

**Hankook Tire Worldwide Co., Ltd.
and Subsidiaries**
Consolidated Financial Statements
December 31, 2018 and 2017

Hankook Tire Worldwide Co., Ltd. and Subsidiaries

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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
Hankook Tire Worldwide Co., Ltd.

Opinion

We have audited the accompanying consolidated financial statements of Hankook Tire Worldwide Co., Ltd. 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 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 and other explanatory information.

In our opinion, the accompanying consolidated financial statements present fairly, in all material respects, the consolidated financial position of the Group as 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 financial statements of the current period. These matters were addressed in the context of our audit of the financial statements as a whole, and in forming our opinion thereon, and we do not provide a consolidated opinion on these matters.

(1) Impairment assessment of investment in associates

Key Audit Matter

The book value of investment in associates of Hankook Tire Worldwide Co., Ltd is ₩ 2,640,509,520 thousand as at December 31, 2018. As explained in note 10, the Group has significant influence to Hankook Tire Co., Ltd and is applying equity method on the investments.

We considered as a key audit matter because of the i) existence of indication of impairment loss on investment in associates due to long-term steady decrease of Hankook Tire Co., Ltd share price, ii) significance of unpredictability of estimation that the management used in determining recoverable amount of Hankook Tire Co., Ltd, and iii) the category causes significant influence to the Group.

How our audit addressed the Key Audit Matter

We performed the following audit procedures for the valuation model, key assumptions and decisions related to the value-in-use valuation. We included expert in value assessment when performing audit procedure.

- Review capability and related experience (independence and suitability) of the expert that the management used in value-in-use valuation
- Inquire and review valuation model that the management applied
- Obtain understanding of the future cash flow of Hankook Tire Co., Ltd, and test whether future cash flow estimation is based on the business plan approved by the management
- Assess the adequacy of the estimation of the past business plan by comparing it with the performance for Hankook Tire Co., Ltd.
- Assess the rationality of key assumptions used in valuation model, such as discount rate, growth rate and others by comparing the external benchmark in the same industry and past financial information of Hankook Tire Co., Ltd.

(2) Allocation of acquisition cost of investments in associates

Key Audit Matter

As explained in Note 10, the Group acquired 4.8% of the shares of Hankook Tire Co., Ltd at December, 2017. The Group completed the process of purchase price allocation, which purchase price are allocated to acquiree's assets and liabilities. We determined it as a key audit matter considering significance of management's decision in allocating purchase price and importance of acquisition. The management allocated purchase price of net asset including customer relationship, brand, other intangible asset and goodwill by the support of the external valuation expert. Since the matter is complex and causes significant influence to the Group, the matter is considered as key audit matter.

How our audit addressed the Key Audit Matter

We performed the following audit procedures for purchase price allocation. We included expert in value assessment when performing audit procedure.

- Obtain understanding of the Group's approach to purchase contract, consideration paid, and purchase price allocation. (Includes understanding of identification and valuation process of identifiable asset and liability including customer relationship and value technique)
- Review capability and related experience (independence and suitability) of the expert that the management used in value-in-use valuation
- Inquire and review valuation model that the management applied
- Obtain understanding of the future cash flow of Hankook Tire Co., Ltd, and test whether future cash flow estimation is based on business plan approved by the management
- Assess the adequacy of past business plan estimation by comparing the past business plan against the performance for Hankook Tire Co., Ltd.
- Assess whether key basic assumptions and variables used to determine fair value are consistent with valuation in other area, and whether if it is rational.

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

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

Seoul, Korea
March 20, 2019

This report is effective as of March 20, 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.

Hankook Tire Worldwide Co., Ltd. and Subsidiaries
Consolidated Statements of Financial Position
December 31, 2018 and 2017

<i>(in thousands of Korean won)</i>	Notes			2018			2017
Assets							
Current assets							
Cash and cash equivalents	6	₩	198,335,208	₩	129,484,160		
Short-term financial assets	6,7		85,000,000		137,690,301		
Financial assets designated at fair value through profit and loss	5,6,7		-		20,460,417		
Financial assets at fair value through profit or loss	5,6,7		60,502,478		-		
Available-for-sale financial assets	5,6		-		3,111,800		
Trade receivables	6,8,34		151,658,775		141,423,760		
Other receivables	6,8		4,115,943		12,517,963		
Other current assets	9		5,927,922		4,635,112		
Inventories	31		84,842,609		46,038,494		
Curret tax assets			3,184		13,034		
			<u>590,386,119</u>		<u>495,375,041</u>		
Non-current assets							
Long-term financial assets	6		10,013,392		9,460		
Financial assets designated at fair value through profit and loss	5,6,7		-		19,925,401		
Financial assets at fair value through profit or loss	5,6,7		15,180,870		-		
Financial assets at fair value through other comprehensive income	5,6,7		11,405,284		-		
Other non-current receivables	6,8		7,827,773		1,589,503		
Property, plant and equipment	11		158,359,983		158,925,090		
Investment properties	12		29,842,657		26,002,872		
Intangible assets	13		24,456,851		30,682,932		
Investments in associates	10		2,649,766,278		2,551,301,245		
Available-for-sale financial assets	5,6,7		-		29,698,419		
Net defined benefit assets	16		701,382		1,906,279		
Other non-current asstets	9		650,019		650,018		
			<u>2,908,204,489</u>		<u>2,820,691,219</u>		
Total assets		₩	<u>3,498,590,608</u>	₩	<u>3,316,066,260</u>		
Liabilities							
Current liabilities							
Trade payables	4,6	₩	44,974,243	₩	44,193,711		
Other payables	4,6,14		42,394,929		42,852,848		
Current tax liabilities			18,003,556		18,438,751		
Other current liabilities	15		5,153,834		8,897,025		
Borrowings	4,6,27,32		86,356,661		49,953,567		
			<u>196,883,223</u>		<u>164,335,902</u>		
Non-current liabilities							
Other non-current payables	4,6,14		276,679		-		
Net defined benefit liabilities	16		3,211,719		641,207		
Deferred tax liabilities	26		58,537,965		88,348,235		
Other non-current liabilities	15		3,082,752		2,330,729		
Other provisions	17		725,943		746,308		
			<u>65,835,058</u>		<u>92,066,479</u>		
Total liabilities			<u>262,718,281</u>		<u>256,402,381</u>		
Equity							
Share capital	1,18		46,510,087		46,510,087		
Other paid-in capital	19		1,281,093,682		1,285,765,464		
Retained earnings	20		1,884,292,022		1,702,637,351		
Other components of equity	21		(62,549,038)		(50,298,710)		
Equity attributable to owners of the Parent Company			<u>3,149,346,753</u>		<u>2,984,614,192</u>		
Non-controlling interest			<u>86,525,574</u>		<u>75,049,687</u>		
Total equity			<u>3,235,872,327</u>		<u>3,059,663,879</u>		
Total liabilities and equity		₩	<u>3,498,590,608</u>	₩	<u>3,316,066,260</u>		

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

Hankook Tire Worldwide Co., Ltd. and Subsidiaries
Consolidated Statements of Comprehensive Income
Years Ended December 31, 2018 and 2017

<i>(in thousands of Korean won)</i>	Notes	2018	2017
Sales and share of profit or loss of associates accounted for using the equity method	30	₩ 847,957,281	₩ 824,846,244
Costs of sales	23	<u>563,849,070</u>	<u>527,886,796</u>
Gross profit		284,108,211	296,959,448
Selling and administrative expenses	22,23	<u>72,646,921</u>	<u>97,637,515</u>
Operating profit		<u>211,461,290</u>	<u>199,321,933</u>
Finance income	24	12,066,044	20,844,894
Finance costs	24	6,265,267	4,856,829
Other non-operating income	25	16,613,628	73,912,789
Other non-operating expense	25	<u>12,226,652</u>	<u>16,566,305</u>
Profit before income tax		221,649,043	272,656,482
Income tax expense	26	<u>3,293,439</u>	<u>30,139,184</u>
Profit for the year		<u>₩ 218,355,604</u>	<u>₩ 242,517,298</u>
Other comprehensive income			
<i>Items that will not be reclassified to profit or loss</i>			
Remeasurements of net defined benefit assets	16	824,049	3,373,346
Remeasurements of net defined benefit assets of associates		910,094	3,813,603
Gain (loss) on valuation of equity instruments at fair value through other comprehensive income	6,21	647,025	-
<i>Items that may be subsequently reclassified to profit or loss</i>			
Changes in the fair value of available-for-sale financial assets	6,21	-	(1,106,284)
Gain (loss) on valuation of debt instruments at fair value through other comprehensive income	6,21	(745,480)	-
Gain (loss) on foreign operation translation	21	91,433	(144,036)
Share of other comprehensive income of associates	21	<u>(11,311,887)</u>	<u>(30,374,730)</u>
Total comprehensive income for the year		<u>₩ 208,770,838</u>	<u>₩ 218,079,197</u>
Profit is attributable to:			
Owners of the Parent Company		207,068,039	233,099,924
Non-controlling interest		11,287,565	9,417,373
Total comprehensive income for the year is attributable to:			
Owners of the Parent Company		196,912,868	208,688,103
Non-controlling interest		11,857,970	9,391,094
Earnings per share			
Basic and diluted earnings per share	33	₩ 2,258	₩ 2,542

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

Hankook Tire Worldwide Co., Ltd. and Subsidiaries
Consolidated Statements of Changes in Equity
Years Ended December 31, 2018 and 2017

	Notes	Attributable to owners of the Parent Company							
		Share capital	Other paid-in capital	Retained earnings	Other components of equity			Non-controlling interests	Total
					Changes in the fair value of available-for-sale financial assets	Gains(losses) on overseas operation translation	Share of other comprehensive income of associates		
<i>(in thousands of Korean won)</i>		₩	₩	₩	₩	₩	₩	₩	₩
Balance at January 1, 2017		₩ 46,510,087	₩ 1,285,765,464	₩ 1,489,859,004	₩ 1,520,105	₩ -	₩ (20,220,046)	₩ 65,945,155	₩ 2,869,379,769
Annual dividends	20	-	-	(27,508,525)	-	-	-	(286,562)	(27,795,087)
Total comprehensive income for the year		-	-	240,286,873	(1,116,173)	(107,867)	(30,374,730)	9,391,094	218,079,197
Profit for the year		-	-	233,099,924	-	-	-	9,417,373	242,517,297
Remeasurements of net defined benefit assets	16	-	-	3,373,346	-	-	-	-	3,373,346
Remeasurements of net defined benefit assets of associates		-	-	3,813,603	-	-	-	-	3,813,603
Changes in the fair value of available-for-sale financial assets	6,21	-	-	-	(1,116,173)	-	-	9,890	(1,106,283)
Loss on foreign operation translation	21	-	-	-	-	(107,867)	-	(36,169)	(144,036)
Share of other comprehensive income of associates	10	-	-	-	-	-	(30,374,730)	-	(30,374,730)
Balance at December 31, 2017		₩ 46,510,087	₩ 1,285,765,464	₩ 1,702,637,351	₩ 403,932	₩ (107,867)	₩ (50,594,775)	₩ 75,049,687	₩ 3,059,663,879
Balance at January 1, 2018		₩ 46,510,087	₩ 1,285,765,464	₩ 1,702,637,351	₩ 403,932	₩ (107,867)	₩ (50,594,775)	₩ 75,049,687	₩ 3,059,663,879
Changes in accounting policy	35	-	-	896,658	(896,658)	-	-	-	-
Balance at January 1, 2018 (Adjusted)		₩ 46,510,087	₩ 1,285,765,464	₩ 1,703,534,009	₩ (492,726)	₩ (107,867)	₩ (50,594,775)	₩ 75,049,687	₩ 3,059,663,879
Annual dividends	20	-	-	(27,508,525)	-	-	-	(382,083)	(27,890,608)
Changes in other paid-in capital of associates		-	(4,671,782)	-	-	-	-	-	(4,671,782)
Total comprehensive income for the year		-	-	208,266,537	(110,256)	68,473	(11,311,887)	11,857,970	208,770,837
Profit for the year		-	-	207,068,039	-	-	-	11,287,565	218,355,604
Remeasurements of net defined benefit assets	16	-	-	288,404	-	-	-	535,644	824,048
Remeasurements of net defined benefit assets of associates		-	-	910,094	-	-	-	-	910,094
Gain (loss) on valuation of equity instruments at fair value through other comprehensive income	6,21	-	-	-	635,224	-	-	11,801	647,025
Gain (loss) on valuation of debt instruments at fair value through other comprehensive income	6,21	-	-	-	(745,480)	-	-	-	(745,480)
Gain on foreign operation translation	21	-	-	-	-	68,473	-	22,960	91,433
Share of other comprehensive income of associates	10	-	-	-	-	-	(11,311,887)	-	(11,311,887)
Balance at December 31, 2018		₩ 46,510,087	₩ 1,281,093,682	₩ 1,884,292,022	₩ (602,982)	₩ (39,394)	₩ (61,906,662)	₩ 86,525,574	₩ 3,235,872,327

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

Hankook Tire Worldwide Co., Ltd. and Subsidiaries
Consolidated Statements of Cash Flows
Years Ended December 31, 2018 and 2017

<i>(in thousands of Korean won)</i>	Notes	2018	2017
Cash flows from operating activities			
Cash generated from operations			
Profit for the year		₩ 218,355,604	₩ 242,517,297
Adjustments	27	(87,411,134)	(129,419,720)
Changes in operating assets and liabilities	27	<u>(60,712,191)</u>	<u>11,885,918</u>
		70,232,279	124,983,495
Interest received		6,371,166	10,957,137
Interest paid		(1,887,558)	(649,061)
Dividend received		15,138,128	12,217,788
Income taxes paid		<u>(28,983,349)</u>	<u>(24,625,932)</u>
Net cash inflow from operating activities		<u>60,870,667</u>	<u>122,883,427</u>
Cash flows from investing activities			
Payments for short-term financial assets		(131,501,015)	(535,698,718)
Proceeds from sale of short-term financial assets		84,191,316	645,508,417
Payments for long-term financial assets		(10,003,932)	(2,275)
Increase in short-term loans		-	(185,900)
Repayments of short-term loans		7,644	52,599,670
Increase in long-term loans		(4,000,000)	-
Payments for financial assets designated at fair value through profit or loss		-	(103,000,000)
Proceeds from sale of financial assets designated at fair value through profit or loss		-	83,401,556
Payments for available-for-sale financial assets		-	(7,996,437)
Proceeds from sale of available-for-sale financial assets		9,712,548	2,129,703
Payment for debt instruments at fair value through profit or loss	7	(110,000,000)	-
Proceeds from sale of debt instruments at fair value through profit or loss	7	183,185,170	-
Proceeds from sale of debt instruments at fair value through other comprehensive income	7	18,363,164	-
Payment for equity instruments at fair value through profit or loss	7	(4,993,539)	-
Payments for property, plant and equipment	11	(21,317,792)	(23,170,177)
Proceeds from sale of property, plant and equipment	11	172,727	74,379
Payments for intangible assets	13	(2,275,278)	(2,124,259)
Proceeds from sale of intangible assets	13	203,000	22,727
Payments for investments in associates	10	(9,845,698)	(324,112,451)
Cash inflow from derivative transactions		-	4,237,560
Increase in cash due to change in the scope of consolidation		-	423,159
Cash outflow from business combination	36	<u>(3,571,878)</u>	<u>(4,960,154)</u>
Net cash inflow (outflow) from investing activities		<u>(1,673,563)</u>	<u>(212,853,199)</u>
Cash flows from financing activities			
Proceeds from short-term borrowings		37,507,742	21,872,461
Repayments of short-term borrowings		-	(118,540)
Dividends paid		(27,508,525)	(27,508,525)
Dividends paid to non-controlling interests		<u>(382,083)</u>	<u>(286,562)</u>
Net cash outflow from financing activities		<u>9,617,134</u>	<u>(6,041,166)</u>
Net increase (decrease) in cash and cash equivalents		68,814,238	(96,010,938)
Cash and cash equivalents at the beginning of the financial year		129,484,160	225,653,912
Effects of exchange rate changes on cash and cash equivalents		36,811	(158,815)
Cash and cash equivalents at the end of the year		<u>₩ 198,335,209</u>	<u>₩ 129,484,159</u>

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

Hankook Tire Worldwide Co., Ltd. and Subsidiaries

Notes to the Consolidated Financial Statements

December 31, 2018 and 2017

1. General Information

1.1 The Group

Hankook Tire Worldwide Co., Ltd. (the Parent Company) and its subsidiaries (collectively referred to as the "Group") was incorporated in May, 1941 to manufacture and sell tires, tubes and alloy wheels. In December 1968, the Group offered its shares for public ownership and all of the Group's shares were registered with the Korea Exchange. On April 25, 2012, the Board of Directors resolved to spin-off the tire business unit and the investment business unit separately; the former engages in manufacturing, processing and distribution of tires, tubes and parts; the latter engages in the subsidiary management and real estate rental business. Following the approval of the shareholders' meeting on July 27, 2012, the spin-off has been implemented on September 1, 2012 and the Group changed its corporate name from Hankook Tire Co., Ltd. to Hankook Tire Worldwide Co., Ltd.

Through the multiple capital increases, transfers of convertible notes and the spin-off, the authorized number of the Group's ordinary shares are 250 million with a par value of ₩500 per share as at December 31, 2018. The share capital of the Group is ₩46,510,087 thousand (ordinary shares: 93,020,173) and the Group's shareholders as at the end of the reporting periods, are as follows:

	2018		2017	
	Number of shares	Percentage of ownership (%)	Number of shares	Percentage of ownership (%)
Yang Rai Cho	21,942,693	23.6	21,942,693	23.6
Hyun Shick Cho	17,974,870	19.3	17,974,870	19.3
Hyun Bum Cho	17,959,178	19.3	17,959,178	19.3
Treasury shares	1,325,090	1.4	1,325,090	1.4
Others	33,818,342	36.4	33,818,342	36.4
	<u>93,020,173</u>	<u>100.0</u>	<u>93,020,173</u>	<u>100.0</u>

1.2 Consolidated Subsidiaries and Change in the Scope in Consolidation

Details of the consolidated subsidiaries as at the end of the reporting periods, are as follows:

Name of entity	Ownership interest held by the group (%)		Location	Main business
	2018	2017		
Atlas BX Co., Ltd	74.9	74.9	Korea	Manufacturing and sales of storage batteries and dry cells
Atlas BX Motorsports Co., Ltd. ¹	74.9	74.9	Korea	Management of racing team and agency of advertisement
Atlasbx America Corporation ¹	74.9	74.9	USA	Sales of storage batteries and dry cells
HK Automotive Co., Ltd.	100.0	100.0	Korea	Repairing automobiles and sales of parts

Hankook Tire Worldwide Co., Ltd. and Subsidiaries

Notes to the Consolidated Financial Statements

December 31, 2018 and 2017

JAX Motors Co., Ltd. (formerly, Flying Motors Co., Ltd.) ²	100.0	100.0	Korea	Repairing automobiles and sales of parts
HK Motors Co., Ltd. ³	100.0	100.0	Korea	Repairing automobiles and sales of parts
Han Automobile Co., Ltd. ⁴	100.0	-	Korea	Sales and repairing imported automobiles

¹ Atlas BX Co., Ltd. holds 100% of equity interests of the entity as at December 31, 2018 and 2017.

² Flying Motors Co., Ltd., the subsidiary of HK Automotive Co., Ltd. has merged with NEXZEN INC and has changed its name to JAX Motors Co., Ltd. during the year ended December 31, 2018.

³ HK Automotive Co., Ltd wholly owns HK Motors Co., Ltd as at December 31, 2018 and 2017.

⁴ HK Automotive Co., Ltd , the subsidiary of the Company, established Han Automobile Co., Ltd. and it was included as a subsidiary during the year ended December 31, 2018.

Summarized financial information for consolidated subsidiaries as at the end of the reporting periods, is as follows:

(in thousands of Korean won)

	2018					
	Assets	Liabilities	Equity	Sales	Profit (loss) for the year	Total comprehensive income (loss)
Atlas BX Co., Ltd	₩ 487,617,592	₩ 172,528,363	₩ 315,089,229	₩ 657,402,850	₩ 50,693,940	₩ 52,874,013
Atlas BX Motorsports Co., Ltd.	737,953	328,204	409,750	2,056,237	255,098	255,098
Atlasbx America Corporation	58,970,642	22,923,242	36,047,400	51,834,026	605,666	719,919
HK Automotive Co., Ltd.	18,000,597	248,124	17,752,473	2,442,556	(130,642)	(130,642)
JAX Motors Co., Ltd.	3,157,391	1,525,836	1,631,555	1,734,320	(2,554,327)	(2,623,587)
HK Motors Co., Ltd.	6,499,128	2,072,350	4,426,778	5,724,009	(429,556)	(456,167)
Han Automobile Co., Ltd.	8,936,432	5,387,783	3,548,649	11,267,528	(351,351)	(351,351)

(in thousands of Korean won)

	2017					
	Assets	Liabilities	Equity	Sales	Profit (loss) for the year	Total comprehensive income (loss)
Atlas BX Co., Ltd	₩ 407,234,356	₩ 143,497,583	₩ 263,736,773	₩ 629,506,608	₩ 43,220,525	₩ 44,925,453
Atlas BX Motorsports Co., Ltd.	345,277	190,626	154,651	1,622,048	(121,957)	(121,958)
Atlasbx America Corporation	17,262,185	15,452,204	1,809,981	18,518,312	(351,383)	(495,419)
HK Automotive Co., Ltd.	9,955,137	72,022	9,883,115	537,899	(116,429)	(116,885)
Flying Motors Co., Ltd.	1,093,280	147,340	945,940	917,813	(253,774)	(271,279)
HK Motors Co., Ltd.	4,665,685	381,456	4,284,229	4,824,630	152,018	129,657

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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 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

(a) New and amended standards and interpretation 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.

- 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.

- 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

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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.

- 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.

- 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.

- 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 the differences between previous book amounts and book amounts at the date of initial application are recognized to equity. See Note 35 for further details on the impact of the application of the standard.

- Korean IFRS 1115 *Revenue from Contracts with Customers*

The Group has applied to apply 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 retained earnings as at January 1, 2018, the period of initial application. See Note 35 for further details on the impact of the application of the standard.

(b) 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.

- Korean IFRS 1116 *Leases*

Korean IFRS 1116 *Leases* issued on May 22, 2017 is effective for annual periods beginning on or after January 1, 2019, with early adoption permitted. This standard will replace Korean IFRS 1017 *Leases*. The Group will apply the standards for annual periods beginning on or after January 1,

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2019.

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.

The Group performed an impact assessment to identify potential financial effects of applying Korean IFRS 1116. The Group is analyzing the effects on the financial statements based on available information as at December 31, 2018 to identify effects on 2019 financial statements; however, it is difficult to provide reasonable estimates of financial effects until the analysis is complete.

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 Parent 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.

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(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 Foreign Currency Translation

(a) Functional and presentation currency

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

(b) Transactions and balances

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

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

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2.5 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. Changes in the fair value of investments in equity instruments that are not unspecified are recognized in profit or loss.

(b) Measurement

At initial recognition, the Group measures a financial asset at its fair value plus, in the case of a financial asset not at fair value through profit or loss, transaction costs that are directly attributable to the acquisition of the financial asset. 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 'finance income' using the effective interest rate method.

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

Changes in the fair value of financial assets at fair value through profit or loss are recognized in 'finance income or 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. (Note 34 provides more detail of how the Group determines there has been a significant increase in credit risk.)

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2.6 Derivative Instruments

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

2.7 Inventories

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

2.8 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:

	Useful life
Buildings	10 - 40 years
Structures	10 - 40
Machinery and equipment	10
Vehicles	4 - 5
Supplies	4 - 5
Tools, furniture and fixtures	5 - 10

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

2.9 Intangible Assets

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

Membership rights and goodwill 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:

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	Useful life
Industrial property rights	5 - 10 years
Other intangible assets	4 - 10

2.10 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 for 20-40 years.

2.11 Impairment of Non-financial Assets

Intangible assets that have an indefinite useful life are not subject to amortization and are tested annually for impairment, or more frequently if events or changes in circumstances indicate that they might be impaired. An impairment loss is recognized for the amount by which the asset's carrying amount exceeds its recoverable amount. The recoverable amount is the higher of an asset's fair value less costs of disposal and value in use. Non-financial assets other than goodwill that suffered an impairment are reviewed for possible reversal of the impairment at the end of each reporting period.

2.12 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 'finance costs', together with interest expenses recognized from other financial liabilities.

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(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.

2.13 Current and Deferred Tax

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

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

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

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.

2.14 Employee Benefits

(a) Post-employment benefits

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

For defined contribution plans, the Group pays contribution to publicly or privately administered pension insurance plans on mandatory, contractual or voluntary basis. The Group has no further payment obligation once the contribution have been paid. The contribution are recognized as employee benefit expense when they are due.

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A defined benefit plan is a pension plan that is not a defined contribution plan. Generally, post-employment benefits are payable after the completion of employment, and the benefit amount depended on the employee's age, periods of service or salary levels. The liability recognized in the statement of financial position in respect of defined benefit pension plans is the present value of the defined benefit obligation at the end of the reporting period less the fair value of plan assets. The defined benefit obligation is calculated annually by independent actuaries using the projected unit credit method. The present value of the defined benefit obligation is determined by discounting the estimated future cash outflows using interest rates of high-quality corporate bonds that are denominated in the currency in which the benefits will be paid, and that have terms approximating to the terms of the related obligation. Remeasurement gains and losses arising from experience adjustments and changes in actuarial assumptions are recognized in the period in which they occur, directly in other comprehensive income.

Changes in the present value of the defined benefit obligation resulting from plan amendments or curtailments are recognized immediately in profit or loss as past service costs.

(b) Other long-term employee benefits

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

2.15 Revenue Recognition

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

(a) Sale of goods

The Group manufactures and sells storage batteries and dry cells. Sales related to storage batteries business are recognized when control of the products has transferred, being when the products are delivered to the wholesaler.

(b) Providing of transportation Service

In connection with export transactions agreed on conditions of delivery of the shipment, which the Group is obliged to pay freight, delivery of goods is identified as a separate performance obligation as it is deemed to be satisfied after the control of goods is transferred to customers.

(c) Rendering of services including Shared Service

The Group is providing supporting service to affiliates. If the Group has the right to receive the amount for the value provided to the customer for the performance completed, the Group recognizes the amount of right for the service provided. This is because the Group can use

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practical impediment in recognizing the amount of right to receive.

(d) Royalty income

Royalty income is the consideration that provides a license of intellectual property, and is recognized when a later event occurs between fulfillment of the performance obligation to which the consideration is allocated and the subsequent sale or use.

(e) Rental income

Rental income from investment properties is recognized using the straight-line method over the period of rent.

2.16 Provisions

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

2.17 Segment Reporting

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

2.18 Approval of Issuance of the Financial Statements

The consolidated financial statements 2018 were approved for issue by the Board of Directors on March 12, 2019 and are subject to change with the approval of shareholders at their Annual General Meeting.

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. Additional information of significant judgement and assumptions of certain items are included in relevant notes.

(a) Estimated goodwill impairment

The Group tests whether goodwill has suffered any impairment on an annual basis. The recoverable amount of a cash generating unit (CGU) is determined based on value-in-use

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calculations.

(b) Income taxes

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

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

(c) Fair value of financial instruments

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

(d) Impairment of financial assets

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

(e) Net defined benefit liability

The present value of net defined benefit liability depends on a number of factors that are determined on an actuarial basis using a number of assumptions including the discount rate (Note 16).

4. Financial Risk Management

(a) Capital Management

The Group manages its capital to ensure that entities under the Group will be able to continue while maximizing the return to shareholders through the optimization of its debt and equity balance. The Group's overall strategy remains unchanged from that of the prior periods. The Group utilizes the debt ratio as capital management index which is the total liabilities divided by the total equity. Total liabilities and total equity are based on the amounts stated in the financial statements. The Group is not subject to any externally imposed capital requirements.

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The debt ratio as at the end of the reporting periods, are as follows:

<i>(in thousands of Korean won)</i>	2018	2017
Total liabilities	₩ 262,718,282	₩ 256,402,381
Total equity	3,235,872,326	3,059,663,878
Debt ratio	<u>8.12%</u>	<u>8.38%</u>

(b) The significant accounting policies and methods (including recognition, measurement, and related gain (loss) recognition) adopted to the Group's financial assets, financial liabilities and equity are detailed in Note 2.

(c) *Financial risk management*

1) Purpose of financial risk management

The Group is exposed to various risks related to its financial instruments, such as market risk (currency risk, fair value interest rate risk, and price risk), credit risk, liquidity risk and cash flow interest rate risk. The finance department of the Group manages operations, organizes the approach to financial market and controls the financial risks related to operations of the Group through internal risk reports which analyze the scope and degree of each risk factor.

The Group uses derivative financial instruments to hedge against the risks listed. The use of derivatives is decided in the observance of the Group's policies approved by the board of the directors. They provide the documented principles of currency risk, interest rate risk, credit risk, use of derivatives/non-derivatives and excessive liquidity investments. The audit committee constantly oversees the observance of the policies and the degree of risk exposure. The Group does not trade the financial instruments including derivatives for the speculative purpose.

The finance department of the Group report the details quarterly to Financial Risk Management Committee monitoring whether the Group continues to comply with the risk management policies and the current risk management system works appropriately for the risks that the Group is exposed to.

2) Market risk

Operations of the Group are mainly exposed to financial risks of changes in currency and interest rate. The Group makes various contracts of derivatives for management of interest risk and foreign exchange rate.

a) Foreign currency risk management

The Group undertakes transactions denominated in foreign currencies; consequently, exposures to exchange rate fluctuations arise. Exchange rate exposures are managed within approved policy

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parameters utilizing forward foreign exchange contracts.

The sensitivity analysis includes only outstanding foreign currency denominated monetary items and adjusts their translation at the year end for a 10% change in foreign currency rates.

The table below summarizes the impact of weakened Korean won on the Group's pre-tax profit for the year. The analysis is based on the assumption that Korean won has weakened by 10% with all other variables held constant.

<i>(in thousands of Korean won)</i>		<u>2018</u>		<u>2017</u>
USD	₩	16,307	₩	851,980
EUR		106,757		319,040
Others		70,600		590,308

b) Interest rate risk

Interest rate risk is defined as the risk that the interest income or expenses arising from the Group's investing and financing activities will fluctuate because of changes in market interest rate. In order to minimizing uncertainty caused by fluctuations in interest rates and minimizing finance costs, the Group monitors a fluctuation of domestic and foreign interest rates and establishes alternatives.

c) Other price risks

The Group is exposed to equity price risks arising from its equity investments. Equity investments are held for strategic rather than trading purposes. The Group does not actively trade these investments.

The below sensitivity analysis was performed based on stock price fluctuation risk at the end of the reporting period.

If the price of financial assets at fair value through other comprehensive income and financial assets at fair value through profit or loss changed by 5% with all other variables held constant, other comprehensive income would be increased/decreased by ₩ 62,220 thousand (2017: ₩ 44,591 thousand) and Profit before income tax would be increased/decreased by ₩ 256,021 (2017: ₩ - thousand) for the year ended December 31, 2018.

There was no significant change in sensitivity of stock price of the Group comparing to that of prior year.

3) Liquidity risk management

The Group has established an appropriate liquidity risk management framework for the management of the Group's short, medium and long-term funding and liquidity management requirements. The Board of Directors has a full responsibility of the liquidity risk management. The

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Group manages liquidity risk by maintaining adequate reserves and credit facilities, by continuously monitoring forecast and actual cash flows, and by matching the maturity profiles of financial assets and liabilities.

The table below illustrates remaining contractual maturity of non-derivative financial liabilities and Derivative financial liabilities in detail. Contractual maturity is based on the earliest day when the payment can be claimed to the Group. Maturity analysis of non-derivative financial liabilities according to their remaining maturity at the end of the reporting periods, are as follows:

(in thousands of Korean won)

	2018					
	Book amount	Contractual cash flows	Residual amount			
			Within a year	1-2 years	2-5 years	After 5 years
Trade payables	₩ 44,974,243	₩ 44,974,243	₩ 44,974,243	₩ -	₩ -	₩ -
Other payables	42,394,929	42,394,929	42,394,929	-	-	-
Other non-current payables	276,679	276,679	-	276,679	-	-
Borrowings	86,356,661	86,356,661	86,356,661	-	-	-
	<u>₩ 174,002,512</u>	<u>₩ 174,002,512</u>	<u>₩ 173,725,833</u>	<u>₩ 276,679</u>	<u>₩ -</u>	<u>₩ -</u>

(in thousands of Korean won)

	2017					
	Book amount	Contractual cash flows	Residual amount			
			Within a year	1-2 years	2-5 years	After 5 years
Trade payables	₩ 44,193,711	₩ 44,193,711	₩ 44,193,711	₩ -	₩ -	₩ -
Other payables	42,852,848	42,852,848	42,852,848	-	-	-
Borrowings	49,953,567	49,953,567	49,953,567	-	-	-
	<u>₩ 137,000,126</u>	<u>₩ 137,000,126</u>	<u>₩ 137,000,126</u>	<u>₩ -</u>	<u>₩ -</u>	<u>₩ -</u>

Amounts of instruments with floating interest rate included in the above table may change if the changes in floating interest rate is different from the interest rate estimates determined at the end of the reporting period. The Group determined that the Group can repay the obligations with the cash that will be redeemed when the financial assets mature.

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5. Fair Value

5.1 Financial instruments that are measured at fair value

Details of the financial instruments that are measured at fair value as at the end of the reporting periods, are as follows:

<i>(in thousands of Korean won)</i>	2018		2017	
	Carrying amount	Fair value	Carrying amount	Fair value
Financial assets				
Available-for-sale financial assets ¹	₩ -	₩ -	₩ 32,578,640	₩ 32,578,640
Financial instruments designated at fair value through profit or loss	-	-	40,385,818	40,385,818
Debt instruments at fair value through profit or loss	60,502,478	60,502,478	-	-
Debt instruments at fair value through profit or loss (non-current)	10,060,445	10,060,445	-	-
Equity instruments at fair value through profit or loss (non-current)	5,120,425	5,120,425	-	-
Equity instruments at fair value through other comprehensive income (non-current)	11,405,284	11,405,284	-	-

¹ Equity instruments that do not have a quoted price in an active market are measured at cost because their fair value cannot be measured reliably, and excluded from the fair value disclosures.

Trade receivables, non-trade receivables, other receivables and payables measured at amortized cost whose carrying amount is a reasonable approximation of fair value are excluded from the fair value disclosures.

5.2 Fair Value Hierarchy

Financial instruments that are measured subsequent to initial recognition 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).

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Financial instruments that are measured subsequent to initial recognition at fair value at the end of the reporting periods, are as follows:

(in thousands of Korean won)

	2018			
	Level 1	Level 2	Level 3	Total
Recurring fair value measurements				
Equity instruments at fair value through other comprehensive income	₩ 1,464,484	₩ 9,940,800	₩ -	₩ 11,405,284
Debt instruments at fair value through profit or loss	-	70,562,923	-	70,562,923
Equity instruments at fair value through profit or loss	5,120,425	-	-	5,120,425
	<u>₩ 6,584,909</u>	<u>₩ 80,503,723</u>	<u>₩ -</u>	<u>₩ 87,088,632</u>

(in thousands of Korean won)

	2017			
	Level 1	Level 2	Level 3	Total
Available-for-sale financial assets				
Marketable equity instruments	₩ 891,810	₩ -	₩ -	₩ 891,810
Nonmarketable debt instruments	-	31,686,830	-	31,686,830
Financial assets designated at fair value through profit or loss				
Derivative linked securities	-	40,385,818	-	40,385,818
	<u>₩ 891,810</u>	<u>₩ 72,072,648</u>	<u>₩ -</u>	<u>₩ 72,964,458</u>

5.3 Transfers Between Fair Value Hierarchy Levels of Recurring Fair Value Measurements

The Group's policy is to recognize transfers between levels of the fair value at the date of the event or change in circumstances that caused the transfer. There were no transfers between levels of each fair value hierarchy of financial instruments.

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5.4 Valuation Techniques and the Inputs

Valuation techniques and inputs used in levels 2 fair value measurements are as follows:

(In thousands of Korean won)

		2018			
	Fair value	Level	Valuation techniques	Inputs	
Equity instruments at fair value through other comprehensive income					
Hybrid capital securities (consol bond)	₩ 9,940,800	2	Discounted cash flows model	Credit risk adjusted discount rate	
Debt instruments at fair value through profit or loss					
Derivative linked securities	20,037,512	2	Option pricing model	Underlying assets price, Credit risk adjusted discount rate, Volatility of underlying assets	
Beneficiary certificates	50,525,412	2	Discounted cash flows model	Credit risk adjusted discount rate	

(In thousands of Korean won)

		2017			
	Fair value	Level	Valuation techniques	Inputs	
Available-for-sale financial assets					
Government bonds	₩22,258,530	2	Discounted cash flows model	Credit risk adjusted discount rate	
Hybrid capital securities (Consol bond)	9,428,300	2	Discounted cash flows model	Credit risk adjusted discount rate	
Financial assets at fair value through profit or loss					
Derivative linked securities	40,385,818	2	Option pricing model	Underlying assets price, Credit risk adjusted discount rate, Volatility of underlying assets	

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6. Financial instrument

(in thousands of Korean won)

		2018		2017	
		Book amount		Book amount	
Financial assets:					
Financial assets at fair value	Financial assets at fair value through profit or loss	₩	75,683,349	₩	-
	Financial assets at fair value through other comprehensive income		11,405,284		-
	Available-for-sale financial assets		-		32,810,219
	Financial assets designated at fair value through profit and loss		-		40,385,818
Financial assets at amortized cost	Cash and cash equivalents		198,335,208		129,484,160
	Short-term financial assets		85,000,000		137,690,301
	Trade receivables		151,658,775		141,423,760
	Other receivables		4,115,943		12,517,963
	Long-term financial assets		10,013,392		9,460
	Other non-current receivables		7,827,773		1,589,503
		₩	<u>544,039,724</u>	₩	<u>495,911,184</u>

(in thousands of Korean won)

		2018		2017	
		Book amount		Book amount	
Financial liabilities:					
Financial liabilities at amortized cost	Trade payables	₩	44,974,243	₩	44,193,711
	Other payables		42,394,929		42,852,848
	Other non-current payables		276,679		-
	Borrowings ¹		86,356,661		-
Other financial liabilities	Borrowings ²		-		49,953,567
		₩	<u>174,002,512</u>	₩	<u>137,000,126</u>

¹ As the transferred assets are measured at amortized costs, related liabilities are measured at amortized costs of the rights and obligations of transferor and the amortized costs is same as net book amount of transferred assets and related liabilities.

² Financial liabilities relate to transfer do not meet the derecognition criteria that is not subject to financial liabilities by categories.

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

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<i>(in thousands of Korean won)</i>	2018	2017
Derivatives		
Gains (losses) on foreign exchange forward contracts transaction	₩ -	₩ 1,927,812
Available-for-sale financial assets		
Gains (losses) on valuation (other comprehensive income, net of tax)	-	(1,106,284)
Gains on disposal (profit or loss)	-	4,886,840
Dividend income	-	11,823
Financial assets designated at Fair Value through Profit or Loss		
Gains on valuation (profit or loss)	-	385,818
Gains on disposal (profit or loss)	-	329,196
Financial assets measured at amortized cost		
Interest income	3,664,124	9,295,673
Gains (losses) on foreign currency transaction	3,916,940	(8,502,928)
Gains (losses) on foreign currency translation	(1,580,215)	(2,294,793)
(Reversal of provision for) impairment losses	(62,885)	35,537
Financial liabilities measured at amortized cost		
Interest expense	(1,633,872)	-
Gains (losses) on foreign currency transaction	(2,782,727)	1,095,693
Gains (losses) on foreign currency translation	1,135,852	123,080
Other financial liabilities		
Interest expense	-	(558,793)
Gains (losses) on foreign currency transaction	-	1,527,378
Gains (losses) on foreign currency translation	-	1,456,718
Debt instruments at fair value through other comprehensive income		
Reclassification to profit or loss (other comprehensive income, net of tax)	(745,480)	-
Interest income	433,927	-
Gain on disposal	199,918	-
Equity instruments at fair value through other comprehensive income		
Gain on valuation (other comprehensive income, net of tax)	647,025	-
Dividend income	7,894	-
Debt instruments at fair value through profit or loss		
Gain on valuation	179,066	-
Gain on disposal	71,409	-
Interest income	2,591,379	-
Equity instruments at fair value through profit or loss		
Gain on valuation	126,886	-
	<u>₩ 6,169,241</u>	<u>₩ 8,612,770</u>

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7. Financial Assets

7.1 Financial assets at fair value through profit or loss

As explained in Note 2, the Company has applied Korean IFRS 1109 *Financial Instruments* from January 1, 2018. See Note 35 for the impact of the changes in accounting policies on the classification of financial assets and financial statements.

Details of financial assets through profit or loss at the end of the reporting periods are as follows:

<i>(in thousands of Korean won)</i>	2018	2017¹
Current		
Derivative-linked securities	₩ 20,037,512	₩ 20,460,417
Beneficiary certificates	40,464,966	103,111,800
Non-current		
Derivative-linked securities	-	19,925,401
Beneficiary certificates	10,060,445	-
Listed securities	5,120,425	-
	<u>₩ 75,683,348</u>	<u>₩ 143,497,618</u>

¹The beginning balances were reclassified with applying Korean IFRS 1109 (Notes 35).

Amounts recognized in profit or loss for the years ended December 31, 2018, are as follows:

<i>(in thousands of Korean won)</i>	2018	2017
Gain from equity instruments at fair value through profit or loss	₩ 126,886	₩ -
Gain from debt instruments at fair value through profit or loss	2,841,853	715,014
	<u>₩ 2,968,739</u>	<u>₩ 715,014</u>

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Changes in financial assets through profit or loss for the years ended December 31, 2018, are as follows:

(in thousands of Korean won)

	2018				
	Beginning balance ¹	Acquisition	Disposals	Valuation	Ending balance
Debt instruments					
Derivative-linked securities	₩ 40,385,818	₩ 20,000,000	₩ (40,454,818)	₩ 106,512	₩ 20,037,512
Beneficiary certificates	103,111,800	90,000,000	(142,658,943)	72,554	50,525,411
Equity instruments					
Listed securities	-	4,993,539	-	126,886	5,120,425
	<u>₩ 143,497,618</u>	<u>₩ 114,993,539</u>	<u>₩ (183,113,761)</u>	<u>₩ 305,952</u>	<u>₩ 75,683,348</u>

¹The beginning balances were reclassified with applying Korean IFRS 1109 (Notes 35).

7.2 Financial assets at fair value through other comprehensive income

(a) Details of financial assets at fair value through other comprehensive income at the end of the reporting periods are as follows:

(in thousands of Korean won)

	2018	2017 ¹
Non-current		
Listed securities and others	₩ 1,464,484	₩ 1,123,389
Hybrid capital securities (consol bond)	9,940,800	9,428,300
	<u>₩ 11,405,284</u>	<u>₩ 10,551,689</u>

¹The beginning balances were reclassified with applying Korean IFRS 1109 (Notes 35).

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

(b) Debt instruments 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 thousands of Korean won)

	2018	2017 ¹
Non-current		
Government bonds	-	19,146,730

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¹The beginning balances were reclassified with applying Korean IFRS 1109 (Notes 35).

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

Changes in Financial assets at fair value through other comprehensive income for the years ended December 31, 2018, are as follows:

(in thousands of Korean won)

	2018			
	Beginning balance¹	Disposals	Valuation	Ending balance
Equity instruments				
Listed securities and others	₩ 1,123,389	₩ -	₩ 341,095	₩ 1,464,484
Hybrid capital securities (consol bond)	9,428,300	-	512,500	9,940,800
Debt instruments				
Government bonds	19,146,730	(18,163,247)	(983,483)	-
	<u>₩ 29,698,419</u>	<u>₩ (18,163,247)</u>	<u>₩ (129,888)</u>	<u>₩ 11,405,284</u>

¹The beginning balances were reclassified with applying Korean IFRS 1109 (Notes 35).

8. Trade and Other Receivables

Details of trade and other receivables as at the end of the reporting periods, are as follows:

(in thousands of Korean won)

	2018		
	Gross amount	Less: Provision for impairment	Net amount
Current			
Trade receivables	₩ 151,660,314	₩ (1,539)	₩ 151,658,775
Other receivables			
Non-trade receivables	2,277,202	-	2,277,202
Accrued income	1,821,141	-	1,821,141
Short-term loans	-	-	-
Deposits	17,600	-	17,600
	<u>₩ 4,115,943</u>	<u>₩ -</u>	<u>₩ 4,115,943</u>
Non-current			
Long-term loans	₩ 4,000,000	₩ -	₩ 4,000,000
Leasehold deposits provided	3,827,773	-	3,827,773
	<u>₩ 7,827,773</u>	<u>₩ -</u>	<u>₩ 7,827,773</u>

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(in thousands of Korean won)

	2017		
	Gross amount	Less: Provision for impairment	Net amount
Current			
Trade receivables	₩ 141,429,487	₩ (5,727)	₩ 141,423,760
Other receivables			
Non-trade receivables	11,012,921	-	11,012,921
Accrued income	1,499,398	-	1,499,398
Short-term loans	5,644	-	5,644
	<u>₩ 12,517,963</u>	<u>₩ -</u>	<u>₩ 12,517,963</u>
Non-current			
Long-term loans	₩ -	₩ -	₩ -
Leasehold deposits provided	1,589,503	-	1,589,503
	<u>₩ 1,589,503</u>	<u>₩ -</u>	<u>₩ 1,589,503</u>

Movements on the provision for impairment of trade and other receivables for the years ended December 31, 2018 and 2017, are as follows:

(in thousands of Korean won)

	2018	2017
Beginning balance	₩ 5,727	₩ 41,264
Impairment loss (reversal)	62,885	(35,537)
Written-off and others	(67,073)	-
Ending balance	<u>₩ 1,539</u>	<u>₩ 5,727</u>

The Group considers a change of credit grade about trade receivables from starting date for granting credit to the statements of financial position date to judge recoverability of trade receivables and others. Since the Group has many customers that are not interconnected with each other, concentration risk in trade receivables is limited.

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9. Other Assets

Details of other assets as at the end of the reporting periods, are as follows:

(in thousands of Korean won)

	2018				2017			
	Current		Non-current		Current		Non-current	
Advance payments	₩	1,618,682	₩	-	₩	927,910	₩	-
Prepaid expenses		861,639		-		510,268		-
Prepaid value added tax		3,447,602		-		3,196,934		-
Others		-		650,018		-		650,018
	₩	5,927,922	₩	650,018	₩	4,635,112	₩	650,018

10. Investments in Associates

Details of the Group's associates as at the end of the reporting periods, are as follows:

Name of entity		Percentage of ownership (%)		Location	Main business
		2018	2017		
Hankook Tire Co., Ltd. ¹	Associate	30.2%	30.0%	Korea	Manufacturing and sales of the tires, tubes and alloy wheels
EmFrontier, Inc.	Associate	40.0%	40.0%	Korea	Managing e-business and providing service of integrated system

¹ The Group acquired 246,134 shares(acquisition cost : ₩ 9,845,698 thousand) of Hankook Tire Co., Ltd. for the period ended December 31, 2018. As at the end of the reporting period, the Group's percentage of ownership is 30.20%.

Details of the Group's investments in associates as at the end of the reporting the years, are as follows:

(in thousands of Korean won)

	2018		
	Number of shares	Acquisition cost	Book amount
Hankook Tire Co., Ltd. ¹	37,408,655	₩ 1,961,613,900	₩ 2,640,509,520
EmFrontier, Inc.	1,333,334	2,778,102	9,256,758
		₩ 1,964,392,002	₩ 2,649,766,278

¹ The Group acquired shares of Hankook Tire Co., Ltd and recognized ₩ 6,089,279 thousand of gain from a bargain purchase as profit.

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(in thousands of Korean won)

	2017		
	Number of shares	Acquisition cost	Book amount
Hankook Tire Co., Ltd. ¹	37,162,521	₩ 1,951,768,201	₩ 2,542,230,243
EmFrontier, Inc.	1,333,334	2,778,102	9,071,002
		₩ 1,954,546,303	₩ 2,551,301,245

¹ For the acquisition of shares of Hankook Tire Co., Ltd in 2017, based on the result of applying acquisition method in accordance with Korean IFRS 1103 Business Combination, the Group recognized ₩ 63,556,306 thousand of gain from a bargain purchase as profit in the prior financial statements retrospectively.

Details of share of profit or loss of associates accounted for using the equity method for the years ended December 31, 2018 and 2017, are as follows:

(in thousands of Korean won)

	2018						
	Beginning balance	Acquisition	Share of profit or loss of associates accounted for using the equity method	Dividend	Retained earnings	Others	Ending balance
Hankook Tire Co., Ltd.	₩ 2,542,230,243	₩ 9,845,698	₩ 117,096,886	₩ (14,865,008)	₩ 1,281,914	₩ (15,080,213)	₩ 2,640,509,520
EmFrontier, Inc.	9,071,002	-	233,327	-	(61,596)	14,025	9,256,758
	₩ 2,551,301,245	₩ 9,845,698	₩ 117,330,213	₩ (14,865,008)	₩ 1,220,318	₩ (15,066,188)	₩ 2,649,766,278

(in thousands of Korean won)

	2017						
	Beginning balance	Acquisition	Share of profit or loss of associates accounted for using the equity method	Dividend	Retained earnings	Others	Ending balance
Hankook Tire Co., Ltd.	₩ 2,085,009,481	₩ 324,112,451	₩ 117,320,218	₩ (12,469,811)	₩ 4,754,530	₩ 23,503,374	₩ 2,542,230,243
EmFrontier, Inc.	9,234,057	-	(358,117)	-	209,669	(14,607)	9,071,002
	₩ 2,094,243,538	₩ 324,112,451	₩ 116,962,101	₩ (12,469,811)	₩ 4,964,199	₩ 23,488,767	₩ 2,551,301,245

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The tables below provide summarized financial information and received dividends for those associates that are material to the Group.

(in thousands of Korean won)

	2018			
	Hankook Tire Co., Ltd.		EmFrontier, Inc.	
Assets	₩	9,796,442,247	₩	33,085,754
Liabilities		3,006,129,279		9,943,866
Equity		6,790,312,968		23,141,889
Sales		6,795,088,816		38,694,062
Profit for the year		530,380,684		583,317
Total comprehensive income		484,929,790		432,687
Dividend received		14,865,008		-

(in thousands of Korean won)

	2017			
	Hankook Tire Co., Ltd.		EmFrontier, Inc.	
Assets	₩	9,518,786,151	₩	42,078,231
Liabilities		3,145,279,906		19,400,570
Equity		6,373,506,245		22,677,661
Sales		6,812,857,982		65,354,118
Profit for the year		606,456,841		(888,332)
Total comprehensive income		465,689,738		(383,494)
Dividend received		12,469,811		-

As at the end of the reporting periods, adjustments of the amount of financial information of an important associates to the carrying amount of equity interest in an associate are as follows:

(in thousands of Korean won)

	2018						
	Ownership interest of parent company	Percentage of ownership (%)	Amount of ownership	Increase(decrease) in fair value	Goodwill	Others	Ending balance
Hankook Tire Co., Ltd.	₩ 6,765,543,099	30.2	₩ 2,043,194,016	₩ 335,746,273	₩ 262,313,525	₩ (744,294)	₩ 2,640,509,520
	₩ 6,765,543,099	30.2	₩ 2,043,194,016	₩ 335,746,273	₩ 262,313,525	₩ (744,294)	₩ 2,640,509,520

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	2017						
	Ownership interest of parent company	Percentage of ownership (%)	Amount of ownership	Increase(decreas e) in fair value	Goodwill	Others	Ending balance
Hankook Tire Co., Ltd.	₩ 6,358,671,188	30	₩ 1,907,601,356	₩ 372,026,450	₩ 262,313,525	₩ 288,913	₩ 2,542,230,243
	₩ 6,358,671,188	30	₩ 1,907,601,356	₩ 372,026,450	₩ 262,313,525	₩ 288,913	₩ 2,542,230,243

As at the end of the reporting periods, the fair values of marketable investments in associates are as follows:

(in thousands of Korean won)

	2018	2017
Hankook Tire Co., Ltd.	₩ 1,501,957,498	₩ 2,029,073,647

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11. Property, Plant and Equipment

Details of property, plant and equipment as at the end of the reporting periods, are as follows:

(in thousands of Korean won)

	2018			
	Cost	Accumulated depreciation	Accumulated impairment loss	Book amount
Land	₩ 40,946,754	₩ -	₩ -	₩ 40,946,754
Buildings	79,494,724	(38,035,041)	-	41,459,684
Structures	5,986,015	(4,412,563)	-	1,573,452
Machinery and equipment	152,870,973	(98,709,550)	-	54,161,423
Vehicles	948,113	(579,688)	-	368,425
Supplies	9,179,184	(7,532,847)	-	1,646,338
Tools, furniture and fixtures	33,183,548	(23,045,039)	-	10,138,509
Construction in progress	8,367,286	-	(301,888)	8,065,398
	<u>₩ 330,976,598</u>	<u>₩ (172,314,727)</u>	<u>₩ (301,888)</u>	<u>₩ 158,359,983</u>

(in thousands of Korean won)

	2017			
	Cost	Accumulated depreciation	Accumulated impairment loss	Book amount
Land	₩ 42,424,322	₩ -	₩ -	₩ 42,424,322
Buildings	81,568,638	(38,231,826)	-	43,336,812
Structures	5,958,015	(4,158,343)	-	1,799,672
Machinery and equipment	142,994,393	(89,627,612)	-	53,366,781
Vehicles	1,473,616	(1,139,175)	-	334,441
Supplies	8,435,678	(6,839,468)	-	1,596,210
Tools, furniture and fixtures	28,369,300	(19,617,304)	-	8,751,996
Construction in progress	7,616,744	-	(301,888)	7,314,856
	<u>₩ 318,840,706</u>	<u>₩ (159,613,728)</u>	<u>₩ (301,888)</u>	<u>₩ 158,925,090</u>

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

(in thousands of Korean won)

		2018						
	Opening net book amount	Acquisition	Disposal	Depreciation	Transfer	The change in the scope of consolidation	Closing net book amount	
Land	₩ 42,424,322	₩ 1,265,689	₩ -	₩ -	₩ (2,743,257)	₩ -	₩ 40,946,754	
Buildings	43,336,812	2,180,594	(28,479)	(2,824,729)	(1,204,514)	-	41,459,684	
Structures	1,799,672	28,000	-	(254,220)	-	-	1,573,452	
Machinery and equipment	53,366,781	7,931,303	(84,834)	(9,832,956)	2,763,312	17,817	54,161,423	
Vehicles	334,441	272,122	(81,819)	(162,194)	-	5,875	368,425	
Supplies	1,596,210	806,047	(28)	(759,498)	-	3,607	1,646,338	
Tools, furniture and fixtures	8,751,996	4,042,881	(4,777)	(3,594,800)	921,437	21,772	10,138,509	
Construction in progress	7,314,856	5,102,922	-	-	(4,352,380)	-	8,065,398	
	₩ 158,925,090	₩ 21,629,558	₩ (199,937)	₩ (17,428,397)	₩ (4,615,402)	₩ 49,071	₩ 158,359,983	

(in thousands of Korean won)

		2017						
	Opening net book amount	Acquisition	Disposal	Depreciation	Transfer	The change in the scope of consolidation	Closing net book amount	
Land	₩ 42,424,322	₩ -	₩ -	₩ -	₩ -	₩ -	₩ 42,424,322	
Buildings	44,329,266	2,409,232	-	(2,993,896)	(407,790)	-	43,336,812	
Structures	1,617,456	16,858	-	(242,432)	407,790	-	1,799,672	
Machinery and equipment	48,247,012	11,951,930	(65,900)	(8,936,333)	1,841,619	328,453	53,366,781	
Vehicles	182,998	259,624	(13,288)	(94,893)	-	-	334,441	
Supplies	1,624,718	672,774	(44)	(790,339)	17,000	72,101	1,596,210	
Tools, furniture and fixtures	8,877,547	2,365,004	(13,735)	(3,136,873)	461,316	198,737	8,751,996	
Construction in progress	3,468,905	6,165,886	-	-	(2,319,935)	-	7,314,856	
	₩ 150,772,224	₩ 23,841,308	₩ (92,967)	₩ (16,194,766)	₩ -	₩ 599,291	₩ 158,925,090	

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Line items including depreciation of property, plant and equipment for the years ended December 31, 2018 and 2017, are as follows:

<i>(In thousands of Korean won)</i>	2018		2017	
Cost of sales	₩	15,432,677	₩	14,125,720
Selling and administrative expenses(included research and development costs)		1,995,720		2,069,046
	₩	<u>17,428,397</u>	₩	<u>16,194,766</u>

12. Investment Properties

Details of investment properties as at the end of the reporting periods, are as follows:

<i>(in thousands of Korean won)</i>	2018		
	Cost	Accumulated depreciation	Book amount
Land	₩ 20,319,156	₩ -	₩ 20,319,156
Buildings	29,113,977	(19,590,477)	9,523,500
	₩ <u>49,433,134</u>	₩ <u>(19,590,477)</u>	₩ <u>29,842,657</u>

<i>(in thousands of Korean won)</i>	2017		
	Cost	Accumulated depreciation	Book amount
Land	₩ 17,575,899	₩ -	₩ 17,575,899
Buildings	24,238,440	(15,811,467)	8,426,973
	₩ <u>41,814,339</u>	₩ <u>(15,811,467)</u>	₩ <u>26,002,872</u>

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

<i>(in thousands of Korean won)</i>	2018			
	Beginning balance	Depreciation	Transfer	Ending balance
Land	₩ 17,575,899	₩ -	₩ 2,743,258	₩ 20,319,157
Buildings	8,426,973	(775,617)	1,872,145	9,523,500
	₩ <u>26,002,872</u>	₩ <u>(775,617)</u>	₩ <u>4,615,403</u>	₩ <u>29,842,657</u>

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<i>(in thousands of Korean won)</i>	2017			
	Beginning balance	Depreciation	Transfer	Ending balance
Land	₩ 17,575,899	₩ -	₩ -	₩ 17,575,899
Buildings	9,123,939	(696,966)	-	8,426,973
	<u>₩ 26,699,838</u>	<u>₩ (696,966)</u>	<u>₩ -</u>	<u>₩ 26,002,872</u>

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

<i>(in thousands of Korean won)</i>	2018	2017
Rental sales	₩ 5,498,973	₩ 4,510,465
Rental income	2,822,015	2,321,691
Operating expenses	2,919,216	2,275,981

Fair value of investment properties at the end of the reporting periods, are as follows:

<i>(in thousands of Korean won)</i>	2018	2017
Book amount	₩ 29,842,657	₩ 26,002,872
Fair value	121,791,457	113,043,952

13. Intangible Assets

Intangible assets as at the end of the reporting period, consist of:

<i>(in thousands of Korean won)</i>	2018		
	Cost	Accumulated amortization ¹	Book amount
Industrial rights	₩ 6,307,253	₩ (4,122,935)	₩ 2,184,318
Membership rights	7,617,952	(368,119)	7,249,833
Other intangible assets	33,162,577	(22,978,955)	10,183,623
Construction in progress	2,211,114	-	2,211,114
Goodwill	6,072,863	(3,444,900)	2,627,963
	<u>₩ 55,371,760</u>	<u>₩ (30,914,909)</u>	<u>₩ 24,456,851</u>

¹Accumulated impairment loss is included.

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	2017		
	Cost	Accumulated amortization ¹	Book amount
Industrial rights	₩ 6,272,376	₩ (3,326,958)	₩ 2,945,418
Membership rights	7,499,341	(408,876)	7,090,465
Other intangible assets	32,672,747	(15,359,869)	17,312,878
Construction in progress	824,076	-	824,076
Goodwill	2,510,095	-	2,510,095
	<u>₩ 49,778,635</u>	<u>₩ (19,095,703)</u>	<u>₩ 30,682,932</u>

¹Accumulated impairment loss is included.

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

(in thousands of Korean won)

	2018							The change in the scope of consolidation	Ending balance
	Beginning balance	Acquisition	Disposal	Amortization	Impairment	Transfer			
Industrial rights	₩ 2,945,418	₩ 165,445	₩ -	₩ (944,019)	₩ -	₩ 17,474	₩ -	₩ 2,184,318	
Membership rights	7,090,465	323,447	(204,835)	-	40,756	-	-	7,249,833	
Other intangible assets	17,312,878	490,013	-	(7,619,268)	-	-	-	10,183,623	
Construction in progress	824,076	1,404,512	-	-	-	(17,474)	-	2,211,114	
Goodwill	2,510,095	-	-	-	(3,449,670)	-	3,567,538	2,627,963	
	<u>₩ 30,682,932</u>	<u>₩ 2,383,417</u>	<u>₩ (204,835)</u>	<u>₩ (8,563,287)</u>	<u>₩ (3,408,914)</u>	<u>₩ -</u>	<u>₩ 3,567,538</u>	<u>₩ 24,456,851</u>	

(in thousands of Korean won)

	2017							The change in the scope of consolidation	Ending balance
	Beginning balance	Acquisition	Disposal	Amortization	Impairment	Transfer			
Industrial rights	₩ 2,409,780	₩ 338,883	₩ -	₩ (849,869)	₩ -	₩ 1,046,624	₩ -	₩ 2,945,418	
Membership rights	6,959,298	137,937	(23,665)	-	16,895	-	-	7,090,465	
Other intangible assets	23,422,139	1,275,814	-	(7,385,075)	-	-	-	17,312,878	
Construction in progress	1,473,876	396,824	-	-	-	(1,046,624)	-	824,076	
Goodwill	-	-	-	-	-	-	2,510,095	2,510,095	
	<u>₩ 34,265,093</u>	<u>₩ 2,149,458</u>	<u>₩ (23,665)</u>	<u>₩ (8,234,944)</u>	<u>₩ 16,895</u>	<u>₩ -</u>	<u>₩ 2,510,095</u>	<u>₩ 30,682,932</u>	

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Line items including amortization of intangible assets for the years ended December 31, 2018 and 2017, are as follows:

<i>(In thousands of Korean won)</i>	2018		2017	
Cost of sales	₩	421,321	₩	293,897
Selling and administrative expenses(included research and development costs)		8,141,966		7,941,047
	₩	<u>8,563,287</u>	₩	<u>8,234,944</u>

Goodwill arose from acquisition of repairing automobile business and sales and repairing imported automobile business during 2018. The management of the Group reviews operation performance of the business. These calculations use pre-tax cash flow projections based on financial budgets approved by management covering a five-year period.

The table below summarizes goodwill allocation for each cash-generating unit.

<i>(In thousands of Korean won)</i>	2018		2017	
JAX Motors Co., Ltd. (formerly, Flying Motors Co., Ltd.)	₩	-	₩	982,132
HK Motors Co., Ltd.,		1,527,964		1,527,964
Han Automobile Co., Ltd.		<u>1,100,000</u>		<u>-</u>
	₩	<u>2,627,964</u>	₩	<u>2,510,096</u>

The recoverable amount of all CGUs has been determined based on value-in-use calculations. The following table sets out the key assumptions for those CGUs that have significant goodwill allocated to them, used in the value-in-use calculations.

HK Motors Co., Ltd.,

Long-term growth rate	1.00%
Pre-tax discount rate	13.38%

The impairment test suggests that, except for the JAX Motors Co., Ltd., the carrying amount of cash generating units does not exceed the recoverable amount. Impairment test suggests that the recoverable amount of JAX Motors Co., Ltd. does not exceed the book amount, and entire amount of ₩ 3,449,670 thousand are recognized as impairment loss in other non-operating expenses.

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14. Other Payables

Details of other payables as at the end of the reporting period, are as follows:

(in thousands of Korean won)

	2018				2017			
	Current		Non-current		Current		Non-current	
Non-trade payables	₩	22,528,919	₩	-	₩	26,983,862	₩	-
Accrued expenses		10,051,773		-		6,644,811		-
Dividend payables		2,622		-		66,585		-
Leasehold deposits received		9,811,615		276,679		9,157,590		-
	₩	42,394,929	₩	276,679	₩	42,852,848	₩	-

15. Other Liabilities

Details of current and non-current other liabilities as at the end of the reporting period, are as follows:

(in thousands of Korean won)

	2018				2017			
	Current		Non-current		Current		Non-current	
Withholdings	₩	3,058,857	₩	-	₩	4,562,273	₩	-
Value added tax withheld		9,461		-		53,144		-
Other long-term employee benefits		-		3,082,752		-		2,330,729
Advance received		2,051,599		-		4,251,379		-
Deferred revenue		-		-		409		-
Emission obligation		33,917		-		29,820		-
	₩	5,153,834	₩	3,082,752	₩	8,897,025	₩	2,330,729

Changes in other long-term employee benefits for the years ended December 31, 2018 and 2017, are as follows:

(in thousands of Korean won)

	2018									
	Beginning balance	Profit or loss	Payment	The change in the scope of consolidation	Ending balance					
Other long-term employee benefits	₩	2,330,729	₩	895,291	₩	(143,268)	₩	-	₩	3,082,752

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(in thousands of Korean won)

	2017				
	Beginning balance	Profit or loss	Payment	The change in the scope of consolidation	Ending balance
Other long-term employee benefits	₩ 1,998,606	₩ 653,974	₩ (321,851)	₩ -	₩ 2,330,729

16. Net Defined Benefit Liabilities

The Group operates a defined benefit pension plans for its employees with eligibility requirements. By applying the three-month average salary in the final work period service that the employee has been provided at the time of retirement, the employee has received a lump-sum payment under the scheme. Under the plan, the Group is exposed to the risk of the investment risk, interest rate risk and wage risk.

The most recent actuarial assessment of plan assets and defined benefit obligation was performed on December 31, 2018, by SAMSUNG SECURITIES CO.,LTD and others. Present value of the defined benefit obligation, its related current service cost and past service cost have been measured by the projected unit credit method.

Details of net defined benefit liabilities recognized in the statements of financial position at the end of the reporting periods, are as follows:

(in thousands of Korean won)

	2018		2017	
Present value of defined benefit obligations	₩	46,182,472	₩	59,212,021
Fair value of plan assets		(43,672,136)		(60,477,093)
Net defined benefit liabilities	₩	3,211,719	₩	641,207
Net defined benefit assets		(701,382)		(1,906,279)

The significant actuarial assumptions used in defined benefit obligations assessment at the end of the reporting periods, are as follows:

	2018	2017
Discount rate	3.3%	3.7%
Expected rate of salary increase	5.1%	5.9%

Movements in the defined benefit obligations and the fair value of plan assets for the years ended

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December 31, 2018 and 2017, are as follows:

	2018		
	Present value of defined benefit obligations	Fair value of plan assets	Total
Beginning balance	₩ 59,212,021	₩ (60,477,093)	₩ (1,265,072)
Current service cost	5,951,827	-	5,951,827
Interest expense (income)	1,812,018	(1,636,433)	175,585
	<u>7,763,845</u>	<u>(1,636,433)</u>	<u>6,127,412</u>
Remeasurements:			
Return on plan assets (excluding amounts included in net interest)	-	768,765	768,765
Actuarial gain from change in demographic assumptions	6,114	-	6,114
Actuarial gain from change in financial assumptions	(1,033,197)	-	(1,033,197)
Actuarial gain from experience adjustments	(866,709)	-	(866,709)
	<u>(1,893,792)</u>	<u>768,765</u>	<u>(1,125,027)</u>
Benefits payments	(3,665,350)	2,368,282	(1,297,068)
Others	(15,234,254)	15,304,343	70,089
Ending balance	₩ 46,182,470	₩ (43,672,136)	₩ 2,510,334
	2017		
	Present value of defined benefit obligations	Fair value of plan assets	Total
Beginning balance	₩ 56,764,154	₩ (60,744,939)	₩ (3,980,785)
Current service cost	8,379,133	-	8,379,133
Interest expense (income)	2,125,149	(2,036,192)	88,957
	<u>10,504,282</u>	<u>(2,036,192)</u>	<u>8,468,090</u>
Remeasurements:			
Return on plan assets (excluding amounts included in net interest)	-	823,375	823,375
Actuarial gain from change in demographic assumptions	(144,174)	-	(144,174)
Actuarial gain from change in financial assumptions	(3,255,552)	-	(3,255,552)
Actuarial gain from experience adjustments	(1,886,702)	-	(1,886,702)
	<u>(5,286,428)</u>	<u>823,375</u>	<u>(4,463,053)</u>
Employers contributions	-	(2,000,000)	(2,000,000)
Benefits payments	(2,849,076)	3,534,968	685,892
Others	54,305	(54,305)	-
The change in the scope of consolidation	24,784	-	24,784

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Ending balance	₩	59,212,021	₩	(60,477,093)	₩	(1,265,072)
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When significant actuarial assumptions vary within a reasonable range with all other assumptions held constant at the end of the reporting periods, the effects on the defined benefit obligations are as follows:

<i>(in thousands of Korean won)</i>	2018			
	Increase		Decrease	
1% change of discount rate	₩	(4,609,160)	₩	5,469,114
1% change of salary growth rate		5,337,458		(4,595,178)

<i>(in thousands of Korean won)</i>	2017			
	Increase		Decrease	
1% change of discount rate	₩	(5,455,961)	₩	6,474,475
1% change of salary growth rate		6,318,666		(5,438,837)

Amounts recognized in the statements of comprehensive income regarding defined benefit pension plans for the years ended December 31, 2018 and 2017, are as follows:

<i>(in thousands of Korean won)</i>	2018		2017	
Current service cost	₩	5,951,827	₩	8,379,133
Interest cost		175,585		88,957
	₩	6,127,412	₩	8,468,090

Plan assets as at the end of the reporting periods, consist of:

<i>(in thousands of Korean won)</i>	2018		2017	
	Amount	Composition	Amount	Composition
Debt instruments	37,697,454	86.3%	58,425,656	96.6%
Deposits	5,941,089	13.6%	2,017,837	3.3%
National Pension Fund	33,592	0.1%	33,600	0.1%
	43,672,136	100.0%	60,477,093	100.0%

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 ₩ 3,334,769 thousand (2018: ₩ 2,992,506 thousand).

The expected maturity analysis of undiscounted pension benefits as at the end of the reporting

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periods, is as follows:

<i>(in thousands of Korean won)</i>	2018					Total
	Less than 1 year	Between 1 and 2 years	Between 2 and 5 years	Over 5 years		
Pension benefits	₩ 988,514	₩ 1,583,240	₩ 6,448,116	₩ 223,574,130	₩	232,594,000

<i>(in thousands of Korean won)</i>	2017					Total
	Less than 1 year	Between 1 and 2 years	Between 2 and 5 years	Over 5 years		
Pension benefits ¹	₩ 1,534,743	₩ 2,788,980	₩ 8,189,465	₩ 245,746,310	₩	258,259,498

¹ The amount, which will decrease due to reorganization, is not reflected (Note 16).

The weighted average duration of the defined benefit obligation is 12.6 years (2017: 13.2 years).

Due to reorganization of its holding company, the Group transferred the control over some organizations to Hankook Tire Co., Ltd., its associate, as at January 1, 2018. As a result, defined benefit obligations and plan assets decreased by ₩ 15,304,343 thousand, as at January 1, 2018.

17. Provisions

The Group's provisions are provisions for product warranties as at the end of the reporting period. Changes in provisions for the years ended December 31, 2018 and 2017, are as follows:

<i>(in thousands of Korean won)</i>	2018					Ending balance
	Beginning balance	Profit or loss	Payment	The change in the scope of consolidation		
Provisions for product warranties	₩ 746,308	₩ 676,017	₩ (696,382)	₩ -	₩	725,943

<i>(in thousands of Korean won)</i>	2017					Ending balance
	Beginning balance	Profit or loss	Payment	The change in the scope of consolidation		
Provisions for product warranties	₩ 1,334,016	₩ (118,691)	₩ (469,017)	₩ -	₩	746,308

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18. Share Capital

Details of share capital as at the end of the reporting periods, are as follows:

<i>(in Korean won, except for number of shares)</i>	2018	2017
Authorized (in shares)	250,000,000	250,000,000
Par value	₩ 500	₩ 500
Outstanding (in shares):		
Ordinary share	93,020,173	93,020,173
Share capital:		
Ordinary share	₩ 46,510,086,500	₩ 46,510,086,500

19. Other Paid-in-Capital

Details of other paid-in-capital as at the end of the reporting periods, are as follows:

<i>(in thousands of Korean won)</i>	2018	2017
Share premium	₩ 1,302,628,300	₩ 1,302,628,300
Treasury shares	(11,092,609)	(11,092,609)
Other capital surplus	(10,442,009)	(5,770,227)
	₩ 1,281,093,682	₩ 1,285,765,464

As at December 31, 2018, the Group holds 1,325,090 ordinary shares in treasury, to stabilize the market price of its shares, and records treasury share as other paid-in capital. Further appropriation of them is not determined.

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20. Retained Earnings and Dividends

Retained earnings at the end of the reporting periods, consist of:

<i>(in thousands of Korean won)</i>	2018	2017
Legal reserve:		
Earned profit reserve ¹	₩ 22,010,864	₩ 19,260,011
	<u>22,010,864</u>	<u>19,260,011</u>
Discretionary reserve:		
Reserve for revaluation ²	443,289,239	443,289,239
Dividend equalization reserve	60,000,000	60,000,000
Director's retirement bonus reserve	93,918,000	93,918,000
Voluntary reserve	110,000,000	110,000,000
	<u>707,207,239</u>	<u>707,207,239</u>
Unappropriated retained earnings	1,155,073,919	976,170,102
	<u>₩ 1,884,292,022</u>	<u>₩ 1,702,637,352</u>

¹ The Commercial Law of the Republic of Korea requires the Group to appropriate a portion of retained earnings as a legal reserve in an amount equal to a minimum of 10% of its cash dividends, until such reserve equals 50% of its share capital. The reserve is not available for the payment of cash dividends but may be transferred to ordinary share or used to offset accumulated deficit, if any, through a resolution of shareholders.

² According to the past assets revaluation law, the Group conducted assets revaluation and appropriated revaluation gains for revaluation reserve. This revaluation surplus is not allowed to use as financial resources of dividends, but it is allowed to use only for capitalization or preservation of losses.

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

<i>(in thousands of Korean won)</i>	2018	2017
Beginning balance	₩ 1,702,637,352	₩ 1,489,859,004
Changes in accounting policy	896,658	-
Profit for the year	207,068,039	233,099,924
Dividend payments	(27,508,525)	(27,508,525)
Remeasurements of net defined benefit assets	288,404	3,373,346
Remeasurements of net defined benefit assets of associates	910,094	3,813,602
Ending balance	<u>₩ 1,884,292,022</u>	<u>₩ 1,702,637,352</u>

Dividend distribution to the Group's shareholders amounted to ₩ 27,508,525 thousand (paid in 2017: ₩ 27,508,525 thousand) for the year ended December 31, 2017, was paid in April 2018.

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21. Other Components of Equity

Changes in other component of equity for the years ended December 31, 2018 and 2017, are as follows:

(in thousands of Korean won)	2018						
	Beginning balance ¹	Changes in accounting policy	Beginning balance (adjusted)	Increase (Decrease) ²	Non-controlling interests	Reclassification to profit or loss	Ending balance
Changes in the fair value of available-for-sale financial assets	₩ 403,932	₩ (403,932)	₩ -	₩ -	₩ -	₩ -	₩ -
Gain(loss) on valuation of financial assets at fair value through other comprehensive income	-	(492,726)	(492,726)	647,025	(11,801)	(745,480)	(602,982)
Exchange differences on translating foreign operations	(107,867)	-	(107,867)	91,433	(22,960)	-	(39,394)
Share of other comprehensive income of associates	(50,594,775)	-	(50,594,775)	(11,311,887)	-	-	(61,906,662)
	<u>₩(50,298,710)</u>	<u>₩ (896,658)</u>	<u>₩ (51,195,368)</u>	<u>₩ (10,573,429)</u>	<u>₩ (34,761)</u>	<u>₩ (745,480)</u>	<u>₩ (62,549,038)</u>

¹Beginning balance is same as reported amount as at December 31, 2017.

² Amount of tax effect is deducted.

(in thousands of Korean won)	2017				
	Beginning balance	Increase (Decrease) ¹	Non-controlling interests	Reclassification to profit or loss	Ending balance
Changes in the fair value of available-for-sale financial assets	₩ 1,520,105	₩ (902,998)	₩ (9,890)	₩ (203,285)	₩ 403,932
Exchange differences on translating foreign operations	-	(144,036)	36,169	-	(107,867)
Share of other comprehensive income of associates	(20,220,046)	(30,374,729)	-	-	(50,594,775)
	<u>₩ (18,699,941)</u>	<u>₩ (31,421,763)</u>	<u>₩ 26,279</u>	<u>₩ (203,285)</u>	<u>₩ (50,298,710)</u>

¹Amount of tax effect is deducted.

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22. Selling and Administrative Expenses

Selling and administrative expenses for the years ended December 31, 2018 and 2017, are as follows:

<i>(in thousands of Korean won)</i>	2018		2017	
Payroll	₩	17,809,327	₩	33,022,841
Post-employment benefits		1,916,227		4,260,910
Employee benefits		1,953,671		3,549,860
Training expenses		179,965		1,240,445
Travel expenses		1,193,945		1,733,046
Vehicles maintenance expenses		195,877		229,033
Insurance		405,408		342,739
Taxes and dues		1,306,894		1,193,367
Entertainment expenses		468,808		692,230
Supplies expenses		1,693,356		1,763,742
Publication expenses		121,617		511,879
Communication expenses		180,952		190,568
(Reversal of provision for) Impairment loss on receivables		62,885		(35,537)
Utility expenses		941,056		860,161
Repairs expenses		332,854		370,825
Conference expenses		224		20,319
Service fees		8,077,311		8,658,098
Rental expenses		1,884,418		1,230,461
Depreciation of investment property		775,617		696,966
Depreciation of property, plant and equipment		1,443,472		1,487,428
Amortization of intangible assets		8,092,758		7,888,965
Travel and transportation expenses		2,048,374		1,190,567
Service expenses		367,593		677,901
Shared service expenses		1,540,117		-
Export expenses		9,043,234		17,151,253
Advertisement		4,701,914		3,922,314
Foreign market development expenses		87,441		50,738
Sales damage expenses		676,017		(118,691)
Test expenses		347,657		125,832
Sample expenses		42,163		33,401
Research and development expenses		4,474,514		4,318,138
Miscellaneous expenses		281,255		377,716
	₩	72,646,921	₩	97,637,515

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23. Breakdown of Expenses by Nature

Expenses by nature for the years ended December 31, 2018 and 2017, are as follows:

<i>(in thousands of Korean won)</i>	2018		2017	
Changes in inventories	₩	(39,036,085)	₩	(1,434,243)
Purchase of raw materials		459,028,606		428,007,759
Purchase of merchandises		22,754,392		2,427,559
Payroll		70,512,575		75,887,595
Post-employment benefits		6,512,677		8,883,155
Employee benefits		10,565,655		10,907,948
Power expenses		14,250,339		12,590,590
Fuel expenses		2,272,750		2,281,764
Depreciation of property, plant and equipment		17,428,397		16,194,766
Depreciation of investment property		775,617		696,966
Amortization of intangible assets		8,563,287		8,234,944
Supplies expenses		5,477,206		5,473,853
Repairs expenses		3,489,044		3,009,445
Service fees		19,400,886		21,597,591
Export expenses		19,923,488		17,151,253
Foreign market development expenses		87,441		50,738
Research and development expenses		148,186		113,777
Others		14,341,530		13,448,851
Total cost of sales, and selling and administrative expenses	₩	636,495,991	₩	625,524,311

24. Finance Income and Finance Costs

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

<i>(in thousands of Korean won)</i>	2018		2017	
Finance income				
Interest income	₩	6,689,430	₩	9,295,673
Gains on foreign currency transaction		3,308,168		4,104,789
Gains on foreign currency translation		1,143,524		1,479,854
Gains on disposal of AFS financial assets		-		4,886,840
Gains on valuation and disposal of financial assets designated at fair value through profit or loss		-		1,077,738
Gains on valuation of debt instruments at fair value through profit or loss		179,066		-

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Gains on valuation of equity instruments at fair value through profit or loss	126,886	-
Gains on disposal of debt instruments at fair value through profit or loss	419,053	-
Gains on disposal of financial instruments at fair value through other comprehensive income	199,918	-
	₩ 12,066,045	₩ 20,844,894
Finance costs		
Interest expense	₩ 1,633,872	₩ 558,793
Losses on foreign currency transaction	4,149,846	3,897,397
Losses on foreign currency translation	133,904	37,915
Losses on valuation and disposal of financial assets designated at fair value through profit or loss	-	362,724
Losses on disposal of debt instruments at fair value through profit or loss	347,645	-
	₩ 6,265,267	₩ 4,856,829

25. Other Non-operating Income and Expenses

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

<i>(in thousands of Korean won)</i>	2018	2017
Other non-operating income		
Dividend income	₩ 7,894	₩ 7,004
Gains on foreign currency transaction	6,708,560	5,127,211
Gains on foreign currency translation	88,091	147,640
Gains on foreign exchange forward contracts transaction	-	1,927,812
Rental income	2,822,015	2,321,691
Gains on disposal of property, plant and equipment	132,664	60,983
Gain from a bargain purchase ¹	6,089,279	63,556,306
Miscellaneous gain	765,124	764,142
	₩ 16,613,627	₩ 73,912,789
Other non-operating expenses		
Losses on foreign currency transaction	₩ 4,732,668	₩ 11,214,460
Losses on foreign currency translation	1,542,073	2,304,574
Losses on disposal of property, plant and equipment	118,118	79,571
Losses on disposal of intangible assets	1,835	939
Impairment loss on intangible assets	3,449,670	4,438
Donation	2,184,836	2,851,935
Miscellaneous loss	197,452	110,388

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₩	12,226,652	₩	16,566,305
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¹ For the acquisition of shares of Hankook Tire Co., Ltd in 2017, based on the result of applying acquisition method in accordance with Korean IFRS 1103 Business Combination, the Group recognized ₩ 63,556,306 thousand of gain from a bargain purchase as profit in the prior financial statements retrospectively. For the acquisition of shares of Hankook Tire Co., Ltd in 2018, the Group recognized ₩6,089,279 thousand of gain from a bargain purchase as profit.

26. Tax Expense and Deferred Tax

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

<i>(in thousands of Korean won)</i>	2018	2017
Current tax:		
Current tax on profits for the year	₩ 28,448,187	₩ 26,469,690
Adjustments in respect of prior years	109,821	(879,332)
Deferred tax:		
Origination and reversal of temporary differences	(29,810,269)	(3,256,730)
Charged or credited directly to equity	4,545,700	7,805,556
Income tax expense	₩ 3,293,439	₩ 30,139,184

The tax on the Group's profit before tax differs from the theoretical amount that would arise using the weighted average tax rate applicable to profits of the consolidated entities as follows:

<i>(in thousands of Korean won)</i>	2018	2017
Profit before income tax expense	₩ 221,649,043	₩ 272,656,480
Tax at domestic tax rates applicable to profits in the respective countries	52,124,010	63,755,151
Tax effects of:		
Income not subject to tax	(340)	(402)
Expenses not deductible for tax purposes	152,556	156,661
Tax credit and tax cut	(190,795)	(228,302)
Additional tax payment	109,821	(879,332)
Unrecognized changes in net assets of investments in subsidiaries and associates	(47,602,353)	(32,230,977)
Tax for recirculation of corporate income	48,158	1,229,090
Others	(1,347,617)	(1,662,705)
	(48,830,570)	(33,615,967)
Income tax expense	₩ 3,293,439	₩ 30,139,184

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The tax effect relating to components of other comprehensive income (expenses) for the years ended December 31, 2018 and 2017, is as follows:

<i>(in thousands of Korean won)</i>	2018			2017		
	Before tax	Tax effect	After tax	Before tax	Tax effect	After tax
Remeasurements of net defined benefit liabilities	₩ 1,119,505	₩ (295,457)	₩ 824,048	₩ 4,463,052	₩ (1,089,706)	₩ 3,373,346
Remeasurements of net defined benefit liabilities of associates	1,220,316	(310,223)	910,093	4,964,199	(1,150,596)	3,813,603
Change in the fair value of AFS financial assets	-	-	-	(1,459,332)	353,048	(1,106,284)
Exchange differences on translating foreign operations	91,433	-	91,433	(144,036)	-	(144,036)
Share of other comprehensive income of associates	(21,103,617)	5,119,948	(15,983,669)	(40,067,540)	9,692,810	(30,374,730)
Gain(loss) on valuation of financial assets at fair value through other comprehensive income	(129,888)	31,433	(98,455)	-	-	-
	₩ (18,802,251)	₩ 4,545,701	₩ (14,256,550)	₩ (32,243,657)	₩ 7,805,556	₩ (24,438,101)

The analysis of deferred tax assets and liabilities as at December 31, 2018 and 2017, is as follows:

<i>(in thousands of Korean won)</i>	2018	2017
Deferred tax assets		
Deferred tax asset to be recovered after more than 12 months	₩ 20,688,111	₩ 19,728,473
Deferred tax asset to be recovered within 12 months	978,404	846,080
	<u>21,666,515</u>	<u>20,574,553</u>
Deferred tax liabilities		
Deferred tax liability to be recovered after more than 12 months	79,759,475	108,559,934
Deferred tax liability to be recovered within 12 months	445,005	362,854
	<u>80,204,480</u>	<u>108,922,788</u>
Deferred tax assets (liabilities), net	₩ (58,537,965)	₩ (88,348,235)

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The movement in deferred tax assets and liabilities during the year, without taking into consideration the offsetting of balances within the same tax jurisdiction, is as follows:

(in thousands of Korean won)

	2018				
	Beginning balance	Statement of profit or loss	Other comprehensive income	Foreign currency translation and others	Ending balance
Deferred tax assets(liabilities)					
Unearned revenue	₩ (362,854)	₩ (82,150)	₩ -	₩ -	₩ (445,004)
Other receivables	-	64,254	-	-	64,254
Other long-term employee benefits	287,497	181,989	-	-	469,486
Accrued expenses	139,807	(39,079)	-	-	100,728
Property, plant and equipment	2,207,530	120,480	-	-	2,328,010
Net defined benefit liabilities	(362,942)	1,317,903	(295,457)	-	659,504
Financial assets at fair value through profit or loss	(93,368)	(45,334)	-	-	(138,702)
Intangible assets	(8,894,785)	1,593,909	-	-	(7,300,876)
Construction in progress	232,760	-	-	-	232,760
Financial instruments at fair value through other comprehensive income	3,084,533	84,290	31,433	-	3,200,256
Advanced depreciation provision	(2,556,024)	-	-	-	(2,556,024)
Valuation of inventories	24,935	36,675	-	-	61,610
Impairment loss	281,686	-	-	-	281,686
Annual leave provisions	460,319	85,737	-	-	546,056
Stock dividend	307	-	-	-	307
Provisions for product warranties	180,606	(4,928)	-	-	175,678
Emission obligation	7,216	992	-	-	8,208
Investment in subsidiaries and associates	(83,109,806)	22,074,178	4,809,725	-	(56,225,903)
	(88,472,583)	25,388,916	4,545,701	-	(58,537,966)
Tax loss carryforwards	124,348	(124,348)	-	-	-
	₩ (88,348,235)	₩ 25,264,568	₩ 4,545,701	₩ -	₩ (58,537,966)

(in thousands of Korean won)

	2017				
	Beginning balance	Statement of profit or loss	Other comprehensive income	Foreign currency translation and others	Ending balance
Deferred tax assets(liabilities)					
Unearned revenue	₩ (821,672)	₩ 458,818	₩ -	₩ -	₩ (362,854)
Other long-term employee benefits	207,123	80,374	-	-	287,497
Accrued expenses	114,085	25,722	-	-	139,807
Property, plant and equipment	1,908,964	298,566	-	-	2,207,530
Net defined benefit liabilities	515,732	211,032	(1,089,706)	-	(362,942)
Derivative financial instruments	(15,243)	15,243	-	-	-
Financial assets at fair value through profit or loss	(17,511)	(75,857)	-	-	(93,368)
Intangible assets	(10,446,114)	1,551,329	-	-	(8,894,785)
Construction in progress	232,760	-	-	-	232,760
AFS Financial Assets	2,731,485	-	353,048	-	3,084,533
Advanced depreciation provision	(2,556,024)	-	-	-	(2,556,024)
Valuation of inventories	32,910	(7,975)	-	-	24,935

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Impairment loss	281,686	-	-	-	281,686
Annual leave provisions	486,174	(25,855)	-	-	460,319
Stock dividend	307	-	-	-	307
Provisions for product warranties	322,832	(142,226)	-	-	180,606
Emission obligation	12,742	(5,526)	-	-	7,216
Investment in subsidiaries and associates	(84,588,265)	(7,063,755)	8,542,214	-	(83,109,806)
	(91,598,029)	(4,680,110)	7,805,556	-	(88,472,583)
Tax loss carryforwards	-	131,284	-	(6,936)	124,348
	₩ (91,598,029)	₩ (4,548,826)	₩ 7,805,556	₩ (6,936)	₩ (88,348,235)

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

<i>(in thousands of Korean won)</i>	2018		2017		Remarks
Interests in subsidiary	₩	1,168,043,664	₩	1,166,705,594	No plan for disposal

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27. Cash Generated from Operations

Details of cash generated from operations for the years ended December 31, 2018 and 2017, are as follows:

<i>(in thousands of Korean won)</i>	2018	2017
Adjustments for:		
Income tax expense	₩ 3,293,439	30,139,184
Losses on foreign currency translation	1,675,978	2,342,489
Losses on foreign currency transaction	-	2,344,720
Losses on valuation and disposal of financial assets designated at fair value through profit or loss	-	362,724
Losses on disposal of financial assets at fair value through profit or loss	347,645	-
Losses on disposal of property, plant and equipment	118,118	79,571
Losses on disposal of intangible assets	1,835	939
Impairment loss on intangible assets	3,449,670	4,438
Reversal of impairment loss on intangible assets	(45,526)	(21,180)
Depreciation of investment property	775,617	696,966
Depreciation of property, plant and equipment	17,428,397	16,194,766
Amortization of intangible assets	8,563,287	8,234,944
Other long-term employee benefits	895,291	653,974
Post-employment benefit obligations	6,127,414	8,468,090
Interest expense	1,633,872	558,793
Sales damage expenses	676,017	(118,691)
Losses on valuation of inventory	62,149	80,859
Bad debt expenses	62,885	(35,537)
Interest income	(6,689,430)	(9,295,673)
Dividend received	(9,273)	(11,823)
Gains on foreign currency translation	(1,231,615)	(1,627,494)
Gains on foreign exchange forward contracts transaction	-	(1,927,812)
Gains on disposal of financial assets designated at fair value through profit or loss	-	(1,077,738)
Gains on valuation of debt instrument at fair value through profit or loss	(179,066)	-
Gains on valuation of equity instruments at fair value through profit or loss	(126,886)	-
Gains on disposal of financial assets at fair value through profit or loss	(419,053)	-
Gains on disposal of financial assets at fair value through other comprehensive income	(199,918)	-
Gains on disposal of AFS financial assets	-	(4,886,840)

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<i>(in thousands of Korean won)</i>	2018	2017
Gains on disposal of property, plant and equipment	(132,664)	(60,983)
Share of profit of associates	(117,330,213)	(116,962,101)
Gain from a bargain purchase	(6,089,279)	(63,556,306)
Miscellaneous gains	(69,822)	-
	<u>(87,411,131)</u>	<u>(129,419,720)</u>
Changes in operating assets and liabilities:		
Decrease(increase) in trade receivables	(11,406,219)	4,481,662
Increase in non-trade receivables	(1,249,462)	(366,442)
Decrease in accrued revenues	9,174	-
Decrease(increase) in advance payments	(690,772)	2,092,090
Increase in prepaid expenses	(81,295)	(1,382)
Increase in prepaid value added tax	(263,050)	(447,239)
Increase in inventory	(38,809,633)	(146,529)
Increase in leasehold deposits provided	(2,152,289)	(658,817)
Increase in trade payables	369,826	4,507,762
Increase(decrease) in non-trade payables	(4,808,552)	2,272,953
Decrease in value added tax withheld	(49,110)	(29,983)
Increase(decrease) in advance received	(2,199,779)	583,301
Increase in accrued expenses	3,410,127	1,259,318
Increase(decrease) in withholdings	(1,510,181)	565,534
Increase(decrease) in deferred revenue	(409)	409
Increase(decrease) in leasehold deposits received	917,383	(69,293)
Decrease in provisions for product warranties	(761,711)	(469,018)
Increase(decrease) in emission obligation	4,097	(52,448)
Decrease in post-employment benefit obligation	(3,665,350)	(2,849,075)
Decrease in pension plan assets	2,368,282	1,534,966
Decrease in other long-term employee benefits	(143,268)	(321,851)
	<u>₩ (60,712,191)</u>	<u>₩ 11,885,918</u>

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The principal non-cash transaction for the years ended December 31, 2018 and 2017, are as follows:

<i>(in thousands of Korean won)</i>	2018		2017	
Transfer of construction in progress to intangible assets	₩	17,474	₩	1,046,624
Transfer of property, plant and equipment to investment property		4,615,402		-
Transfer of construction in progress to property, plant and equipment		4,321,161		2,319,935
Increase in non-trade payables in relation to acquisition of property, plant and equipment		1,435,828		1,165,819
Increase in non-trade payables in relation to acquisition of intangible assets		185,815		77,676
Decrease in non-trade payables in relation to acquisition of property, plant and equipment		1,165,819		494,688
Decrease in non-trade payables in relation to acquisition of intangible assets		77,676		52,477
Increase in non-trade receivables in relation to disposal of AFS financial assets		-		9,712,548
Decrease in non-trade receivables in relation to disposal of AFS financial assets		9,712,548		-

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

<i>(in thousands of Korean won)</i>	2018	
	Short-term borrowings	
Beginning balance	₩	49,953,567
Exchange differences		(1,104,648)
Cash flows		37,507,742
Ending balance	₩	86,356,661

<i>(in thousands of Korean won)</i>	2017	
	Short-term borrowings	
Beginning balance	₩	29,537,824
Exchange differences		(1,456,718)
Cash flows		21,753,921
Other changes(declared dividend and others)		118,540
Ending balance	₩	49,953,567

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28. Related Party Transactions

Details of related parties as at December 31, 2018, are as follows:

Type	Name of related parties
Individuals	Yang-Rai Cho, Hyun-Shick Cho, Hyun-Bum Cho
Associates	Hankook Tire Co., Ltd., EmFrontier, Inc.
Domestic subsidiaries of associates	Daehwa Engineering & Machinery Co., Ltd., MK Technology Corp., Hankook Donggeurami Partners Co., Ltd., KCG 1 Private Equity Fund Limited Partnership, Model Solution Co., Ltd.
Overseas subsidiaries of associates	Hankook Tire America Corp., Hankook Tyre U.K. Ltd., Jiangsu Hankook Tire Co., Ltd., Hankook Tire China Co., Ltd., Shanghai Hankook Tire Sales Co., Ltd., Hankook Tire Netherlands B.V., Hankook Tire Japan Corp., Hankook Tire Canada Corp., Hankook Reifen Deutschland GmbH, Hankook Tire France SARL, Hankook Tire Italia S.R.L., Hankook Espana S.A., Hankook Tyre Australia Pty., Ltd., Hankook Tire Hungary Ltd., Hankook Tire Europe Holdings B.V, Hankook Tire Europe GmbH, Hankook Tire Budapest Kereskedelmi Kft, Hankook Tire DE Mexico, S.A. DE C.V., Chongqing Hankooktire Co., Ltd., Hankook Tire Rus LLC, PT. Hankooktire Indonesia, MK Mold (Jiaxing) Co., LTD, Hankook Tire Singapore PTE., Ltd., Hankook Tire Malaysia SDN.BHD., Hankook Tire Sweden AB, Beijing Jielun Trading Company Co.,Ltd., Hankook Tire Thailand Co.,Ltd., Hankook Lastikleri A.S., Hankook Tire Polska Sp. z o.o., Hankook Tire de Colombia Ltda., Hankook Tire America Holdings I, LLC, Hankook Tire America Holdings II, LLC, Hankook Tire Manufacturing Tennessee LP, Hankook Tire Ceska Republika s.r.o. MK Technology (CHONGQING) Mould Co., Ltd., PT. EMFRONTIER ENS Indonesia, Emfrontier America Inc Hankook Tyre Australia Retail Pty.,Ltd., JAX Quickfit Franchising Systems Unit Trust., JAX Quickfit Franchising Systems Pty Ltd., JAX Quickfit Properties Pty Ltd., Hankook Tires India llp. Hankook Tire Latam, S.A. Hankook Tire Latin America Distribution Center, S.A. Hankook Tire Ukraine LLC, ModelSolution Inc., Reifen-Muller KG, Reifen-Muller Runderneuerung BV
Domestic associate of associates	Hanon Systems Co., Ltd.
Other related parties ¹	Shin-Yang Tourist Development, Shin-Yang World Leisure, FWS Investment Advisory, Daehwa Eng' & Machinery Jiaxing Co., Ltd., Another WTE Co., Ltd., H-2 WTE Co., Ltd., Another Geumsan Co., Ltd., YKT Co., Ltd.

¹ Although the entity is not the related party of the Group in accordance with Korean IFRS 1024, the entity belongs to the Large Enterprise Group to which the Group also belongs in accordance with the Monopoly Regulation and Fair Trade Act.

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Transactions between the Group and related parties for the years ended December 31, 2018 and 2017, are as follows:

<i>(in thousands of Korean won)</i>		2018			
		Name of entity	Sales¹	Selling and administrative expenses	Purchase and others
Associates	Hankook Tire Co., Ltd.	₩ 78,182,220	₩ 2,562,177	₩ 178,854	₩ 1,294,848
	EmFrontier, Inc.	-	1,148,577	469,732	-
Domestic subsidiary of associates	Hankook Donggeurami Partners Co., Ltd.	6,368	114,570	31,600	2,580
	Overseas subsidiaries of associates	Hankook Tire Canada Corp. and others	-	91,586	-
Other related parties	Shin-Yang Tourist Development and others	-	1,298,180	-	5,814
		<u>₩ 78,188,588</u>	<u>₩ 5,215,091</u>	<u>₩ 680,186</u>	<u>₩ 1,303,242</u>

¹ Share of profit or loss of associates accounted for using the equity method is not included in sales.

<i>(in thousands of Korean won)</i>		2017			
		Name of entity	Sales¹	Selling and administrative expenses	Purchase and others
Associates	Hankook Tire Co., Ltd.	₩ 110,004,705	₩ 646,806	₩ 12,543	₩ 1,015,352
	EmFrontier, Inc.	-	1,105,173	1,605,213	-
Domestic subsidiary of associates	Hankook Donggeurami Partners Co., Ltd.	5,700	231,672	-	2,580
	Daehwa Engineering & Machinery Co., Ltd.	-	2,035	-	-
	MK Technology Corp.	-	-	179,050	-
Overseas subsidiaries of associates	Hankook Tire Netherlands B.V. and others	-	102,139	-	787,399
Other related parties	Shin-Yang Tourist Development and others	-	2,148,397	-	5,814
		<u>₩ 110,010,405</u>	<u>₩ 4,236,222</u>	<u>₩ 1,796,806</u>	<u>₩ 1,811,145</u>

¹ Share of profit or loss of associates accounted for using the equity method is not included in sales.

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Outstanding balances of receivables and payables at the end of the reporting periods, are as follows:

<i>(in thousands of Korean won)</i>		2018					
		Name of entity	Trade receivables	Loans	Other receivables	Non-trade payables	Other payables
Associates	Hankook Tire Co., Ltd.	₩ 23,450,250	₩ -	₩ 552,715	₩ 1,045,440	₩ 2,370,090	
	EmFrontier, Inc.	-	-	2,041	335,524	-	
Domestic subsidiary of associates	Hankook Donggeurami Partners Co., Ltd.	-	-	-	726	4,650	
Overseas subsidiaries of associates	Hankook Tire Canada Corp. and others	-	-	-	7,447	-	
Other related parties	Shin-Yang Tourist Development and others	-	-	-	-	105,503	
		₩ 23,450,250	₩ -	₩ 554,756	₩ 1,389,138	₩ 2,480,243	

<i>(in thousands of Korean won)</i>		2017					
		Name of entity	Trade receivables	Loans	Other receivables	Non-trade payables	Other payables
Associates	Hankook Tire Co., Ltd.	₩ 42,278,418	₩ -	₩ 168,742	₩ 110,353	₩ 1,859,096	
	EmFrontier, Inc.	-	-	-	878,787	-	
Domestic subsidiary of associates	Hankook Donggeurami Partners Co., Ltd.	-	-	-	1,903	4,650	
	Daehwa Engineering & Machinery Co., Ltd.	-	-	-	2,238	-	
	MK Technology Corp.	-	-	-	149,050	-	
Overseas subsidiaries of associates	Hankook Tire Netherlands B.V. and others	-	-	263,846	7,622	-	
Other related parties	Shin-Yang Tourist Development and others	-	-	-	224,658	105,503	
		₩ 42,278,418	₩ -	₩ 432,588	₩ 1,374,611	₩ 1,969,249	

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There is no loans to related parties for the years ended December 31, 2018 and loans to related parties for the years ended December 31, 2017, are as follows:

		2017					
		Beginning balance	Increase	Repayments	Exchange differences	Transfer	Ending balance
Hankook Tire	Short-term	₩ 54,750,160	₩ -	₩ (52,405,440)	₩ (2,344,720)	₩ -	₩ -
Netherlands B.V.	loans	₩ 54,750,160	₩ -	₩ (52,405,440)	₩ (2,344,720)	₩ -	₩ -

Dividend income and contributions in cash from/to related parties for the years ended December 31, 2018 and 2017, are as follows:

		2018		2017	
		Dividend income	Contributions in cash	Dividend income	Contributions in cash
Associates	Hankook Tire Co., Ltd.	₩ 14,865,008	₩ -	₩ 12,469,811	₩ -

The Group provides joint surety with Hankook Tire Co., Ltd. for the liabilities incurred before the spin-off. The remaining guarantees provided by the Group jointly and severally at the end of reporting periods are as follows:

	2018		2017	
	Foreign currency	Korean won equivalent	Foreign currency	Korean won equivalent
USD	-	₩ -	70,000	₩ 74,998,000

Compensations for key management for the years ended December 31, 2018 and 2017, are as follows:

	2018		2017	
Short-term benefits	₩	1,915,252	₩	8,834,308
Post-employment benefits		207,247		889,358
	₩	2,122,499	₩	9,723,666

Key management refers to the directors (registered and non-registered) and audit committee members who have significant authority and responsibility in respect to planning, operating and controlling of the Group's business activities.

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29. Contingencies and Commitments

Details of outstanding credit facility agreements of the Group at the end of the reporting periods, are as follows:

(in thousands on Korean won and thousands of USD)

		2018		2017	
		Commitment amount	Korean won	Commitment amount	Korean won
Purchase card agreements	Woori Bank and others	KRW 20,000,000	₩ 20,000,000	KRW 20,000,000	₩ 20,000,000
General loans agreements	Woori Bank	KRW 5,000,000	5,000,000	KRW 5,000,000	5,000,000
Agreements to forward exchange contracts	Citi Bank and others	USD 6,000	6,708,600	USD 6,000	6,428,400
Trade financing	Woori Bank and others	KRW 10,300,000	10,300,000	KRW 19,500,000	19,500,000
Letter of credit	Woori Bank and others	USD 97,500	109,014,750	USD 83,000	88,926,200
Loans for working capital	KEB Hana Bank and others	KRW 8,000,000	8,000,000	KRW 7,000,000	7,000,000
	BOA	USD 9,000	10,062,900	USD -	-
Overdraft	Woori Bank and others	KRW 2,000,000	2,000,000	KRW 2,000,000	2,000,000
Inventory financing	Shinhan card	KRW 8,000,000	8,000,000	KRW -	-
		KRW 53,300,000	₩ 179,086,250	KRW 53,500,000	₩ 148,854,600
		USD 112,500		USD 89,000	

As at December 31, 2018, the Group entered into supply contracts to provide trademark license and supporting work with Hankook Tire Co., Ltd., a related party, and to be provided maintenance service for the Group's information system with EmFrontier, Inc., an associate.

As at December 31, 2018, the Group is named as a defendant in one legal action amounting to ₩250 million arising from status of employees and four legal actions amounting to ₩1,030 million arising from salaries and damage compensation and others. As at December 31, 2018, the Group cannot reasonably estimate the results of the legal action to have impact on the consolidated financial statements.

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30. Operating Segment Information

Operating segments of the Group are classified into investment business and storage batteries business. Management has determined the operating segments based on the information reported to and reviewed by the Board of Directors that performs resource allocation and performance assessment. From a product perspective, management classifies the investment and storage batteries.

Profit or loss by each segment for the years ended December 31, 2018 and 2017, are as follows:

(in thousands of Korean won)

	2018					
	Investment business		Storage batteries business		Total	
Total segment revenue	₩	196,736,838	₩	652,359,917	₩	849,096,755
Inter-segment revenue		(1,139,474)		-		(1,139,474)
Revenue from external customers		195,597,364		652,359,917		847,957,281
Operating profit		147,228,599		64,232,690		211,461,290

(in thousands of Korean won)

	2017					
	Investment business		Storage batteries business		Total	
Total segment revenue	₩	195,163,575	₩	629,926,098	₩	825,089,673
Inter-segment revenue		(243,429)		-		(243,429)
Revenue from external customers		194,920,146		629,926,098		824,846,244
Operating profit		138,559,778		60,762,154		199,321,932

The Group derives the following types of revenue:

(in thousands of Korean won)

	2018		2017	
Sales of finished goods	₩	634,523,031	₩	625,487,862
Sales of merchandise		18,198,610		4,509,790
Shared service sales		4,116,165		20,851,546
Rental sales		5,498,973		4,510,465
Trademark right revenue		49,221,532		48,735,137
Share of profit or loss of associates accounted for using the equity method		117,330,213		116,962,101
Others		19,068,757		3,789,343
	₩	<u>847,957,281</u>	₩	<u>824,846,244</u>

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Revenue from external customers broken down by location of the Group for the years ended December 31, 2018 and 2017, are shown as follows:

<i>(in thousands of Korean won)</i>	2018		2017	
Korea (headquarter)	₩	796,123,255	₩	806,327,931
America		51,834,026		18,518,313
	₩	<u>847,957,281</u>	₩	<u>824,846,244</u>

Details of external customers, who contribute more than 10% of the Group's revenue for the years ended December 31, 2018 and 2017, are as follows:

<i>(in thousands of Korean won)</i>	2018		2017	
A Company	₩	195,279,106	₩	227,324,923

31. Inventories

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

<i>(in thousands of Korean won)</i>	2018		2017	
Finished goods	₩	25,038,593	₩	15,794,862
Merchandise		6,150,746		501,338
Raw materials		35,192,564		14,076,837
Work in process		13,277,357		10,802,422
Supplies		2,007,533		1,455,249
Materials in transit		3,175,816		3,407,786
	₩	<u>84,842,609</u>	₩	<u>46,038,494</u>

Inventories recognized as expenses during the year ended December 31, 2018 amounted to ₩ 442,746,913 thousand (2017: ₩ 429,001,075 thousand).

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32. Borrowings

Details of borrowings as at the end of the reporting periods, are as follows:

<i>(in thousands of Korean won)</i>		Creditor	Latest maturity date	Annual interest rate (%) December 31, 2018	2018	2017
Short-term borrowings	Export bill discount (Nego borrowings)	Kookmin Bank	2019.04.05	2.56 ~ 5.28	₩ 12,241,970	₩ 6,652,929
		NH Bank	2019.03.21	2.94 ~ 3.39	11,317,225	2,584,406
		Deutsche Bank AG	2018.02.26	2.3	-	137,278
		Shinhan Bank	2019.04.16	0.09 ~ 3.40	10,626,975	4,284,539
		Woori Bank	2019.04.23	0.09 ~ 3.40	25,888,927	21,024,375
		KEB Hana Bank	2019.04.23	0.17 ~ 3.40	14,611,597	15,124,556
		Citi Bank	2019.04.24	2.89 ~ 3.39	6,129,166	145,484
		Inventory financing	Shinhan card	2019.04.30	4.25 ~ 4.75	4,540,802
	Loans for operating funds	Woori Bank	2019.05.15	3.88	1,000,000	-
					₩ 86,356,661	₩ 49,953,567

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

<i>(in thousands of Korean won)</i>	2018	2017
Beginning balance	₩ 49,953,567	₩ 29,537,824
Proceeds from borrowings	37,507,742	21,872,461
Redemption of borrowings	-	(118,540)
The change in the scope of consolidation	-	118,540
Translation differences	(1,104,648)	(1,456,718)
Ending balance	₩ 86,356,661	₩ 49,953,567

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33. Earnings Per Share

The Group's basic earnings per share attributable to equity holders of Parent Company for the years ended December 31, 2018 and 2017, are computed as follows:

<i>(in Korean won, except for number of shares)</i>	2018	2017
Profit attributable to the ordinary equity holders of Parent Company ¹	₩ 207,068,039,256	₩ 233,099,923,540
Weighted-average number of ordinary shares outstanding (in share) ²	91,695,084	91,695,084
Basic earnings per share	₩ 2,258	₩ 2,542

¹ As there are no adjustments during the reporting period, profit attributable to the ordinary equity holders of Parent Company is identical to profit attributable to owners of the Parent Company in the statements of comprehensive income.

² The Group's outstanding ordinary shares excluding the number of treasury share acquired are weighted averaged.

The Group did not issue any potential ordinary shares. Therefore, basic earnings per share is identical to diluted earnings per share.

34. Credit risk

The Group is exposed to credit risk if the counterparty does not make payment by the due date.

- Payment of trade receivables by payment term for the customer
- Contractual cash flow of debt instruments at amortized costs
- Contractual cash flow of debt instruments at fair value through other comprehensive income

A. 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 days past due. Loss allowance was not recognized at the end of the reporting period and no related loss was recognized as 'operating expenses' in profit or loss for the years ended December 31, 2018 and 2017.

Gross book amount of trade receivables, the maximum exposure amount, is ₩151,658,775 thousand at the reporting period (2017: ₩141,423,760 thousand).

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B. Other financial assets at amortized cost

Other financial assets at amortized cost include government bonds, loans to related parties, and other receivables. Loss allowance for Other financial assets amortized cost was not recognized at the end of the reporting period and no related loss was recognized as 'operating expenses' in profit or loss for the years ended December 31, 2018 and 2017.

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

C. Debt investments at fair value through other comprehensive income

Debt investments at fair value through other comprehensive income include government bonds, corporate bonds and 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. Loss allowance for Debt investments at fair value through other comprehensive income was not recognized at the end of the reporting period and no related loss was recognized as 'finance costs' in profit or loss for the years ended December 31, 2018 and 2017.

All of the debt investments at fair value through other comprehensive income are considered to have low credit risk, and the loss allowance recognized during the period was, therefore, limited to 12 months expected losses. Other instruments are considered to be low credit risk when they have a low risk of default and the issuer has a strong capacity to meet its contractual cash flow obligations in the near term.

35. Changes in Accounting Policies

35.1 Adoption of Korean IFRS 1109 *Financial Instruments*

As explained in Note 2, the Company 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 with the exception of certain aspects of hedge accounting. The effect of retrospective application of the amendments that were not restated are immaterial and reflected in the beginning balance of retained earnings and other components of equity as at January 1, 2018.

(a) Classification and Measurement of Financial Instruments

On the date of initial application of Korean IFRS 1109, January 1, 2018, the Company's management has assessed which business models apply to the financial assets held by the Company and has classified its financial instruments into the appropriate Korean IFRS 1109

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categories.

As at January 1, 2018, available-for-sale financial assets amounting to ₩32,810,219 thousand were reclassified to financial assets at fair value through other comprehensive income amounting to ₩29,698,419 thousand and financial assets at fair value through profit or loss amounting to ₩3,111,800 thousand. Financial assets designated at fair value through profit or loss amounting to ₩40,385,818 thousand were reclassified to financial assets at fair value through profit or loss.

As at January 1, 2018, loan and other receivables amounting to ₩422,715,147 thousand were reclassified to financial assets at fair value through profit or loss amounting to ₩100,000,000 thousand and to financial assets at amortized costs amounting to ₩322,715,147 thousand. As at January 1, 2018, financial liabilities at amortized costs amounting to ₩ 87,046,559 thousand were reclassified to financial liabilities at amortized costs.

The Company elected to present changes in the fair value of some of its equity instruments and debt instruments previously classified as available-for-sale financial assets, because these investments are not held for trading, in other comprehensive income or profit or loss. As a result, available-for-sale financial assets were reclassified to equity instruments at fair value through other comprehensive income amounting to ₩10,551,689 thousand, debt instruments at fair value through other comprehensive income amounting to ₩ 19,146,730 thousand and debt instruments at fair value through profit or loss amounting to ₩ 3,111,800 thousand. The impairment loss amounting to ₩897,115 thousand recognized in beginning balance of retained earnings was transferred to other components of equity.

As at January 1, 2018, related accumulated gain on valuation of equity instruments available-for-sale of other components amounting to ₩ 309,798 thousand were not reclassified to profit or loss even though these assets are disposed of.

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

(in thousands 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	Amortized costs	Amortized costs	₩ 129,484,160	₩ 129,484,160	₩ -
Short-term financial assets	Amortized costs	Amortized costs	37,690,301	37,690,301	-
	Amortized costs	Fair value through profit or loss	100,000,000	100,000,000	-
Trade receivables	Amortized costs	Amortized costs	141,423,760	141,423,760	-
Other receivables	Amortized costs	Amortized costs	12,517,963	12,517,963	-
Derivative linked securities	Financial assets designated at fair value through profit or loss	Fair value through profit or loss	20,460,417	20,460,417	-
Government bonds	Available-for-sale financial assets	Fair value through profit or loss	3,111,800	3,111,800	-
Non-current financial assets					
Listed securities and others	Available-for-sale financial assets	Fair value through other comprehensive income	1,123,389	1,123,389	-
Hybrid capital securities (consol bond)	Available-for-sale financial assets	Fair value through other comprehensive income	9,428,300	9,428,300	-
Government bonds	Available-for-sale financial assets	Fair value through other comprehensive income	19,146,730	19,146,730	-
Derivative linked securities	Financial assets designated at fair value through profit or loss	Fair value through profit or loss	19,925,401	19,925,401	-
Other non-current receivables	Amortized costs	Amortized costs	1,589,503	1,589,503	-
Long-term financial assets	Amortized costs	Amortized costs	9,460	9,460	-

(b) Impairment of Financial Assets

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

- trade receivables arising from sales of inventories
- debt investments 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 immaterial.

(i) Trade receivables

The Company applies the simplified approach to measure the loss allowance at an amount equal

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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 credit risk, and thus the provision for impairment is determined as 12 months expected credit losses.

35.2 Adoption of Korean IFRS 1115 Revenue from Contracts with Customers

As explained in Note 2, the Group has applied Korean IFRS 1115 *Revenue from contracts with customers* from January 1, 2018. In accordance with the transitional provisions in Korean IFRS 1115, comparative figures have not been restated.

The Group has identified the transport services distinguished from the sale of goods when applying Korean IFRS 1115. In addition, transportation costs are incurred before the customer's benefit (revenue recognition) is incurred. These contract costs are amortized over the term of the contract only when they are capitalized. On the date of Initial application date, January 1, 2018, The impact of the amendments reflected in the financial statements are immaterial.

The impacts of the changes on the financial statements are as follows:

<i>(in thousands of Korean won)</i>	Reported amount	Adjustments	Amount before application of Korean IFRS 1115
Sales and Share of profit or loss of associates	₩ 847,957,281	₩ -	₩ 847,957,281
Cost of sales	563,849,070	(10,880,254)	552,968,816
Selling and administrative expenses	72,646,921	10,880,254	83,527,175

The impacts of applying Korean IFRS 1115 on statements of cash flows are immaterial.

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36. Business Combination and Transactions with Non-controlling Interests

During 2018, the Group acquired 100% of the issued share capital of NEXZEN INC and obtained control of NEXZEN INC. The goodwill of ₩ 1,140,624 thousand arising from the acquisition is attributable to economies of scale expected from combining the operations of the Group and NEXZEN INC. The recognized goodwill will not be deductible for tax purpose. Details of the purchase consideration, the assets and liabilities recognized as a result of the acquisition, and the goodwill of NEXZEN INC at the acquisition date are as follows:

<i>(in thousands of Korean won)</i>	Amount
Purchase consideration	₩ 1,880,308
Recognized amounts of identifiable assets acquired and liabilities assumed	
Cash and cash equivalent	193,178
Trade receivables	59,465
Property, plant and equipment	49,071
Inventories	277,429
Other assets	639,158
Trade payables	(317,364)
Other liabilities	(161,253)
Net identifiable assets acquired	739,684
Goodwill	1,140,624
	₩ 1,880,308

Han Automobile Co., Ltd. acquired sales and repairing imported automobiles business for business expansion and recognized ₩ 1,100,000 thousand of intangible assets as results of business acquisition.