumulative effects of the adoption of the new standard in the beginning

balances on a selected sample basis
- Substantive testing the effects of the adoption of the new standard to the consolidated financial statements on a selected sample basis

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

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

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

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

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

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

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

attention in our auditor's report to the related disclosures in the consolidated financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Group to cease to continue as a going concern.

- Evaluate the overall presentation, structure and content of the consolidated financial statements, including the disclosures, and whether the consolidated financial statements represent the underlying transactions and events in a manner that achieves fair presentation.

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 On-Gyun Chang, Certified Public Accountant.

Seoul, Korea
March 7, 2019

This report is effective as of March 7, 2019, the audit report date. Certain subsequent events or circumstances, which may occur between the audit report date and the time of reading this report, could have a material impact on the accompanying consolidated financial statements and notes thereto. Accordingly, the readers of the audit report should understand that there is a possibility that the above audit report may have to be revised to reflect the impact of such subsequent events or circumstances, if any.

LG Uplus Corp. and Subsidiaries
Consolidated Statements of Financial Position
December 31, 2018 and 2017

(in millions of Korean won)	Notes		2018		2017
Assets					
Current assets					
Cash and cash equivalents	5,8,33	₩	378,631	₩	449,879
Financial institution deposits	5,9,33		21,270		31,265
Trade receivables	5,6,32,33		1,711,963		1,938,216
Other receivables	5,6,32,33		215,877		190,215
Inventories	10		455,134		334,521
Current tax assets	29		598		146
Other current assets	7,11		1,463,771		128,744
			4,247,244		3,072,986
Non-current assets					
Financial institution deposits	5,9,33		21		21
Available-for-sale financial assets	5,33		33,062		30,947
Trade receivables	5,6,32,33		490,061		550,948
Other receivables	5,6,32,33		264,835		288,865
Investments in associates and joint ventures	16		41,214		37,940
Deferred tax assets	29		41		403,213
Property, plant and equipment	12		6,465,781		6,526,974
Investment property	13		35,564		38,715
Intangible assets	14		1,705,693		957,342
Other non-current assets	7,11		656,432		27,502
			9,692,704		8,862,467
Total assets		₩	13,939,948	₩	11,935,453
Liabilities					
Current liabilities					
Trade payables	5,32,33	₩	333,612	₩	515,626
Non-trade and other payables	5,32,33		1,909,147		1,745,149
Short-term borrowings	5,12,17,33		10,000		15,000
Debentures and long-term borrowings	5,12,17,33		884,809		866,019
Other financial liabilities	5,18,33		298,539		326,811
Current tax liabilities	29		78,771		105,052
Other current liabilities	21		318,089		90,895
			3,832,967		3,664,552
Non-current liabilities					
Debentures and long-term borrowings	5,12,17,33		2,076,253		2,460,571
Other financial liabilities	5,18,33		907,362		395,823
Net defined benefit liabilities	20,32		38,153		129,151
Deferred tax liabilities	29		79,651		-
Provisions	19		40,194		34,744
Other non-current liabilities	21		111,999		17,626
			3,253,612		3,037,915
Total liabilities			7,086,579		6,702,467
Equity					
Share capital	23		2,573,969		2,573,969
Capital surplus	23		836,918		836,918
Accumulated other comprehensive income	25		(4,827)		1,422
Retained earnings	23		3,447,171		1,820,562
Equity attributable to owners of the Parent Company			6,853,231		5,232,871
Non-controlling interest			138		115
Total equity			6,853,369		5,232,986
Total liabilities and equity		₩	13,939,948	₩	11,935,453

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

LG Uplus Corp. and Subsidiaries
Consolidated Statements of Profit or Loss
Years Ended December 31, 2018 and 2017

(in millions of Korean won, except for earnings per share)	**Notes**		**2018**		**2017**
Operating revenue	4,32	₩	12,125,051	₩	12,279,382
Operating expenses					
Costs of merchandise purchased	10,32		3,002,449		2,929,894
Employee benefits	20,32		944,282		881,573
Depreciation and amortization	12,13,14		1,671,873		1,689,010
Other operating expenses	26		5,775,502		5,952,610
			11,394,106		11,453,087
Operating profit			730,945		826,295
Financial income	28		34,975		26,434
Financial costs	28		127,513		139,387
Share of profit (loss) of associates and joint ventures	16		153		(885)
Other non-operating income	27		53,978		67,783
Other non-operating expenses	27		44,271		113,420
Profit before income tax			648,267		666,820
Income tax expense	29		166,658		119,702
Profit for the year		₩	481,609	₩	547,118
Profit (loss) is attributable to:					
Owners of the Parent Company		₩	481,637	₩	547,234
Non-controlling interests			(28)		(116)
Earnings per share (in Korean won)					
Basic and diluted earnings per share	30	₩	1,103	₩	1,253

The above consolidated statements of profit or loss should be read in conjunction with the accompanying notes.

LG Uplus Corp. and Subsidiaries
Consolidated Statements of Comprehensive Income
Years Ended December 31, 2018 and 2017

(in millions of Korean won)		2018		2017
Profit for the year	₩	481,609	₩	547,118
Other comprehensive income (loss) for the year, net of tax				
Items that will not be reclassified to profit or loss				
Loss on valuation of FV-OCI equity instruments		(1,319)		-
Remeasurements of net defined benefit liability		16,382		12,065
Items that may be subsequently reclassified to profit or loss				
Loss on valuation of FV-OCI debt instruments		(4,795)		-
Changes in the fair value of available-for-sale financial assets		-		(105)
Gain (loss) on translation of foreign operations		(239)		400
Share of other comprehensive loss of associates and joint ventures		(37)		(11)
		9,992		12,349
Total comprehensive income for the year	₩	491,601	₩	559,467
Total comprehensive income (loss) for the year is attributable to:				
Owners of the Parent Company	₩	491,629	₩	559,582
Non-controlling interest		(28)		(115)

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

LG Uplus Corp. and Subsidiaries
Consolidated Statements of Changes in Equity
Years Ended December 31, 2018 and 2017

(in millions of Korean won)

		Attributable to owners of the Parent Company						
	Notes	Share Capital	Capital Surplus	Accumulated Other Comprehensive Income	Retained Earnings	Total	Non-controlling Interest	Total Equity
Balance at January 1, 2017		₩ 2,573,969	₩ 836,920	₩ 1,138	₩ 1,414,078	₩ 4,826,105	₩ 223	₩ 4,826,328
Annual dividends		-	-	-	(152,814)	(152,814)	-	(152,814)
Profit for the year		-	-	-	547,234	547,234	(116)	547,118
Changes in the fair value of available-for-sale financial assets	25	-	-	(105)	-	(105)	-	(105)
Gain on translation of foreign operations		-	-	400	-	400	-	400
Remeasurements of net defined benefit liability	20	-	-	-	12,064	12,064	1	12,065
Share of other comprehensive loss of associates and joint ventures		-	-	(11)	-	(11)	-	(11)
Paid-in capital increase of subsidiaries		-	-	-	-	-	5	5
Intragroup equity transactions		-	(2)	-	-	(2)	2	-
Balance at December 31, 2017		₩ 2,573,969	₩ 836,918	₩ 1,422	₩ 1,820,562	₩ 5,232,871	₩ 115	₩ 5,232,986
Balance at January 1, 2018		₩ 2,573,969	₩ 836,918	₩ 1,422	₩ 1,820,562	₩ 5,232,871	₩ 115	₩ 5,232,986
Annual dividends		-	-	-	(174,645)	(174,645)	-	(174,645)
Changes in accounting policy	36	-	-	-	1,303,354	1,303,354	51	1,303,405
Profit for the year		-	-	-	481,637	481,637	(28)	481,609
Gain on translation of foreign operations		-	-	(240)	-	(240)	-	(240)
Remeasurements of net defined benefit liability	20	-	-	-	16,382	16,382	-	16,382
Share of other comprehensive loss of associates and joint ventures		-	-	(37)	-	(37)	-	(37)
Loss on valutaion of debt instruments at fair value through other comprehensive income	25	-	-	(4,795)	-	(4,795)	-	(4,795)
Loss on valutaion of equity instruments at fair value through other comprehensive income	25	-	-	(1,177)	(142)	(1,319)	-	(1,319)
Share of reserves of associates and joint ventures		-	-	-	23	23	-	23
Balance at December 31, 2018		₩ 2,573,969	₩ 836,918	₩ (4,827)	₩ 3,447,171	₩ 6,853,231	₩ 138	₩ 6,853,369

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

LG Uplus Corp. and Subsidiaries
Consolidated Statements of Cash Flows
Years Ended December 31, 2018 and 2017

(in millions of Korean won)	2018	2017
Cash flows from operating activities		
Profit for the year	₩ 481,609	₩ 547,118
Additions of expenses not involving cash outflows		
Post-employment benefits	64,209	70,535
Depreciation	1,428,565	1,444,138
Amortization	243,308	244,872
Bad debt expenses	65,025	71,765
Interest expense	101,468	116,851
Loss on foreign currency translation	4,298	10,430
Loss on disposal of trade receivables	22,384	14,841
Loss on disposal of property, plant and equipment, and others	27,886	65,858
Impairment loss on available-for-sale financial assets	-	7,647
Income tax expense	166,658	119,702
Amortization of contract assets and others	1,926,016	-
Others	10,384	6,430
	4,060,201	2,173,069
Deduction of income not involving cash inflows		
Interest income	(34,286)	(26,094)
Gain on foreign currency translation	(4,104)	(10,655)
Dividend income	(534)	(327)
Gain on disposal of property, plant and equipment	(2,200)	(3,305)
Share of loss (profit) of associates and joint ventures	(153)	885
Gain on disposal of available-for-sale financial assets	-	(11)
Gain on disposal of investments in associates	(2,137)	-
Amortization of contract liabilities and others	(292,962)	-
	(336,376)	(39,507)
Changes in operating assets and liabilities		
Decrease (increase) in trade receivables	219,889	(525,150)
Decrease (increase) in other receivables	(34,060)	104,267
Increase in inventories	(123,038)	(76,617)
Increase in contract assets	(1,869,299)	-
Decrease in other assets	2,911	3,508
Increase (decrease) in trade payables	(181,990)	217,643
Increase (decrease) in other payables	(99,013)	42,381
Decrease in net defined benefit liabilities	(131,398)	(9,961)
Increase in contract liabilities	361,931	-
Increase (decrease) in other liabilities	(47,264)	84,243
	(1,901,331)	(159,686)
Cash generated from operations		
Interest income received	27,695	19,507
Dividend received	534	327
Interest expense paid	(90,827)	(110,834)
Income taxes paid	(172,066)	(150,563)
	(234,664)	(241,563)
Net cash inflow from operating activities	₩ 2,069,439	₩ 2,279,431

LG Uplus Corp. and Subsidiaries
Consolidated Statements of Cash Flows
Years Ended December 31, 2018 and 2017

(in millions of Korean won)	2018	2017
Cash flows from investing activities		
Cash inflows from investing activities		
Proceeds from disposal of available-for-sale assets	₩ 3,934	₩ 1,764
Decrease in financial institution deposits	85,350	40,350
Proceeds from disposal of property, plant and equipment	6,883	9,742
Proceeds from disposal of intangible assets	5,566	5,820
Decrease in loans	52,318	35,295
Decrease in security deposits provided	54,691	35,626
	208,742	128,597
Cash outflows for investing activities		
Payments for acquisition of available-for-sale assets	(7,963)	(6,254)
Increase in financial institution deposits	(75,355)	(50,452)
Payments for acquisition of investments in associates	(1,000)	(30,996)
Payments for acquisition of property, plant and equipment	(1,220,984)	(1,182,574)
Payments for acquisition of intangible assets	(400,389)	(153,358)
Increase in loans	(70,270)	(36,194)
Increase in security deposits provided	(26,353)	(25,014)
Increase in others	-	(2,050)
	(1,802,314)	(1,486,892)
Net cash outflow from investing activities	(1,593,572)	(1,358,295)
Cash flows from financing activities		
Cash inflows from financing activities		
Proceeds from short-term borrowings	487,337	208,967
Issuance of debentures	298,717	298,726
Proceeds from long-term borrowings	200,000	100,000
Increase in government grants	251	3,885
Issuance of shares of subsidiaries	-	5
	986,305	611,583
Cash outflows for financing activities		
Repayments of short-term borrowings	(492,337)	(208,967)
Repayments of current portion of long-term liabilities	(866,196)	(1,038,313)
Payment of dividends	(174,645)	(152,814)
	(1,533,178)	(1,400,094)
Net cash outflow from financing activities	(546,873)	(788,511)
Effects of exchange rate changes on cash and cash equivalents	(242)	(29)
Net increase (decrease) in cash and cash equivalents	(71,248)	132,596
Cash and cash equivalents at the beginning of the year	449,879	317,283
Cash and cash equivalents at the end of the year	₩ 378,631	₩ 449,879

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

1. General Information

LG Uplus Corp. (the “Company” or the “Parent Company”) was incorporated on July 11, 1996, under the Commercial Code of the Republic of Korea to provide personal communication services, including voice, data and value-added communication. The Company commenced its commercial operation on October 1, 1997. The Company listed its shares on the Korea Securities Dealers Automated Quotation (“KOSDAQ”) stock market on September 21, 2000. The Company listed its shares on the Korea Exchange on April 21, 2008.

In efforts to enhance operational efficiency and maximize synergy effects between wire and wireless communication businesses, LG Dacom Corp. and LG Powercom Corp. merged into the Company on January 1, 2010. Through this merger, the Company expanded its business to include landline phone service (including international and long-distance telephone services), internet access service and value-added telecommunications activities from LG Dacom Corp., and broadband network rentals and broadband internet service activities from LG Powercom Corp.

Effective July 1, 2010, the Company changed its name from LG Telecom, Ltd. to LG Uplus Corp. to reflect the expanded nature of its business operations.

The Company’s headquarters is located at Hangang daero, Yongsan-gu, Seoul, Korea, and it has set up telecommunication networks all over the country to provide fixed-line and wireless services.

As at December 31, 2018, the Company’s shareholders are as follows:

	Number of shares	Percentage of ownership (%)
LG Corporation	157,376,777	36.05%
National Pension Fund	44,114,225	10.10%
The Capital Group Companies, Inc.	25,555,627	5.85%
Others	209,564,732	48.00%
	436,611,361	100.00%

1.1 Consolidated Subsidiaries

	Location	2018 Ownership interest held by the Group (%)	2017 Ownership interest held by the Group (%)	Closing month	Main business
AIN TeleService, LTD.	Korea	100.00	100.00	December	Telemarketing service
CSLEADER	Korea	100.00	100.00	December	Telemarketing service
Medialog corp.	Korea	99.58	99.58	December	Internet services and etc.
DACOM America, Inc.	USA	100.00	100.00	December	Telecommunication service
CS One partner Corporation	Korea	100.00	100.00	December	Telemarketing services
WithU Corporation	Korea	100.00	100.00	December	Other business support services
LG UPLUS FUND I LLC[1]	USA	100.00	-	December	Investment fund

[1] During 2018, LG UPLUS FUND I LLC was newly established as a wholly owned subsidiary of the Group.

1.2 Changes in Scope for Consolidation

Subsidiary newly included in the consolidation for the year ended December 31, 2018:

Subsidiary	Reason
LG UPLUS FUND I LLC	Newly established

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 years presented, unless otherwise stated.

2.1 Basis of Preparation

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

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

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

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

2.2 Changes in Accounting Policies and Disclosures

2.1.1 New and amended standards adopted by the Group

The Group has applied the following standards and amendments for the first time for their annual reporting period commencing January 1, 2018. There is no significant impact on the financial statement except for described in note 36.

(a) Amendment to Korean IFRS 1028 *Investments in Associates and Joint Ventures*

When an investment in an associate or a joint venture is held by, or is held indirectly through, an entity that is a venture capital organization, or a mutual fund, unit trust and similar entities including investment-linked insurance funds, the entity may elect to measure each investment separately at fair value through profit or loss in accordance with Korean IFRS 1109. The amendment does not have a significant impact on the financial statements because the Group is not a venture capital organization.

(b) Amendment to Korean IFRS 1040 *Transfers of Investment Property*

The amendment to Korean IFRS 1040 clarifies that a transfer to, or from, investment property, including property under construction, can only be made if there has been a change in use that is supported by evidence, and the list of evidence for a change of use in the standard was re-characterized as a non-exclusive list of example. The amendment does not have a significant impact on the financial statements.

(c) Amendment to Korean IFRS 1102 *Share-based Payment*

Amendments to Korean IFRS 1102 clarify accounting for a modification to the terms and conditions of a share-based payment that changes the classification of the transaction from cash-settled to equity-settled. Amendments also clarify that the measurement approach should treat the terms and conditions of a cash-settled award in the same way as for an equity-settled award. The amendment does not have a significant impact on the financial statements.

(d) Enactment of Interpretation 2122 *Foreign Currency Transaction and Advance Consideration*

According to the enactment, the date of the transaction for the purpose of determining the exchange rate to use on initial recognition of the related asset, expense or income (or part of it) is the date on which an entity initially recognizes the non-monetary asset or non-monetary liability arising from the payment or receipt of advance consideration. The enactment does not have a significant impact on the financial statements.

(e) Korean IFRS 1109 *Financial Instruments*

The Group has applied Korean IFRS 1109 *Financial Instruments* on January 1, 2018, the date of initial application. In accordance with the transitional provisions in Korean IFRS 1109, comparative figures have not been restated, and see Note 36 for further details on the impact of the application of the standard.

(f) Korean IFRS 1115 *Revenue from Contracts with Customers*

The Group has applied Korean IFRS 1115 *Revenue from Contracts with Customers*. In accordance with the transition provisions in Korean IFRS 1115, comparative figures have not been restated. The Group elected the modified retrospective approach, and recognized the cumulative impact of initially applying the revenue standard as an adjustment to equity as at January 1, 2018, the period of initial application. See Note 36 for further details on the impact of the application of the standard.

2.2.2 New standards and interpretations not yet adopted by the Group

Certain new accounting standards and interpretations that have been published that are not mandatory for annual reporting period commencing January 1, 2018 and have not been early adopted by the Group are set out below.

(a) Korean IFRS 1116 *Leases*

Korean IFRS 1116 *Leases* issued on May 22, 2017. This standard will replace Korean IFRS 1017 *Leases*. The Group will apply the standards for annual periods beginning on or after January 1, 2019, and will elect the modified retrospective approach which will recognize the cumulative impact of initially applying the revenue standard as an adjustment to retained earnings as at January 1, 2019, the period of initial application.

Under the new standard, with implementation of a single lease model, lessee is required to recognize assets and liabilities for all lease which lease term is over 12 months and underlying assets are not low value assets. A lessee is required to recognize a right-of-use asset and a lease liability representing its obligation to make lease payments.

As at December 31, 2018, the Group prepared for adjusting internal management process and accounting system in relation to implementation of Korean IFRS 1116. Also, the Group is analyzing the financial effects of applying the standard. The Group plans to analyze the financial effects of applying the standard by lease contract type and disclose the result of the analysis in the notes on the financial statements as at March 31, 2019.

2.3 Consolidation

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

(a) Subsidiaries

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

From January 1, 2018, the Group has applied Korean IFRS 1115 *Revenue from Contracts with Customers.*

(a) Identifying performance obligations

With the implementation of Korean IFRS 1115, the Group shall identify performance obligations from a contract with a customer, such as telecommunication services and handset sales. The timing of revenue recognition may vary depending on whether it satisfies the performance obligation at a point in time or satisfies the performance obligation over time. The Group satisfies the performance obligation and recognizes revenue at the point of sale for handset sales. On the other hand, the Group recognizes revenue over time by providing telecommunication services throughout the estimated contract period.

(b) Allocating the transaction price to performance obligations

With implementation of Korean IFRS 1115, the Group shall allocate the transaction price to several performance obligations identified from one contract on a relative stand-alone selling price basis. Accordingly, a certain amount of the discount on handsets given at the point of the sale is deducted from the telecommunication service revenue over the estimated contract period, whereas a certain amount of the discount on plans is added to the telecommunication service revenue over the contract period after immediately deducted from handset sales revenue.

(c) Incremental costs of obtaining a contract and contract assets

The Group pays sales commissions to its employees based on customer contracts signed through the employees in telecommunication services. The commission accounts for substantial portion of sales commissions in operating expenses. With implementation of Korean IFRS 1115, the Group recognizes as an asset "the incremental costs of obtaining a contract", and costs that are recognized as assets are amortized over the period.

2.5 Leases

A lease is an agreement, whereby the lessor conveys to the lessee, in return for a payment or series of payments, the right to use an asset for an agreed period of time. Leases in which a significant portion of the risks and rewards of ownership are not transferred to the Group are classified as operating leases. Payments made under operating leases are charge to profit or loss on a straight-line basis over the period of lease.

Leases where the Group, as lessee, has substantially all the risks and rewards of ownership are classified as finance leases. Finance leases are capitalized at the lease’s inception at the fair value of the leased property or, if lower, the present value of the minimum lease payments. The corresponding rental obligations, net of finance charges, are included in other short-term and long-term payables. Each lease payment is allocated between the liability and finance cost.

If the Group is a lessor, a lease is classified as a finance lease if it transfers substantially all the risks and rewards incidental to ownership at the inception of the lease. A lease other than a finance lease is classified as an operating lease. Lease income from operating leases is recognized in income on a straight-line basis over the lease term. Initial direct costs incurred by the lessor in negotiating and arranging an operating lease is added to the carrying amount of the leased asset and recognized as an expense over the lease term on the same basis as the lease income.

2.6 Foreign Currency Translation

The consolidated financial statements of the Group are presented in the currency of the primary economic environment in which the Group operates (its functional currency). For the purpose of the consolidated financial statements, the results and financial position of the Group are expressed in Korean won, which is the functional currency of the Group and the reporting currency for the consolidated financial statements.

In preparation of the Group's consolidated financial statements, any transaction that occurred in currency other than its functional currency will be recorded in translated amount using the exchange rate of the transaction. At the end of the reporting period, all monetary assets and liabilities will be translated using the exchange rate at the end of the reporting date. Meanwhile, non-monetary assets and liabilities measured at fair value will be retranslated using the exchange rate on the day of fair value evaluation, whereas non-monetary assets and liabilities measured at historical cost will not be translated.

Exchange differences are recognized in profit or loss in the period in which they arise, except for:

- exchange differences on foreign currency borrowings relating to assets under construction for future productive use, which are included in the cost of those assets when they are regarded as an adjustment to interest costs on those foreign currency borrowings, and

- exchange differences on transactions entered into in order to hedge certain foreign currency risks.

2.7 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.

2.8 Post-employment Benefits

(a) Defined contributions plans

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

(b) Defined benefit plans

The Group's net liabilities in respect of defined benefit plans is calculated separately for each plan by estimating the amount of future benefit that employees have earned in the current and prior periods, discounting that amount and deducting the fair value of any plan assets.

The calculation of defined benefit liability (asset) is performed annually by a qualified actuary using the projected unit credit method. When the calculation results in a potential asset for the Group, the recognized asset is limited to the present value of economic benefits available in the form of any future refunds from the plan or reductions in future contributions to the plan. To calculate the present value of economic benefits, consideration is given to any applicable minimum funding requirements.

Remeasurements of the net defined benefit liability (asset), which comprise actuarial gains and losses, the return on plan assets (excluding interest) and the effect of the asset ceiling (if any, excluding interest), are recognized immediately in other comprehensive income. The Group determines the net interest expense (income) on the net defined benefit liability (asset) for the period by applying the discount rate used to measure the defined benefit obligation at the beginning of the annual period to the then net defined benefit liability (asset), taking into account any changes in the net defined benefit liability (asset) during the period as a result of contributions and benefit payments. Net interest expense and other expenses related to defined benefit plans are recognized in profit or loss.

When the benefits of a plan are changed or when a plan is curtailed, the resulting change in benefit that relates to past service or the gain or loss on curtailment is recognized immediately in profit or loss. The Group recognizes gains and losses on the settlement of a defined benefit plan when the settlement occurs.

2.9 Income Taxes

The tax expense for the period consists of current and deferred tax. Current and deferred tax is recognized in profit or loss, except to the extent that it relates to items recognized in other comprehensive income or directly in equity. In this case, the tax is also recognized in other comprehensive income or directly in equity, respectively.

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

Management periodically evaluates positions taken in tax returns with respect to situations in which applicable tax regulation is subject to interpretation. The Group recognizes current income tax on the basis of amounts expected to be paid to the tax authorities.

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 consolidated 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 nor taxable profit/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 entity has a legally enforceable right to offset and intends either to settle on a net basis.

2.10 Property, Plant and Equipment

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

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

	Estimated useful lives (years)
Buildings	20~40
Telecommunication facilities	3~8
Tools, furniture and fixtures	3~5
Vehicles	5

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

2.11 Investment Property

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 useful lives of 20 ~ 40 years.

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 directly attributable to internally generated by the Group are recognized 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 (years)
Intellectual property rights	5~10
Frequency usage rights	5~10
Other intangible assets	2~10

2.13 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. Other assets are tested for impairment whenever events or changes in circumstances indicate that the carrying amount may not be recoverable. An impairment loss is recognized for the amount by which the asset's carrying amount exceeds its recoverable amount. The recoverable amount is the higher of an asset's fair value less costs of disposal and value in use. 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.

2.14 Inventories

Inventories are stated at the lower of cost and net realizable value. Cost is determined using the total-average method (using the moving-average method for certain inventories).

2.15 Provisions

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

2.16 Cash and Cash Equivalents

Cash and cash equivalents include cash; savings and checking accounts; and short-term investment, highly liquidated investments (maturities of three months or less from acquisition). Bank overdrafts are accounted for as short-term borrowings.

2.17 Financial Assets

(a) Classification

From January 1, 2018, 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.

(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. Transaction costs of financial assets carried at fair value through profit or loss are expensed in profit or loss.

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

A. Debt instruments

Subsequent measurement of debt instruments depends on the 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 'financial 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 'financial income' using the effective interest rate method.

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

(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 and lease 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 statement of financial position.

(e) Offsetting of financial instruments

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

2.18 Financial Liabilities

(a) Classification and measurement

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

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.

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

(b) Derecognition

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

2.19 Fair Value

In addition, for financial reporting purposes, fair value measurements are categorized into Levels 1, 2 or 3 based on the degree to which the inputs to the fair value measurements are observable and the significance of the inputs to the fair value measurement in its entirety, which are described as follows:

- Level 1 inputs are quoted prices (unadjusted) in active markets for identical assets or liabilities that the entity can access at the measurement date;
- Level 2 inputs are inputs, other than quoted prices included within Level 1, that are observable for the asset or liability, either directly or indirectly; and
- Level 3 inputs are unobservable inputs for the asset or liability.

3. Critical Accounting Estimates and Assumptions

The preparation of financial statements requires the Group to make estimates and assumptions concerning the future. Estimates and judgements 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. The resulting accounting estimates will, by definition, seldom equal the related actual results. 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.

3.1 Fair Value of Financial Instruments

Derivative financial instruments and available-for-sale financial assets are measured at fair value after initial recognition and gains and losses from changes in fair value are recognized either in profit or loss or in accumulated other comprehensive income (loss). If there is a market value disclosed in an active market when measuring fair value, that market value is used as fair value. Otherwise, the fair value is estimated by a valuation technique requiring management’s assumption on the expected future cash flows and discount rate.

3.2 Provision for Impairment of Trade Receivables, and Loans and Receivables

The Group estimates an allowance for doubtful loans and receivables based on aging of receivables, historical loss experience and economic and industrial factors.

3.3 Income Taxes

The Group’s taxable income generated from these operations are subject to income taxes based on tax laws and interpretations of tax authorities in numerous jurisdictions. There are many transactions and calculations for which the ultimate tax determination is uncertain (Note 29).

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. The new tax system is effective for three years from 2015. 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.

3.4 Defined Benefit Pension Plan

For the defined benefit pension plan, the service cost is determined using actuarial valuations. In order to apply actuarial valuations, it is necessary to assume a discount rate, an expected wage increase rate, death rate, etc. The retirement benefit plan contains significant uncertainties on the estimation due to its long-term nature. The defined benefit obligations as at December 31, 2018, are ₩38,153 million (2017: ₩129,151 million) and details are described in Note 20.

3.5 Depreciation of Incremental Costs

The incremental costs are amortized on a systematic basis consistent with the manner in which goods and services are transferred to customers. The Group determined that the costs are amortized during expected length of time which is estimated based on the period specified in contract and average maintenance period.

4. Operating Segment Information

The Group determined that it operates under only one business segment based on the characteristics of goods and services provided and nature of network assets held. As a result, no separate segment information is disclosed in this report. The Group's reportable segments are consistent with the internal business segment reporting provided to the chief operating decision-maker.

Details of operating revenues from the Group's sale of goods and provision of services for the years ended December 31, 2018 and 2017, are as follows:

(in millions of Korean won)	**Revenue recognition**	**Major goods and services**		**2018**		**2017**
LG Uplus Corp.	At a point in time	Telecommunication and related services	₩	9,344,498	₩	9,406,191
	Over time	Handset sales		2,780,553		2,873,191
			₩	12,125,051	₩	12,279,382

The Group's operating revenues are mostly generated from domestic customers due to the nature of the telecommunication services and the majority of the related non-current assets are located in the Republic of Korea.

5. Classification of Financial Instruments and Fair Value

Carrying amount and fair value of financial assets by category as at December 31, 2018 and 2017, are as follows:

(in millions of Korean won)	2018		2017	
	Carrying amount	Fair value	Carrying amount	Fair value
Financial assets at amortized costs				
Cash and cash equivalents	₩ 378,631	₩ 378,631	₩ 449,879	₩ 449,879
Financial institution deposits	21,291	21,291	31,286	31,286
Trade receivables	1,343,654	1,343,654	2,489,164	2,489,164
Loans	62,785	62,785	44,898	44,898
Non-trade receivables	167,853	167,853	155,258	155,258
Accrued income	73	73	166	166
Deposits provided	250,001	250,001	278,758	278,758
	2,224,288	2,224,288	3,449,409	3,449,409
Financial assets at fair value through profit or loss				
Available-for-sale financial assets	25,206	25,206	19,500	19,500
Financial assets at fair value through other comprehensive income				
Available-for-sale financial assets	7,856	7,856	11,447	11,447
Trade receivables	858,370	858,370	-	-
	866,226	866,226	11,447	11,447
	₩ 3,115,720	₩ 3,115,720	₩ 3,480,356	₩ 3,480,356

Carrying amount and fair value of financial liabilities by category as at December 31, 2018 and 2017, are as follows:

(in millions of Korean won)	2018		2017	
	Carrying amount	Fair value	Carrying amount	Fair value
Financial liabilities at amortized cost				
Trade payables	₩ 333,612	₩ 333,612	₩ 515,626	₩ 515,626
Borrowings	635,000	635,000	876,197	876,197
Debentures[1]	2,336,062	2,366,838	2,465,393	2,474,387
Non-trade payables	1,975,792	1,975,792	1,260,560	1,260,560
Accrued expenses	840,679	840,679	880,292	880,292
Withholdings	293,441	293,441	320,938	320,938
Leasehold deposits received	5,136	5,136	5,993	5,993
	₩ 6,419,722	₩ 6,450,498	₩ 6,324,999	₩ 6,333,993

[1] The fair value of the debentures is the discounted amount of the future cash flow under the terms of the contract by using current market interest rate (2018: 2.06%~2.53%, 2017: 2.05%~3.20%)

applied on similar financial instruments.

The carrying amounts of certain financial assets and liabilities recognized at amortized cost are considered to approximate their fair values.

6. Financial Assets

6.1 Financial assets at fair value through profit or loss

(in millions of Korean won)		2018		2017[1]
Non-current				
Debt instruments	₩	25,206	₩	-

[1] In the prior fiscal year, debt instruments were classified as available-for-sale financial assets for the purpose of medium to long-term investment, which is amounting to ₩19,500 million as at December 31, 2017.

6.2 Financial assets at fair value through other comprehensive income

(a) Equity investments at fair value through other comprehensive income

(in millions of Korean won)		2018		2017[1]
Non-current				
Listed equity securities	₩	4,671	₩	-
Unlisted equity securities		3,185		-
	₩	7,856	₩	-

[1] In the prior fiscal year, equity investments were classified as available-for-sale financial assets for the purpose of medium to long-term investment, which is amounting to ₩11,448 million as at December 31, 2017.

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

(b) Debt investments at fair value through other comprehensive income

Debt investments at fair value through other comprehensive income comprise the following investments in bonds having solely payments of principal and interest:

(in millions of Korean won)		2018		2017[1]
Trade receivables				
Handset installment sales (current)	₩	421,516	₩	-
Handset installment sales (non-current)		436,854		-
	₩	858,370	₩	-

[1] Trade receivables arising from handset installment sales has been designated the financial assets at fair value through other comprehensive income since 2018, they were classified as loans and receivables in 2017 (Note 36).

Upon disposal of these debt investments, any balance within the accumulated other comprehensive income for these debt investments is reclassified to profit or loss.

6.3 Trade receivables and other financial assets at amortized costs

(a) Trade receivables and provision for impairment

(in millions of Korean won)		2018		2017
Trade receivables[1]	₩	1,499,410	₩	2,663,026
Less: provision for impairment		(155,756)		(173,862)
Trade receivables - net	₩	1,343,654	₩	2,489,164

[1] Trade receivables classified as debt instruments at fair value through other comprehensive income are excluded.

(b) Other financial assets at amortized costs

(in millions of Korean won)	2018			2017		
	Current	Non-current	Total	Current	Non-current	Total
Loans	₩ 48,004	₩ 14,834	₩ 62,838	₩ 34,838	₩ 10,107	₩ 44,945
Non-trade receivables	254,501	-	254,501	216,753	-	216,753
Accrued income	73	-	73	166	-	166
Deposits provided	-	250,001	250,001	-	278,758	278,758
	302,578	264,835	567,413	251,757	288,865	540,622
Less: provision for	(86,701)	-	(86,701)	(61,542)	-	(61,542)

impairment						
	₩ 215,877	₩ 264,835	₩ 480,712	₩ 190,215	₩ 288,865	₩ 479,080

7. Contract Assets and Liabilities

The Group has recognized the following assets and liabilities, which are presented as other current (non-current) assets and other current (non-current) liabilities, respectively:

(in millions of Korean won)	2018	2017
Contract assets		
Allocating the transaction price	₩ 290,933	₩ 288,396
Costs to fulfill a contract	69,715	65,429
Others	12,688	26,932
	₩ 373,336	₩ 380,757
Contract liabilities		
Allocating the transaction price	₩ 298,916	₩ 219,388
Others	49,893	69,536
	₩ 348,809	₩ 288,294

Significant changes in contract assets and liabilities

As explained in Note 2, the Group has applied Korean IFRS 1115 *Revenue from Contracts with Customers* from January 1, 2018. See Note 36 for the impact of the changes in accounting policies on the classification of financial assets and financial statements.

Revenue recognized in relation to contract liabilities

The following table shows how much of the revenue recognized in the current reporting period relates to carried-forward contract liabilities and how much relates to performance obligations that were satisfied in a prior year.

(in millions of Korean won)	2018
Contract liabilities	
Allocating the transaction price	₩ 160,427
Others	42,926

8. Cash and Cash Equivalents

Cash and cash equivalents in the consolidated statement of cash flows are the same as the cash and cash equivalents in the consolidated statement of financial position. Cash and cash equivalents as at December 31, 2018 and 2017, consists of:

(in millions of Korean won)		2018		2017
Financial institution deposits	₩	378,101	₩	447,966
Other cash equivalents		530		1,913
	₩	378,631	₩	449,879

9. Restricted Financial Assets

Restricted financial assets as at December 31, 2018 and 2017, are as follows:

(in millions of Korean won)	Financial institution		2018		2017
Financial deposits	Industrial Bank of Korea[1]	₩	20,500	₩	20,500
Term deposits	KEB Hana Bank [2]		350		350
Ordinary deposit	Shinhan Bank and others		-		64
Guarantee deposits for checking accounts	Woori Bank and others		21		21
		₩	20,871	₩	20,935

[1] Financial deposits are restricted in use in relation to Win-win Growth Cooperative Agreements between the big companies and the small and medium enterprises.
[2] Amounts are pledged by BC Card in relation to the payment gateway business.

10. Inventories

The Group periodically reviews a possibility of the significant changes in net realizable value of inventories from decrease in market value and obsolescence, and recognizes as valuation allowances of inventories. Details of inventories as at December 31, 2018 and 2017, are as follows:

(in millions of Korean won)	2018			2017		
	Acquisition cost	Valuation allowance	Carrying amount	Acquisition cost	Valuation allowance	Carrying amount
Merchandise	₩ 491,110	(35,976)	455,134	361,451	(26,930)	334,521

Inventory costs recognized in operating expenses for the years ended December 31, 2018 and 2017, are ₩3,002,449 million and ₩2,929,894 million, respectively, which include ₩9,046 million of losses on valuation of inventories for the year ended December 31, 2018, and ₩761 million of reversal of losses on valuation of inventories for the year ended December 31, 2017.

11. Other Assets

Details of other current assets as at December 31, 2018 and 2017, are as follows:

(in millions of Korean won)	2018	2017
Advance payments	₩ 13,382	₩ 23,656
Prepaid expenses	106,447	105,088
Contract assets		
Allocating the transaction price	206,684	-
Costs to fulfill a contract[1]	38,341	-
Others	9,568	-
Incremental costs of obtaining a contract[2]	974,161	-
Others	115,188	-
	₩ 1,463,771	₩ 128,744

[1] The Group recognizes costs related to installment services, which are identified as a single performance obligation, as “contract assets - costs to fulfill a contract” and amortize it over the expected contract period.
[2] The Group recognizes commissions that is paid by the Group related to the activities to obtain a contract with customer and to maintain a customer in telecommunication services as “incremental costs of obtaining a contract” and amortized it over the expected contract period.

Details of other non-current assets as at December 31, 2018 and 2017, are as follows:

(in millions of Korean won)		**2018**		**2017**
Advance payments	₩	-	₩	1,050
Prepaid expenses		30,893		26,452
Contract assets				
Allocating the transaction price		84,249		-
Costs to fulfill a contract[1]		31,374		-
Others		3,120		-
Incremental costs of obtaining a contract[2]		407,333		-
Others		99,462		-
	₩	656,432	₩	27,502

[1] The Group recognizes costs related to installment services, which are identified as a single performance obligation, as “contract assets - costs to fulfill a contract” and amortize it over the expected contract period.
[2] The Group recognizes commissions that is paid by the Group related to the activities to obtain a contract with customer and to maintain a customer in telecommunication services as “incremental costs of obtaining a contract” and amortized it over the expected contract period.

During 2018, the Group recognized amortization of costs to fulfill a contact and incremental costs of obtaining a contract amounting to ₩ 49,888 million and ₩ 1,460,128 million, respectively.

12. Property, Plant and Equipment

Changes in property, plant and equipment for the years ended December 31, 2018 and 2017, are as follows:

(in millions of Korean won)	2018					
	Land	**Buildings**	**Telecommuni-cation facilities**	**Others**	**Construction in progress**	**Total**
Beginning acquisition cost	₩ 652,555	₩ 942,130	₩ 13,715,746	₩ 919,357	₩ 105,012	₩ 16,334,800
Accumulated depreciation	-	(203,381)	(8,902,562)	(627,447)	-	(9,733,390)
Accumulated impairment loss	-	-	(65,750)	(77)	-	(65,827)
Government grants	-	(887)	(7,623)	(99)	-	(8,609)
Beginning balance	652,555	737,862	4,739,811	291,734	105,012	6,526,974
Acquisitions	2,814	46,571	225,407	67,494	1,045,812	1,388,098
Transfers	1,210	29,537	715,700	80,819	(817,704)	9,562
Disposals	-	-	(30,419)	(2,649)	-	(33,068)
Depreciation	-	(30,884)	(1,287,945)	(106,956)	-	(1,425,785)
Ending balance	₩ 656,579	₩ 783,086	₩ 4,362,554	₩ 330,442	₩ 333,120	₩ 6,465,781
Ending acquisition cost	₩ 656,579	₩ 1,018,981	₩ 14,065,819	₩ 940,060	₩ 333,120	₩ 17,014,559
Accumulated depreciation	-	(235,059)	(9,640,164)	(609,449)	-	(10,484,672)
Accumulated impairment loss	-	-	(56,505)	-	-	(56,505)
Government grants	-	(836)	(6,596)	(169)	-	(7,601)
Ending balance	₩ 656,579	₩ 783,086	₩ 4,362,554	₩ 330,442	₩ 333,120	₩ 6,465,781

(in millions of Korean won)	2017					
	Land	Buildings	Telecommuni-cation facilities	Others	Construction in progress	Total
Beginning acquisition cost	₩ 655,676	₩ 759,875	₩ 14,972,897	₩ 970,930	₩ 224,230	₩ 17,583,608
Accumulated depreciation	-	(177,434)	(9,623,045)	(710,499)	-	(10,510,978)
Accumulated impairment loss	-	-	(111,428)	(5,805)	(856)	(118,089)
Government grants	-	(938)	(3,974)	(53)	-	(4,965)
Beginning balance	655,676	581,503	5,234,450	254,573	223,374	6,949,576
Acquisitions	-	12,486	211,979	34,898	828,360	1,087,723
Transfers	(2,993)	169,802	694,813	87,591	(946,722)	2,491
Disposals	(128)	-	(67,154)	(3,749)	-	(71,031)
Depreciation	-	-	-	(77)	-	(77)
Impairment loss	-	(25,929)	(1,334,277)	(81,502)	-	(1,441,708)
Ending balance	₩ 652,555	₩ 737,862	₩ 4,739,811	₩ 291,734	₩ 105,012	₩ 6,526,974
Ending acquisition cost	₩ 652,555	₩ 942,130	₩ 13,715,746	₩ 919,357	₩ 105,012	₩ 16,334,800
Accumulated depreciation	-	(203,381)	(8,902,562)	(627,447)	-	(9,733,390)
Accumulated impairment loss	-	-	(65,750)	(77)	-	(65,827)
Government grants	-	(887)	(7,623)	(99)	-	(8,609)
Ending balance	₩ 652,555	₩ 737,862	₩ 4,739,811	₩ 291,734	₩ 105,012	₩ 6,526,974

The Group has pledged a portion of land, buildings and telecommunication facilities, carrying amounts of which are ₩29,350 million, as collateral in relation to borrowings from Korea Development Bank ("KDB") and the maximum amount of bonds are ₩58,000 million.

13.Investment Property

Changes in investment property for the years ended December 31, 2018 and 2017, are as follows:

(in millions of Korean won)	2018		
	Land	**Buildings**	**Total**
Beginning acquisition cost	₩ 20,192	₩ 27,278	₩ 47,470
Accumulated depreciation	-	(8,755)	(8,755)
Beginning balance	20,192	18,523	38,715
Transfers	(1,210)	839	(371)
Depreciation	-	(2,780)	(2,780)
Ending balance	₩ 18,982	₩ 16,582	₩ 35,564
Ending acquisition cost	₩ 18,982	₩ 23,667	₩ 42,649
Accumulated depreciation	-	(7,085)	(7,085)
Ending balance	₩ 18,982	₩ 16,582	₩ 35,564

(in millions of Korean won)	2017		
	Land	**Buildings**	**Total**
Beginning acquisition cost	₩ 17,199	₩ 26,860	₩ 44,059
Accumulated depreciation	-	(6,887)	(6,887)
Beginning balance	17,199	19,973	37,172
Transfers	2,993	980	3,973
Depreciation	-	(2,430)	(2,430)
Ending balance	₩ 20,192	₩ 18,523	₩ 38,715
Ending acquisition cost	₩ 20,192	₩ 27,278	₩ 47,470
Accumulated depreciation	-	(8,755)	(8,755)
Ending balance	₩ 20,192	₩ 18,523	₩ 38,715

The Group recognized rental revenue related to investment property in the amount of ₩4,931 million and ₩5,370 million for the years ended December 31, 2018 and 2017, respectively.

As at December 31, 2018, the fair value of investment property amount to ₩ 33,973 million.

14.Intangible Assets

Changes in intangible assets for the years ended December 31, 2018 and 2017, are as follows:

(in millions of Korean won)	2018					
	Intellectual property rights	**Membership**	**Goodwill**	**Frequency usage rights**	**Other intangible assets**	**Total**
Beginning acquisition cost	₩ 8,617	₩ 39,130	₩ 932	₩ 1,714,475	₩ 211,554	₩ 1,974,708
Accumulated amortization	(5,206)	-	-	(855,718)	(137,766)	(998,690)
Accumulated impairment loss	-	(6,019)	-	-	(12,657)	(18,676)
Beginning balance	3,411	33,111	932	858,757	61,131	957,342
Acquisition	666	971	-	985,675	10,421	997,733
Disposals	-	(406)	-	-	(5,803)	(6,209)
Impairment loss (reversal)	-	180	-	-	(45)	135
Amortization	(691)	-	-	(229,473)	(13,144)	(243,308)
Ending balance	₩ 3,386	₩ 33,856	₩ 932	₩ 1,614,959	₩ 52,560	₩ 1,705,693
Ending acquisition cost	9,283	39,695	932	2,700,151	216,172	2,966,233
Accumulated amortization	(5,897)	-	-	(1,085,192)	(150,910)	(1,241,999)
Accumulated impairment loss	-	(5,839)	-	-	(12,702)	(18,541)
Ending balance	₩ 3,386	₩ 33,856	₩ 932	₩ 1,614,959	₩ 52,560	₩ 1,705,693

(in millions of Korean won)	2017					
	Intellectual property rights	**Membership**	**Goodwill**	**Frequency usage rights**	**Other intangible assets**	**Total**
Beginning acquisition cost	₩ 7,625	₩ 39,749	₩ 932	₩ 1,714,476	₩ 209,440	₩ 1,972,222
Accumulated amortization	(4,458)	-	-	(632,757)	(125,779)	(762,994)
Accumulated impairment loss	-	(5,671)	-	-	(11,350)	(17,021)
Beginning balance	3,167	34,078	932	1,081,719	72,311	1,192,207
Acquisition	992	1,833	-	-	14,697	17,522
Disposals	-	(2,452)	-	-	(3,408)	(5,860)
Impairment loss		(348)	-	-	(1,307)	(1,655)
Amortization	(748)	-	-	(222,962)	(21,162)	(244,872)
Ending balance	₩ 3,411	₩ 33,111	₩ 932	₩ 858,757	₩ 61,131	₩ 957,342
Ending acquisition cost	8,617	39,130	932	1,714,476	211,554	1,974,709
Accumulated amortization	(5,206)	-	-	(855,719)	(137,766)	(998,691)
Accumulated impairment loss	-	(6,019)	-	-	(12,657)	(18,676)
Ending balance	₩ 3,411	₩ 33,111	₩ 932	₩ 858,757	₩ 61,131	₩ 957,342

The Group classifies membership and goodwill as intangible assets with indefinite useful lives and does not amortize them. Meanwhile, the Group recognizes impairment loss by performing impairment test annually.

R&D costs

The costs related to research and development for the years ended December 31, 2018 and 2017, are as follows:

(in millions of Korean won)	**2018**	**2017**
Other operating expenses – R&D costs	₩ 71,920	₩ 52,477

Significant intangible assets

Frequency usage rights were acquired in the amount of ₩880,033 million (including borrowing cost ₩12,119 million) during the year ended December 31, 2011, and amortized on a straight-line method for 10 years of useful lives. Frequency usage rights for 2.6 GHz were acquired in the amount of ₩461,973 million during the year ended December 31, 2013, and amortized on a straight-line method for eight years of useful lives. In addition, frequency usage rights for 2.1 GHz were acquired in the amount of ₩372,470 million during the year ended December 31, 2016, and amortized on a straight-line method for five years of useful lives.

Frequency usage rights for 3.5 GHz and 28GHz were acquired in the amount of ₩781,445 million and ₩204,231 million, respectively, during the year ended December 31, 2018. And frequency usage right to 3.5 GHz is amortized on a straight-line method for ten years of useful lives and 28 GHz will be amortized on a straight-line method from time of use.

15.Investments in Subsidiaries

Details of subsidiaries as at December 31, 2018 and 2017, are as follows:

(in millions of Korean won)	Location	Main business	Closing month	Percentage of ownership (%)	
				2018	2017
Ain Tele Service	South Korea	Telemarketing service	December	100.00	100.00
CS Leader	South Korea	Telemarketing service	December	100.00	100.00
Medialog Corp.	South Korea	Internet service and others	December	99.58	99.58
DACOM America, Inc.	USA	Telecommunication service	December	100.00	100.00
CS One Partner Corporation	South Korea	Telemarketing service	December	100.00	100.00
With U	South Korea	Other office support service	December	100.00	100.00
LG UPLUS FUND I LLC[1]	USA	Investment fund	December	100.00	-

[1] LG UPLUS FUND LLC is included in the consolidation as the Group newly invested for the year ended December 31, 2018.

Summary of financial information of subsidiaries as at and for the years ended December 31, 2018 and 2017, is as follows:

(in millions of Korean won)	2018						
	Ain Tele Service	CS Leader	Medialog Corp.	DACOM America, Inc.	CS One Partner Corporation	With U	LG UPLUS FUND I LLC
Current assets	₩ 12,929	₩ 9,747	₩ 98,338	₩ 166	₩ 16,325	₩ 1,836	₩ 10,516
Non-current assets	2,066	1,617	17,601	25	2,768	153	-
Total assets	14,995	11,364	115,939	191	19,093	1,989	10,516
Current liabilities	12,424	7,585	39,843	3,396	14,311	1,026	-
Non-current liabilities	4,144	3,392	11,014	-	1,826	153	-
Total liabilities	16,568	10,977	50,857	3,396	16,137	1,179	-
Total equity	₩ (1,573)	₩ 387	₩ 65,082	₩ (3,205)	₩ 2,956	₩ 810	₩ 10,516

(in millions of Korean won)	2017					
	Ain Tele Service	**CS Leader**	**Medialog Corp.**	**DACOM America, Inc.**	**CS One Partner Corporation**	**With U**
Current assets	₩ 11,141	₩ 9,061	₩ 86,890	₩ 269	₩ 14,550	₩ 1,206
Non-current assets	2,032	1,341	18,590	24	2,619	108
Total assets	13,173	10,402	105,480	293	17,169	1,314
Current liabilities	9,692	6,546	41,793	3,395	11,115	562
Non-current liabilities	5,237	2,739	9,302	-	6,152	45
Total liabilities	14,929	9,285	51,095	3,395	17,267	607
Total equity	₩ (1,756)	₩ 1,117	₩ 54,385	₩ (3,102)	₩ (98)	₩ 707

Summary of financial performance of subsidiaries for the years ended December 31, 2018 and 2017, is as follows:

(in millions of Korean won)	2018						
	Ain Tele Service	**CS Leader**	**Medialog Corp.**	**DACOM America, Inc.**	**CS One Partner Corporation**	**With U**	**LG UPLUS FUND I LLC**
Operating revenue	₩ 71,964	₩ 45,092	₩ 183,165	₩ 1,103	₩ 87,749	₩ 7,016	₩ -
Operating profit (loss)	1,583	683	(12,011)	48	4,538	219	-
Profit (loss) for the year	1,584	646	(13,312)	32	4,635	219	(654)
Other comprehensive income (loss)	(1,401)	(1,375)	140	(135)	(1,581)	(115)	(105)
Total comprehensive income (loss)	183	(729)	(13,172)	(103)	3,054	104	(759)

(in millions of Korean won)	2017					
	Ain Tele Service	**CS Leader**	**Medialog Corp.**	**DACOM America, Inc.**	**CS One Partner Corporation**	**With U**
Operating revenue	₩ 60,810	₩ 40,073	₩ 173,541	₩ 1,099	₩ 81,439	₩ 4,742
Operating profit (loss)	(1,123)	560	(14,646)	84	(1,881)	113
Profit (loss) for the year	(1,109)	106	(18,176)	55	(2,351)	113
Other comprehensive income (loss)	(651)	395	377	401	(11)	67
Total comprehensive income (loss)	(1,760)	501	(17,799)	456	(2,362)	180

Summary of cash flows of subsidiaries for years ended December 31, 2018 and 2017, is as follows:

(in millions of Korean won)	2018						
	Ain Tele Service	**CS Leader**	**Medialog Corp.**	**DACOM America, Inc.**	**CS One Partner Corporation**	**With U**	**LG UPLUS FUND I LLC**
Cash flows from operating activities	₩ (491)	₩ (169)	₩ 986	₩ (33)	₩ (787)	₩ 496	₩ (654)
Cash flows from investing activities	(486)	(551)	(2,866)	-	(759)	(178)	-
Cash flows from financing activities	-	-	(5,000)	-	-	99	11,275
Net increase (decrease) in cash and cash equivalents	(977)	(720)	(6,880)	(33)	(1,546)	417	10,621
Cash and cash equivalents at the beginning of the year	2,404	3,308	47,208	270	4,801	682	-
Effects of exchange rate changes on cash and cash equivalents	-	-	-	(136)	-	-	(105)
Cash and cash equivalents at the end of the year	₩ 1,427	₩ 2,588	₩ 40,328	₩ 101	₩ 3,255	₩ 1,099	₩ 10,516

Summary of cash flows as above includes the adjustments of differences in accounting policy of controlled entities and the fair value of the goodwill recognized in the business combination. In addition, internal transaction amount is not excluded.

(in millions of Korean won)	2017					
	Ain Tele Service	**CS Leader**	**Medialog Corp.**	**DACOM America, Inc.**	**CS One Partner Corporation**	**With U**
Cash flows from operating activities	₩ 1,262	₩ 2,372	₩ (6,543)	₩ 60	₩ 1,844	₩ 288
Cash flows from investing activities	(1,841)	(1,136)	(7,627)	-	(2,658)	(251)
Cash flows from financing activities	-	-	44,848	-	-	95
Net increase (decrease) in cash and cash equivalents	(579)	1,236	30,678	60	(814)	132
Cash and cash equivalents at the beginning of the year	2,983	2,072	16,530	238	5,615	550
Effects of exchange rate changes on cash and cash equivalents	-	-	-	(28)	-	-
Cash and cash equivalents at the end of the year	₩ 2,404	₩ 3,308	₩ 47,208	₩ 270	₩ 4,801	₩ 682

Summary of cash flows as above includes the adjustments of differences in accounting policy of controlled entities and the fair value of the goodwill recognized in the business combination. In addition, internal transaction amount is not excluded.

16. Investments in Associates and Joint Ventures

Composition of the Group's investments in associates and joint ventures as at December 31, 2018 and 2017, is as follows:

(in millions of Korean won)	**Class**	**Location**	**Percentage of ownership (%)**	**Book amount**	
				2018	**2017**
DACOM Crossing Corporation[1]	Joint venture	South Korea	51.00	₩ 9,072	₩ 8,316
Genie Music Corporation[2]	Associate	South Korea	12.70	28,493	25,780
Focus Media Korea Corporation	Associate	South Korea	20.00	2,696	3,844
VENTA VR Co., Ltd. [3]	Associate	South Korea	25.00	953	-
				₩ 41,214	₩ 37,940

[1] The Group acquired more than 50% shares of DACOM Crossing Corporation, but as the Group retains joint controlling power, it classified the shares as jointly controlled entities.

[2] Although the Group holds less than 20% of Genie Music Corporation's equity shares, the Group classified it as an associate because the Group can exercise significant influence over the investee's Board of Directors and others.

[3] The Group has significant influence over VENTA VR Co., Ltd. as the Group newly acquired its shares for the year ended December 31, 2018.

Details of valuation of investments in associates and joint ventures that are accounted for using the equity method for the years ended December 31, 2018 and 2017, are as follows:

(in millions of Korean won)	2018						
	Beginning balance	**Acquisition**	**Share of profit or loss of associates and joint ventures**	**Share of other comprehensive loss of associates and joint ventures**	**Share of movement in retained earnings of associates and joint ventures**	**Others[1]**	**Ending balance**
DACOM Crossing Corporation	₩ 8,316	₩ -	₩ 756	₩ -	₩ -	₩ -	₩ 9,072
Genie Music Corporation	25,780	-	592	(37)	22	2,136	28,493
Focus Media Korea Corporation	3,844	-	(1,148)	-	-	-	2,696
VENTA VR Co., Ltd.	-	1,000	(47)	-	-	-	953
	₩ 37,940	₩ 1,000	₩ 153	₩ (37)	₩ 22	₩ 2,136	₩ 41,214

[1] Others are the effect of changes in percentage of ownership from share issuance of Genie Music Corporation.

(in millions of Korean won)	2018				
	Beginning balance	**Acquisition**	**Share of profit or loss of associates and joint ventures**	**Share of other comprehensive loss of associates and joint ventures**	**Ending balance**
DACOM Crossing Corporation	₩ 7,840	₩ -	₩ 485	₩ (9)	₩ 8,316
Genie Music Corporation	-	26,871	(1,089)	(2)	25,780
Focus Media Korea Corporation	-	4,125	(281)	-	3,844
	₩ 7,840	₩ 30,996	₩ (885)	₩ (11)	₩ 37,940

Details of reconciliation between net assets of associates and the carrying amount of the investments in associates and joint ventures as at and for the years ended December 31, 2018 and 2017, are as follows:

(in millions of Korean won)	2018			
	DACOM Crossing Corporation	**Genie Music Corporation**	**Focus Media Korea Corporation**	**VENTA VR Co., Ltd.**
Net assets at the end of the year (A)	₩ 17,789	₩ 152,698	₩ 13,234	₩ 700
The ownership interest of the consolidated entity (B)	51.0%	12.7%	20.0%	25.0%
The ownership amount of net assets (AxB)	9,072	19,393	2,647	175
(+) Goodwill	-	10,626	-	778
(-) Elimination of internal transaction effect	-	-	49	-
(-) Others	-	(1,526)	-	-
December 31, 2018	₩ 9,072	₩ 28,493	₩ 2,696	₩ 953

(in millions of Korean won)	2017		
	DACOM Crossing Corporation	**Genie Music Corporation**	**Focus Media Korea Corporation**
Net assets at the end of the year (A)	₩ 16,306	₩ 100,212	₩ 18,973
The ownership interest of the consolidated entity (B)	51%	15%	20%
The ownership amount of net assets (AxB)	8,316	15,032	3,795
(+) Goodwill	-	10,626	-
(-) Elimination of internal transaction effect and others	-	122	49
December 31, 2018	₩ 8,316	₩ 25,780	₩ 3,844

Summary of financial information of associates and joint ventures as at December 31, 2018 and 2017, is as follows:

(in millions of Korean won)	2018							
	DACOM Crossing Corporation		**Genie Music Corporation**		**Focus Media Korea Corporation**		**VENTA VR Co., Ltd.**	
Current assets	₩	17,485	₩	168,553	₩	4,398	₩	848
Non-current assets		41,322		94,375		18,721		190
Total assets	₩	58,807	₩	262,928	₩	23,119	₩	1,038
Current liabilities	₩	9,828	₩	103,246	₩	9,569	₩	306
Non-current liabilities		31,190		6,984		316		32
Total liabilities	₩	41,018	₩	110,230	₩	9,885	₩	338
Total equity	₩	17,789	₩	152,698	₩	13,234	₩	700

(in millions of Korean won)	2017					
	DACOM Crossing Corporation		**Genie Music Corporation**		**Focus Media Korea Corporation**	
Current assets	₩	13,570	₩	119,735	₩	10,543
Non-current assets		42,204		33,096		9,508
Total assets	₩	55,774	₩	152,831	₩	20,051
Current liabilities	₩	9,015	₩	47,469	₩	1,078
Non-current liabilities		30,453		5,151		-
Total liabilities	₩	39,468	₩	52,620	₩	1,078
Total equity	₩	16,306	₩	100,211	₩	18,973

Summary of financial performances of associates and joint ventures for the years ended December 31, 2018 and 2017, is as follows:

(in millions of Korean won)	2018							
	DACOM Crossing Corporation		**Genie Music Corporation**		**Focus Media Korea Corporation**		**VENTA VR Co., Ltd.**	
Operating income	₩	30,190	₩	171,259	₩	11,535	₩	850
Profit (loss) for the year		1,483		3,824		(5,611)		(402)
Total comprehensive income (loss)		1,482		3,786		(5,611)		(402)

(in millions of Korean won)	2017		
	DACOM Crossing Corporation	Genie Music Corporation	Focus Media Korea Corporation
Operating revenue	₩ 30,676	₩ 155,642	₩ 3,745
Profit (loss) for the year	951	(6,282)	(1,636)
Total comprehensive income (loss)	933	(6,501)	(1,636)

17. Borrowings and Debentures

Details of short-term borrowings as at December 31, 2018 and 2017, are as follows:

(in millions of Korean won)	Creditor	Annual interest rate (%)	2018	2017
General loans	Shinhan Bank	4.01	₩ 5,000	₩ 10,000
	KEB Hana Bank	4.04	5,000	5,000
			₩ 10,000	₩ 15,000

Details of long-term borrowings as at December 31, 2018 and 2017, are as follows:

(in millions of Korean won)	Creditor	Annual interest rate (%)	2018	2017
Facilities financing	KDB and others	1.91~2.87	₩ 600,000	₩ 800,000
	Others	2.60~3.00	25,000	60,730
IT promotion funds	KEB Hana Bank	-	-	467
			625,000	861,197
Less: current portion			(275,000)	(436,197)
			₩ 350,000	₩ 425,000

Details of debentures as at December 31, 2018 and 2017, are as follows:

(in millions of Korean won)	**Annual interest rate (%)**	**2018**	**2017**
Debentures issued under public offering	1.77~3.67	₩ 2,230,000	₩ 2,360,000
Debentures issued privately	3.54	110,000	110,000
Total	Face value	2,340,000	2,470,000
	Discount on debentures	(3,938)	(4,607)
	Book amount	2,336,062	2,465,393
Less: current portion	Face value	610,000	430,000
	Discount on debentures	(191)	(178)
	Book amount	609,809	429,822
Non-current portion	Face value	1,730,000	2,040,000
	Discount on debentures	(3,747)	(4,429)
	Book amount	₩ 1,726,253	₩ 2,035,571

The repayment schedule of long-term borrowings and debentures as at December 31, 2018, is as follows:

(in millions of Korean won)	**Long-term borrowings**	**Debentures**	**Total**
January 1, 2020 ~ December 31, 2020	₩ 150,000	₩ 340,000	₩ 490,000
January 1, 2021 ~ December 31, 2021	100,000	510,000	610,000
January 1, 2022, and thereafter	100,000	880,000	980,000
	₩ 350,000	₩ 1,730,000	₩ 2,080,000

18. Other Financial Liabilities

Details of other financial liabilities as at December 31, 2018 and 2017, are as follows:

(in millions of Korean won)	2018		2017	
	Current	Non-current	Current	Non-current
Non-trade payables[1]	₩ -	₩ 907,324	₩ -	₩ 395,703
Withholdings	293,441	-	320,938	-
Leasehold deposits received	5,098	38	5,873	120
	₩ 298,539	₩ 907,362	₩ 326,811	₩ 395,823

[1] Current portion of non-trade payables are included in non-trade and other payables.

19. Provisions

Changes in restoration liabilities for the years ended December 31, 2018 and 2017, are as follows:

(in millions of Korean won)	2018			
	Beginning balance	Increase	Decrease	Ending balance
Restoration liabilities	₩ 34,744	₩ 9,721	₩ (4,271)	₩ 40,194

(in millions of Korean won)	2017			
	Beginning balance	Increase	Decrease	Ending balance
Restoration liabilities	₩ 34,659	₩ 2,115	₩ (2,030)	₩ 34,744

20. Post-employment Benefits

20.1 Defined Contribution Plan

The Group operates a defined contribution plan for employees, under which the Group is obligated to make payments to third-party funds. The employee benefits under the plan are determined by the payments made to the funds by the Group and the investment earnings from the funds. Additionally, plan assets are managed by the third-party funds and are segregated from the Group's assets.

The Group recognized expense of ₩6,331 million and ₩5,159 million related to defined contribution plan for the years ended December 31, 2018 and 2017, respectively.

20.2 Defined Benefit Plan

The Group operates a defined benefit plan for employees and according to the plan, employees will be paid his or her average salary amount of the final three months multiplied by the number of years vested; adjusted for salary pay rate and other. The valuation of the defined benefit plan remeasurements is performed by an independent reputable actuary specialist under the projected unit credit method.

Details of net defined benefit liabilities recognized in the statements of financial position as at December 31, 2018 and 2017, are as follows:

(in millions of Korean won)		**2018**		**2017**
Present value of defined benefit obligations	₩	463,645	₩	445,589
Fair value of plan assets		(425,492)		(316,438)
Net defined benefit liabilities	₩	38,153	₩	129,151

Movements in the defined benefit obligations for the years ended December 31, 2018 and 2017, are as follows:

(in millions of Korean won)		**2018**		**2017**
Beginning balance	₩	445,588	₩	413,023
Current service cost		65,007		63,080
Past service cost		(4,919)		5,120
Interest expense		13,526		11,369
Remeasurements:		(26,106)		(19,032)
Actuarial gain from change in demographic assumptions		(2,542)		(907)
Actuarial gain from change in financial assumptions		(17,572)		(18,071)
Actuarial gain from experience adjustments		(5,545)		(862)
Actuarial loss (gain) arising from transfer in/out adjustment		(447)		808
Benefit payments		(31,513)		(28,578)
Transferred from affiliated companies		2,062		607
Ending balance	₩	463,645	₩	445,589

Income or loss recognized relating to defined benefit plan for the years ended December 31, 2018 and 2017, are as follows:

(in millions of Korean won)		**2018**		**2017**
Service cost				
Current service cost	₩	65,007	₩	63,080
Past service cost		(4,919)		5,120
		60,088		68,200
Net interest on the net defined benefit liability (asset)				
Interest cost of defined benefit obligations		13,526		11,369
Interest income on plan assets		(9,648)		(9,003)
		3,878		2,366
Others		717		612
	₩	64,683	₩	71,178

Movements in the fair value of plan assets for the years ended December 31, 2018 and 2017, are as follows:

(in millions of Korean won)		**2018**		**2017**
Beginning balance	₩	316,438	₩	328,479
Interest income		9,648		9,003
Remeasurements:				
Return on plan assets (excluding amounts included in interest income)		(2,425)		(3,062)
Contributions from the employer		129,190		7,627
Transferred to affiliated companies		(11)		(128)
Others		(717)		(612)
Benefit payments		(26,631)		(24,869)
Ending balance	₩	425,492	₩	316,438

All of the plan assets are invested in financial instruments that provide guaranteed principal and interest rate as at December 31, 2018 and 2017.

The significant actuarial assumptions as at December 31, 2018 and 2017, are as follows:

(in percentage, %)	**2018**	**2017**
Discount rate	2.23% ~ 3.10%	2.69% ~ 3.22%
Salary growth rate	4.00% ~ 4.99%	3.50% ~ 5.81%

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

(in percentage)	**Impact on defined benefit obligation**		
	Changes in assumption	**Increase in assumption**	**Decrease in assumption**
Discount rate	1.0% point	9.0% decrease	10.5% increase
Salary growth rate	1.0% point	10.2% increase	8.9% decrease

The above sensitivity analyses are based on a change in an assumption while holding all other assumptions constant. The sensitivity of the defined benefit obligation to changes in principal actuarial assumptions is calculated using the projected unit credit method, the same method applied when calculating the defined benefit obligations recognized on the statement of financial position.

The Group reviews the funding level on an annual basis and has a policy of eliminating deficit from the fund.

Expected contributions to post-employment benefit plans for the year ending December 31, 2019, are ₩ 99,659 million.

The expected maturity analysis of undiscounted pension benefits as at December 31, 2018, is as follows:

(in millions of Korean won)	Less than 1 year	Between 1-2 years	Between 2-5 years	Over 5 years	Total
Pension benefits	₩ 29,071	₩ 27,173	₩ 88,932	₩ 517,089	₩ 662,265

The weighted average duration of the defined benefit obligation is 10.26 years.

21. Other Liabilities

Details of other liabilities as at December 31, 2018 and 2017, are as follows:

(in millions of Korean won)	2018		2017	
	Current	Non-current	Current	Non-current
Advances received	₩ 62,287	₩ -	₩ 87,287	₩
Unearned income	1,726	-	3,608	2,782
Contract liabilities – allocating the transaction price	222,003	76,913	-	-
Contract liabilities - others	32,072	17,821	-	-
Other	-	17,265	-	14,844
	₩ 318,088	₩ 111,999	₩ 90,895	₩ 17,626

22. Lease

Total minimum lease payments in relation to operating leases that are payable at the end of the reporting period are as follows:

(in millions of Korean won)	2018
Within one year	₩ 108,233
Later than one year but not later than five years	108,381
More than five years	27,838
	₩ 244,452

Lease payments of ₩ 139,515 million under the above operating lease are recognized in the consolidated statements of profit or loss.

23. Equity

23.1 Share Capital

Details of share capital as at December 31, 2018 and 2017, are as follows:

Type of share	Number of authorized shares	Par value	2018 Number of issued shares	2018 Share capital	2017 Number of issued shares	2017 Share capital
Ordinary shares	700,000,000	₩ 5,000	436,611,361	₩ 2,573,969 million	436,611,361	₩ 2,573,969 million

The Parent Company retired 78,182,474 shares of treasury share according to the resolution of the Board of Directors on August 30, 2012. The face amount of issued shares and the amount of paid-in capital are not identical due to the retirement of treasury share.

23.2 Capital Surplus

Capital surplus consisting of share premium, consideration for exchange rights and other capital surplus, amount to ₩836,918 million as at December 31, 2018 and 2017. The Group's share premium is available only for transfer to share capital or use to reduce accumulated deficit.

23.3 Retained Earnings

Retained earnings as at December 31, 2018 and 2017, consist of:

(in millions of Korean won)		2018		2017
Legal reserves[1]	₩	101,245	₩	83,781
Retained earnings before appropriation		3,345,926		1,736,781
	₩	3,447,171	₩	1,820,562

[1]The Commercial Code of the Republic of Korea requires the Group to appropriate for each financial period, as a legal reserve, an amount equal to a minimum of 10% of cash dividends paid until such reserve equals 50% of its issued share capital. The reserve is not available for cash dividends payment, but may be transferred to share capital or used to reduce accumulated deficit. When the accumulated legal reserves (the sum of capital reserves and earned profit reserves) are greater than 1.5 times the paid-in capital amount, the excess legal reserves may be distributed.

24. Dividends

A dividend is to be proposed to shareholders at the annual general meeting on March 15, 2019.

Details of dividend paid of the Parent Company for the years ended December 31, 2018 and 2017, are as follows:

		2018		2017
Number of shares issued and outstanding		436,611,361		436,611,361
Number of treasury shares		3		3
Number of shares eligible for dividends		436,611,358		436,611,358
Par value per share	₩	5,000	₩	5,000
Dividend rate		8%		8%
Dividends per share	₩	400	₩	400
Total dividends	₩	174,645 million	₩	174,645 million

Dividend payout ratio of the Parent Company for the years ended December 31, 2018 and 2017, is as follows:

(in millions of Korean won)		2018		2017
Total dividends	₩	174,645	₩	174,645
Profit attributable to the owners of the Group		476,752		570,391
Dividend payout ratio		36.63%		30.62%

25. Accumulated Other Comprehensive Income

Changes in accumulated other comprehensive income after the deduction of income tax effect for the years ended December 31, 2018 and 2017, are as follows:

(in millions of Korean won)	Available-for-sale financial assets	Defined benefit obligations	Equity investments at fair value through other comprehensive income	Debt investments at fair value through other comprehensive income	Share of other comprehensive income of associates and joint venture	Foreign currency translation for foreign operations	Total
January 1, 2017	₩ 1,477	₩ -	₩ -	₩ -	₩ 65	₩ (404)	₩ 1,138
Changes in the fair value of available-for-sale financial assets	(105)	-	-	-	-	-	(105)
Foreign currency translation for foreign operations	-	-	-	-	-	400	400
Changes in share of other comprehensive income of associates	-	-	-	-	(11)	-	(11)
Remeasurement of defined benefit plan	-	12,064	-	-	-	-	12,064
Reclassification to retained earnings	-	(12,064)	-	-	-	-	(12,064)
December 31, 2017	₩ 1,372	₩ -	₩ -	₩ -	₩ 54	₩ (4)	₩ 1,422
January 1, 2018	₩ -	₩ -	₩ 1,372	₩ -	₩ 54	₩ (4)	₩ 1,422
Fair value estimation	-	-	(1,319)	(4,795)	-	-	(6,114)
Foreign currency translation for foreign operations	-	-	-	-	-	(240)	(240)
Changes in share of other comprehensive income of associates	-	-	-	-	(37)	-	(37)
Remeasurement of defined benefit plan	-	16,382	-	-	-	-	16,382
Reclassification to retained earnings	-	(16,382)	142	-	-	-	(16,240)
December 31, 2018	₩ -	₩ -	₩ 195	₩ (4,795)	₩ 17	₩ (244)	₩ (4,827)

26. Other Expenses

Details of other expenses for the years ended December 31, 2018 and 2017, are as follows:

(in millions of Korean won)		2018		2017
Operating lease payment	₩	326,169	₩	347,979
Advertising expense		271,111		433,029
Sales commissions		1,701,923		1,818,506
Commission charge		1,509,575		1,362,220
Interconnection charge		573,407		602,852
Telecommunication equipment rental fees		200,301		216,747
Outsourcing expense		344,092		344,770
Bad debt expenses		65,025		71,765
Settlement expenses		87,271		103,321
Others		696,628		651,421
	₩	5,775,502	₩	5,952,610

27. Other Non-operating Income and Expenses

Details of other non-operating income for the years ended December 31, 2018 and 2017, are as follows:

(in millions of Korean won)		2018		2017
Gain on disposal of property, plant and equipment	₩	2,200	₩	3,305
Gain on foreign currency transactions		2,602		4,155
Gain on foreign currency translation		4,104		10,655
Gain on disposal of investments in associates		2,137		-
Commission income		30		-
Miscellaneous income		42,905		49,668
	₩	53,978	₩	67,783

Details of other non-operating expenses for the years ended December 31, 2018 and 2017, are as follows:

(in millions of Korean won)		**2018**		**2017**
Loss on disposal of property, plant and equipment	₩	27,954	₩	64,086
Impairment loss of property, plant and equipment		-		77
Loss on disposal of intangible assets		67		40
Impairment loss of intangible assets		(135)		1,655
Loss on foreign currency transactions		2,963		3,058
Loss on foreign currency translation		4,295		10,430
Donation		3,684		8,180
Miscellaneous expenses		5,443		25,894
	₩	44,271	₩	113,420

28. Finance Income and Costs

Details of finance income for the years ended December 31, 2018 and 2017, are as follows:

(in millions of Korean won)		**2018**		**2017**
Interest income	₩	34,286	₩	26,094
Gain on foreign currency transactions		155		2
Dividend income		534		327
Gain on disposal of available-for-sale financial assets		-		11
	₩	34,975	₩	26,434

Details of interest income included in finance income for the years ended December 31, 2018 and 2017, are as follows:

(in millions of Korean won)		**2018**		**2017**
Cash and cash equivalents and financial institution deposits	₩	8,926	₩	5,556
Equity investments at fair value through other comprehensive income (other loans and receivables) and others		25,360		20,538
	₩	34,286	₩	26,094

Details of finance costs for the years ended December 31, 2018 and 2017, are as follows:

(in millions of Korean won)		**2018**		**2017**
Interest expense	₩	101,468	₩	116,851
Loss on foreign currency transactions		2		46
Loss on foreign currency translation		2		1
Loss on valuation of financial assets at fair value through profit or loss		3,658		-
Impairment loss on available-for-sale financial assets		-		7,648
Loss on disposal of trade receivables and others		22,384		14,841
	₩	127,513	₩	139,386

Details of interest expense in finance costs for the years ended December 31, 2018 and 2017, are as follows:

(in millions of Korean won)		**2018**		**2017**
Bank overdrafts and loan interest	₩	16,561	₩	30,207
Debentures interest		71,060		76,197
Other interest expense		13,847		12,166
Less: amounts capitalized on qualifying assets [1]		-		(1,669)
	₩	101,468	₩	116,851

[1] Capitalization rate for calculating borrowing costs, which is eligible for capitalization as at December 31, 2017, is 2.80%.

Net gains or losses on each category of financial instruments for the years ended December 31, 2018 and 2017, are as follows:

(in millions of Korean won)		**2018**		**2017**
Financial assets				
Financial assets at amortized cost[1]				
Interest income	₩	34,286	₩	26,094
Gain (loss) on foreign currency translation		4,920		(11,116)
Bad debt expenses		(63,587)		(71,765)
		(24,381)		(56,787)
Financial assets at fair value through profit or loss[2]				
Loss on valuation		(3,658)		-
Dividend income		95		-
		(3,563)		-
Financial assets at fair value through other comprehensive income[3]				
Loss on valuation		(6,114)		(105)
Impairment loss		-		(7,648)
Dividend income		439		327
Loss on disposal		(22,384)		(14,829)
Bad debt expenses[4]		(1,438)		-
		(29,497)		(22,255)
		(57,441)		(79,043)
Financial liabilities				
Financial liabilities at amortized cost				
Interest expense		(100,289)		(116,714)
Gain (loss) on foreign currency translation		(5,321)		12,394
		(105,610)		(104,320)
	₩	(163,051)	₩	(183,362)

[1] These investments were classified as loans and receivables in 2017.

[2] These investments were classified as available-for-sale financial assets in 2017.

[3] These investments were classified as loans and receivables, and available-for-sale financial assets in 2017.

[4] Bad debt expenses incurred from installment receivables were classified as being incurred from loans and receivables in 2017.

29.Tax Expense

Income tax expense for the years ended December 31, 2018 and 2017, consists of:

(in millions of Korean won)		2018		2017
Current tax	₩	145,329	₩	165,696
Changes in deferred tax due to temporary differences		26,524		(42,077)
Beginning deferred tax assets		403,213		361,136
Adjustments of beginning deferred tax assets due to changes in accounting policy		(456,299)		-
Ending deferred tax liabilities (assets)		(79,610)		403,213
Tax that are charged or credited directly to equity		(5,195)		(3,917)
Income tax expense	₩	166,658	₩	119,702

Reconciliation between profit before income tax and income tax expense of the Group for the years ended December 31, 2018 and 2017, are as follows:

(in millions of Korean won)		2018		2017
Profit before income tax expense	₩	648,267	₩	666,820
Tax at domestic tax rates applicable to profits		169,510		166,221
Tax effects of:		(2,853)		(46,519)
Income not subject to tax		(999)		(263)
Expenses not deductible for tax purposes		7,056		1,448
Tax credits		(5,709)		(30,612)
Effects of change in the Korean tax rate		-		(19,333)
Others		(3,201)		2,241
Income tax expense	₩	166,658	₩	119,702
Effective tax rate (income tax expense/profit before income tax)		25.71%		17.95%

The aggregate current and deferred tax relating to items that are charged or credited directly to equity for the years ended December 31, 2018 and 2017, is as follows:

(in millions of Korean won)		**2018**		**2017**
Gain on valuation of equity investments at fair value through other comprehensive income	₩	414	₩	-
Loss on valuation of available-for-sale financial assets		-		(11)
Remeasurement of defined benefit plan		(7,299)		(3,905)
Gain on valuation of debt investments at fair value through other comprehensive income		1,685		-
	₩	(5,200)	₩	(3,916)

The movements in deferred tax assets and liabilities for the year ended December 31, 2018, are as follows:

(in millions of Korean won)		**2018**						
		Beginning balance		**Increase**		**Decrease**		**Ending balance**
Deductible temporary differences:								
Net defined benefit liabilities	₩	417,357	₩	47,583	₩	27,525	₩	437,415
Bad debt expenses and others		179,786		176,309		172,312		183,783
Loss on valuation of inventories		34,583		43,785		34,452		43,916
Unsettled expenses		205,482		174,263		205,482		174,263
Property, plant and equipment		466,236		91,164		90,167		467,233
Provisions		35,623		41,353		35,623		41,353
Impairment loss on available-for-sale financial assets		14,953		-		7,000		7,953
Loss on valuation of investment securities		2,598		6,392		1,899		7,091
Intangible assets		70,806		3,102		16,104		57,804
Deemed dividends		160		-		-		160
Government grants		9,780		736		2,799		7,717
Adjustments on revenues		80,867		67,180		66,014		82,033
Investment assets		3,707		361		-		4,068
Prepaid expenses		456		3,954		2,222		2,188
Present value discount		22		9		22		9
Goodwill		6,321		-		1,806		4,515
Valuation on installment receivables		-		6,500		-		6,500
Impairment loss on investments in subsidiaries		-		9,046		-		9,046
Contract liabilities		-		599,891		292,961		306,930
		1,528,737		1,271,628		956,388		1,843,977
Taxable temporary differences:								
Accrued interest income		(166)		(73)		(166)		(73)

Deposits for severance benefits	(316,387)	(132,623)	(26,734)	(422,276)
Share of profit of associates and joint venture	(2,578)	-	116	(2,694)
Estimate of assets for restoration	(10,159)	(15,287)	(10,730)	(14,716)
Equipment allowances	(91,251)	-	(20,384)	(70,867)
Other assets	-	(3,215,810)	(1,628,655)	(1,587,155)
Contract assets	-	(697,026)	(343,234)	(353,792)
Others	(4,898)	(1,789)	(26)	(6,661)
	(425,439)	(4,062,608)	(2,029,813)	(2,458,234)
Tax loss carryforwards	41,374	4,593	-	45,967
	1,144,672	(2,786,387)	(1,073,425)	(568,290)
Realizable temporary differences and tax loss carryforwards	1,079,223	(2,777,764)	(1,061,646)	(636,895)
Unrealizable temporary differences and tax loss carryforwards	65,449	(8,623)	(11,779)	68,605
Tax rate	11%, 22%, 26%			11%, 22%, 26%
Tax effect due to temporary differences and tax loss carryforwards	283,218	(724,328)	(280,373)	(160,737)
Tax effect due to tax credit carryforwards	119,995	3,468	42,336	81,127
Deferred tax assets (liabilities)	₩ 403,213	₩ (720,860)	₩ (238,037)	₩ (79,610)

The movements in deferred tax assets and liabilities for the year ended December 31, 2017, are as follows:

(in millions of Korean won)	2017			
	Beginning balance	**Increase**	**Decrease**	**Ending balance**
Deductible temporary differences:				
Net defined benefit liabilities	₩ 379,686	₩ 63,966	₩ 26,295	₩ 417,357
Bad debt expenses and others	148,703	172,175	141,092	179,786
Loss on valuation of inventories	39,441	35,153	40,011	34,583
Unsettled expenses	168,992	226,205	189,715	205,482
Property, plant and equipment	447,854	117,713	99,331	466,236
Provisions	35,621	35,623	35,621	35,623
Impairment loss on available-for-sale financial assets	7,789	7,634	470	14,953
Loss on valuation of investment securities	2,490	108	-	2,598
Intangible assets	68,349	14,883	12,426	70,806
Deemed dividends	160	-	-	160
Government grants	8,958	8,527	7,705	9,780
Adjustments on revenues	85,574	63,703	68,410	80,867
Investment assets	3,707	-	-	3,707
Prepaid expenses	4,305	(251)	3,598	456
Present value discount	29	22	29	22
Goodwill	8,127	-	1,806	6,321

Others	16,260	(19,447)	1,711	(4,898)
	1,426,045	726,014	628,220	1,523,839
Taxable temporary differences:				
Accrued interest income	(66)	(169)	(69)	(166)
Deposits for severance benefits	(323,809)	(17,535)	(24,957)	(316,387)
Interest expenses (capitalized interest expense)	(626)	-	(626)	-
Share of profit of associates and joint venture	(4,191)	896	(717)	(2,578)
Estimate of assets for restoration	(1,134)	(10,697)	(1,672)	(10,159)
Equipment allowances	(111,631)	-	(20,380)	(91,251)
	(441,457)	(27,505)	(48,421)	(420,541)
Tax loss carryforwards	27,778	13,596	-	41,374
	1,012,366	712,105	579,799	1,144,672
Realizable temporary differences and tax loss carryforwards	978,406	675,389	574,572	1,079,223
Unrealizable temporary differences and tax loss carryforwards	33,960	36,716	5,227	65,449
Tax rate	11%, 22%, 24.2%			11%, 22%, 26%
Tax effect due to temporary differences and tax loss carryforwards	234,527	187,300	138,609	283,218
Tax effect due to tax credit carryforwards	126,609	30,158	36,772	119,995
Deferred tax assets	₩ 361,136	₩ 217,458	₩ 175,381	₩ 403,213

Details of unrecognized deductible (taxable) temporary differences as deferred tax assets as at December 31, 2018 and 2017, are as follows:

(in millions of Korean won)	2018	2017
Temporary differences	₩ 22,802	₩ 40,172
Tax loss	45,803	25,277
Tax credit carryforwards	18,458	18,882

The maturity of tax loss and tax credit carryforwards that are not recognized as deferred tax assets is as follows:

	2018	
(in millions of Korean won)	**Tax loss**	**Tax credit carryforwards**
Less than 1 year	₩ -	₩ 6,115
Between 1 and 3 years	-	11,543
More than 3 years	45,803	800
	₩ 45,803	₩ 18,458

30. Earnings per Share

Basic earnings per share are the profit attributable to one share of ordinary shares of the Group. It is measured by dividing profit attributable to ordinary shares during a specified period with weighted-average number of ordinary shares issued during that period. Earnings per share for the years ended December 31, 2018 and 2017, are calculated as follows:

(in millions of Korean won)		**2018**		**2017**
Profit attributable to the ordinary equity holders of the Parent Company	₩	481,637	₩	547,234
Weighted average number of ordinary shares outstanding		436,611,358 shares		436,611,358 shares
Basic earnings per share *(in Korean won)*	₩	1,103	₩	1,253

Diluted earnings per share are same as basic earnings per share as the Group has no dilutive potential ordinary shares as at December 31, 2018 and 2017.

31. Contingencies and Commitments

As at December 31, 2018, there are 80 lawsuits ongoing where the Group is a defendant in the Republic of Korea; total claim amount the Group is being sued for is ₩17,180 million. Management believes the outcome of these lawsuits will likely not have a significant effect on the consolidated financial positon of the Group.

The Group entered into agreements with Woori Bank and others for a line of credit and commercial paper up to ₩71,500 million. These agreements include bank overdraft agreement with Woori Bank and others up to ₩30,000 million.

As at December 31, 2018, the Group has entered into agreement with Woori Bank and three other banks for a limit of ₩68,800 million in relation to payment of its trade payables. It is a loan agreement secured by an electronic trade receivable, where the Group guarantees the payment of trade receivable when the vendors of the Group transfer their trade receivables due from the Group prior to its maturity to banks.

The Group is provided with payment guarantees amounting to ₩15,237 million, ₩10,000 million, ₩10,800 million and ₩44,013 million in relation to the contract guarantees, bid guarantees and payment guarantees in foreign currencies from Seoul Guarantee Insurance Company, KEB Hana Bank, Woori Bank and Korea Software Financial Cooperative, respectively.

According to the financial and other covenants included in certain bonds and borrowings, the Group is required to maintain certain financial ratios such as debt to equity ratio and use the funds for the designated purpose. The covenant also contains restriction on provision of additional collaterals and disposal of certain assets.

The Group acquired frequency usage right for 3.5㎓ for the period from December 1, 2018 to November 30, 2028 and 28㎓ for the period from December 1, 2018 to November 30, 2023, in the amounts of for ₩809,500 million and ₩207,200 million, respectively, through an auction for 5G frequency by Ministry of Science and ICT in June 2018. A quarter of the acquired amounts for each frequency was paid in November 2018, and the remaining amounts would be paid in every March over the contract period.

The Group has entered into a transfer contract of securitized assets with the SPCs (2018: U Plus LTE SPC 37th~42th, 2017: U Plus LTE 31th~36th), and transferred the installment receivables of handset during the years ended December 31, 2018 and 2017. The Group also has entered into asset management contract with each SPC to manage the transferred installment receivables, and committed to be received asset management fees when the SPCs are liquidated.

Due to fire in power storage system established by the other company, the power storage system established by the Group was shut down temporarily in order to inspect safety and take precautions for fire. The ultimate effect of these uncertainty as of the date of statement of financial position.

32. Related Party Transactions

Major related parties as at December 31, 2018 and 2017, are as follows:

	2018
Investor with significant influence over the Group	LG Corporation
Joint venture	Dacom Crossing Corporation
Associates	Genie Music Corporation, Focus Media Korea Corporation, VENTA VR Co., Ltd.
Others	S&I corp. and 11 others, LG CNS and 40 others, LG Sports, LG Management Development Institute, Lusem
Other related parties included in Large Business Group defined by the act	LG Electronics Inc. and 110 others; L. Best; HS Ad Co., Ltd. and four others; GIIR Inc. and nine others; Hanultari Co., Ltd.; Helistar Air Co., Ltd.; Pantos Busan Newport Logistics Center Co., Ltd.; Pantos Logistics Co., Ltd and 49 others; Sal de Vida Korea Corp; Global Dynasty Natural Resource Private Equity Fund; Dangjin Tank Terminal Co., Ltd.; LG International Corp. and 44 others; Robostar Co., Ltd.; Hanuri; LG Fuel Cell Systems (Korea) Inc.; LG-Hitachi Water Solutions Co., Ltd.; Hientech Co., Ltd.; Ace R&A Co., Ltd.; HITeleservice Co., Ltd.; Hi-M Solutec Co., Ltd.; Silicon Works Inc. and two others; Hi Plaza Inc.; Innowith; LG Innotek Alliance Fund and 11 others; Nanumnuri Co., Ltd.; LG Display Co., Ltd. and 20 others; SEETEC Co., Ltd.; LG MMA Corp.; GREENNURI CO., LTD.; LG. Tostem BM Co., Ltd; LG Hausys, Ltd. and 10 others; JS PHARM CO., LTD.; TAI GUK PHARM CO., LTD.; Ulleung Mountain Chu Natural Spring Water Development Company; MiGenstory Co., Ltd.; LG Farouk Co.; Balkeunuri Co., Ltd.; CNP Cosmetics Co., Ltd.; K&I Co., Ltd; Clean Soul Ltd.; HAITAI HTB CO., LTD.; Hankook Beverage Co., Ltd.; The FaceShop Co., Inc. and seven others; Coca-Cola Beverage Co.; LG Household & Health Care Ltd. and 16 others; FarmHanong Co., Ltd. and three others; Ugimag Korea Co., Ltd.; Haengboknuri; LG Chem Ltd. and 38 others; and Zenisce Co., Ltd.

	2017
Investor with significant influence over the Group	LG Corporation
Joint venture	Dacom Crossing Corporation
Associates	Genie Music Corporation, Focus Media Korea Corporation
Others	Serveone and nine others, LG Siltron and two others, LG CNS and 36 others, LG Sports, LG Management Development Institute, Lusem, LG Holdings Japan Co., Ltd., LG Corp. U.S.A., Combustion Synthesis Co.,LTD.
Other related parties included in Large Business Group defined by the act	LG Chem Ltd. and 30 others; SEETEC Co., Ltd.; Haengboknuri; FarmHanong Co., Ltd. and one other; FarmHwaong Co., Ltd.; LG Electronics Inc. and 95 others; Hi Plaza Inc.; Hi-M Solutec Co., Ltd.; HITeleservice Co., Ltd.; Ace R&A Co., Ltd.; Hientech Co., Ltd.; LG-Hitachi Water Solutions Co., Ltd.; LG Fuel Cell Systems (Korea) Inc.; Hanuri; LG Display Co., Ltd. and 18 others; Nanumnuri Co., Ltd.; LG Innotek Alliance Fund and 11 others; Innowith; LG Household & Health Care Ltd. and 16 others; The FaceShop Co., Inc. and six others; Coca-Cola Beverage Co.; Hankook Beverage Co., Ltd.; HAITAI HTB CO., LTD.; Clean Soul Ltd.; K&I Co., Ltd; CNP Cosmetics Co., Ltd.; Zenisce Co., Ltd.; Balkeunuri Co., Ltd.; LG Farouk Co.; MiGenstory Co., Ltd.; Sarangnuri, LG Hausys, Ltd. and nine others; LG. Tostem BM Co., Ltd; LG Hausys ENG., Ltd.; LG International Corp. and 30 others; Dangjin Tank Terminal Co., Ltd.; Global Dynasty Natural Resource Private Equity Fund; Sal de Vida Korea Corp.; Pantos Logistics Co., Ltd and 49 others; Pantos Busan Newport Logistics Center Co., Ltd.; Helistar Air Co., Ltd.; GIIR Inc. and nine others; HS Ad Co., Ltd. and three others; L. Best; Silicon Works Inc. and two others; LG MMA Corp.; JIHEUNG. Co., Ltd; and LG Hitachi Co., Ltd.

As at December 31, 2018, no entity controls the Group. LG Corporation has 36.05% of ownership interest and has significant influence over the Group.

Sales and purchases with related parties for the years ended December 31, 2018 and 2017, are as follows:

(in millions of Korean won)	**2018**			**2017**		
	Sales and others	**Purchase of property, plant and equipment**	**Purchase and others**	**Sales and others**	**Purchase of property, plant and equipment**	**Purchase and others**
Investor with significant influence over the Group						
LG Corporation	₩ 136	₩ -	₩ 31,171	₩ 205	₩ -	₩ 31,117
Joint venture						
Dacom Crossing	541	-	19,745	425	-	11,218

(in millions of Korean won)	2018			2017		
	Sales and others	**Purchase of property, plant and equipment**	**Purchase and others**	**Sales and others**	**Purchase of property, plant and equipment**	**Purchase and others**
Corporation						
Associates						
Genie Music Corporation	160	-	22,162	49	-	4,471
Focus Media Korea Corporation	2,768	-	36	2,192	-	28
VENTA VR Co., Ltd.	-	-	360	-	-	-
Others						
S&I corp.[1]	6,972	75,237	43,283	54,895	72,554	34,005
LG CNS[2]	25,429	212,443	148,134	23,645	139,786	152,404
LG Management Development Institute	72	-	6,164	73	-	6,028
LG Sports	30	-	3,517	30	-	3,097
LG Siltron[3]	-	-	-	224	-	3
Lusem[4]	9	-	-	57	-	-
Other related parties included in Large Business Group defined by the act[5]						
HS Ad Co., Ltd.	597	8,010	23,836	248	7,498	16,234
LG Display Co., Ltd.	1,739	-	21	1,854	-	152
LG Household & Health Care Ltd.	2,652	-	830	3,147	-	1,260
LG Innotek Alliance Fund	71	8,404	37	57	1,322	2,470
LG Electronics Inc.	6,355	6,998	529,616	7,487	29,901	687,256
LG Chem Ltd.	3,352	234	1,526	1,582	417	27
The FaceShop Co., Inc.	2,020	-	139	2,200	-	151
Pantos Logistics Co., Ltd	75	-	8,808	63	409	6,287
L. Best	50	-	3,010	50	-	2,351
Hi Plaza Inc.	54,392	-	44,081	57,254	-	34,893
LG Hausys, Ltd.	880	159	1,462	529	-	16
Coca-Cola Beverage Co.	680	-	56	265	-	112
Others	2,237	2,654	278	1,056	1,112	128
	₩ 111,217	₩ 314,139	₩ 888,272	₩ 157,587	₩ 252,999	₩ 993,708

[1] On December 1, 2018, Serveone spun off S&I corp. (existing corporation) and Serveone (newly established corporation), and transactions of both corporations are included.

[2] Transactions with subsidiaries of the related parties are included.

[3] LG Siltron was sold to SK Co., Ltd. on August 17, 2017, and excluded from related parties as at

December 31, 2018.

[4] Lusem was sold to LB SEMICON CO., LTD. on February 27, 2018, and excluded from related parties as at December 31, 2018.

[5] These companies are not related parties defined in paragraph 9 of Korean IFRS 1024 *Related party disclosures*. However, the companies are designated by the Fair Trade Commission as related parties in accordance with the resolution of the Securities and Futures Commission in accordance with the substantive relationship stipulated in paragraph 10 of Korean IFRS 1024.

Outstanding balances arising from sales/purchases of goods and services as at December 31, 2018 and 2017, are as follows:

(in millions of Korean won)	2018		2017	
	Trade receivables and others	**Trade payables and others**	**Trade receivables and others**	**Trade payables and others**
Investor with significant influence over the Group				
LG Corporation	₩ 5,397	₩ -	₩ 5,393	₩ 1,558
Joint venture				
Dacom Crossing Corporation	-	1,992	-	817
Associates				
Genie Music Corporation	47	5,235	-	1,131
Focus Media Korea Corporation	14	-	-	22
Others				
LG CNS[1]	1,057	165,623	819	99,190
LG Management Development Institute	3,107	176	2,958	165
LG Sports	-	10	-	49
Lusem[2]	-	-	4	-
S&I corp.[3]	19,939	29,729	44,831	36,808
Other related parties included in Large Business Group defined by the act[4]				
HS Ad Co., Ltd.	-	32,904	-	28,479
LG Household & Health Care Ltd.	135	3	166	22
LG Innotek Alliance Fund	9	2,315	20	1,025
LG Electronics Inc.	369	14,027	855	47,451
LG Chem Ltd.	111	436	214	293
L. Best	-	2,564	146	1,318
Pantos Logistics Co., Ltd	-	2,026	-	1,846
Hi-M Solutec Co., Ltd.	-	209	36	-
Hi Plaza Inc.	-	2,850	3,550	5,760
Others	380	1,770	1,536	29
	₩ 30,565	₩ 261,869	₩ 60,528	₩ 225,963

[1] Transactions with subsidiaries of the related parties are included.

[2] Lusem was sold to LB SEMICON CO., LTD. on February 27, 2018, and excluded from related parties as at December 31, 2018.

[3] On December 1, 2018, Serveone spun off S&I corp. (existing corporation) and Serveone (newly established corporation), and receivables and payables of both corporations are included.

[4] These companies are not related parties defined in paragraph 9 of Korean IFRS 1024 *Related party disclosures*. However, the companies are designated by the Fair Trade Commission as related parties in accordance with the resolution of the Securities and Futures Commission in accordance with the substantive relationship stipulated in paragraph 10 of Korean IFRS 1024.

Above receivables and payables are unsecured and to be settled in cash. Also, there are no payment guarantees, which were given or received related to above receivables and payables.

Fund transactions with related parties for the years ended December 31, 2018 and 2017, are as follows:

(in millions of Korean won)	**2018**		**2017**	
	Dividends paid	**Contributions in cash**	**Dividends paid**	**Contributions in cash**
Investor with significant influence over the Group				
LG Corporation	₩ 62,950	₩ -	₩ 55,082	₩ -
Subsidiaries				
Medialog Corp.	-	-	-	45,000
LG UPLUS FUND I LLC		11,275	-	-
Associates				
Genie Music Corporation	-	-	-	26,749
Focus Media Korea Corporation	-	-	-	4,125
VENTA VR Co., Ltd.	-	1,000	-	-
Other related parties included in Large Business Group defined by the act				
Others	-	-	69	-

The compensation and benefits for the Group's key management, including directors (excluding non-executive directors) and executive officers, who have significant control and responsibilities on planning, operating and controlling the Group's business activities for the years ended December 31, 2018 and 2017, are summarized as follows:

(in millions of Korean won)	**2018**	**2017**
Short-term employee benefits	₩ 32,250	₩ 31,222
Long-term employee benefits	44	30

Post-employment benefits[1]		5,072		5,300
	₩	37,366	₩	36,552

[1] The above balances refer to post-employment benefits incurred for key management during the years ended December 31, 2018 and 2017. In addition, the present values of defined benefit obligations for key management are ₩38,490 million and ₩36,150 million as at December 31, 2018 and 2017, respectively.

33. Risk Management

33.1 Capital Risk Management

The Group's objectives when managing capital are to safeguard the Group's ability to continue as a going concern, so the Group can continue to provide returns for shareholders and benefits for other stakeholders, and to maintain an optimal capital structure to reduce the cost of capital.

The Group's capital structure consists of net liability, which is borrowing (including bonds and finance lease liability) less cash and cash equivalents, and equity; the overall capital risk management policy of the Group have been consistently maintained to all the years presented. In addition, items managed as capital by the Group as at December 31, 2018 and 2017, are as follows:

(in millions of Korean won)		**2018**		**2017**
Total borrowings	₩	2,971,062	₩	3,341,590
Less: cash and cash equivalents		(378,631)		(449,879)
Borrowings, net	₩	2,592,431	₩	2,891,711
Total equity	₩	6,853,369	₩	5,232,986
Net borrowings-to-equity ratio		37.83%		55.26%

33.2 Financial Risk Management

The Group is exposed to various financial risks, such as market risk (foreign exchange risk, interest rate risk and price risk), credit risk and liquidity risk related to financial instruments. The purpose of risk management of the Group is to identify the potential risks to financial performance and reduce, eliminate and evade those risks to a degree acceptable to the Group. The Group makes use of derivative financial instruments to hedge certain risks, such as foreign exchange and interest rate risks. Overall financial risk management policy of the Group has been consistently maintained to all the years presented.

(a) Foreign currency risk

The Group is exposed to Foreign currency risk since it undertakes transactions denominated in foreign currencies. The carrying amounts of the Group's monetary assets and liabilities denominated in foreign currencies that is not the functional currency as at December 31, 2018 and 2017, are as follows:

(in millions of Korean won)	2018			
	Assets		Liabilities	
USD	₩	96,420	₩	108,085
Others		48		783
	₩	96,468	₩	108,868

(in millions of Korean won)	2017			
	Assets		Liabilities	
USD	₩	96,778	₩	107,442
Others		136		296
	₩	96,914	₩	107,738

The Group internally assesses the foreign currency risk from changes in exchanges rates on a regular basis. The Group's sensitivity to a 10% increase and decrease in the Korean won (functional currency of the Group) against the major foreign currencies as at December 31, 2018 and 2017, is as follows:

(in millions of Korean won)	2018			
	Gain (loss) from 10% increase against foreign currency		Gain (loss) from 10% decrease against foreign currency	
USD	₩	(863)	₩	863

(in millions of Korean won)	2017			
	Gain (loss) from 10% increase against foreign currency		Gain (loss) from 10% decrease against foreign currency	
USD	₩	(808)	₩	808

Sensitivity analysis above is conducted for monetary assets and liabilities denominated in foreign currencies other than functional currency as at December 31, 2018 and 2017.

(b) Interest rate risk

The Group borrows funds on floating interest rates and is exposed to cash flow risk arising from interest rate changes. The carrying amount of liabilities exposed to interest rate risk as at December 31, 2018 and 2017, is as follows:

(in millions of Korean won)	**2018**	**2017**
Borrowings	₩ -	₩ 467
Non-trade payables	1,132,011	529,742

The Group internally assesses the cash flow risk from changes in interest rates on a regular basis. The effect of changes in interest rates of 1% point to profit or loss and net assets as at December 31, 2018 and 2017, is as follows:

(in millions of Korean won)	**2018**			
	1% point increase		**1% point decrease**	
	Profit or loss	**Net assets**	**Profit or loss**	**Net assets**
Non-trade payables	₩ (8,653)	₩ (8,653)	₩ 8,653	₩ 8,653

(in millions of Korean won)	**2017**			
	1% point increase		**1% point decrease**	
	Profit or loss	**Net assets**	**Profit or loss**	**Net assets**
Borrowings	₩ (4)	₩ (4)	₩ 4	₩ 4
Non-trade payables	(4,014)	(4,014)	4,014	4,014

(c) Price risk

The Group is exposed to price risks arising from marketable equity instruments. The fair value of marketable equity instruments for the years ended December 31, 2018 and 2017, is ₩4,671 million and ₩2,780 million, respectively, and when the price of equity instrument changes by 10% with all other variables held constant, the effect to equity will be ₩346 million and ₩211 million, for the years ended December 31, 2018 and 2017, respectively.

(d) Credit risk

Credit risk refers to the risk that counterparty may default on its contractual obligations resulting in financial loss to the Group. Credit risk is managed on respective entity basis, including the Parent Company and its subsidiaries. Credit risk arises from cash and cash equivalents, derivatives, deposits in bank and financial institution as well as receivables and firm commitments to individual customers. The Group's credit risk exposure to bank and financial institutions is limited due to making transactions with high credit rating financial institutions. The Group evaluate credit status of customers based on their financial status, credit history and other factors. The Group does not establish policies to manage credit limits of each customer.

(i) Trade receivables

The Group applies the simplified approach to measuring expected credit losses which uses a lifetime expected loss allowance for all trade receivables. To measure the expected credit losses, trade receivables have been grouped based on shared credit risk characteristics and the period. On that basis, the loss allowance as at December 31, 2018 was determined as follows for trade receivables. The expected credit losses reflect forward-looking information.

(in millions of Korean won)	**2018**			
	Within 6 months	**7-12 months**	**More than 1 year**	**Total**
Expected loss rate	3.19%	60.70%	68.98%	
Gross carrying amount	₩ 1,330,408	₩ 39,081	₩ 129,921	₩ 1,499,410
Loss allowance provision	42,421	23,720	89,615	155,756

[1] The time band is categorized by claim date for the receivables. The receivables that were not claimed are included in time band 'Within 6 months'.

Movements in the loss allowance provision for trade receivables for the years ended December 31, 2018 and 2017, are as follows:

(in millions of Korean won)	**2018**	**2017**
Beginning balance - Korean IFRS 1039	₩ 173,862	₩ 166,460
Reclassification of trade receivables to debt investments at fair value through other comprehensive income	(984)	-
Loss allowance as at initial application date - calculated under Korean IFRS 1109	172,878	166,460
Increase in loss allowance recognized in profit or loss during the year	45,229	43,764
Receivables written off during the year as uncollectible	(56,151)	(57,067)
Unused amounts reversed	16,679	20,706
Transfer of loss allowance due to reclassification of the receivables	(22,879)	-
Ending balance (the amount as at December 31, 2017 - calculated under Korean IFRS 1039)	₩ 155,756	₩ 173,862

As at December 31, 2018, total carrying amounts of trade receivables that are maximum exposure to credit risk is ₩1,499,410 million (2017: ₩2,663,026 million).

Following losses are recognized in profit or loss in relation to impaired trade receivables for the years ended December 31, 2018 and 2017, are as follows:

(in millions of Korean won)		**2018**		**2017**
Impairment loss				
Bad debt expenses	₩	45,229	₩	43,764

(ii) Debt investments at fair value through other comprehensive income

Debt investments at fair value through other comprehensive income include trade receivables subject to be sold. The loss allowance for debt investments at fair value through other comprehensive income is recognized in profit or loss and reduces the fair value loss otherwise recognized in other comprehensive income.

Debt investments at fair value through other comprehensive income 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, after the initial recognition, and the loss allowance recognized during the period was, therefore, limited to 12 months expected losses. When credit risk is not low and decrease in credit risk is significant, a lifetime expected loss allowance is used.

Movements in loss allowance provision for debt investments at fair value through other comprehensive income for the year ended December 31, 2018, are as follows:

(in millions of Korean won)		**2018**
Beginning balance - Korean IFRS 1039	₩	-
Reclassification of trade receivables to debt investments at fair value through other comprehensive income		984
Loss allowance as at initial application date - calculated under Korean IFRS 1109		984
Increase in loss allowance recognized in profit or loss during the year		1,438
Receivables written off during the year as uncollectible		(1,196)
Unused amounts reversed		295
Ending balance	₩	1,521

(iii) Other financial assets at amortized cost

Other financial assets at amortized cost 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, after the initial recognition, and the loss allowance recognized during the period was, therefore, limited to 12 months expected losses. When credit risk is not low and decrease in credit risk is significant, a lifetime expected loss allowance is used.

Movements in loss allowance provision for other financial assets at amortized cost for the years ended December 31, 2018 and 2017, are as follows:

(in millions of Korean won)		2018		2017
Beginning balance - Korean IFRS 1039	₩	61,542	₩	40,547
Loss allowance as at initial application date - calculated under Korean IFRS 1109		61,542		40,547
Increase in loss allowance recognized in profit or loss during the year		17,968		28,218
Receivables written off during the year as uncollectible		(16,616)		(7,409)
Unused amounts reversed		928		187
Transfer of loss allowance due to reclassification of the receivables		22,879		-
Ending balance	₩	86,701	₩	61,542

(e) Liquidity risk

The Group manages liquidity risk by establishing short-, medium- and long-term funding plans and continuously monitoring actual cash outflow and its budget to match the maturity profiles of financial assets and liabilities. Management of the Group believes that financial liability may be redeemed by cash flows arising from operating activities and financial assets.

Maturity analysis of non-derivative financial liabilities according to its remaining maturity as at December 31, 2018 and 2017, is as follows:

(in millions of Korean won)	2018			
	Within a year	1-5 years	More than 5 years	Total
Non-interest-bearing instruments	₩ 2,311,370	₩ 38	₩ -	₩ 2,311,408
Variable interest rate instruments	232,637	638,370	303,563	1,174,570
Fixed interest rate instruments	959,568	1,697,316	504,073	3,160,957
	₩ 3,503,575	₩ 2,335,724	₩ 807,636	₩ 6,646,935

Maturity analysis above is based on the earliest maturity for the Group to bay based on the carrying amount.

(in millions of Korean won)	2017			
	Within a year	1-5 years	More than 5 years	Total
Non-interest-bearing instruments	₩ 2,450,043	₩ 124	₩ -	₩ 2,450,167
Variable interest rate instruments	139,575	406,800	-	546,375
Fixed interest rate instruments	959,589	2,153,800	453,279	3,566,668
	₩ 3,549,207	₩ 2,560,724	₩ 453,279	₩ 6,563,210

Maturity analysis above is based on the earliest maturity for the Group to bay based on the carrying amount.

33.3 Transfer of Financial Assets

Transferred Financial Assets that are Derecognized in their Entirety

The Group transferred trade receivables to special purpose entities and others for ₩ 2,458,267 million and derecognized the trade receivables from the financial statements as substantially all the risks and rewards are transferred. Accordingly, the Group recognized a loss on disposal for ₩ 22,384 million.

33.4 Fair Value Hierarchy

Items that are measured at fair value are categorized by the fair value hierarchy levels, and the defined levels are as follows:

- Quoted prices (unadjusted) in active markets for identical assets or liabilities (Level 1).
- All inputs other than quoted prices included in level 1 that are observable (either directly that is, prices, or indirectly that is, derived from prices) for the asset or liability (Level 2).
- Unobservable inputs for the asset or liability (Level 3).

Fair value hierarchy classifications of the financial instruments that are measured subsequent at fair value to initial recognition as at December 31, 2018 and 2017, are as follows:

(in millions of Korean won)	**2018**				
		Fair value			
	Carrying amount	**Level 1**	**Level 2**	**Level 3**	**Total**
Financial assets					
Financial assets at fair value through profit or loss					
Available-for-sale financial assets	₩ 25,206	₩ -	₩ -	₩ 25,206	₩ 25,206
Financial assets at fair value through other comprehensive income					
Available-for-sale financial assets	7,856	4,671	-	3,185	7,856
Trade receivables	858,370	-	858,370	-	858,370

(in millions of Korean won)	**2017**				
		Fair value			
	Carrying amount	**Level 1**	**Level 2**	**Level 3**	**Total**
Financial assets					
Marketable equity securities	₩ 2,780	₩ 2,780	₩ -	₩ -	₩ 2,780

There were no significant transfers between levels 1 and 2 for fair value measurements for the years ended December 31, 2018 and 2017.

Valuation of the financial assets categorized within level 3 of the fair value hierarchy classifications are considered risks adjusted discount rate and others.

There are no significant changes in business environments or economic environments, which have impact on the fair values of financial assets and financial liabilities held by the Group.

Valuation techniques and inputs used in the recurring and non-recurring fair value measurements categorized within level 2 of the fair value hierarchy are as follows:

(in millions of Korean won)	**Fair value**	**Level**	**Valuation techniques**	**Inputs**	**Range of inputs**
Financial assets					
Trade receivables	₩ 858,370	2	Discounted cash flow	Interest rate of debentures	2.234% ~ 6.4%

34. Statements of Cash Flows

The major transactions not involving cash outflows and cash inflows for the years ended December 31, 2018 and 2017, are as follows:

(in millions of Korean won)	2018	2017
Reclassification of assets under construction	₩ 817,704	₩ 946,722
Current portion of long-term non-trade payables	134,456	135,975
Non-trade payables relating to acquiring property, plant and equipment and intangible assets	764,458	230,687
Current portion of long-term borrowings and debentures	884,411	865,795
Effects of changes in accounting policy	1,303,405	-

Changes in liabilities arising from financial activities for the years ended December 31, 2018 and 2017, are as follows:

(in millions of Korean won)	Current portion of debentures	Debentures	Short-term borrowings	Current portion of long-term borrowings	Long-term borrowings	Total
At January 1, 2017	₩ 529,789	₩ 2,164,861	₩ 15,000	₩ 508,313	₩ 761,197	₩ 3,979,160
Cash flows – issue / borrowing	-	298,726	208,967	-	100,000	607,693
Cash flows – repayment	(530,000)	-	(208,967)	(508,313)	-	(1,247,280)
Current portion	429,598	(429,598)	-	436,197	(436,197)	-
Others	435	1,582	-	-	-	2,017
At December 31, 2017	₩ 429,822	₩ 2,035,571	₩ 15,000	₩ 436,197	₩ 425,000	₩ 3,341,590
Cash flows – issue / borrowing	₩ -	₩ 298,717	₩ 487,337	₩ -	₩ 200,000	₩ 986,054
Cash flows – repayment	(430,000)	-	(492,337)	(436,197)	-	(1,358,534)
Current portion	609,411	(609,411)	-	275,000	(275,000)	-
Others	576	1,376	-	-	-	1,952
At December 31, 2018	₩ 609,809	₩ 1,726,253	₩ 10,000	₩ 275,000	₩ 350,000	₩ 2,971,062

35. Unconsolidated Structured Entities

In order to carry out asset securitization with receivables of handset as underlying assets, the Group transferred the receivables of handset to U Plus LTE SPC 22th and 20 other companies (the “SPC”). As a result, SPC is not subject to consolidation according to Korean IFRS 1110 *Consolidated financial statement*’ and the receivables of handset satisfy the requirements of derecognition of Korean IFRS 1109 *Financial Instruments*.

Details of scale of unconsolidated structured entities as at December 31, 2018 and 2017, are as follows:

(in millions of Korean won)		**Asset securitization**
Total assets of unconsolidated structured entities	₩	2,587,875

36. Changes in Accounting Policies

36.1 Adoption of Korean IFRS 1109 *Financial Instruments*

As explained in Note 2, Group has applied Korean IFRS 1109 *Financial Instruments* on January 1, 2018, the date of initial application. In accordance with the transitional provisions in Korean IFRS 1109, comparative figures for prior reporting period have not been restated. The impact on the financial statements due to the application of Korean IFRS 1109 is as follows:

(a) Classification and Measurement of Financial Instruments

(i) Reclassification from available-for-sale to fair value through profit or loss

Investments amounting to ₩19,500 million were reclassified from available-for-sale to financial assets at fair value through profit or loss. They do not meet the criteria to be classified as at amortized cost in accordance with Korean IFRS 1109, because their cash flows do not represent solely payments of principal and interest.

(ii) Reclassification of equity investments from available-for-sale to fair value through other comprehensive income

The Group elected to present changes in the fair value of all its equity investments that were not held for trading and previously classified as available-for-sale in other comprehensive income. As a result, assets with a fair value of ₩11,448 million were reclassified from available-for-sale financial assets to financial assets at fair value through other comprehensive income. As at January 1, 2018, related accumulated other comprehensive income of ₩ 1,372 million were not reclassified to profit or loss even though these assets are disposed of.

(iii) Reclassification of loans and receivables to debt investments at fair value through other comprehensive income

Trade receivables were reclassified from loans and receivables to fair value through other comprehensive income, as the Group's business model is achieved both by collecting contractual cash flows and selling of these assets. The contractual cash flows of these investments are solely principal and interest. As a result, trade receivables with a fair value of ₩ 1,002,664 million were reclassified from loans and receivables to debt investments at fair value through other comprehensive income on January 1, 2018.

On the date of initial application, January 1, 2018, the financial instruments of the Group with any reclassifications noted, were as follows:

(in millions of Korean won)	**Measurement category**		**Carrying amount**		
	Korean IFRS 1039	**Korean IFRS 1109**	**Korean IFRS 1039**	**Korean IFRS 1109**	**Difference**
Current financial assets					
Cash and cash equivalents	Loans and receivables	Amortized costs	₩ 449,879	₩ 449,879	₩ -
Financial institution deposits	Loans and receivables	Amortized costs	31,265	31,265	-
Trade receivables	Loans and receivables	Amortized costs	1,453,194	1,453,194	-
Trade receivables	Loans and receivables	Fair value through other comprehensive income	485,022	485,022	-
Other receivables	Loans and receivables	Amortized costs	190,215	190,215	-
Non-current financial assets					
Financial institution deposits	Loans and receivables	Amortized costs	₩ 21	₩ 21	₩ -
Available-for-sale financial assets	Available-for-sale financial assets	Fair value through profit or loss	19,500	19,500	-
Available-for-sale financial assets	Available-for-sale financial assets	Fair value through other comprehensive income	11,448	11,448	-
Trade receivables	Loans and receivables	Amortized costs	33,306	33,306	-
Trade receivables	Loans and receivables	Fair value through other comprehensive income	517,642	517,642	-
Other receivables	Loans and receivables	Amortized costs	288,865	288,865	-

(b) Impairment of Financial Assets

The Group has three types of financial assets subject to Korean IFRS 1109's new expected credit loss model:

- trade receivables for sales of inventory
- debt investments carried at fair value through other comprehensive income, and
- debt investments carried at amortized cost

Upon adoption of Korean IFRS 1109, accounting policies for recognition of impairment have changed. The impact of the change in impairment methodology on the Group's beginning balance of retained earnings is disclosed in the table on *(a)* above.

(i) 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.

(ii) Debt instruments

Debt investments at amortized cost and those at fair value through other comprehensive income are considered to be low risk, and thus the provision for impairment is determined as 12 months expected credit losses.

36.2 Adoption of Korean IFRS 1115 *Revenue from Contracts with Customers*

The impact on the Group's statements of financial position as at January 1, 2018, the date of initial application, is as follows:

(in millions of Korean won)		**December 31, 2017 (before adjustments)**		**Adjustments**		**January 1, 2018 (after adjustments)**
Other current assets[1,2]	₩	128,744	₩	1,374,629	₩	1,503,373
Other non-current assets[1,2]		27,502		651,568		679,070
Deferred tax assets		403,213		(403,206)		7
Total assets	₩	11,935,453	₩	1,622,991	₩	13,558,444
Other current liabilities[1]	₩	90,895	₩	171,944	₩	262,839
Other non-current liabilities[1]		17,626		94,549		112,175
Deferred tax liabilities		-		53,093		53,093
Total liabilities	₩	6,702,467	₩	319,586	₩	7,022,053
Retained earnings	₩	1,820,562	₩	1,303,354	₩	3,123,916
Non-controlling interests		115		51		166
Total equity	₩	5,232,986	₩	1,303,405	₩	6,536,391

[1] Allocating the transaction price to performance obligations

With implementation of Korean IFRS 1115, the Group shall allocate the transaction price to several performance obligations identified from one contract on a relative stand-alone selling price basis. Accordingly, a certain amount of the discount on handsets given at the point of the sale is deducted from the telecommunication service revenue over the estimated contract period, whereas a certain amount of the discount on plans is added to the telecommunication service revenue over the contract period after immediately deducted from handset sales revenue.

In relation to above, contract assets and contract liabilities increased by ₩288,396 million and ₩219,388 million, respectively, on January 1, 2018.

[2] Incremental costs of obtaining a contract

The Group pays sales commissions to its employees based on customer contracts signed through the employees in telecommunication services. The commission accounts for substantial portion of sales commissions in operating expenses. With implementation of Korean IFRS 1115, the Group recognizes as an asset "the incremental costs of obtaining a contract", and costs that are recognized as assets are amortized over the period.

To reflect this change in policy, current and non-current other assets increased by ₩1,546,769 million on January 1, 2018.

Financial statement line items affected by the adoption of the new rules in the current period are as follows:

Statement of financial position

(in millions of Korean won)		**Reported amount**		**Adjustments**		**Amount before application of Korean IFRS 1115**
Other current assets	₩	1,463,771	₩	(1,343,941)	₩	119,830
Other non-current assets		656,432		(625,539)		30,893
Deferred tax assets		41		342,882		342,923
Total assets	₩	13,939,948	₩	(1,626,598)	₩	12,313,351
Other current liabilities	₩	318,089	₩	(243,834)	₩	74,254
Other non-current liabilities		111,999		(91,623)		20,377
Deferred tax liabilities		79,651		(79,651)		-
Total liabilities	₩	7,086,580	₩	(415,108)	₩	6,671,472
Retained earnings	₩	3,447,171	₩	(1,211,498)	₩	2,235,673
Non-controlling interests		138		8		146
Total equity	₩	6,853,369	₩	(1,211,490)	₩	5,641,879

Statement of profit or loss

(in millions of Korean won)		Reported amount		Adjustments		Amount before application of Korean IFRS 1115
Operating revenue	₩	12,125,051	₩	233,495	₩	12,358,546
Operating expenses		11,394,107		107,807		11,501,914
Costs of merchandise purchased		3,002,449		(14,244)		2,988,205
Other operating expenses		5,775,503		122,052		5,897,554
Operating profit		730,945		125,687		856,632
Profit before income tax		648,267		125,687		773,954
Income tax expense		166,658		33,773		200,431
Profit for the year		481,609		91,914		573,524

Statement of cash flows

(in millions of Korean won)		Reported amount		Adjustments		Amount before application of Korean IFRS 1115
Profit for the year	₩	481,609	₩	91,914	₩	573,524
Adjustments for:						
Income tax expenses		166,658		33,773		200,431
Amortization of contract assets and others		1,926,016		(1,926,016)		-
Amortization of contract liabilities ant others		292,962		(292,962)		-
Changes in operating assets and liabilities:						
Increase in contract assets and others		(1,869,299)		1,869,299		-
Increase in contract liabilities and others		361,919		(361,919)		-
Cash generated from operations	₩	2,069,439	₩	-	₩	2,069,439

37. Approval of Issuance of the Financial Statements

The consolidated financial statements 2018 were approved for issue by the Board of Directors on January 28, 2019 and will be finally approved with the approval of shareholders at their Annual General Shareholders' Meeting on March 15, 2019.

38. Events After the Reporting Period

It was approved at the finance committee on January 4, 2019 to issue the 104th bond in order to retain conversion funds and operating funds. According to this resolution, unsecured public bonds (Credit rate of AA0) of ₩250,000 million, ₩170,000 million and ₩80,000 million with expiration dates of January 28, 2022, January 28, 2024, and January 28, 2029, respectively, were issued on January 28, 2019.

On January 22, 2019, in accordance with the resolution of finance committee, the Group transferred trade receivables with total face amount of ₩363,263 million to UPlus LTE SPC 43th. The proceeds from this sale was settled on February 7, 2019.

On February 14, 2019, in accordance with the resolution of Board of Directors, the Group determined to acquire 38,723,433 shares of CJ Hello Co., Ltd. for ₩800,000 million by cash in order to secure competitiveness in broadcasting market. As a result, the Group’s percentage of ownership for CJ Hello Co., Ltd. will be 50.00%+1 share.