

**Daewoo Shipbuilding & Marine  
Engineering Co., Ltd. and Subsidiaries**  
Consolidated Financial Statements  
December 31, 2018 and 2017

**Daewoo Shipbuilding & Marine Engineering Co., Ltd. and Subsidiaries**  
**Index**  
**December 31, 2018 and 2017**

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	<b>Page(s)</b>
<b>Independent Auditor's Report</b> .....	1 - 6
<b>Consolidated Financial Statements</b>	
Consolidated Statements of Financial Position .....	7 - 8
Consolidated Statements of Profit or Loss .....	9
Consolidated Statements of Comprehensive Income .....	10
Consolidated Statements of Changes in Equity .....	11
Consolidated Statements of Cash Flows .....	12 - 13
Notes to the Consolidated Financial Statements .....	14 - 118



## Independent Auditor's Report

(English Translation of a Report Originally Issued in Korean)

To the Board of Directors and Shareholders of  
Daewoo Shipbuilding & Marine Engineering Co., Ltd.

### Opinion

We have audited the accompanying consolidated financial statements of Daewoo Shipbuilding & Marine Engineering 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 profit or loss, consolidated statements of comprehensive income, consolidated statements of changes in equity and consolidated statements of cash flows for the years then ended, and notes to the consolidated financial statements, including a summary of significant accounting policies.

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

### Basis for Opinion

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

### Key Audit Matters

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

## A. Revenue recognition based on input method

### *Why it is determined to be a key audit matter*

As explained in Note 3 (Critical Accounting Estimates and Assumptions) to the consolidated financial statements, the Group recognizes contract revenue and contract costs associated with the construction contract as revenue and expense respectively under the percentage of completion method at the end of the reporting period when the outcome of a construction contract can be estimated reliably. The percentage of completion method is based on the percentage of costs incurred to date, excluding any contract cost that does not reflect the work performed, compared to the estimated total costs of the contract, which are estimated based on future estimates such as material cost, labor cost, construction period and others.

As explained in Note 3 (Critical Accounting Estimates and Assumptions) to the consolidated financial statements, in the prior period, the actual contract costs have significantly increased compared to the estimated costs due to unexpected delay and construction project inefficiency in offshore plants. In the current year, the estimated total contract costs have been changed due to effects of fluctuations in prices of materials and exchange rates in commercial ships and offshore plants. Given the uncertainty of estimated total contract cost caused by price risk and impacts on the profit or loss for the current year (or for the succeeding years), we identified uncertainty of estimated total contract costs as a significant risk.

As explained in Note 3 (Critical Accounting Estimates and Assumptions) to the consolidated financial statements, the Group includes variations, arisen from changes in project scope or others, in contract revenue when it is highly probable that a customer will approve the variations, the specified performance standards will be met or exceeded and the associated amount can be reliably measured.

Total contract revenue is measured at the initial contract amount agreed; however, total estimated contract revenue may deviate from original estimate depending on project scope changes, claims, incentive payments, or penalties for delayed delivery arising in the course of construction. Given the extent of uncertainties associated with the outcomes of future events impacting estimates of total estimated contracts, we identified uncertainty of estimated total contract costs as a significant risk.

### *How our audit addressed the key audit matter*

As at December 31, 2018, we performed the following audit procedures on the Group's revenue recognition based on input method.

- We assessed whether the accounting policy of revenue recognition is appropriate.
- We performed audit procedures over possibility of generating economic benefits.
  - Examined the terms and conditions of the contract
  - Reviewed if there is significant decrease in prices of similar vessels and termination conditions
  - Inquired of management on customer's financial status and project progress
- We evaluated design and tested effectiveness of internal controls related to the calculation of estimated total contract cost.
- We assessed reasonableness of management's estimates used for calculating total contract costs (quantities of materials to be used and labor hours, etc.) and reconciled them with the estimates made by project teams.
- We compared total contract costs of projects with that of similar projects and evaluated reasonableness.

- We examined if there are any changes in estimated total contract cost after the reporting period and the reason causing the changes.
- We tested effectiveness of internal controls related to measuring cost input and allocation by each construction contract.
- We tested occurrence and cut-off of cost incurred for each construction contract.
- We obtained an understanding and assessed design and effectiveness of internal controls of the Group related to the accounting treatment for variations in contract work.
- We examined supporting documents of the customer's approvals in relation to the changing contract amounts from variations in contract work.
- We reviewed the conditions for liquidated damage arising from delay and major milestone as well as the contract completion date.
- We assessed consistency between the expected delivery date and estimated date to fulfill the major milestones specified in the agreements for the contracts that management expects liquidated damages arising from delayed completion.
- We evaluated reasonableness of management's basis for estimated liquidated damage arising from delayed completion.

#### B. Collectability of the contract assets with indication of impairment

##### *Why it is determined to be a key audit matter*

As explained in Note 3 (Critical Accounting Estimates and Assumptions) to the consolidated financial statements, the Group assesses at the end of each reporting period whether there are any objective evidences that the contract assets are impaired. The objective evidences include aggravation of the customer's financial condition, increase in the probability of contract termination due to delay in contract in progress or decrease of vessel price, delay in delivery schedule, and others. After the assessment on the objective evidences, the Group recognizes impairment loss if it believes there is an objective evidence of impairment as a result of one or more events that occurred, and that loss event has an impact on the estimated future cash flows of construction contract that can be reliably estimated.

The uncertainty in collectability of the contract assets has been increased as possibility of delay in delivery and contract termination, which might be caused by customers' financial difficulties due to extended global oil price decline, have been increased. Accordingly, we identified the collectability of the contract assets with indication of impairment as a significant risk.

##### *How our audit addressed the key audit matter*

As at December 31, 2018, in respect of the collectability of the contract assets with indication of impairment, we have performed the following audit procedures.

- We obtained an understanding and evaluated the design and effectiveness of the internal controls related to assessing the collectability of the contract assets.
- We inquired of management with respect to basis for recognizing the significant contract assets.
- We obtain an understanding of the status of project that recognized the significant contract assets through discussion with management.
- We inquired of management in relation to contract termination possibility and customer's financial status.
- We assessed the reasonableness of collectability assessment of the contract assets.

## C. Disposal of shares in DW Mangalia Heavy Industries S.A.

### *Why it is determined to be a key audit matter*

As explained in Note 14 (Subsidiaries) to the consolidated financial statements, the Group disposed all of its shares in DW Mangalia Heavy Industries S.A. (hereafter, "D.M.H.I"), a subsidiary, during the year ended December 31, 2018. The Group recognized loss on disposal amounting to ₩ 488,424 million for the year ended December 31, 2018.

The disposal of shares in D.M.H.I is considered to be a significant transaction which affects both the Group's consolidated financial statements and our audit procedures; therefore we determined the transaction to be a key audit matter.

### *How our audit addressed the key audit matter*

As at December 31, 2018, in respect of the disposal of shares in D.M.H.I, we have performed the following audit procedures.

- We examined the contract, minutes and other agreements related to the disposal of shares in the subsidiary.
- We assessed the basis of accounting treatment.
- We obtained an understanding of the transaction and evaluated consistency between our understanding and other audit evidence obtained from other documents and inquiries of the management to evaluate management's basis for the accounting treatment.

## **Other Matter**

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

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

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

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

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

## **Auditor's Responsibilities for the Audit of the Consolidated Financial Statements**

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

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

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

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

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

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

The engagement partner on the audit resulting in this independent auditor's report is Dae-hyun Jou, Certified Public Accountant.

Seoul, Korea

March 21, 2019

This report is effective as of March 21, 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.



**Daewoo Shipbuilding & Marine Engineering Co., Ltd. and Subsidiaries**  
**Consolidated Statements of Financial Position**  
**December 31, 2018 and 2017**

<i>(in millions of Korean won)</i>	<b>Notes</b>	<b>December 31, 2018</b>	<b>December 31, 2017</b>
<b>Assets</b>			
<b>Current assets</b>			
Cash and cash equivalents	6,7,37	₩ 351,190	₩ 205,795
Short-term financial instruments	6,8,37	74,778	82,504
Financial assets at fair value through profit or loss	4,5,6,9,27,37,45	382	31,377
Current portion of held-to-maturity financial assets	6,9,45	1	27
Trade and other receivables	6,9,37,38	706,861	442,749
Contract assets	4,6,10,38,45	4,372,352	-
Due from customers for contract work	6,10,38,45	-	4,089,030
Current firm commitment assets	27	13,897	5,593
Current portion of currency forward assets	4,5,6,27,37	12,519	70,138
Inventories	11,17	1,345,634	743,359
Current tax assets		1,098	1,487
Other current assets	12	458,410	936,156
Non-current assets held for sale	13	12,914	43,087
		<u>7,350,036</u>	<u>6,651,302</u>
<b>Non-current assets</b>			
Long-term financial instruments	6,8,45	415,987	414,024
Financial assets at fair value through profit or loss	4,5,6,9,17,37,45	20,199	-
Held-to-maturity financial assets	6,9,45	37	305
Available-for-sale financial assets	4,5,6,9,45	-	52,085
Financial assets at fair value through other comprehensive income	4,5,6,9,45	20,087	-
Investments in associates and joint ventures	15	14,801	15,956
Long-term trade and other receivables	4,5,9,37,38	195,915	183,238
Firm commitment assets	27	8,853	314
Currency forward assets	4,5,6,27,37	7,841	67,637
Property, plant and equipment	16,17	3,822,852	4,003,428
Investment properties	17,18	7,795	7,914
Intangible assets	19	39,774	37,314
Deferred tax assets	26	168	1,353
Other non-current assets	12	14,177	11,883
		<u>4,568,486</u>	<u>4,795,451</u>
<b>Total assets</b>		<u>₩ 11,918,522</u>	<u>₩ 11,446,753</u>

**Daewoo Shipbuilding & Marine Engineering Co., Ltd. and Subsidiaries**  
**Consolidated Statements of Financial Position**  
**December 31, 2018 and 2017**

<i>(in millions of Korean won)</i>	<b>Notes</b>	<b>December 31, 2018</b>	<b>December 31, 2017</b>
<b>Liabilities</b>			
<b>Current liabilities</b>			
Short-term borrowings	4,5,17,22,37,44,45	₩ 1,472,600	₩ 2,046,503
Financial liabilities at fair value through profit or loss	4,5,6,27,37,45	89	42,724
Trade and other payables	6,20,37,45	1,082,739	1,072,985
Current portion of long-term borrowings	6,17,22,37,44,45	197,061	460,882
Current firm commitment liabilities	27	7,561	28,020
Current portion of currency forward liabilities	4,5,6,27,37	38,406	10,023
Contract liabilities	10,27,38,45	1,871,290	-
Due to customers for contract work	10,27,38,45	-	2,354,607
Current tax liabilities		1,557	563
Provisions	25,45	558,740	-
Other current liabilities	23	126,729	107,782
Non-current liabilities held for sale	13	-	18,953
		<u>5,356,772</u>	<u>6,143,042</u>
<b>Non-current liabilities</b>			
Debentures	6,21,37,44,45	575,561	530,661
Long-term borrowings	6,17,22,37,44,45	935,902	673,611
Long-term trade and other payables	6,20,37,45	66,224	136,145
Net defined benefit liabilities and other long-term employee benefits	24	162,608	160,540
Provisions	25,39	860,188	693,822
Financial guarantee liabilities	4,5,6,37	480	1,472
Finance lease obligations	37	24,145	-
Firm commitment liabilities	27	4,494	65,507
Currency forward liabilities	4,5,6,27,37	7,371	263
Deferred tax liabilities	26	84,555	51,005
Other non-current liabilities	23	-	24
		<u>2,721,528</u>	<u>2,313,050</u>
<b>Total liabilities</b>		<u>8,078,300</u>	<u>8,456,092</u>
<b>Equity</b>			
Share capital	28,37,44	541,029	538,281
Other contributed capital	30,37,44	17,386	368,803
Hybrid bond	30,37,44	2,332,832	2,284,775
Components of other capital	30,45	301,970	293,725
Retained earnings (accumulated deficit)	29,44	647,004	(92,163)
<b>Equity attributable to owners of the Parent Company</b>		<u>3,840,221</u>	<u>3,393,421</u>
<b>Non-controlling interest</b>		<u>-</u>	<u>(402,760)</u>
<b>Total equity</b>		<u>3,840,221</u>	<u>2,990,661</u>
<b>Total liabilities and equity</b>		<u>₩ 11,918,522</u>	<u>₩ 11,446,753</u>

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

**Daewoo Shipbuilding & Marine Engineering Co., Ltd. and Subsidiaries**  
**Consolidated Statements of Profit or Loss**  
**Years Ended December 31, 2018 and 2017**

*(in millions of Korean won, except per share amounts)*

	Notes	2018	2017
<b>Sales</b>	27,37,38,42,45	₩ 9,644,383	₩ 11,101,818
<b>Cost of sales</b>	36,37,38,45	<u>8,892,718</u>	<u>9,557,731</u>
<b>Gross profit</b>	42,45	751,665	1,544,087
Selling expenses	32,36,37	63,423	178,814
Administrative expenses	32,36,37	67,379	211,946
Research and development expenses	36	61,566	40,953
Impairment loss (reversal of impairment loss)	4,6	<u>(465,535)</u>	<u>379,370</u>
<b>Operating profit</b>		1,024,832	733,004
Interest income	6,33,37	61,058	17,087
Finance income	6,33,37	1,149	1,432,797
Finance costs	6,33,37	182,202	46,550
Share of net profit of subsidiaries, associates and joint ventures	14,15	(497,791)	(167,258)
Foreign exchange gains	4,5,6,34	489,891	654,346
Foreign exchange losses	4,5,6,34	476,211	720,701
Other non-operating income	6,27,35	234,472	819,911
Other non-operating expenses	6,27,35	287,349	1,482,856
Other impairment loss (reversal of other impairment loss)	4,6	<u>142</u>	<u>50,735</u>
<b>Profit before income tax expense</b>		367,707	1,189,045
Income tax expense	26	<u>47,655</u>	<u>543,287</u>
<b>Profit for the year</b>		<u>₩ 320,052</u>	<u>₩ 645,758</u>
<b>Profit (loss) is attributable to:</b>			
Owners of the Parent Company		₩ 344,722	₩ 621,492
Non-controlling interest		(24,670)	24,266
<b>Earning per share</b>			
<b>attributable to the equity holders of the Parent Company</b>	31		
Basic earning per share		₩ 2,998	₩ 7,141
Diluted earning per share		2,094	4,995

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

**Daewoo Shipbuilding & Marine Engineering Co., Ltd. and Subsidiaries**  
**Consolidated Statements of Comprehensive Income**  
**Years Ended December 31, 2018 and 2017**

(in millions of Korean won)

	2018	2017
<b>Profit for the year</b>	<u>₩ 320,052</u>	<u>₩ 645,758</u>
<b>Other comprehensive income</b>		
<i>Items that will not be reclassified subsequently to profit or loss</i>		
Remeasurements of net defined benefit liabilities	(31,192)	(3,148)
Loss on revaluation of property, plant and equipment	(9,534)	(81,952)
Loss on valuation of financial assets at fair value through other comprehensive income	(10,450)	-
<i>Items that may be reclassified subsequently to profit or loss</i>		
Gain (loss) on translation of foreign operations	30,997	(3,913)
Changes in the fair value of available-for-sale financial assets	-	646
Share of other comprehensive income of associates and joint ventures	-	(21)
	<u>(20,179)</u>	<u>(88,388)</u>
<b>Total comprehensive income for the year</b>	<u>₩ 299,873</u>	<u>₩ 557,370</u>
<b>Total comprehensive income (loss) for the year attributable to:</b>		
Owners of the Parent Company	₩ 332,469	₩ 527,133
Non-controlling interests	(32,596)	30,237

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

**Daewoo Shipbuilding & Marine Engineering Co., Ltd. and Subsidiaries**  
**Consolidated Statements of Changes in Equity**  
**Years Ended December 31, 2018 and 2017**

(in millions of Korean won)

(in millions of Korean won)

	Attributable to owners of the Parent Company														
	Other contributed capital				Components of other capital										
	Share capital	Other capital	Treasury shares	Hybrid bond	Changes in fair value of available-for-sale financial asset	Gain (loss) on valuation of financial assets at FVTOCI	Share of other comprehensive income of associates joint ventures	Gain (loss) on translation of foreign operations	Revaluation surplus of property, plant and equipment	Retained earnings (accumulated deficit)	Subtotal	Non-controlling interests	Total		
Balance at January 1, 2017	W 332,885	W 2,830,216	W -	W 1,000,000	W 11,717	W -	W 21	W (42,191)	W 441,030	W (3,546,768)	W 1,026,910	W (367,533)	W 659,377		
Payment of fractional share cost	-	-	(726)	-	-	-	-	-	-	-	(726)	-	(726)		
Transfer of reserves to accumulated deficit	-	(2,825,626)	-	-	-	-	-	-	-	2,825,626	-	-	-		
Debt for equity swap	205,396	342,526	-	-	-	-	-	-	-	-	547,922	-	547,922		
Issuance of permanent convertible notes	-	(264)	-	1,284,775	-	-	-	-	-	-	1,284,511	-	1,284,511		
Interest payment for hybrid bonds	-	-	-	-	-	-	-	-	-	(15,007)	(15,007)	-	(15,007)		
Other changes in capital	-	22,678	-	-	-	-	-	-	(24,139)	24,139	22,678	(65,464)	(42,786)		
Profit for the year	-	-	-	-	-	-	-	-	-	621,492	621,492	24,266	645,758		
Other comprehensive income	-	-	-	-	670	-	(21)	(11,411)	(81,952)	(1,645)	(94,359)	5,971	(88,388)		
Balance at December 31, 2017	W 538,281	W 369,530	W (726)	W 2,284,775	W 12,387	W -	W -	W (53,602)	W 334,939	W (92,163)	W 3,393,421	W (402,760)	W 2,990,661		
Balance at January 1, 2018	W 538,281	W 369,530	W (726)	W 2,284,775	W 12,387	W -	W -	W (53,602)	W 334,939	W (92,163)	W 3,393,421	W (402,760)	W 2,990,661		
Effect of changes in accounting policies (Note 45)	-	-	-	-	(12,387)	544	-	-	-	63,923	52,080	-	52,080		
Adjusted balance at January 1, 2018	538,281	369,530	(726)	2,284,775	-	544	-	(53,602)	334,939	(28,240)	3,445,501	(402,760)	3,042,741		
Transfer of capital surplus to accumulated deficit	-	(341,349)	-	-	-	-	-	-	-	341,349	-	-	-		
Debt to equity swap (Note 44)	2,748	10,431	-	-	-	-	-	-	-	-	13,179	-	13,179		
Issuance of permanent convertible notes (Note 29)	-	(20,499)	-	48,057	-	-	-	-	-	-	27,558	-	27,558		
Changes in scope of consolidation	-	-	-	-	-	-	-	-	-	21,514	21,514	435,356	456,870		
Profit (loss) for the year	-	-	-	-	-	-	-	-	-	344,722	344,722	(24,670)	320,052		
Other comprehensive income	-	-	-	-	-	(8,596)	-	38,924	(10,240)	(32,341)	(12,253)	(7,926)	(20,179)		
Balance at December 31, 2018	W 541,029	W 18,113	W (726)	W 2,332,832	W -	W (8,052)	W -	W (14,678)	W 324,699	W 647,004	W 3,840,221	W -	W 3,840,221		

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

**Daewoo Shipbuilding & Marine Engineering Co., Ltd. and Subsidiaries**  
**Consolidated Statement of Cash Flows**  
**Years Ended December 31, 2018 and 2017**

<i>(in millions of Korean won)</i>	Notes	2018	2017
<b>Cash flows from operating activities</b>			
Cash generated from(used in) operations	40,45		
Profit for the year		₩ 320,052	₩ 645,758
Adjustments		605,947	1,453,995
Changes in working capital		(113,123)	(2,987,955)
		812,876	(888,202)
Dividends received		1,851	1,174
Interests received		17,621	24,834
Interests paid		(111,657)	(164,145)
Income tax received		4,450	6,440
<b>Net cash inflow (outflow) from operating activities</b>		<b>725,141</b>	<b>(1,019,899)</b>
<b>Cash flows from investing activities</b>	41		
Cash inflows from investing activities:			
Acceptance of governments grants		-	3,728
Decrease in short-term financial instruments		54,361	33,124
Decrease in short-term loans receivable		32,168	29,121
Disposal of held-to-maturity financial assets		310	7
Disposal of available-for-sale financial assets		-	1,785
Disposal of financial assets at fair value through profit or loss		5,731	-
Disposal of financial assets at fair value through other comprehensive income		56	-
Disposal of investments in subsidiaries		21,067	-
Decrease in long-term loans receivable		23,467	9,329
Disposal of property, plant and equipment		2,645	25,554
Disposal of intangible assets		87	580
Disposal of non-current assets held for sale		92,812	258,353
Disposal of investment properties		-	785
Disposal of investments in associates and joint venture		-	1,127
Cash inflow from other investing activities		9,218	551
		241,922	364,044
Cash outflows from investing activities:			
Redemption of governments grants		-	706
Increase in short-term financial instruments		7,957	17,012
Increase in long-term financial instruments		40,675	108,530
Acquisition of financial instruments at fair value through profit or loss		6,250	-
Acquisition of held-to-maturity financial assets		19	3
Acquisition of available-for-sale financial assets		-	404
Increase in short-term loans receivable		830	28,187
Acquisition of property, plant and equipment		148,053	108,831
Acquisition of intangible assets		4,407	7,594
Cash flows from changes in scope of consolidation		46,802	69,941
Acquisition of other investments		149	112
		255,142	341,320
<b>Net cash inflow (outflow) from investing activities</b>		<b>(13,220)</b>	<b>22,724</b>

**Daewoo Shipbuilding & Marine Engineering Co., Ltd. and Subsidiaries**  
**Consolidated Statement of Cash Flows**  
**Years Ended December 31, 2018 and 2017**

<i>(in millions of Korean won)</i>	<b>Notes</b>	<b>2018</b>	<b>2017</b>
<b>Cash flows from financing activities</b>	41		
Cash inflows from financing activities:			
Proceeds from short-term borrowings		57,822	1,647,919
Reversal of payment of share issue cost		3	13
Proceeds from long-term borrowings		-	61,716
		<u>57,825</u>	<u>1,709,648</u>
Cash outflows from financing activities:			
Repayment of short-term borrowings		596,739	583,989
Repayment of current portion of long-term borrowings		8,742	112,797
Early redemption of long-term borrowings		568	7,734
Repayment of finance lease obligations		17,640	-
Interest paid for hybrid bonds		-	15,007
Payment of share issue cost		29	2,232
		<u>623,718</u>	<u>721,759</u>
<b>Net cash inflow (outflow) from financing activities</b>		<u>(565,893)</u>	<u>987,889</u>
<b>Net increase (decrease) in cash and cash equivalents</b>		146,028	(9,286)
Cash and cash equivalents at the beginning of the year		205,795	224,268
Effects of exchange rate changes on the cash and cash equivalents		(633)	(9,187)
<b>Cash and cash equivalents at the end of the year</b>	7	<u>₩ 351,190</u>	<u>₩ 205,795</u>

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

# Daewoo Shipbuilding & Marine Engineering Co., Ltd. and Subsidiaries

## Notes to the Consolidated Financial Statements

### December 31, 2018 and 2017

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#### 1. General Information

Daewoo Shipbuilding & Marine Engineering Co., Ltd. (the Company), the controlling company in accordance with Korean IFRS 1110 *Consolidated Financial Statements*, was established on October 1, 2000, as one of entities spun-off from Daewoo Heavy Industry Co., Ltd. The spun-off registration date is October 23, 2000. On February 2, 2001, the Company listed its stock on the Korea Exchange. Moreover, the Company changed its name from Daewoo Shipbuilding & Commerce Co., Ltd. to Daewoo Shipbuilding & Marine Engineering Co., Ltd. The Company's major businesses are building and selling various types of ship, including special-purpose ships and construction of offshore plants. As at December 31, 2018, the Company's major shareholders is Korea Development Bank ("KDB") (55.72%).

##### 1.1 Changes in Scope for Consolidation

Subsidiaries excluded from the consolidation for the year ended December 31, 2018:

Name of subsidiary	Reason
DeWind Co., Little Pringle <sup>1</sup> LLC, Little Pringle <sup>2</sup> LLC, DeWind Novus III LLC, DeWind Frisco LLC, DW Mangalia Heavy Industries S.A., PT.DSME ENR CEPU	Loss of control due to disposal of shares
DSME Oman LLC	Loss of control due to liquidation

#### 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

Daewoo Shipbuilding & Marine Engineering Co., Ltd. and its subsidiaries (collectively referred to as 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.



**Daewoo Shipbuilding & Marine Engineering Co., Ltd. and Subsidiaries**  
**Notes to the Consolidated Financial Statements**  
**December 31, 2018 and 2017**

---

**2.2 New and Amended Standards and Interpretations 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.

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

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

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

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

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

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

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

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

(e) Korean IFRS 1109 *Financial Instruments*

The Group has applied Korean IFRS 1109 *Financial Instruments* on January 1, 2018, the date of initial application. In accordance with the transitional provisions in Korean IFRS 1109, comparative figures have not been restated, and the differences between previous book amounts and book amounts at the date of initial application are recognized to retained earnings. See Note 45 for further details on the impact of the application of the standard.

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

The Group has applied 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 45 for further details on the impact of the application of the standard.

**Daewoo Shipbuilding & Marine Engineering Co., Ltd. and Subsidiaries**  
**Notes to the Consolidated Financial Statements**  
**December 31, 2018 and 2017**

---

**2.3 New and Amended Standards and Interpretations Not Yet Adopted by the Group**

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

**(a) Korean IFRS 1116 *Leases***

Korean IFRS 1116 *Leases* issued on May 22, 2017 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, 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 is analyzing the financial effects of applying Korean IFRS 1116; however, it is difficult to provide reasonable estimates of financial effects until the analysis is complete.

**(b) Korean IFRS 1109 *Financial Instruments***

The narrow-scope amendments made to Korean IFRS 1109 *Financial Instruments* enable entities to measure certain prepayable financial assets with negative compensation at amortized cost. When a modification of a financial liability measured at amortized cost that does not result in the derecognition, a modification gain or loss shall be recognized in profit or loss. These amendments will be applied for annual periods beginning on or after January 1, 2019, with early adoption permitted.

**(c) Amendments to Korean IFRS 1019 *Employee Benefits***

The amendments require that an entity shall calculate current service cost and net interest for the remainder of the reporting period after a plan amendment, curtailment or settlement based on updated actuarial assumptions from the date of the change. The amendments also require that a reduction in a surplus must be recognized in profit or loss even if that surplus was not previously recognized because of the impact of the asset ceiling. The amendments are effective for plan amendments, curtailments and settlements occurring in reporting periods that begin on or after January 1, 2019.

**(d) Amendments to Korean IFRS 1028 *Investments in Associates and Joint Ventures***

The amendments clarify that an entity shall apply Korean IFRS 1109 to financial instruments in an associate or joint venture to which the equity method is not applied. These include long-term interests that, in substance, form part of the entity's net investment in an associate or joint venture. These amendments will be applied for annual periods beginning on or after January 1, 2019, with early adoption permitted. In accordance with the transitional provisions in Korean IFRS 1109, the restatement of the comparative information is not required and the cumulative effects of initially applying the amendments retrospectively should be recognized in the beginning balance of retained earnings (or other components of equity, as appropriate) at the date of initial application.

**(e) Enactment to Interpretation of Korean IFRS 2123 *Uncertainty over Income Tax Treatments***

The Interpretation explains how to recognize and measure deferred and current income tax assets and liabilities where there is uncertainty over a tax treatment, and includes guidance on how to

**Daewoo Shipbuilding & Marine Engineering Co., Ltd. and Subsidiaries**  
**Notes to the Consolidated Financial Statements**  
**December 31, 2018 and 2017**

---

determine whether each uncertain tax treatment is considered separately or together. It also presents examples of circumstances where a judgement or estimate is required to be reassessed. This Interpretation will be applied for annual periods beginning on or after January 1, 2019, and an entity can either restate the comparative financial statements retrospectively or recognize the cumulative effect of initially applying the Interpretation as an adjustment in the beginning balance at the date of initial application.

(f) Annual Improvements to Korean IFRS 2015 – 2017 Cycle:

· Korean IFRS 1103 *Business Combination*

The amendments clarify that when a party to a joint arrangement obtains control of a business that is a joint operation, and had rights to the assets and obligations for the liabilities relating to that joint operation immediately before the acquisition date, the transaction is a business combination achieved in stages. In such cases, the acquirer shall remeasure its entire previously held interest in the joint operation. These amendments will be applied to business combinations for which the acquisition date is on or after the beginning of the first annual reporting period beginning on or after January 1, 2019, with early adoption permitted.

· Korean IFRS 1111 *Joint Agreements*

The amendments clarify that when a party that participates in, but does not have joint control of, a joint operation might obtain joint control of the joint operation in which the activity of the joint operation constitutes a business. In such cases, previously held interests in the joint operation are not remeasured. These amendments will be applied to transactions in which an entity obtains joint control on or after the beginning of the first annual reporting period beginning on or after January 1, 2019, with early adoption permitted.

· Paragraph 57A of Korean IFRS 1012 *Income Tax*

The amendment is applied to all the income tax consequences of dividends and requires an entity to recognize the income tax consequences of dividends in profit or loss, other comprehensive income or equity according to where the entity originally recognized those past transactions or events. These amendments will be applied for annual reporting periods beginning on or after January 1, 2019, with early adoption permitted.

· Korean IFRS 1023 *Borrowing Costs*

The amendments clarify that if a specific borrowing remains outstanding after the related qualifying asset is ready for its intended use (or sale), it becomes part of general borrowings. These amendments will be applied to borrowing costs incurred on or after the beginning of the first annual reporting period beginning on or after January 1, 2019, with early adoption permitted.

## **2.4 Consolidation**

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

(a) *Subsidiaries*

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

**Daewoo Shipbuilding & Marine Engineering Co., Ltd. and Subsidiaries**  
**Notes to the Consolidated Financial Statements**  
**December 31, 2018 and 2017**

---

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 recorded 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.

The Group treats transactions with non-controlling interests that do not result in a loss of control as transactions with equity owners of the Group. A change in ownership interest results in an adjustment between the carrying amounts of the controlling and non-controlling interest to reflect their relative interest in the subsidiary. Any difference between the amount of the adjustment to non-controlling interest and any consideration paid or received is recognized in a separate reserve within equity attributable to owners of the Parent Company.

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

*(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.

**Daewoo Shipbuilding & Marine Engineering Co., Ltd. and Subsidiaries**  
**Notes to the Consolidated Financial Statements**  
**December 31, 2018 and 2017**

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**2.5 Foreign Currency Translation**

*(a) Functional and presentation currency*

Items included in the financial statements of each of the Group's entities are measured using the currency of the primary economic environment in which each entity operates (the "functional currency"). The consolidated financial statements are presented in Korean won, which is the Parent Company'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. They are deferred in other comprehensive income if they relate to qualifying cash flow hedges and qualifying effective portion of net investment hedges, or are attributable to monetary part of the net investment in a foreign operation.

Foreign exchange gains and losses that relate to borrowings are presented in the statement of profit or loss within foreign exchange gains and losses.

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 held at fair value through other comprehensive income are recognized in other comprehensive income.

**2.6 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.

**Daewoo Shipbuilding & Marine Engineering Co., Ltd. and Subsidiaries**  
**Notes to the Consolidated Financial Statements**  
**December 31, 2018 and 2017**

---

*(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 separately presented in the statements of comprehensive income.
- **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. Foreign exchange gains and losses are presented in 'foreign exchange gains and losses' and impairment losses are presented in 'other non-operating expenses'. Interest income from these financial assets is separately presented in the statements of comprehensive income.

- **Fair value through profit or loss:** Assets that do not meet the criteria for amortized cost or fair value through other comprehensive income are measured at fair value through profit or loss. A gain or loss on a debt investment that is subsequently measured at fair value through profit or loss and is not part of a hedging relationship is recognized in profit or loss and presented net in the statement of profit or loss within 'other non-operating income or other non-operating expenses' in the year in which it arises.

*B. Equity instruments*

The Group subsequently measures all equity investments at fair value. Where the Group's management has elected to present fair value gains and losses on equity investments, 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.

**Daewoo Shipbuilding & Marine Engineering Co., Ltd. and Subsidiaries**  
**Notes to the Consolidated Financial Statements**  
**December 31, 2018 and 2017**

---

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

*(c) Impairment*

The Group assesses on a forward looking basis the expected credit losses associated with its debt instruments and contract assets 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 contract assets, the Group applies the simplified approach, which requires expected losses to be estimated considering past experience of credit losses.

*(d) Recognition and Derecognition*

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

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

*(e) Offsetting of financial instruments*

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

**2.7 Derivative Instruments**

*(a) Hedge accounting*

Derivatives are initially recognized at fair value on the date a derivative contract is entered into and are subsequently remeasured to their fair value at the end of each reporting period. The accounting for subsequent changes in fair value depends on whether the derivative is designated as a hedging instrument, and if so, the nature of the item being hedged. The Group has hedge relationships and designates certain derivatives as:

- hedges of the fair value of recognized assets or liabilities or a firm commitment (fair value hedges)

At inception of the hedge relationship, the Group documents the economic relationship between hedging instruments and hedged items including whether changes in the cash flows of the hedging instruments are expected to offset changes in the cash flows of hedged items.

**Daewoo Shipbuilding & Marine Engineering Co., Ltd. and Subsidiaries**  
**Notes to the Consolidated Financial Statements**  
**December 31, 2018 and 2017**

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The fair values of derivative financial instruments designated in hedge relationships are disclosed in Note 5.

The full fair value of a hedging derivative is classified as a non-current asset or liability when the remaining maturity of the hedged item is more than 12 months; it is classified as a current asset or liability when the remaining maturity of the hedged item is less than 12 months. A non-derivative financial asset and a non-derivative financial liability is classified as a current or non-current based on its expected maturity and its settlement, respectively.

*(b) Fair value hedge*

Changes in the fair value of derivatives that are designated as fair value hedging instruments are recorded in profit or loss, together with any changes in the fair value of the hedged asset or liability that are attributable to the hedged risk.

If the hedge no longer meets the criteria for hedge accounting, the adjustment to the carrying amount of a hedged item for which the effective interest method is used is amortized to profit or loss over the period to maturity using a recalculated effective interest rate.

**2.8 Trade Receivables**

Trade receivables are recognized initially at fair value and subsequently measured at amortized cost using the effective interest method, less loss allowance. See Note 9.4 for further information about the Group's accounting for trade receivables and Note 4.1.2-2 for a description of the Group's impairment policies.

**2.9 Inventories**

Inventories are stated at the lower of cost and net realizable value. Cost is determined using the moving-weighted average method, except for goods in transit that are determined using the specific identification method.

**2.10 Non-current Assets Held for sale**

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

**2.11 Property, Plant and Equipment**

Land is shown at fair value based on valuations by external independent valuers. Valuations are performed in regular basis to ensure that the fair value of a revalued asset does not differ materially from its carrying amount at the end of the reporting period.

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

If an asset's carrying amount is increased as a result of a revaluation, the increase is recognized in revaluation surplus of other comprehensive income. However, the increase is recognized in profit or loss to the extent that it reverses a revaluation decrease of the same asset previously recognized in profit or loss. Losses on revaluation is recognized in profit or loss. However, the decrease is recognized in other comprehensive income to the extent of any credit balance existing in the revaluation surplus in respect of that asset.



**Daewoo Shipbuilding & Marine Engineering Co., Ltd. and Subsidiaries**  
**Notes to the Consolidated Financial Statements**  
**December 31, 2018 and 2017**

---

When revalued assets are sold, the amounts included in revaluation surplus is transferred to retained earnings.

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:

	<b>Useful lives</b>
Buildings	12 - 60 years
Structures	12 - 50
Machinery	12 - 30
Vessels and aircraft	15 - 40
Vehicles and others	6 - 15

The assets' depreciation method, residual values and useful lives are reviewed, and adjusted if appropriate, at the end of each reporting period. An asset's carrying amount is adjusted to its recoverable amount if the asset's carrying amount is greater than its estimated recoverable amount. Gains and losses on disposals are determined by comparing the proceeds with the carrying amount and are recognized as 'other gains and losses, net' in the statement of profit or loss.

The revaluation surplus included in equity in respect of an item of property, plant and equipment is transferred directly to retained earnings when the asset is derecognized.

## **2.12 Borrowing Costs**

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

There are no capitalized borrowing costs for the year ended December 31, 2018(Note 45). The Group recognized the capitalized borrowing costs amounting to ₩ 164,560 million for the year ended December 31, 2017, of which ₩ 164,365 million and ₩ 195 million were included in cost of sales and construction in progress, respectively. Specific and general borrowing interest rate were 4.14% and 3.31%, respectively.

## **2.13 Government Grants**

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

**Daewoo Shipbuilding & Marine Engineering Co., Ltd. and Subsidiaries**  
**Notes to the Consolidated Financial Statements**  
**December 31, 2018 and 2017**

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**2.14 Intangible Assets**

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

Development expense that is directly attributable to internally generated by the Group are recognized when the criteria; such as, technically feasible, generate probable future economic benefits and other, are met. Membership rights that have an indefinite useful life are not subject to amortization because there is no foreseeable limit to the period over which the assets are expected to be utilized.

The Group amortizes intangible assets with a limited useful life using the straight-line method over the following periods:

	Useful lives
Industrial rights	5 - 10 years
Development expense	5
Exclusive right to use facilities	20 - 40
Other intangible assets	2 - 50

**2.15 Investment Property**

Investment property is property held to earn rentals or for capital appreciation or both. An investment property is measured initially at its cost. An investment property is measured after initial measurement at depreciated cost (less any accumulated impairment losses). After recognition as an asset, investment property is carried at cost less accumulated depreciation and impairment losses. The Group depreciates investment properties, except for land, using the straight-line method over their useful lives of 60 years.

**2.16 Impairment of Non-financial Assets**

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

**2.17 Trade and Other Payables**

These amounts represent liabilities for goods and services provided to the Group prior to the end of reporting period which are unpaid. The amounts are unsecured and are usually paid within 45 ~ 90 days of recognition. Trade and other payables are presented as current liabilities, unless payment is not due within 12 months after the reporting period. They are recognized initially at their fair value and subsequently measured at amortized cost using the effective interest method.

**Daewoo Shipbuilding & Marine Engineering Co., Ltd. and Subsidiaries**  
**Notes to the Consolidated Financial Statements**  
**December 31, 2018 and 2017**

---

**2.18 Financial Liabilities**

*(a) Classification and measurement*

The Group's financial liabilities at fair value through profit or loss are currency forward liabilities 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 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 and other payables' and 'borrowings' 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.

*(b) Derecognition*

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

**2.19 Financial Guarantee Contracts**

Financial guarantee contracts are recognized as a financial liability at the time the guarantee is issued. The liability is initially measured at fair value, subsequently at the higher of following and recognized in the statement of financial position within 'other financial liabilities'.

- the amount determined in accordance with the expected credit loss model under Korean IFRS 1109 *Financial Instruments* and
- the amount initially recognized less, where appropriate, the cumulative amount of income recognized in accordance with Korean IFRS 1115 *Revenue from Contracts with Customers*

**2.20 Provisions**

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

**Daewoo Shipbuilding & Marine Engineering Co., Ltd. and Subsidiaries**  
**Notes to the Consolidated Financial Statements**  
**December 31, 2018 and 2017**

---

**2.21 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.

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

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

**2.22 Employee 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.

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

**Daewoo Shipbuilding & Marine Engineering Co., Ltd. and Subsidiaries**  
**Notes to the Consolidated Financial Statements**  
**December 31, 2018 and 2017**

---

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.

The Group provide long-term employee benefits that are entitled to employees with service period for five 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 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.

A liability for a termination benefit is recognized at the earlier of when the entity can no longer withdraw the offer of the termination benefit and when the entity recognizes any related restructuring costs.

## **2.23 Revenue Recognition**

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

### *(a) Identify performance obligation*

The Group operates commercial ships division, offshore plant and special ships division and other business division. For the year ended December 31, 2018, revenue from the commercial ships division and offshore plant and special ships division amount to ₩ 6,606,977 million and ₩ 3,065,675 million, respectively, which represent 67.4% and 31.8% of the Group's total revenue, respectively.

With the implementation of Korean IFRS 1115, the Group identifies a construction of each vessels in contracts entered by commercial ships, offshore plants and special ships division as a performance obligation. Sales of goods and rendering of services that are distinct such as purchase and procurement activity are identified as a separate performance obligation.

### *(b) A performance obligation is satisfied over time*

The commercial ships division and offshore plant and special ships division of the Group build and sell ships ordered by customers, and it generally takes over one-year to build. The Group recognizes revenue over time based on costs incurred relative to total estimated costs to determine the extent of progress toward completion. However, if the Group may not be able to reasonably measure the progress towards completion, the Group recognizes revenue only to the extent of the costs incurred until such time that it can reasonably measure the outcome of the performance obligation.

In accordance with Korean IFRS 1115, revenue is recognized over time, if one of the following three criteria is met:

- The customer simultaneously receives and consumes the benefits provided by the entity's performance as the entity performs;
- The entity's performance creates or enhances an assets that the customer controls as the asset is created or enhanced; or

**Daewoo Shipbuilding & Marine Engineering Co., Ltd. and Subsidiaries**  
**Notes to the Consolidated Financial Statements**  
**December 31, 2018 and 2017**

---

- The entity's performance does not create an asset with an alternative use to the entity and the entity has an enforceable right to payment for performance completed to date.

As a result of the contract terms and conditions analysis, the Group recognizes revenue over time on the basis that the entity's performance does not create an asset with an alternative use to the entity and the entity has an enforceable right to payment for performance completed to date. However, in case of a resale contract for certain ships of which contract is terminated, the revenue is recognized upon delivery as it is deemed to have an alternative use at contract inception, depending on the progress of completion of the ship's construction.

*(c) Input methods for measuring progress*

Accounting to Korean IFRS 1115, a faithful depiction of the Group's performance might be to recognize revenue at an amount equal to the cost of a goods used to satisfy a performance obligation if the Group expects at contract inception that all of the following conditions would be met: i) the goods are not distinct; ii) the customer is expected to obtain control of the goods significantly before receiving services related to the goods; iii) the costs of the transferred goods are significant relative to the total expected costs to completely satisfy the performance obligation; and iv) the Group procures the goods from a third party and is not significantly involved in designing and manufacturing the goods. Therefore, the Group excludes the cost which meets the above conditions from measuring progress and recognizes revenue at an amount equal to the cost.

*(d) Variable consideration*

The Group may experience variable consideration due to liquidated damage and change order caused by the delays in delivery and overweight of vessels. With implementation of Korean IFRS 1115, the Group estimates an amount of variable consideration by using the expected value which the Group expects to better predict the amount of consideration. The Group recognizes revenue with transaction price including variable consideration only to the extent that it is highly probable that a significant reversal in the amount of cumulative revenue recognized will not occur when the uncertainty associated with variable consideration has resolved.

*(e) The existence of a significant financing component in the contract*

According to Korean IFRS 1115, in determining the transaction price, the Group adjusts the promised amount of consideration for the effects of the time value of money if the timing of payments agreed to by the parties to the contract provides the customer or the entity with a significant benefit of financing the transfer of goods or services to the customer.

According to Korean IFRS 1115, the consideration is recognized as revenue when there is significant financing component in a contract. The Group adjusted the promised amount of consideration for the effects of a significant financing component(Note 45).

*(f) Incremental costs of obtaining a contract*

The Group pays broker commissions to its brokers based on certain supply contracts. The commission is an incremental cost because it would not have incurred if the contract has not been obtained. With implementation of Korean IFRS 1115, the Group recognizes as an asset the incremental costs of obtaining a contract with a customer if the Group expects to recover those costs, and costs that are recognized as assets are amortized based on the progress towards complete satisfaction.

*(g) Warranties*

**Daewoo Shipbuilding & Marine Engineering Co., Ltd. and Subsidiaries**  
**Notes to the Consolidated Financial Statements**  
**December 31, 2018 and 2017**

---

The Group analyzed the effect of warranties, and concluded that the impacts on the financial statements are not significant. The Group provides customers for certain project with another warranty in addition to the standard warranty assuring that the product complies with agreed-upon specifications. Therefore, the promised service is a performance obligation in accordance with Korean IFRS 1115.

In accordance with Korean IFRS 1115, if the Group provides the customer with a service in addition to the assurance that the product complies with agreed-upon specifications, the Group accounts for the promised warranty as a performance obligation and allocate a portion of the transaction price to service provided and warranty service.

#### **2.24 Lease**

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

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

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

#### **2.25 Segment Reporting**

Information of each operating segment is reported in a manner consistent with the internal business segment reporting provided to the chief executive officer. The chief executive officer is responsible for allocating resources and assessing performance of the operating segments.

#### **2.26 Approval of Issuance of the Financial Statements**

The consolidated financial statements 2018 were approved for issue by the Board of Directors on March 14, 2019 and are subject to change with the approval of shareholders at their Annual General Meeting.

**Daewoo Shipbuilding & Marine Engineering Co., Ltd. and Subsidiaries**  
**Notes to the Consolidated Financial Statements**  
**December 31, 2018 and 2017**

---

**3. Critical Accounting Estimates and Assumptions**

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

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

**3.1 Impairment of Non-financial Assets**

At the end of the reporting period, the Group assesses its non-financial assets to determine whether there is any indication of impairment. Intangible assets with indefinite useful lives are tested for impairment at least annually. Other non-financial assets are tested for impairment whenever there is an indication that the carrying amount will not be recoverable. In assessing value in use, management estimates future expected cash flows derived from the relevant asset or cash-generating unit and applies an appropriate discount rate to compute the present value.

**3.2 Deferred Tax Assets**

The Group reviews the book amount of deferred tax assets at the end of each reporting period, and decrease the carrying value of deferred tax assets when it is not probable to generate sufficient taxable profit to recover all or part of deferred tax asset.

**3.3 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).

**3.4 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(Note 4).

**3.5 Net Defined Benefit Liability and Other Long-term Employee Benefits**

The present value of net defined benefit liability and other long-term employee benefits depends on a number of factors that are determined on an actuarial basis using a number of assumptions including the discount rate(Note 24).



### **3.6 Revenue Recognition**

#### **3.6.1 Revenue Recognition based on the Input Method and Measuring the Progress of Contract**

The Group recognizes contract revenue and contract cost associated with the construction contract as revenue and expense respectively based on the progress of a contract at the end of the reporting period when the outcome of a construction contract can be reliably estimated. The progress of a contract is determined based on the proportion of costs incurred to date, excluding any contract cost that does not reflect the work performed, to the estimated total costs of the contract. The Group presents the gross amount due from customer for contract work as contract assets for which costs incurred plus recognized profits (less recognized losses) exceed progress billings, and presents the gross amount due to customers for contract work as contract liabilities for which progress billings exceed costs incurred plus recognized profits (less recognized losses).

#### **3.6.2 Uncertainty of Estimated Total Contract Costs**

Contract revenue is affected by the progress of a contract which is determined by the contract costs incurred to date. Total contract costs is estimated based on future estimates of material cost, labor cost and construction period and others. During the prior period, unexpected process delay in offshore plants have occurred and the inefficiency has increased. As a result, the general construction costs to estimated costs have significantly increased. The estimation of total contract costs has changed due to the price change of major raw materials of commercial ships and offshore plants and changes in exchange rate as at December 31, 2018.

As at December 31, 2018, when the estimation of remaining contract costs for construction in progress increases by 5%, the effect to profit for the year before income tax and net asset before income tax effect decreases by ₩ 520,339 million.

#### **3.6.3 Uncertainty of Estimates in Total Contract Revenue regarding Variations Arisen from Changes in Project Scope**

The total contract revenue is measured based on the original contract price from the initially agreed contract. However, the amount of contract revenue may increase or decrease due to a variation, claim, and incentive payment, therefore, the measurement of contract revenue is affected by the variant uncertainties related to consequence of future incidents. A variation is included in contract revenue by the Group when it is probable that the customer will approve the variation, when the Group is likely to satisfy the performance standard, and when the amount of revenue can be reliably measured. Such measurement of contract revenue is affected by high level of uncertainties that depend on the outcome of future event.

#### **3.6.4 Uncertainty of Estimates in Liquidated Damage regarding Delay of Construction**

The liquidated damage arising from delay caused by the Group in completion of contract may cause a decrease in total contract revenue; therefore, the Group estimates the liquidated damage for a project that may delay in completion schedule on a basis of historical experience. As at December 31, 2018, the maximum amount for liquidated damages arising from delays caused by the Group is estimated to be ₩ 172,304 million and the amount is deducted from the contract revenue amount. These amounts would be consistently revalued until completion of construction.

The Group continuously prepares countermeasure acts; such as, claim for extension of construction completion date and providing evidence of the reason that construction completion delay is not caused by the Group to their customers in order to minimize the liquidated damages.

**Daewoo Shipbuilding & Marine Engineering Co., Ltd. and Subsidiaries**  
**Notes to the Consolidated Financial Statements**  
**December 31, 2018 and 2017**

---

**3.7 Uncertainty of Estimates in Collectability of Contract Assets (Due from Customer under Construction Contracts)**

The Group assesses at the end of each reporting period whether there is any objective evidence that contract assets (due from customer under construction contracts) are impaired. The objective evidences include adverse change in customer's financial condition, delay in construction process or increase in possibility of cancellation due to decrease in vessel price and delay in delivery schedule.

Based on the Group's assessment on the objective evidence of impairment, if there is objective evidence of impairment and that loss event has an impact on the estimated future cash flows of construction contract that can be reliably estimated, the Group recognizes the amount as 'impairment loss'.

As at December 31, 2018, the uncertainty of estimates in collectability of contract assets (due from customer under construction contracts) has been increased because of contract termination and delay in delivery schedule that are caused by customers' financial difficulties.

**Daewoo Shipbuilding & Marine Engineering Co., Ltd. and Subsidiaries**  
**Notes to the Consolidated Financial Statements**  
**December 31, 2018 and 2017**

**4. Financial Risk Management**

**4.1 Financial Risk Factors**

The Group's activities expose it to a variety of financial risks: market risk (including foreign currency risk, price risk, and interest rate risk), credit risk and liquidity risk. The purpose of managing financial risk is to identify the potential risk factors that may affect the Group's financial performance and minimize it to the extent that is acceptable. Risk management is carried out by the relevant departments based on the risk management policies approved by the Board of Directors, and the risk management department identifies, assesses and hedges financial risks through close cooperation with other relevant departments. Meanwhile, financial risk management object and risk management policy of the Group is consistent with those of the prior period.

**4.1.1 Market Risk**

**4.1.1-1 Foreign Currency Risk**

Foreign exchange risk arises from future commercial transactions or when recognized assets or liabilities are denominated in a currency that is not the Group's functional currency. Exchange rate exposure is managed within approved policy parameters utilizing forward exchange contracts.

*(a) Foreign currency sensitivity analysis*

The Group is exposed to foreign exchange risk arising from foreign currency transactions, primarily with respect to the US dollar and Euro. The book amounts of the Group's monetary assets and liabilities denominated in foreign currencies as at December 31, 2018 and 2017, are as follows:

(in millions of Korean won)		December 31, 2018									
		USD		EUR		JPY		Others		Total	
		Assets	Liabilities	Assets	Liabilities	Assets	Liabilities	Assets	Liabilities	Assets	Liabilities
Functional currency											
KRW		₩5,098,912	₩1,968,207	₩ 6,093	₩ 55,107	₩ -	₩ 282	₩ 60,530	₩ 21,015	₩5,165,535	₩2,044,611
CNY		22,965	47,222	-	-	-	-	-	3	22,965	47,225
Others		4,571	-	-	-	-	-	-	-	4,571	-
		<u>₩5,126,448</u>	<u>₩2,015,429</u>	<u>₩ 6,093</u>	<u>₩ 55,107</u>	<u>₩ -</u>	<u>₩ 282</u>	<u>₩ 60,530</u>	<u>₩ 21,018</u>	<u>₩5,193,071</u>	<u>₩2,091,836</u>

(in millions of Korean won)		December 31, 2017									
		USD		EUR		JPY		Others		Total	
		Assets	Liabilities	Assets	Liabilities	Assets	Liabilities	Assets	Liabilities	Assets	Liabilities
Functional currency											
KRW		₩5,164,410	₩1,870,815	₩ 421	₩130,867	₩ -	₩ 364	₩ 64,973	₩ 53,660	₩5,229,804	₩2,055,706
RON		18,469	70,582	1,213	424	-	-	3	-	19,685	71,006
CNY		18,641	26,890	-	-	-	-	-	-	18,641	26,890
Others		1,402	17,444	-	-	-	-	42	6	1,444	17,450
		<u>₩5,202,922</u>	<u>₩1,985,731</u>	<u>₩ 1,635</u>	<u>₩ 131,291</u>	<u>₩ -</u>	<u>₩ 364</u>	<u>₩ 65,018</u>	<u>₩ 53,666</u>	<u>₩5,269,574</u>	<u>₩2,171,052</u>

The Group's sensitivity to a 10% increase or decrease in Korean won (functional currency of the Group) against the major foreign currencies as at December 31, 2018 and 2017, is presented in the table below. The sensitivity rate used in reporting foreign currency risk internally to key

**Daewoo Shipbuilding & Marine Engineering Co., Ltd. and Subsidiaries**  
**Notes to the Consolidated Financial Statements**  
**December 31, 2018 and 2017**

management personnel is 10% and it represents management's assessment of the reasonably possible change in foreign exchange rates.

The sensitivity analysis includes only outstanding monetary items denominated in foreign currencies. The impact of weakened/strengthened Korean won by 10 % on the Group's pre-tax profit for the year is as follows:

(in millions of Korean won)	2018			
	USD	EUR	JPY	Others
10% increase (Korean won weakened)	₩ 311,102	₩ (4,901)	₩ (28)	₩ 3,951
10% decrease (Korean won strengthened)	(311,102)	4,901	28	(3,951)

  

(in millions of Korean won)	2017			
	USD	EUR	JPY	Others
10% increase (Korean won weakened)	₩ 321,719	₩ (12,966)	₩ (36)	₩ 1,135
10% decrease (Korean won strengthened)	(321,719)	12,966	36	(1,135)

*(b) Forward foreign exchange contracts*

The Group operates internationally to win a contract for commercial ships and offshore plant projects, and is exposed to foreign exchange risk, primarily the changes of exchange rates in the US dollar or Euro. Foreign exchange risk arises from advance received denominated in foreign currency from customers and an exchange rate fluctuation of delivery payment. The risk is measured through a forecast of highly probable US dollar and Euro receivables. The risk is hedged with the objective of minimizing the volatility of the sales of the Group.

The Group treasury's risk management policy is to hedge more than 40% of exposure to foreign currency risk of construction payment(firm commitment), of which the Group will receive according to payment conditions stated in the construction contract of ships and offshore plants. For the year ended December 31, 2018, approximately 70% of firm commitment were hedged in respect of foreign currency risk.

The Group uses foreign currency forwards to hedge its exposure to foreign currency risk. Under the Group's policy the critical terms of the forwards must align with the hedged items.

The Group only designates the spot component of foreign currency forwards in hedge relationships. The spot component is determined with reference to relevant spot market exchange rates. The differential between the contracted forward rate and the spot market exchange rate is defined as the forward points and discounted to present value.

The Group also entered into foreign currency forwards in relation to projected purchases for the next 12 months that do not qualify as 'highly probable' forecast transactions and hence do not satisfy the requirements for hedge accounting (economic hedges). The foreign currency forwards are subject to the same risk management policies as all other derivative contracts. However, they are accounted for as held for trading with gains or losses recognized in profit or loss.

**Daewoo Shipbuilding & Marine Engineering Co., Ltd. and Subsidiaries**  
**Notes to the Consolidated Financial Statements**  
**December 31, 2018 and 2017**

The following details the forward foreign currency contracts outstanding as at December 31, 2018 and 2017.

(in millions of Korean won, in thousands of US dollar)	December 31, 2018					
	Average contracted exchange rate		Sell amounts		Buy amounts	Fair value
For fair value hedging						
Sell USD	1,093.28	USD	3,738,840	KRW	4,087,603	(25,418)
For trading						
Sell USD	1,114.93	USD	142,083	KRW	158,412	294
		USD	3,880,923	KRW	4,246,015	(25,124)

(in millions of Korean won, in thousands of US dollar, Euro and British pound)	December 31, 2017					
	Average contracted exchange rate		Sell amounts		Buy amounts	Fair value
For fair value hedging						
Sell USD	1,098.39	USD	3,795,811	KRW	4,169,264	127,489
For trading						
Sell USD / Buy EUR	1.33	USD	2,255	EUR	1,700	(238)
Sell USD / Buy GBP	1.45	USD	182	GBP	125	(14)
Sell USD	1,159.63	USD	346,000	KRW	401,233	31,377
		KRW	-	KRW	4,570,497	
		USD	4,144,248	USD	-	158,614
		EUR	-	EUR	1,700	
		GBP	-	GBP	125	

(c) *Effects of hedge accounting*

The effects of the foreign currency related hedging instruments on the Group's financial position and performance are as follows:

(in millions of Korean won)	December 31, 2018		December 31, 2017	
<b>Foreign currency forwards</b>				
Currency forward assets	₩	20,360	₩	137,775
Currency forward liabilities	₩	45,778	₩	10,286
Notional amount		USD 3,738,840		USD 3,795,811
Maturity		2019/01~2021/06		2018/01~2020/04
Hedge ratio		1:0.78		1:1.01
Change in spot components of outstanding hedging instrument	₩	(25,418)	₩	127,489
Change in value of hedged item	₩	32,670	₩	(126,808)
Weighted average hedged exchange rate for the year		1,100.57		1,064.17

**Daewoo Shipbuilding & Marine Engineering Co., Ltd. and Subsidiaries**  
**Notes to the Consolidated Financial Statements**  
**December 31, 2018 and 2017**

**4.1.1-2 Price Risk**

The Group's investment in marketable equity securities is made upon management's decision. As at December 31, 2018, the Group has marketable equity securities that are classified as financial assets that are measured at fair value through other comprehensive income (2017: available-for-sale financial assets), and when the price of the marketable equity securities increase by 10%, the effect to other components of equity will be increased by ₩ 1 million (2017 : ₩ 367 million). Conversely, if the price decreases, it will be decreased.

**4.1.1-3 Interest Risk**

The interest rate risk mainly arises through floating borrowings. The Group is exposed to interest rate risk since it has borrowings issued at floating rates. The interest rate risk is managed through the interest rate swap contract if the interest rate risk hedging is required.

The Group's exposures to interest rates on financial assets and financial liabilities as at December 31, 2018 and 2017, are as follows:

<i>(in millions of Korean won)</i>	<b>December 31, 2018</b>		<b>December 31, 2017</b>	
Fixed interest rate				
Financial assets <sup>1</sup>	₩	38	₩	563,717
Financial liabilities <sup>2</sup>		<u>(1,525,655)</u>		<u>(2,110,266)</u>
	₩	<u>(1,525,617)</u>	₩	<u>(1,546,549)</u>
Floating interest rate				
Financial assets <sup>1</sup>	₩	848,786	₩	225,327
Financial liabilities <sup>2</sup>		<u>(1,655,468)</u>		<u>(1,601,392)</u>
	₩	<u>(806,682)</u>	₩	<u>(1,376,065)</u>

<sup>1</sup> Financial assets consist of cash and cash equivalents, short-term and long-term financial instruments, short-term and long-term loans, and financial assets at amortized cost (government and public bonds).

<sup>2</sup> Financial liabilities consist of short-term and long-term borrowings and debentures.

The contractual re-pricing dates of the financial liabilities as at December 31, 2018 and 2017, are as follows:

<i>(in millions of Korean won)</i>	<b>December 31, 2018</b>			<b>December 31, 2017</b>		
		<b>Amount</b>	<b>Ratio</b>		<b>Amount</b>	<b>Ratio</b>
Floating interest rate	₩	1,655,468	48.6%	₩	1,601,392	40.2%
Fixed interest rate - repricing dates <sup>1</sup> :						
Up to 6 months		830,406	24.4%		1,419,865	35.7%
6 to 12 months		-	-		-	-
1 to 5 years		790,611	23.2%		688,837	17.3%
Over 5 years		<u>128,838</u>	<u>3.8%</u>		<u>269,661</u>	<u>6.8%</u>
		<u>1,749,855</u>	<u>51.4%</u>		<u>2,378,363</u>	<u>59.8%</u>
Discount on debentures		(165,267)	-		(210,373)	-

**Daewoo Shipbuilding & Marine Engineering Co., Ltd. and Subsidiaries**  
**Notes to the Consolidated Financial Statements**  
**December 31, 2018 and 2017**

Present value discounts	(58,932)	-	(57,724)	-
	₩ 3,181,124	100.0%	₩ 3,711,658	100.0%

<sup>1</sup> Repricing date is earlier of the contractual re-pricing dates or contract maturity.

The table below summarizes the impact of increases/decreases of interest rate on the Group's pre-tax profit for the year. The analysis is based on the assumption that the interest rate has increased/decreased by 100 basis points with all other variables held constant.

<i>(in millions of Korean won)</i>	2018	2017
Financial instruments with floating interest rates		
100bp increase	₩ (8,067)	₩ (13,761)
100bp decrease	8,067	13,761

The sensitivity analyses above have been determined based on the assumption that the amount of floating-rate financial assets and liabilities outstanding at the end of the reporting period has been identical for the whole reporting period.

#### **4.1.2 Credit Risk Management**

Credit risk is managed on a group basis. Credit risk arises from cash and cash equivalents, deposits with banks and financial institutions and derivative financial instruments, as well as credit exposures to customers, including outstanding receivables and committed transactions. For banks and financial institutions, only independently rated parties with a minimum rating of 'A' are accepted. If wholesale customers are independently rated, these ratings are used. If there is no independent rating, the credit quality of the customer is evaluated taking into account its financial position, past experience and other factors.

The maximum exposure to credit risk of financial assets that are measured at amortized cost (Note 9) and derivatives is represented by the carrying amount, and for financial guarantee liabilities, it is represented by the maximum amount to be paid at the debtor's request, which amounts to ₩ 62,886 million (2017: ₩ 180,984 million)(Notes 17 and 37).

##### **4.1.2-1 Security**

For some trade receivables, the Group may obtain security in the form of Corporate Guarantee which can be called upon if the counterparty is in default under the terms of the agreement.

##### **4.1.2-2 Impairment of Financial Assets**

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

- trade receivables for sales of goods and provision of services,
- contract assets relating to provision of services,
- debt investments carried at fair value through other comprehensive income, and
- other financial assets carried at amortized cost.

**Daewoo Shipbuilding & Marine Engineering Co., Ltd. and Subsidiaries**  
**Notes to the Consolidated Financial Statements**  
**December 31, 2018 and 2017**

*(a) Trade receivables and contract assets*

The Group applies the simplified approach to measuring expected credit losses which uses a lifetime expected loss allowance for all trade receivables and contract assets. To measure the expected credit losses, trade receivables have been grouped based on shared credit risk characteristics.

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

<i>(in millions of Korean won)</i>	<b>2018</b>			<b>2017</b>		
	<b>Trade receivables</b>	<b>Contract assets</b>	<b>Total</b>	<b>Trade receivables</b>	<b>Contract assets</b>	<b>Total</b>
Beginning balance - Korean IFRS 1039	₩ 1,008,745	₩ 657,461	₩ 1,666,206	₩ 1,099,738	₩ -	₩ 1,099,738
Amounts restated through beginning balance of retained earnings	-	11	11	-	-	-
Loss allowance as at initial application date - calculated under Korean IFRS 1109	1,008,745	657,472	1,666,217	1,099,738	-	1,099,738
Impairment loss (reversal)	(115,932)	(277,504)	(393,436)	66,993	-	66,993
Other (effects of exchange rate changes and others)	(273,556)	(279,061)	(552,617)	(157,986)	-	(157,986)
Ending balance	₩ 619,257	₩ 100,907	₩ 720,164	₩ 1,008,745	₩ -	₩ 1,008,745

The impairment losses on trade receivables and contract assets were assessed based on the expected credit losses model considering the past credit loss experiences according to changes in the accounting standard (in prior year: the incurred loss model). The estimated impairment losses on these receivables are presented separately in the provision for impairment. The Group considered that there was evidence of impairment if any of the following indicators were present:

- Significant financial difficulties of the debtor
- Probability that the debtor will enter bankruptcy or financial reorganization, or
- Default or significant delinquency in payments.

Impairment losses on trade receivables and contract assets are presented as net impairment losses within impairment loss in the statement of profit or loss. Subsequent recoveries of amounts previously written off are credited against the same line item.



**Daewoo Shipbuilding & Marine Engineering Co., Ltd. and Subsidiaries**  
**Notes to the Consolidated Financial Statements**  
**December 31, 2018 and 2017**

2) 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. The loss allowance provision as at December 31, 2018, are as follows:

*(in millions of Korean won)*

	<b>December 31, 2018</b>		
	<b>Expected loss rates</b>	<b>Gross carrying amount</b>	<b>Loss allowance provision</b>
<b>Trade receivables</b>			
Collective assessment			
Affiliates	8.06%	₩ 1,010	₩ 81
Government organizations	0.00%	86,798	-
Others	0.23%	571,176	1,295
	0.21%	658,984	1,376
Individual assessment	-	630,701	617,882
Total	-	₩ 1,289,685	₩ 619,258
<b>Contract assets</b>			
Collective assessment			
Affiliates	8.06%	₩ -	₩ -
Government organizations	0.00%	126,004	-
Others	0.00%	3,013,854	93
	0.00%	3,139,858	93
Individual assessment	-	1,333,401	100,815
Total	-	₩ 4,473,259	₩ 100,908

**Daewoo Shipbuilding & Marine Engineering Co., Ltd. and Subsidiaries**  
**Notes to the Consolidated Financial Statements**  
**December 31, 2018 and 2017**

*(b) Other financial assets at amortized cost*

Other financial assets at amortized cost include loans, other receivables, accrued income and deposits. Movements in loss allowance provision for other financial assets at amortized cost for the year ended December 31, 2018, are as follows:

*(in millions of Korean won)*

	2018				
	Loans	Other receivables	Accrued income	Deposits	Total
Beginning balance - Korean IFRS 1039	₩ 289,996	₩ 11,271	₩ 35,868	₩ 17,879	₩ 355,014
Amounts restated through beginning balance of retained earnings	-	-	-	-	-
Loss allowance as at initial application date - calculated under Korean IFRS 1109	289,996	11,271	35,868	17,879	355,014
Impairment loss (reversal)	1,571	(1,619)	421	(232)	141
Other (effects of exchange rate changes and others)	(3,669)	84,251	(7,688)	(752)	72,142
Ending balance	₩ 287,898	₩ 93,903	₩ 28,601	₩ 16,895	₩ 427,297

If financial assets at amortized cost are considered to have low credit risk, loss allowance provisions are recognized based on 12-month expected credit losses. If credit risk is significantly increasing or credit is considered to be impaired, loss allowance is recognized based on lifetime expected credit losses. Management considers instruments to have 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.

*(in millions of Korean won)*

	2017				
	Loans	Other receivables	Accrued income	Deposits	Total
Beginning balance	₩ 223,282	₩ 25,222	₩ 40,971	₩ 3,072	₩ 292,547
Impairment loss (reversal)	17,098	(3,506)	(265)	8	13,335
Other (effects of exchange rate changes and others)	49,617	(10,446)	(4,838)	14,799	49,132
Ending balance	₩ 289,997	₩ 11,270	₩ 35,868	₩ 17,879	₩ 355,014

**Daewoo Shipbuilding & Marine Engineering Co., Ltd. and Subsidiaries**  
**Notes to the Consolidated Financial Statements**  
**December 31, 2018 and 2017**

(c) Amounts recognized in profit or loss

The amounts recognized in profit or loss within 'impairment loss' in relation to impaired receivables for the years ended December 31, 2018 and 2017, are as follows:

(in millions of Korean won)	2018						
	Trade receivables	Contract assets	Other financial assets at amortized cost				Total
			Loans	Other receivables	Accrued income	Deposits	
Impairment loss							
- Movement in loss allowance	₩ 13,803	₩ 93	₩ 3,118	₩ 418	₩ 421	₩ -	₩ 17,853
- Reversal of impairment loss recognized in prior periods	(202,297)	(277,596)	(1,547)	(2,037)	-	(232)	(483,709)
	₩ (188,494)	₩ (277,504)	₩ 1,571	₩ (1,619)	₩ 421	₩ (232)	₩ (465,857)

(in millions of Korean won)	2017						
	Trade receivables	Contract assets	Other financial assets at amortized cost				Total
			Loans	Other receivables	Accrued income	Deposits	
Impairment loss							
- Movement in loss allowance	₩ 66,993	₩ -	₩ 17,098	₩ -	₩ -	₩ 8	₩ 84,099
- Reversal of impairment loss recognized in prior periods	-	-	-	(3,506)	(265)	-	3,771
	₩ 66,993	₩ -	₩ -	₩ (3,506)	₩ (265)	₩ 8	₩ 63,230

**Daewoo Shipbuilding & Marine Engineering Co., Ltd. and Subsidiaries**  
**Notes to the Consolidated Financial Statements**  
**December 31, 2018 and 2017**

**4.1.3 Liquidity Risk Management**

The Group manages liquidity risk by maintaining sufficient cash and marketable securities, the availability of funding through an adequate level of committed credit facilities and the ability to close out market position. Due to the dynamic nature of the underlying business, the Group maintains flexibility in funding by maintaining availability under committed credit lines.

4.1.3-1 The table below analyses the Group's non-derivative financial liabilities into relevant maturity groupings based on the remaining period at the end of reporting period to the contractual maturity date. The amounts disclosed in the table are the contractual undiscounted cash flows. The balances due within a year equals to their book amount as the impact of discounting is not significant.

(in millions of Korean won)	December 31, 2018			
	Less than 1 year	Between 1 and 2 years	Over 2 years	Total
Borrowings and others <sup>1</sup>	₩ 1,741,971	₩ 173,524	₩ 1,685,061	₩ 3,600,556
Trade and other payables	1,082,739	40,898	25,326	1,148,963
Financial guarantee contract <sup>2</sup>	62,886	-	-	62,886
	<u>₩ 2,887,596</u>	<u>₩ 214,422</u>	<u>₩ 1,710,387</u>	<u>₩ 4,812,405</u>

  

(in millions of Korean won)	December 31, 2017			
	Less than 1 year	Between 1 and 2 years	Over 2 years	Total
Borrowings and others <sup>1</sup>	₩ 2,554,524	₩ 36,061	₩ 1,539,523	₩ 4,130,108
Trade and other payables	1,072,984	93,228	42,917	1,209,129
Financial guarantee contract <sup>2</sup>	180,984	-	-	180,984
	<u>₩ 3,808,492</u>	<u>₩ 129,289</u>	<u>₩ 1,582,440</u>	<u>₩ 5,520,221</u>

<sup>1</sup> The cash flows for borrowings(including debentures) include expected interest expense.

<sup>2</sup> Amount of financial guarantee contract represents a limit of payment guarantee, which is the maximum amount payable by the Group in case the debtor claims for the full guaranteed amount.

**Daewoo Shipbuilding & Marine Engineering Co., Ltd. and Subsidiaries**  
**Notes to the Consolidated Financial Statements**  
**December 31, 2018 and 2017**

4.1.3-2 The table below analyses the Group's derivative instruments into relevant maturity groupings based on the remaining period at the end of reporting period to the contractual maturity date. The amount of the derivative instruments that are settled in net amounts is based on undiscounted net cash inflows and outflows in accordance with the terms of the contract. In case the amounts to be received or paid are not settled, an interest rate estimated based on the yield curve at the end of the reporting period is used.

(in millions of Korean won)	December 31, 2018			
	Less than 1 year	Between 1 and 2 years	Over 2 years	Total
Net settlement: Currency forward contracts	₩ (26,670)	₩ (1,613)	₩ 1,341	₩ (26,942)

(in millions of Korean won)	December 31, 2017			
	Less than 1 year	Between 1 and 2 years	Over 2 years	Total
Net settlement: Currency forward contracts	₩ 91,338	₩ 53,580	₩ 16,264	₩ 161,182

#### **4.2 Capital Risk Management**

The Group's objectives when managing capital are to safeguard the Group's ability to continue as a going concern, so the Group can continue to provide returns for shareholders and benefits for other stakeholders and to maintain an optimal capital structure to reduce the cost of capital. The Group's general strategy of capital risk management is consistently applied with that of previous year.

The Group monitors capital on the basis of the gearing ratio. This ratio is calculated as net borrowing divided by total capital. Net borrowing is total borrowings less cash and cash equivalents and short financial instruments. Total capital is 'equity' as shown in the consolidated statement of financial position plus net borrowing. The gearing ratios as at December 31, 2018 and 2017, are as follows:

(in millions of Korean won)	December 31, 2018	December 31, 2017
Total borrowings (Notes 21 and 22)	₩ 3,181,124	₩ 3,711,658
Less: cash and cash equivalents and short-term financial instruments	(425,968)	(288,300)
Net debt	2,755,156	3,423,358
Total equity	3,840,222	2,990,661
Total capital	₩ 6,595,378	₩ 6,414,019
Gearing ratio	41.77%	53.37%

**Daewoo Shipbuilding & Marine Engineering Co., Ltd. and Subsidiaries**  
**Notes to the Consolidated Financial Statements**  
**December 31, 2018 and 2017**

**5. Fair Value**

**5.1 Fair Value Hierarchy**

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

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

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

*(in millions of Korean won)*

		<b>December 31, 2018</b>			
		<b>Level 1</b>	<b>Level 2</b>	<b>Level 3</b>	<b>Total</b>
<b>Financial assets</b>					
Financial assets at fair value through profit or loss					
Derivative held for trading	₩	-	₩ 382	₩	- ₩ 382
Beneficiary certificates		3,592	-	-	3,592
Equity investments		-	16,607	-	16,607
Currency forward assets					
Derivative instrument for hedging		-	20,360	-	20,360
Financial assets at fair value through other comprehensive income					
Listed securities		8	-	-	8
Non-listed securities		-	11,832	8,247	20,079
	₩	3,600	₩ 49,181	₩ 8,247	₩ 61,028
<b>Financial liabilities</b>					
Financial liabilities at fair value through profit or loss					
Derivative held for trading	₩	-	₩ 89	₩	- ₩ 89
Currency forward liabilities					
Derivative instrument for hedging		-	45,778	-	45,778
	₩	-	₩ 45,867	₩	- ₩ 45,867

**Daewoo Shipbuilding & Marine Engineering Co., Ltd. and Subsidiaries**  
**Notes to the Consolidated Financial Statements**  
**December 31, 2018 and 2017**

(in millions of Korean won)

	December 31, 2017			
	Level 1	Level 2	Level 3	Total
<b>Financial assets</b>				
Financial assets at fair value through profit or loss				
Derivative held for trading	₩ -	₩ 31,377	₩ -	₩ 31,377
Derivative financial assets				
Derivative instrument for hedging	-	137,775	-	137,775
Available-for-sale financial assets				
Listed securities	8	-	-	8
Beneficiary certificates	3,663	-	-	3,663
Non-listed securities	-	6,296	20,872	27,168
	₩ 3,671	₩ 175,448	₩ 20,872	₩ 199,991
<b>Financial liabilities</b>				
Financial liabilities at fair value through profit or loss				
Derivative held for trading	₩ -	₩ 252	₩ -	₩ 252
Financial liabilities designated at fair value through profit or loss	-	42,472	-	42,472
Derivative financial liabilities				
Derivative instrument for hedging	-	10,286	-	10,286
	₩ -	₩ 53,010	₩ -	₩ 53,010

## 5.2 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.

Details of transfers between levels of each fair value hierarchy of financial instruments are as follows:

There were no transfers between levels 1 and 2 for recurring fair value measurements during the year.

**Daewoo Shipbuilding & Marine Engineering Co., Ltd. and Subsidiaries**  
**Notes to the Consolidated Financial Statements**  
**December 31, 2018 and 2017**

Changes in level 3 for recurring fair value measurements for the years ended December 31, 2018 and 2017, are as follows:

<i>(in millions of Korean won)</i>		<b>2018</b>
Financial assets at fair value through other comprehensive income: Non-listed securities		
Beginning balance	₩	20,872
Purchases (Disposals)		(4,679)
Transfer <sup>1</sup>		(7,798)
Valuation		(148)
Ending balance	₩	<u>8,247</u>

<sup>1</sup> Non-listed securities classified as Level 3 were transferred to Level 2 during the period.

<i>(in millions of Korean won)</i>		<b>2017</b>
AFS financial assets: Non-listed securities		
Beginning balance	₩	32,647
Transfer <sup>1</sup>		6,149
Valuation		16
Other changes <sup>2</sup>		(17,940)
Ending balance	₩	<u>20,872</u>

<sup>1</sup> As the measurement method for non-listed securities was changed from the cost method to fair valuation, the relevant amount has been transferred to Level 3 for the years ended December 31, 2018 and 2017. Additionally, non-listed securities classified as Level 3 were transferred to Level 2 during the current year.

<sup>2</sup> Other changes include changes in consolidation scope and others.

### **5.3 Valuation Techniques and the Inputs**

Valuation techniques and inputs used in the recurring and non-recurring fair value measurements categorized within Level 2 and Level 3 of the fair value hierarchy as at December 31, 2018 and 2017, are as follows:

<i>(in millions of Korean won)</i>		<b>December 31, 2018</b>			
	<b>Level</b>	<b>Valuation techniques</b>	<b>Inputs</b>	<b>Range of inputs</b>	<b>Fair value</b>
<b>Financial instruments that are measured at fair value</b>					
Foreign currency forward contracts	2	Discounted cash flow	Forward rate, credit risk adjusted discount rate	N/A	₩ (25,124)
Equity investments	2	Discounted cash flow	Credit risk adjusted discount rate	N/A	16,607
Unlisted equity securities	2	Market price of similar asset	Market price of similar asset	N/A	10,487
Unlisted equity securities	2	Quoted price in inactive market	Quoted price in inactive market	N/A	1,345
Unlisted equity securities	3	Net asset value approach method	N/A	N/A	8,247



**Daewoo Shipbuilding & Marine Engineering Co., Ltd. and Subsidiaries**  
**Notes to the Consolidated Financial Statements**  
**December 31, 2018 and 2017**

**6. Financial Instruments by Category**

**6.1 Financial Assets**

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

(in millions of Korean won)	December 31, 2018							
	Financial assets at fair value through profit or loss	Financial assets at fair value through other comprehensive income	Financial assets at amortized costs	Derivative financial assets for hedging	Total (Carrying amount)	Fair value		
Cash and cash equivalents	₩ -	₩ -	₩ 351,190	₩ -	₩ 351,190	₩	₩	₩ 351,190
Short- and long-term financial assets	-	-	490,765	-	490,765			490,765
Financial assets at fair value through profit or loss <sup>1</sup>	20,582	-	-	-	20,582			20,582
Held-to-maturity financial assets	-	-	38	-	38			38
Financial assets at fair value through other comprehensive income	-	20,087	-	-	20,087			20,087
Trade and other receivables	-	-	902,775	-	902,775			902,775
Contract assets	-	-	4,372,352	-	4,372,352			4,372,352
Currency forward assets	-	-	-	20,360	20,360			20,360
	₩ 20,582	₩ 20,087	₩ 6,117,120	₩ 20,360	₩ 6,178,149	₩	₩	₩ 6,178,149

<sup>1</sup> Financial assets at fair value through profit or loss consist of currency forward assets held for trading, equity investments, and others

(in millions of Korean won)	December 31, 2017							
	Loans and receivables	Financial assets at fair value through profit or loss	Held-to- maturity financial assets	Available-for- sale financial assets	Derivative financial assets for hedging	Total (Carrying amount)	Fair value	
Cash and cash equivalents	₩ 205,795	₩ -	₩ -	₩ -	₩ -	₩ 205,795	₩	₩ 205,795
Short- and long-term financial assets	496,528	-	-	-	-	496,528		496,528
Financial assets at fair value through profit or loss <sup>1</sup>	-	31,377	-	-	-	31,377		31,377
Held-to-maturity financial assets	-	-	331	-	-	331		331
Available-for-sale financial assets	-	-	-	52,085	-	52,085		52,085
Trade and other receivables	625,987	-	-	-	-	625,987		625,987
Due from customers for contract work, net	4,089,030	-	-	-	-	4,089,030		4,089,030
Currency forward assets	-	-	-	-	137,775	137,775		137,775
	₩ 5,417,340	₩ 31,377	₩ 331	₩ 52,085	₩ 137,775	₩ 5,638,908	₩	₩ 5,638,908

<sup>1</sup> Financial assets at fair value through profit or loss consist of currency forward assets held for trading.

**Daewoo Shipbuilding & Marine Engineering Co., Ltd. and Subsidiaries**  
**Notes to the Consolidated Financial Statements**  
**December 31, 2018 and 2017**

The amounts of financial assets by category presented above tables are sum of current and non-current assets, net of loss allowance.

**6.2 Financial Liabilities**

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

(in millions of Korean won) Korean won)	December 31, 2018					
	Financial liabilities at fair value through profit or loss	Financial liabilities at amortized costs	Derivative financial liabilities for hedging	Total (Carrying amount)	Fair value	
Borrowings	₩ -	₩ 2,605,563	₩ -	₩ 2,605,563	₩	2,607,391
Debentures	-	575,561	-	575,561		579,609
Financial liabilities at fair value through profit or loss <sup>1</sup>	89	-	-	89		89
Trade and other payables	-	1,148,962	-	1,148,962		1,148,962
Currency forward liabilities <sup>1</sup>	-	-	45,778	45,778		45,778
Financial guarantee liabilities <sup>2</sup>	-	480	-	480		480
	₩ 89	₩ 4,330,566	₩ 45,778	₩ 4,376,433	₩	4,382,309

<sup>1</sup> Financial liabilities at fair value through profit or loss consist of currency forward liabilities held for trading.

<sup>2</sup> As described in Note 17 and Note 37, the Group recognized expected payment guarantees amount, based on the agreement, as financial guarantee liabilities.

(in millions of Korean won) Korean won)	December 31, 2017					
	Financial liabilities at fair value through profit or loss	Other financial liabilities	Derivative financial liabilities for hedging	Total (Carrying amount)	Fair value	
Borrowings	₩ -	₩ 3,180,996	₩ -	₩ 3,180,996	₩	3,171,019
Debentures	-	530,661	-	530,661		520,664
Financial liabilities at fair value through profit or loss <sup>1</sup>	42,724	-	-	42,724		42,724
Trade and other payables	-	1,209,129	-	1,209,129		1,209,129
Currency forward liabilities <sup>1</sup>	-	-	10,286	10,286		10,286
Financial guarantee liabilities <sup>2</sup>	-	1,472	-	1,472		1,472
	₩ 42,724	₩ 4,922,258	₩ 10,286	₩ 4,975,268	₩	4,955,294

<sup>1</sup> Financial liabilities at fair value through profit or loss consist of currency forward liabilities held for trading and financial liabilities designated at fair value through profit or loss.

<sup>2</sup> As described in Note 17, the Group recognized expected payment guarantees amount, based on the agreement, as financial guarantee liabilities.

The amounts above are sum of current and non-current liabilities.

**Daewoo Shipbuilding & Marine Engineering Co., Ltd. and Subsidiaries**  
**Notes to the Consolidated Financial Statements**  
**December 31, 2018 and 2017**

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**6.3 Net Gains or Losses by Category of Financial Instruments (Before Income Tax Effects)**

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

<i>(in millions of Korean won)</i>	<b>2018</b>
<b>Financial assets at fair value through profit or loss</b>	
Gains on valuation of foreign exchange forward contracts, net	₩ 383
Losses on foreign exchange forward transaction, net	(3,352)
Losses on valuation of financial assets at fair value through profit or loss	(1,992)
Gains on disposal of financial assets at fair value through profit or loss	786
<b>Financial assets at fair value through other comprehensive income</b>	
Dividend income	147
Losses on valuation of financial assets at fair value through other comprehensive income	(10,657)
<b>Financial assets at amortized costs</b>	
Interest income	61,058
Impairment reversal	465,393
Gains on foreign currency translation, net	65,274
Gains on foreign currency transaction, net	120,212
<b>Derivative financial assets for hedging</b>	
Losses on valuation of foreign exchange forward contracts, net	(21,946)
Losses on foreign exchange forward transaction, net	(6,658)
<b>Financial liabilities at fair value through profit or loss</b>	
Losses on valuation of foreign exchange forward contracts, net	(89)
Losses on foreign exchange forward transaction, net	(14,943)
Gains on valuation of financial liabilities at fair value through profit or loss	767
<b>Financial liabilities at amortized costs</b>	
Interest expenses	(182,202)
Losses on foreign currency translation, net	(99,431)
Losses on foreign currency transaction, net	(72,376)
Reversal of financial guarantee liabilities	992
Gains on debt restructuring	10
<b>Derivative financial liabilities for hedging</b>	
Losses on valuation of foreign exchange forward contracts, net	(66,672)
Losses on foreign exchange forward transaction, net	(48,420)

**Daewoo Shipbuilding & Marine Engineering Co., Ltd. and Subsidiaries**  
**Notes to the Consolidated Financial Statements**  
**December 31, 2018 and 2017**

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(in millions of Korean won)

**2017**

**Loans and receivables**

Interest income	₩ 17,077
Impairment loss <sup>1</sup>	(392,704)
Losses on foreign currency translation, net	(306,375)
Losses on foreign currency transaction, net	(97,650)

**Financial assets at fair value through profit or loss**

Gains on valuation of foreign exchange forward contracts, net	34,078
Gains on foreign exchange forward transaction, net	11,092

**Held-to-maturity financial assets**

Interest income	9
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**Available-for-sale financial assets**

Dividend income	748
Gains on valuation of available-for-sale financial assets (other comprehensive income)	1,549
Gains on disposal of available-for-sale financial assets	968
Impairment loss on available-for-sale financial assets	(44)

**Derivative financial assets for hedging**

Gains on valuation of foreign exchange forward contracts, net	336,885
Gains on foreign exchange forward transaction, net	66,468

**Financial liabilities at fair value through profit or loss**

Gains on valuation of foreign exchange forward contracts, net	288
Gains on foreign exchange forward transaction, net	2,817
Gains on valuation of financial liabilities at fair value through profit or loss	2,355

**Other financial liabilities**

Interest expenses	(46,550)
Gains on foreign currency translation, net	161,456
Gains on foreign currencies transaction, net	176,214
Reversal of financial guarantee liabilities	9,447
Gains on debt restructuring	1,422,602
Capitalized financial expenses	(175,136)

**Derivative financial liabilities for hedging**

Gains on valuation of foreign exchange forward contracts, net	45,841
Gains on foreign exchange forward transaction, net	101,144

<sup>1</sup> The amount of impairment loss for the year ended December 31, 2017 includes reversal of provision for impairment.

**Daewoo Shipbuilding & Marine Engineering Co., Ltd. and Subsidiaries**  
**Notes to the Consolidated Financial Statements**  
**December 31, 2018 and 2017**

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**7. Cash and Cash Equivalents**

The Group's cash and cash equivalents in the consolidated statement of financial position are the same as that in the consolidated statement of cash flows. Details of cash and cash equivalents as at December 31, 2018 and 2017, are as follows:

<i>(in millions of Korean won)</i>	<b>December 31, 2018</b>		<b>December 31, 2017</b>	
Cash on hand	₩	19	₩	28
Financial institution deposits		351,171		205,767
	₩	<u>351,190</u>	₩	<u>205,795</u>

**8. Restricted or Pledged Financial Assets**

The restricted or pledged financial assets as at December 31, 2018 and 2017, are as follows:

<i>(in millions of Korean won)</i>	<b>December 31, 2018</b>		<b>December 31, 2017</b>		<b>Description</b>
Cash and cash equivalents	₩	3,307	₩	6,329	Guaranteed security and the others
Short-term financial assets <sup>1</sup>		71,778		82,504	Guarantee for contract performance guarantee and the others
Long-term financial assets		415,987		414,024	Guarantee for contract performance guarantee and the others
	₩	<u>491,072</u>	₩	<u>502,857</u>	

<sup>1</sup> The Group has unrestricted short-term financial assets amounting to ₩ 3,000 million as at December 31, 2018.

**Daewoo Shipbuilding & Marine Engineering Co., Ltd. and Subsidiaries**  
**Notes to the Consolidated Financial Statements**  
**December 31, 2018 and 2017**

**9. Financial Assets**

As explained in Note 2, the Group has applied Korean IFRS 1109 *Financial Instruments* from January 1, 2018. See Note 45 for the impact of the changes in accounting policies on the classification of financial assets and financial statements.

**9.1 Financial Assets at Fair Value through Profit or Loss(2017: Financial Assets at Fair Value through Profit or Loss and Available-for-Sale Financial Assets)**

*(a) Financial assets at fair value through profit or loss*

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

<i>(in millions of Korean won)</i>	<b>December 31, 2018</b>		<b>December 31, 2017</b>	
<b>Current</b>				
Currency forward assets held for trading <sup>1</sup>	₩	382	₩	31,377
<b>Non-current</b>				
Equity investments <sup>2</sup>		16,607		12,454
Beneficiary certificates <sup>3</sup>		3,592		3,663
	₩	20,581	₩	47,494

<sup>1</sup> Classified as financial assets at fair value through profit or loss in prior year.

<sup>2,3</sup> Classified as available-for-sale financial assets in prior year.

*(b) Amounts recognized in profit or loss*

<i>(in millions of Korean won)</i>	<b>2018</b>		<b>2017</b>	
Gains(losses) on currency forward assets held for trading, net	₩	(2,969)	₩	45,171
Losses on equity investments		(2,096)		-
Gains on beneficiary certificates		110		-
Gains on non-listed securities		780		-
	₩	(4,175)	₩	45,171

**Daewoo Shipbuilding & Marine Engineering Co., Ltd. and Subsidiaries**  
**Notes to the Consolidated Financial Statements**  
**December 31, 2018 and 2017**

**9.2 Financial Assets at Fair Value through Other Comprehensive Income(2017: Available-for-Sale Financial Assets)**

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

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

<i>(in millions of Korean won)</i>	<b>December 31, 2018</b>		<b>December 31, 2017</b>	
Listed securities	₩	8	₩	8
Non-listed securities		20,079		35,960
	₩	20,087	₩	35,968

Upon disposal of these equity investments, any balance within the accumulated other comprehensive income for these equity investments is reclassified to retained earnings.

**9.3 Held-to-Maturity Financial Assets**

*(a) Held-to-maturity financial assets*

Details of held-to-maturity financial assets as at December 31, 2018 and 2017, are as follows:

<i>(in millions of Korean won)</i>	<b>December 31, 2018</b>		<b>December 31, 2017</b>	
	<b>Current</b>	<b>Non-current</b>	<b>Current</b>	<b>Non-current</b>
Government and public bonds	₩ 1	₩ 37	₩ 27	₩ 305

*(b) Movements in held-to-maturity financial assets*

Movements in held-to-maturity financial assets for the years ended December 31, 2018 and 2017, are as follows:

<i>(in millions of Korean won)</i>	<b>2018</b>		<b>2017</b>	
	<b>Current</b>	<b>Non-current</b>	<b>Current</b>	<b>Non-current</b>
Beginning balance	₩ 27	₩ 305	₩ 8	₩ 339
Purchases	-	19	-	3
Disposals	(27)	(285)	(7)	-
Transfers	1	(1)	29	(29)
Changes in the scope of consolidation	-	-	(3)	(9)
Ending balance	₩ 1	₩ 37	₩ 27	₩ 305

**Daewoo Shipbuilding & Marine Engineering Co., Ltd. and Subsidiaries**  
**Notes to the Consolidated Financial Statements**  
**December 31, 2018 and 2017**

**9.4 Trade Receivables and Other Financial Assets at Amortized Cost**

*(a) Trade receivables and provision for impairment*

Trade receivables and its provisions for impairment as at December 31, 2018 and 2017, are as follows:

<i>(in millions of Korean won)</i>	<b>December 31, 2018</b>		<b>December 31, 2017</b>	
	<b>Current</b>	<b>Non-current</b>	<b>Current</b>	<b>Non-current</b>
Receivables from construction contracts and trade receivables	₩ 675,795	₩ 613,888	₩ 459,940	₩ 1,023,961
Less: Provision for impairment	(18,481)	(600,775)	(60,123)	(948,623)
Receivables from construction contracts and trade receivables, net	₩ 657,314	₩ 13,113	₩ 399,817	₩ 75,338

*(b) Other financial assets at amortized costs*

Other financial assets at amortized costs as at December 31, 2018 and 2017, are as follows:

<i>(in millions of Korean won)</i>	<b>December 31, 2018</b>		<b>December 31, 2017</b>	
	<b>Current</b>	<b>Non-current</b>	<b>Current</b>	<b>Non-current</b>
Loans	₩ 143,883	₩ 150,846	₩ 179,772	₩ 196,614
Less: Provision for impairment	(143,883)	(144,015)	(155,980)	(134,016)
Loans, net	-	6,831	23,792	62,598
Other receivable	58,577	143,509	29,106	34,261
Less: Provision for impairment	(9,299)	(84,604)	(11,271)	-
Other receivable, net	49,278	58,905	17,835	34,261
Accrued income	28,840	7	37,141	230
Less: Provision for impairment	(28,595)	(6)	(35,862)	(6)
Accrued income, net	245	1	1,279	224
Deposits <sup>1</sup>	23	133,959	25	28,696
Less: Provision for impairment	-	(16,895)	-	(17,879)
Deposits, net	23	117,064	25	10,817
	₩ 49,546	₩ 182,801	₩ 42,931	₩ 107,900

<sup>1</sup> Includes ₩ 107.5 billion paid to Defense Acquisition Program Administration (DAPA) as deposit of contract performance guarantee during the current year.



**Daewoo Shipbuilding & Marine Engineering Co., Ltd. and Subsidiaries**  
**Notes to the Consolidated Financial Statements**  
**December 31, 2018 and 2017**

**10. Contract Assets and Liabilities**

As explained in Note 2, the Group has applied Korean IFRS 1115 *Revenue from Contracts with Customers* from January 1, 2018. See Note 45 for the impact of the changes in accounting policies on the financial statements.

(a) The Group has recognized the following revenue-related contract assets and liabilities as at December 31, 2018 and 2017:

<i>(in millions of Korean won)</i>	<b>December 31, 2018</b>		<b>December 31, 2017</b>	
Due from customers for contract work <sup>1</sup>	₩	4,473,259	₩	-
Loss allowance		(100,907)		-
Total contract assets	₩	4,372,352	₩	-
Due to customers for contract work <sup>1</sup>	₩	1,656,758	₩	-
Advance received		214,532		-
Total contract liabilities	₩	1,871,290	₩	-

<sup>1</sup> As at December 31, 2017, the Group recorded due from/to customers for contract work amounting to ₩ 4,089,030 million and ₩ 2,354,607 million, respectively, in other separate accounts, not in contract assets and contract liabilities.

*(b) Significant changes in contract assets and liabilities*

According to changes in accounting policies, due from customers for contract work, advance payments, due to customers for contract work and advance received associated with revenue from contracts with customer were reclassified to contract assets and contract liabilities. During the year ended December 31, 2018, revenue recognition on construction contracts resulted in changes in contract assets and liabilities(Note 38).

*(c) Revenue recognized in relation to contract liabilities*

The following table shows how much of the revenue recognized in the current reporting period relates to contract liability balance at the beginning of the year.

<i>(in millions of Korean won)</i>	<b>2018</b>	
Revenue recognized that was included in the contract liability balance at the beginning of the year	₩	1,746,793
Revenue recognized from performance obligations satisfied in previous year		106,876

**Daewoo Shipbuilding & Marine Engineering Co., Ltd. and Subsidiaries**  
**Notes to the Consolidated Financial Statements**  
**December 31, 2018 and 2017**

*(d) Unsatisfied construction contracts*

The following table shows unsatisfied performance obligations resulting from fixed-price long-term construction contracts.

*(in millions of Korean won)*

**2018**

Aggregate amount of the transaction price allocated to construction contracts that are partially or fully unsatisfied as at December 31 <sup>1</sup>	₩	11,964,869
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<sup>1</sup> As permitted under the transitional provisions in Korean IFRS 1115, the transaction price allocated to unsatisfied performance obligations as at December 31, 2017, is not disclosed.

Management expects that 87.11% of the transaction price (₩ 10,422,886 million) allocated to the unsatisfied contracts as at December 31, 2018, will be recognized as revenue during the next reporting period. The remaining 12.89% (₩ 1,541,982 million) will be recognized after the following financial year. The amount disclosed above does not include variable consideration which is constrained.

**11. Inventories**

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

*(in millions of Korean won)*

	December 31, 2018			December 31, 2017		
	Acquisition cost	Valuation allowance	Carrying amount	Acquisition cost	Valuation allowance	Carrying amount
Work in process <sup>1</sup>	₩ 1,043,389	₩ (233,897)	₩ 809,492	₩ 488,680	₩ (215,515)	₩ 273,165
Raw materials	437,764	(41,138)	396,626	347,616	(56,398)	291,218
Supplies	22,860	-	22,860	20,295	(5,077)	15,218
Goods in transit	116,612	-	116,612	163,713	-	163,713
Land and others	45	-	45	45	-	45
	<u>₩ 1,620,670</u>	<u>₩ (275,035)</u>	<u>₩ 1,345,635</u>	<u>₩ 1,020,349</u>	<u>₩ (276,990)</u>	<u>₩ 743,359</u>

<sup>1</sup> During the year ended December 31, 2018, contracts of two ships under construction were cancelled due to financial condition of customer. The Group has reclassified the corresponding contract assets amounting to ₩ 495,745 million as work in process.

Inventories are stated in the consolidated statement of financial position at the lower of cost or net realizable value in case that the market value is lower than the acquisition cost. In subsequent periods, if the market value of an impaired inventory recovers, the Group reverses the valuation loss up to the initially booked amount.

**Daewoo Shipbuilding & Marine Engineering Co., Ltd. and Subsidiaries**  
**Notes to the Consolidated Financial Statements**  
**December 31, 2018 and 2017**

**12. Other Assets**

(a) Details of other assets as at December 31, 2018 and 2017, are as follows:

(in millions of Korean won)	December 31, 2018		December 31, 2017	
	Current	Non-current	Current	Non-current
Advance payments	₩ 369,085	₩ -	₩ 770,445	₩ -
Prepaid construction costs	645	-	2,243	-
Prepaid expenses	20,348	8,218	128,893	5,888
VAT receivables	1,294	-	1,846	-
Incremental costs of obtaining a contract <sup>1</sup>	31,142	-	-	-
Others	35,897	5,960	32,728	5,996
	<u>₩ 458,411</u>	<u>₩ 14,178</u>	<u>₩ 936,155</u>	<u>₩ 11,884</u>

<sup>1</sup> The Group separately classified incremental costs of obtaining a contract amounting to ₩ 103,048 million as prepaid expenses in 2017.

*(b) Assets recognized from incremental costs of obtaining a contract*

The Group has recognized an asset in relation to broker commission that would not have incurred if the contract has not been obtained.

(in millions of Korean won)	December 31, 2018	
Assets recognized from incremental costs of obtaining a contract as at December 31, 2018	₩	31,142
Amortization and impairment loss recognized as cost during the period		126,855

Above assets recognized from incremental costs of obtaining a contract are expensed in the same manner as recognition of the associated revenue. The Group recognized an impairment loss of ₩ 39,421 million for the assets as it is expected not to be recoverable during the year ended December 31, 2018.

**Daewoo Shipbuilding & Marine Engineering Co., Ltd. and Subsidiaries**  
**Notes to the Consolidated Financial Statements**  
**December 31, 2018 and 2017**

**13. Non-current Assets Held-for-sale**

As described in Note 43, the Group entered into an agreement with major creditor bank to stabilize the Group's financial position including disposal plan of the Group's property, plant and equipment as physical self-help plan. The Group classified the assets that are expected to meet the terms of sale within one year as a non-current assets held-for-sale.

<i>(in millions of Korean won)</i>	<b>December 31, 2018</b>		<b>December 31, 2017</b>	
Land	₩	-	₩	1,339
Buildings		-		847
Construction-in-progress		12,914		38,295
Disposed assets held-for-sale <sup>1</sup>		-		2,606
Total non-current assets held-for-sale		<u>12,914</u>		<u>43,087</u>
Liabilities among the disposal group held-for-sale <sup>1</sup>	₩	-	₩	18,953

<sup>1</sup> As at December 31, 2017, the assets and liabilities of subsidiary, whose disposal is highly probable, are classified as non-current assets held-for-sale and liabilities held-for-sale and the Group completed a disposal of the subsidiary during the year ended December 31, 2018.

The Group measured a non-current asset held-for-sale at the lower of its book amount and fair value less costs to sell. During the period, ₩ 76,613 million of impairment loss was recognized.

**14. Investments in Subsidiaries**

Details of the investments in subsidiaries of the Group as at December 31, 2018, and 2017, are as follows:

	Location	Closing month	Main business	Ownership of the Group (%)		Ownership of the non-controlling interests (%) <sup>1</sup>	
				December 31, 2018	December 31, 2017	December 31, 2018	December 31, 2017
DW Mangalia Heavy Industries S.A. <sup>1</sup>	Romania	December	Shipbuilding	-	51.00	-	49.00
DSME Shandong Co., Ltd	China	December	Manufacturing ship parts	100.00	100.00	-	-
DK Maritime S.A	Panama	December	Shipping	100.00	100.00	-	-
DSME Oman LLC <sup>2</sup>	Oman	December	Development of real estate and related business activities	-	70.00	-	30.00
DSME Far East LLC	Russia	December	Shipbuilding	100.00	100.00	-	-
PT.DSME ENR CEPU <sup>2</sup>	Indonesia	December	Investments in mining	-	85.00	-	15.00
DSME Information and Consulting	Geoje	December	IT Service	100.00	100.00	-	-
DSME Kazakhstan LLP	Kazakhstan	December	Repair of ships and technical support	100.00	-	-	-

<sup>1</sup> Excluded from the scope of consolidation due to disposal for the year ended December 31, 2018. At disposal, the Group accounted the agreements on disposal of shares and receivables as a

**Daewoo Shipbuilding & Marine Engineering Co., Ltd. and Subsidiaries**  
**Notes to the Consolidated Financial Statements**  
**December 31, 2018 and 2017**

single transaction and therefore, recognized losses on disposal of investments in subsidiary amounting to ₩ 488.4 billion.

<sup>2</sup> Disposal and liquidation were completed during the year ended December 31, 2018.

Summarized financial information and financial performance of subsidiaries as at and for the year ended December 31, 2018 are as follows:

(in millions of Korean won)	December 31, 2018			2018		
	Total assets	Total liabilities	Total equity	Sales	Profit (loss) for the year	Total comprehensive income (loss)
DSME Shandong Co., Ltd.	₩ 327,318	₩ 103,912	₩ 223,407	₩ 100,772	₩ (6,804)	₩ (7,904)
DK Maritime S.A	4,425	131,765	(127,340)	-	17	(5,302)
DSME Far East LLC	1,373	584	790	-	(103)	(271)
DSME Information and Consulting	11,045	6,159	4,886	45,095	2,980	2,980
DSME Kazakhstan LLP	6,246	154	6,092	4,771	2,907	2,001

Meanwhile, above summarized financial information and financial performance are before inter-company elimination.

## 15. Investments in Associates and Joint Ventures

15.1 Details of investments in associates and joint ventures as at December 31, 2018 and 2017, are as follows:

(in millions of Korean won)			December 31, 2018		December 31, 2017	
	Location	Main business	Ownership interest (%)	Book amount	Ownership interest (%)	Book amount
<b>Associates</b>						
Wing Ship Technology Corp.	Daejeon	Research and Development on other engineering	23.20	₩ -	23.20	₩ -
TPI Megaline Co., Ltd. <sup>1</sup>	Seoul	Shipping	19.00	4,454	19.00	3,580
PT. PJUC <sup>2</sup>	Indonesia	Development, sales and investment of natural resources	-	-	45.00	-
DAEHAN SHIPBUILDING CO., LTD	Haenam	Ship building	23.35	-	23.35	-
Welliv Private Investment Joint Company <sup>3</sup>	Geoje	Holding Company	34.39	10,347	34.39	12,376
Shinhan Heavy Industries Co., Ltd. <sup>4</sup>	Ulsan	Manufacturing ship parts	89.22	-	89.22	-
Samwoo Heavy Industry Co., Ltd. <sup>4</sup>	Gwangyang	Manufacturing ship parts	100.00	-	100.00	-
<b>Joint ventures</b>						
SBM Shipyard Ltd.	Angola	Holding Company	33.33	-	33.33	-
				₩ 14,801		₩ 15,956

**Daewoo Shipbuilding & Marine Engineering Co., Ltd. and Subsidiaries**  
**Notes to the Consolidated Financial Statements**  
**December 31, 2018 and 2017**

<sup>1</sup> The Group has classified investment as an associate, since the Group has rights to participate in the decision-making body of the investee company.

<sup>2</sup> As PT.DSME ENR CEPU, the subsidiary, was disposed during the period, PT.PJUC, the associate of PT.DSME ENR CEPU, is also excluded from associates.

<sup>3</sup> The Group sold 1,200,000 of its ordinary shares (100%) to Welliv Holdings, and some of the proceeds were received as a 34.39 % stake in the Welliv Private Investment Joint Company, an investor of Welliv Holdings. As a senior partner of the invested company, the Group may receive a distribution equivalent to 2% of the contribution paid annually. Out of cumulative distribution of the limited partnership, the Group has a priority to receive the sum of the contribution paid and the amount equivalent to internal rate of return of 6% per annum when the remaining assets are distributed.

<sup>4</sup> The Group has reclassified investment in subsidiaries as investment in associates as the Group lost its control over these subsidiaries, due to the commencement of major creditor bank management procedure during the prior period.

15.2 Changes in the investments in associates and joint ventures for the years ended December 31, 2018 and 2017, are as follows:

(in millions of Korean won)

	2018						
	Beginning balance	Acquisition (disposal)	Share of profit (loss) of associates and joint ventures	Impairment loss	Dividends	Other changes <sup>1</sup>	Ending balance
<b>Associates</b>							
TPI Megaline Co., Ltd.	₩ 3,580	₩ -	₩ 983	₩ -	₩ (109)	₩ -	₩ 4,454
PT. PJUC	-	-	(3,684)	-	-	3,684	-
Welliv Private Investment Joint Company	12,376	-	(1,834)	-	(195)	-	10,347
	₩ 15,956	₩ -	₩ (4,536)	₩ -	₩ (304)	₩ 3,684	₩ 14,801

(in millions of Korean won)

	2017						
	Beginning balance	Acquisition (disposal)	Share of profit (loss) of associates and joint ventures	Impairment loss	Dividends	Other changes <sup>1</sup>	Ending balance
<b>Associates</b>							
Korea Marine Finance Corp.	₩ 3,152	₩ (3,152)	₩ -	₩ -	₩ -	₩ -	₩ -
TPI Megaline Co., Ltd.	6,178	-	(2,401)	-	(197)	-	3,580
PT.PJUC <sup>2</sup>	9,030	-	3,677	(10,365)	(230)	(2,113)	-
DAEHAN SHIPBUILDING CO., LTD	-	-	(1,406)	-	-	1,406	-
Welliv Private Investment Joint Company	-	9,750	2,626	-	-	-	12,376
	₩ 18,359	₩ 6,598	₩ 2,496	₩ (10,365)	₩ (426)	₩ (707)	₩ 15,956

<sup>1</sup> Other changes consist of impairment loss and exchange rate change.

**Daewoo Shipbuilding & Marine Engineering Co., Ltd. and Subsidiaries**  
**Notes to the Consolidated Financial Statements**  
**December 31, 2018 and 2017**

**16. Property, Plant and Equipment**

16.1 Details of property, plant and equipment as at December 31, 2018 and 2017, are as follows:

<i>(in millions of Korean won)</i>	<b>December 31, 2018</b>					
	<b>Cost</b>	<b>Revaluation surplus</b>	<b>Government grants</b>	<b>Accumulated depreciation</b>	<b>Accumulated impairment losses</b>	<b>Book amount</b>
Land	₩ 1,485,596	₩ 408,751	₩ -	₩ -	₩ (57,092)	₩ 1,837,254
Buildings	1,114,539	-	(5,365)	(415,975)	(80,498)	612,701
Structures	1,249,706	-	-	(447,858)	(70,548)	731,300
Machinery	1,153,499	-	(95)	(700,949)	(155,032)	297,423
Vehicle	183,789	-	-	(138,076)	(30,970)	14,743
Ships and aircraft	207,389	-	-	(111,577)	(14,012)	81,800
Finance lease ships and aircraft	39,698	-	-	(15,879)	-	23,819
Tools	357,922	-	-	(237,905)	(102,403)	17,614
Supplies	237,787	-	(60)	(164,512)	(46,822)	26,393
Construction-in- progress	191,309	-	-	-	(11,504)	179,805
	<u>₩ 6,221,234</u>	<u>₩ 408,751</u>	<u>₩ (5,520)</u>	<u>₩ (2,232,731)</u>	<u>₩ (568,881)</u>	<u>₩ 3,822,852</u>

<i>(in millions of Korean won)</i>	<b>December 31, 2017</b>					
	<b>Cost</b>	<b>Revaluation surplus</b>	<b>Government grants</b>	<b>Accumulated depreciation</b>	<b>Accumulated impairment losses</b>	<b>Book amount</b>
Land	₩ 1,492,696	₩ 461,985	₩ -	₩ -	₩ (95,078)	₩ 1,859,603
Buildings	1,282,356	-	(5,506)	(461,594)	(163,319)	651,937
Structures	1,322,389	-	-	(434,647)	(80,186)	807,556
Machinery	1,182,654	-	(107)	(725,683)	(160,322)	296,542
Vehicle	238,202	-	-	(161,464)	(38,361)	38,377
Ships and aircraft	247,802	-	-	(106,883)	(14,012)	126,907
Tools	356,472	-	(1)	(241,515)	(102,690)	12,266
Supplies	230,355	-	(89)	(166,362)	(47,152)	16,752
Construction-in- progress	209,910	-	-	-	(16,422)	193,488
	<u>₩ 6,562,836</u>	<u>₩ 461,985</u>	<u>₩ (5,703)</u>	<u>₩ (2,298,148)</u>	<u>₩ (717,542)</u>	<u>₩ 4,003,428</u>

**Daewoo Shipbuilding & Marine Engineering Co., Ltd. and Subsidiaries**  
**Notes to the Consolidated Financial Statements**  
**December 31, 2018 and 2017**

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

(in millions of Korean won)	2018				
	Land	Buildings	Structure	Machinery	Vehicle
<b>At January 1</b>	₩ 1,859,603	₩ 651,937	₩ 807,556	₩ 296,542	₩ 38,377
Acquisitions	2	390	120	53,163	10,441
Disposals	-	-	-	(147)	(62)
Depreciation	-	(29,546)	(36,729)	(33,026)	(3,092)
Others <sup>1,2</sup>	(22,351)	(10,081)	(39,647)	(19,108)	(30,921)
<b>At December 31</b>	<u>₩ 1,837,254</u>	<u>₩ 612,700</u>	<u>₩ 731,300</u>	<u>₩ 297,424</u>	<u>₩ 14,743</u>

(in millions of Korean won)	2018					
	Ships and aircraft	Finance lease ships and aircraft	Tool	Supplies	Construction -in-progress	Total
<b>At January 1</b>	₩ 126,907	₩ -	₩ 12,266	₩ 16,752	₩ 193,488	₩ 4,003,428
Acquisitions	100	-	8,620	14,301	63,870	151,007
Disposals	-	-	(164)	(16)	-	(389)
Depreciation	(6,451)	(15,879)	(4,384)	(4,845)	-	(133,952)
Others <sup>1,2</sup>	(38,756)	39,698	1,276	201	(77,553)	(197,242)
<b>At December 31</b>	<u>₩ 81,800</u>	<u>₩ 23,819</u>	<u>₩ 17,614</u>	<u>₩ 26,393</u>	<u>₩ 179,805</u>	<u>₩ 3,822,852</u>

(in millions of Korean won)	2017				
	Land	Buildings	Structure	Machinery	Vehicle
<b>At January 1</b>	₩ 2,216,532	₩ 845,863	₩ 901,441	₩ 502,916	₩ 71,059
Acquisitions	15,491	20	1,181	10,602	210
Disposals	(3,769)	(177)	(87)	(736)	(135)
Depreciation	-	(31,595)	(38,874)	(42,763)	(7,495)
Others <sup>2</sup>	(368,651)	(162,174)	(56,105)	(173,477)	(25,262)
<b>At December 31</b>	<u>₩ 1,859,603</u>	<u>₩ 651,937</u>	<u>₩ 807,556</u>	<u>₩ 296,542</u>	<u>₩ 38,377</u>

(in millions of Korean won)	2017				
	Finance lease ships and aircraft	Tool	Supplies	Construction -in-progress	Total
<b>At January 1</b>	₩ 104,558	₩ 112,687	₩ 54,238	₩ 388,584	₩ 5,197,878
Acquisitions	4,366	14,313	17,221	45,427	108,831
Disposals	-	(964)	(73)	(17,734)	(23,675)
Depreciation	(6,761)	(9,625)	(11,862)	-	(148,975)
Others <sup>2</sup>	24,744	(104,145)	(42,772)	(222,789)	(1,130,631)
<b>At December 31</b>	<u>₩ 126,907</u>	<u>₩ 12,266</u>	<u>₩ 16,752</u>	<u>₩ 193,488</u>	<u>₩ 4,003,428</u>



**Daewoo Shipbuilding & Marine Engineering Co., Ltd. and Subsidiaries**  
**Notes to the Consolidated Financial Statements**  
**December 31, 2018 and 2017**

<sup>1</sup> As a result of land revaluation, the Group recognized other comprehensive loss of ₩ 13,852 million and loss on land revaluation of ₩ 2,292 million within equity and other expenses, respectively.

<sup>2</sup> Others include changes arising from revaluation, transfer of construction-in-progress to property, plant and equipment, reversal of impairment loss on property, plant and equipment, and other transfers.

16.3 Line items including depreciation (including depreciation on investment properties) in the statements of profit or loss for the years ended December 31, 2018 and 2017, are as follows:

<i>(in millions of Korean won)</i>	<b>2018</b>		<b>2017</b>	
Cost of sales	₩	130,885	₩	143,907
Selling and administrative expenses		3,186		5,184
	₩	134,071	₩	149,091

16.4 As described in Note 42, the Group measured the amount of impairment loss of the cash generating units that had indication of an impairment due to decrease in the sales volume and deterioration in market condition and the assets planned to be disposed through the business normalization plan. After impairment assessment, the Group recognized total ₩ 627,265 million of impairment loss on property, plant and equipment, intangible assets and investment properties (including decrease in revaluation surplus of ₩ 86,305 million). The estimated recoverable amount from the impairment assessment is the net fair value of individual asset, which is the estimated value of the sale or potential appraisal with the potential buyer.

16.5 Property, plant and equipment measured at fair value

Land measured at fair value is included in Level 3.

(a) The Group engages external, independent and qualified valuers to determine the fair value of the land owned by the Group. The accounting team reviews whether the assumptions used in the independent valuation report and changes in value are reasonable. The external valuers applied a publicly assessed land price method, which calculates the value of land based on the official price of land that is deemed to have a similar valuation factors or the value of use, adjusted by fixed date of appraisal, local factors, individual factors and others. And, the Group reviewed the reasonableness of appraisal results using the sales comparison approach, of which determines the value of land based on the sales cases for the land and the nearby areas with similar value of land.

**Daewoo Shipbuilding & Marine Engineering Co., Ltd. and Subsidiaries**  
**Notes to the Consolidated Financial Statements**  
**December 31, 2018 and 2017**

*(b) Valuation techniques and the inputs*

Valuation techniques and inputs used in the recurring fair value measurements categorized within Level 3 of the fair value hierarchy as at December 31, 2018, are as follows:

	Level	Valuation technique(s)	Unobservable inputs	Range of unobservable inputs	Correlation between unobservable inputs and fair value
Land	3	Publicly assessed land price method	Fixed date of appraisal	0.94015 ~ 1.034195	When land price change rate rises (falls), fair value increases (decreases)
			Local factors	1	When the regional factor increases (decreases), fair value increases (decreases)
			Individual factors	0.112 ~ 4.180	When the correction value such as the ground condition increases (decreases), fair value increases (decreases)
			Other factors	1.13 ~ 8.33	The correction for land price level etc. increases (decrease), fair value increases (decreases)

16.6 Contractual commitments for the acquisition of property, plant and equipment

According to the agreement entered with Seoul National University in 2015, the Group constructs tank facilities for testing purpose in Siheung Campus, and transfers its ownership in 25 years. Details of contractual commitments for the acquisition of property, plant and equipment as at December 31, 2018 and 2017, are as follows:

<i>(in millions of Korean won)</i>		2018		2017
Property, plant and equipment	₩	40,719	₩	82,068

16.7 Finance lease

The Group entered into a non-cancellable long-term transportation contract with TPI Megaline Co., an associate, whose lease term is 10 years.

Finance lease assets related to the transaction as at December 31, 2018, are as follows:

<i>(in millions of Korean won)</i>		December 31, 2018
Cost- capitalized finance leases	₩	39,698
Accumulated depreciation		(15,879)
Net book amount	₩	23,819

Lease payments for the year ended December 31, 2018, are ₩ 17,640 million, including ₩ 2,086 of interest expenses.

**Daewoo Shipbuilding & Marine Engineering Co., Ltd. and Subsidiaries**  
**Notes to the Consolidated Financial Statements**  
**December 31, 2018 and 2017**

The total of future minimum lease payments to the lessor at the end of the reporting period are as follows:

<i>(in millions of Korean won)</i>	<b>2018</b>		<b>2017</b>	
<b>Total minimum lease payments</b>				
Less than 1 year	₩	17,640	₩	17,640
Between 1 year and 3 years		7,693		25,333
		<u>25,333</u>		<u>42,973</u>
<b>Unearned finance income</b>		<u>(1,188)</u>		<u>(3,275)</u>
<b>Net minimum lease payments</b>				
Less than 1 year		16,577		15,554
Between 1 year and 3 years		7,568		24,145
	₩	<u>24,145</u>	₩	<u>39,698</u>

**16.8 Operating lease**

The Group leases buildings, machinery, ships and aircraft and vehicle under operating leases.

For the year ended December 31, 2018, minimum lease payments in relation to operating leases are paid as follows:

<i>(in millions of Korean won)</i>	<b>2018</b>	
Buildings <sup>1</sup>	₩	16,523
Machinery		9,656
Ships and aircraft		947
Vehicle		2,109
	₩	<u>29,235</u>

<sup>1</sup> Includes the lease agreement for Seoul office which can be renewed at the market price at the end of the lease term. Contract termination is prohibited for 33 months period from October 28, 2017. However, either party can terminate the agreement with a three-month written notice. There is no purchase option when the agreement is terminated.

The total future minimum lease payments are as follows:

<i>(in millions of Korean won)</i>	<b>2018</b>	
Less than 1 year	₩	33,126
Between 1 year and 5 years		23,184
	₩	<u>56,310</u>

**Daewoo Shipbuilding & Marine Engineering Co., Ltd. and Subsidiaries**  
**Notes to the Consolidated Financial Statements**  
**December 31, 2018 and 2017**

**17. Pledged Assets and others**

17.1 As at December 31, 2018, the Group's assets except deposits(Note 8) that are pledged as collaterals for borrowings and others are summarized as follows:

*(in millions of Korean won, in thousands of foreign currency)*

Assets	Book amount	Pledged amount	Guarantee for	Borrowings amount	Lender
Property, plant and equipment, and Investment properties	KRW 3,341,846	KRW 3,735,200	Borrowings in local currency	KRW 825,559	KDB, KEXIM
		USD 880,000	Borrowings in foreign currency	USD 1,036,685	
	CNY 1,094,443	CNY 267,240	Borrowings	CNY 222,700	1 <sup>st</sup> :KDB Shanghai branch 2 <sup>nd</sup> :KDB Tokyo branch, Singapore branch
		USD 23,328		USD 19,440	
Financial assets at fair value through profit or loss	KRW 15,397	KRW 17,818	Performance guarantee	KRW -	KDIA, Machinery Financial Cooperative
	CNY 1,094,443	CNY 267,240		CNY 222,700	
	-	USD 903,328		USD 1,056,125	
	KRW 3,357,243	KRW 3,753,018		KRW 825,559	

17.2 Significant guarantees provided to those other than the Group's related parties as at December 31, 2018, are as follows:

*(in thousands of USD)*

Provided for	Guarantee Amount	Lender
Korea Line Corp.	USD 56,244	KDB and others

17.3 The Group received performance guarantees of advances received refund guarantee and others regarding exporting ships. Details of guarantees provided to the Group are as follows:

*(in thousands of foreign currency)*

Provided by	Guarantee Limit		Actual warranty balance	
	Currency	Amount	Currency	Amount
KDB	USD	4,703,250	USD	1,888,964
KEXIM	USD	4,044,521	USD	3,138,734
			EUR	9,348
Other financial institutions	USD	395,807	USD	384,292

In addition to the above, the Group is provided with performance guarantee of ₩2,148,599 million from Korea Defense Industry Association (KDIA) and others. Meanwhile, the Group provides a mortgage of transfer on i) export object under construction, ii) raw materials for construction and iii) export payment, relating to performance guarantee provided, borrowing on shipbuilding financing and the new funding support limit provided by the Korea Development Bank and the Korea Export-Import Bank(Note 43).

**Daewoo Shipbuilding & Marine Engineering Co., Ltd. and Subsidiaries**  
**Notes to the Consolidated Financial Statements**  
**December 31, 2018 and 2017**

**18. Investment Properties**

18.1 Investment properties as at December 31, 2018 and 2017, are as follows:

*(in millions of Korean won)*

	<b>December 31, 2018</b>		
	<b>Land</b>	<b>Buildings</b>	<b>Total</b>
Acquisition cost	₩ 4,661	₩ 8,473	₩ 13,134
Accumulated depreciation	-	(3,986)	(3,986)
Accumulated impairment loss	-	(1,353)	(1,353)
Book amount	<u>₩ 4,661</u>	<u>₩ 3,134</u>	<u>₩ 7,795</u>

*(in millions of Korean won)*

	<b>December 31, 2017</b>		
	<b>Land</b>	<b>Buildings</b>	<b>Total</b>
Acquisition cost	₩ 4,661	₩ 8,473	₩ 13,134
Accumulated depreciation	-	(3,867)	(3,867)
Accumulated impairment loss	-	(1,354)	(1,354)
Book amount	<u>₩ 4,661</u>	<u>₩ 3,252</u>	<u>₩ 7,913</u>

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

*(in millions of Korean won)*

	<b>2018</b>		
	<b>Land</b>	<b>Buildings</b>	<b>Total</b>
Beginning balance	₩ 4,661	₩ 3,252	₩ 7,913
Depreciation	-	(118)	(118)
Ending balance	<u>₩ 4,661</u>	<u>₩ 3,134</u>	<u>₩ 7,795</u>

*(in millions of Korean won)*

	<b>2017</b>		
	<b>Land</b>	<b>Buildings</b>	<b>Total</b>
Beginning balance	₩ 4,661	₩ 5,509	₩ 10,170
Depreciation	-	(119)	(119)
Impairment loss	-	(1,353)	(1,353)
Others	-	(785)	(785)
Ending balance	<u>₩ 4,661</u>	<u>₩ 3,252</u>	<u>₩ 7,913</u>

18.3 Income generated from the investment properties for the years ended December 31, 2018 and 2017, are as follows:

*(in millions of Korean won)*

	<b>2018</b>	<b>2017</b>
Rental income	₩ 163	₩ 162

**Daewoo Shipbuilding & Marine Engineering Co., Ltd. and Subsidiaries**  
**Notes to the Consolidated Financial Statements**  
**December 31, 2018 and 2017**

18.4 Fair values of the investment properties as at December 31, 2018 and 2017, are as follows:

(in millions of Korean won)	December 31, 2018				December 31, 2017			
	Book amount		Fair value		Book amount		Fair value	
Land	₩	4,661	₩	6,992	₩	4,661	₩	4,661
Buildings		3,134		3,689		3,252		3,252
	₩	7,795	₩	10,681	₩	7,913	₩	7,913

The fair values of the investment properties were measured at the value of the collateral.

## 19. Intangible Assets

19.1 Intangible assets as at December 31, 2018 and 2017, consist of:

(in millions of Korean won)	December 31, 2018		December 31, 2017	
Cost	₩	68,968	₩	70,798
Accumulated amortization and impairment loss		(29,194)		(33,484)
Book amount	₩	39,774	₩	37,314

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

(in millions of Korean won)	2018											
	Intellectual property rights		Development costs		Computer software		Facility usage rights		Others		Total	
Beginning balance	₩	1,178	₩	11,389	₩	448	₩	23,268	₩	1,031	₩	37,314
Additions(disposal)		2,180		2,213		5		-		(11)		4,387
Amortization		(402)		(185)		(275)		(623)		-		(1,485)
Other changes <sup>1</sup>		-		-		(86)		(113)		(243)		(442)
Ending balance	₩	2,956	₩	13,417	₩	92	₩	22,532	₩	777	₩	39,774

(in millions of Korean won)	2017													
	Goodwill	Intellectual property rights		Development costs		Computer software		Facility usage rights		Others		Total		
Beginning balance	₩	8,727	₩	9,784	₩	25,962	₩	1,156	₩	25,714	₩	1,962	₩	73,305
Additions(disposal)		-		2,230		5,171		67		-		(499)		6,969
Amortization		-		(591)		(1,281)		(594)		(677)		(172)		(3,315)
Other changes <sup>1,2</sup>		(8,727)		(10,244)		(18,464)		(181)		(1,770)		(259)		(39,645)
Ending balance	₩	-	₩	1,179	₩	11,388	₩	448	₩	23,267	₩	1,032	₩	37,314

<sup>1</sup> Other changes include the changes in scope of consolidation arising from disposal of certain subsidiaries and others.

<sup>2</sup> During the last period, the Group recognized ₩ 29,415 million of impairment loss by impairment test(Note 16).

**Daewoo Shipbuilding & Marine Engineering Co., Ltd. and Subsidiaries**  
**Notes to the Consolidated Financial Statements**  
**December 31, 2018 and 2017**

**20. Trade and Other Payables**

Trade and other payables as at December 31, 2018 and 2017, are as follows:

(in millions of Korean won)	December 31, 2018		December 31, 2017	
	Current	Non-current	Current	Non-current
Trade payables <sup>1</sup>	₩ 668,508	₩ -	₩ 735,589	₩ -
Accounts payables	222,439	66,224	244,239	121,650
Accrued expenses	174,062	-	79,939	14,495
Deposits received	17,729	-	13,217	-
	<u>₩ 1,082,738</u>	<u>₩ 66,224</u>	<u>₩ 1,072,984</u>	<u>₩ 136,145</u>

<sup>1</sup> Trade payables are unsecured and are usually paid within 45~90 days of recognition. The carrying amounts of trade and other payables, and accrued expenses are considered to be the same as their fair values, due to their short-term nature.

**21. Debentures**

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

Type	Maturity date	Annual interest rate (%) December 31, 2018	December 31, 2018	December 31, 2017
4-2 <sup>nd</sup> non-guarantee bonds	April 21, 2023	1.00	₩ 149,102	₩ 149,142
5-2 <sup>nd</sup> non-guarantee bonds	April 21, 2023	1.00	98,635	98,635
6-1 <sup>st</sup> non-guarantee bonds	April 21, 2023	1.00	213,113	213,274
6-2 <sup>nd</sup> non-guarantee bonds	April 21, 2023	1.00	29,316	29,321
7 <sup>th</sup> non-guarantee bonds	April 21, 2023	1.00	148,768	148,768
Commercial papers	April 21, 2023	1.00	101,894	101,894
			<u>740,828</u>	<u>741,034</u>
	Less: discount on debentures		(165,267)	(210,373)
	Less: current portion		-	-
			<u>₩ 575,561</u>	<u>₩ 530,661</u>

As described in Note 43, in April 2017, the Group and the bond holders agreed on debt restructuring of issued corporate bonds and CPs through bond holder's meeting and amendment of CP contracts. The debt restructuring of corporate bonds includes debt-to-equity swap of 50% or more of issued bonds, extension of maturity of remaining bonds, and decrease in interest rate of remaining bonds. Regarding the CPs, debt restructuring includes debt-to-equity swap of 50% of CP's held by individuals, extension of maturity of remaining CPs, and split issuance. In accordance with this debt restructuring plan debt-to-equity swap of corporate bonds and CP was executed on August 12, 2017, December 22, 2017 and March 15, 2018.

**Daewoo Shipbuilding & Marine Engineering Co., Ltd. and Subsidiaries**  
**Notes to the Consolidated Financial Statements**  
**December 31, 2018 and 2017**

**22. Borrowings**

**22.1 Short-term borrowings**

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

*(in millions of Korean won)*

Denominated currency	Creditor	Annual interest rate (%)				
				December 31, 2018		December 31, 2017
Short-term borrowings in Korean won	Kookmin Bank	-	₩	4,843	₩	4,302
	KDB	3.00		532,659		827,659
	KEXIM	3.00		292,900		587,900
				830,402		1,419,861
Short-term borrowings in foreign currencies	KDB and others	6ML+0.3 and others		450,993		403,147
		PBOC*115% and others		36,247		42,324
	KEXIM	3ML+2.65		133,242		127,678
	Shinhan Bank	-		-		53,493
	KDB Singapore/Tokyo	3ML+3.5		21,716		-
				642,198		626,642
			₩	1,472,600	₩	2,046,503



**Daewoo Shipbuilding & Marine Engineering Co., Ltd. and Subsidiaries**  
**Notes to the Consolidated Financial Statements**  
**December 31, 2018 and 2017**

**22.2 Long-term Borrowings**

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

*(in millions of Korean won)*

Denominated currency	Creditor	Annual interest rate (%)	December 31, 2018	December 31, 2017
Long-term borrowings in Korean won	Korea Housing Guarantee	-	₩ 109	₩ 112
	Kookmin Bank	1.00	20,000	20,000
	KEB Hana Bank	1.00	91,912	91,912
	Woori Bank	1.00	19,972	19,972
	Shinhan Bank	1.00	16,000	16,000
			<u>147,993</u>	<u>147,996</u>
Long-term borrowings in foreign currency	KDB	3ML+2.55 and others	816,213	797,796
	Korea National Oil Corp.	-	12,627	12,967
	KEXIM	6ML+3.05 and others	17,610	-
		3ML+2.65 and others	179,447	232,365
		1.00	12,604	-
	Woori Bank	1.00	5,402	-
	GNG Holdings INC	-	-	1,094
			<u>1,043,903</u>	<u>1,044,222</u>
			1,191,896	1,192,218
Less: Current portion			(197,061)	(460,882)
Less: discount on loans			(58,933)	(57,724)
			<u>₩ 935,902</u>	<u>₩ 2,046,503</u>

The Group's property, plant and equipment are pledged as collateral in relation to the above borrowings(Note 17).

**Daewoo Shipbuilding & Marine Engineering Co., Ltd. and Subsidiaries**  
**Notes to the Consolidated Financial Statements**  
**December 31, 2018 and 2017**

**23. Other Liabilities**

Other liabilities as at December 31, 2018 and 2017, are as follows:

(in millions of Korean won)	December 31, 2018		December 31, 2017	
	Current	Non-current	Current	Non-current
Advance received	₩ 2,989	₩ -	₩ 41,337	₩ -
Unearned income	-	-	279	-
Withholdings	123,739	-	66,150	-
Others	-	-	15	23
	<u>₩ 126,728</u>	<u>₩ -</u>	<u>₩ 107,781</u>	<u>₩ 23</u>

**24. Net Defined Benefit Liabilities and Other Long-Term Employee Benefit Liabilities**

24.1 Details of net defined benefit liabilities and other long-term employee benefit liabilities as at December 31, 2018 and 2017, are as follows:

(in millions of Korean won)	December 31, 2018		December 31, 2017	
Present value of defined benefit obligation	₩	419,793	₩	389,625
Fair value of plan assets		(278,877)		(253,030)
Net defined benefit liabilities		<u>140,916</u>		<u>136,595</u>
Other long-term employee benefit liabilities	₩	21,692	₩	23,946

24.2 Movements in the net defined benefit liabilities and other long-term employee benefit liabilities for the years ended December 31, 2018 and 2017, are as follows:

(in millions of Korean won)	2018			
	Present value of defined benefit obligations	Plan assets	Other long-term employee benefit obligation	Total
Beginning balance	₩ 389,625	₩ (253,031)	₩ 23,947	₩ 160,541
Current service cost	48,316	-	1,220	49,536
Interest cost (interest income)	<u>11,045</u>	<u>(7,168)</u>	<u>622</u>	<u>4,499</u>
	448,986	(260,199)	25,788	214,575
Remeasurements:				
Return on plan assets	-	3,855	-	3,855
Actuarial gains (losses) arising from changes in demographic assumptions	438	-	(773)	(335)
Actuarial gains arising from changes in financial assumptions	22,240	-	522	22,762
Actuarial gains (losses) arising from experience adjustments	<u>14,291</u>	<u>-</u>	<u>(202)</u>	<u>14,089</u>

**Daewoo Shipbuilding & Marine Engineering Co., Ltd. and Subsidiaries**  
**Notes to the Consolidated Financial Statements**  
**December 31, 2018 and 2017**

	36,969	3,855	(453)	40,371
Contributions	-	(54,900)	-	(54,900)
Benefits payments	(66,116)	32,367	(1,600)	(35,349)
Others <sup>1</sup>	(46)	-	(2,043)	(2,089)
Ending balance	₩ 419,793	₩ (278,877)	₩ 21,692	₩ 162,608

(in millions of  
Korean won)

	2017			
	Present value of defined benefit obligations	Plan assets	Other long-term employee benefit obligation	Total
Beginning balance	₩ 428,386	₩ (266,050)	₩ 29,057	₩ 191,393
Current service cost	55,315	-	1,184	56,499
Past service cost and gains or losses on settlements	(586)	-	391	(195)
Interest cost (interest income)	10,843	(6,486)	(989)	3,368
	493,958	(272,536)	29,643	251,065
Remeasurements:				
Return on plan assets	-	3,776	-	3,776
Actuarial gains (losses) arising from changes in demographic assumptions	9	-	(1,340)	(1,331)
Actuarial losses arising from change in financial assumptions	(10,141)	-	(507)	(10,648)
Actuarial gains (losses) arising from experience adjustments	4,326	-	(369)	3,957
	(5,806)	3,776	(2,216)	(4,246)
Contributions	-	(36,865)	-	(36,865)
Benefits payments	(72,004)	38,663	(2,697)	(36,038)
Others <sup>1</sup>	(26,523)	13,931	(783)	(13,375)
Ending balance	₩ 389,625	₩ (253,031)	₩ 23,947	₩ 160,541

<sup>1</sup> Others include changes in the scope of consolidation arising from disposal of certain subsidiaries and others.

**Daewoo Shipbuilding & Marine Engineering Co., Ltd. and Subsidiaries**  
**Notes to the Consolidated Financial Statements**  
**December 31, 2018 and 2017**

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

<i>(in percentage, %)</i>	<b>December 31, 2018</b>	<b>December 31, 2017</b>
Discount rate	2.4 %	2.8 %
Salary growth rate (including inflation rate)	2.0 %	1.9 ~ 3.3 %

24.4 Plan assets as at December 31, 2018 and 2017, consist of:

<i>(in millions of Korean won)</i>	<b>December 31, 2018</b>	<b>December 31, 2017</b>
Deposit and installment savings	₩ 159,099	₩ 203,419
Others <sup>1</sup>	119,778	49,612
	<u>₩ 278,877</u>	<u>₩ 253,031</u>

<sup>1</sup> Includes the contributions to the National Pension Fund.

24.5 While holding all other assumptions constant as at December 31, 2018 and 2017, and in the case where significant actuarial assumptions are within the reasonable and possible changes, the fluctuation of the defined benefit obligations is as follows:

<i>(in millions of Korean won)</i>	<b>2018</b>		<b>2017</b>	
	<b>Increase</b>	<b>Decrease</b>	<b>Increase</b>	<b>Decrease</b>
Changes in 100 basis point (bp) of discount rate	₩ (35,498)	₩ 41,847	₩ (32,949)	₩ 38,785
Changes in 1 % of expected salary growth rate	42,173	(36,379)	39,126	(33,845)

Since there is correlation among actuarial assumptions, changes of assumptions will not occur in isolation and above sensitivity analyses will not show the actual change of defined benefit obligations. Also, in the above sensitivity analyses, present value of defined benefit obligations is measured by using the projected unit credit method, which is applied to measure the amount of defined benefit obligations in the statement of financial position.

24.6 The weighted average duration of the defined benefit obligations is 9.76 years. The expected maturity analysis of undiscounted pension benefits as at December 31, 2018, is as follows:

<i>(in millions of Korean won)</i>	<b>Less than 1 year</b>	<b>Between 1-2 years</b>	<b>Between 2-5 years</b>	<b>Between 5-10 years</b>	<b>Over 10 years</b>	<b>Total</b>
Pension benefits	₩ 42,793	₩ 41,380	₩ 111,847	₩ 192,850	₩ 490,759	₩ 879,629

The Group reviews the funding level on an annual basis and has a policy to eliminate deficit in the fund. Expected contributions to post-employment benefit plans for the year ending December 31, 2019 are ₩ 39,900 million.

**Daewoo Shipbuilding & Marine Engineering Co., Ltd. and Subsidiaries**  
**Notes to the Consolidated Financial Statements**  
**December 31, 2018 and 2017**

**25. Provisions**

Changes in provisions for construction warranties and other provisions for the years ended December 31, 2018 and 2017, are as follows:

(in millions of Korean won)

	<b>2018</b>					
	<b>Current</b>		<b>Non-current</b>		<b>Total</b>	
	<b>Provision for construction losses</b>	<b>Other provisions</b>	<b>Provision for construction warranties</b>	<b>Other provisions</b>		
Beginning balance	₩ -	₩ -	₩ 156,769	₩ 537,053	₩ 693,822	
Effect of changes in accounting policy	457,857	-	-	-	457,691	
Adjusted amount	457,857	-	156,769	537,053	1,151,513	
Additional provisions (Reversal provisions)	77,870	23,179	170,560	(40,179)	231,430	
Used	-	-	(17,664)	70,038	52,374	
Others <sup>1</sup>	(166)	-	(2,851)	(13,538)	(16,389)	
Ending balance	₩ 535,561	₩ 23,179	₩ 306,814	₩ 553,374	₩ 1,418,928	

(in millions of Korean won)

	<b>2017</b>		
	<b>Non-current</b>		<b>Total</b>
	<b>Provision for construction warranties</b>	<b>Other provisions</b>	
Beginning balance	₩ 141,204	₩ 258,392	₩ 399,596
Additional provisions	46,991	390,643	437,634
Used	(16,509)	(72,109)	(88,618)
Others <sup>1</sup>	(14,917)	(39,873)	(54,790)
Ending balance	₩ 156,769	₩ 537,053	₩ 693,822

<sup>1</sup> Others include impairment losses in provisions and changes in the scope of consolidation arising from disposal of certain subsidiaries.

**26. Income Taxes Expense**

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

(in millions of Korean won)

	<b>2018</b>	<b>2017</b>
Income tax payable(receivable)	₩ (2,935)	₩ (11,017)
Changes in deferred income tax from temporary differences	50,590	551,507
Total amount of income tax effect	47,655	540,490
Income tax directly reflected to shareholders' equity	-	2,797
Income tax expense	₩ 47,655	₩ 543,287

**Daewoo Shipbuilding & Marine Engineering Co., Ltd. and Subsidiaries**  
**Notes to the Consolidated Financial Statements**  
**December 31, 2018 and 2017**

26.2 The tax on the Group's profit (loss) before tax differs from the theoretical amount that would arise using the weighted average tax rate applicable to the profits (losses) of the Group as follows:

<i>(in millions of Korean won)</i>	2018	2017
Profit before income tax	₩ 367,707	₩ 1,189,045
Tax calculated at applicable tax rates <sup>1</sup>	101,119	287,749
Adjustments:		
Tax effect of permanent differences	(11,938)	(13,846)
Unrecognized deferred tax assets <sup>2</sup>	(41,526)	269,384
Income tax expense	₩ 47,655	₩ 543,287
Effective tax rate	12.96%	44.78%

<sup>1</sup> The weighted average applicable tax rate on net income before income taxes is the applicable corporate tax rate (including inhabitant tax) applicable to taxable income in the Republic of Korea.

<sup>2</sup> The Group recognizes a deferred tax asset for all deductible temporary differences and unused tax losses when it is probable the taxable profit will be available against which the temporary difference can be utilized. However, certain deferred tax assets recognized in the previous year, due to uncertainty of future taxable profit from drop in international oil prices and the decrease in contracts, is recognized as income tax expense.

26.3 Changes in deferred tax assets and liabilities for the years ended December 31, 2018 and 2017, are as follows:

<i>(in millions of Korean won)</i>	2018			
	Beginning balance	Increase (decrease)	Changes in the scope of consolidation	Ending balance
<i>Temporary differences</i>				
Loss on revaluation of land	₩ 29	₩ 616	₩ -	₩ 645
Research and development reserves	(3,230)	3,230	-	-
Provision for construction warranties	42,327	42,047	-	84,374
Provision for construction loss	166,764	(19,485)	-	147,279
Gain (loss) on foreign currency translation	1,029	(408)	-	621
Gain (loss) on valuation of forward currency	25,480	(21,444)	-	4,036
Investments in subsidiaries and associates and others	260,774	(275,441)	-	(14,667)
Changes in the fair value of available-for-sale financial assets (Other components of equity)	(4,699)	6,913	-	2,214
Gain on revaluation of land	(256,862)	481	-	(256,381)
Provision for advance depreciation	(60,426)	92	-	(60,334)
Others	1,397,026	(754,217)	3,286	646,095
	1,568,212	(1,017,616)	3,286	646,095

**Daewoo Shipbuilding & Marine Engineering Co., Ltd. and Subsidiaries**  
**Notes to the Consolidated Financial Statements**  
**December 31, 2018 and 2017**

Tax losses	426,830	547,951	-	974,781
Tax refund due to accounting different from facts	363,330	1,200	-	364,530
	<u>2,358,372</u>	<u>(468,465)</u>	<u>3,286</u>	<u>1,893,193</u>
Recognized deferred tax assets (liabilities)	(49,652)	(34,735)	-	(84,387)
Unrecognized deferred tax assets (liabilities)	₩ 2,408,024	₩ (433,730)	₩ 3,286	₩ 1,977,580

(in millions of Korean won)

	2017			
	Beginning balance	Increase (decrease)	Changes in the scope of consolidation	Ending balance
<i>Temporary differences</i>				
Loss on revaluation of land	₩ 5,290	₩ (206)	₩ (5,055)	₩ 29
Research and development reserves	(16,940)	13,710	-	(3,230)
Provision for construction warranties	33,305	11,232	(2,210)	42,327
Provision for construction loss	107,482	60,391	(1,109)	166,764
Gain (loss) on foreign currency translation	929	112	(12)	1,029
Gain (loss) on valuation of forward currency	2,332	23,148	-	25,480
Investments in subsidiaries and associates and others	232,371	28,403	-	260,774
Changes in the fair value of available-for-sale financial assets (Other components of equity)	(3,832)	(1,758)	891	(4,699)
Gain on revaluation of land	(258,481)	(29,423)	31,042	(256,862)
Provision for advance depreciation	(53,313)	(7,113)	-	(60,426)
Other	<u>1,103,662</u>	<u>326,804</u>	<u>(33,440)</u>	<u>1,397,026</u>
	1,152,805	425,300	(9,893)	1,568,212
Tax losses	609,626	(167,402)	(15,394)	426,830
Tax refund due to accounting different from facts	393,391	(30,061)	-	363,330
	<u>2,155,822</u>	<u>227,837</u>	<u>(25,287)</u>	<u>2,358,372</u>
Recognized deferred tax assets (liabilities)	514,588	(538,953)	(25,287)	(49,652)
Unrecognized deferred tax assets (liabilities)	₩ 1,641,234	₩ 766,790	₩ -	₩ 2,408,024

**Daewoo Shipbuilding & Marine Engineering Co., Ltd. and Subsidiaries**  
**Notes to the Consolidated Financial Statements**  
**December 31, 2018 and 2017**

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

<i>(in millions of Korean won)</i>	<b>December 31, 2018</b>		<b>December 31, 2017</b>	
Deferred tax assets				
Deferred tax asset to be recovered within 12 months	₩	-	₩	32,093
Deferred tax asset to be recovered after more than 12 months		355,321		362,589
		<u>355,321</u>		<u>394,682</u>
Deferred tax liabilities				
Deferred tax liability to be recovered within 12 months		-		-
Deferred tax liability to be recovered after more than 12 months		(439,708)		(444,334)
		<u>(439,708)</u>		<u>(444,334)</u>
Deferred tax assets (liabilities), net	₩	<u>(84,387)</u>	₩	<u>(49,652)</u>

26.5 The Group recognizes a deferred tax asset for all deductible temporary differences and unused tax losses when it is probable the taxable profit will be available against which the temporary difference can be utilized. However, certain deferred tax assets recognized in the previous year, due to uncertainty of future taxable profit from drop in international oil prices and the decrease in contracts, is recognized as income tax expense. Details of unrecognized deferred tax assets as at December 31, 2018 and 2017, are as follows:

<i>(in millions of Korean won)</i>	<b>December 31, 2018</b>		<b>December 31, 2017</b>	
Unused losses	₩	3,544,658	₩	1,552,107
Deductible taxable difference		3,646,542		7,204,344

The maturity of unused losses is as follows:

<i>(in millions of Korean won)</i>	<b>December 31, 2018</b>		<b>December 31, 2017</b>	
Between 5-10 years	₩	3,544,658	₩	1,552,107



**Daewoo Shipbuilding & Marine Engineering Co., Ltd. and Subsidiaries**  
**Notes to the Consolidated Financial Statements**  
**December 31, 2018 and 2017**

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

*(in millions of Korean won)*

	<b>2018</b>		
	<b>Before tax</b>	<b>Tax effect</b>	<b>After tax</b>
Loss on valuation of financial assets at fair value through other comprehensive income	₩ (8,052)	₩ -	₩ (8,052)
Revaluation surplus of property, plant and equipment	447,862	(123,162)	324,700
Remeasurements	(5,797)	-	(5,797)
	<u>₩ 434,013</u>	<u>₩ (123,162)</u>	<u>₩ 310,851</u>

*(in millions of Korean won)*

	<b>2017</b>		
	<b>Before tax</b>	<b>Tax effect</b>	<b>After tax</b>
Changes in the fair value of available-for-sale financial assets	₩ 17,086	₩ (4,699)	₩ 12,387
Revaluation surplus of property, plant and equipment	461,985	(127,046)	334,939
Remeasurements	35,027	(9,632)	25,395
	<u>₩ 514,098</u>	<u>₩ (141,377)</u>	<u>₩ 372,721</u>

**Daewoo Shipbuilding & Marine Engineering Co., Ltd. and Subsidiaries**  
**Notes to the Consolidated Financial Statements**  
**December 31, 2018 and 2017**

**27. Derivative Instruments**

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

(in millions of Korean won)	December 31, 2018						
	Sales	Other non-operating income (expense)	Firm commitment assets <sup>1</sup>	Firm commitment liabilities <sup>1</sup>	Contract liabilities	Currency forward assets	Currency forward liabilities
For fair value hedging <sup>1</sup>	₩ (37,241)	₩ (10,773)	₩ 22,749	₩ 12,055	₩ 248	₩ 20,360	₩ 45,778
For trading <sup>2</sup>	-	(18,001)	-	-	-	382	89
	₩ (37,241)	₩ (28,774)	₩ 22,749	₩ 12,055	₩ 248	₩ 20,742	₩ 45,867

(in millions of Korean won)	December 31, 2017						
	Sales	Other non-operating income (expense)	Firm commitment assets <sup>1</sup>	Firm commitment liabilities <sup>1</sup>	Due to customer under construction contract	Currency forward assets	Currency forward liabilities
For fair value hedging <sup>1</sup>	₩ 3,356	₩ (4,296)	₩ 5,907	₩ 93,527	₩ (2,385)	₩ 137,775	₩ 10,286
For trading <sup>2</sup>	-	48,275	-	-	-	31,377	252
	₩ 3,356	₩ 43,979	₩ 5,907	₩ 93,527	₩ (2,385)	₩ 169,152	₩ 10,538

<sup>1</sup> The Group has entered into currency forward contracts (Korean won against USD) in order to hedge exchange rate fluctuation risk and applied fair value hedge accounting to the respective firm commitment as at December 31, 2018.

<sup>2</sup> The Group recognized currency forward assets and liabilities held for trading purpose as financial assets (liabilities) at fair value through profit or loss.

**Daewoo Shipbuilding & Marine Engineering Co., Ltd. and Subsidiaries**  
**Notes to the Consolidated Financial Statements**  
**December 31, 2018 and 2017**

**28. Share Capital**

On August 23, 2004, the Group retired 1,000,000 shares of treasury share acquired for ₩15,416 million upon the approval at the Board of Directors' meeting. Accordingly, the number of shares issued has been decreased. However, the amount of paid-up capital has not been reduced. As a result, the face value of the Group's issued shares and the ordinary share presented in the consolidated statement of financial position are not identical as at December 31, 2018 and December 31, 2017.

The Group's total number of authorized shares, issued shares and par value per share are 800,000,000, 107,205,752 (2017: 106,656,288) and ₩5,000, respectively, as at December 31, 2018.

Changes in number of shares and share capital for the years ended December 31, 2018 and 2017, are as follows:

<i>(in millions of Korean won, and in number of shares)</i>	<b>Details</b>	<b>Number of shares (in shares)</b>	<b>Share capital</b>
January 1, 2017	Beginning balance	65,576,960	₩ 332,885
June 29, 2017	Debt to equity swap	19,647,036	98,235
August 12, 2017	Debt to equity swap	19,804,813	99,024
December 21, 2017	Debt to equity swap	1,627,479	8,137
December 31, 2017	Ending balance	106,656,288	538,281
January 1, 2018	Beginning balance	106,656,288	538,281
March 14, 2018	Debt to equity swap	549,464	2,747
December 31, 2018	Ending balance	107,205,752	541,029

**29. Retained Earnings (Accumulated Deficit)**

Retained earnings (accumulated deficit) as at December 31, 2018 and 2017, consist of:

<i>(in millions of Korean won)</i>	<b>December 31, 2018</b>	<b>December 31, 2017</b>
Legal reserves <sup>1</sup>	₩ 91,246	₩ 91,246
Reserve for research and human resource development	20,000	70,000
Reserve for facility expansion	3,450,000	3,450,000
Reserve for dividend equalization	70,000	70,000
Accumulated deficit before disposition	(2,984,242)	(3,773,409)
	<u>₩ 647,004</u>	<u>₩ (92,163)</u>

<sup>1</sup> The Commercial Code of the Republic of Korea requires the Group to appropriate for each financial period, as a legal reserve, an amount equal to a minimum of 10% of cash dividends paid until such reserve equals 50% of its issued share capital. The reserve is not available for cash dividends payment, but may be transferred to share capital or used to reduce accumulated deficit.

**Daewoo Shipbuilding & Marine Engineering Co., Ltd. and Subsidiaries**  
**Notes to the Consolidated Financial Statements**  
**December 31, 2018 and 2017**

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**30. Other Contributed Capital and Components of Other Capital**

30.1 Other contributed capital as at December 31, 2018 and 2017, consists of:

<i>(in millions of Korean won)</i>	<b>December 31, 2018</b>	<b>December 31, 2017</b>
Other contributed capital		
Share premium	₩ 10,437	₩ 54,617
Others <sup>1</sup>	6,949	314,186
	<u>17,386</u>	<u>368,803</u>
Components of other capital		
Revaluation surplus of property, plant and equipment	324,700	334,939
Gain on valuation of AFS financial assets	-	12,387
Loss on valuation of financial assets at fair value through other comprehensive income	(8,052)	-
Share of other comprehensive income of associates and joint ventures	-	-
Loss on foreign currency translation of foreign operations	(14,678)	(53,601)
	<u>301,970</u>	<u>293,725</u>

<sup>1</sup> Others include ₩ 726 million of other contributed capital, which qualifies as equity even though actual debt-to-equity swap is not completed as the number and price of issuing shares are fixed as at December 31, 2018.

**Daewoo Shipbuilding & Marine Engineering Co., Ltd. and Subsidiaries**  
**Notes to the Consolidated Financial Statements**  
**December 31, 2018 and 2017**

30.2 Hybrid Capital Instrument

Hybrid capital instrument as at December 31, 2018 and 2017, consists of:

<i>(in millions of Korean won)</i>	<b>December 31, 2018</b>		<b>December 31, 2017</b>	
8th Private unregistered non-guarantee convertible bond <sup>1</sup>	₩	1,000,000	₩	1,000,000
9th Private unregistered non-guarantee convertible bond <sup>2</sup>		1,284,775		1,284,775
10th Private unregistered non-guarantee convertible bond <sup>3</sup>		48,057		-
	₩	2,332,832	₩	2,284,775

<sup>1</sup> As at December 29, 2016, the Group issued convertible to Export-Import Bank of Korea (KEXIM) to secure its capital, by offsetting ₩1,000,000 million of the outstanding balance of export financing loan(expiry date: January 2, 2018) made from November 25, 2015 to December 12, 2016.

These convertible bonds are classified as equity as there is no contractual cash payment obligation of the issuer. Details of convertible bonds issued by the Group are changed as at June 28, 2017, and the condition of bond issuance are as follows:

	<b>Details</b>
Bonds	8th Private unregistered non-guarantee convertible bond
Value at issue	₩ 1,000,000 million
Maturity	December 29, 2046(30 years), The maturity date can be extended under the same conditions as the discretion of the issuer. Amount: 3% until June 28, 2017, 1% until Dec 31, 2021, 0.25% added every year on standard yield of 5 year maturity public unsecured corporate bonds.
Interest paid	Payment: Pay quarterly, Optional payment suspension only if there is no reason for not suspending interest payment(*) (*)Reason for not suspending interest payment: A dividend payment decision is made in the last 12 months, or the shares of the issuer are reduced by the Group's retained earnings or purchased, repaid by the Group
Early redemption right	Optional redemption for all and part of the bonds every year, after Dec 31, 2021,
Conversion condition	₩ 40,350 per share
Trigger clause	The liquidation of the issuing group

<sup>2</sup> On June 28, 2017, the Group issued convertible bonds to KEXIM to secure its capital, by offsetting ₩1,284,775 million of the outstanding balance of export financing loan(expiry date: December 31, 2017) made from October 17, 2014 to February 9, 2017.

These convertible bonds are classified as equity as there is no contractual cash payment obligation of the issuer. Details of convertible bonds issued by the Group are as follows:

	<b>Details</b>
Bonds	9th Private unregistered non-guarantee convertible bond
Value at issue	₩ 1,284,775 million
Maturity	June 28, 2047 (30 years), The maturity date can be extended under the same conditions as the discretion of the issuer. Amount: 1.0% until December 31, 2021, 0.25% added every year on standard yield of 5 year maturity public unsecured corporate bonds.
Interest paid	Payment: Pay quarterly, Optional payment suspension only if there

**Daewoo Shipbuilding & Marine Engineering Co., Ltd. and Subsidiaries**  
**Notes to the Consolidated Financial Statements**  
**December 31, 2018 and 2017**

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	is no reason for not suspending interest payment(*)
	(*)Reason for not suspending interest payment: A dividend payment decision is made in the last 12 months, or the shares of the issuer are reduced by the Group's retained earnings or purchased, repaid by the Group
Early redemption right	Optional redemption for all and part of the bonds every year, after 3 years from the issuance date,
Conversion condition	₩ 40,350 per share
Trigger clause	The liquidation of the issuing group

<sup>3</sup> On March 14, 2018, the Group issued convertible bonds to KEXIM to secure its capital, by offsetting ₩ 48,057 million won of the outstanding balance of export financing loan (expiry date : March 27, 2018) made from January 31, 2018.

These convertible bonds are classified as equity as there is no contractual cash payment obligation of the issuer. Details of convertible bonds issued by the group are as follows:

	<b>Details</b>
Bonds	10th Private unregistered non-guarantee convertible bond
Value at issue	₩ 48,057 million
Maturity	March 14, 2048 (30 years), The maturity date can be extended under the same conditions as the discretion of the issuer. Amount: 1.0% until December 31, 2021, 0.25% added every year on standard yield of 5 year maturity public unsecured corporate bonds. Payment: Pay quarterly, Optional payment suspension only if there is no reason for not suspending interest payment(*) (*)Reason for not suspending interest payment: A dividend payment decision is made in the last 12 months, or the shares of the issuer are reduced by the Group's retained earnings or purchased, repaid by the Group
Interest paid	Overdue interest rate: If early redemption amount isn't paid after the notification of early redemption right or interest isn't paid despite no reason for not suspending interest payment, the overdue interest rate of 15% is applied.
Early redemption right	Optional redemption for all and part of the bonds, after adjustment date of interest rate (*). (*) Adjustment date of Interest rate: December 31, 2021.
Conversion condition	₩ 40,350 per share
Trigger clause	The liquidation of the issuing company

**Daewoo Shipbuilding & Marine Engineering Co., Ltd. and Subsidiaries**  
**Notes to the Consolidated Financial Statements**  
**December 31, 2018 and 2017**

**31. Earnings per Share**

31.1 Basic earnings (losses) per share is calculated by dividing the profit (loss) attributable to equity holders of the Group by the weighted average number of ordinary shares outstanding during the year excluding ordinary shares purchased by the Group and held as treasury shares.

Basic earnings per share for the years ended December 31, 2018 and 2017, are as follows:

<i>(in Korean won)</i>	<b>2018</b>	<b>2017</b>
Profit from discontinued operation attributable to the ordinary equity holders of the Parent Company ₩	344,721,579,646 ₩	621,492,030,973
Paid interest of hybrid capital instrument <sup>1</sup>	(23,595,078,890)	(26,445,004,150)
Profit attributable to the ordinary equity holders of the Parent Company	321,126,500,756	595,047,026,823
Weighted average number of ordinary shares outstanding	107,081,158 shares	83,327,667shares
Basic earnings per share	₩ 2,998	₩ 7,141

<sup>1</sup> Interest payable related to hybrid capital instrument ₩23,595 million (accumulated: ₩35,033 million) is included as at December 31, 2018.

31.2 Weighted-average number of ordinary shares outstanding used in the calculation of earnings per share, for the years ended December 31, 2018 and 2017, is as follows:

<i>(in shares)</i>	<b>2018</b>				
	<b>Issued shares</b>	<b>Treasury shares</b>	<b>Outstanding shares</b>	<b>Number of days</b>	<b>Weighted average number of ordinary shares outstanding</b>
Jan. 1, 2018	106,656,288	(16,207)	106,640,081	72	21,035,852
Mar. 14, 2018	107,205,752	(16,207)	107,189,545	293	86,045,306
				365	107,081,158

  

<i>(in shares)</i>	<b>2017</b>				
	<b>Issued shares</b>	<b>Treasury shares</b>	<b>Outstanding shares</b>	<b>Number of days</b>	<b>Weighted average number of ordinary shares outstanding</b>
Jan. 1, 2017	65,576,960	-	65,576,960	24	4,311,910
Jan. 25, 2017	65,576,960	(16,207)	65,560,753	155	27,840,868
Jun. 29, 2017	85,223,996	(16,207)	85,207,789	44	10,271,624
Aug. 12, 2017	105,028,809	(16,207)	105,012,602	131	37,689,454
Dec. 21, 2017	106,656,288	(16,207)	106,640,081	11	3,213,811
				365	83,327,667

**Daewoo Shipbuilding & Marine Engineering Co., Ltd. and Subsidiaries**  
**Notes to the Consolidated Financial Statements**  
**December 31, 2018 and 2017**

31.3 Diluted earnings is adjusted weighted average number of ordinary shares outstanding with assumption that every dilutive securities are converted to ordinary shares. The Group issued dilutive securities as convertible bonds (hybrid capital instrument). Convertible bonds are assumed to be converted to ordinary shares and interest cost of the convertible bonds are assume to be added to earnings of ordinary shares.

<i>(in Korean won)</i>		<b>2018</b>		<b>2017</b>
Profit attributable to the ordinary equity holders of the Parent Company	₩	321,126,500,756	₩	595,047,026,823
Interest of convertible bonds (hybrid capital instrument)		23,595,078,890		26,445,004,150
Profit used to determine diluted EPS		344,721,579,646		621,492,030,973
Weighted average number of ordinary shares outstanding		107,081,158 shares		83,327,667 shares
Adjustment:				
Assumption of conversion of permanent bonds		57,579,986		41,096,089
Weighted average number of ordinary shares outstanding		164,661,144 shares		124,423,756 shares
Diluted earnings per share	₩	2,094	₩	4,995

**32. Selling and Administrative Expenses**

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

<i>(in millions of Korean won)</i>		<b>2018</b>		<b>2017</b>
Advertising	₩	1,574	₩	1,137
Freight and custody charges		83		604
Commission expenses		60,167		175,816
Sales promotional expenses		1,543		1,100
Others		56		157
	₩	63,423	₩	178,814

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

<i>(in millions of Korean won)</i>		<b>2018</b>		<b>2017</b>
Salaries	₩	53,653	₩	51,167
Post-employment benefits		3,959		4,886
Employee welfare benefits		16,174		8,948
Rental expenses		3,084		8,078
Depreciation		2,288		4,425
Amortization		275		741
Repairs and maintenance expenses		6,921		7,778
Travel expenses		3,216		2,438
Training expenses		1,182		1,202
Administrative service costs		10,173		15,347
Taxes and dues		(41,945)		60,088
Others		8,399		46,848
	₩	67,379	₩	211,946



**Daewoo Shipbuilding & Marine Engineering Co., Ltd. and Subsidiaries**  
**Notes to the Consolidated Financial Statements**  
**December 31, 2018 and 2017**

**33. Interest Income, Finance Income and Costs**

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

<i>(in millions of Korean won)</i>	<b>2018</b>	<b>2017</b>
Interest income:		
Deposits	₩ 7,241	₩ 4,922
Trade receivables and other receivables	53,817	12,155
Held-to-maturity financial assets	-	9
	<u>61,058</u>	<u>17,086</u>
Dividend income:		
Financial assets at fair value through other comprehensive income	147	476
Investments in associates and subsidiaries	-	272
	<u>147</u>	<u>748</u>
Reversal of financial guarantee liabilities:	992	9,447
Gain on debt restructuring	10	1,422,602
	<u>1,149</u>	<u>1,432,797</u>
Interest expenses:		
Bank overdrafts and interests on loans	182,202	189,090
Others	-	-
Less: Amount included in cost of qualifying assets	-	(142,540)
	<u>182,202</u>	<u>46,550</u>
Net finance income (cost)	₩ <u>(119,995)</u>	₩ <u>1,403,333</u>

**34. Foreign Exchange Gains and Losses**

Details of foreign exchange gains and losses for the years ended December 31, 2018 and 2017, are as follows:

<i>(in millions of Korean won)</i>	<b>2018</b>	<b>2017</b>
Gain on foreign currency transactions	₩ 401,781	₩ 397,499
Gain on foreign exchange translations	88,110	256,847
	<u>489,891</u>	<u>654,346</u>
Loss on foreign currency transactions	353,945	318,935
Loss on foreign exchange translations, net	122,266	401,766
	<u>476,211</u>	<u>720,701</u>
Net foreign exchange gains and losses	₩ <u>13,680</u>	₩ <u>(66,355)</u>

**Daewoo Shipbuilding & Marine Engineering Co., Ltd. and Subsidiaries**  
**Notes to the Consolidated Financial Statements**  
**December 31, 2018 and 2017**

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**35. Other Non-operating Income and Expenses**

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

<i>(in millions of Korean won)</i>	<b>2018</b>	<b>2017</b>
Gain on valuation of firm commitment	₩ 137,351	₩ 779
Gain on valuation of currency forward	6,214	417,092
Gain on currency forward transactions	5,747	183,027
Gain on disposal of property, plant and equipment	1,612	2,430
Others	83,548	216,583
	<u>₩ 234,472</u>	<u>₩ 819,911</u>

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

<i>(in millions of Korean won)</i>	<b>2018</b>	<b>2017</b>
Loss on valuation of firm commitment	₩ 4,429	₩ 555,413
Loss on valuation of currency forward	94,538	-
Loss on currency forward transactions	79,119	1,506
Loss on disposal of property, plant and equipment	652	552
Impairment loss of property, plant and equipment	-	509,947
Impairment loss of intangible assets	114	29,660
Impairment loss of assets held-for-sale	76,613	-
Others	31,883	385,777
	<u>₩ 287,348</u>	<u>₩ 1,482,856</u>

**Daewoo Shipbuilding & Marine Engineering Co., Ltd. and Subsidiaries**  
**Notes to the Consolidated Financial Statements**  
**December 31, 2018 and 2017**

**36. Expenses by Nature**

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

<i>(in millions of Korean won)</i>		<b>2018</b>	
	<b>Selling and administrative expenses, research and development expenses and impairment loss</b>	<b>Cost of sales</b>	<b>Total</b>
Changes in inventories	₩ -	₩ (611,582)	₩ (611,582)
Purchase of raw materials	-	4,345,554	4,345,554
Employee benefits	85,830	870,282	956,112
Depreciation	3,186	130,885	134,071
Amortization	907	577	1,484
Commission	60,225	99,964	160,189
Travel	3,450	3,588	7,038
Administrative service fees	11,680	80,529	92,209
Rent	3,251	23,334	26,585
Amount paid to subcontractor	254	1,796,342	1,796,596
Others	(441,949)	2,153,245	1,711,296
	<u>₩ (273,166)</u>	<u>₩ 8,892,718</u>	<u>₩ 8,619,552</u>

<i>(in millions of Korean won)</i>		<b>2017</b>	
	<b>Selling and administrative expenses, research and development expenses and impairment loss</b>	<b>Cost of sales</b>	<b>Total</b>
Changes in inventories	₩ -	₩ 290,943	₩ 290,943
Purchase of raw materials	-	4,251,940	4,251,940
Employee benefits	87,578	819,692	907,270
Depreciation	5,184	143,907	149,091
Amortization	1,389	1,926	3,315
Commission	190,162	110,354	300,516
Travel	2,791	6,100	8,891
Administrative service fees	17,065	90,977	108,042
Rent	8,211	47,098	55,309
Amount paid to subcontractor	2,105	1,948,408	1,950,513
Others	496,598	1,846,386	2,342,984
	<u>₩ 811,083</u>	<u>₩ 9,557,731</u>	<u>₩ 10,368,814</u>

**Daewoo Shipbuilding & Marine Engineering Co., Ltd. and Subsidiaries**  
**Notes to the Consolidated Financial Statements**  
**December 31, 2018 and 2017**

**37. Related Parties**

37.1 Related parties of the Group as at December 31, 2018, are as follows:

	<b>Group</b>
Controlling Company	KDB
Associates <sup>1</sup>	Wing Ship Technology Corp., TPI Megaline Co., Ltd., DAEHAN SHIPBUILDING CO., LTD., Welliv Private Equity Limited Partnerships, Shinhan Heavy Industries Co., Ltd., Samwoo Heavy Industry Co., Ltd, Welliv Corp.
Joint ventures	SBM Shipyard Ltd.
Other related parties	D&H Solutions AS, PT. DSME Indonesia, DSME Offshore Engineering Center, PAENAL YARD, KC Kazakh B.V., SEYOUNG Academy for middle school students and others, Related parties of KDB and government related parties(KEXIM and others) <sup>2</sup> .

<sup>1</sup> PT.PJUC, an associate of PT.DSME ENR CEPU, was excluded from the Group's associates as disposal of PT.DSME ENR CEPU was completed for the year ended December 31, 2018.

<sup>2</sup> In accordance with the exemption on disclosure of related party transactions with government related special entity as prescribed under Korean IFRS 1024, the Group has not disclosed all transactions, commitments and outstanding balances concerning the government related special entity.

37.2 Details of associates and other related parties that have sales and other transactions with the Group or have outstanding balances as at December 31, 2018 and 2017, are as follows:

<i>(in millions of Korean won)</i>			<b>2018</b>	<b>2017</b>
<b>Controlling Group:</b>				
KDB	Interest and other income	₩	20,992	₩ 361,499
	Interest and other expenses		214,445	81,867
<b>Associates:</b>				
DAEHAN SHIPBUILDING CO., LTD. and others	Sales		3,298	1,986
	Purchases		415,324	137,147
	Interest and other income		3,172	4,531
	Interest and other expense		42,489	-
<b>Other related parties:</b>				
KEXIM	Interest and other expense		47,392	83,282
Related parties of KDB and others <sup>1</sup>	Sales		359,360	2,329
	Purchases		114,475	62,311
	Interest and other income		156	267
	Interest and other expense		1,346	83,733
	Sales	₩	362,658	₩ 4,315
	Purchases		529,799	199,458
Total	Interest and other income		24,320	366,297
	Interest and other expense		305,672	248,882

**Daewoo Shipbuilding & Marine Engineering Co., Ltd. and Subsidiaries**  
**Notes to the Consolidated Financial Statements**  
**December 31, 2018 and 2017**

<sup>1</sup> The Group has entered into shipbuilding contracts of ₩ 1,213,841 million(2017: ₩ 451,009 million) with Sparta International 1~5 S.A and others(subsidiaries of Hyundai Merchant Marine Co., Ltd.) for the year ended December 31, 2018. The Group recognized sales of ₩ 359,258 million(2017: ₩ 2,322 million) for the year ended December 31, 2018. As at December 31, 2018, the remaining contract balance amounted to ₩ 1,314,864 million.

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

<i>(in millions of Korean won)</i>	<b>Transaction</b>	<b>2018</b>	<b>2017</b>
<b>Controlling Group:</b>			
KDB	Proceeds from borrowings	₩ -	₩ 810,004
	Redemption of borrowings	302,597	522,200
	Debt-to-equity swap	-	268,932
<b>Associates:</b>			
DAEHAN SHIPBUILDING	Increase in loans	-	28,187
CO., LTD. and others	Decrease in loans	-	30,095
<b>Other related parties:</b>			
KEXIM	Proceeds from borrowings	60,393	817,000
	Redemption of borrowings	295,000	76,000
	Debt-to-equity swap (permanent bonds conversion)	48,314	1,284,775
Related parties of KDB and others	Redemption of borrowings	-	108
	Debt acquisition	71,717	-
	Proceeds from borrowings	₩ 60,393	₩ 1,627,004
	Redemption of borrowings	597,597	598,200
	Increase in loans	-	28,187
	Decrease in loans	-	30,203
Total	Debt-to-equity swap	-	268,932
	Debt-to-equity swap (permanent bonds conversion)	48,314	1,284,775
	Debt acquisition	71,717	-

**Daewoo Shipbuilding & Marine Engineering Co., Ltd. and Subsidiaries**  
**Notes to the Consolidated Financial Statements**  
**December 31, 2018 and 2017**

37.4 Significant receivables from and payables to the related parties as at December 31, 2018 and 2017, are as follows:

(in millions of Korean won)	December 31, 2018					
	Financial instruments and others <sup>1</sup>	Trade receivables <sup>1</sup>	Other receivables <sup>1</sup>	Loans and others <sup>1</sup>	Borrowings	Other payables and others
<b>Controlling Group:</b>						
KDB	₩ 887,528	₩ -	₩ 24,274	₩ 21,299	₩ 1,499,081	₩ 42,650
<b>Associates:</b>						
DAEHAN SHIPBUILDING CO., LTD and others	-	588	2,401	97,526	-	31,404
<b>Joint ventures:</b>						
SBM Shipyards Ltd. and others	-	-	-	183,133	-	-
<b>Other related parties:</b>						
D&H Solutions AS and others	-	3,722	-	32,850	-	-
KEXIM <sup>2</sup>	-	-	-	1,487	635,804	1,191
Related parties of KDB	3,242	198,423	-	8,464	-	15,245
	₩ 890,770	₩ 202,602	₩ 26,675	₩ 344,759	₩ 2,134,885	₩ 90,490

(in millions of Korean won)	December 31, 2017					
	Financial instruments and others <sup>1</sup>	Trade receivables <sup>1</sup>	Other receivables <sup>1</sup>	Loans and others <sup>1</sup>	Borrowings	Other payables and others
<b>Controlling Group:</b>						
KDB	₩ 859,914	₩ -	₩ 24,274	₩ 135,988	₩ 1,766,712	₩ 12,398
<b>Associates:</b>						
DAEHAN SHIPBUILDING CO., LTD and others	-	133	10,118	151,131	-	79,420
<b>Joint ventures:</b>						
SBM Shipyards Ltd. and others	-	-	-	183,133	-	-
<b>Other related parties:</b>						
KEXIM <sup>2</sup>	-	-	-	1,954	904,404	1,571
Other related parties	3,311	16,079	1,491	37,150	-	95
	₩ 863,225	₩ 16,212	₩ 35,883	₩ 509,356	₩ 2,671,116	₩ 93,484

<sup>1</sup> Amount before deduction of provision for impairment loss.

<sup>2</sup> As described in Note 30, hybrid capital instrument classified as equity were not included in the borrowings.

**Daewoo Shipbuilding & Marine Engineering Co., Ltd. and Subsidiaries**  
**Notes to the Consolidated Financial Statements**  
**December 31, 2018 and 2017**

Meanwhile, movements of provision for impairment of trade and other receivables in relation to the above receivables with related parties for the years ended December 31, 2018 and 2017, are as follows:

<i>(in millions of Korean won)</i>	<b>2018</b>				
	<b>Beginning balance</b>	<b>Impairment loss (reversal)</b>	<b>Others</b>	<b>Ending balance</b>	
Trade receivables	₩ -	₩ 2,967	₩ 755	₩	3,722
Other receivables	-	2,238	-		2,238
Loans and others	304,276	1,620	(5,919)		299,977
	₩ 304,276	₩ 6,825	₩ (5,164)	₩	305,937

<i>(in millions of Korean won)</i>	<b>2017</b>			
	<b>Beginning balance</b>	<b>Impairment loss (reversal)</b>	<b>Others</b>	<b>Ending balance</b>
Loans and others	216,975	199	87,102	304,276

37.5 Key management compensation for the years ended December 31, 2018 and 2017, is as follows:

<i>(in millions of Korean won)</i>	<b>2018</b>	<b>2017</b>
Short-term salaries	₩ 937	₩ 1,165
Post-employment benefits	100	293
	₩ 1,037	₩ 1,458

The Group's key management includes directors (including outside directors) who are registered executives and members of the Audit Committee.

37.6 Significant collaterals and guarantees provided for the related parties as at December 31, 2018, are as follows:

<i>(in thousands of foreign currency)</i>			
<b>Provided for</b>	<b>Guaranteed amount</b>	<b>Guarantor</b>	
KC Kazakh B.V. <sup>1</sup>	USD 250	KazMunayGas	

<sup>1</sup> The Group provides performance guarantees to KazMunayGas regarding the share of mining area in Kazakhstan disposed by KC Kazakh B.V.

Due to the inability of the original borrower to repay the loan to the associates, ₩ 71,717 million was assumed by the Group during the period. In relation to the liabilities assumed, the Group executed debt restructuring during the period, such as debt-to-equity swap and the conversion of permanent bonds(Notes 30 and 44).

**Daewoo Shipbuilding & Marine Engineering Co., Ltd. and Subsidiaries**  
**Notes to the Consolidated Financial Statements**  
**December 31, 2018 and 2017**

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37.7 Significant guarantees provided by related parties as at December 31, 2018, are as follows:

*(in thousands of foreign currency)*

Guarantor	Type of obligations guaranteed	Guaranteed amount		Type of borrowings	Borrowing amount	
<b>Controlling group:</b>						
KDB	Usance bills	USD	314,400	Short-term borrowings	USD	82,504
	Advance payment bonds and others	USD	4,703,250	-	USD	1,888,964
<b>Other related parties:</b>						
KEXIM	Advance payment bonds and others	USD	4,044,521	-	USD	3,138,734
				-	EUR	9,348
Hyundai Merchant Marine Co., Ltd.	Performance guarantee	USD	418,869	Shipbuilding		-
Total		USD	9,481,040		USD	5,110,202
					EUR	9,348



**Daewoo Shipbuilding & Marine Engineering Co., Ltd. and Subsidiaries**  
**Notes to the Consolidated Financial Statements**  
**December 31, 2018 and 2017**

**38. Construction Contracts**

38.1 Changes in the remaining balance of construction contracts for the years ended December 31, 2018, and 2017, are as follows:

<i>(in millions of Korean won)</i>	<b>2018</b>				
	<b>Beginning balance</b>	<b>New contracts</b>	<b>Others <sup>1</sup></b>	<b>Recognized construction revenue <sup>2</sup></b>	<b>Ending balance</b>
Commercial ships	₩ 8,170,796	₩ 6,341,761	₩ 178,092	₩ (6,538,733)	₩ 8,151,916
Offshore plant and special ships	5,203,669	737,390	839,128	(2,972,520)	3,807,667
Others	9,622	535	(14,034)	9,163	5,286
	<u>₩ 13,384,087</u>	<u>₩ 7,079,686</u>	<u>₩ 1,003,186</u>	<u>₩ (9,502,090)</u>	<u>₩ 11,964,869</u>

<i>(in millions of Korean won)</i>	<b>2017</b>				
	<b>Beginning balance</b>	<b>New contracts</b>	<b>Others <sup>1</sup></b>	<b>Recognized construction revenue <sup>2</sup></b>	<b>Ending balance</b>
Commercial ships	₩ 13,210,280	₩ 2,918,714	₩ (1,016,136)	₩ (6,942,062)	₩ 8,170,796
Offshore plant and special ships	7,982,303	294,124	556,376	(3,629,134)	5,203,669
Construction	823,154	105,455	(745,994)	(182,615)	-
Others	15,358	2,359	(3,273)	(4,822)	9,622
	<u>₩ 22,031,095</u>	<u>₩ 3,320,652</u>	<u>₩ (1,209,027)</u>	<u>₩ (10,758,633)</u>	<u>₩ 13,384,087</u>

<sup>1</sup> Others consist of increase or decrease due to fluctuations of foreign exchange rates and changes of contract amount.

<sup>2</sup> Recognized construction revenue excludes increase or decrease of sales related to firm commitment assets (liabilities) according to hedge accounting.

38.2 Details of in-progress construction contracts such as recognized construction profit or loss as at December 31, 2018 and 2017, are as follows:

<i>(in millions of Korean won)</i>	<b>December 31, 2018</b>			
	<b>Accumulated construction revenue</b>	<b>Accumulated construction cost</b>	<b>Accumulated profit (loss)</b>	<b>Reserve<sup>1</sup></b>
Commercial ships	₩ 5,907,686	₩ (5,888,282)	₩ 19,404	₩ 698,725
Offshore plant and special ships	18,382,809	(19,730,780)	(1,347,971)	-
Others	118,299	(79,579)	38,720	-
	<u>₩ 24,408,794</u>	<u>₩ (25,698,641)</u>	<u>₩ (1,289,847)</u>	<u>₩ 698,725</u>

**Daewoo Shipbuilding & Marine Engineering Co., Ltd. and Subsidiaries**  
**Notes to the Consolidated Financial Statements**  
**December 31, 2018 and 2017**

<i>(in millions of Korean won)</i>	<b>December 31, 2017</b>			
	<b>Accumulated construction revenue</b>	<b>Accumulated construction cost</b>	<b>Accumulated profit (loss)</b>	<b>Reserve<sup>1</sup></b>
Commercial ships	₩ 7,035,926	₩ (6,798,969)	₩ 236,957	₩ 978,285
Offshore plant and special ships	24,974,212	(26,808,903)	(1,834,691)	-
Others	132,273	(81,137)	51,136	-
	<u>₩ 32,142,411</u>	<u>₩ (33,689,009)</u>	<u>₩ (1,546,598)</u>	<u>₩ 978,285</u>

<sup>1</sup> Reserve, before the deduction of provision for impairment, refer to the receivable related to a transferred vessel for which payment term is postponed. The principal and the accrued interest are being collected in accordance with the contract.

38.3 Details of due to and from customers for contract work as at December 31, 2018 and December 31, 2017, are as follows:

<i>(in millions of Korean won)</i>	<b>December 31, 2018</b>		<b>December 31, 2017</b>	
	<b>Contract assets</b>	<b>Contract liabilities</b>	<b>Due from customers contract work</b>	<b>Due to customers contract work</b>
Commercial ships	₩ 2,827,775	₩ 686,112	₩ 2,407,043	₩ 1,275,168
Offshore plant and special ships	1,544,540	1,162,762	1,668,962	1,054,142
Others	37	22,416	13,025	25,297
	<u>₩ 4,372,352</u>	<u>₩ 1,871,290</u>	<u>₩ 4,089,030</u>	<u>₩ 2,354,607</u>

Provisions for construction loss are not included in the contract assets and contract liabilities as at December 31, 2018. Provisions for construction loss included in the due from/to customers amount to ₩ 299,310 million and ₩ 307,270 million, respectively, as at December 31, 2017.

**Daewoo Shipbuilding & Marine Engineering Co., Ltd. and Subsidiaries**  
**Notes to the Consolidated Financial Statements**  
**December 31, 2018 and 2017**

38.4 Contractual details that contract revenue for the year ended December 31, 2018 more than 5% of sales in previous year, are as follows:

(in millions of Korean Won)		Customers	Contract date	Expected completion date <sup>1</sup> / Completion date	Percentage of Completion	December 31, 2018				December 31, 2017			
						Contract assets (Due from customers for contract work)		Trade receivables (receivables from construction contracts)		Due from customers for contract work		Trade receivables (receivables from construction contracts)	
						Gross	Provision <sup>2</sup>	Gross	Provision <sup>2</sup>	Gross	Provision <sup>2</sup>	Gross	Provision <sup>2</sup>
						W	W	W	W	W	W	W	W
Drillship	America	2012.09.27	2019.09.30	99.3%		W 113,925	W -	W -	W -	W 91,970	W -	W -	W -
Drillship	Africa	2013.10.15	2019.03.15	97.9%		501,066	(45,441)	-	-	480,138	(206,488)	-	-
Drillship	Africa	2013.10.15	2019.04.07	96.5%		505,218	(49,591)	-	-	484,116	(206,488)	-	-
Drillship	America	2013.06.24	2020.06.30	99.0%		195,092	-	-	-	181,169	-	-	-
FPSO	Europe	2010.08.23	2018.03.29	100.0%		-	-	-	-	-	-	778	-
FP	Oceania	2011.10.14	2018.02.28	100.0%		-	-	-	-	5,915	-	2,073	-
FPSO	Oceania	2012.03.08	2019.12.31	98.4%		109,495	-	10,252	-	185,644	-	24,490	-
FP	Africa	2012.08.16	2019.12.31	99.3%		78,435	-	39,418	-	-	-	(85)	-
FP	Europe	2012.12.21	2019.10.30	98.8%		-	-	23,708	-	-	-	24,986	-
FP	Europe	2013.02.20	2018.06.04	100.0%		-	-	-	-	-	-	5,111	-
FP	Asia	2013.05.26	2019.04.30	96.3%		10,423	-	-	-	14,806	-	1,343	-
FP	Asia	2014.10.09	2020.07.27	46.4%		-	-	167,434	-	-	-	71,331	-
FLNG	Asia	2012.03.16	2018.01.05	100.0%		-	-	3,822	-	7,956	-	-	-

<sup>1</sup> Expected completion date is the date expected by the Group as at December 31, 2018, and it is affected by a variety of uncertainties that depend on the outcome of future events.

<sup>2</sup> Accumulated impairment loss excludes the loss recognized through the collective assessment.

As at December 31, 2018, two construction contracts were not presented according to Amendment to Korean IFRS 1011, par 45.2(2) due to contractual reasons with customers. The aforementioned information has not been presented in the securities report, investment prospectus, nor quarterly report / semi-annual reports required in Capital Market Act. Additionally, the fact that they are not disclosed was reported to the audit committee on March 8, 2019.

**Daewoo Shipbuilding & Marine Engineering Co., Ltd. and Subsidiaries**  
**Notes to the Consolidated Financial Statements**  
**December 31, 2018 and 2017**

38.5 Details of contracts for using rate of accumulated contract costs incurred per operating segments divided by estimated total contract costs to measure percentage of completion, are as follows:

(in millions of Korean won)	December 31, 2018					
	Changes in estimation				Contract Assets (Due from customers contract work)	
	Provisions for expected losses	Changes in estimated total contract revenue	Changes in estimated total contract cost	Changes in gain (loss) from construction	Gross amount	Accumulated impairment loss
Commercial ships	₩ 395,946	₩ (32,795)	₩ (54,561)	₩ 195,487	₩ 2,827,775	₩ -
Offshore plant and special ships	139,615	878,130	669,354	193,636	1,645,447	(100,907)
Others	-	(12,253)	(900)	(12,253)	37	-
	₩ 535,561	₩ 833,082	₩ 613,893	₩ 376,870	₩ 4,473,259	₩ (100,907)

  

(in millions of Korean won)	December 31, 2017					
	Changes in estimation				Due from customers contract work	
	Provisions for expected losses	Changes in estimated total contract revenue	Changes in estimated total contract cost	Changes in gain (loss) from construction	Gross amount	Accumulated impairment loss
Commercial ships	₩ 352,920	₩ (757,146)	₩ (703,931)	₩ 397,286	₩ 2,407,043	₩ -
Offshore plant and special ships	253,660	850,142	(86,334)	1,100,572	2,320,536	(651,574)
Others	-	2,041	224	(1)	13,025	-
	₩ 606,580	₩ 95,037	₩ (790,041)	₩ 1,497,857	₩ 4,740,604	₩ (651,574)

38.6 Changes in the estimation of total contract revenues and costs

As the estimated total revenue and costs for contracts in progress have changed, details of changes in estimated total contract revenue and costs, profits or loss for the year ended December 31, 2018, and the succeeding period, and the impact on due from customers for contract work are as follows:

(in millions of Korean won)	2018			
	Changes in estimated total contract revenue	Changes in estimated total contract cost	Impact on profit (loss) for the year	Impact on profit (loss) for the succeeding period
Commercial ships	₩ (32,795)	₩ (54,561)	₩ 195,487	₩ (173,721)
Offshore plant and special ships	878,130	669,354	193,636	15,140
Others	(12,253)	(900)	(12,253)	900
	₩ 833,082	₩ 613,893	₩ 376,870	₩ (157,681)

**Daewoo Shipbuilding & Marine Engineering Co., Ltd. and Subsidiaries**  
**Notes to the Consolidated Financial Statements**  
**December 31, 2018 and 2017**

(in millions of Korean won)	2017			
	Changes in estimated total contract revenue	Changes in estimated total contract cost	Impact on profit (loss) for the year	Impact on profit (loss) for the succeeding period
Commercial ships	₩ (757,146)	₩ (703,931)	₩ 397,286	₩ (450,501)
Offshore plant and special ships	850,142	(86,334)	1,100,572	(164,096)
Others	2,041	224	(1)	1,818
	₩ 95,037	₩ (790,041)	₩ 1,497,857	₩ (612,779)

The impact on profit (loss) for the year (prior period) and the succeeding period is determined based on total contract costs, which are estimated based on the circumstances present from the commencement of the contract to the end of current period (prior period), and the estimated contract revenue as at December 31, 2018 and December 31, 2017. Contract costs and contract revenue may change in the future.

### 39. Commitments and Contingencies

39.1 The Group provided 14 blank notes to Korea National Oil Corporation and others as construction warranty and others at December 31, 2018.

39.2 The Group is involved in lawsuits as a plaintiff pending in relation to a damage claim, and other 22 with aggregated claim amount of ₩ 921,296 million and CNY 14,615 thousand as at December 31, 2018. The Group filed a request for arbitrations to the London Maritime Arbitrators Association in relation to settlement of contract amount and additional contract cost incurred with some customers.

39.3 The sale of Dewind Co. has been completed during the period, but the Group still provides a performance guarantee for turbine maintenance contracts concluded between Dewind Co. and WEIcan wind turbine contractors. The performance guarantee amounts to CAD 3,200 thousand.

39.4 Certain investors claimed that they acquired the ordinary shares, corporate bonds, and commercial papers and resulted in loss by relying on false audited report, annual report, registration of securities, and prospectus, etc. Including the aforementioned litigation, the Group is involved in 77 other lawsuits as a defendant with aggregated claim amount of USD 81,015 thousand, CNY 1 thousand and ₩ 237,175 million, including a pending lawsuit in relation to construction payment.

In addition, some of the Group's subcontractors are under an investigation of the Fair Trade Commission for the unfair subcontracting or a violation of written contract and accordingly, the Group's eligibility to participate in bidding for public institutions may be restricted for a certain period of time depending on the investigation result.

The outcome of the above cases cannot be reasonably estimated, and outflows of resources and the timing are also uncertain as at December 31, 2018. The Group, however, recognized the best estimated loss amounting to ₩ 553,374 million from pending litigations and performance guarantees as provisions as at December 31, 2018.

**Daewoo Shipbuilding & Marine Engineering Co., Ltd. and Subsidiaries**  
**Notes to the Consolidated Financial Statements**  
**December 31, 2018 and 2017**

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39.5 The Group's major joint ventures are as follows.

The Group has invested in Nigeria oil fields development project by forming a Korean consortium (9.75% of the Group's shares) including Korea National Oil Corp. The Group recognized the investment in Nigeria oil fields as other investment assets.

The Group has invested in Kazakhstan oil fields development project by forming a Korean consortium (5.00% of the Group's shares). The consortium has invested in Jambyl mine near the Caspian Sea by forming a Korean consortium of 27% (1.35% of the Group's shares) with Kazmunay Gas, Kazakhstani national oil company.

The Group has invested in "Southwest Pacific Seafloor Hydrothermal Deposit Project" with the Ministry of Land, Transport and Maritime Affairs in order to secure exclusive development rights of the project.

The Group has formed a consortium with Ersai Caspian contractor LLC for onsite management supervision and personnel training services related to the TCO project in Kazakhstan.

39.6 Corporate Judging Committee of KRX decided to evaluate the Group for suspicion of violating accounting standards and suspicion of former employee embezzlement and malpractice. The Committee granted a period of improvement for one year until September 28, 2017. Accordingly, trading of the shares issued by the Group was suspended during the period of improvement. On October 26, 2017, the Committee decided to release the trading suspension starting from October 30, 2017.

39.7 As at December 31, 2018, the estimated loss amounting to ₩ 159,332 million out of the claim amount of ₩ 175,332 million related to the construction contract of the Group was included in the statement of financial position as provisions for construction warranties. Meanwhile, the Group is obligated to warranty liabilities in connection with the construction contracts of the Group. As a result, the Group assumes the expected warranty cost as the provision for construction warranties (Note 25).

38.8 Details of commitment limit to major financial institutions as at December 31, 2018 are as follows:

*(in thousands of foreign currency and millions of Korean won)*

			Amount
KDB and others	Issuance of L/C limit	USD	1,072,800
	Foreign-currency payment guarantee limit	USD	9,143,578
	Borrowing limit and others	USD	1,060,956
		CNY	222,700
		₩	3,843,543

**Daewoo Shipbuilding & Marine Engineering Co., Ltd. and Subsidiaries**  
**Notes to the Consolidated Financial Statements**  
**December 31, 2018 and 2017**

**40. Cash Flows from Operating Activities**

Cash flows from operating activities for the years ended December 31, 2018 and 2017, are as follow:

<i>(in millions of Korean won)</i>	<b>2018</b>		<b>2017</b>	
1. Profit for the year	₩	320,052	₩	645,758
2. Adjustments for				
(1) Addition of expenses				
Post-employment benefits		52,190		59,086
Employee benefits		1,520		(1,592)
Depreciation		134,071		149,092
Amortization		1,485		3,315
Impairment loss and other impairment losses		(461,809)		439,910
Loss on valuation of firm commitment		4,429		555,413
Loss on valuation of currency forward contracts		94,538		-
Loss on disposal of held-to-maturity financial assets		2		-
Loss on valuation of inventories		1,075		11,532
Loss on disposal of available-for-sale financial assets		-		84
Loss on disposal of investment in subsidiaries		500,042		161,133
Loss on disposal of property, plant and equipment		652		552
Loss on disposal of intangible assets		-		50
Impairment loss on available-for-sale financial assets		-		44
Impairment loss on investment in associates and joint ventures		-		10,365
Impairment loss on property, plant and equipment		-		509,947
Loss on revaluation of property, plant and equipment		2,292		-
Impairment loss on investment property		-		1,353
Impairment loss on intangible assets		114		29,660
Impairment loss on other investment property		127		112
Loss on disposal of non-current assets held for sale		-		495
Impairment loss on non-current assets held-for-sale		76,613		-
Interest expenses		182,202		46,550
Capitalized financial expense		-		175,136
Loss on foreign currency translation		122,266		401,766
Share of loss of associates and joint ventures		7,622		3,807
Income tax expense		47,655		543,287
Transfer to provision for construction losses		35,620		165,752
Transfer to provision for construction warranties		188,910		48,987
Transfer to provision for contingent liabilities		19,361		395,551
Transfer to other provision		-		12,667
Loss on valuation of financial assets at fair value through profit or loss		1,992		-
Other expenses		3,001		43,082
		<u>1,015,970</u>		<u>3,767,136</u>

**Daewoo Shipbuilding & Marine Engineering Co., Ltd. and Subsidiaries**  
**Notes to the Consolidated Financial Statements**  
**December 31, 2018 and 2017**

(2) Deduction of income

Reversal of provision for construction warranties	18,155	1,996
Reversal of provision for construction loss	-	690
Reversal of provision for contingent liabilities	53,704	-
Reversal of other provision	3,125	17,575
Gain on valuation of firm commitment	137,351	779
Gain on valuation of currency forward contracts	6,214	417,092
Reversal of impairment loss and other impairment losses	3,584	9,806
Gain on disposal of available-for-sale financial assets	-	1,052
Gain on disposal of investment in subsidiaries	6,786	-
Gain on disposal of investment in associates and joint ventures	-	1,743
Gain on valuation of financial liabilities at fair value through profit or loss	767	2,355
Gain on disposal of financial assets at fair value through profit or loss	786	-
Gain on disposal of property, plant and equipment	1,612	2,430
Gain on disposal of intangible assets	-	2
Gain on disposal of other investments	-	551
Gain on disposal of assets held-for-sale	128	532
Reversal of valuation loss on inventories	5,475	3,947
Reversal of impairment loss on property, plant and equipment	9,681	69,403
Reversal of impairment loss on intangible assets	67	245
Interest income	61,058	17,086
Dividend income	147	748
Reversal of financial guarantee liabilities	992	9,447
Gain on foreign currency translation	88,110	256,847
Gain on debt restructuring	10	1,422,602
Share of profit of associates and joint ventures	3,086	6,304
Gain on foreign currency translation of debt-to-equity swap	367	71,891
Other incomes	8,819	(1,982)
	<u>(410,023)</u>	<u>(2,313,141)</u>

3. Changes in working capital

Trade and other receivables	(119,762)	(73,287)
Inventories	(74,146)	317,522
Due from customers for contract work	-	(233,560)
Contract assets	(194,579)	-
Other current assets	405,268	218,900
Non-current trade and other receivables	25,771	46,104
Firm commitment assets	116,080	255,080
Currency forward assets	60,086	(102,379)
Other non-current assets	(1,254)	201
Trade and other payables	(38,446)	(767,095)
Due to customers for contract work	-	(2,066,837)
Contract liabilities	(362,640)	-
Provisions	5,619	(131,763)
Other current liabilities	232,010	8,449



**Daewoo Shipbuilding & Marine Engineering Co., Ltd. and Subsidiaries**  
**Notes to the Consolidated Financial Statements**  
**December 31, 2018 and 2017**

Non-current other payables	(28,567)	(5,893)
Net defined benefit obligation and other long-term employee benefit liabilities	(90,702)	(72,903)
Firm commitment liabilities	(81,472)	-
Currency forward liabilities	35,329	-
Other non-current liabilities	(1,718)	(380,494)
	<u>(113,123)</u>	<u>(2,987,955)</u>
Cash generated from (used in) operations	<u>₩ 817,876</u>	<u>₩ (888,202)</u>

**41. Non-cash Transactions and Changes in Liabilities Arising from Financing Activities**

41.1 The principle significant non-cash transactions from investment and financing activities that are not included in the consolidated statements of cash flows are as follows:

<i>(in millions of Korean won)</i>	<b>2018</b>	<b>2017</b>
Capital increase (debt-to-equity swaps)	₩ 13,170	₩ 1,664,906
Issuance of hybrid capital instruments (refunding)	48,057	1,284,775
Taking over liabilities of other related parties	71,717	-
Write-off of long-term trade receivables	146,198	-
Transfer of long-term loans to the respective current assets	-	126,768
Transfer of long-term borrowings to the respective current liabilities	-	254,538
Extension of maturity of debentures and long-term borrowings	246,418	903,742
Transfer of construction in progress to property, plant and equipment	14,783	6,220
Transfer to non-current asset held for sale	83,484	103,505
Acquisition of investment in associates <sup>1</sup>	-	9,750
Transfer of long-term financial assets to the respective current assets	38,678	101,896
Transfer of contract assets to inventories <sup>2</sup>	495,745	-

<sup>1</sup> The Group disposed of 1,200,000 ordinary shares (100%) of Welliv Corp. to Welliv Holdings Co., Ltd. and acquired 34.39% shares of Welliv Private Equity Limited Partnerships which is an investor of Welliv Holdings Co., Ltd. as a part of the proceeds

<sup>2</sup> Due to the termination of the contracts associated with two ships under construction during the period, the Group reclassified those contracts from contract assets to work-in-process(Note 11).

Meanwhile, cash inflows and outflows arising from short-term financial instruments, short-term loans and short-term borrowings with large frequent transactions and short-term maturities have been presented in net amounts.

**Daewoo Shipbuilding & Marine Engineering Co., Ltd. and Subsidiaries**  
**Notes to the Consolidated Financial Statements**  
**December 31, 2018 and 2017**

41.2 Changes in liabilities arising from financing activities for the years ended December 31, 2018 and 2017, is as follows:

(in millions of Korean won)	December 31, 2018					
	Liabilities from financing activities					
	Short-term borrowings	Current portion of long-term borrowings	Long-term borrowings	Debentures	Finance lease obligations	Total
Beginning balance	₩ 2,046,503	₩ 460,882	₩ 673,611	₩ 530,661	₩ -	₩ 3,711,657
Cash flows from financing activities	(538,917)	(8,742)	(568)	-	(17,640)	(565,867)
Changes in exchange rate	3,231	8,231	34,502	-	-	45,964
Amortization	-	-	6,886	45,106	2,086	54,078
Debt restructuring <sup>1</sup>	(86,275)	-	9,474	(206)	-	(77,007)
Transfer and others	48,058	(263,310)	211,997	-	39,698	36,443
Ending balance	₩ 1,472,600	₩ 197,061	₩ 935,902	₩ 575,561	₩ 24,144	₩ 3,205,268

(in millions of Korean won)	December 31, 2017					
	Liabilities from financing activities					
	Short-term borrowings	Current portion of long-term borrowings	Current portion of debentures	Long-term borrowings	Debentures	Total
Beginning balance	₩ 2,860,994	₩ 1,486,203	₩ 1,348,886	₩ 742,041	₩ 192,424	₩ 6,630,549
Cash flows from financing activities	1,063,930	(112,797)	-	53,982	-	1,005,115
Changes in exchange rate	(22,741)	(161,929)	-	135,689	-	(48,981)
Amortization	-	-	1,931	2,968	30,134	35,033
Debt restructuring <sup>1</sup>	(1,497,110)	(596,129)	(941,529)	(180,612)	(101,185)	(3,316,566)
Transfer and others	(358,570)	(154,466)	(409,288)	(80,456)	409,288	(593,492)
Ending balance	₩ 2,046,503	₩ 460,882	₩ -	₩ 673,611	₩ 530,661	₩ 3,711,658

<sup>1</sup> Debt restructuring includes the difference between the fair value of the liability subject to restructuring and the book amount of the derecognized liability(Note 44).

**Daewoo Shipbuilding & Marine Engineering Co., Ltd. and Subsidiaries**  
**Notes to the Consolidated Financial Statements**  
**December 31, 2018 and 2017**

**42. Segment Information**

42.1 The Group classifies its segments by the type of goods and details of the goods and services that generate income, and major customers for each segment are as follows:

Segment	Goods or services	Major customer	Ratio of sales (%)
Commercial ships	LNGC and others	TEEKAY – CLNG and others	67.4
Offshore plants and special ships	Marine steel structure and others	TENGIZCHEVROIL LLP (TCO) and others	31.8
Others	Energy, service	Various customers	0.8
			<u>100.0</u>

42.2 Financial information by segment is as follows:

(in millions of Korean won)

	2018				
	Commercial ships	Off shore plants and special ship	Others <sup>1</sup>	Consolidation adjustment	Total after adjustment
Sales	₩ 6,606,977	₩ 3,065,675	₩ 95,079	₩ (123,347)	₩ 9,644,384
Gross profit (loss)	307,418	371,925	78,254	(5,931)	751,665
Operating profit (loss) <sup>2</sup>	1,020,596	-	5,295	(1,059)	1,024,832
Depreciation <sup>2</sup>	134,040	-	31	-	134,071
Amortization <sup>2</sup>	1,484	-	-	-	1,485
Profit (loss) for the year <sup>2</sup>	892,296	-	82,873	(655,117)	320,052
Property, plant and equipment and intangible assets <sup>2</sup>	3,993,240	-	26	(130,640)	3,862,626
Total assets <sup>2</sup>	₩ 12,064,094	₩ -	₩ 54,939	₩ (200,512)	₩ 11,918,522
Total liabilities <sup>2</sup>	₩ 8,108,921	₩ -	₩ 138,661	₩ (169,283)	₩ 8,078,300

(in millions of Korean won)

	2017					
	Ships	Off shore plants and special ship	Construction	Others <sup>1</sup>	Consolidation adjustment	Total after adjustment
Sales	₩ 7,338,133	₩ 3,909,685	₩ 197,732	₩ 172,111	₩ (515,843)	₩ 11,101,818
Gross profit (loss)	568,775	932,052	11,978	27,112	4,170	1,544,087
Operating profit (loss) <sup>2</sup>	710,805	-	5,106	(4,525)	21,617	733,003
Depreciation <sup>2</sup>	148,127	-	43	1,348	(426)	149,092
Amortization <sup>2</sup>	3,286	-	-	29	-	3,315
Profit (loss) for the year <sup>2</sup>	801,291	-	3,797	(46,279)	(113,051)	645,758

**Daewoo Shipbuilding & Marine Engineering Co., Ltd. and Subsidiaries**  
**Notes to the Consolidated Financial Statements**  
**December 31, 2018 and 2017**

Property, plant and equipment and intangible assets <sup>2</sup>	4,185,668	-	-	1,323	(146,249)	4,040,742
Total assets <sup>2</sup>	₩ 11,570,033	₩ -	₩ -	₩ 108,967	₩ (232,247)	₩ 11,446,753
Total liabilities <sup>2</sup>	₩ 9,379,275	₩ -	₩ -	₩ 459,988	₩ (1,383,170)	₩ 8,456,092

<sup>1</sup> The Group believes that it is probable that the Group wins the lawsuit regarding work holiday allowance, based on the Supreme Court *en banc decision* regarding similar lawsuit. Therefore, the Group recognized reversal of provision amounting to ₩ 69,697 million, which is included in gross profit or loss of other division.

<sup>2</sup> Included in Commercial ships segment as the corresponding information associated with Offshore Plant & Special Ships is not distinguishable.

42.3 Financial information by region is as follows:

(in millions of Korean won)	2018					
	Domestic	Romania	China	Kazakhstan and Others	Consolidation adjustment	Total after adjustment
Sales	₩ 9,644,854	₩ 16,779	₩ 100,772	₩ 5,326	₩ (123,347)	₩ 9,644,384
Gross profit (loss)	765,693	(18,973)	8,038	2,839	(5,931)	751,665
Operating profit (loss)	1,047,669	(22,348)	(1,459)	2,029	(1,059)	1,024,832
Depreciation	106,469	7,896	19,676	30	-	134,071
Amortization	587	158	740	-	-	1,485
Profit (loss) for the year	947,934	(47,009)	(6,804)	81,048	(655,117)	320,052
Property, plant and equipment and intangible assets	3,706,967	-	286,280	19	(130,640)	3,862,626
Total assets	₩ 11,779,670	₩ -	₩ 327,318	₩ 12,044	₩ (200,512)	₩ 11,918,522
Total liabilities	₩ 8,011,169	₩ -	₩ 103,912	₩ 132,502	₩ (169,283)	₩ 8,078,300

(in millions of Korean won)	2017					
	Domestic	Romania	China	USA and Others	Consolidation adjustment	Total after adjustment
Sales	₩ 11,216,209	₩ 261,026	₩ 139,082	₩ 1,344	₩ (515,843)	₩ 11,101,818
Gross profit (loss)	1,541,745	(24,238)	23,099	(689)	4,170	1,544,087
Operating profit (loss)	739,602	(33,844)	12,676	(7,048)	21,617	733,003
Depreciation	116,223	13,602	19,416	277	(426)	149,092
Amortization	2,014	444	831	26	-	3,315
Profit (loss) for the year	749,343	55,163	2,739	(48,436)	(113,051)	645,758

**Daewoo Shipbuilding & Marine Engineering Co., Ltd. and Subsidiaries**  
**Notes to the Consolidated Financial Statements**  
**December 31, 2018 and 2017**

---

Property, plant and equipment and intangible assets	3,738,191	139,884	307,602	1,314	(146,249)	4,040,742
Total assets	₩ 11,030,999	₩ 205,322	₩ 340,180	₩ 102,499	₩ (232,247)	₩ 11,446,753
Total liabilities	₩ 8,283,290	₩ 991,678	₩ 108,869	₩ 455,425	₩ (1,383,170)	₩ 8,456,092

The major customers who account for more than 10% of the Group's revenue are two (2017: one) customers and their revenues amount to ₩ 2,555,866 million and ₩ 1,338,690 million for the year ended December 31, 2018 and 2017, respectively.

#### **43. Create Self-Help Plan to Stabilize Financial Position of the Group**

The Group entered into an agreement with the creditor bank on November 9, 2015 in order to handle the deterioration of financial situation from cumulative operating loss occurred for the following reasons.

1) Increase in total contract costs due to delays in offshore projects and recognition of provisions for delays in deliveries.

Total contract costs reflected continuous delays in the progress of the offshore projects compared to the plan and as a consequence additional loss has been recognized. In addition, the Group recognized provisions for delay as the Group believes that it is probable that the actual project delivery date may be made after the contractual delivery date due to delay in progress.

2) Recognition of provisions for impairment by assessing the collectability of the amounts due from customers as credit ratings of customers declined.

Customers, who are facing financial difficulties due to prolonged decline of global oil prices, have requested for delivery delay of drill ship. The Group recognized provision for impairment taking into account collectability of the amounts due from customers.

3) Impairment loss on assets including PPE, investments in subsidiaries in consideration of decrease in the sales volume of the Group and deterioration in market condition.

During the year ended December 31, 2017, the Group recognized impairment losses on property, plant and equipment, intangible assets, and investment properties of ₩ 627,265 million (including decrease of revaluation surplus of ₩ 86,305 million) due to the Group's decrease in sales volume and deterioration of market conditions(Note 16). Also, the Group has prompted restructure of its business to stabilize its financial position. During the year ended December 31, 2017, the Group completed disposal of investment in DSEC Co., Ltd., DSME Construction Co., Ltd., Welliv Corp, DW Mangalia Heavy Industries S.A. and PT.DSME ENR CEPU and others. On June 28, 2017 and August 21, 2017, the major creditor bank's management procedure began for Shinhan Heavy Industries Co., Ltd. and Samwoo Heavy Industry Co., Ltd., the Group's subsidiaries, and the Group reclassified these subsidiaries as associates as it lost its control over them due to the agreement with its major creditor bank.

Meanwhile, the Group is consistently enhancing self-supporting efforts in accordance with the agreement with the creditor bank to perform business stabilization plan. This agreement includes new capital supports, financial structure improvement (disposal of un-core assets including Magok District, cost reduction and others) and enhancement of its competitiveness for mid/long-term period through capital injection plan and others.

The financial statements have been accounted for on the assumption that assets and liabilities can be recovered or repaid at book amounts through the normal business activities. There is a

**Daewoo Shipbuilding & Marine Engineering Co., Ltd. and Subsidiaries**  
**Notes to the Consolidated Financial Statements**  
**December 31, 2018 and 2017**

possibility that the financial condition and business performance will fluctuate greatly depending on the shipbuilding market condition. To improve financial structure, the Group and bond holders agreed to the debt restructuring that includes debt-to-equity swap of 50% or more of existing corporate bonds and CP, and extending the maturity and decreasing interest rate for the rest of remaining bonds through bondholders' meeting and amendment of CP contract for terms and conditions of issuing, respectively, during April, 2017. Accordingly, the Group is in the process of debt restructuring and debt-to-equity swap. In addition on June 28, 2017, the Creditor Financial Institutions (such as Korea Development Bank and other financial institutions) executed debt adjustments which includes debt-to-equity swap and maturity extension, and new capital support up to ₩ 2.9 trillion from KDB and KEXIM Bank is in progress (see Note 44). Meanwhile, KDB and KEXIM Bank pledged to provide new capital support to DSME until the repayment date of the remaining bonds after the debt-to-equity swap and to use the reserved portion of the new funds for remaining bonds first.

#### **44. Debt Restructuring**

Since the announcement of the "DSME Restructuring Promotion Plan" for prompt normalization of management of the Group during March, 2017, the Group agreed to the debt restructuring that includes the debt-for-equity swap, maturity extension and interest rate changes for unsecured bonds held by financial institutions, unsecured and bearer bonds (4-2, 5-2, 6-1, 6-2 and 7th) and commercial paper (CP). This debt restructuring agreement was made based on mutual consent of creditor financial institutions, resolution of the bondholders' meeting and amended CP contract.

44.1 Details of debt restructuring are as follows:

<i>(in millions of Korean won)</i>	Amount subject to debt restructuring		Debt to equity swaps		Change in terms		Others	
Short-term borrowings <sup>1,4,5</sup>	₩	1,695,039	₩	1,529,533	₩	165,058	₩	448
Debentures <sup>2</sup>		1,350,000		711,066		638,934		-
Commercial papers		194,578		97,289		97,289		-
Long-term borrowings <sup>3,4</sup>		680,673		680,653		-		20
	₩	3,920,290	₩	3,018,541	₩	901,281	₩	468

<sup>1</sup> Short-term borrowings in foreign currencies that are subject to debt restructuring and change in terms are debt amounts as at June 29, 2017. Short-term borrowings include ₩ 80 billion of borrowings recognized on July 3, 2017, of which ₩ 64 billion was restructured during the fourth quarter of 2017. In addition, short-term borrowings include ₩ 86,275 million of borrowings which were taken over as the original debtor failed to repay loan regarding guarantee liabilities for subsidiaries and associates on January 31, 2018, of which debt-to-equity swap, conversion to perpetual bond, and change in terms were executed during the first quarter of 2018.

<sup>2</sup> Debt-to-equity swap of bonds was executed on August 12, 2017, December 22, 2017, and March 15, 2018. In addition, 50.4% of bonds held by other creditors were restructured (17,474,086 shares) except for the Korean Development Bank's bonds (7th bond amounting to ₩ 50 billion) which is subject to 100% debt to equity swap.

<sup>3</sup> There is a difference of ₩ 20 million between long-term borrowings subject to debt restructuring and debt-to-equity swap. The difference is cash repayments.

<sup>4</sup> In 2017, the KEXIM's unsecured debt of ₩ 1,284,775 million (short-term borrowings of ₩ 724,042 million and long-term borrowings of ₩ 560,733 million) was offset by issuing the same amount of convertible bonds. In 2018, the KEXIM's unsecured debt of ₩ 48,057 million was offset

**Daewoo Shipbuilding & Marine Engineering Co., Ltd. and Subsidiaries**  
**Notes to the Consolidated Financial Statements**  
**December 31, 2018 and 2017**

by issuing the same amount of convertible bonds(Note 30).

<sup>5</sup> The amount has occurred due to differences in exchange rates among the date of initial recognition of the borrowings in foreign currency subject to debt restructuring, the date of debt-to-equity swap, and the period-end date of December 31, 2018.

As a result of the aforementioned debt restructuring agreement, the Group issued new shares through a third-party allotment on June 29, 2017 (as at the date of payment) by debt-to-equity swap of creditor bank's unsecured bonds. In addition, further debt-to-equity swaps for ₩ 799,124 million of corporate bonds(1<sup>st</sup>) and CP in August 12, 2017, for ₩ 65,669 million of corporate bonds(2<sup>nd</sup>) and creditor bank in December 22, 2017, and for ₩ 13,170 million of corporate bonds(3<sup>rd</sup>) and creditor bank in March 15, 2018 were executed.

#### 44.2 Debt-to-equity swaps and changes in terms

##### i) Debt to equity swaps

	Details
Number of shares	41,775,998 shares <sup>1</sup>
Types of share issued	Ordinary shares
Issue price	₩ 40,350
Sale restrictions	None

<sup>1</sup> 147,206 shares (assuming conversion rate of 50%) which was not converted to equity during the period ended December 31, 2018, were recognized as other paid-in capital.

##### ii) Debt grace period

<i>(in millions of Korean won)</i>	Public offering bonds (including CP)	Unsecured borrowings
Debt in the grace period	₩ 736,223	₩ 165,059
Grace period	6 years	10 years
Payment method	3 years grace period, Installment over 3 years	5 years grace period, Installment over 5 years

##### iii) Change of interest rate and treatment of delinquent interest payment

<i>(in millions of Korean won)</i>	Public offering bonds (including CP)	Unsecured borrowings
Target bond	₩ 736,223	₩ 165,059
Effective interest rate	1%	1%
Applicable period	6 years	10 years

#### 44.3 The effects of debt to equity swaps and debt restructuring

For the year ended December 31, 2018, the Group recognized ₩ 10 million of gain on debt restructuring as finance income in relation to the above-mentioned debt-to-equity swaps and debt restructuring.

**Daewoo Shipbuilding & Marine Engineering Co., Ltd. and Subsidiaries**  
**Notes to the Consolidated Financial Statements**  
**December 31, 2018 and 2017**

**45. Changes in Accounting Policies**

**45.1 Impacts of the changes in accounting policies on the financial statements**

The impact on the statement of financial position at the date of initial application is as follows:

(in millions of Korean won)	December 31, 2017 (before adjustments)	Adjustments			January 1, 2018 (after adjustments)
		Korean IFRS 1109	Korean IFRS 1115	Total	
Trade and other receivables	₩ 625,987	₩ -	₩ -	₩ -	₩ 625,987
Contract assets	-	-	4,291,696	4,291,696	4,291,696
Due from customers for contract work	4,089,030	-	(4,089,030)	(4,089,030)	-
Inventories	743,359	-	-	-	743,359
Financial assets	923,892	-	-	-	923,892
Others	5,064,485	-	-	-	5,064,485
<b>Total assets</b>	<b>₩ 11,446,753</b>	<b>₩ -</b>	<b>₩ 202,666</b>	<b>₩ 202,666</b>	<b>₩ 11,747,158</b>
Trade and other payables	₩ 1,209,129	₩ -	₩ -	₩ -	₩ 1,209,129
Contract liabilities	-	-	2,047,338	2,047,338	2,047,338
Due to customers for contract work	2,354,607	-	(2,354,607)	(2,354,607)	-
Provisions	693,822	-	457,857	457,857	1,151,679
Financial liabilities	3,766,140	-	-	-	3,766,140
Others	432,393	-	-	-	432,393
<b>Total liabilities</b>	<b>8,456,091</b>	<b>-</b>	<b>150,588</b>	<b>150,588</b>	<b>8,606,679</b>
Retained earnings	(92,163)	11,842	52,080	63,923	(28,240)
Others	3,082,825	(11,842)	-	(11,842)	3,070,983
<b>Total equity</b>	<b>₩ 2,990,662</b>	<b>₩ -</b>	<b>₩ 52,080</b>	<b>₩ 52,080</b>	<b>₩ 3,042,742</b>



**Daewoo Shipbuilding & Marine Engineering Co., Ltd. and Subsidiaries**  
**Notes to the Consolidated Financial Statements**  
**December 31, 2018 and 2017**

**45.2 Adoption of Korean IFRS 1109 *Financial Instruments***

As explained in Note 2, the Group has applied Korean IFRS 1109 *Financial Instruments* from January 1, 2018. In accordance with the transitional provisions in Korean IFRS 1109, comparative figures have not been restated. The significant changes in accounting policies from the application of Korean IFRS 1109 and the impacts of the changes on the financial statements are as follows.

*(a) Classification and Measurement of Financial Instruments*

The total impact on the Group's retained earnings due to classification and measurement of financial instruments as at January 1, 2018, is as follows:

<i>(in millions of Korean won)</i>	Notes	January 1, 2018
Reclassification of available-for-sale securities to financial assets at fair value through other comprehensive income	(ii)	₩ 11,843
Adjustments to retained earnings from adoption of Korean IFRS 1109		11,843

On the date of initial application of Korean IFRS 1109, January 1, 2018, the Group's management has assessed which business models apply to the financial assets held by the Group and has classified its financial instruments into the appropriate Korean IFRS 1109 categories. The main effects resulting from this reclassification are as follows:

<i>(in millions of Korean won)</i>	Notes	Fair value through profit or loss (Financial assets at FVTPL in 2017)	Fair value through other comprehensive income (Available-for-sale financial assets in 2017)	Amortized cost (Held-to-maturity financial assets, loans and receivables in 2017)	Total
<b>Financial assets – January 1, 2018</b>					
Beginning balance – Korean IFRS 1039 <sup>1</sup>		₩ 31,377	₩ 52,085	₩ 5,417,671	₩ 5,501,133
Reclassification from available-for-sale financial assets to financial assets at fair value through profit or loss	(i)	12,454	(12,454)	-	-
Beginning balance - Korean IFRS 1109 <sup>1</sup>		₩ 43,831	₩ 39,631	₩ 5,417,671	₩ 5,501,133

**Daewoo Shipbuilding & Marine Engineering Co., Ltd. and Subsidiaries**  
**Notes to the Consolidated Financial Statements**  
**December 31, 2018 and 2017**

The impact on these changes on the Group's equity is as follows:

<i>(in millions of Korean won)</i>	Notes	Changes in the fair value of available-for-sale financial assets	Accumulated amount on valuation of financial assets at fair value through other comprehensive income	Effect on retained earnings
Beginning balance – Korean IFRS 1039		₩ 12,387	₩ -	₩ (92,163)
Reclassification of equity investments that are not held for trading from available-for-sale financial assets to financial assets at fair value through other comprehensive income		(12,387)	12,387	-
	(ii)	-	(11,843)	11,843
		(12,387)	544	11,843
Beginning balance - Korean IFRS 1109		₩ -	₩ 544	₩ (80,320)

<sup>1</sup> The beginning balance as at January 1, 2018, presented financial assets at FVTPL at financial assets at fair value through profit or loss, available-for-sale financial assets at fair value through other comprehensive income, and held-to-maturity investments and loans and receivables at amortized cost, respectively.

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

As at January 1, 2018, equity investments amounting to ₩ 12,453 million were reclassified from available-for-sale financial assets to financial assets at fair value through profit or loss. They do not meet the criteria to be classified as financial assets at amortized cost in accordance with Korean IFRS 1109, because their cash flows do not represent solely payments of principal and interest. Related accumulated other comprehensive income were not transferred from the available-for-sale financial assets to retained earnings on January 1, 2018.

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

The Group elected to present changes in the fair value of all its equity investments previously classified as available-for-sale financial assets, because these investments are not held for trading, in other comprehensive income. As a result, assets with a fair value of ₩ 39,631 million were reclassified from available-for-sale financial assets to financial assets at fair value through other comprehensive income. As at January 1, 2018, related accumulated other comprehensive income of ₩ 544 million will not be reclassified to profit or loss even if these assets are disposed of. Also, impairment loss on the equity investment of ₩ 11,843 million were reclassified from retained earnings to reserve for financial assets at fair value through other comprehensive income.

**Daewoo Shipbuilding & Marine Engineering Co., Ltd. and Subsidiaries**  
**Notes to the Consolidated Financial Statements**  
**December 31, 2018 and 2017**

(iii) Reclassifications of financial instruments on adoption of Korean IFRS 1109

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

(in millions of Korean won)	Measurement category		Carrying amount				
	Korean IFRS 1039	Korean IFRS 1109	Korean IFRS 1039		Korean IFRS 1109		Difference
Current financial assets							
Cash and cash equivalents	Loans and receivables	Amortized costs	₩	205,795	₩	205,795	₩
Short-term financial instruments	Loans and receivables	Amortized costs		82,504		82,504	
Currency forward assets held for trading	Financial assets at fair value through profit or loss	Fair value through profit or loss		31,377		31,377	
Short-term held-to-maturity financial assets	Held-to-maturity financial assets	Amortized cost		27		27	
Trade and other receivables	Loans and receivables	Amortized costs		442,749		442,749	
Due from customers for contract work	Loans and receivables	Amortized costs		4,089,030		4,089,030	
Non-current financial assets							
Long-term financial instruments	Loans and receivables	Amortized costs	₩	414,024	₩	414,024	₩
Currency forward assets held for trading	Financial assets at fair value through profit or loss	Fair value through profit or loss		-		-	
Trade and other receivables	Loans and receivables	Amortized costs		183,238		183,238	
Government bonds and public bonds	Held-to-maturity financial assets	Amortized costs		305		305	
Listed and non-listed securities, beneficiary securities	Available-for-sale financial assets	Fair value through other comprehensive income				39,631	
					52,085		
Equity investments and beneficiary certificates		Fair value through profit or loss				12,454	
Current financial liabilities							
Short-term borrowings	Other financial liabilities	Amortized costs	₩	2,046,503	₩	2,046,503	₩
Currency forward liabilities held for trading	Financial liabilities at fair value through profit or loss	Fair value through profit or loss		42,724		42,724	
Financial liabilities designated at fair value through profit or loss							
Trade and other payables	Other financial liabilities	Amortized costs		1,072,984		1,072,984	
Current portion of long-term borrowings	Other financial liabilities	Amortized costs		460,882		460,882	
Non-current financial liabilities							
Trade and other payables	Other financial liabilities	Amortized costs	₩	136,145	₩	136,145	₩
Financial guarantee liabilities	Other financial liabilities	Amortized costs		1,472		1,472	

**Daewoo Shipbuilding & Marine Engineering Co., Ltd. and Subsidiaries**  
**Notes to the Consolidated Financial Statements**  
**December 31, 2018 and 2017**

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Debentures	Other financial liabilities	Amortized costs	530,661	530,661	-
Long-term borrowings	Other financial liabilities	Amortized costs	673,611	673,611	-

*(b) Impairment of Financial Assets*

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

- trade receivables and contract assets,
- debt investments carried at amortized cost, and
- debt investments carried at fair value through other comprehensive income

Upon adoption of Korean IFRS 1109, accounting policies for recognition of impairment have changed. There is no impact of the change in impairment methodology on the Group's beginning balance of retained earnings.

*(i) Trade receivables and contract assets*

The Group applies the simplified approach to measure the loss allowance at an amount equal to lifetime expected credit losses for trade receivables and contract assets.

*(ii) Debt instruments*

Debt investments at amortized cost and those at fair value through other comprehensive income are considered to be low risk, and thus the provision for impairment is determined as 12 months expected credit losses. But, if the credit risk increases significantly or the credit is impaired after initial recognition, the provision for impairment is recognized at an amount equal to lifetime expected credit losses.

*(c) Hedge Accounting*

The foreign exchange forward contract as at December 31, 2018 qualified as fair value hedges under Korean IFRS 1109. The Group's risk management strategies and hedge documentation are aligned with the requirements of Korean IFRS 1109 and are thus continuously accounting for using hedging accounting.

**Daewoo Shipbuilding & Marine Engineering Co., Ltd. and Subsidiaries**  
**Notes to the Consolidated Financial Statements**  
**December 31, 2018 and 2017**

**45.3 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 application of Korean IFRS 1115 has impact on the financial statements as follows.

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

	December 31, 2017				January 1, 2018	
(in millions of Korean won)	(before adjustments)		Reclassification	Remeasurement	Total	(after adjustments)
Trade and other receivables	₩	625,987	₩ -	₩ -	₩ -	₩ 625,987
Contract assets <sup>1, 2</sup>		-	4,388,339	(96,643)	4,291,696	4,291,696
Due from customers for contract work <sup>1, 2</sup>		4,089,030	(4,089,030)	-	(4,089,030)	-
Inventories		743,359	-	-	-	743,359
Financial assets		923,892	-	-	-	923,892
Others <sup>1</sup>		5,064,485	-	-	-	5,064,485
<b>Total assets</b>		<b>11,446,753</b>	<b>299,309</b>	<b>(96,643)</b>	<b>202,666</b>	<b>11,649,419</b>
Trade and other payables		1,209,129	-	-	-	1,209,129
Contract liabilities <sup>1</sup>		-	2,047,336	-	2,047,336	2,047,336
Due to customers for contract work <sup>1, 2</sup>		2,354,607	(2,354,607)	-	(2,354,607)	-
Provisions <sup>2</sup>		693,822	606,581	(148,724)	457,857	1,151,679
Financial liabilities		3,766,140	-	-	-	3,766,140
Others <sup>1</sup>		432,393	-	-	-	432,393
<b>Total liabilities</b>		<b>8,456,091</b>	<b>299,310</b>	<b>(148,724)</b>	<b>150,586</b>	<b>8,606,677</b>
Retained earnings <sup>2</sup>		(92,163)	-	52,081	52,081	(40,082)
Others		3,082,825	-	-	-	3,082,825
<b>Total equity</b>	₩	<b>2,990,662</b>	₩ -	₩ 52,081	₩ 52,081	₩ 3,042,743

<sup>1</sup> Presentation of contract assets and contract liabilities

As at January 1, 2018, the Group has also voluntarily changed the presentation of accounts in the statements of financial position to reflect the terminology of Korean IFRS 1115:

- As at January 1, 2018, due from customers for contract work amounting to ₩4,089,030 million were reclassified to contract assets and provision for construction loss.
- As at January 1, 2018, due to customers for contract work amounting to ₩2,354,607 million were reclassified to contract liabilities and provision for construction loss.

Meanwhile, provision for construction loss, which was adjusted at due from customers for contract work or due to customers for contract work under previous standard of revenue, was reclassified to provision.

**Daewoo Shipbuilding & Marine Engineering Co., Ltd. and Subsidiaries**  
**Notes to the Consolidated Financial Statements**  
**December 31, 2018 and 2017**

<sup>2</sup> Significant financing component and provision for construction loss

Under previous standard of revenue, financing costs were included in the measurement of provision for construction loss since financing costs satisfy the definition of contract costs. But under Korean IFRS 1115, the Group adjusts significant financing component at contract earnings, and measures provision for construction loss by excluding the financing costs from the contract costs. Accordingly, provision for construction loss decreased by ₩ 148,724 million and the contract assets decreased by ₩ 96,643 million. The retained earnings increased by ₩ 52,081 million as a consequence.

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

(i) Statement of financial position

<i>(in millions of Korean won)</i>	<b>Reported amount</b>	<b>Reclassification</b>	<b>Remeasurement</b>	<b>Total</b>	<b>Amount before application of Korean IFRS 1115</b>
Trade and other receivables	₩ 902,775	₩ -	₩ -	₩ -	₩ 902,775
Contract assets	4,372,352	(4,372,352)	-	(4,372,352)	-
Due from customers for contract work	-	4,129,946	19,410	4,149,356	4,149,356
Inventories	1,345,634	-	-	-	1,345,634
Financial assets	903,022	-	-	-	903,022
Others	4,394,738	-	-	-	4,394,738
<b>Total assets</b>	<b>11,918,521</b>	<b>(242,406)</b>	<b>19,410</b>	<b>(222,996)</b>	<b>11,695,525</b>
Trade and other payables	1,148,962	-	-	-	1,148,962
Contract liabilities	1,871,290	(1,871,290)	-	(1,871,290)	-
Due to customers for contract work	-	1,949,913	184,954	2,134,867	2,134,867
Provisions	1,418,928	(535,561)	-	(535,561)	883,367
Financial liabilities	3,251,615	-	-	-	3,251,615
Others	387,504	214,532	-	214,532	602,036
<b>Total liabilities</b>	<b>8,078,299</b>	<b>(242,406)</b>	<b>184,954</b>	<b>(57,452)</b>	<b>8,020,847</b>
Retained earnings	647,004	-	(165,544)	(165,544)	481,460
Others	3,193,218	-	-	-	3,193,218
<b>Total equity</b>	<b>₩ 3,840,222</b>	<b>₩ -</b>	<b>₩ (165,544)</b>	<b>₩ (165,544)</b>	<b>₩ 3,674,678</b>

**Daewoo Shipbuilding & Marine Engineering Co., Ltd. and Subsidiaries**  
**Notes to the Consolidated Financial Statements**  
**December 31, 2018 and 2017**

(ii) Statement of profit or loss

<i>(in millions of Korean won)</i>	Reported amount		Adjustments	Amount before application of Korean IFRS 1115	
Sales	₩	9,644,384	₩	10,729	₩ 9,655,113
Cost of sales <sup>1</sup>		8,892,718		276,106	9,168,824
Gross profit		751,666		(265,377)	486,289
Selling and administrative expenses		(273,166)		-	(273,166)
Operating profit		1,024,832		(265,377)	759,455
Finance profit and loss <sup>1</sup>		(119,995)		126,388	6,393
Profit and loss from investment in associates and joint ventures		(497,791)		-	(497,791)
Foreign exchange gain and loss <sup>1</sup>		13,679		25,524	39,203
Other non-operating profit and loss		(53,018)		1	(53,017)
Profit before income tax expense		367,707		(113,464)	254,243
Income tax expense		47,655		-	47,655
Profit for the year	₩	320,052	₩	(113,464)	₩ 206,588

<sup>1</sup> Presentation of financing costs

Under previous standard of revenue, the Group classified financing costs as cost of sale since financing costs satisfy the definition of contract costs. But under Korean IFRS 1115, the Group judged that financing costs shall not be included in contract costs and ship under construction does not satisfy the definition of a qualifying asset under Korean IFRS 1023. Therefore, the Group classified financing costs as finance loss. Due to this effect, if the Group does not apply Korean IFRS 1115, cost of sales will increase and finance cost will decrease.

(iii) Statement of cash flows

<i>(in millions of Korean won)</i>	Reported amount		Adjustments		Amount before application of Korean IFRS 1115
Profit for the year	₩	320,052	₩	(113,464)	₩ 206,588
Adjustments		605,947		(151,913)	454,034
Changes in operating assets and liabilities		<u>(113,123)</u>		<u>265,377</u>	<u>152,254</u>
Cash generated from operations	₩	812,876	₩	-	₩ 812,876

Upon application of Korean IFRS 1115, cash flows have changed compared to cash flows prepared under previous standard as a result of a decrease in profit for the year of ₩ 113,464 million. However, due to a decrease in adjustments without cash flows of ₩ 151,913 million and an increase in operating assets and liabilities of ₩ 265,377 million, net cash generated from operations is identical to that of the previous standard.

**Daewoo Shipbuilding & Marine Engineering Co., Ltd. and Subsidiaries**  
**Notes to the Consolidated Financial Statements**  
**December 31, 2018 and 2017**

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**46. Events After the Reporting Period**

The Group decided to issue 42,750,877 ordinary shares with the resolution of the Group's Board of Directors on January 31, 2019. This capital increase with consideration will be executed according to the basic agreements entered among Hyundai Heavy Industries Co., Ltd. (HHIC), Hyundai Heavy Industries Holdings Co., Ltd. and the Korean Development Bank (KDB) on January 31, 2019, as well as the new share subscription agreement entered between the Group and HHIC on the same date, in relation to the sale of the Group's shares held by KDB, the Group's largest shareholder.

This capital increase is expected to be executed when certain conditions are satisfied such as the approval from the Fair Trade Commission (including overseas related agencies) and the approvals from KDB and HHIC on the business combination based on the in-kind contribution agreement. In addition, the contract may be terminated at the commencement of the rehabilitation or bankruptcy procedure in accordance with the Act on the Debtor Rehabilitation and Bankruptcy.