1 Consolidated financial statements

(1) Consolidated statement of financial position

As of December 31, 2018 and 2017

(Millions of yen)

	Note	2018	2017
Assets			
Current assets			
Cash and cash equivalents	6	54,039	44,121
Trade receivables	7,20	74,952	76,874
Contract assets	22	1,650	―
Other receivables	7	1,643	1,216
Inventories	8	43,592	40,298
Other financial assets	20	280	190
Other current assets		2,969	2,996
Total current assets		179,124	165,695
Non-current assets			
Property, plant and equipment	9,11	80,573	70,700
Intangible assets	10,11	5,076	5,850
Goodwill	10,11	15,512	21,310
Investment property	13	5,382	5,404
Investments accounted for using the equity method	14	29,641	20,184
Other financial assets	20	9,558	8,547
Deferred tax assets	19	2,012	1,633
Other non-current assets		1,690	2,236
Total non-current assets		149,443	135,863
Total assets		328,568	301,557

(Millions of yen)

	Note	2018	2017
Liabilities and equity			
Liabilities			
Current liabilities			
Trade payables	15,20	50,297	57,148
Contract liabilities	22	5,232	─
Bonds and borrowings	17,20	34,067	16,365
Other payables	15,20	11,809	12,492
Income taxes payable		3,479	4,550
Provisions	16	1,625	732
Other financial liabilities	20	─	7
Other current liabilities		6,048	5,641
Total current liabilities		112,558	96,934
Non-current liabilities			
Bonds and borrowings	17,20	11,243	11,355
Net defined benefit liability	18	9,142	9,339
Deferred tax liabilities	19	4,881	4,801
Other non-current liabilities		1,490	2,127
Total non-current liabilities		26,755	27,621
Total liabilities		139,313	124,556
Equity			
Share capital	21	10,000	10,000
Share premium	21	15,096	14,956
Retained earnings	21	155,133	143,349
Treasury shares	21	(2,903)	(3,600)
Other components of equity	21	1,377	2,831
Equity attributable to owners of the parent		178,702	167,537
Non-controlling interests		10,553	9,465
Total equity		189,255	177,002
Total liabilities and equity		328,568	301,557

(2) Consolidated statement of profit or loss

For the years ended December 31, 2018 and 2017

(Millions of yen)

	Note	2018	2017
Net sales	5,22	294,626	282,422
Cost of sales	23	(215,043)	(201,982)
Gross profit		79,583	80,440
Other income	24	1,582	1,351
Selling, general and administrative expenses	23	(53,184)	(51,285)
Other expenses	24	(6,093)	(1,038)
Operating profit	5	21,889	29,468
Finance income	25	366	632
Finance costs	25	(1,473)	(109)
Share of profit of investments accounted for using the equity method	14	9,181	4,915
Profit before tax		29,962	34,907
Income tax expense	19	(6,997)	(8,338)
Profit for the year		22,965	26,569

Profit for the year attributable to			
Owners of the parent		21,029	25,146
Non-controlling interests		1,935	1,423
Profit for the year		22,965	26,569

Earnings per share			
Basic earnings per share (yen)	27	169.65	203.85
Diluted earnings per share (yen)	27	169.42	203.48

(3) Consolidated statement of comprehensive income

For the years ended December 31, 2018 and 2017

(Millions of yen)

	Note	2018	2017
Profit for the year		22,965	26,569
Other comprehensive income for the year			
Items that will not be reclassified to profit or loss			
Remeasurements of net defined benefit liabilities (assets)	21	(18)	180
Net changes in financial assets measured at fair value through other comprehensive income	21	(16)	419
Share of other comprehensive income of investments accounted for using the equity method	14,21	677	19
Total items that will not be reclassified to profit or loss		643	618
Items that may be reclassified subsequently to profit or loss			
Exchange differences on translating foreign operations	21	(2,628)	2,278
Total items that may be reclassified subsequently to profit or loss		(2,628)	2,278
Total other comprehensive income for the year, net of tax		(1,984)	2,896
Total comprehensive income for the year		20,980	29,464

Comprehensive income attributable to			
Owners of the parent		19,552	27,761
Non-controlling interests		1,428	1,704
Total comprehensive income for the year		20,980	29,464

(4) Consolidated statement of changes in equity

For the years ended December 31, 2018 and 2017

2018

(Millions of yen)

	Note	Share capital	Share premium	Retained earnings	Treasury shares	Other components of equity	
						Exchange differences on translating foreign operations	Valuation differences due to changes in fair value
Balance as of January 1, 2018		10,000	14,956	143,349	(3,600)	(773)	3,604
Profit for the year		–	–	21,029	–	–	–
Other comprehensive income for the year	21	–	–	–	–	(2,114)	640
Total comprehensive income for the year		–	–	21,029	–	(2,114)	640
Acquisition (disposal) of treasury shares and others, net	21	–	–	(30)	200	–	–
Dividends	21	–	–	(9,193)	–	–	–
Transfer from other components of equity to retained earnings		–	–	(23)	–	–	20
Share-based payment transactions	26	–	140	–	–	–	–
Others	21	–	–	–	496	–	–
Total transactions with owners and others		–	140	(9,246)	697	–	20
Balance as of December 31, 2018		10,000	15,096	155,133	(2,903)	(2,887)	4,264

	Note	Other components of equity		Total equity attributable to owners of the parent	Non-controlling interests	Total equity
		Remeasurements of net defined benefit liabilities (assets)	Total			
Balance as of January 1, 2018		–	2,831	167,537	9,465	177,002
Profit for the year		–	–	21,029	1,935	22,965
Other comprehensive income for the year	21	(3)	(1,477)	(1,477)	(507)	(1,984)
Total comprehensive income for the year		(3)	(1,477)	19,552	1,428	20,980
Acquisition (disposal) of treasury shares and others, net	21	–	–	170	–	170
Dividends	21	–	–	(9,193)	(340)	(9,533)
Transfer from other components of equity to retained earnings		3	23	–	–	–
Share-based payment transactions	26	–	–	140	–	140
Others	27	–	–	496	–	496
Total transactions with owners and others		3	23	(8,387)	(340)	(8,727)
Balance as of December 31, 2018		–	1,377	178,702	10,553	189,255

2017

(Millions of yen)

	Note	Share capital	Share premium	Retained earnings	Treasury shares	Other components of equity	
						Exchange differences on translating foreign operations	Valuation differences due to changes in fair value
Balance as of January 1, 2017		10,000	14,703	125,493	(2,649)	(2,788)	3,169
Profit for the year		–	–	25,146	–	–	–
Other comprehensive income for the year	21	–	–	–	–	2,015	448
Total comprehensive income for the year		–	–	25,146	–	2,015	448
Acquisition (disposal) of treasury shares and others, net	21	–	–	(4)	(951)	–	–
Acquisition (disposal) of non-controlling interests and others, net		–	–	–	–	–	–
Dividends	21	–	–	(7,452)	–	–	–
Transfer from other components of equity to retained earnings		–	–	166	–	–	(14)
Share-based payment transactions	26	–	253	–	–	–	–
Total transactions with owners and others		–	253	(7,290)	(951)	–	(14)
Balance as of December 31, 2017		10,000	14,956	143,349	(3,600)	(773)	3,604

	Note	Other components of equity		Total equity attributable to owners of the parent	Non-controlling interests	Total equity
		Remeasurements of net defined benefit liabilities (assets)	Total			
Balance as of January 1, 2017		–	382	147,929	7,974	155,904
Profit for the year		–	–	25,146	1,423	26,569
Other comprehensive income for the year	21	152	2,615	2,615	281	2,896
Total comprehensive income for the year		152	2,615	27,761	1,704	29,464
Acquisition (disposal) of treasury shares and others, net	21	–	–	(955)	–	(955)
Acquisition (disposal) of non-controlling interests and others, net		–	–	–	51	51
Dividends	21	–	–	(7,452)	(264)	(7,715)
Transfer from other components of equity to retained earnings		(152)	(166)	–	–	–
Share-based payment transactions	26	–	–	253	–	253
Total transactions with owners and others		(152)	(166)	(8,154)	(213)	(8,367)
Balance as of December 31, 2017		–	2,831	167,537	9,465	177,002

(5) Consolidated statement of cash flows

For the years ended December 31, 2018 and 2017

(Millions of yen)

	Note	2018	2017
Cash flows from operating activities			
Profit for the year		22,965	26,569
Depreciation and amortization		10,011	8,974
Impairment losses	11	5,223	192
Increase (decrease) in net defined benefit assets and liabilities		180	336
Interest and dividends income		(259)	(185)
Interest expenses		124	109
Share of (profit) loss of investments accounted for using the equity method		(9,181)	(4,915)
Loss (gain) on sale and disposal of property, plant and equipment		185	294
Income tax expense		6,997	8,338
Decrease (increase) in trade receivables		(1,496)	(9,681)
Decrease (increase) in inventories		(4,454)	(5,735)
Increase (decrease) in trade payables		22	7,904
Others		104	(60)
Sub-total		30,421	32,140
Interest and dividends received		1,190	888
Interest paid		(112)	(171)
Income tax paid		(7,335)	(9,786)
Net cash provided by operating activities		24,165	23,071

(Millions of yen)

	Note	2018	2017
Cash flows from investing activities			
Decrease (increase) in time deposits		(73)	(0)
Purchase of property, plant and equipment		(20,650)	(11,375)
Proceeds from sales of property, plant and equipment		168	193
Purchase of intangible assets		(840)	(818)
Purchase of investments in subsidiaries resulting in change in scope of consolidation		–	(8,203)
Purchase of share options		(626)	–
Others		198	17
Net cash used in investing activities		(21,823)	(20,186)
Cash flows from financing activities			
Net increase (decrease) in short-term borrowings	17	18,023	7,474
Proceeds from long-term borrowings	17	130	471
Repayment of long-term borrowings	17	(249)	(198)
Net decrease (increase) in treasury shares		17	(987)
Dividends paid	21	(9,184)	(7,447)
Dividends paid to non-controlling interests		(340)	(264)
Net cash used in financing activities		8,396	(950)
Net increase in cash and cash equivalents		10,739	1,934
Cash and cash equivalents at the beginning of the year	6	44,121	41,780
Effect of exchange rate changes on cash and cash equivalents		(821)	407
Cash and cash equivalents at the end of the year	6	54,039	44,121

Notes to consolidated financial statements

1. Reporting entity

Nabtesco Corporation (the “Company”) is an entity domiciled in Japan. The Company’s consolidated financial statements for the year ended December 31, 2018 comprise the financial statements of the Company and its subsidiaries (the “Group”) and the equity interests in associates. The Group’s principal businesses are “Component Solutions Business”, “Transport Solutions Business” and “Accessibility Solutions Business”. The details are described in “Note 5. Business segments”.

2. Basis of preparation

(1) Compliance with IFRS

The consolidated financial statements have been prepared in accordance with International Financial Reporting Standards (“IFRS”).

The accompanying consolidated financial statements were authorized by the Company's Board of Directors on March 26, 2019.

(2) Basis of measurement

As described in “Note 3. Significant accounting policies”, the Group’s consolidated financial statements have been prepared based on historical cost, except for certain items, such as financial instruments measured at fair value.

(3) Functional currency and presentation currency

The Group’s consolidated financial statements are presented in Japanese yen, which is the Company’s functional currency.

3. Significant accounting policies

The significant accounting policies are consistently applied, unless specifically stated, to all the periods presented in the consolidated financial statements.

(1) Basis of consolidation

1) Subsidiaries

Subsidiaries are entities controlled by the Group. The financial statements of subsidiaries are included in the Group's consolidated financial statements from the date on which the Group obtains control of the subsidiary and until the date on which control is lost. The accounting policies of subsidiaries have been adjusted to conform to the accounting policies adopted by the Group, as necessary.

Changes in the Group's ownership interest in a subsidiary that do not result in a loss of control are accounted for as equity transactions. Any difference between the adjusted non-controlling interests and the fair value of consideration is recognized as equity attributable to owners of the parent.

Intra-group balances of receivables and payables, intra-group transactions, and unrealized gains and losses arising from intra-group transactions are eliminated in preparing the consolidated financial statements.

A subsidiary with a different reporting date is consolidated based on its provisional financial statements at the consolidated reporting date.

2) Investments in associates

Associates are entities over which the Group has a significant influence, but not control, on the financial and operating policies. If the Group holds 20% or more of the voting rights of another entity, the Group is presumed to have significant influence over the entity.

Investments in associates are accounted for using the equity method and are recognized at cost on acquisition. Under the equity method, any difference between the cost of the investment on the investment date and the Group’s share of the net fair value of the investee’s identifiable assets and liabilities is included in the carrying amount of the investment as goodwill.

In the consolidated financial statements, the carrying amount of the investment is adjusted to recognize the Group’s share of the profit or loss and other comprehensive income of the associate during the period from the date on which the Group has a significant influence until the date on which it loses such influence.

The Group’s share of losses of an associate is recorded in profit or loss to the extent of the Group’s interest in the associate. Any further loss is not recognized except when the Group incurs legal or constructive obligations or makes payments on behalf of the associate.

In applying the equity method, necessary adjustments are made to align the accounting policies of the associates accounted for using the equity method with the Group’s accounting policies. For certain associates accounted for using the equity method, it is impracticable to conform their reporting dates to the Group’s reporting date mainly due to the relationships with other owners of the associates. The consolidated financial statements, therefore include investments in such associates whose reporting dates differ from the Group’s reporting date. Adjustments are made for significant transactions or events that occurred between the reporting date of the associates accounted for using the equity method and that of the Group. Reporting date of the associates accounted for using the equity method is mainly March 31.

Unrealized gains arising from transactions with associates accounted for using the equity method are eliminated against the investment to the extent of the Group’s interest in the investees.

(2) Business combinations

Business combinations are accounted for using the acquisition method. Identifiable assets and liabilities of an acquiree are measured at fair value at the date of acquisition.

Goodwill is measured as the excess of the aggregate of the consideration transferred in a business combination, the amount of any non-controlling interest in the acquiree and the fair value of the acquirer's previously held equity interest in the acquiree, over the net amount of identifiable assets and liabilities at the date of acquisition.

Acquisition-related costs are expensed in the periods in which they are incurred.

Regarding business combinations of entities under common control, the Company accounts for such transactions based on the carrying amounts prior to the occurrence of the transaction.

(3) Foreign currencies

1) Functional currencies and presentation currencies

The financial statements of Group entity are prepared using their functional currency, which is the currency of the primary economic environment in which the entity operates. The presentation currency of the Group's consolidated financial statements is Japanese yen, which is the Company's functional currency.

2) Transactions denominated in foreign currencies

Transactions denominated in foreign currencies are translated into the functional currency using the exchange rates at the date of the transaction. Monetary assets and liabilities denominated in foreign currencies at the end of the fiscal year are translated into the functional currency using the exchange rate at the end of the fiscal year.

Non-monetary assets and liabilities denominated in foreign currencies measured at historical cost are translated into the functional currency using the exchange rate at the dates of the transaction.

Non-monetary assets and liabilities denominated in foreign currencies measured at fair value are translated into the functional currency using the exchange rate at the date when the fair value was measured. Exchange differences arising from translations are recognized in profit or loss. However, exchange differences arising from the translations of financial instruments measured at fair value through other comprehensive income are recorded in other comprehensive income.

3) Foreign operations

The assets and liabilities of foreign operations are translated into Japanese yen using the exchange rate at the end of the fiscal year. The income and expenses of foreign operations are translated into Japanese yen using the average rate for the fiscal year, except for cases of significant exchange rate movements during the fiscal year.

Exchange differences in the financial statements of the foreign operations are recognized in other comprehensive income.

Exchange differences arising from the translation of financial statements of foreign operations are recorded in other components of equity. These exchange differences are reclassified to profit or loss when a foreign operation is disposed.

(4) Cash and cash equivalents

Cash and cash equivalents are composed of cash on hand, demand deposits and short-term investments that are readily convertible to cash and which are subject to an insignificant risk of changes in value with maturities of three months or less from the date of acquisition.

(5) Inventories

Inventories are measured at the lower of cost and net realizable value. The cost is determined mainly based on the weighted average method and includes costs of purchase, costs of production, costs of conversion and other costs incurred in bringing the inventories to their present location and condition.

Net realizable value is the estimated selling price in the ordinary course of business less the estimated costs of completion and the estimated costs necessary to make the sale.

(6) Financial instruments

1) Non-derivative financial assets

The Group initially recognizes financial assets at the transaction date when it becomes a party to the contract concerning the financial instruments.

Financial assets are initially measured at fair value. For financial assets that are not measured at fair value through profit or loss after initial recognition, transaction costs directly incurred for the acquisition of the financial assets are included in the amount initially measured.

(a) Financial assets measured at amortized cost

Financial assets are classified as measured at amortized cost if the following conditions are met:

- the financial asset is held within a business model whose objective is to hold financial assets in order to collect contractual cash flows; and
- the contractual terms of the financial asset give rise on specified dates to cash flows that are solely payments of principal and interest on the principal amount outstanding.

These financial assets are measured after initial recognition at amortized cost applying the effective interest method.

A loss allowance is recognized for expected credit losses on financial assets measured at amortized cost.

At the end of each fiscal year, the Group assesses whether there has been a significant increase in credit risk for financial assets by comparing the credit risk of such assets at the end of the fiscal year and at the date of initial recognition.

A loss allowance for financial assets is measured at an amount equal to the lifetime expected credit losses if the credit risk has increased significantly since initial recognition, or at an amount equal to 12-month expected credit losses if the credit risk of such assets has not increased significantly. However, notwithstanding the above, a loss allowance for trade receivables and contract assets that include no significant financing components is measured at an amount equal to the lifetime expected credit losses. Provision of the loss allowance for financial assets is recognized in profit or loss. In cases where an event to reduce the loss allowance occurs, the reversal of the loss allowance is recognized in profit or loss.

(b) Financial assets measured at fair value through other comprehensive income

The Group has elected to recognize changes in the fair value of equity instruments, in principle, in other comprehensive income at initial recognition unless the instrument is held for trading purposes. The Group designates those equity instruments as measured through other comprehensive income, and such designations are applied irrevocably and consistently. These financial assets are measured after initial recognition at fair value through other comprehensive income.

When the financial assets are sold, the cumulative gain or loss previously recognized in other comprehensive income is reclassified to retained earnings at the time of the sale. Dividends from the financial assets are recognized in profit or loss.

(c) Financial assets measured at fair value through profit or loss

Financial assets that do not fall into the category (a) or (b) above are classified as financial assets measured at fair value through profit or loss. These financial assets are measured after initial recognition at fair value through profit or loss.

The Group derecognizes financial assets when the contractual rights to the cash flows expire or are transferred, or when substantially all the risks and rewards of ownership are transferred.

2) Non-derivative financial liabilities

The Group initially recognizes debt securities issued by the Group at the date of issuance. All other financial liabilities are recognized at the transaction date when the Group becomes a party to the contract of the financial instruments.

The Group’s non-derivative financial liabilities, which are composed mainly of bonds and borrowings, are all classified as financial liabilities measured at amortized cost. Financial liabilities measured at amortized cost are measured initially at fair value plus or minus direct transaction costs and subsequently at amortized cost applying the effective interest method.

The Group derecognizes financial liabilities when the contractual obligation is discharged, cancelled or expired.

3) Derivative financial instruments

The Group mainly holds derivative financial instruments to avert and mitigate the risks from fluctuations in foreign exchange and interest rates.

Derivatives are initially recognized at fair value, and any related transaction costs are recognized in profit or loss as incurred. Derivatives instruments are measured after initial recognition at fair value through profit or loss.

(7) Property, plant and equipment

1) Recognition and measurement

Property, plant, and equipment are measured at cost less accumulated depreciation and accumulated impairment losses using the cost model.

The cost includes the following costs directly related to the acquisition of the asset:

- costs of employee benefits, installation and assembly costs arising directly from the production of the asset;
- estimated costs of dismantlement and removal when having an obligation to remove the asset; and
- capitalized borrowing costs

2) Depreciation

Property, plant and equipment are depreciated using the straight-line method over the estimated useful life of each item.

Depreciation is determined based on the depreciable amount, which is calculated as the cost of the asset less its residual value.

The estimated useful lives are as follows:

Buildings and structures:	3 to 50 years
Machinery, equipment and vehicles:	4 to 12 years
Tools, furniture and fixtures:	2 to 20 years

Depreciation methods, useful lives and residual values are reviewed at the end of each fiscal year and revised as necessary.

(8) Goodwill and intangible assets

1) Goodwill

The measurement at initial recognition is described in “(2) Business combinations”.

After initial recognition, goodwill is presented at cost less accumulated impairment losses. Goodwill is not subject to amortization but is tested for impairment each fiscal year and whenever there is an indication of impairment. Impairment losses for goodwill are not reversed.

2) Research and development costs

Expenditure on research activities with the aim of gaining new scientific or technological knowledge and understanding is recognized in profit or loss as incurred.

3) Other intangible assets

Other intangible assets are measured at cost less accumulated amortization and accumulated impairment losses using the cost model.

The cost of intangible assets recognized separately from goodwill in a business combination is measured at their fair value at the acquisition date.

Such assets are amortized using the straight-line method over their estimated useful lives from the date on which the assets are available for use.

Amortization is determined based on the depreciable amount, which is calculated as the cost of the asset less its residual value.

The estimated useful lives are as follows:

Software:	3 to 5 years
Customer related assets:	3 to 8 years
Technology assets:	7 to 20 years
Others:	8 to 20 years

Amortization methods, useful lives and residual values are reviewed at the end of each fiscal year and revised as necessary.

Intangible assets with indefinite useful lives are presented at cost less accumulated impairment losses. Such assets are not subject to amortization but are tested for impairment each fiscal year and whenever there is an indication that the intangible asset may be impaired.

(9) Investment property

Investment property is property held to earn rental income or for capital appreciation or both, which is measured and depreciated on the same basis as property, plant and equipment. The estimated useful lives of investment property are 5 - 50 years.

Depreciation methods, useful lives and residual values are reviewed at the end of each fiscal year and revised as necessary.

(10) Impairment of non-financial assets

At the end of each fiscal year, it is determined whether there is any indication of impairment for the carrying amount of the Group's non-financial assets other than inventories, deferred tax assets and assets for retirement benefits. If there is any indication of impairment, the recoverable amount of the asset is estimated.

The recoverable amount of an asset or cash-generating unit is the higher of its value in use and its fair value less costs of disposal. Value in use is determined by discounting estimated future cash flows to their present value using a pre-tax discount rate that reflects the time value of money and the risks specific to the asset.

An impairment loss is recognized for an asset or cash-generating unit when its carrying amount exceeds its recoverable amount.

At the end of each fiscal year, it is assessed whether there is any indication that an impairment loss recognized in prior years may have decreased or may no longer exist. If there are any changes in the estimates used to determine the recoverable amount, the impairment loss is reversed to the extent of the carrying amount less depreciation that would have been determined if no impairment loss had been recognized.

The accounting treatment for impairment losses related to goodwill is described in "(8) Goodwill and intangible assets, 1) Goodwill".

(11) Employee benefits

1) Post-employment benefits

The Group has adopted retirement lump-sum payment plans and pension plans as post-employment benefit plans for employees. These plans are classified as either defined contribution plans or defined benefit plans.

(a) Defined contribution plans

Post-employment benefit costs for defined contribution plans are recognized as an expense for the period during which employees render services.

(b) Defined benefit plans

For each defined benefit plan, the Group determines the present value of its defined benefit obligations and the related current service cost and past service cost using the projected unit credit method. A discount period is set based on the expected term until the future benefit payments, and the discount rate is determined by reference to market yields at the end of the fiscal year on high-quality corporate bonds that have a term consistent with the discount period. Net defined benefit liabilities are determined by deducting the fair value of any plan assets from the present value of the defined benefit obligation. Remeasurements of the net defined benefit assets or liabilities are recognized collectively in other comprehensive income and reclassified to retained earnings in the period during in which they are incurred.

2) Short-term employee benefits

Short-term employee benefits are recognized as an expense on an undiscounted basis when the related service is provided.

Bonuses are recognized as liabilities for the amount estimated to be paid in accordance with the applicable plans when the Group has present legal or constructive obligations to pay as a result of past labor rendered by employees, and the obligations can be reliably estimated.

(12) Provisions and contingent liabilities

Provisions are recognized when the Group has, as a result of past events, a present legal or constructive obligation that can be reasonably estimated, and the settlement of the obligation is likely to give rise to an outflow of economic resources. When the time value of money is material, provisions are measured by discounting the estimated future cash flows to the present value using a pre-tax discount rate that reflects the time value of money and the risks specific to the liability. The unwinding of the discount due to the passage of time is recognized as a finance cost.

To provide against the payment of costs, including repair costs that may be incurred after the delivery of products, the costs are estimated and recorded as a provision for product warranties.

To provide against future losses on contracts received, expected losses on the contracts received at the end of the fiscal year are separately estimated and recorded as a provision for loss on orders received.

The Group discloses contingent liabilities in the notes to consolidated financial statements if there are possible obligations at the end of the fiscal year, whose existence cannot be confirmed at that date, or if the obligations do not meet the recognition criteria for provisions.

(13) Shareholders' equity

1) Ordinary shares

Ordinary shares are classified as equity. Additional costs related directly to the issuance of ordinary shares and share options are recognized net of tax as a deduction from equity.

2) Treasury shares

When treasury shares is acquired, the consideration paid, which includes any direct transaction costs (net of tax), is recognized as a deduction from equity. When treasury shares is disposed of, the difference between the consideration received and the carrying amount of the treasury shares is recognized as equity.

3) Share-based payment transactions

(a) Share option plan

The Company had been implementing share-based payment-type share option plan until the end of March 2017, under which the right to purchase the Company's shares can be exercised, for the Company's directors and executive officers (excluding outside directors; hereinafter, the "Directors"). As the share options under the plan vest at the date when the share-based payment is granted, they are estimated at fair value at a grant date and recognized collectively as an expense while the corresponding amount is recognized as equity. The fair value of options granted is determined using the Black-Scholes model, taking into account the terms and conditions of the options. The Company abolished the plan in March 2017. However, the share options granted to the Directors that have not been exercised remain

(b) Board Benefit Trust (Share settlement-type)

The Company has introduced a Board Benefit Trust ("BBT") under which the Company grants its treasury shares to the Company's Directors through the trust from May 2017. In the share-based payment plan, the Company measures the value of rendered services and the corresponding increase in equity at fair value of equity instruments at a grant date. The amount is recorded as an expense over the vesting period, and the same amount is recognized as an increase in equity.

(14) Revenues from contracts with customers

Following the application of IFRS 15, the Group recognizes revenues based on the five-step approach below.

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

1) Performance obligations that are satisfied at a point in time

The Group's main lines of business are the manufacture and sale of industrial robot components, equipment for construction machinery, brake systems and automatic door operating systems for railroad vehicles, aircraft components, brake systems and drive control units for vehicles, control systems for marine vessels, automatic door operating systems for buildings and general industry, and platform safety systems. In the sale of such products, the Group recognizes revenue principally at delivery of the product since the Group deems that performance obligation is satisfied when the customer gains control over the product at delivery in most cases. Revenue is measured by deducting discounts, rebates and returns from the compensation promised in the contract with customers.

2) Performance obligations that are satisfied over time

The Group satisfies its performance obligations and recognizes revenue over time if one of the following criteria is met, since control over a product or service is transferred over time:

a. the customer simultaneously receives and consumes all of the benefits provided by the Group as the Group performs;
b. the Group's performance creates or enhances an asset that the customer controls as the asset is created or enhanced; or
c. the Group's performance does not create an asset with an alternative use to the Group and the Group has an enforceable right to payment for performance completed to date.

The Group's revenues concerning performance obligations that are satisfied over time include those for the performance obligation of platform safety systems. The revenue of platform safety systems is recognized by estimating the stage of completion. The stage of completion is calculated by the percentage of the actual cost of construction to the total estimated cost of construction (input method).

(15) Finance income and finance costs

Finance income mainly consists of interest income, dividends income, foreign exchange gains and gains on derivatives. Interest income is recognized when it occurs using the effective interest method. Dividend income is recognized when the Group's right to receive payment is established.

Finance costs mainly consist of interest expenses, foreign exchange losses and losses on derivatives.

(16) Income taxes

Income taxes consist of current taxes and deferred taxes. These are recognized in profit or loss, except for items recognized in other comprehensive income, items recognized directly in equity and items recognized through business combinations.

Current taxes are determined by multiplying the current taxable income by the tax rates that have been enacted or substantially enacted by the end of the fiscal year.

Deferred taxes are recognized for temporary differences between the carrying amount of assets and liabilities in the financial statements and their tax base. Deferred tax assets are recognized for deductible temporary differences, unused tax credits and unused tax losses to the extent that it is probable that future taxable income will be available against which they can be utilized. Deferred tax liabilities are recognized, in principle, for taxable temporary differences.

However, deferred tax assets or liabilities are not recorded for:

・initial recognition of assets or liabilities in a transaction that is not related to business combination and that affects neither accounting profit nor taxable income;
・differences arising from investments in subsidiaries and joint arrangements to the extent that it is probable that the temporary difference will not reverse in the foreseeable future; and
・taxable temporary differences arising from the initial recognition of goodwill.

Deferred taxes are measured using the tax rates that are expected to be applied when the temporary differences will reverse, based on the laws that have been enacted or substantively enacted by the end of the fiscal year.

Deferred tax assets and deferred tax liabilities are offset when the Group has a legally enforceable right to set off current tax assets against current tax liabilities and when income taxes are levied by the same taxation authority on the same taxable entity.

(17) Earnings per share

Basic earnings per share are calculated by dividing profit attributable to the Company's ordinary shareholders by the weighted average number of ordinary shares (after adjusting for treasury shares) outstanding during the period. Diluted earnings per share are calculated by adjusting the effects of all dilutive potential ordinary shares. The Company’s potential ordinary shares include share options.

(18) Changes in accounting policies

The Group has applied “Revenues from Contracts with Customers” (IFRS 15) from the year ended December 31, 2018. The Group has applied IFRS 15 using the cumulative effect method (without practical expedients) with the effect of initially applying this Standard recognized at the date of initial application. The Group's accounting policy with IFRS 15 on this consolidated financial statements is described in the accounting policy "(14) Revenues from contracts with customers".

Due to the application of the standard, ¥1,650 million in contract assets that were previously included in trade receivables under current assets and ¥5,232 million in contract liabilities that were included in trade payables under current liabilities are presented separately. This has no impact on net sales, operating profit or net profit.

(19) New standards and interpretations not yet applied

The Group has not applied the new or amended standards that are not effective as of December 31, 2018 in preparing these consolidated financial statements.

The Group is required to apply "Leases" (IFRS 16) from January 1, 2019. The Group has assessed the estimated impact that initial application of IFRS 16 will have on its consolidated financial statement as follows:

- Increase by approximately ¥9 billion in right-of-use assets and lease liabilities.

The Group will apply IFRS 16 retrospectively with the cumulative effect of initially applying IFRS 16 recognized at the date of initial application.

IFRS	Title	Reporting period on or after which the applications are required	Reporting periods of the application by the Group	Summaries of new IFRSs and amendments
IFRS 16	Leases	January 1, 2019	December 31, 2019	Requires as a general rule that all leases should be accounted on the statement of financial position

4. Significant accounting judgments, estimates and assumptions

In preparing consolidated financial statements in accordance with IFRS, management is required to make judgments, estimates and assumptions that may affect the application of accounting policies as well as the reported amounts of assets, liabilities, revenue and expenses. Actual results may differ from these estimates.

The estimates and the underlying assumptions are reviewed on an ongoing basis. Changes in accounting estimates are recognized in the period when such estimates are changed and future periods that are affected by the changes.

Major accounting judgments, estimates and assumptions are as follows:

(1) Valuation of inventories

In determining the net realizable value of inventories, the Group makes assumptions about the costs of completion and the costs necessary to make the sale in accordance with “Note 3. Significant accounting policies”.

These assumptions are based on the best estimates and judgments made by management. However, there is a possibility that they may be affected by changes in uncertain future economic conditions. When the reconsideration of the assumptions is required, it may have a material impact on the consolidated financial statements.

The amount of the write-down of inventories is described in “Note 8. Inventories”.

(2) Significant assumptions used in the calculation of expected discounted cash flows for the impairment tests of non-financial assets

The Group tests property, plant and equipment, as well as intangible assets and goodwill for impairment in accordance with “Note 3. Significant accounting policies”. When determining a recoverable amount in the impairment test, assumptions are made for future cash flows, discount rates and other variables.

These assumptions are based on the best estimates and judgments made by management. However, there is a possibility that they may be affected by changes in uncertain future economic conditions. When the assumptions need to be reconsidered, it may have a material impact on the consolidated financial statements.

The impairment testing of goodwill is described in “Note 10. Goodwill and intangible assets”. Impairment of other non-financial assets is described in "Note 11. Impairment of non-financial assets".

(3) Provisions and contingent liabilities

The Group recognizes various provisions such as the provision for product warranties, in the consolidated statement of financial position. These provisions are recorded based on the best estimates of the expenditures required to settling the obligations taking into account risks and uncertainty related to the obligations at the end of the fiscal year.

Expenditures required to settle the obligations are determined comprehensively by taking into account possible results. However, they may be affected by the occurrence of unexpected events or changes in circumstances. If the actual payment differs from the estimate, the amounts recognized in the future consolidated financial statements may be materially affected.

The Group discloses contingent liabilities taking into account all available evidence at the end of the fiscal year as well as the probability and monetary effects thereof.

The details and amounts of the provisions and contingent liabilities are provided in “Note 16. Provisions” and “Note 32. Contingent liabilities”.

(4) Measurement of defined benefit obligations

The Group has various post-employment benefit plans including defined benefit plans. For each plan, the present value of the defined benefit obligations and the related costs including service cost are determined based on actuarial assumptions such as discount rates, and mortality rates and other factors. The actuarial assumptions are based on the best estimates and judgments made by management. However, there is a possibility that they may be affected by changes in uncertain future economic conditions. When the assumptions need to be reconsidered, it may have a material impact on the consolidated financial statements.

The amounts of the defined benefit obligations, and plan assets and the assumptions are used in “Note 18. Employee benefits”.

(5) Income taxes

The Group is affected by income taxes in a number of tax jurisdictions. When determining the estimated amount of income taxes in each jurisdiction, significant judgments are required. There may be uncertainty regarding the final tax amounts due to the nature of the transactions and the calculation methods. The Group recognizes liabilities for anticipated tax investigations when an estimate of additional tax payment is required. If the final tax amount related to these issues is different from the amount that has been initially recognized, the difference may have a material impact on the consolidated financial statements.

Deferred tax assets are recognized to the extent that it is probable that taxable income will be available against which deductible temporary differences can be utilized. In recognizing deferred tax assets, when assessing the probability taxable income will be available, the Group reasonably estimates the timing and amount of future taxable income and determines the amount accordingly.

The timing when taxable income arises and the amount of such income may be affected by changes in uncertain future economic conditions and may, if the timing and amount that have actually arisen differ from the estimates, have a material impact on the amounts recognized in the future consolidated financial statements.

Significant components of deferred tax assets are described in “Note 19. Income taxes”.

(6) Valuation of financial instrument

The fair value of specific financial instruments is measured based on valuation techniques that use unobservable inputs. The unobservable inputs may be affected by changes in uncertain future economic conditions and others. When the inputs need to be reconsidered, it may have a material impact on the consolidated financial statements.

The valuation of fair value of the specific financial instruments is described in “Note 20. Financial instruments”.

(7) Fair value of assets acquired and liabilities assumed in business combinations

Assets acquired and liabilities assumed in business combination are measured at fair value on the acquisition date. The future cash-flows, on which the calculation of fair value is based, reflect the time value of money and risk specific to the assets in a discount rate. Although the measurement of fair value is based on the best estimates made by management, there is a possibility that the measurements may be affected by changes in uncertain future economic conditions. There is a risk that the changes may have a material impact on the value of intangible assets and goodwill.

The fair value of assets acquired and liabilities assumed is described in “Note 28. Business combinations”.

(8) Scope of subsidiaries

The Group considers a specific company which is owned its voting rights less than 50% by the Company as a subsidiary, because the Company controls a company.

The specific company is described in "Note 29. Subsidiaries".

(9) Scope of investments accounted for using the equity method

The Group accounts for investments in a specific company which is owned its voting rights less than 20% by the Company by the equity method, because the Company has significant influence on the specific company.

The investments in the specific company are described in "Note 14. Investment accounted for using the equity method".

5. Business segments

(1) Overview of reportable segments

The reportable segments are components of the Group areas for which discrete financial information is available, and are regularly reviewed by the Board of Directors to make decisions about resource allocation and to assess its performance.

Based on the similarity of business models, the Group aggregates its business segments and classifies them into the following three reportable segments: “Component Solutions Business”, “Transport Solutions Business” and “Accessibility Solutions Business”.

The main lines of business of each reportable segment are as follows:

Business segment	Main lines of business
Component Solutions Business	Design, manufacture, sale, maintenance and repair of industrial robot components and equipment for construction machinery and its components
Transport Solutions Business	Design, manufacture, sale, maintenance and repair of brake systems and automatic door operating systems for railroad vehicles, aircraft components, brake systems and drive control units for vehicles, control systems for marine vessels and their components
Accessibility Solutions Business	Design, manufacture, sale, installation, maintenance and repair of automatic door operating systems for buildings and general industry, platform safety systems and their components

(2) Information on reportable segments

The accounting policies for the reportable segments are same as the Group's accounting policies described in "Note 3. Significant accounting policies".

Inter-segment sales and transfers are based on actual market prices.

2018

(Millions of yen)

	Reportable segment				Others	Total	Adjustments	Amount stated in consolidated
	Component	Transport	Accessibility	Total				
Net sales								
Sales to external customers	119,280	81,863	75,957	277,100	17,527	294,626	—	294,626
Inter-segment sales	2,388	695	14	3,096	291	3,387	(3,387)	—
Total net sales	121,668	82,558	75,970	280,196	17,817	298,013	(3,387)	294,626
Segment income (Operating profit)	20,197	2,007	4,625	26,830	2,458	29,288	(7,400)	21,889
Finance income	—							366
Finance costs	—							(1,473)
Share of profit of investments accounted for using the equity method	—							9,181
Profit before tax	—							29,962
Other items								
Depreciation and amortization	4,176	3,516	1,302	8,994	262	9,256	755	10,011
Impairment losses	—	5,223	—	5,223	—	5,223	—	5,223
Segment assets	107,023	83,765	74,507	265,296	16,530	281,826	46,742	328,568
Increase in tangible and intangible assets	11,424	6,950	945	19,319	300	19,619	669	20,288

Notes: 1. "Others" is a business segment that is not included in the reportable segments and consists of businesses that are engaged in design, manufacture, sale, maintenance and repair of packaging machinery, three-dimensional model production devices, machine tools and their components.
2. Adjustments for net sales are eliminations of inter-segment transactions.
3. Adjustments for segment income (operating profit) are corporate profit, loss and other adjustments that are not allocated to the respective segments.
4. Adjustments of depreciation and amortization are depreciation and amortization related to corporate assets that are not allocated to the respective segments.
5. Adjustments for segment assets include corporate assets of ¥46,742 million that are not allocated to the respective segments. The main items are surplus funds (cash and cash equivalents) and investment funds (investments securities) of the Company.
6. Adjustments of increase in tangible and intangible assets are capital investments in corporate assets that are not allocated to the respective segments.

2017

(Millions of yen)

	Reportable segment				Others	Total	Adjustments	Amount stated in consolidated
	Component	Transport	Accessibility	Total				
Net sales								
Sales to external customers	113,885	79,134	72,374	265,393	17,029	282,422	—	282,422
Inter-segment sales	2,056	418	5	2,479	309	2,787	(2,787)	—
Total net sales	115,941	79,552	72,379	267,872	17,337	285,209	(2,787)	282,422
Segment income (Operating profit)	20,432	8,383	5,168	33,984	1,983	35,967	(6,498)	29,468
Finance income	—							632
Finance costs	—							(109)
Share of profit of investments accounted for using the equity method	—							4,915
Profit before tax	—							34,907
Other items								
Depreciation and amortization	3,565	3,192	1,234	7,991	273	8,264	710	8,974
Impairment losses	—	192	—	192	—	192	—	192
Segment assets	90,372	77,950	71,138	239,461	15,989	255,450	46,107	301,557
Increase in tangible and intangible assets	6,803	9,065	1,897	17,764	239	18,003	494	18,497

Notes: 1. “Others” is a business segment that is not included in reportable segments and consists of businesses that are engaged in design, manufacture, sale, maintenance and repair of packaging machinery, three-dimensional model production devices, vacuum equipment, machine tools and their components.
2. Adjustments for net sales are eliminations of inter-segment transactions.
3. Adjustments for segment income (operating profit) are corporate profit, loss and other adjustments that are not allocated to the respective segments.
4. Adjustments of depreciation and amortization are depreciation and amortization related to corporate assets that are not allocated to the respective segments.
5. Adjustments for segment assets include corporate assets of ¥46,107 million that are not allocated to the respective segments. The main items are surplus funds (cash and cash equivalents) and investment funds (investments securities) of the Company.
6. Adjustments of increase in tangible and intangible assets are capital investments in corporate assets that are not allocated to the respective segments.

(3) Income from major products and services

The description of income from major products and services is omitted as similar information is disclosed in “(1) Overview of reportable segments” and “(2) Information on reportable segments” and “Note 22. Revenues from contracts with customers”.

(4) Geographic information

Net sales

(Millions of yen)

	2018	2017
Japan	161,458	156,800
China	47,647	40,273
Other Asia	20,465	19,751
North America	19,738	19,315
Europe	43,913	45,785
Other regions	1,405	498
Total	294,626	282,422

Note: Net sales are classified by country or region based on the customer's locations.

Non-current assets

(Millions of yen)

	2018	2017
Japan	88,817	85,488
China	8,313	7,425
Other Asia	1,406	1,606
North America	1,292	1,474
Europe	7,901	8,560
Total	107,729	104,553

Note: Non-current assets are classified the locations of the assets and exclude financial assets, deferred tax assets, assets for retirement benefits and other items.

(5) Information about major customers

Information about major customers is omitted as there is no specific customer that accounts for 10% or more of net sales in the consolidated statement of profit or loss.

6. Cash and cash equivalents

Cash and cash equivalents as of December 31, 2018 and 2017 consist of the following:

(Millions of yen)

	2018	2017
Cash and deposits	44,039	38,121
Short-term investments due within three months from the date of acquisition	10,000	6,000
Total	54,039	44,121

Note: The balance of "Cash and cash equivalents" in the consolidated statement of financial position and that in the consolidated statement of cash flows are equal.

7. Trade receivables and other receivables

(1) Trade receivables

Trade receivables as of December 31, 2018 and 2017 consist of the following:

(Millions of yen)

	2018	2017
Accounts receivable	65,786	68,228
Notes receivable	9,285	8,851
Others	306	291
Less: Loss allowance	(424)	(497)
Total	74,952	76,874

(2) Other receivables

Other receivables as of December 31, 2018 and 2017 consist of the following:

(Millions of yen)

	2018	2017
Accounts receivable-others	1,643	1,216
Total	1,643	1,216

8. Inventories

Inventories as of December 31, 2018 and 2017 consist of the following:

(Millions of yen)

	2018	2017
Finished goods and merchandise	10,145	8,052
Work in progress	17,804	16,897
Raw materials and supplies	15,643	15,349
Total	43,592	40,298

Note: The amounts of write-down of inventories recorded in cost of sales are not significant for the year ended December 31, 2018. The amounts of write-down of inventories recorded in cost of sales are ¥150 million for the year ended December 31, 2017. There is no significant reversal of write-down for the years ended December 31, 2018 and 2017.

9. Property, plant and equipment

(1) Reconciliation of carrying amounts

(Millions of yen)

Cost	Buildings and structures	Machinery, equipment and vehicles	Tools, furniture and fixtures	Land	Construction in progress	Total
Balance as of January 1, 2017	19,569	18,170	4,401	14,305	6,710	63,155
Additions	−	−	−	105	14,264	14,369
Acquisitions through business combinations	53	158	62	−	611	884
Depreciation (Note 1)	(1,589)	(3,696)	(2,064)	−	−	(7,349)
Impairment losses (Note 2)	(10)	(48)	(110)	−	−	(169)
Reclassification	6,797	9,774	2,593	−	(19,164)	−
Disposals	(133)	(194)	(36)	−	(45)	(408)
Exchange differences on translating foreign operations	109	43	81	(25)	10	218
Balance as of December 31, 2017	24,796	24,207	4,926	14,385	2,387	70,700
Additions	−	−	−	280	19,040	19,320
Depreciation (Note 1)	(1,701)	(4,561)	(2,242)	−	−	(8,505)
Reclassification	1,879	8,716	2,513	−	(13,108)	−
Disposals	(157)	(131)	(27)	−	(1)	(315)
Exchange differences on translating foreign operations	(320)	9	(113)	(107)	(96)	(627)
Balance as of December 31, 2018	24,497	28,240	5,057	14,558	8,221	80,573

Notes: 1. Depreciation of property, plant and equipment is included in “Cost of sales” and “Selling, general and administrative expenses” in the consolidated statement of profit or loss.

2. Impairment losses of property, plant and equipment are included in “Other expenses” in the consolidated statement of profit or loss.

(2) Cost

(Millions of yen)

	Buildings and structures	Machinery, equipment and vehicles	Tools, furniture and fixtures	Land	Construction in progress	Total
Balance as of January 1, 2017	49,801	70,484	26,940	14,305	6,710	168,241
Balance as of December 31, 2017	56,270	79,431	28,953	14,385	2,387	181,425
Balance as of December 31, 2018	56,703	84,688	30,110	14,558	8,221	194,281

(3) Accumulated depreciation and accumulated impairment losses

(Millions of yen)

	Buildings and structures	Machinery, equipment and vehicles	Tools, furniture and fixtures	Land	Construction in progress	Total
Balance as of January 1, 2017	30,232	52,315	22,539	−	−	105,086
Balance as of December 31, 2017	31,474	55,224	24,026	−	−	110,725
Balance as of December 31, 2018	32,207	56,448	25,053	−	−	113,708

10. Goodwill and intangible assets

(1) Reconciliation of carrying amounts

(Millions of yen)

	Goodwill	Software	Customer related assets	Technology assets	Others	Total
Balance as of January 1, 2017	14,361	2,545	—	—	125	17,032
Additions	—	810	—	—	8	818
Acquisitions through business combinations	6,016	83	2,321	407	582	9,410
Amortization (Note 2)	—	(991)	(367)	(23)	(172)	(1,553)
Impairment losses (Note 3)	—	(16)	—	—	(7)	(24)
Exchange differences on translating foreign operations	933	18	311	55	160	1,477
Balance as of December 31, 2017	21,310	2,449	2,266	438	697	27,159
Additions	—	838	—	—	53	892
Amortization (Note 2)	—	(1,004)	(291)	(25)	(127)	(1,446)
Impairment losses (Note 3)	(5,223)	—	—	—	—	(5,223)
Disposals	—	(1)	—	—	—	(1)
Exchange differences on translating foreign operations	(574)	(17)	(155)	(27)	(19)	(792)
Balance as of December 31, 2018	15,512	2,267	1,820	386	604	20,588

Notes: 1. There are no significant intangible assets with indefinite useful lives.
2. Amortization of intangible assets is included in "Cost of sales" and "Selling, general and administrative expenses" in the consolidated statement of profit or loss.
3. Impairment losses of intangible assets are included in "Other expenses" in the consolidated statement of profit or loss.

(2) Cost

(Millions of yen)

	Goodwill	Software	Customer related assets	Technology assets	Others	Total
Balance as of January 1, 2017	18,426	5,901	—	—	864	25,191
Balance as of December 31, 2017	25,419	6,758	2,633	461	1,548	36,819
Balance as of December 31, 2018	24,621	7,017	2,478	434	1,446	35,996

(3) Accumulated amortization and accumulated impairment losses

(Millions of yen)

	Goodwill	Software	Customer related assets	Technology assets	Others	Total
Balance as of January 1, 2017	4,065	3,356	—	—	738	8,160
Balance as of December 31, 2017	4,110	4,309	367	23	851	9,660
Balance as of December 31, 2018	9,109	4,751	658	49	842	15,408

(4) Impairment test

Carrying amounts of goodwill as of December 31, 2018 and 2017 allocated to each cash-generating unit are as follows:

(Millions of yen)

Reportable segment	Cash-generating unit	2018	2017
Component	Nabtesco Power Control Company	2,582	2,582
Transport	OVALO Group	1,319	6,822
Accessibility	Gilgen Group	11,612	11,906
Total		15,512	21,310

The Group tests goodwill for impairment in accordance with “Note 3. Significant accounting policies”. Goodwill is not subject to amortization but is tested for impairment whenever there is an indication of impairment and annually irrespective of whether there is any indication of impairment. The Group compares the carrying amount of each cash-generating unit group including goodwill and the recoverable amount. An impairment loss is recognized by reducing the carrying amount to the recoverable amount.

The recoverable amount of goodwill is measured at its value in use. The value in use is the present value calculated by discounting the estimated future cash flows based on a business plan authorized by management. The period of the business plan is limited to 4 years, reflecting management’s assessments of future industry trends and historical data based on internal and external information. The growth rate subsequent to the last year of the business plan is granted as zero or long-term average growth rate of the market to which the cash-generating unit belongs.

The Group tested goodwill at the end of May 2019 and recognized impairment loss for one of the cash-generating unit. The details of this impairment loss is described in "Note 11. Impairment of non-financial assets".

The Group does not recognize impairment loss as of December 31, 2018 as a result of the goodwill impairment testing of goodwill, under which the estimated cash flows are discounted by the pre-tax weighted average cost of capital of the cash-generating unit (6.9% to 17.7%). However, there is a risk that a change in key assumptions may result in impairment. If the pre-tax weighted average capital cost of capital increases by 1.7%, there is a possibility that impairment loss may be incurred.

The Group did not recognize impairment loss as of December 31, 2017 as a result of the impairment testing of goodwill, under which the estimated cash flow are discounted by the pre-tax weighted average cost of capital of the cash-generating unit (6.6% to 17.6%). However there is a risk that a change in key assumptions may result in impairment. If the pre-tax weighted average cost of capital increases by 1.5%, there is a possibility that an impairment loss may be incurred.

11. Impairment of non-financial assets

For the year ended December 31, 2018

During 2018, the Group has reassessed the business plan of OVALO GmbH, the Group's subsidiary, due to the change in the business environment. As a result of reassessment, OVALO GmbH's performance is expected to be lower than originally planned. The Group recognized an impairment loss as a result of impairment test performed over goodwill allocated to the cash-generating unit.

The impairment loss is included in "Other expenses" in the consolidated statement of profit or loss. The impairment loss is recognized in the Transport Solutions Business. The recoverable value of this cash-generating unit is based on the value in use (pre-tax discount rate: 17.7%).

(Millions of yen)

Reportable segment	Asset type	Amount of impairment losses
Transport	Goodwill	5,223

For the year ended December 31, 2017

Based on the business plan at the end of the fiscal year ended December 31, 2017, each cash-generating unit group is tested for impairment. Since the recoverable amount fell below the carrying amount mainly due to lower expected profit, an impairment loss of ¥192 million (property, plant and equipment: ¥169 million, intangible assets: ¥24 million) is recognized for Nabtesco Oclap S.r.l. This impairment loss is recognized in the Transport Solutions Business. The recoverable amount of this cash-generating unit is based on the value in use (pre-tax discount rate: 19.9%).

(Millions of yen)

Reportable segment	Asset type	Amount of impairment losses
Transport	Buildings and structures	10
	Machinery, equipment and vehicles	48
	Tools, furniture and fixtures	110
	Software	16
	Intangibles assets (others)	7
	Total	192

12. Leases

(1) Total future minimum lease payments under non-cancelable operating leases

The Group leases assets including land and buildings as a lessee.

The total future minimum lease payments as of December 31, 2018 and 2017 under non-cancelable operating leases consist of the following:

(Millions of yen)

	2018	2017
Payments due less than one year	902	770
Payments due between one and five years	1,723	1,370
Payments due more than five years	2,937	760
Total	5,563	2,900

(2) Lease payments recognized as an expense

(Millions of yen)

	2018	2017
Lease payments recognized as an expense	4,150	3,956

13. Investment property

(1) Overview of investments property

The Group has a part of an office building and land for lease in Tokyo and other areas.

(2) Reconciliation of carrying amount

(Millions of yen)

Balance as of January 1, 2017	5,486
Acquisitions	55
Depreciation	(72)
Disposals	(64)
Balance as of December 31, 2017	5,404
Acquisitions	76
Depreciation	(61)
Disposals	(38)
Balance as of December 31, 2018	5,382

(3) Cost

(Millions of yen)

Balance as of January 1, 2017	9,385
Balance as of December 31, 2017	9,163
Balance as of December 31, 2018	9,038

(4) Accumulated depreciation and accumulated impairment losses

(Millions of yen)

Balance as of January 1, 2017	3,899
Balance as of December 31, 2017	3,758
Balance as of December 31, 2018	3,656

(5) Fair value

(Millions of yen)

	2018	2017
Fair value	7,407	6,673

The fair value of investment property as of December 31, 2018 and 2017 is mainly based on appraisal values calculated by independent real estate appraisers, which are typically determined by the appraisal values derived from the discounted cash flow method or observable market values of similar assets. The appraised values are all categorized as Level 3 of the fair value hierarchy. The levels of the fair value hierarchy are described in “Note 20. Financial instruments”.

14. Investments accounted for using the equity method

(1) Major associates accounted for using the equity method of the Group

Major associates accounted for using the equity method of the Group as of December 31, 2018 and 2017 are as follows.

Company name	Location	Main business	Percentage of voting rights (%)	
			2018	2017
TMT Machinery, Inc. (Note)	Chuo-ku, Osaka city Osaka-hu	Manufacturing, sales and others of synthetic fiber machinery and systems	33.0	33.0
Harmonic Drive Systems Inc.	Shinagawa-ku, Tokyo	Production and sales of mechatronics products in industrial robots and others	19.0	20.0

Note: The Group accounts investments in Harmonic Drive Systems Inc. (the "Associate") using the equity method, although the percentage of voting rights the Group holds over the Associate is less than 20%, due to the fact that the Group owns share options issued by the Associate, and therefore has significant influence over it.

(2) Investments in significant associates for the Group

There were no investments in significant associates for the Group as of December 31, 2017 and 2018.

(3) Investments in non-significant associates for the Group

(Millions of yen)

	2018	2017
The Group’s share of profit for the year	9,181	4,915
The Group’s share of other comprehensive income	677	19
The Group’s share of comprehensive income	9,858	4,934
Carrying amount of investments in associates	29,641	20,184

(4) Reporting date of associates accounted for using the equity method

The reporting date is March 31 for four associates accounted for using the equity method. The reporting date is June 30 for one associate accounted for using the equity method. The reporting date is November 30 for one associates accounted for using the equity method. The Group uses their provisional financial statements on the consolidated reporting date, December 31, because it is impracticable to conform their reporting dates to the Group’s reporting date.

15. Trade and other payables

(1) Trade payables

Trade payables as of December 31, 2018 and 2017 consist of the following:

(Millions of yen)

	2018	2017
Accounts payable	16,806	17,285
Notes payable	2,195	2,111
Electronically recorded obligations	31,296	32,300
Others	—	5,453
Total	50,297	57,148

(2) Other payables

Other payables as of December 31, 2018 and 2017 consist of the following:

(Millions of yen)

	2018	2017
Accounts payable-others	4,806	5,718
Accrued expenses	2,233	1,339
Electronically recorded obligations-equipment	3,130	3,884
Others	1,640	1,550
Total	11,809	12,492

16. Provisions

(1) Details of provisions

Provisions as of December 31, 2018 and 2017 consist of the following:

(Millions of yen)

	2018	2017
Current liabilities	1,625	732

(2) Changes in provisions

(Millions of yen)

	Provision for product warranties	Provision for losses on order received	Total
Balance as of January 1, 2018	712	20	732
Additional provisions made during the year	691	672	1,364
Provisions used during the year	(315)	(13)	(328)
Provisions reversed during the year	(135)	–	(135)
Exchange differences on translating foreign operations	(7)	–	(7)
Balance as of December 31, 2018	946	680	1,625

(3) Overview of the provisions and the expected timing of resulting outflow of economic resources

1) Provision for product warranties

To provide against the payment of repair costs and other costs that may be incurred after the delivery of products, the costs are separately estimated and recorded as a provision for product warranties. Outflows of economic resources are expected to occur within one year.

2) Provision for losses on orders received

To provide against future losses on contracts received, the expected losses on the contracts at the end of the fiscal year are separately estimated and recorded as a provision for loss on orders received. Outflows of economic resources are expected to occur within one year.

17. Bonds and borrowings

(1) Details of bonds and borrowings

Bonds and borrowings as of December 31, 2018 and 2017 consist of the following:

(Millions of yen)

	2018	2017
Current liabilities		
Short-term borrowings	33,835	16,132
Current portion of long-term borrowings	232	234
Total	34,067	16,365
Non-current liabilities		
Long-term borrowings	1,271	1,392
Bonds	9,972	9,963
Total	11,243	11,355

(2) Bonds

The issuance of bonds is summarized as follows:

(Millions of yen)

Company	Name	Issue date	Balance as of December 31, 2018	Balance as of December 31, 2017	Coupon rate (%)	Collateral	Maturity date
Nabtesco Corporation	2nd series of unsecured straight bonds (with inter-bond pari passu clauses)	December 13, 2016	9,972	9,963	0.14	Unsecured	December 13, 2021

(3) Borrowings

Weighted average interest rates on “Short-term borrowings”, “Current portion of long-term borrowings” and “Long-term borrowings” were 0.29%, 0.58% and 0.59%, respectively, for the year ended December 31, 2018. The repayment terms of “Long-term borrowings” are from 2020 to 2026.

(4) Changes in liabilities arising from financial activities

The changes in liabilities arising from financial activities are as follows:

	Current liabilities			Non-current liabilities			Total
	Short-term borrowings	Current portion of long-term borrowings	Sub-total	Long-term borrowings	Bonds	Sub-total	
Balance as of January 1, 2017	5,648	146	5,794	1,202	9,954	11,155	16,949
Changes from financing cash flow	7,474	(146)	7,327	420	―	420	7,747
Changes through business combination	2,647	1	2,648	2	―	2	2,651
Reclassification	―	232	232	(232)	―	(232)	―
Exchange differences on translating foreign operations	363	0	364	0	―	0	364
Others	―	―	―	―	9	9	9
Balance as of December 31, 2017	16,132	234	16,365	1,392	9,963	11,355	27,721
Changes from financing cash flow	18,023	(234)	17,789	114	―	114	17,904
Reclassification	―	232	232	(232)	―	(232)	―
Exchange differences on translating foreign operations	(320)	(0)	(320)	(3)	―	(3)	(323)
Others	―	―	―	―	9	9	9
Balance as of December 31, 2018	33,835	232	34,067	1,271	9,972	11,243	45,310

18. Employee benefits

(1) Overview of the adopted post-employment benefit plans

The Company and some of its consolidated subsidiaries have adopted funded and unfunded defined benefit plans as well as defined contribution plans for employee's post-retirement benefits. Defined benefit plans provide lump-sum payments or pensions based on positions and service periods of employees.

Funded defined benefit plans are managed by independent pension funds from the Group, in compliance with laws and ordinances. The Group accumulates contributions that are actuarially calculated using certain rates of wages and salaries. The board of administration and pension fund trustees must operate the pension funds in the best priority to the benefit of its participants laws and ordinances are obliged to manage the plan assets based on predetermined policies.

(2) Defined benefit plans

The Group has defined benefit plans. The amounts of benefits are determined based on evaluation factors, such as the number of years of service, performance and job grades and titles.

1) Risks associated with defined benefit plans

The Group is exposed to various risks associated with defined benefit plans. Major risks are as follows. The Group is not exposed to significant concentration risk in respect of plan assets.

Changes in plan assets	Investments in equity instruments, debt instruments and other assets are exposed to fluctuation risk.
Changes in market yields on bonds	A decrease in market yields on bonds causes an increase in defined benefit obligations.

2) Amounts in the consolidated statement of financial position

(Millions of yen)

	2018	2017
Present value of defined benefit obligations	29,866	29,227
Fair value of plan assets	(21,099)	(20,858)
Effect of the asset ceiling	114	618
Net defined benefit liabilities	9,142	9,339
Net defined benefit assets	(261)	(352)
Net amount of liabilities and assets in the consolidated statement of financial position	8,881	8,987

3) Changes in the present value of defined benefit obligations

(Millions of yen)

	2018	2017
Balance at the beginning of the year	29,227	27,948
Current service cost	1,403	1,354
Interest cost	167	154
Remeasurement		
Actuarial gains and losses arising from changes in demographic assumptions	−	(1)
Actuarial gains and losses arising from changes in financial assumptions	(296)	(33)
Actuarial gains and losses arising from experience adjustments	308	147
Benefits paid	(292)	(551)
Acquisition through business combinations	−	25
Exchange differences on translating foreign operations	(651)	185
Balance at the end of the year	29,866	29,227

The weighted average duration of defined benefit obligations was 13.4 years as of the year ended December 31, 2018 and 13.8 years as of the year ended December 31, 2017.

4) Changes in the fair value of plan assets

(Millions of yen)

	2018	2017
Balance at the beginning of the year	20,858	18,783
Interest income	129	110
Remeasurement		
Income from plan assets	(474)	969
Return on plan assets excluding interest income	842	826
Contributions by employees	419	406
Benefits paid	(260)	(565)
Changes through business combination	−	144
Exchange differences on translating foreign operations	(416)	185
Balance at the end of the year	21,099	20,858

The Group plans to contribute ¥1,277 million to the defined benefit plans for the year ending December 31, 2019.

5) Details of plan assets

(Millions of yen)

	2018			2017		
	With quoted market prices in active markets	Without quoted market prices in active markets	Total	With quoted market prices in active markets	Without quoted market prices in active markets	Total
Cash and cash equivalents	2,602	—	2,602	3,025	—	3,025
Equity instruments						
Domestic shares	180	259	440	224	247	472
Foreign shares	5,959	259	6,218	6,003	249	6,252
Debt instruments						
Domestic bonds	—	1,187	1,187	—	1,114	1,114
Foreign bonds	8,169	285	8,454	8,019	219	8,237
Others	—	2,198	2,198	—	1,758	1,758
Total	16,910	4,189	21,099	17,271	3,588	20,858

Plan assets are managed for the purpose of securing the sustainability of defined benefit plans. Risk and return targets of investments in plan assets are determined as policies. The investment results are appropriately monitored, and the policies are regularly reviewed.

6) Changes in adjustments for asset ceiling

(Millions of yen)

	2018	2017
Balance at the beginning of the year	618	—
Interest revenue	4	—
Remeasurement		
Effect of limiting a net defined benefit asset to the asset ceiling	(493)	618
Exchange differences on translating foreign operations	(16)	—
Balance at the end of the year	114	618

7) Amounts in the consolidated statement of profit or loss

(Millions of yen)

	2018	2017
Defined benefit cost	1,018	992

8) Significant actuarial assumptions

Significant actuarial assumptions as of December 31, 2018 and 2017 are as follows:

	2018	2017
Discount rate	0.7%	0.6%

The following table shows a sensitivity analysis of the impacts of changes in the aforementioned actuarial assumptions on defined benefit obligations as of December 31, 2018 and 2017. The sensitivity analysis based on the premise that the other actuarial assumptions are unchanged. Accordingly, changes in other factors on multiple assumptions may influence to defined benefit obligations.

(Millions of yen)

	2018	2017
0.25% increase in discount rate	(917)	(947)
0.25% decrease in discount rate	974	1,009

9) Asset-liability matching strategy adopted by the Group

The Group's investment strategy is to reduce discrepancies between assets and liabilities by setting expected medium and long-term investment returns above discount rates. This investment strategy primarily focuses on mitigating the investment risk, rather than maximizing the profit. This investment policy is expected to generate income sufficient to fulfill long-term contracts.

(3) Defined contribution plans

(Millions of yen)

	2018	2017
Amounts recognized as an expense for defined contribution plans for the year	1,045	903

19. Income taxes

(1) Income taxes

1) Income taxes recognized in profit or loss

(Millions of yen)

	2018	2017
Current tax expense for the year		
Current fiscal year	7,457	8,523
Recognition of previously unrecognized tax losses	(68)	(234)
Sub-total	7,389	8,289
Deferred tax expense for the year		
Origination and reversal of temporary differences	(392)	11
Changes in tax rates	—	38
Sub-total	(392)	49
Total	6,997	8,338

2) Reconciliation of effective statutory tax rates and average effect tax rates

Reconciliation of effective statutory tax rates and average effective tax rates of the Group is as follows. The average effective tax rates represent the percentage of income tax expense to profit before tax.

	2018	2017
Effective statutory tax rate for the year	30.9	30.9
(Adjustments)		
Effect of tax rates in foreign jurisdictions	(1.7)	(1.1)
Changes in unrecognized deferred tax assets	0.8	0.3
Non-deductible expenses for tax purposes such as meals and entertainment	0.5	0.4
Share of profit of investments accounted for using the equity method	(9.5)	(4.3)
Tax credit	(4.5)	(3.6)
Decrease in deferred tax assets at the end of fiscal year due to change in tax rate	—	0.2
Exchange differences on translating foreign operations	1.6	0.9
Impairment of goodwill	5.4	—
Others	(0.2)	0.2
Average effective tax rate for the year	23.3	23.9

On March 29, 2016, the “Act for Partial Revision of the Income Tax Act” (Act No. 15 of 2016) and “Act for Partial Revision of the Local Tax Act and others” (Act No. 13 of 2016) were enacted into law by Japan's Diet to reduce the income tax rates for fiscal years beginning on or after April 1, 2016. In line with these amendments, the Company changed the effective statutory tax rates for calculating deferred tax assets and liabilities from 32.3% to 30.9% for assets and liabilities that are expected to be recovered or settled from January 1, 2017 to December 31, 2018 and to 30.6% for those which are expected to be recovered or settled on or after January 1, 2019.

On December 22, 2017, amendments to the federal tax law were enacted in the United States of America and the income tax rate for the consolidated fiscal years beginning on or after January 1, 2018 was changed. In line with these amendments, the Group has changed the effective statutory tax rate, mainly from 34.1% to 21.1%, which is used in the calculations of deferred tax assets and liabilities of its consolidated subsidiaries in the United States.

(2) Deferred taxes

1) Details of changes in deferred tax assets and liabilities

Changes in deferred tax assets and liabilities consist of the following:

2018

(Millions of yen)

	Balance as of January 1, 2018	Amount recognized in profit or loss	Amount recognized in other comprehensive income	Balance as of December 31, 2018
Deferred tax assets				
Loss allowance	22	(7)	–	15
Loss on valuation of inventories	104	35	–	138
Accrued expenses	584	(17)	–	567
Provision for product warranties	157	60	–	217
Other current liabilities	748	(14)	–	734
Net defined benefit liabilities	2,691	(14)	10	2,687
Loss on valuation of investments in associates	164	–	–	164
Loss on valuation of golf club membership rights	31	(6)	–	25
Tax loss carried forward	440	503	–	943
Others (assets)	1,268	108	–	1,376
Total	6,207	649	10	6,865
Deferred tax liabilities				
Deferred taxation on government grants for acquisition of property, plant and equipment	1,353	(95)	–	1,258
Other financial assets - valuation differences due to changes in fair value	1,598	(6)	(7)	1,585
Unrealized gains on land	971	–	–	971
Adjustments for taxable income related to foreign operations (inventories)	272	28	–	300
Adjustments for taxable income related to foreign operations (investments in associates)	996	160	–	1,157
Undistributed earnings on foreign operations and associates	2,621	466	–	3,087
Identifiable intangible assets	1,019	(175)	–	844
Others (liabilities)	544	(109)	97	532
Total	9,375	270	90	9,734
Net deferred tax assets (liabilities)	(3,168)	379	(80)	(2,869)

Note: The difference between the net amount of deferred tax assets and liabilities recognized in profit or loss and the sub-total of deferred tax expense in "(1) Income taxes 1) Income taxes recognized in profit or loss" is a result of changes in exchange rates and other factors.

2017

(Millions of yen)

	Balance as of January 1, 2017	Amount recognized in profit or loss	Amount recognized in other comprehensive income	Acquisitions through business combinations	Balance as of December 31, 2017
Deferred tax assets					
Loss allowance	36	(15)	—	—	22
Loss on valuation of inventories	149	(46)	—	—	104
Accrued expenses	883	(300)	—	—	584
Provision for product warranties	164	(8)	—	—	157
Other current liabilities	615	133	—	—	748
Net defined benefit liabilities	2,761	22	(59)	(34)	2,691
Other non-current liabilities	76	(76)	—	—	—
Loss on valuation of financial assets	11	(11)	—	—	—
Loss on valuation of investments in associates	164	—	—	—	164
Loss on valuation of golf club membership rights	31	(0)	—	—	31
Impairment losses	258	(258)	—	—	—
Tax loss carried forward	38	85	—	317	440
Others (assets)	805	463	—	—	1,268
Total	5,992	(9)	(59)	283	6,207

Deferred tax liabilities					
Deferred taxation on government grants for acquisition of property, plant and equipment	1,915	(562)	—	—	1,353
Other financial assets - valuation differences due to changes in fair value	1,413	—	185	—	1,598
Unrealized gains on land	971	—	—	—	971
Adjustments for taxable income related to foreign operations (inventories)	276	(4)	—	—	272
Adjustments for taxable income related to foreign operations (investments in associates)	425	571	—	—	996
Undistributed earnings on foreign operations and associates	2,304	317	—	—	2,621
Identifiable intangible assets	—	(4)	—	1,023	1,019
Others (liabilities)	605	(61)	—	—	544
Total	7,909	258	185	1,023	9,375
Net deferred tax assets (liabilities)	(1,916)	(267)	(244)	(740)	(3,168)

Note: The difference between the net amount of deferred tax assets and liabilities recognized in profit or loss and the sub-total of deferred tax expense in "(1) Income taxes 1) Income taxes recognized in profit or loss" is a result of changes in exchange rates and other factors.

2) Deductible temporary differences and unused tax losses for which no deferred tax assets are recognized

Deductible temporary differences and unused tax losses for the year for which no deferred tax assets are recognized are as follows. Deductible temporary differences do not expire under the current tax regulations. Deferred tax assets relating to these items are not recognized as it is not probable that future taxable income will be available against which the Group can utilize the benefits therefrom.

(Millions of yen)

	2018	2017
Deductible temporary differences	798	1,138
Tax loss carry forward	10,380	9,908
Total	11,178	11,046

Tax losses for the year for which no deferred tax assets are recognized expire as follows:

(Millions of yen)

	2018	2017
1st year	179	759
2nd year	754	1,211
3rd year	740	1,154
4th year	−	814
5th year	19	375
More than 5 years	8,688	5,595
Total	10,380	9,908

20. Financial instruments

To avert or mitigate the financial risks (credit risk, liquidity risk and market risk) associated with business activities, the Group manages financial risks as follows:

(1) Credit risk management

Credit risk is the risk that the Group incurs financial losses due to the default of business partners on obligations.

The credit risk on cash and cash equivalents and time deposits with deposit terms of over three months included in other financial assets (current) is limited, because the Group has such transactions with functional institutions only with high credit rating.

Trade receivables, contract assets and other receivables are exposed to credit risk of business partners. The Group manages credit risk on trade receivables consisting of notes receivables, accounts receivables and contract assets by setting credit lines for business partners in accordance with its internal rules on credit risk management. Credit lines for new business partners are set at the inception of transactions, and those for existing business partners are set through internal deliberation and approval procedures while their credit conditions are monitored regularly. For business partners with unfavorable credit conditions, the Group takes measures, such as receiving guarantee deposits and collateral, as necessary. The Group recognizes and measures expected credit losses, taking into account in the microeconomic situation, such as the number of corporate bankruptcies, in addition to the information on the business partners' business conditions and financial positions through the credit risk management. Accounts receivable-others included in other receivables are also exposed to credit risk of business partners, but the Group has determined that such credit risk is limited because most of the settlements are scheduled in the short term.

The Group calculates the amount of loss allowance separately for trade receivables, contract assets and other receivables.

The Group always records a loss allowance for the trade receivables and contract assets at an amount equal to the lifetime expected credit losses. The Group records a loss allowance for other receivables at an amount equal to 12-month expected credit losses in principle. However, if the credit risk on other receivables has increased significantly, the Group estimates the lifetime expected credit losses for each receivable and records loss allowance. The Group determines whether the credit risk has increased significantly or not based on whether there are significant increases in the risk of a default on the financial assets since initial recognition. When assessing the change in the risk of a default, the Group takes into account the following:

- financial difficulty of business partners due to the deterioration of their business performance;
- significant delinquency; and
- significant change in external credit rating.

When the Group determined that the collection of the whole of part of the asset is impossible or extraordinarily difficult, such financial assets are determined to be in default and treated as credit-impaired financial assets.

The Group’s maximum exposure to credit risk is the carrying amount of financial assets presented in the consolidated statement of financial position. The Group is not exposed to excessively concentrated credit risk for specific business partners.

1) Exposure to credit risk

Changes in trade receivables and loss allowance are as follows:

2018

(Millions of yen)

Trade receivables	With loss allowance measured at an amount equal to lifetime expected credit losses
Balance as of December 31, 2017	77,080
Adjustment on initial application of IFRS 15	(2,362)
Balance as of January 1, 2018	74,718
Increase and collections (Net)	1,908
Decrease (Others)	(379)
Exchange differences on translating foreign operations	(1,177)
Balance as of December 31, 2018	75,070

(Millions of yen)

Loss allowance for trade receivables	With loss allowance measured at an amount equal to lifetime expected credit losses
Balance as of January 1, 2018	497
Increase due to recognition	53
Decrease (Written-down)	(20)
Decrease (Others)	(78)
Exchange differences on translating foreign operations	(28)
Balance as of December 31, 2018	424

The amount of loss allowance for other receivables is not described because it is not material.

The amounts of provision for, and reversal of, loss allowance are included in "Selling, general and administrative expenses" in the consolidated statement of profit or loss.

2017

(Millions of yen)

Trade receivables	With loss allowance measured at an amount equal to lifetime expected credit losses
Balance as of January 1, 2017	65,703
Increase due to business combinations	734
Increase and collections (Net)	9,835
Exchange differences on translating foreign operations	808
Balance as of December 31, 2017	77,080

(Millions of yen)

Loss allowance for trade receivables	With loss allowance measured at an amount equal to lifetime expected credit losses
Balance as of January 1, 2017	319
Increase due to recognition	193
Decrease (Written-down)	(2)
Decrease (Others)	(17)
Exchange differences on translating foreign operations	5
Balance as of December 31, 2017	497

The amount of loss allowance for other receivables is not described because it is not material.

The amounts of provision for, and reversal of, loss allowance are included in "Selling, general and administrative expenses" in the consolidated statement of profit or loss.

(2) Liquidity risk management

Liquidity risk is the risk that the Group becomes unable to pay for the settlement of financial liabilities on due dates.

The Group manages liquidity risk related to raising funds by using financing plans prepared and updated by the Accounting and Finance Department in a timely manner based on reports from respective departments. Furthermore, in certain regions, regional headquarters or regional bases have implemented a cash management system to intensively and efficiently manage funds retained in their region, thereby making efforts to mitigate liquidity risk.

The maturity analysis of the Group's financial liabilities as of December 31, 2018 and 2017 is as follows:

(Millions of yen)

2018	Carrying amount	Contractual cash flows	Within 1 year	1-2 years	2-3 years	3-4 years	4-5 years	Over 5 years
Trade payables	50,297	50,297	50,297	―	―	―	―	―
Other payables	9,576	9,576	9,576	―	―	―	―	―
Borrowings	35,338	35,443	34,165	225	254	241	203	355
Bonds	9,972	10,042	14	14	10,014	―	―	―
Total	105,183	105,358	94,051	239	10,268	241	203	355

(Millions of yen)

2017	Carrying amount	Contractual cash flows	Within 1 year	1-2 years	2-3 years	3-4 years	4-5 years	Over 5 years
Trade payables	51,695	51,695	51,695	―	―	―	―	―
Other payables	11,153	11,153	11,153	―	―	―	―	―
Borrowings	17,758	17,814	16,414	231	205	203	203	558
Bonds	9,963	10,056	14	14	14	10,014	―	―
Total	90,569	90,719	79,277	245	219	10,217	203	558

(3) Market risk management

1) Foreign currency risk

The Group operates its businesses globally and sells its products overseas. Therefore, the Group is exposed to the fluctuation risk of exchange rates ("foreign currency risk") associated with the translation of trade receivables, trade payables and other items generated from transactions in currencies other than the functional currency, using the exchange rates at the end of the reporting period.

The Group's trade receivables, trade payables and other items are denominated in foreign currencies are exposed to foreign currency risk. The Group hedges the risk by ascertaining the foreign currency-denominated balances by currency and by month, and by using forward exchange contracts and other hedging instruments for the netted positions in principle. For this reason, the Group has determined that its exposure to the foreign currency risk is limited.

Derivatives

The overview of the main derivatives used by the Group to control foreign currency risk as of December 31, 2018 and 2017 is as follows:

Derivative transactions to which hedge accounting is not applied

(Millions of yen)

	2018			2017		
	Contract amount	Over 1 year	Fair value	Contract amount	Over 1 year	Fair value
Short USD	1,179	―	24	836	―	(7)

Note: There are no derivative transactions to which hedge accounting is applied.

Sensitivity analysis on exchange rates

In case each currency excluding the functional currency appreciates against the functional currency by 1% at the end of each consolidated fiscal year, impacts on the profit before tax and equity are as follows.

This sensitivity analysis on exchange rates shows the impact caused by the translation of foreign currency-denominated financial instruments (including intragroup transactions) for which exchange differences are recognized in profit or loss. The analysis does not include the impacts of revenue and expenses denominated in foreign currencies. This analysis is based on fluctuations in foreign exchanges rates that the Group considers to be reasonably possible at the end of the consolidated fiscal year and on the premise that the other factors do not change.

(Millions of yen)

Currency	2018		2017	
	Profit before tax	Equity	Profit before tax	Equity
USD	37	26	51	35
CNY	48	33	24	17
EUR	20	14	58	40
JPY	(56)	(46)	(59)	(54)

Note: The amount of JPY is related to yen-denominated financial assets and liabilities held by foreign operations.

2) Interest rate risk

Interest rate risk is defined as the risk of changes in the fair values of financial instruments or future cash flows generated from financial instruments due to fluctuations in market interest rates. A part of the Group's interest-bearing debt is borrowings with a floating rate of interest. As the amount of the interest is affected by the fluctuations in market interest rates, the Group is exposed to the interest rate risk that may change the future cash flows of the interest.

The Group manages its surplus funds in excess of the amount of floating-interest borrowings mainly by making short-term deposits. When the interest rates rise due to changes in the financial market environment in the future, the Group is able to cut future financing costs by using the surplus funds as a source of repayment to reduce the interest-bearing debt.

Therefore, the Company believes that the interest rate risk at the end of the consolidated fiscal year is not material. The Group has determined that the exposure to interest rate risk is limited.

3) Price risks

The Group is exposed to the risk of changes in market prices arising from equity instruments (shares). The equity instruments held by the Group mainly consist of corporate shares. The Group regularly monitors the fair value and the financial condition of the issuer (business partner) and takes into account the relationship with the business partner, thereby reviewing its shareholding status.

Sensitivity analysis of the price risk is not described because the Group believes the effect of the price risk to profit for the year and other comprehensive income is not material.

(4) Fair value of financial instruments

1) Method of measuring fair value measurement

(a) Financial assets measured at amortized cost

i) Other financial assets

The fair value of other financial assets is mainly classified by certain periods of time and assessed based on the present value calculated by discounting their cash flows with an interest rate that reflects the credit risk.

(b) Financial assets measured at fair value through profit or loss

i) Golf club memberships

The fair value of golf club memberships is mainly based on market prices. Golf club memberships are included in "Other financial assets" in the consolidated statement of financial position.

ii) Derivative financial assets

The fair value of share options is mainly measured based on Monte Carlo simulation considering market price, historical volatility, etc. The fair value of forward exchange contracts is measured mainly based on forward exchange rates. Derivative financial assets are included in “Other financial assets” in the consolidated statement of financial position.

(c) Financial assets measured at fair value through other comprehensive income

Investment securities

Investment securities are equity instruments mainly consisting of shares. The fair value of listed shares is determined based on market prices at shares exchanges, and the fair value of unlisted shares is determined using valuation techniques based on the market prices of similar entities or net asset values. The investment securities are included in "Other financial assets" in the consolidated statement of financial position.

(d) Financial liabilities measured at amortized cost

Bonds and borrowings

The fair value of bonds issued by the Company is assessed based on market prices. The fair value of borrowings is determined as the present value calculated by discounting the total of principal and interest with an assumed interest rate for similar new borrowings.

(e) Financial liabilities measured at fair value through profit or loss

Derivative financial liabilities

The fair value of forward exchange contracts is measured based on forward exchange rates. Derivative financial liabilities are included in "Other financial liabilities" in the consolidated statement of financial position.

2) Carrying amount and fair value of financial instruments by classification

The carrying amount and fair value of financial assets and financial liabilities included in the consolidated statement of financial position are as follows:

(Millions of yen)

	2018		2017	
	Carrying amount	Fair value	Carrying amount	Fair value
Financial assets				
Financial assets measured at amortized cost				
Other financial assets	1,664	1,664	1,489	1,489
Total financial assets measured at amortized cost	1,664	1,664	1,489	1,489
Financial assets measured at fair value through profit or loss				
Golf club memberships	155	155	150	150
Derivative financial assets	750	750	—	—
Total financial assets measured at fair value through profit or loss	905	905	150	150
Financial assets measured at fair value through other comprehensive income				
Investment in securities	7,269	7,269	7,098	7,098
Total financial assets measured at fair value through other comprehensive income	7,269	7,269	7,098	7,098
Total financial assets	9,838	9,838	8,736	8,736
Financial liabilities				
Financial liabilities measured at amortized cost				
Bonds and borrowings	45,310	45,340	27,721	27,754
Total financial liabilities measured at amortized cost	45,310	45,340	27,721	27,754
Financial liabilities measured at fair value through profit or loss				
Derivative financial liabilities	—	—	7	7
Total financial liabilities measured at fair value through profit or loss	—	—	7	7
Total financial liabilities	45,310	45,340	27,727	27,761

The Group does not have any financial assets and liabilities irrevocably designated at initial recognition as financial assets and liabilities measured at fair value through profit or loss. Financial assets measured at amortized cost, cash and equivalents, trade receivables, contract assets, other receivables, trade payables and other payables, are not included in the table above, because they are settled in the short-term and their book values reasonably approximate their fair values.

3) Classification by the levels in the fair value hierarchy

The fair value of financial assets and financial liabilities is measured and analyzed on a recurring basis as follows. These fair value amounts are categorized into three levels of the fair value hierarchy based on the inputs (available market data) used in valuation techniques. The respective levels are defined as follows:

Level 1: Fair value measured at quoted prices in active markets

Level 2: Fair value calculated, either directly or indirectly, using observable prices other than Level 1

Level 3: Fair value calculated using valuation techniques based on unobservable inputs

Transfers between the levels of the fair value hierarchy are recognized on the dates when events or changes causing the transfers occur.

The fair value hierarchy of financial assets and financial liabilities measured at fair value on a recurring basis as of December 31, 2018 and 2017 are as follows:

(Millions of yen)

2018	Level 1	Level 2	Level 3	Total
Other financial assets				
Financial assets measured at fair value through profit or loss	—	179	727	905
Financial assets measured at fair value through other comprehensive income	4,943	—	2,326	7,269

(Millions of yen)

2017	Level 1	Level 2	Level 3	Total
Other financial assets				
Financial assets measured at fair value through profit or loss	—	150	—	150
Financial assets measured at fair value through other comprehensive income	5,312	—	1,786	7,098
Other financial liabilities				
Financial liabilities measured at fair value through profit or loss	—	7	—	7

The fair value of financial instruments measured at amortized cost disclosed in “2) Carrying amounts and fair value of financial instruments by classification” are categorized as Level 2 for bonds and mainly Level 3 for the other instruments.

There were no transfers between Level 1, Level 2 and level 3 for the years ended December 31, 2018 and 2017.

No significant assets or liabilities were measured at fair value on a non-recurring basis as of December 31, 2018 and 2017.

4) Information on fair value measurement categorized as Level 3

(a) Valuation techniques and inputs

Other financial assets categorized as Level 3 are mainly unlisted shares and share options. The fair value of unlisted shares is determined using valuation techniques based on market prices of similar entities or net asset values. In measuring the fair value of unlisted shares, unobservable inputs such as valuation multiples are used. The fair value of share options is mainly determined based on Monte Carlo simulation using market price, historical volatility, etc. as input.

(b) Valuation process

The fair value of financial instruments categorized as Level 3 is measured in accordance with relevant internal rules and regulations. In measuring the fair value, the Group uses valuation techniques and inputs that most appropriately reflect the nature, characteristics and risks of the financial instruments to be measured.

(c) Information on the sensitivity of the recurring fair value measurement categorized as Level 3

Significant unobservable inputs related to the measurement of the fair value of financial instruments categorized as Level 3 on a recurring basis include an EBIT ratio based on financial forecast, illiquidity discount and historical volatility. The fair value increases (decreases) when the EBIT ratio and historical volatility increases (decreases). The fair value decreases (increases) when the illiquidity discount increases (decreases).

There is no significant impact on the fair value of financial instruments categorized as Level 3 even if unobservable inputs are changed to reasonable alternative assumptions.

(d) Reconciliation from the beginning balances to the ending balances for financial instruments categorized as Level 3

(Millions of yen)

	2018	2017
Balance at the beginning of the year	1,786	1,920
Total gains or losses	439	(129)
Profit for the year (Note 1)	101	―
Other comprehensive income for the year (Note 2)	338	(129)
Purchase	878	―
Sales	(50)	(5)
Balance at the end of the year	3,053	1,786

Note: 1. Gains and losses recognized in profit or loss for the year are included in “Finance costs" in the consolidated statement of profit or loss.

2. Gains and losses recognized in other comprehensive income are included in “Net changes in financial assets measured at fair value through other comprehensive income” in the consolidated statement of comprehensive income.

(5) Other financial assets

The details of other financial assets as of December 31, 2018 and 2017 are as follows:

(Millions of yen)

	2018	2017
Time deposits with deposit terms of more than three months	238	172
Golf club memberships	155	150
Investment securities	7,269	7,098
Others	2,176	1,317
Total	9,838	8,736
Current	280	190
Non-current	9,558	8,547
Total	9,838	8,736

Investment securities held by the Group are equity instruments mainly consisting of corporate shares. The investment securities are held mainly to facilitate business relationships, and are not held for short-term trading. Therefore, they are measured at fair value through other comprehensive income. The details of major investments and their fair values as of December 31, 2018 and 2017 are as follows:

(Millions of yen)

	2018	2017
Central Japan Railway Company	2,317	2,018
SINFONIA TECHNOLOGY CO., LTD.	615	1,007
NABCO KANAGAWA PTY,LTD.	506	464
East Japan Railway Company	490	555
WEST JAPAN RAILWAY TECHNOS Co., Ltd.	480	457
Kyodo Yushi Co., Ltd	460	―
WEST JAPAN RAILWAY TECHSIA Co., Ltd.	423	374
Keio Corporation	426	328
WEST JAPAN RAILWAY COMPANY	349	370
Others	1,204	1,524
Total	7,269	7,098
Dividend income	69	70

The Group periodically reviews capital efficiency and its business partnerships. As a result, the Group sells and derecognizes some financial assets measured at fair value through other comprehensive income. Equity instruments measured at fair value through other comprehensive income that the Group sold for the years ended December 31, 2018 and 2017 are as follows.

(Millions of yen)

	2018	2017
Fair value	198	43
Cumulative gains (losses)	(33)	20
Dividend income	4	1

The Group recognizes the cumulative gains or losses on the financial instruments measured at fair value through other comprehensive income as other components of equity. When the Group disposes of and derecognizes the financial instruments, or determines that the fair value of the financial instruments has apparently declined, it transfers them from other components of equity to retained earnings. The amount of cumulative gains or losses in other comprehensive income transferred to retained earnings were ¥-20 million and ¥14 million for the years ended December 31, 2018 and 2017, respectively.

21. Capital and other components of equity

(1) Total number of shares authorized and total number of shares issued

The total number of shares authorized and the total number of shares issued are as follows:

	Total number of shares authorized (shares)	Total number of shares issued (shares)
As of January 1, 2017	400,000,000	125,133,799
Increase	–	–
Decrease	–	–
As of December 31, 2017	400,000,000	125,133,799
Increase	–	–
Decrease	–	–
As of December 31, 2018	400,000,000	125,133,799

Note:1. Shares issued by the Company are no par value ordinary shares.
2. Issued shares are fully paid-up.

(2) Share premium

Share premium is the amount generated from equity transactions and not incorporated into share capital.

The Japanese Companies Act (“Companies Act”) stipulates that no less than 50% of the amount of payment received or the value of property delivered by the issuance of shares shall be incorporated into share capital and the remaining amount shall be incorporated into legal capital surplus included in share premium. In addition, the Companies Act provides that legal capital surplus may be reclassified to share capital by a resolution of a shareholders’ meeting.

(3) Retained earnings

Retained earnings consist of legal retained earnings and other retained earnings. Other retained earnings are mainly an accumulation of profit earned by the Group.

Under the Companies Act, a company shall accumulate an amount equivalent to one-tenth of the dividends paid from surplus as legal capital surplus or legal retained earnings until the total amount accumulated is equivalent to up to one-fourth of the amount of share capital. The accumulated legal retained earnings may be apportioned to offset deficits. In addition, legal retained earnings may be reversed by a resolution of a shareholders’ meeting.

(4) Treasury shares

Changes in the number and balance of treasury shares are as follows:

	Number of shares (shares)	Amount (millions of yen)
As of January 1, 2017	1,608,476	2,649
Acquisitions through Board Benefit Trust	294,400	982
Acquisitions through purchasing request of shares less than one unit	1,511	6
Decrease through exercise of share options	(16,100)	(37)
Sale through selling request of shares less than one unit	(40)	(0)
As of December 31, 2017	1,888,247	3,600
Acquisitions through purchasing request of shares less than one unit	749	3
Decrease through Board Benefit Trust	(18,736)	(62)
Decrease through exercise of share options	(55,800)	(140)
Others	(660,057)	(496)
As of December 31, 2018	1,154,403	2,903

Note: The details of the share option and the Board Benefit Trust are described in "Note 26. Share-based payment".
The Group discloses Nabtesco share owned by Board Benefit Trust as treasury shares on equity. The balance of the treasury shares was ¥919 million and the number of the treasury shares was 275,644 shares as of December 31, 2018.

(5) Other components of equity

1) Remeasurements of net defined benefit liabilities

Remeasurements of net defined benefit liabilities mainly consist of actuarial gains and losses on defined benefit obligations and returns on plan assets (excluding amount included in interest income from plan assets).

2) Net changes in financial assets measured at fair value through other comprehensive income

Net changes in financial assets measured at fair value through other comprehensive income are the amount of changes in the fair value of equity financial instruments measured at fair value through other comprehensive income.

3) Exchange differences on translating foreign operations

Exchange differences on translating foreign operations are exchange differences that arise when consolidating the foreign currency-denominated financial statements of foreign operations.

(6) Dividends

Dividend payments during the years ended December 31, 2018 and 2017 are as follows:

2018

Resolution	Total amount of dividends (millions of yen)	Dividend per share (yen)	Record date	Effective date
Ordinary General Meeting of Shareholders on March 27, 2018 (Note 1)	4,720	38	December 31, 2017	March 28, 2018
Board of Directors' Meeting on July 31, 2018 (Note 2)	4,473	36	June 30, 2018	August 31, 2018

Note:1. The total amount of dividends determined by the Ordinary General Meeting of Shareholders on March 27, 2018 includes the dividends of ¥11 million on the Company's shares held by the trust account of Mizuho Trust & Banking Co., Ltd. in relation to the Board Benefit Trust (BBT).

2. The total amount of dividends determined by the Board of Directors Meeting on July 31, 2018 includes the dividends of ¥10 million on the Company's shares held by the trust account of Mizuho Trust & Banking Co., Ltd. in relation to the Board Benefit Trust (BBT).

Dividends whose record date is in the current fiscal year but whose effective date in the following year are as follow:

Resolution	Total amount of dividends (millions of yen)	Dividend per share (yen)	Record date	Effective date
Ordinary General Meeting of Shareholders on March 26, 2019	4,597	37	December 31, 2018	March 27, 2019

Note: The total amount of dividends determined by the Ordinary General Meeting of Shareholders on March 26, 2019 includes the dividends of ¥10 million on the Company's shares held by the trust account of Mizuho Trust & Banking Co., Ltd. in relation to the Board Benefit Trust (BBT).

2017

Resolution	Total amount of dividends (millions of yen)	Dividend per share (yen)	Record date	Effective date
Ordinary General Meeting of Shareholders on March 28, 2017	3,229	26	December 31, 2016	March 29, 2017
Board of Directors' Meeting on July 31, 2017	4,223	34	June 30, 2017	September 4, 2017

Note: The total amount of dividends determined by the Board of Directors on July 31, 2017 includes the dividends of ¥10 million on the Company's shares held by the trust account of Mizuho Trust & Banking Co., Ltd. in relation to the Board Benefit Trust (BBT).

(7) Other comprehensive income for the year

The amounts incurred during the year, reclassification adjustments to profit or loss and tax effects of items in comprehensive income for the years ended December 31, 2018 and 2017 are as follows:

2018

(Millions of yen)

	Before tax	Tax (expense) benefit	After tax
Items that will not be reclassified to profit or loss			
Remeasurements of net defined benefit liabilities (assets)	(28)	10	(18)
Net changes in financial assets measured at fair value through other comprehensive income	(23)	7	(16)
Share of other comprehensive income of investments accounted for using the equity method	774	(97)	677
Sub-total	724	(80)	643
Items that may be reclassified subsequently to profit or loss			
Exchange differences on translating foreign operations	(2,628)	−	(2,628)
Sub-total	(2,628)	−	(2,628)
Total	(1,904)	(80)	(1,984)

Note: No reclassification adjustments arose from the above items.

2017

(Millions of yen)

	Before tax	Tax (expense) benefit	After tax
Items that will not be reclassified to profit or loss			
Remeasurements of net defined benefit liabilities (assets)	238	(59)	180
Net changes in financial assets measured at fair value through other comprehensive income	604	(185)	419
Share of other comprehensive income of investments accounted for using the equity method	19	−	19
Sub-total	861	(244)	618
Items that may be reclassified subsequently to profit or loss			
Exchange differences on translating foreign operations	2,278	−	2,278
Sub-total	2,278	−	2,278
Total	3,139	(244)	2,896

Note: No reclassification adjustments arose from the above items.

(8) Capital management

The Group operates its business based on the targeted level of return on assets (ROA) and return on equity (ROE) in order to maintain and improve its market value. To prepare for sudden changes in the economic environment, it also aims to achieve an appropriate percentage of equity attributable to owners of the parent that can maintain high credit ratings to raise funds regardless of the financial situation surrounding the Group.

The Group's ROA, ROE, Percentage of equity attributable to owners of the parent for the years ended December 31, 2018 and 2017 are as follows.

	2018	2017
ROA	6.7	9.0
ROE	12.1	15.9
Percentage of equity attributable to owners of the parent	54.4	55.6

22. Revenue from contracts with customers

(1) Disaggregation of revenue

The Group's businesses are comprised of the Component Solutions Business, Transport Solutions Business, Accessibility Solutions Business and Others. The Board of Directors regularly makes decisions on the allocation of management resources and assesses its performance.

The Group presents revenue obtained through these businesses as sales. Sales are broken down by main products. The following table shows relationship between the disaggregated sales and the sales for the year ended December 31, 2018 by segment described in “Note 5. Business segments”.

The Group has no performance obligation as an agent.

(Millions of yen)

Business segments	Main products	2018
Component Solutions Business	Precision reduction gear	65,803
	Hydraulic equipment	53,395
	Others	82
	Sub-total	119,280
Transport Solutions Business	Railroad vehicle equipment	31,207
	Aircraft equipment	18,526
	Commercial vehicle equipment	14,600
	Marine vessel equipment	9,777
	Others	7,754
	Sub-total	81,863
Accessibility Solutions Business	Automatic doors	75,957
	Sub-total	75,957
Others	Packaging machines	14,650
	Others	2,876
	Sub-total	17,527
Total		294,626

Note: The amounts of sales are showed based on external sales.

(2) Contract balances

The following table shows information about accounts receivable, contract assets and contract liabilities from contracts with customers.

(Millions of yen)

	January 1, 2018	December 31, 2018
Accounts receivable from contracts with customers	74,221	74,646
Contract assets	2,362	1,650
Contract liabilities	5,453	5,232

Note: Contract assets were included in "Trade receivables" and contract liabilities were included in "Trade payables" as of December 31, 2017.

The contract assets primarily relate to the Group's right to consideration for performance obligations that have been satisfied over time. The contract assets are transferred to receivables when the right becomes unconditional. Accounts receivable from contracts with customers is mainly paid within one year from the date which performance obligations are satisfied, in accordance to payment terms specified in a contract. In addition, the accounts receivable from contracts with customers contain no significant financing components.

Contract liabilities primarily relate to the consideration received from customers before delivery of the product.

The amount of revenue recognized for the year ended December 31, 2018, which was included in contract liabilities at the beginning of the year ended December 31, 2018 is ¥ 5,263 million. In addition, the amount of revenue recognized from performance obligations satisfied (or partially satisfied) in previous period is not significant.

Impairment loss (increase due to recognition of loss allowance) recognized for receivables from contracts with customers for the year ended December 31, 2018 is ¥53 million, and there are no impairment losses recognized for contract assets.

(3) Transaction price allocated to the remaining performance obligations

The transaction price for each remaining period to satisfy the obligation is as follows. The transaction price does not include estimates of variable consideration amounts. In addition, as the Group uses practical expedients, the following amounts do not include transaction amounts for which the individual expected contract period is within one year.

(Millions of yen)

	2018
Within one year	27,125
More than one year	15,524
Total	42,648

(4) Assets recognized from the costs of obtaining or fulfilling contracts with customers

There are no assets recognized from the costs for obtainment or fulfillment of contracts with customers for the year ended December 31, 2018. If the amortization period of the assets to be recognized is within one year, practical expedients are applied, and the incremental costs of obtaining contracts are recognized as an expense when incurred.

23. Details of expenses by nature

Cost of sales and selling, general and administrative expenses for the years ended December 31, 2018 and 2017 consist of the following:

(Millions of yen)

	2018	2017
Cost of materials and others allocated	145,111	139,436
Employee benefit expenses (Note 1)	59,910	56,992
Research and development costs (Note 2)	10,214	8,731
Depreciation and amortization	9,367	8,313
Travel and transportation costs	3,279	3,199
Others	40,346	36,597
Total	268,227	253,267

Note:1. Employee benefit expenses include the benefits expenses for directors and corporate auditors of the Group.

2. Research and development costs include employee benefit expenses, depreciation and amortization relating to research and development.

24. Other income and expenses

(1) Other income

Other income for the years ended December 31, 2018 and 2017 consists of the following:

(Millions of yen)

	2018	2017
Rental income	417	282
Gain on sale of property, plant and equipment	33	51
Insurance proceeds received	274	286
Others	859	733
Total	1,582	1,351

(2) Other expenses

Other expenses for the years ended December 31, 2018 and 2017 consist of the following

(Millions of yen)

	2018	2017
Loss on disaster	49	161
Loss on sale and disposal of property, plant and equipment	218	345
Rental costs	107	—
Impairment losses	5,223	192
Others	496	340
Total	6,093	1,038

25. Finance income and finance costs

(1) Finance income

Finance income for the years ended December 31, 2018 and 2017 consists of the following:

(Millions of yen)

	2018	2017
Interest income Financial assets measured at amortized cost	186	115
Dividend income Financial assets measured at fair value through other comprehensive income	73	71
Gain from changes in fair value of golf club membership Financial assets measured at fair value through profit or loss	6	－
Gain from changes in fair value of derivatives Financial assets measured at fair value through profit or loss	101	－
Net foreign exchange gain	－	446
Total	366	632

(2) Finance costs

Finance costs for the years ended December 31, 2018 and 2017 consist of the following:

(Millions of yen)

	2018	2017
Interest expenses Financial liabilities measured at amortized cost	124	109
Net foreign exchange loss	1,349	－
Total	1,473	109

26. Share-based payment

(1) Share-based payment-type share option plan

1) Overview of share-based payment-type share option plan

The Company grants share options, which give the holder the right to purchase the Company's shares, to its directors and executive officers (excluding outside directors; hereafter "Directors"). This plan does not have any vesting conditions. With the approval of the 14th Ordinary General Meeting of Shareholders held on March 28, 2017, the Company abolished the share-based payment-type share option plan (however, any unexercised subscription rights to shares already granted to directors as share-based payment-type share options remain). One unit of share option is exchanged for 100 ordinary shares when it is exercised.

The details of share options as of December 31, 2018 are as follows:

Date of grant	Number of board of directors entitled	Number of ordinary shares	Method of settlement	Exercise period		
August 21, 2009	19	99,000	Equity- settled	August 22, 2009	-	August 21, 2034
August 20, 2010	18	70,000	Equity- settled	August 21, 2010	-	August 20, 2035
August 19, 2011	20	70,000	Equity- settled	August 20, 2011	-	August 19, 2036
August 20, 2012	22	77,700	Equity- settled	August 21, 2012	-	August 20, 2037
August 20, 2013	22	64,500	Equity- settled	August 21, 2013	-	August 20, 2038
August 20, 2014	21	55,500	Equity- settled	August 21, 2014	-	August 20, 2039
August 20, 2015	19	29,300	Equity- settled	August 21, 2015	-	August 20, 2040
May 20, 2016	19	53,000	Equity- settled	May 21, 2016	-	May 20, 2041
February 27, 2017	19	6,200	Equity- settled	February 27, 2020	-	February 26, 2030

2) Number of share options and weighted averaged exercise price

	2018		2017	
	Number of share option	weighted average exercise price	Number of share options	weighted average exercise price
Balance at the beginning of the year	2,233	1	2,332	1
Granted	－	－	62	1
Exercised (Note 2)	(558)	1	(161)	1
Balance at the end of the year (Note 3)	1,675	1	2,233	1
Exercisable balance at the end of the year	1,613	1	2,141	1

Note:1. The Company changed its share-trading unit from 1,000 shares to 100 shares on October 1, 2010. Accordingly, the numbers of share options granted on August 21, 2009 and August 20, 2010 have been adjusted from a 1,000 shares per unit basis to a 100 shares per unit basis.

2. The weighted average share prices of the share options exercised is ¥4,027 and ¥2,038 for the years ended December 31, 2018 and 2017, respectively.

3. The weighted average exercise price of unexercised shares options is ¥1 each as of December 31, 2018 and 2017. The weighted average of the remaining contractual years is 19.2 years and 20.6 years for the years ended December 31, 2018 and 2017.

3) Fair value, measurement and assumptions of share options granted during the year

The fair value of all share-based payment plans has been measured using the Black-Scholes model based on the following assumptions. Expected volatility is calculated based on the share price records over the historical period commensurate with the expected remaining period from the grant date as well as share price information collected on a daily basis.sh

There were no granted share options for the year ended December 31, 2018.

	2017
Exercise price	1 yen
Fair value at grant date	2,739 yen
Share price at grant date	3,115 yen
Expected volatility	36.237%
Expected remaining period	7.997 years
Dividend yield	1.605%
Risk-free rate	0.003%

4) Share-based payment expenses

Share-based payment expenses is ¥17 million for the year ended December 31, 2017. No share-based payment expenses is for the year ended December 31, 2018. They are included in “Selling, general and administrative expenses” in the consolidated statement of profit or loss.

(2) Board Benefit Trust (Equity settled-type)

1) Overview of Board Benefit Trust

The Company introduced the Board Benefit Trust (BBT) in the year ended December 31, 2017.

The plan was introduced to further motivate Directors to improve the medium- to long-term business performance of the Group as a whole and to raise the corporate value, as well as further increase shareholder-centric management awareness. Compared with the existing share-based payment type share options, the plan has the potential to achieve this purpose by additionally clarifying the link between compensation for Directors and the business performance and share value of the Company, and by enabling Directors to share with the shareholders not only benefits of rising share prices but also risks of falling share prices.

Under the plan, the Company's shares are acquired through the trust using the money contributed by the Company, and points ("share grant points") are awarded to Directors every year based on their position and business performance in accordance with the regulations for the provision of shares to officers formulated by the Company. Company shares and the cash equivalent of Company shares will be granted or provided through the trust at prescribed times in accordance with the number of share grant points. One share grant point is exchanged for one ordinary share when the Company shares are granted

2) Number of Share grant points

	2018	2017
	Number of point	Number of point
Balance at the beginning of the year	80,524	−
Granted	81,700	80,524
Exercised	(21,540)	−
Balance at the end of the year	140,684	80,524

In the plan, there is no exercise price, because the Company's shares or cash equivalent to the shares will be obtained or provided through the trust.

3) Fair value of share grant points granted during the year

Fair value is measured based on an observable market price.

Expected dividends are not considered because the term between the grant date and expected exercise date is short. The weighted average exercise price of the points granted is ¥3,845 and ¥3,335 for the years ended December 31, 2018 and 2017, respectively.

4) Cost associated with the Board Benefit Trust

Cost associated with the Board Benefit Trust for the years ended December 31, 2018 and 2017 is ¥329 million and ¥269 million, respectively. The cost is included in "Selling, general and administrative expenses" in the consolidated statement of profit or loss.

27. Earnings per share

(1) Calculation basis of basic earnings per share

Basic earnings per share for the year and the calculation basis are as follows:

		2018	2017
Profit for the year attributable to owners of the parent	(millions of yen)	21,029	25,146
Weighted average number of ordinary shares	(thousand shares)	123,960	123,356
Basic earnings per share	(yen)	169.65	203.85

(2) Calculation basis of diluted earnings per share

Diluted earnings per share for the year and the calculation basis are as follows:

		2018	2017
Diluted profit for the year attributable to owners of the parent	(millions of yen)	21,029	25,146
Weighted average number of ordinary shares	(thousand shares)	123,960	123,356
Effect of share options in the form of subscription rights to shares	(thousand shares)	166	222
Diluted weighted average number of ordinary shares	(thousand shares)	124,127	123,578
Diluted earnings per share	(yen)	169.42	203.48

28. Business combinations

2018

There are no significant business combinations for the year ended December 31, 2018.

2017

(Acquisition of equity interests in OVALO GmbH)

The Company acquired 100% of the equity interests in OVALO GmbH ("OVALO") and turned it into a consolidated subsidiary as of March 1, 2017.

(1) Overview of business combination

1) Name and business of the acquiree

Name of the acquiree: OVALO GmbH

Business: Development, manufacturing and sale of system products with the wave gears for the automobile industry

2) Primary reasons for the business combination

The Company decided upon this acquisition aiming for "profitable growth" by gaining a competitive advantage in European market and strengthening mechatronics sector, which is a base of the Company's supply chain.

This acquisition enables the Company to accelerate the development of systems and mechatronic products by utilizing OVALO's technology to develop motor-control unit integrated products.

In addition, OVALO has potential for further growth. The Company considers using OVALO as a development and manufacturing base in Europe in the future, in order to gain a competitive advantage in European market and increase a market share in European market.

3) Method of obtaining control over the acquiree

Acquisition of equity interests in exchange for cash consideration

4) Acquisition date

March 1, 2017

5) Percentage of voting equity interests acquired

100%

(2) Consideration transferred and its details

Cash	¥8,307 million
Total consideration	¥8,307 million

(3) Acquisition-related cost

Acquisition-related cost was ¥139 million (of which ¥80 million was incurred in the fiscal year ended December 31, 2016), which is included in "Selling, general and administrative expenses" in the consolidated statement of profit or loss.

(4) Acquired receivables

The fair value of acquired receivables, which are mainly loans receivable, is ¥1,428 million, and their gross contractual amount is ¥1,428 million. The receivables are expected to be fully collected.

(5) Assets acquired and liabilities assumed

The fair values of assets acquired and liabilities assumed on the acquisition date are as follows:

(Millions of yen)

	Amount
Fair value of consideration transferred (Note 1)	8,307
Non-controlling interests (Note 2)	51
Total	8,357
Current assets (Note 3)	2,412
Non-current assets (Note 4)	4,398
Current liabilities	(3,358)
Non-current liabilities	(1,110)
Goodwill (Note 5)	6,016
Total	8,357

Notes:1. There is no contingent consideration.

2. Non-controlling interests are measured based on the proportionate share of the interests in the fair value of the identifiable net assets of the acquiree.

3. Current assets include cash and cash equivalents of ¥142 million.

4. Intangible assets include customer-related assets of ¥2,321 million (estimated useful life of 3 - 8 years), technology assets of ¥407 million (estimated useful lives of 7 - 20 years) and other intangible assets of ¥582 million (estimated useful lives of 8 years), which had not been recognized by the aquiree.

5. The goodwill is attributable mainly to the high profitability that is expected to be achieved from integrating the company into the Group. None of the goodwill recognized is expected to be deductible for tax purpose.

(6) Impact on the Group's business performance

Information on profit or loss of the acquired business since the acquisition date and the estimated impact of business combination on the consolidated financial statements on the assumption that the business combination had been executed on January 1, 2017, the beginning of the fiscal year, are not provided as they are not material.

29. Subsidiaries

(1) Major subsidiaries of the Group

Major subsidiaries of the Group as of December 31, 2018 and 2017 are as follows;

Company name	Location	Main business	Percentage of voting rights (%)	
			2018	2017
NABCO DOOR Ltd.	Nishi-ku, Osaka, Japan	Accessibility	100.0	100.0
Nabtesco Automotive Corporation	Chiyoda-ku, Tokyo, Japan	Transport	100.0	100.0
NABCO SYSTEM CO., LTD. (Note 2)	Minato-ku, Tokyo, Japan	Accessibility	85.9	85.9
Nabtesco Service Co., Ltd.	Shinagawa-ku, Tokyo, Japan	Transport	100.0	100.0
Toyo Jidoki Co., Ltd.	Minato-ku, Tokyo, Japan	Others	100.0	100.0
Nabtesco (China) Precision Equipment Co., Ltd.	Jiangsu, China	Component	67.0	67.0
Jiangsu Nabtesco KTK Railroad Products Co., Ltd. (Note 3)	Jiangsu, China	Transport	50.0	50.0
Shanghai Nabtesco Hydraulic Co., Ltd.	Shanghai, China	Component	55.0	55.0
Shanghai Nabtesco Hydraulic Equipment Trading Co., Ltd	Shanghai, China	Component	67.0	67.0
Nabtesco Aerospace Inc.	Washington U.S.A.	Transport	100.0	100.0
NABCO Entrances, Inc.	Wisconsin U.S.A.	Accessibility	100.0	100.0
Gilgen Door Systems AG	Schwarzenburg , Switzerland	Accessibility	100.0	100.0
Nabtesco Precision Europe GmbH	Duesseldorf, Germany	Component	100.0	100.0
Nabtesco Power Control (Thailand)Co., Ltd.	Chonburi, Thailand	Component	70.0	70.0

Note:1. In the “Main business” column, the names of reportable segments are stated.

2. Jiangsu Nabtesco KTK Railroad Products Co., Ltd. (“Jiangsu Nabtesco”) is consolidated as the Company determines that it has control over Jiangsu Nabtesco based on the fact that the Company has 50% of the voting rights of Jiangsu Nabtesco and Jiangsu Nabtesco depends on the Company’s technologies.

30. Related parties

(1) Transaction with associates

The balance of receivables and payables and the amounts of transactions with associates are as follows,

1) Balances of receivables and payables with associates

(Millions of yen)

	2018	2017
Outstanding receivables	233	239
Outstanding payables	394	301

Note: The Company has no collaterals or guarantees for the associates. The Company has no loss allowance or receivables due from the associates.

2) Amounts of related party transaction

(Millions of yen)

	2018	2017
Sales	861	771
Purchases	4,212	3,848

Note: Related party transactions are priced on an arm's length basis.

(2) Key management personnel compensation

Compensation of the Company's key management personnel for the year comprised the following:

2018

(Millions of yen)

	Total amounts of compensation and others	Total amount of compensation and others by type	
		Basic compensation	Board Benefit Trust
Key management personnel compensation	446	301	144

Note: The executives are the directors of the Company

2017

(Millions of yen)

	Total amounts of compensation and others	Total amount of compensation and others by type		
		Basic compensation	Board Benefit Trust	Share-based payment-type share options
Key management personnel compensation	406	263	134	8

Note: The key management personnel are the directors of the Company.

31. Commitments

The Group's commitments as of December 31, 2018 and 2017 are as follows:

(Millions of yen)

	2018	2017
Commitments	4,817	7,350

32. Contingent liabilities

There are no contingent liabilities that need disclosure as of December 31, 2018 and 2017.

33. Subsequent events

There are no subsequent events that need disclosure as of December 31, 2018.

KPMG

Independent Auditor's Report

To the Board of Directors of Nabtesco Corporation.:

We have audited the accompanying consolidated financial statements of Nabtesco Corporation and its consolidated subsidiaries, which comprise the consolidated statement of financial position as at December 31, 2018, and the consolidated statement of profit or loss, statement of comprehensive income, statement of changes in equity and statement of cash flows for the year then ended, and notes to consolidated financial statements.

Management's Responsibility for the Consolidated Financial Statements

Management is responsible for the preparation and fair presentation of these consolidated financial statements in accordance with International Financial Reporting Standards, 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.

Auditor's Responsibility

Our responsibility is to express an opinion on these consolidated financial statements based on our audit. We conducted our audit in accordance with auditing standards generally accepted in Japan. Those standards require that we comply with ethical requirements and plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the consolidated financial statements. The procedures selected depend on our judgment, including the assessment of the risks of material misstatement of the consolidated financial statements, whether due to fraud or error. In making those risk assessments, we consider internal control relevant to the entity's preparation and fair presentation of the consolidated financial statements in order to design audit procedures that are appropriate in the circumstances, while the objective of the financial statement audit is not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Opinion

In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of Nabtesco Corporation and its consolidated subsidiaries as at December 31, 2018, and their financial performance and cash flows for the year then ended in accordance with International Financial Reporting Standards.

KPMG AZSA LLC

May 24, 2019
Tokyo, Japan