



**Japan Exchange Group, Inc. and its subsidiaries
Consolidated Financial Statements under IFRS
and Independent Auditor's Report**

For the year ended March 31, 2017

Japan Exchange Group, Inc.

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INDEPENDENT AUDITOR'S REPORT

To the Board of Directors of Japan Exchange Group, Inc.:

We have audited the accompanying consolidated statement of financial position of Japan Exchange Group, Inc. and its subsidiaries as of March 31, 2017, and the related consolidated statements of income, comprehensive income, changes in equity, and cash flows for the fiscal year from April 1, 2016 to March 31, 2017, 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 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 the auditor's 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, the auditor considers 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, but 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 referred to above present fairly, in all material respects, the consolidated financial position of Japan Exchange Group, Inc. and its subsidiaries as of March 31, 2017, and the consolidated results of their operations and their cash flows for the fiscal year then ended in accordance with International Financial Reporting Standards.

Deloitte Touche Tohmatsu LLC

June 9, 2017

Consolidated Financial Statements

Consolidated Statement of Financial Position

| | | As of March 31, 2016 | As of March 31, 2017 |
|--|-------|----------------------|----------------------|
| | Notes | Millions of yen | Millions of yen |
| Assets | | | |
| Current assets | | | |
| Cash and cash equivalents | 7,23 | 66,547 | 73,553 |
| Trade and other receivables | 8,23 | 10,096 | 9,774 |
| Clearing business financial assets | 23 | 26,395,558 | 37,555,555 |
| Specified assets for deposits from clearing participants | 9,23 | 2,809,433 | 3,374,863 |
| Specified assets for legal guarantee funds | 9,23 | 483 | 474 |
| Income tax receivables | | 5,055 | 8,507 |
| Other financial assets | 10,23 | 65,600 | 73,800 |
| Other current assets | | 1,163 | 1,626 |
| Total current assets | | 29,353,939 | 41,098,156 |
| Non-current assets | | | |
| Property and equipment | 11 | 6,025 | 5,140 |
| Goodwill | 12 | 67,374 | 67,374 |
| Intangible assets | 12 | 31,033 | 30,596 |
| Retirement benefit assets | 13 | 3,626 | 5,202 |
| Investments accounted for using the equity method | 14 | 7,592 | 8,809 |
| Specified assets for default compensation reserve funds | 9,23 | 27,948 | 27,948 |
| Other financial assets | 10,23 | 38,639 | 36,275 |
| Other non-current assets | | 5,854 | 5,793 |
| Deferred tax assets | 15 | 4,741 | 3,635 |
| Total non-current assets | | 192,836 | 190,775 |
| Total assets | | 29,546,776 | 41,288,932 |

| | | As of March 31, 2016 | As of March 31, 2017 |
|--|-----------|----------------------|----------------------|
| | Notes | Millions of yen | Millions of yen |
| Liabilities and equity | | | |
| Liabilities | | | |
| Current liabilities | | | |
| Trade and other payables | 16,23,24 | 4,413 | 3,190 |
| Bonds and loans payable | 17,23,24 | 22,500 | 22,500 |
| Clearing business financial liabilities | 23,24 | 26,395,558 | 37,555,555 |
| Deposits from clearing participants | 9,23,24 | 2,809,433 | 3,374,863 |
| Legal guarantee funds | 9,23,24 | 483 | 474 |
| Trading participant security money | 9,23,24 | 7,429 | 8,142 |
| Income tax payables | | 10,714 | 9,210 |
| Other current liabilities | | 6,403 | 5,339 |
| Total current liabilities | | 29,256,937 | 40,979,276 |
| Non-current liabilities | | | |
| Bonds and loans payable | 17,23,24 | 10,000 | 29,933 |
| Retirement benefit liabilities | 13 | 7,352 | 7,357 |
| Other non-current liabilities | | 3,924 | 3,693 |
| Deferred tax liabilities | 15 | 5,650 | 4,900 |
| Total non-current liabilities | | 26,926 | 45,884 |
| Total liabilities | | 29,283,864 | 41,025,161 |
| Equity | | | |
| Share capital | 18 | 11,500 | 11,500 |
| Capital surplus | 18 | 59,726 | 59,722 |
| Treasury shares | 18 | (9) | (13,506) |
| Other components of equity | 18 | 13,321 | 11,604 |
| Retained earnings | 9,18 | 172,656 | 188,634 |
| Total equity attributable to owners of the parent company | 24 | 257,194 | 257,955 |
| Non-controlling interests | | 5,717 | 5,815 |
| Total equity | | 262,912 | 263,770 |
| Total liabilities and equity | | 29,546,776 | 41,288,932 |

Consolidated Statement of Income

| | | Fiscal year ended March 31, 2016 | Fiscal year ended March 31, 2017 |
|--|-------------|-------------------------------------|-------------------------------------|
| | Notes | Millions of yen | Millions of yen |
| Revenue | | | |
| Operating revenue | 19 | 114,776 | 107,885 |
| Other revenue | | 2,137 | 161 |
| Total revenue | | 116,914 | 108,047 |
| Expenses | | | |
| Operating expenses | 12,13,20,27 | 50,925 | 50,185 |
| Other expenses | | 466 | 9 |
| Total expenses | | 51,392 | 50,195 |
| Share of income of investments accounted for using the equity method | 14 | 749 | 1,525 |
| Operating income | | 66,271 | 59,377 |
| Financial income | 21 | 1,540 | 1,235 |
| Financial expenses | 21 | 36 | 8 |
| Income before income tax | | 67,774 | 60,604 |
| Income tax expense | 15 | 22,599 | 18,240 |
| Net income | | 45,175 | 42,363 |
| Net income attributable to | | | |
| Owners of the parent company | | 44,877 | 42,124 |
| Non-controlling interests | | 297 | 238 |
| Net income | | 45,175 | 42,363 |
| Earnings per share | | | |
| Basic (Yen) | 22 | 81.74 | 77.00 |
| Diluted (Yen) | 22 | — | — |

Consolidated Statement of Comprehensive Income

| | | Fiscal year ended March 31, 2016 | Fiscal year ended March 31, 2017 |
|--|-------|-------------------------------------|-------------------------------------|
| | Notes | Millions of yen | Millions of yen |
| Net income | | 45,175 | 42,363 |
| Other comprehensive income | | | |
| Items that will not be reclassified to profit or loss | | | |
| Net gain (loss) on revaluation of financial assets measured at fair value through other comprehensive income | 23 | (1,491) | (1,717) |
| Remeasurements of defined benefit plan | 13 | (1,484) | 1,268 |
| Share of other comprehensive income of investments accounted for using the equity method | 14 | 0 | (0) |
| Other comprehensive income, net of tax | 25 | (2,975) | (448) |
| Comprehensive income | | 42,199 | 41,914 |
| Comprehensive income attributable to: | | | |
| Owners of the parent company | | 41,902 | 41,676 |
| Non-controlling interests | | 297 | 238 |
| Comprehensive income | | 42,199 | 41,914 |

Consolidated Statement of Changes in Equity

| | | Equity attributable to owners of the parent company | | | | |
|---|-------|---|-----------------|-----------------|--|--|
| | | Share capital | Capital surplus | Treasury shares | Other components of equity | |
| | | | | | Net gain (loss) on revaluation of financial assets measured at fair value through other comprehensive income | Remeasurements of defined benefit plan |
| | Notes | Millions of yen | Millions of yen | Millions of yen | Millions of yen | Millions of yen |
| Balance as of April 1, 2015 | | 11,500 | 59,726 | (5) | 14,828 | — |
| Net income | | — | — | — | — | — |
| Other comprehensive income, net of tax | | — | — | — | (1,491) | (1,484) |
| Total comprehensive income | | — | — | — | (1,491) | (1,484) |
| Acquisitions of treasury shares | 18 | — | — | (3) | — | — |
| Dividends paid | 26 | — | — | — | — | — |
| Changes of interests in subsidiaries without losing control | | — | — | — | — | — |
| Transfer from other components of equity to retained earnings | | — | — | — | (15) | 1,484 |
| Total transactions with the owners | | — | — | (3) | (15) | 1,484 |
| Balance as of March 31, 2016 | | 11,500 | 59,726 | (9) | 13,321 | — |
| Net income | | — | — | — | — | — |
| Other comprehensive income, net of tax | | — | — | — | (1,717) | 1,268 |
| Total comprehensive income | | — | — | — | (1,717) | 1,268 |
| Acquisitions of treasury shares | 18 | — | (3) | (13,497) | — | — |
| Dividends paid | 26 | — | — | — | — | — |
| Changes of interests in subsidiaries without losing control | | — | — | — | — | — |
| Transfer from other components of equity to retained earnings | | — | — | — | — | (1,268) |
| Total transactions with the owners | | — | (3) | (13,497) | — | (1,268) |
| Balance as of March 31, 2017 | | 11,500 | 59,722 | (13,506) | 11,604 | — |

| Equity attributable to owners of the parent company | | | | | |
|--|----------------------------------|----------------------|--------------------|----------------------------------|--------------------|
| | Other components of equity | Retained earnings | Total | Non- controlling interests | Total equity |
| | Total | | | | |
| Notes | Millions of yen | Millions of yen | Millions of yen | Millions of yen | Millions of yen |
| Balance as of April 1, 2015 | 14,828 | 149,562 | 235,611 | 5,954 | 241,565 |
| Net income | — | 44,877 | 44,877 | 297 | 45,175 |
| Other comprehensive income, net of tax | (2,975) | — | (2,975) | — | (2,975) |
| Total comprehensive income | (2,975) | 44,877 | 41,902 | 297 | 42,199 |
| Acquisitions of treasury shares | 18 | — | (3) | — | (3) |
| Dividends paid | 26 | (20,315) | (20,315) | (8) | (20,324) |
| Changes of interests in subsidiaries without losing control | — | — | — | (525) | (525) |
| Transfer from other components of equity to retained earnings | 1,468 | (1,468) | — | — | — |
| Total transactions with the owners | 1,468 | (21,784) | (20,319) | (534) | (20,853) |
| Balance as of March 31, 2016 | 13,321 | 172,656 | 257,194 | 5,717 | 262,912 |
| Net income | — | 42,124 | 42,124 | 238 | 42,363 |
| Other comprehensive income, net of tax | (448) | — | (448) | — | (448) |
| Total comprehensive income | (448) | 42,124 | 41,676 | 238 | 41,914 |
| Acquisitions of treasury shares | 18 | — | (13,500) | — | (13,500) |
| Dividends paid | 26 | (27,414) | (27,414) | — | (27,414) |
| Changes of interests in subsidiaries without losing control | — | — | — | (140) | (140) |
| Transfer from other components of equity to retained earnings | (1,268) | 1,268 | — | — | — |
| Total transactions with the owners | (1,268) | (26,146) | (40,915) | (140) | (41,056) |
| Balance as of March 31, 2017 | 11,604 | 188,634 | 257,955 | 5,815 | 263,770 |

Consolidated Statement of Cash Flows

| | Fiscal year ended March 31, 2016 | Fiscal year ended March 31, 2017 |
|--|-------------------------------------|-------------------------------------|
| Notes | Millions of yen | Millions of yen |
| Cash flows from operating activities | | |
| Income before income tax | 67,774 | 60,604 |
| Depreciation and amortization | 10,727 | 11,784 |
| Financial income | (1,540) | (1,235) |
| Financial expenses | 36 | 8 |
| Share of income of investments accounted for using the equity method | (749) | (1,525) |
| Gains on sale of property and equipment | (1,853) | — |
| (Increase) decrease in trade and other receivables | 203 | 306 |
| Increase (decrease) in trade and other payables | 210 | (498) |
| (Increase) decrease in retirement benefit assets | 1,797 | (1,575) |
| Increase (decrease) in retirement benefit liabilities | 313 | 4 |
| Other | (247) | 1,492 |
| Subtotal | <u>76,673</u> | <u>69,364</u> |
| Interest and dividends received | 1,678 | 1,575 |
| Interest paid | (38) | (5) |
| Income taxes paid | (17,243) | (23,473) |
| Cash flows generated from operating activities | <u>61,069</u> | <u>47,462</u> |
| Cash flows from investing activities | | |
| Payments into time deposits | (70,600) | (83,100) |
| Proceeds from withdrawal of time deposits | 47,100 | 74,900 |
| Purchase of property and equipment | (1,624) | (1,111) |
| Proceeds from sale of property and equipment | 3,660 | — |
| Purchase of intangible assets | (11,934) | (9,970) |
| Purchase of investment securities | (1,000) | (127) |
| Other | 807 | 79 |
| Cash flows generated from (used in) investing activities | <u>(33,591)</u> | <u>(19,330)</u> |
| Cash flows from financing activities | | |
| Proceeds from loans payable | 10,000 | 10,000 |
| Repayments of loans payable | (10,000) | (10,000) |
| Proceeds from issuance of bonds | — | 19,932 |
| Dividends paid | (20,315) | (27,414) |
| Purchase of treasury shares | (3) | (13,501) |
| Other | (711) | (136) |
| Cash flows used in financing activities | <u>(21,030)</u> | <u>(21,119)</u> |
| Net increase (decrease) in cash and cash equivalents | <u>6,447</u> | <u>7,011</u> |
| Cash and cash equivalents at the beginning of the year | <u>60,114</u> | <u>66,547</u> |
| Effect of changes in exchange rate on cash and cash equivalents | (13) | (6) |
| Cash and cash equivalents at the end of the year | <u>7</u> <u>66,547</u> | <u>73,553</u> |

Notes to Consolidated Financial Statements

1. Reporting Entity

Japan Exchange Group, Inc. (hereinafter the “Company”) is a stock company based in Japan, and the address of the registered head office is 2-1 Nihombashi Kabutocho, Chuo-ku, Tokyo. The Company’s consolidated financial statements, the reporting date of which is March 31, 2017, are composed of financial statements of the Company and its subsidiaries (hereinafter the “Group”) and the Group’s interests in associates. The Group operates its businesses under regulations of the Financial Instruments and Exchange Act and related laws and regulations, and its major line of business is establishing and operating financial instruments exchange markets and assuming financial instruments obligations.

2. Basis of Preparation

(1) Compliance with IFRS

Since the Company satisfies all the requirements prescribed in Article 1-2 of the Ordinance on Terminology, Forms, and Preparation Methods of Consolidated Financial Statements (Ordinance of the Ministry of Finance No. 28 of 1976; hereinafter the “Ordinance on CFS”), the Group’s consolidated financial statements are prepared in accordance with International Financial Reporting Standards (hereinafter “IFRS”) pursuant to the provision of Article 93 of the Ordinance on CFS.

(2) Approval of Consolidated Financial Statements

The Group’s consolidated financial statements were approved by Akira Kiyota, Director and Representative Executive Officer, Group CEO, and Atsushi Tabata, Executive Officer & CFO, on June 9, 2017.

(3) Basis of Measurement

As stated in Note “3. Significant Accounting Policies,” the Group’s consolidated financial statements are prepared on the historical cost basis, except for certain financial instruments, etc. measured at fair value.

(4) Functional Currency and Presentation Currency

The Group’s consolidated financial statements are presented in Japanese yen, which is the functional currency of the Company, and amounts less than ¥1 million are rounded down.

(5) Early Adoption of New Accounting Standards

The Group has early adopted IFRS 9 “Financial Instruments” (revised in October 2010) (hereinafter “IFRS 9 (2010)”) from the Date of Transition (April 1, 2013).

IFRS 9 (2010) replaces IAS 39 “Financial Instruments: Recognition and Measurement” (hereinafter “IAS 39”) and provides two measurement categories for financial instruments: amortized cost and fair value. Changes in fair value of financial assets measured at fair value are recognized in profit or loss. However, for investments in equity instruments that are not held for trading, it is allowed to make an irrevocable election to recognize subsequent changes in the fair value of those investments as other comprehensive income at initial recognition.

3. Significant Accounting Policies

(1) Basis of Consolidation

1) Subsidiaries

A subsidiary is an entity that is controlled by the Group. In the determination of whether an entity is a subsidiary, various elements related to assessment of control such as holding of voting rights, composition of members of a governing body including the board of directors and influence over decision making on financial and operating policies are taken into account comprehensively.

All subsidiaries are consolidated from the date on which the Group obtains control until the date on which the Group loses the control.

The balances of receivables from, payables to, and transactions with subsidiaries, and unrealized gains that arise from intragroup transactions are eliminated in the preparation of the consolidated financial statements.

2) Associates

An associate is an entity which is not controlled by the Group but for which the Group has significant influence over the financial and operating policies. If the Group holds 20% or more and 50% or less of an entity's voting power, it is presumed that the Group has significant influence over the entity.

Investments in associates, which are accounted for using the equity method, are measured at cost at the time of acquisition, and subsequently the amount of the investments is changed according to changes in the Group's share of net assets of the associates. In this case, the amount equivalent to the Group's share of net profit or loss of associates is recorded in the consolidated statement of income. The amount equivalent to the Group's share of other comprehensive income of associates is recorded as other comprehensive income in the consolidated statement of comprehensive income.

Profits on significant internal transactions are eliminated in proportion to the share in the associate.

(2) Business Combinations

Business combinations are accounted for using the acquisition method.

Consideration transferred in a business combination is measured as the sum of the acquisition-date fair values of the assets transferred, the liabilities assumed and the equity instruments issued by the Company in exchange for control over an acquiree. On the acquisition date, identifiable assets and liabilities are recognized at fair value as of the acquisition date, except for assets and liabilities to be measured at an amount other than fair value under IFRS 3 "Business Combinations," such as deferred tax assets, deferred tax liabilities and assets and liabilities on employee benefits, which are recognized at the value specified in IFRS 3 "Business Combinations."

For each business combination, the Group chooses whether non-controlling interests are measured at fair value or the proportionate share of identifiable net assets of the acquiree on the acquisition date.

When the total of the consideration transferred and the amount of non-controlling interests in an acquiree exceeds the fair value of identifiable assets and liabilities on the acquisition date, the excess is recognized as goodwill in the consolidated statement of financial position. On the other hand, when the total is lower than the fair value of identifiable assets and liabilities, the difference is immediately recognized as profit in the consolidated statement of income. Acquisition-related costs incurred are accounted for as expenses. In the case of a business combination in which control is achieved in stages, the equity interests in the acquiree previously held by the Group are revalued at fair value as of the acquisition date and any resulting gain or loss is recognized in profit or loss.

(3) Foreign Currency Translation

Foreign Currency Transactions

Foreign currency transactions are translated into the functional currency at the rates of exchange prevailing at the dates of transactions.

Monetary assets and liabilities denominated in foreign currencies at the end of each fiscal year are translated into the functional currency at the rates of exchange prevailing at the end of the fiscal year. Differences arising from the translation are recognized in profit or loss. However, exchange differences arising from the translation of financial assets measured at fair value through other comprehensive income are recognized as other comprehensive income.

(4) Cash and Cash Equivalents

Cash and cash equivalents consist of cash on hand, demand deposits and short-term investments that are readily convertible to cash and subject to insignificant risk of changes in value and due within three months from the date of acquisition.

(5) Financial Instruments

1) Financial Assets

(i) Initial Recognition and Measurement

The Group recognizes a financial asset when the Group becomes a party to the contractual provisions of the financial instrument.

The Group classifies financial assets as those measured at amortized cost if both of the following conditions are met on the basis of facts and circumstances that existed at initial recognition of the assets. Otherwise, financial assets are classified as those measured at fair value through profit or loss.

- The asset is held within a business model whose objective is to hold the asset in order to collect contractual cash flows.
- 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.

At initial recognition, the Group may make an irrevocable designation of recognizing subsequent changes in fair value of investments in equity instruments as other comprehensive income.

All financial assets are initially measured at fair value plus transaction costs that are directly attributable to the financial assets, except for when they are classified as financial assets measured at fair value through profit or loss.

(ii) Subsequent Measurement

After initial recognition, financial assets are measured based on the following classifications:

(a) Financial Assets Measured at Amortized Cost

Financial assets measured at amortized cost are measured using the effective interest method.

(b) Financial Assets Measured at Fair Value through Profit or Loss

Financial assets measured at fair value through profit or loss are measured at fair value, and changes in the fair value are recognized in profit or loss.

(c) Financial Assets Measured at Fair Value through Other Comprehensive Income

Financial assets measured at fair value through other comprehensive income are measured at fair value, and changes in the fair value are recognized as other comprehensive income. When such a financial asset is derecognized or the decline in its fair value compared to its acquisition cost is

significant, the amount recognized in other comprehensive income is transferred directly to retained earnings, not being recognized in profit or loss.

However, dividend income from the financial assets is recognized in profit or loss.

(iii) Derecognition

Financial assets are derecognized when contractual rights to cash flows from the financial assets expire, or when contractual rights to receive cash flows generated from the financial assets are transferred in a transaction where substantially all the risks and rewards of the ownership of those financial assets are transferred.

2) Impairment of Financial Assets Measured at Amortized Cost

In accordance with IAS 39, the Group assesses at the end of each fiscal year whether there is any objective evidence that financial assets measured at amortized cost are impaired. Objective evidence of impairment includes significant financial difficulty of the borrower, a default or delinquency in interest or principal payments, and bankruptcy.

The Group assesses evidence of impairment of financial assets measured at amortized cost for each individual asset as well as collectively for these financial assets. Significant financial assets are assessed for impairment individually. For significant financial assets for which impairment is not necessary on an individual basis, the Group collectively assesses whether there is any evidence of impairment that has occurred but not been identified.

If there is objective evidence that impairment exists, impairment loss is measured as the difference between the asset's carrying amount and the present value of estimated future cash flows.

When impairment is recognized, the carrying amount of the financial assets measured at amortized cost is reduced through use of an allowance for doubtful account and impairment loss is recognized. The carrying amount of the financial assets measured at amortized cost is directly reduced for impairment when they are expected to become uncollectible in the future and all collateral is realized or transferred to the Group. If, in a subsequent period, the estimated amount of impairment loss changes due to an event occurring after the impairment loss was recognized, the previously recognized impairment loss is adjusted through use of an allowance for doubtful account.

3) Financial Liabilities

(i) Initial Recognition and Measurement

The Group recognizes a financial liability when the Group becomes a party to the contractual provisions of the financial instrument.

As a general rule, financial liabilities are classified as financial liabilities measured at amortized cost. However, derivative liabilities and financial liabilities held for trading are classified as financial liabilities measured at fair value through profit or loss. The classification is determined at initial recognition of financial liabilities.

All financial liabilities are measured at fair value at initial recognition. However, financial liabilities measured at amortized cost are measured at fair value less transaction costs that are directly attributable to the financial liabilities.

(ii) Subsequent Measurement

After initial recognition, financial liabilities are measured based on the following classifications:

(a) Financial Liabilities Measured at Amortized Cost

Financial liabilities measured at amortized cost are measured using the effective interest method.

(b) Financial Liabilities Measured at Fair Value through Profit or Loss

Financial liabilities measured at fair value through profit or loss are measured at fair value, and changes in the fair value are recognized in profit or loss.

(iii) Derecognition

Financial liabilities are derecognized when the contractual obligation is discharged, canceled or expired.

4) Clearing Business Financial Assets and Clearing Business Financial Liabilities

As a financial instruments clearing organization, Japan Securities Clearing Corporation, the Company's subsidiary, presents receivables and payables related to transactions to be cleared as clearing business financial assets and clearing business financial liabilities (hereinafter "clearing business financial assets and liabilities") and provides a settlement guarantee by assuming obligations for the transactions conducted by market participants and acting as a party to the transactions.

For cash equity transactions at financial instruments exchanges, and sales and purchase transactions of Japanese government bonds at over-the-counter markets, clearing business financial assets and liabilities are initially recognized and simultaneously derecognized on the settlement date basis.

Futures transactions are initially recognized as clearing business financial assets and liabilities on the transaction date. Subsequently, those transactions are measured at fair value and their valuation differences are recognized in profit or loss. Since this company receives and pays such profit or loss as net settlements from and to clearing participants on a daily basis, the clearing business financial assets and liabilities are derecognized upon receipt or payment.

Option transactions are initially recognized on the transaction date, while interest rate swap transactions and credit default swap transactions at over-the-counter markets (hereinafter "OTC derivative transactions") are initially recognized on the date when the obligation is assumed. Subsequently, these transactions are measured at fair value and their valuation differences are recognized in profit or loss.

Over-the-counter transactions of Japanese government bonds that are transactions with repurchase or resale agreements and cash-secured bond lending or borrowing transactions (hereinafter "repo transactions") are initially recognized on the commencement date of transactions and subsequently measured at fair value.

Clearing business financial assets and liabilities recognized are offset and presented as a net amount in the consolidated statement of financial position when the company currently holds a legally enforceable right to set off the amounts and intends either to settle on a net basis or to realize the asset and settle the liability simultaneously.

Because clearing business financial assets and liabilities are recognized at the same amount, profit or loss arising from changes in their fair value is also the same amount. Hence, the profit or loss is eliminated and is not presented in the consolidated statement of income.

(6) Property and Equipment

Property and equipment are measured by using the cost model. After initial recognition, they are stated at cost less accumulated depreciation and accumulated impairment losses.

The acquisition cost includes any costs directly attributable to the acquisition of the asset.

Depreciation of property and equipment is recorded using the straight-line method over their estimated useful lives. The estimated useful lives of major asset items are as follows:

- Buildings: 2 to 50 years
- Information system equipment: 5 years

The estimated useful lives, residual values and depreciation method are reviewed at least at each fiscal year end and when any changes are made, such changes are applied prospectively as changes in accounting estimates.

Property and equipment are derecognized when they are disposed of, or when future economic benefits are no longer expected from their continued use or disposal. A gain or loss arising from derecognition of an item of property and equipment is recognized in profit or loss when the respective asset item is derecognized.

(7) Goodwill and Intangible Assets

1) Goodwill

Measurement of goodwill at initial recognition is described in Note “3. Significant Accounting Policies (2) Business Combinations.” After initial recognition, goodwill is measured at cost less accumulated impairment losses. Goodwill is not amortized. It is tested for impairment at the end of each fiscal year or whenever there is any indication of impairment, and impairment losses are recognized, if any. No reversal of impairment losses is made.

2) Intangible Assets

Intangible assets are measured by using the cost model. After initial recognition, intangible assets are measured at cost less accumulated amortization and accumulated impairment losses.

Expenditures in the development phase are recognized as intangible assets when all of the following have been demonstrated: 1) the Group has the ability to measure those expenditures reliably, 2) the technical feasibility of completing the intangible asset, 3) the intent and ability to use or sell the intangible asset, 4) the availability of adequate resources to use or sell the intangible asset, and 5) when there is a high probability that the intangible asset will generate future economic benefits.

Amortization of intangible assets is recorded using the straight-line method over their estimated useful lives. The estimated useful life of software, a major asset item, is five years.

The estimated useful lives, residual values and amortization method are reviewed at least at each fiscal year end and when any changes are made, such changes are applied prospectively as changes in accounting estimates.

(8) Leases

Leases are classified as finance leases whenever substantially all the risks and rewards incidental to ownership are transferred to the Group, and other leases are classified as operating leases.

In finance lease transactions, leased assets and lease liabilities are recognized in the consolidated statement of financial position at the lower of the fair value of the leased property or the present value of the minimum lease payments, each determined at the inception of the lease.

Lease payments are apportioned between the financial expenses and the reduction of the lease liabilities based on the interest method, and the financial expenses are recognized in the consolidated statement of income. Leased assets are depreciated using the straight-line method over either their estimated useful lives or lease terms, whichever is shorter.

In operating lease transactions, lease payments are recognized as an expense on a straight-line basis over the lease terms.

(9) Impairment of Non-financial Assets

The Group assesses at the end of each fiscal year whether there is any indication that an asset may be impaired. If any such indication exists or in cases where an impairment test is required to be performed each fiscal year, the recoverable amount of the asset is estimated. In cases where the recoverable amount cannot be estimated for an individual asset, it is estimated for the cash-generating unit to which the asset belongs. The recoverable amount is determined at the higher of an asset's or cash-generating unit's fair value less costs to sell it or its value in use. If the carrying amount of an asset or cash-generating unit exceeds its recoverable amount, an impairment loss is recognized, and the carrying amount is reduced to its recoverable amount. In determining value in use, estimated future cash flows are discounted to the present value, using pretax discount rates that reflect current market assessments of the time value of money and the risks specific to the asset. In determining fair value less costs to sell of an asset or cash-generating unit, the Group uses an appropriate valuation model supported by available fair value indicators.

The Group assesses at the end of each fiscal year whether there is any indication that an impairment loss recognized in prior years for an asset other than goodwill may have decreased or may no longer exist. If any such indication exists, the recoverable amount of the asset or cash-generating unit is reestimated. In cases where the recoverable amount exceeds the carrying amount of the asset or cash-generating unit, the impairment loss is reversed up to the lower of the recoverable amount determined or the carrying amount (net of depreciation) that would have been determined if no impairment loss had been recognized in prior years.

Information on goodwill is described in Note "12. Goodwill and Intangible Assets (4) Impairment Test for Goodwill."

(10) Employee Retirement Benefits

The Company and some of its subsidiaries have introduced contract-type defined benefit corporate pension plans and lump-sum retirement benefit plans as defined benefit plans, and defined contribution plans.

1) Defined Benefit Plans

For each plan, the Group calculates the present value of defined benefit obligations, and related current service cost and past service cost using the projected unit credit method. A discount rate is determined by reference to the market yields as of the end of the fiscal year, depending on the expected date of benefit payment in each plan, on high-quality corporate bonds.

Net defined benefit liability (asset) is calculated by deducting the fair value of the plan assets (including adjustments for the asset ceiling for defined benefit plan and minimum funding requirements, if necessary) from the present value of the defined benefit obligation. The net amount of interest on the net defined benefit liability (asset) is recognized as operating expenses.

Remeasurements of defined benefit plans are recognized in full as other comprehensive income in the period when they are incurred and transferred to retained earnings immediately. Past service costs are recognized in profit or loss in the period when they are incurred.

Except when the Group has a legally enforceable right to use surplus in defined benefit plans to settle obligations under the other plans, assets and liabilities are not set off between the plans.

2) Defined Contribution Plans

Cost for retirement benefits is recognized as expenses at the time of contribution.

(11) Revenue

Revenue is recognized at fair value of the consideration received or receivable.

The Group is primarily engaged in the financial instruments exchanges business and its revenue consists mainly of revenue related to the rendering of services, such as trading services revenue and clearing services revenue.

For transactions involving the rendering of services, revenue is recognized by reference to the stage of completion of the transaction as of the end of the fiscal year when all the following conditions are met and the outcome of the transaction can be estimated reliably:

- the amount of revenue can be measured reliably;
- it is probable that economic benefits associated with the transaction will flow to the Group;
- the stage of completion of the transaction at the end of the fiscal year can be measured reliably; and
- the costs incurred for the transaction and the costs to complete the transaction can be measured reliably.

When the outcome of the transaction involving the rendering of services cannot be estimated reliably, revenue is recognized only to the extent of the expenses recognized that are recoverable.

Dividend income is recognized when the shareholder's right to receive payment is established.

(12) Income Taxes

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

Current taxes are the amount expected to be paid or recovered on taxable profit for the current fiscal year, which is calculated using the tax rates that have been enacted or substantively enacted by the end of the fiscal year, with any tax adjustments for prior years.

Deferred taxes are recognized for temporary differences between the carrying amount of assets or liabilities for accounting purposes and the amount of assets or liabilities for tax purposes in accordance with the asset and liability approach. Deferred taxes are not recognized for the following temporary differences arising from:

- the initial recognition of goodwill
- deductible temporary differences arising from investments in subsidiaries and associates to the extent that it is probable that the temporary differences will not reverse in the foreseeable future
- taxable temporary differences arising from investments in subsidiaries and associates to the extent that the timing of the reversal of the temporary differences are controlled and that it is probable that the temporary differences will not reverse in the foreseeable future

Deferred taxes are measured using the tax rates for the fiscal year when the temporary difference is expected to reverse in accordance with the laws that have been enacted or substantively enacted by the end of the fiscal year.

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

Deferred tax assets are recorded for tax loss carryforwards for tax purposes, refunds by carrying back tax losses and deductible temporary differences to the extent that it is probable that sufficient taxable profits will be available against which they can be utilized. Deferred tax assets are reduced to the extent that it is no longer probable that the related tax benefits will be realized.

(13) Treasury Shares

Treasury shares are measured at cost and deducted from equity. No gain or loss is recognized on the purchase, sale or cancellation of treasury shares. Any difference between the carrying amount and the consideration paid is recognized in equity.

(14) Contingent Liabilities

The Group discloses contingent liabilities in the notes to the consolidated financial statements if it has possible obligations at the end of the fiscal year but cannot confirm whether they are obligations as of that date, or if the obligations do not meet the recognition criteria of a provision (a present obligation (legal or constructive obligation) is held as a result of past events, it is probable that the settlement of the obligation is required, and the amount of that obligation can be reliably estimated).

4. Significant Accounting Estimates and Judgments Involving Estimations

In preparing consolidated financial statements in accordance with IFRS, the management is required to make judgments, estimates and assumptions that affect the application of accounting policies and the amounts of assets, liabilities, income and expenses. Given their nature, actual results may differ from these estimates.

Estimates and their underlying assumptions are continuously reviewed. The effects of a change in any accounting estimate are recognized in the fiscal period of the change and future periods.

Judgments and estimates made by the management that may have a significant effect on the amounts recognized in the consolidated financial statements are as follows:

- Estimated useful lives of property and equipment and intangible assets (Note 3. Significant Accounting Policies (6) and (7))
- Impairment of non-financial assets (Notes 11. Property and Equipment and 12. Goodwill and Intangible Assets)
- Recoverability of deferred tax assets (Note 15. Income Taxes)
- Measurement of defined benefit obligations (Note 13. Employee Benefits)
- Fair value measurement of financial instruments (Note 23. Financial Instruments)

5. New Accounting Standards Not Yet Applied by the Group

By the date of approval of the consolidated financial statements, major new accounting standards and new interpretations that have been issued or revised but have not been early applied by the Group are as follows.

The impact that application of the following will have on the consolidated financial statements is under review.

| IFRS | Mandatory application (for the fiscal year beginning on or after) | To be applied by the Group | Description of new standards/revisions |
|---------------------------------|---|--------------------------------------|--|
| IFRS 9 Financial Instruments | January 1, 2018 | Fiscal year ending March 31, 2019 | Amendment for classification, measurement, recognition and impairment of financial instruments |
| IFRS 16 Leases | January 1, 2019 | Not yet determined | Amendment for lease accounting |

6. Operating Segments

(1) General Information

This information is omitted since the Group has a single segment consisting of the financial instruments exchange business.

(2) Information about Products and Services

This information is omitted since similar information is disclosed in Note “19. Operating Revenue.”

(3) Information about Geographical Areas

1) Operating Revenue

This information is omitted since operating revenue from external customers in Japan makes up most of operating revenue recorded in the consolidated statement of income.

2) Non-current Assets

This information is omitted since the amount of non-current assets located in Japan makes up most of the amount of non-current assets recorded in the consolidated statement of financial position.

(4) Information by Major Customer

This information is omitted since there is no single customer that makes up 10% or more of the operating revenue recorded in the consolidated statement of income.

7. Cash and Cash Equivalents

The breakdown of “Cash and cash equivalents” is as follows:

| | As of March 31, 2016 | As of March 31, 2017 |
|---------------------------|----------------------|----------------------|
| | Millions of yen | Millions of yen |
| Cash and cash equivalents | | |
| Cash and deposits | 66,547 | 73,553 |
| Total | 66,547 | 73,553 |

8. Trade and Other Receivables

The breakdown of “Trade and other receivables” is as follows:

| | As of March 31, 2016 | As of March 31, 2017 |
|---------------------------------|----------------------|----------------------|
| | Millions of yen | Millions of yen |
| Operating accounts receivable | 10,058 | 9,771 |
| Other | 47 | 12 |
| Allowance for doubtful accounts | (10) | (9) |
| Total | 10,096 | 9,774 |

(Note) Trade and other receivables are presented in the amount after deduction of allowance for doubtful accounts in the consolidated statement of financial position.

9. Assets and Liabilities Based on Various Rules for Ensuring Safety of Financial Instruments Trading

Deposits from clearing participants are collateral that Japan Securities Clearing Corporation requires clearing participants to deposit (clearing deposit for clearing fund, etc., clearing margin, initial margin and variation margin) in order to provide for possible losses incurred by the company in the event of settlement default of clearing participants.

Legal guarantee funds are collateral that Tokyo Stock Exchange, Inc. and Osaka Exchange, Inc. require trading participants to deposit to provide for possible losses incurred by entrustors of securities trading, etc. in the event of default by trading participants.

Trading participant security money is collateral that Tokyo Stock Exchange, Inc. and Osaka Exchange, Inc. require trading participants to deposit to provide for possible losses incurred by these companies in the event of default by trading participants.

Each type of collateral is deposited in the form of cash or substitute securities (only those permitted by each company's rules). For collateral that is deposited in the form of cash, an asset and a corresponding liability are recorded in the consolidated statement of financial position.

On the other hand, collateral deposited in the form of substitute securities is not recorded in the consolidated statement of financial position. Fair values of substitute securities for the collateral are as follows:

| | As of March 31, 2016 | As of March 31, 2017 |
|---|-------------------------|-------------------------|
| | Millions of yen | Millions of yen |
| Substitute securities for deposits from clearing participants | 2,324,542 | 2,675,561 |
| Substitute securities for legal guarantee funds | 1,151 | 1,338 |
| Substitute securities for trading participant security money | 2,635 | 2,591 |

Default compensation reserve funds are reserve funds to cover losses incurred by Japan Securities Clearing Corporation in association with clearing operations.

10. Other Financial Assets

(1) The breakdown of "Other financial assets" is as follows:

| | As of March 31, 2016 | As of March 31, 2017 |
|---------------------------------|----------------------|----------------------|
| | Millions of yen | Millions of yen |
| Current assets | | |
| Time deposits | 65,600 | 73,800 |
| Total | <u>65,600</u> | <u>73,800</u> |
| Non-current assets | | |
| Equity securities | 36,922 | 34,598 |
| Debt securities | 1,504 | 1,504 |
| Other | 342 | 290 |
| Allowance for doubtful accounts | (130) | (117) |
| Total | <u>38,639</u> | <u>36,275</u> |

Other financial assets are presented in the amount after deduction of allowance for doubtful accounts in the consolidated statement of financial position.

Equity securities are classified as financial assets measured at fair value through other comprehensive income, and time deposits and debt securities are classified as financial assets measured at amortized cost.

- (2) Investee name of significant financial assets measured at fair value through other comprehensive income and their fair values are as follows:

| | As of March 31, 2016 | As of March 31, 2017 |
|------------------------------|----------------------|----------------------|
| | Millions of yen | Millions of yen |
| Shares in Singapore Exchange | 35,144 | 32,797 |

The above shares are held mainly for business relationship purposes. Therefore, they are designated as financial assets measured at fair value through other comprehensive income.

Fair value at the time of sale and cumulative gain or loss of other comprehensive income recognized in equity are as follows:

| As of March 31, 2016 | | As of March 31, 2017 | |
|----------------------|--|----------------------|--|
| Fair value | Cumulative gain or loss of other comprehensive income recognized in equity | Fair value | Cumulative gain or loss of other comprehensive income recognized in equity |
| Millions of yen | Millions of yen | Millions of yen | Millions of yen |
| 43 | 15 | — | — |

(Note) The cumulative gain or loss of other comprehensive income recognized in equity is transferred to retained earnings when the financial assets are sold or their fair value declines significantly.

11. Property and Equipment

(1) Schedule of Property and Equipment

The schedules of changes in carrying amount, acquisition cost as well as accumulated depreciation and accumulated impairment losses of “Property and equipment” are as follows:

1) Carrying Amount

| | Buildings | Information system equipment | Land | Other | Total |
|------------------------|-----------------|------------------------------|-----------------|-----------------|-----------------|
| | Millions of yen | Millions of yen | Millions of yen | Millions of yen | Millions of yen |
| As of April 1, 2015 | 1,321 | 4,493 | 1,297 | 1,461 | 8,573 |
| Individual acquisition | 88 | 1,357 | — | 173 | 1,619 |
| Depreciation | (200) | (1,990) | — | (163) | (2,354) |
| Sale or disposal | (524) | (0) | (1,282) | (5) | (1,812) |
| As of March 31, 2016 | 685 | 3,859 | 14 | 1,465 | 6,025 |
| Individual acquisition | 138 | 674 | — | 288 | 1,101 |
| Depreciation | (147) | (1,653) | — | (185) | (1,985) |
| Sale or disposal | (0) | (0) | — | (0) | (0) |
| As of March 31, 2017 | 676 | 2,880 | 14 | 1,568 | 5,140 |

2) Acquisition Cost

| | Buildings | Information system equipment | Land | Other | Total |
|----------------------|-----------------|------------------------------|-----------------|-----------------|-----------------|
| | Millions of yen | Millions of yen | Millions of yen | Millions of yen | Millions of yen |
| As of April 1, 2015 | 9,566 | 13,197 | 2,851 | 4,076 | 29,693 |
| As of March 31, 2016 | 3,845 | 10,847 | 192 | 4,082 | 18,967 |
| As of March 31, 2017 | 3,874 | 8,108 | 192 | 4,299 | 16,475 |

3) Accumulated Depreciation and Accumulated Impairment Losses

| | Buildings | Information system equipment | Land | Other | Total |
|----------------------|-----------------|------------------------------------|-----------------|-----------------|-----------------|
| | Millions of yen | Millions of yen | Millions of yen | Millions of yen | Millions of yen |
| As of April 1, 2015 | 8,244 | 8,704 | 1,554 | 2,615 | 21,120 |
| As of March 31, 2016 | 3,159 | 6,987 | 178 | 2,616 | 12,942 |
| As of March 31, 2017 | 3,197 | 5,228 | 178 | 2,730 | 11,334 |

(2) Impairment Losses

The grouping of property and equipment is based on the smallest identifiable group of assets that generates cash inflows that are largely independent.

No impairment loss was recognized in the fiscal years ended March 31, 2016 and 2017.

12. Goodwill and Intangible Assets

(1) Schedule of Goodwill and Intangible Assets

The schedules of changes in carrying amount, acquisition cost as well as accumulated amortization and accumulated impairment losses of “Goodwill” and “Intangible assets” are as follows:

1) Carrying Amount

| | Goodwill | Intangible assets | | |
|------------------------|-----------------|-------------------|-----------------|-----------------|
| | | Software | Other | Total |
| | Millions of yen | Millions of yen | Millions of yen | Millions of yen |
| As of April 1, 2015 | 67,374 | 18,055 | 9,575 | 27,631 |
| Individual acquisition | — | 13,923 | (2,147) | 11,775 |
| Amortization | — | (8,231) | (142) | (8,373) |
| Sale or disposal | — | (0) | — | (0) |
| As of March 31, 2016 | 67,374 | 23,747 | 7,286 | 31,033 |
| Individual acquisition | — | 9,799 | (436) | 9,362 |
| Amortization | — | (9,686) | (112) | (9,799) |
| Sale or disposal | — | (0) | (0) | (0) |
| As of March 31, 2017 | 67,374 | 23,860 | 6,736 | 30,596 |

(Note 1) Amount in “Individual acquisition” of “Intangible assets—Other” includes the acquisition cost of “Software in progress” and the amount transferred to “Software.”

(Note 2) Amortization of intangible assets is included in “Operating expenses” in the consolidated statement of income.

2) Acquisition Cost

| | Goodwill | Intangible assets | | |
|----------------------|-----------------|-------------------|-----------------|-----------------|
| | | Software | Other | Total |
| | Millions of yen | Millions of yen | Millions of yen | Millions of yen |
| As of April 1, 2015 | 67,374 | 59,183 | 10,336 | 69,519 |
| As of March 31, 2016 | 67,374 | 71,853 | 7,785 | 79,638 |
| As of March 31, 2017 | 67,374 | 72,703 | 7,197 | 79,901 |

3) Accumulated Amortization and Accumulated Impairment Losses

| | Goodwill | Intangible assets | | |
|----------------------|-----------------|-----------------------------|--------------------------|--------------------------|
| | Millions of yen | Software Millions of yen | Other Millions of yen | Total Millions of yen |
| As of April 1, 2015 | — | 41,127 | 760 | 41,888 |
| As of March 31, 2016 | — | 48,105 | 499 | 48,605 |
| As of March 31, 2017 | — | 48,843 | 461 | 49,304 |

(2) Material Goodwill

Goodwill recorded in the consolidated statement of financial position arose in the business combination between Tokyo Stock Exchange Group, Inc. and Osaka Securities Exchange Co., Ltd.

(3) Impairment Losses

The grouping of intangible assets is based on the smallest identifiable group of assets that generates cash inflows that are largely independent.

No impairment loss was recognized in the fiscal year ended March 31, 2016 and 2017.

(4) Impairment Test for Goodwill

The Group performs an impairment test for goodwill at the end of each fiscal year or whenever there is any indication of impairment. The recoverable amount in an impairment test is calculated based on the value in use.

The value in use is calculated by discounting estimated future cash flows based on the management plan, etc. at the discount rate on the basis of the weighted-average cost of capital of the relevant cash-generating unit. Cash flows in the period beyond the final fiscal year of the management plan are assumed to remain at the same level as the final fiscal year, taking into account future uncertainty.

For goodwill arising in business combinations, the entire Group is identified as a cash-generating unit and is tested for impairment.

13. Employee Benefits

(1) Employee Post-employment Benefits

The Company and some of its subsidiaries have introduced contract-type defined benefit corporate pension plans and lump-sum retirement benefit plans as defined benefit plans, and defined contribution plans.

1) Reconciliation of Defined Benefit Obligations

The reconciliation of the defined benefit obligations is as follows:

| | Fiscal year ended March 31, 2016 | Fiscal year ended March 31, 2017 |
|--|-------------------------------------|-------------------------------------|
| | Millions of yen | Millions of yen |
| Balance at the beginning of the year | 22,955 | 23,730 |
| Current service cost | 1,006 | 1,077 |
| Interest expense | 252 | 149 |
| Increase (decrease) due to remeasurements | 1,146 | (1,242) |
| Actuarial gains and losses—effect of changes in demographic assumptions | (0) | (694) |
| Actuarial gains and losses—effect of changes in financial assumptions | 1,157 | (468) |
| Actuarial gains and losses—experience adjustments | (11) | (79) |
| Benefits paid | (1,631) | (1,446) |
| Balance at the end of the year | <u>23,730</u> | <u>22,268</u> |

2) Reconciliation of Plan Assets

The reconciliation of the plan assets is as follows:

| | Fiscal year ended March 31, 2016 | Fiscal year ended March 31, 2017 |
|---|-------------------------------------|-------------------------------------|
| | Millions of yen | Millions of yen |
| Balance at the beginning of the year | 21,340 | 20,004 |
| Interest income | 256 | 140 |
| Increase (decrease) due to remeasurements | (992) | 586 |
| Return on plan assets (excluding amounts included in interest income) | (992) | 586 |
| Contributions by the employer | 414 | 381 |
| Benefits paid | (1,015) | (998) |
| Balance at the end of the year | <u>20,004</u> | <u>20,113</u> |

3) Reconciliation of Defined Benefit Obligations and Plan Assets

The reconciliation between the defined benefit obligations and plan assets and the retirement benefit liabilities and assets recognized in the consolidated statement of financial position is as follows:

| | As of March 31, 2016 | As of March 31, 2017 |
|---|----------------------|----------------------|
| | Millions of yen | Millions of yen |
| Funded defined benefit obligations | 16,377 | 14,910 |
| Plan assets | (20,004) | (20,113) |
| Subtotal | (3,626) | (5,202) |
| Unfunded defined benefit obligations | 7,352 | 7,357 |
| Net amount of liabilities and assets recognized in consolidated statement of financial position | 3,725 | 2,154 |
| | | |
| Retirement benefit liabilities | 7,352 | 7,357 |
| Retirement benefit assets | (3,626) | (5,202) |
| Net amount of liabilities and assets recognized in consolidated statement of financial position | 3,725 | 2,154 |

4) Breakdown of Defined Benefit Cost

The breakdown of defined benefit cost is as follows:

| | Fiscal year ended March 31, 2016 | Fiscal year ended March 31, 2017 |
|----------------------|-------------------------------------|-------------------------------------|
| | Millions of yen | Millions of yen |
| Current service cost | 1,006 | 1,077 |
| Interest expense | 252 | 149 |
| Interest income | (256) | (140) |
| Total | 1,002 | 1,086 |

(Note) Defined benefit cost is included in "Operating expenses."

5) Major Breakdown of Plan Assets

The Group's investment policy is to manage plan assets for ensuring sufficient return on investment in the long term within the Group's risk tolerance in order to secure the future benefit payments, including pension benefits and lump-sum payments. Specifically, setting a target rate of return which exceeds the assumed rate of return in pension funds in order to maintain sound management of pension plans in the future, the Group adopts an asset composition in light of the risk tolerance taking into account predictions of the expected rate of return, the employer's financial capacity and other factors.

The Group also pays adequate attention to risk management in line with the asset composition introduced to achieve the target for investment and maximize returns under the assumed risk.

The breakdown of plan assets by major category is as follows:

| | As of March 31, 2016 | As of March 31, 2017 |
|---|----------------------|----------------------|
| | Millions of yen | Millions of yen |
| Assets with quoted market prices in active markets | | |
| Equity instruments | 6,423 | 6,606 |
| Domestic stocks | 4,382 | 4,427 |
| Foreign stocks | 2,041 | 2,179 |
| Debt instruments | 6,002 | 5,885 |
| Domestic bonds | 2,548 | 2,009 |
| Foreign bonds | 3,453 | 3,875 |
| Other | 1,798 | 1,827 |
| Subtotal | 14,225 | 14,318 |
| Assets without quoted market prices in active markets | | |
| Corporate pension insurance contracts | 5,779 | 5,794 |
| Subtotal | 5,779 | 5,794 |
| Total plan assets | 20,004 | 20,113 |

In the fiscal year ending March 31, 2018, the Group will contribute approximately ¥509 million to the plan assets as contributions.

The weighted-average duration of the defined benefit obligations as of March 31, 2017 was 16 years.

6) Matters Related to Actuarial Assumptions

The major actuarial assumptions are as follows:

| | As of March 31, 2016 | As of March 31, 2017 |
|---------------|----------------------|----------------------|
| | % | % |
| Discount rate | 0.5 to 0.7 | 0.6 to 0.7 |

(Note) The valuation of defined benefit obligations reflects judgments regarding uncertain future events. The sensitivities of defined benefit obligations as of March 31, 2017 that are affected by changes in discount rates are as follows. These sensitivities assume that other variables remain fixed; however, in fact, they do not always change independently. Negative figures represent decreases in defined benefit obligations, while positive figures represent increases.

| | As of March 31, 2016 | As of March 31, 2017 |
|--------------|----------------------|----------------------|
| | Millions of yen | Millions of yen |
| Rise of 0.5% | (1,448) | (1,267) |
| Drop of 0.5% | 1,613 | 1,400 |

7) Defined Contribution Plans

The amounts recognized as expenses for defined contribution plans were ¥64 million and ¥63 million for the fiscal years ended March 31, 2016 and 2017, respectively.

(2) Short-term Employee Benefits

The amounts of short-term employee benefits included in the consolidated statements of income for the fiscal years ended March 31, 2016 and 2017 were ¥16,178 million and ¥15,242 million, respectively.

14. Investments Accounted for Using the Equity Method

Associates

Information on aggregation of the Group's interests in associates is as follows:

| | Fiscal year ended March 31, 2016 | Fiscal year ended March 31, 2017 |
|--|-------------------------------------|-------------------------------------|
| | Millions of yen | Millions of yen |
| Share of income of investments accounted for using the equity method | 749 | 1,525 |
| Share of other comprehensive income of investments accounted for using the equity method | 0 | (0) |
| Total share of comprehensive income | <u>749</u> | <u>1,525</u> |
| | | |
| Total carrying amount of the Group's interests in associates | <u>7,592</u> | <u>8,809</u> |

15. Income Taxes

(1) Deferred Tax Assets and Deferred Tax Liabilities

The breakdown and movements of "Deferred tax assets" and "Deferred tax liabilities" by major cause of their occurrence are as follows:

Fiscal year ended March 31, 2016

| | As of April 1, 2015 | Recognized in profit or loss | Recognized in other comprehensive income | As of March 31, 2016 |
|--|------------------------|---------------------------------|---|-------------------------|
| | Millions of yen | Millions of yen | Millions of yen | Millions of yen |
| Deferred tax assets | | | | |
| Post-employment benefits | 562 | (56) | 654 | 1,161 |
| Fixed assets | 1,109 | (435) | — | 674 |
| Enterprise taxes payable | 601 | 101 | — | 702 |
| Accrued expenses | 505 | 231 | — | 736 |
| Loss on litigation | 4,273 | (4,273) | — | — |
| Other | 1,252 | 1,258 | — | 2,511 |
| Subtotal | <u>8,304</u> | <u>(3,172)</u> | <u>654</u> | <u>5,786</u> |
| Unrecognized deductible temporary differences | (228) | 12 | — | (216) |
| Total | <u>8,075</u> | <u>(3,160)</u> | <u>654</u> | <u>5,570</u> |
| | | | | |
| Deferred tax liabilities | | | | |
| Fair value of financial assets measured at fair value through other comprehensive income | (7,087) | — | 1,208 | (5,879) |
| Other | (633) | 33 | — | (599) |
| Total | <u>(7,720)</u> | <u>33</u> | <u>1,208</u> | <u>(6,478)</u> |

Fiscal year ended March 31, 2017

| | As of April 1, 2016 | Recognized in profit or loss | Recognized in other comprehensive income | As of March 31, 2017 |
|--|------------------------|---------------------------------|---|-------------------------|
| | Millions of yen | Millions of yen | Millions of yen | Millions of yen |
| Deferred tax assets | | | | |
| Post-employment benefits | 1,161 | 79 | (559) | 681 |
| Fixed assets | 674 | (300) | — | 374 |
| Enterprise taxes payable | 702 | (302) | — | 400 |
| Accrued expenses | 736 | (25) | — | 711 |
| Other | 2,511 | (6) | — | 2,504 |
| Subtotal | 5,786 | (555) | (559) | 4,671 |
| Unrecognized deductible temporary differences | (216) | — | — | (216) |
| Total | 5,570 | (555) | (559) | 4,455 |
| Deferred tax liabilities | | | | |
| Fair value of financial assets measured at fair value through other comprehensive income | (5,879) | — | 757 | (5,121) |
| Other | (599) | — | — | (599) |
| Total | (6,478) | — | 757 | (5,720) |

In recognizing deferred tax assets, the Group takes into account whether deductible temporary differences can be utilized from future taxable profits.

Deductible temporary differences for which deferred tax assets have not been recognized were ¥707 million as of March 31, 2016 and 2017. There were no tax loss carryforwards for tax purposes or significant temporary differences arising from investments in subsidiaries and investments accounted for using the equity method for which deferred tax liabilities have not been recognized.

(2) Income Tax Expense

The breakdown of “Income tax expense” is as follows:

| | Fiscal year ended March 31, 2016 | Fiscal year ended March 31, 2017 |
|----------------------|-------------------------------------|-------------------------------------|
| | Millions of yen | Millions of yen |
| Current tax expense | 19,472 | 17,685 |
| Deferred tax expense | 3,126 | 555 |
| Total | 22,599 | 18,240 |

(3) Reconciliation of Effective Tax Rate

The Group is subject to corporate tax, inhabitant tax, and enterprise tax. The effective statutory tax rates calculated based on these taxes are primarily 33.1% for the fiscal year ended March 31, 2016 and 30.9% for the fiscal year ended March 31, 2017. The difference between the effective statutory tax rate and the actual tax rate in the consolidated statement of income is as follows:

| | Fiscal year ended March 31, 2016 | Fiscal year ended March 31, 2017 |
|------------------------------|-------------------------------------|-------------------------------------|
| | % | % |
| Effective statutory tax rate | 33.1 | 30.9 |
| Other | 0.3 | (0.8) |
| Actual tax rate | 33.3 | 30.1 |

16. Trade and Other Payables

The breakdown of “Trade and other payables” is as follows:

| | As of March 31, 2016 | As of March 31, 2017 |
|----------------------------|----------------------|----------------------|
| | Millions of yen | Millions of yen |
| Operating accounts payable | 2,880 | 2,377 |
| Other payable | 1,533 | 812 |
| Total | 4,413 | 3,190 |

17. Bonds and loans Payable

The breakdown of “Bonds and loans payable” is as follows:

| | As of March 31, 2016 | As of March 31, 2017 | Average interest rate (Note) |
|--|-------------------------|-------------------------|------------------------------------|
| | Millions of yen | Millions of yen | % |
| Short-term loans payable | 22,500 | 12,500 | 0.01 |
| Current portion of long-term loans payable | — | 10,000 | 0.01 |
| Bonds | — | 19,933 | 0.355 |
| Long-term loans payable | 10,000 | 10,000 | 0.01 |
| Total | 32,500 | 52,433 | |
| Current liabilities | 22,500 | 22,500 | |
| Non-current liabilities | 10,000 | 29,933 | |
| Total | 32,500 | 52,433 | |

(Note 1) The interest rate and outstanding balance used to calculate the average interest rate are as of March 31, 2017.

(Note 2) There are no financial covenants associated with loans payable that have material impacts on the Group’s financing activities.

(Note 3) The terms and conditions for corporate bonds are as follows:

| Issuer | Bond name | Issuance date | As of March 31, 2017 | Interest rate | Maturity date |
|----------------------------|---------------------------------|----------------|----------------------|---------------|----------------|
| | | | Millions of yen | % | |
| Japan Exchange Group, Inc. | First series of unsecured bonds | March 16, 2017 | 20,000 | 0.355 | March 16, 2027 |

18. Equity and Other Equity Items

(1) Share Capital and Treasury Shares

| | Fiscal year ended March 31, 2016 | Fiscal year ended March 31, 2017 |
|-------------------|-------------------------------------|-------------------------------------|
| | Share | Share |
| Authorized shares | 2,180,000,000 | 2,180,000,000 |
| Issued shares | 549,069,100 | 549,069,100 |
| Treasury shares | 7,252 | 8,636,052 |

(Note 1) The shares issued by the Company are non-par value ordinary shares that have no restriction on any rights.

(Note 2) The Company conducted a 2-for-1 stock split of its ordinary shares with an effective date of October 1, 2015.

(Note 3) The Company introduced a stock-granting employee stock ownership plan (hereinafter "ESOP") trust in the fiscal year ended March 31, 2017. The shares of the Company held by said stock-granting ESOP trust for the fiscal year ended March 31, 2017 are treated as treasury shares. As a result, 586,800 shares were included in the number of treasury shares at the end of the period.

(2) Surplus

1) Capital Surplus

The Companies Act of Japan stipulates that 50% or more of the amount paid for share issue shall be incorporated into share capital and the remaining amount shall be incorporated into capital reserves included in capital surplus. Capital reserves may be incorporated into share capital by resolution of the shareholders meeting.

2) Retained Earnings

The Companies Act of Japan provides that until the sum of capital reserves included in capital surplus and retained earnings reserves included in retained earnings reaches 25% of share capital, 10% of the surplus distributed as dividends needs to be set aside either as capital reserves or retained earnings reserves. Accumulated retained earnings reserves may be used to cover a deficit. Retained earnings reserves may be reduced by resolution of the shareholders meeting.

If any investment in equity securities designated as the category in which changes in fair value are recognized through other comprehensive income is derecognized or the fair value decreases significantly, any gain or loss on sale or valuation loss is transferred from "Other comprehensive income" to "Retained earnings."

19. Operating Revenue

The breakdown of "Operating revenue" is as follows:

| | Fiscal year ended March 31, 2016 | Fiscal year ended March 31, 2017 |
|------------------------------|-------------------------------------|-------------------------------------|
| | Millions of yen | Millions of yen |
| Trading services revenue | 52,471 | 45,703 |
| Clearing services revenue | 23,140 | 21,454 |
| Listing services revenue | 13,250 | 12,903 |
| Information services revenue | 17,706 | 18,112 |
| Other | 8,208 | 9,711 |
| Total | 114,776 | 107,885 |

20. Operating Expenses

The breakdown of "Operating expenses" is as follows:

| | Fiscal year ended March 31, 2016 | Fiscal year ended March 31, 2017 |
|---|-------------------------------------|-------------------------------------|
| | Millions of yen | Millions of yen |
| Personnel expenses | 16,437 | 15,614 |
| System maintenance and operation expenses | 9,480 | 10,813 |
| Depreciation and amortization | 9,973 | 10,983 |
| Other | 15,034 | 12,774 |
| Total | 50,925 | 50,185 |

21. Financial Income and Financial Expenses

The breakdown of “Financial income” and “Financial expenses” is as follows:

| | Fiscal year ended March 31, 2016 | Fiscal year ended March 31, 2017 |
|--------------------------|-------------------------------------|-------------------------------------|
| | Millions of yen | Millions of yen |
| Dividend income | 1,410 | 1,183 |
| Interest income | 129 | 52 |
| Total financial income | 1,540 | 1,235 |
| Interest expenses | 36 | 8 |
| Other | — | 0 |
| Total financial expenses | 36 | 8 |

22. Earnings per Share

Basic earnings per share for the fiscal year ended March 31, 2017 was calculated based on the net income attributable to owners of the parent company of ¥42,124 million (fiscal year ended March 31, 2016: ¥44,877 million) and the weighted-average number of ordinary shares outstanding of 547,051 thousand shares (fiscal year ended March 31, 2016: 549,062 thousand shares). Diluted earnings per share are not presented because there were no potential shares.

Since a 2-for-1 stock split was conducted with an effective date of October 1, 2015, basic earnings per share was calculated based on the number of shares that were adjusted retrospectively on the basis of the number of shares after the stock split.

The shares of the Company held by said stock-granting ESOP trust for the fiscal year ended March 31, 2017 are treated as treasury shares. As a result, 81,300 shares were deducted from the weighted average number of ordinary shares outstanding

23. Financial Instruments

(1) Classification of Financial Assets and Liabilities

Carrying amounts and accounting classification of financial assets and liabilities are as follows:

As of March 31, 2016

1) Financial Assets

| | Financial assets measured at fair value through profit or loss | Financial assets measured at fair value through other comprehensive income | Financial assets measured at amortized cost |
|--|--|---|---|
| | Millions of yen | Millions of yen | Millions of yen |
| Cash and cash equivalents | — | — | 66,547 |
| Trade and other receivables | — | — | 10,096 |
| Clearing business financial assets | 26,395,558 | — | — |
| Specified assets for deposits from clearing participants | — | — | 2,809,433 |
| Specified assets for legal guarantee funds | — | — | 483 |
| Specified assets for default compensation reserve funds | — | — | 27,948 |
| Other financial assets | — | 37,096 | 67,143 |
| Total | 26,395,558 | 37,096 | 2,981,652 |

2) Financial Liabilities

| | Financial liabilities measured at fair value through profit or loss | Financial liabilities measured at amortized cost |
|---|--|---|
| | Millions of yen | Millions of yen |
| Trade and other payables | — | 4,413 |
| Bonds and loans payable (current) | — | 22,500 |
| Clearing business financial liabilities | 26,395,558 | — |
| Deposits from clearing participants | — | 2,809,433 |
| Legal guarantee funds | — | 483 |
| Trading participant security money | — | 7,429 |
| Bonds and loans payable (non-current) | — | 10,000 |
| Total | 26,395,558 | 2,854,259 |

As of March 31, 2017

1) Financial Assets

| | Financial assets measured at fair value through profit or loss | Financial assets measured at fair value through other comprehensive income | Financial assets measured at amortized cost |
|---|--|---|---|
| | Millions of yen | Millions of yen | Millions of yen |
| Cash and cash equivalents | — | — | 73,553 |
| Trade and other receivables | — | — | 9,774 |
| Clearing business financial assets | 37,555,555 | — | — |
| Specified assets for deposits from clearing participants | — | — | 3,374,863 |
| Specified assets for legal guarantee funds | — | — | 474 |
| Specified assets for default compensation reserve funds | — | — | 27,948 |
| Other financial assets | — | 34,748 | 75,326 |
| Total | 37,555,555 | 34,748 | 3,561,940 |

2) Financial Liabilities

| | Financial liabilities measured at fair value through profit or loss | Financial liabilities measured at amortized cost |
|---|--|---|
| | Millions of yen | Millions of yen |
| Trade and other payables | — | 3,190 |
| Bonds and loans payable (current) | — | 22,500 |
| Clearing business financial liabilities | 37,555,555 | — |
| Deposits from clearing participants | — | 3,374,863 |
| Legal guarantee funds | — | 474 |
| Trading participant security money | — | 8,142 |
| Bonds and loans payable (non-current) | — | 29,933 |
| Total | 37,555,555 | 3,439,104 |

(2) Fair Value Hierarchy

IFRS 13 “Fair Value Measurement” requires entities to classify fair value measurements using a fair value hierarchy that reflects the significance of inputs used to measure fair value.

The hierarchy of fair value used to measure fair value (fair value hierarchy) is defined as follows:

Level 1: Unadjusted quoted prices in active markets for identical assets or liabilities

Level 2: Fair value that is calculated using inputs other than quoted prices included within Level 1 that are observable for the asset or liability, either directly or indirectly

Level 3: Fair value that is calculated using unobservable inputs for the asset or liability

The level of the fair value hierarchy for financial instruments is determined based on the lowest level of significant inputs used in the measurement of fair value.

The fair value hierarchy of financial assets and financial liabilities measured at fair value on a recurring basis in the consolidated statement of financial position according to the above definition is as follows:

As of March 31, 2016

| | Level 1 | Level 2 | Level 3 |
|---|-----------------|-------------------|-----------------|
| | Millions of yen | Millions of yen | Millions of yen |
| Clearing business financial assets | 450,375 | 25,945,183 | — |
| Other financial assets | 35,144 | — | 1,951 |
| Total | <u>485,519</u> | <u>25,945,183</u> | <u>1,951</u> |
| Clearing business financial liabilities | 450,375 | 25,945,183 | — |
| Total | <u>450,375</u> | <u>25,945,183</u> | <u>—</u> |

As of March 31, 2017

| | Level 1 | Level 2 | Level 3 |
|---|-----------------|-------------------|-----------------|
| | Millions of yen | Millions of yen | Millions of yen |
| Clearing business financial assets | 453,732 | 37,101,823 | — |
| Other financial assets | 32,797 | — | 1,950 |
| Total | <u>486,530</u> | <u>37,101,823</u> | <u>1,950</u> |
| Clearing business financial liabilities | 453,732 | 37,101,823 | — |
| Total | <u>453,732</u> | <u>37,101,823</u> | <u>—</u> |

The carrying amounts, fair values and fair value hierarchy of financial assets and financial liabilities that are not measured at fair value in the consolidated statement of financial position are as follows:

As of March 31, 2016

| | Carrying amount | Fair value | |
|---------------------------------------|-----------------|-----------------|-----------------|
| | | Level 1 | Level 2 |
| | Millions of yen | Millions of yen | Millions of yen |
| Other financial assets | 67,143 | 66,165 | 1,001 |
| Total | <u>67,143</u> | <u>66,165</u> | <u>1,001</u> |
| Bonds and loans payable (non-current) | 10,000 | — | 10,000 |
| Total | <u>10,000</u> | <u>—</u> | <u>10,000</u> |

As of March 31, 2017

| | Carrying amount | Fair value | |
|---------------------------------------|-----------------|-----------------|-----------------|
| | | Level 1 | Level 2 |
| | | Millions of yen | Millions of yen |
| Other financial assets | 75,326 | 74,345 | 1,000 |
| Total | 75,326 | 74,345 | 1,000 |
| Bonds and loans payable (non-current) | 29,933 | — | 30,000 |
| Total | 29,933 | — | 30,000 |

For financial assets and financial liabilities that are not measured at fair value in the consolidated statement of financial position, since the following items are all short term and their carrying amounts reasonably approximate the fair values, their fair values are not disclosed.

- Cash and cash equivalents
- Trade and other receivables
- Specified assets for deposits from clearing participants
- Specified assets for legal guarantee funds
- Specified assets for default compensation reserve funds
- Trade and other payables
- Bonds and loans payable (current)
- Deposits from clearing participants
- Legal guarantee funds
- Trading participant security money

(3) Method for Measuring Fair Value

Fair values of financial assets and financial liabilities are as follows:

1) Clearing Business Financial Assets and Liabilities

The fair values of these instruments are estimated by each method in accordance with the following classification:

- For futures transactions, option transactions and OTC derivative transactions, fair value is estimated based on clearing prices at the end of the fiscal year.
- For repo transactions, fair value is estimated by discounting amounts of delivery settlement as of the settlement date of transactions.

2) Other Financial Assets

Fair values for marketable shares are estimated using market prices, and those for marketable bonds are estimated based on the Reference Statistical Prices (Yields) for OTC Bond Transactions publicized by Japan Securities Dealers Association.

3) Bonds and loans Payable

For bonds and loans payable with long periods to maturity, fair value is estimated by discounting future cash flows using the discount rate that reflects the Group's credit standing.

(4) Offsetting of Financial Instruments

Financial assets and financial liabilities are offset and presented as a net amount in the consolidated statement of financial position only when the Group holds a legally enforceable right to set off the recognized amounts and intends either to settle on a net basis or to realize the asset and settle the liability simultaneously.

The effects of offsetting on clearing business financial assets and liabilities in the consolidated statement of financial position are as follows:

As of March 31, 2016

1) Financial Assets

| | Gross amount of recognized financial assets | Gross amount of financial assets offset in the consolidated statement of financial position | Balance in the consolidated statement of financial position |
|----------------------------|---|---|---|
| | Millions of yen | Millions of yen | Millions of yen |
| Repo transactions | 50,035,432 | 24,124,211 | 25,911,220 |
| Listed option transactions | 2,140,375 | 1,735,453 | 404,922 |
| Other | 26,826,664 | 26,747,248 | 79,415 |
| Total | <u>79,002,471</u> | <u>52,606,913</u> | <u>26,395,558</u> |

2) Financial Liabilities

| | Gross amount of recognized financial liabilities | Gross amount of financial liabilities offset in the consolidated statement of financial position | Balance in the consolidated statement of financial position |
|----------------------------|--|--|---|
| | Millions of yen | Millions of yen | Millions of yen |
| Repo transactions | 50,035,432 | 24,124,211 | 25,911,220 |
| Listed option transactions | 2,140,375 | 1,735,453 | 404,922 |
| Other | 26,826,664 | 26,747,248 | 79,415 |
| Total | <u>79,002,471</u> | <u>52,606,913</u> | <u>26,395,558</u> |

As of March 31, 2017

1) Financial Assets

| | Gross amount of recognized financial assets | Gross amount of financial assets offset in the consolidated statement of financial position | Balance in the consolidated statement of financial position |
|----------------------------|---|---|---|
| | Millions of yen | Millions of yen | Millions of yen |
| Repo transactions | 65,766,164 | 28,681,545 | 37,084,619 |
| Listed option transactions | 1,937,071 | 1,535,116 | 401,955 |
| Other | 17,158,206 | 17,089,225 | 68,981 |
| Total | <u>84,861,442</u> | <u>47,305,886</u> | <u>37,555,555</u> |

2) Financial Liabilities

| | Gross amount of recognized financial liabilities | Gross amount of financial liabilities offset in the consolidated statement of financial position | Balance in the consolidated statement of financial position |
|----------------------------|--|--|---|
| | Millions of yen | Millions of yen | Millions of yen |
| Repo transactions | 65,766,164 | 28,681,545 | 37,084,619 |
| Listed option transactions | 1,937,071 | 1,535,116 | 401,955 |
| Other | 17,158,206 | 17,089,225 | 68,981 |
| Total | <u>84,861,442</u> | <u>47,305,886</u> | <u>37,555,555</u> |

Under certain conditions, including the settlement default of any clearing participant, the amounts of clearing business financial assets and liabilities recorded in the consolidated statement of financial position are set off by appropriating securities and money for which delivery to the defaulting clearing participant is suspended and deposits from clearing participants in accordance with the designated methods established by each instrument.

24. Management of Financial Risks

(1) Capital Management

It is the Group's basic policy for capital management to maintain an appropriate capital level and composition of liabilities and equity that are commensurate with the risks of the business for the purpose of achieving sustainable growth and maximization of the corporate value while ensuring stability of the financial base for business operations in order to carry out its mission as a public infrastructure in the Japanese securities market. Equity represents "equity attributable to owners of the parent company."

A certain amount of surplus has been set aside in accordance with the guidelines for clearing institutions, in order to ensure the continuity of the clearing institution and the functioning of settlement guarantee schemes.

Under the Financial Instruments and Exchange Act, restrictions are placed on the acquisition of and holding shares of the Company, which is a financial instruments exchange holding company.

(2) Management of Financial Risks Arising from Financial Instruments

The Group is exposed to financial risks arising from financial instruments, such as credit risk, liquidity risk and market risk, in the course of business activities. The Group seeks to avoid or mitigate such risks by identifying and analyzing risks and comprehensively managing them in an appropriate manner.

Major risks recognized by the Group are credit risk and liquidity risk arising from the clearing operations of Japan Securities Clearing Corporation. The following shows risk management for the Group's clearing operations and other risk management by financial risk.

1) Credit Risk Management

Credit risk is the risk that the Group may incur financial losses due to a counterparty's failure to fulfill a contract and other reasons. Japan Securities Clearing Corporation is exposed to credit risks of clearing participants for clearing business financial assets that are receivables acquired by assuming obligations for the transactions conducted by market participants, and has established a system to respond to the risks, including the qualification system and collateral requirement system for clearing participants. Please refer to "[Appendix] Framework for Ensuring Implementation of Settlement" for details of Japan Securities Clearing Corporation's settlement execution system and Note "9. Assets and Liabilities Based on Various Rules for Ensuring Safety of Financial Instruments Trading" for fair values of substitute securities including deposits from clearing participants.

Specified assets for deposits from clearing participants that are deposited as collateral by clearing participants are exposed to credit risks of entities where the assets are kept and funds are managed. As a general rule, such assets are deposited into bank settlement accounts and a Bank of Japan current account, which are free from credit risks. For asset management, the Group also avoids the risks by funding only call loans collateralized by Japanese government bonds to financial institutions or ordinary deposits with trust banks that have a certain degree of credit strength.

2) Liquidity Risk Management

Liquidity risk is the risk that the Group may incur financial losses due to inability to secure necessary funds and other reasons.

Japan Securities Clearing Corporation is exposed to liquidity risks for clearing business financial liabilities because it needs to cover the fund shortage and complete the settlement even in the case of a clearing participant's settlement default. However, it has established a system to ensure sufficient liquidity for such risks by concluding contracts on provision of liquidity with fund settlement banks and other measures.

For specified assets for deposits from clearing participants that have been deposited as collateral by each clearing participant, the Group avoids liquidity risks at the time of return of collateral by keeping and managing the funds as highly liquid, short-term financial assets.

Furthermore, the Group raises funds through loans payable and is exposed to liquidity risk of failing to repay the debts by the due date. The Group avoids such risks by monitoring its financial condition and forecast and flexibly accommodating group companies with funds within the Group.

The financial liability balance by maturity is as follows:

As of March 31, 2016

| | Book balance | Contractual cash flow | Due within one year | Due after one year through two years |
|---|-------------------|-----------------------|---------------------|--------------------------------------|
| | Millions of yen | Millions of yen | Millions of yen | Millions of yen |
| Trade and other payables | 4,413 | 4,413 | 4,413 | — |
| Bonds and loans payable (current) | 22,500 | 22,500 | 22,500 | — |
| Clearing business financial liabilities | 26,395,558 | 26,395,558 | 26,395,558 | — |
| Deposits from clearing participants | 2,809,433 | 2,809,433 | 2,809,433 | — |
| Legal guarantee funds | 483 | 483 | 483 | — |
| Trading participant security money | 7,429 | 7,429 | 7,429 | — |
| Bonds and loans payable (non-current) | 10,000 | 10,000 | — | 10,000 |
| Total | <u>29,249,818</u> | <u>29,249,818</u> | <u>29,239,818</u> | <u>10,000</u> |

As of March 31, 2017

| | Book balance | Contractual cash flow | Due within one year | Due after one year through two years | Due after two year |
|---|-------------------|-----------------------|---------------------|--------------------------------------|--------------------|
| | Millions of yen | Millions of yen | Millions of yen | Millions of yen | Millions of yen |
| Trade and other payables | 3,190 | 3,190 | 3,190 | — | — |
| Bonds and loans payable (current) | 22,500 | 22,500 | 22,500 | — | — |
| Clearing business financial liabilities | 37,555,555 | 37,555,555 | 37,555,555 | — | — |
| Deposits from clearing participants | 3,374,863 | 3,374,863 | 3,374,863 | — | — |
| Legal guarantee funds | 474 | 474 | 474 | — | — |
| Trading participant security money | 8,142 | 8,142 | 8,142 | — | — |
| Bonds and loans payable (non-current) | 29,933 | 30,000 | — | 10,000 | 20,000 |
| Total | 40,994,660 | 40,994,726 | 40,964,726 | 10,000 | 20,000 |

3) Market Risk Management

(Market price risk and foreign exchange risk)

The Group holds shares in Singapore Exchange for the purpose of building a close partnership. Because fluctuations in market prices of the shares in Singapore Exchange and exchange rates affect the Group's equity and comprehensive income, the Group is exposed to market price risk and foreign exchange risk and continuously monitors fluctuations in the market prices of shares in Singapore Exchange and other situations by periodically reporting such fluctuations to the Board of Directors and other methods.

The effects of a price fluctuation on equity in the consolidated statement of financial position when the fair value of shares in Singapore Exchange declines by 10% are as follows:

| | As of March 31, 2016 | As of March 31, 2017 |
|------------------|----------------------|----------------------|
| | Millions of yen | Millions of yen |
| Effect on equity | (2,438) | (2,275) |

25. Other Comprehensive Income

The amount arising during the year and tax effects for each component of "Other comprehensive income" are as follows:

Fiscal year ended March 31, 2016

| | Amount arising during year | Before tax effects | Tax effects | Net of tax effects |
|---|----------------------------|--------------------|-----------------|--------------------|
| | Millions of yen | Millions of yen | Millions of yen | Millions of yen |
| Net gain on revaluation of financial assets measured at fair value through other comprehensive income | (2,692) | (2,692) | 1,200 | (1,491) |
| Remeasurements of defined benefit plan | (2,138) | (2,138) | 654 | (1,484) |
| Share of other comprehensive income of investments accounted for using the equity method | 0 | 0 | 0 | 0 |
| Total | (4,831) | (4,831) | 1,855 | (2,975) |

Fiscal year ended March 31, 2017

| | Amount arising during year | Before tax effects | Tax effects | Net of tax effects |
|---|----------------------------------|-----------------------|--------------------|-----------------------|
| | Millions of yen | Millions of yen | Millions of yen | Millions of yen |
| Net gain on revaluation of financial assets measured at fair value through other comprehensive income | (2,474) | (2,474) | 757 | (1,717) |
| Remeasurements of defined benefit plan | 1,828 | 1,828 | (559) | 1,268 |
| Share of other comprehensive income of investments accounted for using the equity method | (0) | (0) | 0 | (0) |
| Total | <u>(646)</u> | <u>(646)</u> | <u>198</u> | <u>(448)</u> |

26. Dividends

(1) Dividends Paid

| (Resolution) | Class of shares | Total amount of dividends | Amount of dividends per share | Basis date | Effective date |
|--|--------------------|------------------------------|-------------------------------------|--------------------|------------------|
| | | Millions of yen | Yen | | |
| Board of Directors (May 13, 2015) | Ordinary shares | 8,785 | 32.00 | March 31, 2015 | May 26, 2015 |
| Board of Directors (October 30, 2015) | Ordinary shares | 11,530 | (Note)42.00 | September 30, 2015 | December 1, 2015 |
| Board of Directors (May 17, 2016) | Ordinary shares | 15,922 | 29.00 | March 31, 2016 | May 31, 2016 |
| Board of Directors (October 28, 2016) | Ordinary shares | 11,491 | 21.00 | September 30, 2016 | December 1, 2016 |

(Note) The amount of dividends per share is based on the basis date of September 30, 2015 and does not include the effect of the stock split conducted on October 1, 2015.

(2) Dividend with a Basis Date That Belongs to the Current Fiscal Year and with an Effective Date That Will Belong to the Following Fiscal Year

| (Resolution) | Class of shares | Total amount of dividends | Amount of dividends per share | Basis date | Effective date |
|--------------------------------------|--------------------|------------------------------|-------------------------------------|----------------|----------------|
| | | Millions of yen | Yen | | |
| Board of Directors (May 16, 2017) | Ordinary shares | 14,066 | 26.00 | March 31, 2017 | May 29, 2017 |

27. Operating Lease

The Group leases office buildings, etc. as cancellable operating leases. The total of these lease payments is ¥4,620 million for the fiscal year ended March 31, 2016 and ¥4,062 million for the fiscal year ended March 31, 2017.

28. Related Parties

(1) Major Subsidiaries and Associates

Major subsidiaries and associates are as follows:

| Name | Address | Ratio of voting rights owned (%) |
|--|---------------------------|----------------------------------|
| (Consolidated subsidiaries) | | |
| Tokyo Stock Exchange, Inc. | Chuo-ku, Tokyo | 100.0 |
| Osaka Exchange, Inc. | Chuo-ku, Osaka-shi, Osaka | 100.0 |
| Japan Exchange Regulation | Chuo-ku, Tokyo | 100.0 |
| Japan Securities Clearing Corporation | Chuo-ku, Tokyo | (Note 2) |
| TOSHO SYSTEM SERVICE Co., Ltd. | Chuo-ku, Tokyo | 100.0 (100.0) |
| (Associates accounted for under the equity method) | | |
| ICJ, Inc. | Chiyoda-ku, Tokyo | 50.0 (50.0) |
| Tosho Computer Systems Co., Ltd. | Chiyoda-ku, Tokyo | 35.0 (35.0) |
| Japan Securities Depository Center, Inc. | Chuo-ku, Tokyo | 24.4 |

(Note 1) Figures in parentheses in the ratio of voting rights owned column indicate the figures of indirectly owned voting rights within the totals.

(Note 2) Class A shares: 99.2% / Class B shares: 100.0% / Class C shares: 60.4% / Class D shares: 52.9%

(2) Compensation for Key Management Personnel

| Category | Amount paid |
|--|--------------------------------------|
| Directors (of which, outside directors) | 140 million yen (112 million yen) |
| Executive officers | 422 million yen |

29. Contingencies

Guarantee Liabilities

The Group provides debt guarantees for loans of employees from financial institutions for their housing acquisition as follows:

| Fiscal year ended March 31, 2016 | Fiscal year ended March 31, 2017 |
|-------------------------------------|-------------------------------------|
| Millions of yen | Millions of yen |
| 1,774 | 1,550 |

30. Subsequent Events

As of June 9, 2017, which is the date of issuing the consolidated financial statements for the fiscal year ended March 31, 2017, there are no significant subsequent events.

[Appendix]

Framework for Ensuring Implementation of Settlement

There are four financial instruments exchanges¹ for trading securities in Japan including the Tokyo Stock Exchange. For transactions in securities at these exchanges, all the clearing operations are conducted by Japan Securities Clearing Corporation. This company also covers transactions in securities in PTS² in its clearing operations. In addition, the company also performs the clearing of futures and options trading at the Osaka Exchange and covers credit default swap transactions and interest rate swap transactions at over-the-counter markets (hereinafter “OTC derivative transactions”) and OTC traded Japanese government bonds in the clearing operations.

As a financial instruments clearing organization, Japan Securities Clearing Corporation provides a settlement guarantee by assuming obligations for transactions conducted by market participants and acting as the counterparty to each side of the transactions. This enables market participants to conduct transactions without regard to credit risk of their counterparties, while if a clearing participant fails to fulfill the settlement, Japan Securities Clearing Corporation is obliged to implement the clearing with other clearing participants. Therefore, in cases where Japan Securities Clearing Corporation incurs a loss due to settlement default by a clearing participant, the company basically follows the principle of self-responsibility under which the loss is compensated for with collateral pledged by the clearing participant who failed to fulfill the settlement. In the event of any shortage, Japan Securities Clearing Corporation uses its own funds and has the compensation system where this company also requires other clearing participants to share the burden.

Japan Securities Clearing Corporation’s efforts for ensuring implementation of clearing and the overview of the loss compensation system are as follows:

Measures for Ensuring Settlement

(1) Clearing participant system and monitoring

In order to reduce credit risks of clearing participants, Japan Securities Clearing Corporation has provided for eligibility requirements for clearing by type of eligibility and established criteria for acquisition and maintenance of eligibility in the requirements. A clearing participant must have a certain financial base, management structure and business execution structure. The status of such criteria for clearing participants is monitored periodically. If it is found that there is any problem for a clearing participant, Japan Securities Clearing Corporation may stop the assumption of obligations of the clearing participant and revoke the status of the participant for clearing.

The company also monitors the status of clearing participants’ positions periodically and controls whether or not credit risks are overly concentrated in some clearing participants. If an undue position is taken, the company considers measures as needed.

(2) Collateral requirement system

In order to prepare for possible losses incurred due to settlement default by clearing participants, Japan Securities Clearing Corporation requires clearing participants to deposit collateral. Collateral includes clearing deposit for clearing fund³, etc., clearing margin⁴, initial margin⁵ and variation margin⁶. The company confirms the adequacy of collateral periodically, and verifies and reviews the calculation model for the required amount of collateral as appropriate.

In addition, the company has set certain qualification requirements for money or substitute securities deposited as collateral, and daily assesses collateral value.

(3) Delivery Versus Payment (“DVP”) settlement

The settlement of securities between Japan Securities Clearing Corporation and its clearing participants are conducted via the DVP settlement system, in which the delivery of securities and the payment of funds are linked, that is, securities can be delivered on the condition that the corresponding payment is completed, while payment can be received on the condition that the corresponding securities are delivered. Consequently, should settlement defaults occur, the counterparty will not be left with non-receipt of securities or funds.

(4) Ensuring liquidity

In order to secure liquidity required in cases of settlement defaults by clearing participants, Japan Securities Clearing Corporation has entered into agreements on liquidity supply with fund settlement banks.

In addition, the company confirms the adequacy of liquidity lines for funds periodically.

[Overview of the Loss Compensation System]

In cases where a clearing participant fails to make a settlement, Japan Securities Clearing Corporation stops the assumption or sharing of obligations for the clearing participant as a party as well as the delivery of securities and money that Japan Securities Clearing Corporation should deliver to the clearing participant, and at the same time, appropriates the securities and money for which the delivery is stopped as compensation for the clearing participant's settlement default.

In cases where Japan Securities Clearing Corporation's losses are not eliminated even after the above process, the company makes up for the losses by the following methods. As a general rule, this compensation for losses is made individually for losses⁷ incurred on each clearing of securities trading, futures and option transactions, OTC derivative transactions and OTC traded Japanese government bonds, according to the clearing qualifications of the defaulting clearing participant.

If losses on settlement default are incurred in clearing of securities trading and futures and option transactions, the losses will be compensated under the following multi-tiered scheme:

- 1) Compensation by collateral deposited by the defaulting clearing participant (initial margin, clearing margin, clearing funds, etc.)
- 2) Compensation from loss compensation by financial instruments exchanges, etc.⁸
- 3) Compensation by Japan Securities Clearing Corporation
- 4) Compensation by clearing funds contributed by non-defaulting clearing participants
- 5) Mutual guarantee by non-defaulting clearing participants

Hence, in cases where Japan Securities Clearing Corporation incurs losses due to settlement default by a clearing participant and the company's losses cannot be fully made up for even through the measure in 1), the Group may incur losses due to compensation made by Tokyo Stock Exchange, Inc. or Osaka Exchange, Inc. up to the amount stipulated in the loss compensation contract (cash equities: ¥10.4 billion, futures and option transactions: ¥17.4 billion) for the measure in 2), or compensation made by Japan Securities Clearing Corporation up to the amount funded as a settlement guarantee reserve for securities trading, etc. (¥25.0 billion) for the measure in 3).

If losses on settlement default are incurred in clearing of OTC derivative transactions, the losses will be compensated under the following multi-tiered scheme:

- 1) Compensation by collateral deposited by the defaulting clearing participant (initial margin and clearing funds)
- 2) Compensation by Japan Securities Clearing Corporation (first-tier settlement guarantee reserve)
- 3) Compensation by clearing funds contributed by non-defaulting clearing participants and by Japan Securities Clearing Corporation (second-tier settlement guarantee reserve)
- 4) Compensation by special clearing charges collected from non-defaulting clearing participants
- 5) Compensation by non-defaulting clearing participants who are the recipients of variation margin after the default

Hence, in cases where Japan Securities Clearing Corporation incurs losses due to settlement default by a clearing participant for an OTC derivative transaction and the company's losses cannot be fully made up for

even through the measure in 1), the Group may incur losses for each clearing operation due to compensation made by Japan Securities Clearing Corporation up to the amount funded as the first-tier settlement guarantee reserve (¥2.0 billion each) for the measure in 2), or compensation made by Japan Securities Clearing Corporation up to the amount funded as the second-tier settlement guarantee reserve (credit default swap transaction: ¥1.0 billion, interest rate swap transaction: ¥2.0 billion) for the measure in 3).

Moreover, if losses on settlement default are incurred in clearing of OTC traded Japanese government bonds, the losses will be compensated under the following multi-tiered scheme:

- 1) Compensation by collateral deposited by the defaulting clearing participant (initial margin and clearing funds)
- 2) Compensation by Japan Securities Clearing Corporation (first-tier settlement guarantee reserve)
- 3) Compensation by clearing funds contributed by non-defaulting clearing participants and by Japan Securities Clearing Corporation (second-tier settlement guarantee reserve)
- 4) Compensation by special clearing charges collected from non-defaulting clearing participant
- 5) Compensation by clearing funds contributed by clearing participants subject to original transaction proration⁹ and by Japan Securities Clearing Corporation (second-tier settlement guarantee reserve that is not used in 3))
- 6) Compensation by special clearing charges collected from clearing participants subject to original transaction proration
- 7) Compensation by non-defaulting clearing participants who are the recipients of variation margin after the default

Hence, in cases where Japan Securities Clearing Corporation incurs losses due to settlement default by a clearing participant for an OTC traded Japanese government bond and the company's losses cannot be fully made up for even through the measure in 1), the Group may incur losses due to compensation made by Japan Securities Clearing Corporation up to ¥1.75 billion, which has been funded as the first-tier settlement guarantee reserve, for the measure in 2), or compensation made by Japan Securities Clearing Corporation up to ¥1.75 billion, which has been funded as the second-tier settlement guarantee reserve, for the measures 3) and 5).

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- ¹ Financial instruments exchanges for buying and selling securities: Tokyo Stock Exchange, Nagoya Stock Exchange, Sapporo Securities Exchange and Fukuoka Stock Exchange
- ² PTS: PTS (Proprietary Trading System) operated by SBI Japannext Co., Ltd. and Chi-X Japan Limited
- ³ Clearing funds: Clearing participants are required to deposit these funds in order to ensure their performance of obligations to Japan Securities Clearing Corporation. The required amount in securities trading is calculated to cover reconstruction expense to cover losses that may be incurred due to shortage of margin, etc. deposited by the defaulting clearing participants in cases including the one where multiple clearing participants defaulted on clearing obligations in an extreme, but possible market situation.
- ⁴ Clearing margin: Clearing participants are required to deposit these funds in order to secure their performance of obligations for futures and option transactions to Japan Securities Clearing Corporation. The required amount is at least the amount derived by deducting the total amount of net option value from the amount calculated by SPAN@* for open positions of futures and options trading.
- * SPAN@: SPAN, which is an abbreviation of Standard Portfolio Analysis of Risk, is a methodology that calculates margin developed by Chicago Mercantile Exchange. The amount of margin is calculated according to risks arising from open positions of the entire futures and options trading.
- ⁵ Initial margin: Clearing participants are required to deposit this margin in order to ensure their performance of obligations for futures and option transactions to Japan Securities Clearing Corporation. The required amount is calculated by adding the amount to cover certain risks to the amount of losses expected from fluctuations in the price (yield curb for interest rate swap transactions) in the period up to completion of the position processing in cases where a clearing participant defaults on each transaction.
- ⁶ Variation margin: For the position of each clearing participant, the fluctuation portion of position value from the previous day is received in the form of cash as variation margin in order to cover a daily fluctuation in the price. Clearing participants for whom the fluctuation portion is negative pay that portion to Japan Securities Clearing Corporation, while those for whom the fluctuation portion is positive receive that portion from Japan Securities Clearing Corporation.
- ⁷ Japan Securities Clearing Corporation has introduced Cross Margining system, and profits/losses pertaining to government bond futures transactions subject to Cross Margining are treated as those pertaining to clearing of OTC derivatives transactions (interest rate swap transactions).
- ⁸ Compensation from loss compensation of financial instruments exchanges, etc.: Under loss compensation contracts concluded between Japan Securities Clearing Corporation and financial instruments exchanges, etc., losses are compensated for up to the amount stipulated in those contracts. For agreements on cash equities, there are contracts between Japan Securities Clearing Corporation and five financial instrument exchanges as well as contracts between Japan Securities Clearing Corporation and each PTS. The maximum compensation amount totals ¥11.3 billion, of which ¥10.4 billion is the total maximum compensation amount in the contracts with Tokyo Stock Exchange, Inc. and Osaka Exchange, Inc., group companies. Contracts on futures and options trading have been concluded between Japan Securities Clearing Corporation, and Tokyo Stock Exchange, Inc. and Osaka Exchange, Inc. The maximum compensation amount under these contracts totals ¥17.4 billion.
- ⁹ Clearing participants subject to original transaction proration: These participants are clearing participants who have a trust account.