

Annual Securities Report

(33rd Business Term)

From April 1, 2017 to March 31, 2018

NIPPON TELEGRAPH AND TELEPHONE CORPORATION

This document is an English translation of a report that has been generated/printed with a Table of Contents and page numbers attached to data from the Securities Report filed with the Financial Services Agency using EDINET (Electronic Disclosure for Investors' NETwork).

Included at the end of this report are English translations of the Report of Independent Registered Public Accounting Firm attached to the Securities Report filed in the manner described above and the Report on Internal Control and Confirmation Letter filed in conjunction with the above mentioned Securities Report.

The forward-looking statements and projected figures concerning the future performance of NTT and its subsidiaries and affiliates contained or referred to herein are based on a series of assumptions, projections, estimates, judgments and beliefs of the management of NTT in light of information currently available to it regarding NTT and its subsidiaries and affiliates, the economy and telecommunications industry in Japan and overseas, and other factors. These projections and estimates may be affected by the future business operations of NTT and its subsidiaries and affiliates, the state of the economy in Japan and abroad, possible fluctuations in the securities markets, the pricing of services, the effects of competition, the performance of new products, services and new businesses, changes to laws and regulations affecting the telecommunications industry in Japan and elsewhere, other changes in circumstances that could cause actual results to differ materially from the forecasts contained or referred to herein, as well as other risks included herein and in any other materials publicly disclosed by NTT on its website.

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[Cover]

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PART I. INFORMATION ON THE COMPANY

ITEM 1. OVERVIEW OF THE COMPANY

1. Selected Financial Data

(1) Selected Consolidated Financial and Other Data of the Company

U.S. GAAP

		29 th Business Term	30 th Business Term	31 st Business Term	32 nd Business Term	33 rd Business Term
		Year Ended March 31, 2014	Year Ended March 31, 2015	Year Ended March 31, 2016	Year Ended March 31, 2017	Year Ended March 31, 2018
Operating revenues	Millions of yen	10,925,174	11,095,317	11,540,997	11,391,016	11,799,587
Income before income taxes and equity in earnings (losses) of affiliated companies	Millions of yen	1,294,195	1,066,629	1,329,259	1,527,769	1,755,624
Net income attributable to NTT	Millions of yen	585,473	518,066	737,738	800,129	909,695
Comprehensive income (loss) attributable to NTT	Millions of yen	873,371	691,332	422,153	860,200	956,013
NTT shareholders' equity	Millions of yen	8,511,354	8,681,860	8,833,806	9,052,479	9,485,981
Total assets	Millions of yen	20,284,949	20,702,427	21,035,931	21,250,325	21,675,770
NTT shareholders' equity per share	Yen	3,833.78	4,100.63	4,214.32	4,491.73	4,812.59
Basic earnings per share attributable to NTT	Yen	254.61	236.85	350.34	390.94	455.78
Diluted earnings per share attributable to NTT	Yen	—	—	—	—	—
Equity ratio (ratio of NTT shareholders' equity to Total assets)	%	42.0	41.9	42.0	42.6	43.8
Return on equity ratio (ratio of Net income attributable to NTT to NTT shareholders' equity)	%	7.0	6.0	8.4	8.9	9.8
Price earnings ratio	Multiple	11.0	15.6	13.8	12.2	10.8
Net cash provided by operating activities	Millions of yen	2,727,904	2,391,812	2,711,845	2,917,357	2,637,547
Net cash used in investing activities	Millions of yen	(2,106,806)	(1,868,579)	(1,759,778)	(2,089,311)	(1,841,777)
Net cash used in financing activities	Millions of yen	(622,440)	(678,008)	(707,575)	(981,511)	(931,658)
Cash and cash equivalents at year end	Millions of yen	984,463	849,174	1,088,275	925,213	780,300
Number of employees [Average number of temporary employees]	Number of people	239,756 [100,455]	241,593 [101,648]	241,448 [99,855]	274,844 [90,746]	282,533 [80,481]

Notes: 1. Operating revenues do not include consumption taxes.

2. NTT shareholders' equity does not include the portion attributable to non-controlling interests.

3. Diluted earnings per share attributable to NTT is not stated because NTT did not have potentially dilutive common shares that were outstanding during the period.

4. NTT shareholders' equity per share is calculated based on the number of shares outstanding at the end of the fiscal year, excluding treasury stock, and Basic earnings per share attributable to NTT is calculated based on the average number of shares outstanding during the fiscal year, excluding treasury stock.

5. NTT conducted a two-for-one stock split of its common stock with an effective date of July 1, 2015. The figures for NTT shareholders' equity per share and Basic earnings per share attributable to NTT for each fiscal year have been adjusted to reflect the impact of the stock split as if the stock split had occurred prior to the periods reported above.
6. Number of employees indicates the number of full-time employees as of March 31 of each of the years indicated. The average annual number of temporary employees for the fiscal years indicated is shown in brackets.

(2) Selected Non-Consolidated Financial and Other Data of the Company

		29th Business Term	30th Business Term	31st Business Term	32nd Business Term	33rd Business Term
		Year Ended March 31, 2014	Year Ended March 31, 2015	Year Ended March 31, 2016	Year Ended March 31, 2017	Year Ended March 31, 2018
Operating revenues	Millions of yen	430,843	411,828	521,742	474,380	663,118
Recurring profit	Millions of yen	277,322	272,393	381,487	334,901	528,143
Net income	Millions of yen	279,224	556,578	666,679	288,117	724,908
Common stock	Millions of yen	937,950	937,950	937,950	937,950	937,950
Shares outstanding at end of year	Shares	1,136,697,235	1,136,697,235	2,096,394,470	2,096,394,470	2,096,394,470
Net assets	Millions of yen	4,329,004	4,345,475	4,717,924	4,383,510	4,602,591
Total assets	Millions of yen	7,302,096	7,027,374	7,052,062	6,681,061	6,710,444
Net assets per share	Yen	1,949.92	2,052.46	2,250.77	2,175.04	2,335.07
Dividends per share (Interim dividend per share (included above))	Yen	170.00 (80.00)	180.00 (90.00)	110.00 (50.00)	120.00 (60.00)	150.00 (75.00)
Earnings per share	Yen	121.43	254.45	316.59	140.77	363.20
Diluted net income per share	Yen	—	—	—	—	—
Capital to asset ratio	%	59.3	61.8	66.9	65.6	68.6
Return on equity	%	6.2	12.8	14.7	6.3	16.1
Price earnings ratio	Multiple	23.1	14.5	15.3	33.8	13.5
Payout ratio	%	70.0	35.4	34.7	85.2	41.3
Number of employees [Average number of temporary employees]	Number of people	2,845 [61]	2,835 [61]	2,763 [58]	2,709 [51]	2,644 [54]

Notes: 1. Operating revenues do not include consumption taxes.

2. Diluted net income per share is not listed as there are no applicable dilutive stock.

3. Net assets per share is calculated on the basis of the number of shares outstanding at the end of the fiscal year, excluding treasury stock, and earnings per share is calculated on the basis of the average number of outstanding shares during the fiscal year, excluding treasury stock.

4. NTT conducted a two-for-one stock split of its common stock with an effective date of July 1, 2015. Accordingly, for net assets per share and earnings per share for each fiscal year, and dividends per share and interim dividends per share for the fiscal year ended March 31, 2016, figures have been adjusted to reflect the stock split.

5. Number of employees indicates the number of full-time employees as of March 31 of each of the years indicated. The average annual number of temporary employees for the fiscal years indicated is shown in brackets.

2. History

(1) Background

On August 1, 1952, pursuant to the Nippon Telegraph and Telephone Public Corporation Act (Act No. 250 of July 31, 1952), NTT Public was incorporated, with its capital stock wholly owned by the Government. On April 1, 1985, pursuant to the Nippon Telegraph and Telephone Corporation Act (Act No. 85 of December 25, 1984), NTT was established, with its capital stock wholly owned by the Government. When NTT was established, it succeeded to all the rights and obligations of NTT Public.

(2) History

April 1985	NTT was incorporated as a limited liability, joint-stock company.
February 1987	NTT's Shares were listed on the Tokyo Stock Exchange (the "TSE") and other stock exchanges in Japan.
July 1988	NTT's DATA Communications Division was transferred to NTT DATA System Service Corporation.
April 1992	Implemented organizational reform corresponding to the long distance and regional communications service divisions through a review of, and commitment to, a divisional system.
July 1992	Business operations relating to car phones, mobile phones, maritime telephones, aircraft passenger telephones and radio paging were transferred to NTT Mobile Communications Network, Inc.
December 1992	NTT's electricity, construction and building management operations were transferred to NTT FACILITIES.
September 1994	NTT ADSs were listed on the New York Stock Exchange (the "NYSE").
October 1994	NTT's Shares were listed on the London Stock Exchange.
April 1995	NTT DATA System Service Corporation was listed on the TSE.
September 1997	NTT transferred its software headquarters business to NTT COMMUNICATIONWARE CORPORATION.
August 1998	NTT DATA System Service Corporation changed its business name to NTT DATA CORPORATION.
October 1998	NTT Mobile Communications Network, Inc. was listed on the TSE.
July 1999	Implemented a group reorganization by which NTT became a holding company. Operation of NTT's intra-prefectural communications services was transferred to its two wholly owned subsidiaries, NTT East and NTT West, and inter-prefectural communications services were transferred to NTT COMMUNICATIONS CORPORATION, also a wholly owned subsidiary of NTT.
April 2000	NTT Mobile Communications Network, Inc. changed its business name to NTT DOCOMO, INC.
November 2000	NTT COMMUNICATIONWARE CORPORATION changed its business name to NTT COMWARE CORPORATION.
March 2002	NTT DOCOMO, INC. was listed on the London Stock Exchange and the NYSE.
November 2004	NTT URBAN DEVELOPMENT CORPORATION was listed on the TSE.
January 2009	NTT implemented a 100-for-1 common stock split.
July 2015	NTT implemented a 2-for-1 common stock split.

3. Description of Business

NTT Group consists of NTT (as the holding company) , its 922 subsidiaries and its 118 affiliated companies (as of March 31, 2018). The principal business segments of NTT Group are its regional communications business, long distance and international communications business, mobile communications business, and data communications business. NTT Group also has an other business segment.

NTT Group is categorized as a listed company pursuant to Article 49, Paragraph 2 of the Cabinet Office Ordinance on Regulations on Transactions of Securities, and accordingly insignificance tests for material facts for purposes of insider trading regulations are determined on the basis of consolidated figures.

Details of the business and corporate position of the consolidated subsidiaries are described below.

NTT Group's five business segments are described under Note 20 to the Consolidated Financial Statements.

(1) Regional Communications Business Segment

The principal services in the regional communications business segment are domestic intra-prefectural communications services and related ancillary services.

(Consolidated Subsidiaries)

NTT East, NTT West, and 43 other companies.

(2) Long Distance and International Communications Business Segment

The principal services in the long distance and international communications business segment are domestic inter-prefectural communications services, services related to the international communications business, services related to the solutions business and related services.

(Consolidated Subsidiaries)

NTT COMMUNICATIONS, Dimension Data Holdings plc, NTT Security Corporation, NTT America, Inc., NTT EUROPE LTD., Lux e-shelter 1 S.a.r.l., Arkadin International SAS, RagingWire Data Centers, Inc., Virtela Technology Services Incorporated, NETMAGIC SOLUTIONS PRIVATE LIMITED, GYRON INTERNET LIMITED, NTT Plala Inc., Spectrum Holdings Inc., and 360 other companies.

(3) Mobile Communications Business Segment

The principal services in the mobile communications business segment are mobile phone services and related services.

(Consolidated Subsidiaries)

NTT DOCOMO and 108 other companies.

(4) Data Communications Business Segment

The principal services in the data communications business segment are network system services and system integration services.

(Consolidated Subsidiaries)

NTT DATA, NTT DATA, Inc., NTT DATA Services, LLC, EVERIS PARTICIPACIONES, S.L.U., NTT Data International L.L.C., and 297 other companies.

(5) Other Business Segment

The other business segment includes NTT's operations, and its real estate, finance, construction and power, systems development and development of advanced technologies businesses.

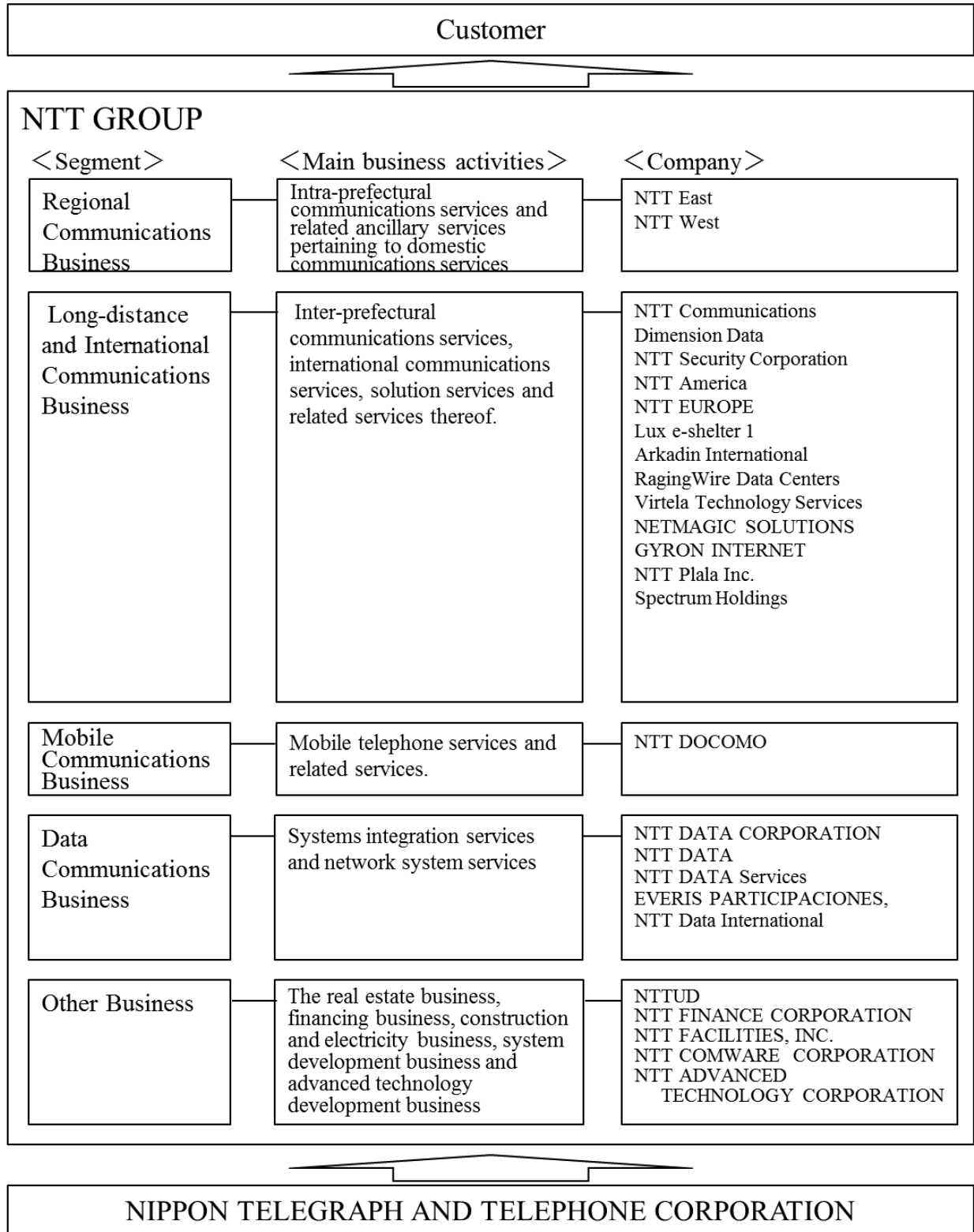
(Consolidated Subsidiaries)

NTT Urban Development, NTT FINANCE, NTT FACILITIES, NTT COMWARE CORPORATION, NTT ADVANCED TECHNOLOGY CORPORATION, and 88 other companies.

Note: In this Annual Securities Report, "NTT East" refers to Nippon Telegraph and Telephone East Corporation, "NTT West" refers to Nippon Telegraph and Telephone West Corporation, "NTT Communications" refers to NTT Communications Corporation, "NTT DOCOMO" refers to NTT DOCOMO, INC., "NTT DATA" refers to NTT DATA CORPORATION, and "NTT Plala" refers to NTT Plala, Inc.

A diagram of NTT Group's business lines is included on the following page.

Business Lines Diagram



4. Information on Affiliates

<u>Name</u>	<u>Location</u>	<u>Common Stock</u>	<u>Principal Business</u>	<u>Percentage of Voting Rights</u>	<u>Relationship</u>
(Consolidated Subsidiaries) Nippon Telegraph and Telephone East Corporation Notes: *1, *3, *4, *5	Shinjuku-ku, Tokyo	(millions of yen) 335,000	Regional Communications Business	100.00	Provides intra-prefectural communications services in the eastern part of Japan. NTT is the provider of a long-term capital loan to NTT East. Concurrent Officers Position Held: Yes
Nippon Telegraph and Telephone West Corporation Notes: *1, *3, *4	Chuo-ku, Osaka	(millions of yen) 312,000	Regional Communications Business	100.00	Provides intra-prefectural communications services in the eastern part of Japan. NTT is the provider of a long-term capital loan to NTT West. Concurrent Officers Position Held: Yes
NTT Communications Corporation Notes: *1, *3, *4	Chiyoda-ku, Tokyo	(millions of yen) 230,979	Long Distance and International Communications Business	100.00	Provides inter-prefectural communications services, international communications services and internet-related services. NTT is the provider of a long-term capital loan to NTT Communications. Concurrent Officers Position Held: No
Dimension Data Holdings Note: *1, *4	England	(ten thousands of U.S. dollars) 88,852	Long Distance and International Communications Business	100.00	Provides IT system building and maintenance support for corporations. Concurrent Officers Position Held: Yes
NTT Security Corporation Note: *4	Chiyoda-ku, Tokyo	(millions of yen) 25,249	Long Distance and International Communications Business	100.00	Provides professional security services Concurrent Officers Position Held: Yes
NTT America Note: *1	U.S.A.	(ten thousands of U.S. dollars) 205,103	Long Distance and International Communications Business	100.00 (100.00)	Provides ICT services in North America. Concurrent Officers Position Held: No

<u>Name</u>	<u>Location</u>	<u>Common Stock</u>	<u>Principal Business</u>	<u>Percentage of Voting Rights</u>	<u>Relationship</u>
NTT EUROPE	England	(ten thousands of British pounds) 15,383	Long Distance and International Communications Business	100.00 (100.00)	Provides ICT services in Europe. Concurrent Officers Position Held: No
Lux e-shelter 1	Luxembourg	(ten thousands of Euros) 40,320	Long Distance and International Communications Business	86.70 (86.70)	Provides data center-related services in Europe. Concurrent Officers Position Held: No
Arkadin International	France	(ten thousands of Euros) 16,618	Long Distance and International Communications Business	100.00 (100.00)	Provides teleconference, web conference and video conference services. Concurrent Officers Position Held: No
RagingWire Data Centers	U.S.A.	(ten thousands of U.S. dollars) 42,041	Long Distance and International Communications Business	100.00 (100.00)	Provides data center-related services in North America. Concurrent Officers Position Held: No
Virtela Technology Services	U.S.A.	(ten thousands of U.S. dollars) 51,353	Long Distance and International Communications Business	100.00 (100.00)	Provides network services. Concurrent Officers Position Held: No
NETMAGIC SOLUTIONS	India	(ten thousands of Indian rupees) 1,660,997	Long Distance and International Communications Business	100.00 (100.00)	Provides data center-related services in India. Concurrent Officers Position Held: No

<u>Name</u>	<u>Location</u>	<u>Common Stock</u>	<u>Principal Business</u>	<u>Percentage of Voting Rights</u>	<u>Relationship</u>
GYRON INTERNET	England	(ten thousands of British pounds) 9,300	Long Distance and International Communications Business	84.97 (84.97)	Provides data center-related services in the UK. Concurrent Officers Position Held: No
NTT Plala Inc.	Toshima-ku, Tokyo	(millions of yen) 12,321	Long Distance and International Communications Business	95.39 (95.39)	Provides internet connection and video distribution services. Concurrent Officers Position Held: No
Spectrum Holdings *1	British Virgin Islands	(ten thousands of U.S. dollars) 410,193	Long Distance and International Communications Business	100.00 (100.00)	Manages subsidiaries of Dimension Data Holdings in Europe. Concurrent Officers Position Held: No
NTT DOCOMO, INC. Notes: *1, *2, *3, *4, *5	Chiyoda-ku, Tokyo	(millions of yen) 949,679	Mobile Communications Business	66.65 (0.01)	Provides mobile communication services and smart life area services. Concurrent Officers Position Held: No
NTT DATA CORPORATION Notes: *1, *2, *3, *4, *5	Koto-ku, Tokyo	(millions of yen) 142,520	Data Communications Business	54.21 (0.02)	Provides data communications systems services and network system services. Concurrent Officers Position Held: No
NTT DATA Note: *1	U.S.A.	(ten thousands of U.S. dollars) 453,613	Data Communications Business	100.00 (100.00)	Consulting, system design and development in North America. Concurrent Officers Position Held: No

<u>Name</u>	<u>Location</u>	<u>Common Stock</u>	<u>Principal Business</u>	<u>Percentage of Voting Rights</u>	<u>Relationship</u>
NTT DATA Services Note: *1	U.S.A.	(ten thousands of U.S. dollars) 211,429	Data Communications Business	100.00 (100.00)	Consulting, system design and development in North America. Concurrent Officers Position Held: No
EVERIS PARTICIPACIONES	Spain	(ten thousands of Euros) 12,030	Data Communications Business	100.00 (100.00)	Consulting, system design and development. Concurrent Officers Position Held: No
NTT Data International Note: *1	U.S.A.	(ten thousands of U.S. dollars) 455,806	Data Communications Business	100.00 (100.00)	Manages subsidiaries of NTT DATA CORPORATION in North America. Concurrent Officers Position Held: No
NTT URBAN DEVELOPMENT CORPORATION Notes: *2, *4	Chiyoda-ku, Tokyo	(millions of yen) 48,760	Other Business	67.30	Real estate acquisition, development, leasing, and management. Concurrent Officers Position Held: No
NTT FINANCE CORPORATION Notes: *2, *4	Minato-ku, Tokyo	(millions of yen) 16,770	Other Business	100.00 (7.83)	Lease and installment sales of telecommunications-related devices, and billing and collection of charges for communications and other services. Concurrent Officers Position Held: No
NTT FACILITIES, INC. Note: *4	Minato-ku, Tokyo	(millions of yen) 12,400	Other Business	100.00	Design, management, and maintenance of buildings, equipment, and electric power facilities. Concurrent Officers Position Held: No

<u>Name</u>	<u>Location</u>	<u>Common Stock</u>	<u>Principal Business</u>	<u>Percentage of Voting Rights</u>	<u>Relationship</u>
NTT COMWARE CORPORATION Note: *4	Minato-ku, Tokyo	(millions of yen) 20,000	Other Business	100.00	Development, production, operation and maintenance of information communications systems and software. Concurrent Officers Position Held: Yes
NTT Advance Technology Corporation Notes: *1, *4	Saiwai-ku, Kawasaki	(millions of yen) 5,000	Other Business	100.00	Technology transfer, technology consulting, system design and development. Concurrent Officers Position Held: No
Others: 896 companies					

Notes: 1. The Principal Business column lists the segment of each company.

2. Numbers listed in parentheses under Percentage of Voting Rights indicate the percentage of voting rights held indirectly.

Furthermore, Common Stock figures for overseas subsidiaries include additional paid-in capital (APIC).

3. *1: Indicates a specified subsidiary.

4. *2: Company files an Annual Securities Report.

5. *3: During the current fiscal year, the company was party to an agreement relating to the continued usage of the results of the company's and NTT's core research and development, pursuant to which NTT is compensated for the provision of comprehensive services related to NTT's core research and development.

6. *4: During the current fiscal year, 22 of the companies subject to consolidated accounting were parties to an agreement with NTT for group management, with the objective of maximizing each group company's profits while also continuing to respect the mutual independence and autonomy of group companies. NTT is compensated for the provision of comprehensive services related to carrying out group management.

7. *5: The company's ratio of net sales (excluding sales among consolidated subsidiaries) to total consolidated sales is greater than 10:100. Key information on profit and loss for each such company is listed below. Descriptions for NTT DOCOMO and NTT DATA are omitted, as such companies are Annual Securities Report filing companies

	<u>Key Information on Profit and Loss</u>				
	<u>Operating Revenues</u> <u>(millions of yen)</u>	<u>Recurring Profit</u> <u>(millions of yen)</u>	<u>Net Income</u> <u>(millions of yen)</u>	<u>Net Assets</u> <u>(millions of yen)</u>	<u>Liabilities and Net Assets</u> <u>(millions of yen)</u>
NTT East	1,646,269	273,622	152,433	2,289,506	3,337,433

5. Employees

(1) Consolidated Basis

<u>Segment</u>	<u>Number of Employees</u>	
Regional communications business	67,592	[50,393]
Long distance and international communications business	45,320	[8,122]
Mobile communications business	27,464	[9,515]
Data communications business	118,006	[2,948]
Other business	24,151	[9,503]
Total	282,533	[80,481]

Note: Number of employees indicates the number of full-time employees. The average annual number of temporary employees for the fiscal year is shown in brackets.

(2) Non-Consolidated Basis of the Company

<u>Number of Employees</u>	<u>Average Age</u>	<u>Average Length of Employment (years)</u>	<u>Average Annual Salary (yen)</u>
2,644 [54]	41.3	16.8	9,054,421

<u>Segment</u>	<u>Number of Employees</u>	
Other business	2,644	[54]
Total	2,644	[54]

Notes: 1. Annual Average Salary includes both standard and extraordinary salaries and bonuses.

2. Number of employees indicates the number of full-time employees. The average annual number of temporary employees for the fiscal year is shown in brackets.

(3) Labor Union Status

The relationship between management and labor at NTT Group is stable, with no developments of note.

ITEM 2. BUSINESS OVERVIEW

1. Management Policy, Business Environment and Challenges Facing NTT

Forward-looking statements included herein are made as of the date of the filing of this Annual Securities Report.

(1) Management Policy

For over 100 years, NTT Group has been the mainstay behind the growth and development of Japanese telecommunications; this track record, the confidence that comes with it, and one of the world's leading R&D capabilities serve as the foundation from which we will “continue to provide safe and secure services, and continue to always earn the trust of our customers and stakeholders.” In order to do so, we will fulfill the legal responsibilities and social mission demanded of each of our businesses in a market environment characterized by intense competition, and at the same time move proactively to develop our businesses to meet the needs of the diversifying and expanding ICT industry. Our aim is for sustainable development backed always by a high level of trust from both our customers and our shareholders.

In furtherance of this basic business operation policy, in May 2015, NTT Group formulated and announced its Medium-Term Management Strategy “Towards the Next Stage 2.0.” NTT Group has worked to place the entire NTT Group on a profit growth track accelerating its self-transformation as a “Value Partner” and has been executing new initiatives to further promote the B2B2X Model.

(2) Business Environment

In the information and telecommunications market, the development of new technologies, such as the accelerated use of cloud services, IoT, big data, and AI, is expected. Furthermore, with the entrance of new players, market competition that surpasses existing business sector boundaries is expected to further intensify, and collaborative coordination and cooperation among businesses working to create new added value should also progress. From these changes, the required role of information and telecommunications should both expand and become more important.

(3) Challenges Facing NTT Group

Business Development Pursuant to the Medium-Term Management Strategy

In line with its Medium-Term Management Strategy “Towards the Next Stage 2.0,” NTT Group has worked to reform its business structure. Regarding the financial targets of the Medium-Term Management Strategy from the fiscal year ended March 31, 2016 through the fiscal year ended March 31, 2018, in the fiscal year under review, the target fiscal year, EPS (earnings per share), the most important target, reached ¥456, achieving the target of ¥400 or more. NTT Group will continue to focus on profit growth through the following initiatives and increase its capital efficiency through stock repurchases, aiming to further grow its EPS.

• Initiatives to Expand Global Business and Increase Overseas Profit Generation

To realize solid sales growth in its overseas business, NTT Group will work to further enhance its global business promotion system as well as its services and products. Furthermore, by expanding its global accounts and promoting up-selling and cross-selling, NTT Group will work to enhance its sales and marketing. Additionally, NTT Group will continue to work to reform its business structure by maximizing cost efficiency and strengthening group governance and risk management.

• Initiatives to Improve Efficiency and Enhance Profitability of Domestic Network Business

In the highly competitive domestic fixed-line communications market and mobile communications market, NTT Group will continue to make efforts toward profit generation through increased efficiency in capital investment and cost reductions. Specifically, in relation to the increased efficiency in capital investment, NTT Group will work to make networks simplified and streamlined, to utilize the results of research and development including software control technology, to further increase the usage efficiency of existing facilities, and to unify specifications of procured goods and narrow down models in order to cut procurement costs. Additionally, NTT Group will work to make its IT systems more efficient through the use of the latest technology, including virtualization as well as shared platforms. With regard to cost reductions, NTT Group is continually enhancing initiatives to improve work processes by further standardizing and systematizing work. NTT Group will boost the competitiveness of its products and services through cost reductions, improve its user service and enhance returns to its

customers, while simultaneously working to establish simple, efficient business operations based on its transition to the B2B2X model and other initiatives.

• ***Initiatives to Expand B2B2X Business***

We are supporting the communications services field as a Gold Partner (Telecommunications Services) for the Olympic and Paralympic Games Tokyo 2020*, and we see the initiative to bring about Society 5.0 (the creation of a new smart society that helps resolve social issues), which is being promoted through public-private partnerships, as a great opportunity to utilize NTT's collective strength and organically use our national-scale fixed-line and mobile broadband networks, as well as our technology and know-how in the information systems field. In particular, by expanding our collaborations with service providers such as businesses in other fields and local governments, and by supporting the digital transformation of service providers, we will contribute to resolving social issues and accelerate the creation of new value. Through the above efforts, we will create services that will be inherited by the next generation and connect to sustained growth in our domestic business.

Note: NTT, NTT East, NTT West, NTT Communications, and NTT DOCOMO are Gold Partners (Telecommunications Services) for the Olympic and Paralympic Games Tokyo 2020.

Promotion of Fundamental Research & Development

NTT Group will develop the core technologies required for the achievement of its Medium-Term Management Strategy, including cloud, security, IoT, and AI in order to contribute to the acceleration of profit creation. NTT Group will also develop technology to reduce equipment cost by segmentalizing functions of network equipment and to reduce the time required for network building, maintenance, and operations. Simultaneously, through the promotion of collaboration with other companies toward the creation of new value, NTT Group will consistently transform output of R&D into new businesses and proactively expand both in Japan and abroad.

Initiatives for Sustained Improvement in Corporate Value

In accordance with the guidelines set out in "NTT Group CSR Charter," NTT Group will help resolve the many social and environmental issues that exist both in and outside of Japan and promote collective initiatives toward improved corporate value and the sustainable development of society.

• ***Initiatives for Cybersecurity***

To continue to counter increasingly sophisticated and complex cyberattacks on international events, governments, and companies, while promoting the introduction of the latest R&D results, NTT Group will enhance its initiative to develop security personnel with high-level skills.

• ***Initiatives to Ensure Diverse Personnel Can Demonstrate their Talents***

NTT Group respects and utilizes personnel with diverse values and individuality, creating a work environment that ensures diverse personnel can demonstrate their talents, irrespective of gender, age, race, nationality, disability status, sexual orientation, or gender identity, advancing initiatives to deepen understanding of work-life management among all of its employees, and promoting its "Work Style Reform."

• ***Initiatives for the Environment***

In accordance with the "NTT Group Environmental Statement," NTT Group is promoting initiatives to contribute to lowering the environmental burden and adapting to climate change through the services and technologies provided by the Group companies such as its ICT services, as well as to preserve ecosystems in cooperation with all of its stakeholders including its business partners and local communities. Furthermore, NTT Group is continually working to improve energy efficiency and resource circulation throughout its business activities.

In addition to the above initiatives, to secure high levels of stability and reliability for its network, NTT Group will work to provide even safer and more secure services through the accumulation of everyday network operational know-how and implementation of disaster drills based on its collaborative frameworks with external agencies.

2. Risk Factors

In addition to the information contained in this Annual Securities Report relating to NTT Group's business, accounting and other matters, prospective investors should also carefully consider the risks described below related to NTT Group's business environment, business strategy and operations, regulations to which NTT is subject and NTT's relationship with the Government, which may be material to such investors' judgment, as summarized below.

Forward-looking statements included herein are made as of the date of the filing of this Annual Securities Report. Additional risks not currently known to NTT or that NTT now deems immaterial may also impair NTT Group's business operations. The forward-looking statements included in this Annual Securities Report also involve risks and uncertainties. NTT Group's actual results could differ materially from those anticipated in these forward-looking statements as a result of a number of factors, including the risks NTT Group faces as described below and elsewhere in this Annual Securities Report.

Risks Associated with the Business Environment and NTT Group's Corresponding Business Strategies

NTT Group's business may be affected by both the global and Japanese economic situation.

NTT Group has operations all over the world. An economic slowdown or deceleration in the economic growth of any of these regions may have an adverse effect on the demand for the services that NTT Group provides or on its operations.

NTT Group also owns investment securities and other financial assets. If their asset value were to decline because of a recession in the stock and other financial markets, the resulting impairment losses may adversely affect NTT Group's results of operations. NTT Group pension investments may also be adversely affected by the global and Japanese economic situation.

In addition, although NTT Group evaluates its means of capital procurement, including issuing corporate bonds and obtaining loans, any substantial fluctuations in the financial markets may lead to increases in NTT Group's financing costs.

As a result, NTT Group's results of operations and financial condition may be adversely affected. In consideration of these risks, NTT Group established a risk management policy, and in accordance with this policy, hedges risks using derivative transactions including forward exchange contracts. In addition, NTT Group is working to diversify its procurement procedures and to secure low-interest and stable financing.

NTT Group's operating revenues may suffer from changes in market structure and increased competition.

With the growing popularity of smartphones, tablets and high-speed wireless broadband services, the efficient use of signals and low latency, with specifications formulated by the 3rd Generation Partnership Project, the use of cloud services, IoT ("Internet of Things," the concept that all things are connected wirelessly and can be controlled via the Internet), Big Data and AI is expanding. While market competition that surpasses existing business sector boundaries continues to further intensify, such as through various new stakeholders joining telecommunications operators in the market and expanding services from providers of over-the-top content ("OTT" a content distribution service utilizing other companies' communications infrastructure, allowing a service provider to distribute services without owning its own communications infrastructure), collaborative coordination and cooperation among businesses operators to create new added value is also progressing.

NTT Group expects the solutions business to be a major area of growth in the information services market, and hardware vendors and other players are also focused on this business. Moreover, NTT Group conducts a variety of business activities in markets outside of the information and communications sector, and in each market, intense competition resulting from structural changes is increasing.

If NTT Group is unable to respond appropriately to increased competition and other changes in the structure of the markets in which it operates, its operating revenues may decline. In the information communications market, NTT Group's results of operations and financial condition could still be adversely affected if, despite these efforts, the number of subscribers that NTT Group acquires or retains fails to meet expected levels or if subscription ratios for various fee/discount services, trends in the number of subscription transfers to flat-rate services, or other initiatives do not proceed as expected.

Moreover, in the information services market, the growth of information service companies in rapidly developing nations, such as India and China, is bringing about global competition. Intensified competition resulting from new competitors' aggressive market entry may have an adverse effect on NTT Group's results of operations and financial condition.

Furthermore, it is possible that each of NTT Group's businesses in other markets will fail to achieve forecasted revenues, which may result in an adverse effect on NTT Group's results of operations and financial condition.

In consideration of these risks, NTT Group implemented measures to accelerate its self-transformation as a "Value Partner" and worked to place the entire NTT Group towards a profit growth track based on the medium-term management strategy "Towards the Next Stage 2.0". Specifically, NTT Group is seeking to expand and establish its global business as a cornerstone of its business operations, promoting efforts to enhance profitability of its domestic network businesses, and creating new markets through the expansion of its B2B2X businesses.

NTT Group's growth in its global business may be lower than anticipated.

NTT Group is expanding its global business as a cornerstone of its operations, and has also implemented initiatives to accelerate profit creation in this area. However, if these efforts do not progress as anticipated, or the cloud services market does not grow as anticipated, or revenues do not grow as expected due to increased competition or other factors, NTT Group's results of operations and financial condition may be adversely affected.

In consideration of these risks, and in order to deliver consistent growth of its overseas business operations, NTT Group will strengthen its sales force and marketing efforts, such as by expanding its global accounts and further promoting its up-selling and cross-selling efforts, in addition to further strengthening its global business promotional structure and strengthening its services and products. In addition, stringent cost-efficiency initiatives are also underway in each of the Group's companies to, among other things, strengthen and improve the efficiency of services and operations, and reduce costs and improve income by strengthening collaboration on deliveries across NTT Group.

NTT Group also monitors the progress of these initiatives on a regular basis and responds to any related developments promptly when the need arises.

NTT Group may not achieve anticipated cost savings.

NTT Group is working to generate profits by increasing capital expenditure efficiencies and reducing costs in the domestic fixed-line and mobile communications markets. However, it is possible that NTT Group will be unable to fully achieve the anticipated optimization of its capital expenditures or reductions in sales expenses, facility-related costs, and personnel and other costs due to changes in the competitive environment or due to the current state of progress in streamlining equipment or general business operations. Any such failure to achieve intended cost reductions could adversely impact NTT Group's results of operations and financial condition.

In consideration of these risks, and to improve capital expenditure efficiencies, NTT Group is working to simplify and streamline the network in each company, as well as utilize the results of research and development, including software control technology, to further increase the usage efficiency of existing facilities, and to unify specifications of procured goods and narrow down models in order to cut procurement costs. For IT systems, efforts are also being made to promote efficiency through standardization and by utilizing the latest technology, such as virtualization. Meanwhile, with respect to reducing costs, NTT Group is continuously working toward improving its business operations through the further standardization and systematization of work, and is working to ensure simple yet highly productive business operations based on initiatives such as the conversion to the B2B2X model.

NTT Group also monitors the progress of these initiatives on a regular basis and responds to any related developments promptly when the need arises.

NTT Group's international and domestic investments, acquisitions, alliances and corporate collaborations may not be successful, or NTT Group may be unable to exert the necessary control over its investments.

NTT Group engages in joint ventures, alliances and collaborations, as well as acquisitions and other strategic investments to expand its global business operations in particular in response to changes in market structure and customers' needs. However, NTT Group may not be able to maintain or enhance the value or financial performance of, or achieve sufficient synergies with, the domestic or overseas operations in which it has invested or agreed to invest or that it may in the future acquire. In addition, there may be occasions when NTT Group will suffer potential losses resulting from the dissolution or disposition of its investments, partnerships or other cooperative initiatives.

Furthermore, the recent increase in the number of foreign subsidiaries within NTT Group may result in increased fragmentation within the group and render a common understanding difficult to achieve. There may be occasions when it is difficult for NTT to exert the control over its overseas subsidiaries necessary to oversee their business and operations. In addition, there is a risk that factors related to cross-border business, such as legal restrictions relating to investment and competition, differences in tax systems, differences in business customs including contract practices, labor relations, and international politics, may pose challenges to NTT Group's management of its overseas business activities. If such risks materialize, NTT Group's results of operations and financial condition may be adversely affected.

In consideration of these risks, NTT Group is proactively striving to expand its global business operations, and has worked to achieve expected returns from these endeavors by carrying out periodic post-acquisition monitoring of its investments. In addition, NTT Group is taking initiatives to enhance its group governance and risk management.

NTT Group may be unable to obtain the licenses for third-party intellectual property necessary for the operation of its business, may be subject to claims related to the infringement of the intellectual property from other companies, or may be unable to protect its own intellectual property rights, all of which could adversely affect its business operations and financial position.

In order for NTT Group and its business partners to carry out their business operations, they at times need to obtain licenses and other rights to use the intellectual property and other rights of third parties. NTT Group and its business partners have entered into the necessary intellectual property licenses, and based on their experience as well as industry practice, NTT Group believes that it will continue to be able to obtain such licenses on reasonable terms. However, if NTT Group is unable to reach or maintain agreements with the holders of such rights on commercially acceptable terms or at all, NTT Group and its business partners may not be able to provide certain technologies, products or services to its customers.

Further, as NTT Group's global business expands, particularly through overseas acquisitions, claims of intellectual property infringement and other claims against NTT Group, particularly by foreign corporations in jurisdictions in which it has completed acquisitions, may increase as it develops new products, services and technologies, and acquires companies that may be subject to ongoing or future intellectual property litigation.

If NTT Group is subject to claims of infringement of intellectual property rights, it may be required to expend considerable time and costs to reach a resolution. If such claims are determined adversely to NTT Group, it may be required to pay substantial damages or royalties to third parties, or may be subject to a temporary or permanent injunction preventing certain NTT Group companies from offering certain products or services and required to develop non-infringing products or technologies, which could result in a loss of revenues from businesses related to such rights. Further, any improper use by third parties of NTT Group's intellectual property and other rights could result in a decrease in NTT Group's contemplated license revenues and compromise NTT Group's competitive advantage.

The occurrence of any of these risks could adversely affect NTT Group's results of operations and financial condition.

In consideration of these risks, NTT Group strategically acquires intellectual property rights, and periodically conducts assessments of intellectual property rights, including measures to properly identify intellectual property rights held by NTT Group and by third parties.

NTT Group may be unable to hire or retain necessary personnel, which could have an adverse effect on NTT Group's results of operations and financial condition.

A number of companies both in Japan and abroad have entered the information and telecommunications market, in which the diversity and sophistication of services and technology has rapidly increased, and where changes in the market, with a focus on cloud services in particular, are expected to accelerate even further going forward. In this environment, NTT Group's ability to hire and retain highly skilled personnel significantly affects the success of its business. If the hiring or retention of such key, highly skilled personnel by NTT Group does not proceed as expected, it could adversely affect NTT Group's ability to develop new technologies, design new products, enhance its existing products and execute its growth strategy, which could negatively impact its results of operations and financial condition.

In consideration of these risks, NTT Group implemented measures to strengthen employee training, in addition to providing training in collaboration with the government, other businesses and educational institutions. In addition, NTT Group works to understand each employee's work responsibilities, work environment, compensation and benefits and career goals by arranging regular meetings with employees, to enable NTT Group to implement preventive measures promptly as necessary to retain its employees.

Risks Associated with Business Management

Cyberattacks could cause service interruptions or cause the quality of NTT Group's service to decline, which may affect NTT Group's results of operations and financial condition.

In recent years, as threats related to information security have become increasingly sophisticated and diversified, causing incidents such as damage due to cyberattacks and information leaks to emerge as social problems, developing information security countermeasures for smartphones, cloud services and other new ICT services has become an increasing concern. Given these circumstances, service interruptions or disruptions in the quality of NTT Group's services due to cyberattacks, such as targeted attacks or unauthorized access of NTT Group's communication networks, servers or other equipment, or the leakage, tampering or loss of information due to intrusions into company networks, could occur, which could harm NTT Group's credibility and corporate image and thereby adversely affect NTT Group's results of operation and financial condition.

In consideration of these risks, NTT Group has been promoting the introduction of the latest research results, continuously strengthening network security, and strengthening its efforts to train highly-skilled personnel in the security field. See "Item 4. Information on NTT-6. Status of Corporate Governance" for a description of these initiatives.

System disruptions, network disruptions, disruptions to business operations or issues with system architecture that occur as a result of natural disasters may affect NTT Group's results of operations and financial condition.

NTT Group has operations both domestically and abroad, and supports society and business activities through its communications networks and information systems. In addition, NTT Group provides a multitude of services that serve as necessary lifelines that ensures people's safety in their everyday lives.

With respect to the provision of these services, natural disasters such as earthquakes, tsunamis, typhoons and floods, pandemics such as new strains of influenza, and other issues including a larger-than-expected increase in telecommunication traffic, terrorism, armed action, regional conflict and various other events could cause system and network failure or threaten the safety of NTT Group employees. As a result, there may be occasions when disruptions in NTT Group's business operations make it impossible to provide reliable services, which may lead to NTT Group being held liable for related damages, potentially damaging NTT Group's credibility and corporate image.

A large-scale disaster in particular could not only severely damage NTT Group's telecommunications networks, but could also harm NTT Group employees or cause damage to systems that could take a long time to restore, and the resulting emergency electricity use restrictions could hinder NTT Group's ability to provide reliable services. These events may lead to reductions in income and substantial repair costs.

In consideration of these risks, NTT Group has implemented a variety of measures, including strengthening the durability and water resistance of exchange offices, re-assessing its transmission lines, and making capital investments in its network facilities to strengthen network resilience, accelerate response time in the event of malfunctions and conduct safety confirmation drills for its employees in preparation for disasters. Through these various efforts, NTT Group is taking steps towards ensuring safe and secure operations of its networks and systems which are essential to the provision of services.

NTT Group also provides and delivers systems and services to customers in the system integration business, which typically operates under a service contract model in which services are completed from the receipt of orders through the delivery dates. As a result of this model, NTT Group generally assumes full contractual responsibility at all stages, but there is a possibility that a deviation from initial estimates or problems in project management at the development stage could result in cost overruns or losses due to delivery delays.

In consideration of these risks, for projects that are above a certain size, NTT Group has a review committee review cost estimates and the feasibility of project plans, and also monitors the progress of projects after they have been commissioned.

NTT's reputation and credibility may be affected by fraud or misconduct in Japan or abroad, or by inappropriate use or leaks of confidential business information and personal information.

NTT Group is subject to a wide variety of laws and regulations, as the scope of its business encompasses a variety of products and services both in Japan and abroad. As a result, some of NTT Group's business activities require licenses, notifications, and permit approvals. In addition, it is possible that NTT Group's growing business operations, especially outside of Japan, could be subject to additional burdens stemming from, among other things, the local rules and regulations of the countries in which NTT operates, or the lack thereof, the unpredictable nature of commercial and judicial interpretations of such local laws, the adoption of new laws and the revision of existing laws. With respect to laws and regulations, it may not always be possible to eliminate compliance risk and reputational risk from loss of credibility, including, for example, in the case of an employee's improper personal behavior. The occurrence of any of the risks described above could adversely affect NTT Group's business, including its reputation and credibility, as well as NTT Group's ability to obtain new subscribers or its eligibility to secure governmental contracts, which could in turn adversely affect NTT Group's results of operations and financial condition.

In consideration of these risks, based on NTT Group's understanding that legal compliance is an extremely important corporate responsibility, NTT Group is working towards further strengthening its compliance systems in light of the recent tightening of bribery and anti-corruption laws in foreign countries, particularly the United States and the United Kingdom.

There is increasing societal demand to ensure the protection of confidential information, such as customers' personal information, as well as increasing requirements to protect such information from a legal standpoint. However, given the further sophistication of criminal activities aimed at obtaining personal information and other confidential information, it is possible that NTT Group will be unable to eliminate the risk of a leak or misuse of confidential information.

In consideration of these risks, NTT Group has historically made efforts to protect confidential information, such as its customers' personal information, and NTT Group has also implemented the "NTT Group Information Security Policy," which requires enhanced internal information management, training and awareness-raising for officers and employees. NTT Group expects to continue being able to ensure the proper management of confidential information in accordance with this policy.

Misuse of products and services offered by NTT Group may have an adverse impact on NTT Group's credibility and corporate image and could expose NTT Group to liability.

NTT Group's products and services may be inappropriately used by users. For example, if cybercrimes, such as unsolicited bulk e-mails, illegal money transfers made through online banking, or bank transfer scams, are perpetrated using NTT Group's services, or if NTT Group customers experience incidents of unsolicited bulk e-mails being sent through its servers, NTT Group customers may be harmed as a result of these actions. Further, there has been a wide range of debate regarding minors' access to illegal or harmful websites, and the effectiveness of filtering services intended to restrict minors from accessing such harmful sites.

In addition, there are also concerns over the increasing incidence of accidents caused by the use of mobile phones while operating vehicles or bicycles, as well as issues with increasing occurrence of problems caused by the use of mobile phones while walking. In addition, there are issues concerning the high fees charged for the excess use of paid content by subscribers and the leaking of private information by fraudulent applications and software. Such issues may adversely affect the credibility of NTT Group's products and services, adversely impact customer satisfaction, and tarnish NTT Group's corporate image, which may result in an increasing number of cancellations among current subscribers and an inability to acquire the anticipated number of new subscribers, which could adversely affect NTT Group's results of operations and financial condition.

In consideration of these risks, NTT Group has worked to provide products and services that can be used comfortably and securely, including providing locks on smartphone use while users are walking, filtering and other functions, and has promoted awareness activities to improve knowledge and personal behaviors with respect to its products and services.

NTT Group may be subject to unfavorable decisions in litigation or other proceedings, which could have an adverse effect on its operations.

Because NTT Group operates through a large number of sites both domestically and abroad, and offers a wide array of goods and services, it is possible that NTT Group will become a party to various types of litigation, disputes, or claims for damages. If NTT Group were to become party to any such litigation, dispute, or claim for damages, in addition to the possibility of a potential financial burden, an unfavorable decision could harm NTT Group's credibility and corporate image, and thereby adversely affect NTT Group's results of operation and financial condition.

In consideration of these risks, NTT Group monitors litigation, disputes and claims against all NTT Group companies, including currently active claims and pending claims, and responds to any related developments promptly when the need arises.

Risks Associated with the Government, Including Rules, Regulations and Others

Changes or decisions regarding telecommunications regulations may affect NTT Group's business.

The regulation of the Japanese telecommunications industry has evolved in many areas, including amendments to telecommunications laws aimed at promoting competition, protecting service users and other purposes. Decisions relating to Government regulations and the resulting changes in the telecommunications industry may affect NTT Group's results of operations and financial condition.

In consideration of these risks, NTT Group is taking appropriate steps to obtain necessary information on developments relating to the Government's information and telecommunications policies and regulations, and has also presented its views through public comments and hearings.

For a summary of Government regulations currently under review, see "Supplemental Information-Regulations Applicable to NTT's Business- (1) Regulations."

The frequencies that NTT Group can use are limited, and it is possible that it will not be able to secure adequate frequency spectrum for its operations.

NTT Group has limited frequencies available for its services. While the number of subscribers and the traffic per subscriber are expected to increase in conjunction with the expanded use of devices such as smartphones and tablets, if NTT Group were unable to obtain the frequency spectrum required for unhindered operation or if the start of operations on a different band frequency did not progress as planned, NTT Group may suffer degradation of service quality and incur additional costs.

In addition, NTT Group may face constraints in providing wireless services or lose subscribers to competitors, which could have a material adverse effect on NTT Group's results of operations or financial condition.

In consideration of these risks, NTT Group is working to obtain new frequencies and implementing carrier aggregation with respect to its mobile communications networks to improve the efficiency of frequency usage.

For additional details, see “Supplemental Information-Regulations Applicable to NTT’s Business- (1) Regulations- 3. Radio Act.”

NTT Group may be impacted by laws, regulations and systems relating to the environment, such as those relating to reduction of greenhouse gas emissions.

NTT Group is subject, both in Japan and overseas, to laws and regulations relating to the environment, such as those governing the reduction of greenhouse gas emissions, energy conservation, waste disposal and harmful substance removal. In the event that stricter laws and regulations and societal demands with respect to the environment materialize in the future, or new laws and regulations are introduced, costs may increase, which may impact NTT Group’s financial condition and results of operations.

In consideration of these risks, NTT Group is working to reduce the environmental burden on society by implementing a variety of forward-looking measures, such as introducing highly efficient power supplies and reusing and recycling telecommunications facilities, in order to comply with such laws and regulations relating to the environment.

The Government owns enough NTT Shares to give it considerable influence over whether resolutions at NTT shareholder meetings are adopted.

The Government, through the Minister of Finance, currently owns 34.45% of NTT’s outstanding Shares excluding treasury stock, which equates to 34.50% of the voting rights. The Government, in its capacity as a shareholder, votes at NTT shareholder meetings and, by virtue of its statutorily mandated position as the largest shareholder, has the power to exert considerable influence over decisions made at such meetings. In 1997, in a statement at the Diet, the Government stated that it did not intend to actively use its position as a shareholder to direct the management of NTT. In fact, the Government has not historically used its power as a shareholder to direct the management of NTT. For details regarding the regulatory authority the Government legally has with respect to NTT Group, see “Supplemental Information-Regulations Applicable to NTT’s Business-Regulations.”

Supplemental Information: Regulations Applicable to NTT's Business

(1) Regulations

The Ministry of Internal Affairs and Communications (the "MIC") is the main regulatory body in Japan responsible for the information and telecommunications industry. The Telecommunications Business Act gives the Minister the authority to regulate telecommunications companies. The Telecommunications Business Act came into effect in 1985 at the same time that NTT was incorporated as a private company and significant changes in the legislative and regulatory framework for telecommunications in Japan opened the Japanese information and telecommunications services industry to competition. Since then, the Government has taken various measures to promote competition in the Japanese telecommunications market. As a result, NTT Group faces increasing competition in many of its business sectors from new companies that have entered or are about to enter the market.

NTT and certain of its subsidiaries are subject to regulations that affect their business under the NTT Act, the Radio Act, and the Telecommunications Business Act. A summary of these regulations is provided below.

1. Telecommunications Business Act (Act No. 86 of 1984)

Regulations under Telecommunications Business Act are as follows:

(a) Regulations applicable to all telecommunications companies

a. Business Commencement/Termination

- Registration with the Minister regarding the commencement of telecommunications business (Article 9)
However, where the scale of the telecommunications circuit facilities which are to be installed and the scope of the area covered thereby do not exceed certain thresholds or fall within a certain category of radio facilities, only a notice to the Minister is required (Article 16).
- Update of registration in the event of a merger, stock acquisition or other similar transaction (Article 12(2)).
- Notification to the Minister as well as their service subscribers if telecommunications companies suspend or discontinue their telecommunications business (Article 18).

b. Setting of Subscriber Rates and Other Terms of Service

- Notification to the Minister of the terms of the basic telecommunications services they provide (Article 19).
Telecommunications businesses that provide basic telecommunications services are required to provide fee-related and other contractual terms and conditions related to those services to the MIC.
- Regulations relating to consumer protection
Telecommunications companies are imposed consumer protection, including provisions on pre-contract accountability (Article 26), document delivery obligations (Article 26(2)), systems for the termination of initial contracts (Article 26 (3)), obligations to handle complaints and inquiries (Article 27), prohibitions on misstatements or on excessive solicitation (Article 27(2)), and measures applicable to business agents, such as trustees (Article 27(3)), among other provisions.

(Note) Ministry of Internal Affairs and Communications (the "MIC Ordinance") requires basic telecommunications services to be provided across Japan because they are regarded as essential to the lives of people in Japan. These are known as "universal services." These services include telephone subscriber lines (base rates) or optical IP telephones equivalent to telephone subscriber lines, Type 1 Public Telephones (public telephones installed pursuant to the MIC standards) and emergency numbers (110, 118, 119).

c. Interconnection

- Regulations promulgated under the Telecommunications Business Act require businesses in the telecommunications sector to respond to the requests of other telecommunications carriers regarding the connection of telecommunications circuit facilities (Article 32).

d. Universal Service Fund ("USF")

The USF is a system under which telecommunications carriers cover the costs and expenses necessary to provide universal services. In order to ensure the provision of universal services, the Minister designates a support organization to provide funds to cover a portion of such costs and expenses (Article 107). Grants are made to eligible telecommunications carriers (Article 108) that provide universal services, including in unprofitable regions. In connection with this system, each telecommunications carrier is obligated to make the appropriate amount of payments to cover the costs and expenses requested by the support organization (Article 110). The designated support organization began providing services in 2006 in response to the MIC Ordinance being amended in April 2006 to determine the services applicable to the USF and to set the calculation method of grants and contributions.

Under the NTT Act, NTT East and NTT West became responsible for providing universal services and were designated as eligible telecommunications carriers by the Minister. In the fiscal year ended March 31, 2018, the aggregate amount of compensation to NTT East and NTT West in connection with the USF was ¥6.9 billion, and in the fiscal year ending March 31, 2019, the aggregate amount of compensation to NTT East and NTT West is expected to be ¥6.5 billion.

(b) Regulations Imposed Only on NTT East and NTT West

a. Rates and Other Terms of Service

- Regulations promulgated under the Telecommunications Business Act require NTT East and NTT West to notify the Minister of the terms and conditions of their rate warranty agreements for designated telecommunications services (Article 20). These regulations also require that rates and other terms of service for designated telecommunications services provided by Category I designated telecommunications facilities be established and submitted to the Minister.
- The Telecommunications Business Act also provides for the regulation of rates for specified telecommunications services (Article 21) and for price cap regulations. The regulations promulgated under the Telecommunications Business Act require that the Minister be notified whenever the service rates of a business are at or below the standard price index specified by the Minister, and approval of the Minister is required when a business proposes to increase rates above the standard price index.

(Note)

- “Category I designated telecommunications facilities” comprise fixed terminal transmission line facilities installed by a telecommunications carrier where the facilities that have been installed by such carrier in a prefecture represent one-half or more of the total number of such facilities in the prefecture, and other ancillary facilities installed together with these facilities whose connection with other telecommunications carriers is essential for improving convenience to subscribers, and for the comprehensive and reasonable development of telecommunications services (designated by the Minister). The main telecommunications facilities of NTT East and NTT West have been designated as Category I designated telecommunications facilities.
- “Designated telecommunications services” are services that are provided by a telecommunications business using a Category I designated telecommunications facility established by such telecommunications business, and that have been designated as services for which “it is particularly necessary to protect the interests of customers by ensuring that the rates and other terms of service are fair and appropriate.” The determination of what constitutes a designated telecommunications service is based on a consideration of various factors, including whether alternative services are being adequately provided by other telecommunications carriers. Specifically, this refers to telephone subscriber line services, ISDN, public telephones, dedicated services, FLET’S Hikari, Hikari Denwa and other services, but excludes services providing supplementary functions that have minimal beneficial impact on subscribers.
- “Specified telecommunications services” are designated telecommunications services or services specified in the MIC Ordinance as having a significant beneficial impact on subscribers. Specifically, this refers to telephone subscriber services, ISDN and public telephone services provided by NTT East and NTT West.
- “Standard price index” refers to an index published by the Minister that shows the standard charges for each type of designated telecommunications service taking into consideration the appropriate costs and commodity prices to support efficient management.
- “Price cap regulation” is a system that sets maximum limits on rates. As the actual charge indexes for NTT East and NTT West are below the level of the standard charge index applicable to the one-year period beginning on October 1, 2017, no price adjustments pursuant to the price cap regulation have been made.

b. Interconnection

- Regulations promulgated under the Telecommunications Business Act require NTT East and NTT West to obtain approval of all interconnection agreements from the Minister as holders of Category I designated telecommunications facilities (Article 33). The Minister's approval is subject, among other things, to the condition that the interconnection rates be fair and proper according to the method stipulated in the MIC Ordinance for computing proper costs under efficient management. NTT East's and NTT West's respective interconnection agreements establish their interconnection rates and conditions for interconnection.

(Telephone Line Interconnection Charges)

In May 1998, in a joint status report on deregulation and competition policy issued by the governments of Japan and the United States, the Government stated its intention to introduce a Long-Run Incremental Cost ("LRIC") Methodology. In May 2000, the Telecommunications Business Act was amended to include the introduction of an LRIC Methodology, which has since then brought about decreases in interconnection charges. As communication traffic declined significantly, in order to avoid an increase in communication rates through the increase of interconnection charges, it was decided that Non-Traffic Sensitive ("NTS") costs (costs which do not vary according to the volume of communication traffic) would be removed from interconnection rate costs and be recovered instead through base rates (October 2004 report of the Telecommunications Council). In addition, with respect to a portion of NTS costs, when the USF was reviewed from the standpoint of restricting cost increases for users, it was decided that the cost burden resulting from narrowing the scope of USF subsidies would not be borne only by NTT East and NTT West, but would also be recovered in a fair and equitable manner from other carriers, and that a portion of NTS costs would therefore be reintroduced as interconnection rate costs.

The Telecommunications Council of 2015 determined, as a result of a review, that it would continue to apply the LRIC Methodology for interconnection charges for the period from the fiscal year ending March 31, 2017 until the fiscal year ending March 31, 2019.

(Optical Fiber Line Interconnection Charges)

NTT East and NTT West are obligated to lease their optical fiber to other carriers at regulated rates (referred to as "optical fiber interconnection charges") because the optical fiber owned by NTT East and NTT West qualifies as Category I designated telecommunications facilities under the Telecommunications Business Act.

In order to maintain low barriers to entry by other carriers through the lowering of interconnection charges, NTT East and NTT West have employed a future cost method that designates the four-year period from the start of the fiscal year ended March 31, 2017 to the end of the fiscal year ending March 31, 2020 as the computation period in order to calculate subscriber optical fiber interconnection charges. For these interconnection charges, NTT Group has introduced a cost difference adjustment system under which adjustments are made by adding the difference between the actual revenue from interconnection charges and the actual cost of interconnection charges for the following year and future years, which NTT believes will eliminate the risk of unrecoverable amounts.

The Information and Communications Council and Postal Services Council conducted an evaluation of the issue of setting per-unit interconnection charges for optical bifurcated lines in the passive optical network (Gigabit Ethernet-Passive Optical Network, or "GE-PON") and determined that there remained issues that needed to be resolved (March 2012 report by the Information and Communications Council and Postal Services Council). To date, the Information and Communications Council has not set per-unit interconnection charges for optical bifurcated lines.

Regulations promulgated under the Telecommunications Business Act require NTT East and NTT West to notify the Minister of:

- (i) plans related to the functions of Category I designated telecommunications facilities, including any changes or additions to such functions (Article 36),
- (ii) any agreement to share Category I designated telecommunications facilities with other telecommunications carriers (Article 37), and,
- (iii) in the event that any wholesale telecommunications provision business utilizing Category I designated telecommunications facilities is started, modified, or terminated, NTT East and NTT West are required to notify the

Minister of such start, modification, or termination, as well as the type of wholesale service, the fee applicable to certain wholesale businesses that meet certain conditions, and other information (Article 38 (2)). Further, there are regulations governing the organization and publication of information furnished to or obtained by the Minister (Article 39 (2)).

c. Prohibited Activities

NTT East and NTT West, as dominant businesses in the fixed voice and IP/packet communications markets, are prohibited from using interconnection information for other than its intended purposes and from giving unfair preferential treatment to any particular telecommunications carrier (Article 30). Officers of NTT East and NTT West are also prohibited from holding concurrent officer positions at NTT Communications, which was designated by the Minister as a specified relevant carrier (Article 31). NTT East and NTT West are required to carry out necessary and proper monitoring of the subsidiaries to which they outsource services to ensure that such subsidiaries do not participate in prohibited activities, and are also obligated to appropriately manage information relating to interconnection services and to establish an appropriate system to monitor the implementation status of interconnection services (Article 31). Accordingly, NTT Group's ability to provide services exclusively in collaboration with telecommunications carriers within NTT Group is limited by these regulations. NTT intends to provide services in response to market needs while ensuring that all requirements for fair competition, including the regulations with respect to prohibited activities, are satisfied. However, these regulations may, for example, impede the timely provision of new services by NTT Group or have other adverse effects.

(c) Regulations Imposed on NTT DOCOMO

a. Interconnection

- Regulations promulgated under the Telecommunications Business Act require NTT DOCOMO to submit to the Minister for approval any interconnection agreements relating to connection with Category II designated telecommunications facilities (Article 34).

NTT DOCOMO's main telecommunications facilities for mobile phones were designated by the Minister as Category II designated telecommunications facilities requiring a reliable connection with other telecommunications businesses. NTT DOCOMO is required to establish its interconnection rates and terms of interconnection in its interconnection agreements and to submit them to the Minister.

- In the event that any wholesale telecommunications provision business utilizing Category II designated telecommunications facilities is started, modified, or terminated, regulations promulgated under the Telecommunications Business Act require NTT DOCOMO to notify the Minister of such start, modification, or termination, as well as the type of wholesale service, the fee applicable to certain wholesale businesses that meet certain conditions, and other information (Article 38(2)). Further, there are regulations governing the organization and publication of information furnished to or obtained by the Minister (Article 39(2)).

Regulations related to Category II designated telecommunications facilities are applicable to all telecommunications companies who install Category II designated telecommunications equipment, including but not limited to NTT DOCOMO.

c. Prohibited Activities

NTT DOCOMO, as a dominant business in the mobile communications market, is prohibited from using interconnection information for other than its intended purposes and from giving unfair preferential treatment to other NTT Group companies as designated by the Minister (Article 30).

(Note)

"Category II designated telecommunications facilities" consist of (a) transmission line facilities connected to mobile phones installed by telecommunications businesses which (i) are installed by the same telecommunications businesses, and (ii) represent ten percent or more of the total number of transmission line facilities in the entire service area, and (b)

telecommunications facilities which were installed specifically to provide such telecommunications services for reliable connection with other telecommunications businesses designated by the Minister.

(d) Future Developments

In December 2014, the Telecommunications Council issued a report on the “State of Information and Communication Policies for the 2020s.” In light of the report, and in order to promote a fair, competitive environment in the telecommunications business and protect telecommunications service users, the partial amendment to the Telecommunications Business Act enabling the provision of wholesale fiber optics services by NTT East and NTT West and allowing subscribers an option to terminate contracts during an agreed period of time at the beginning of a contractual period became effective starting from May 2016.

Further, the amendment requires the government to assess the status of the implementation of the amendment after three years, and if deemed necessary, to determine what further measures should be taken on the basis of its assessment. The potential impact on NTT Group has not yet been determined at this time.

2. NTT Act (Act No. 85 of 1984)

(a) Overview

The Supplementary Provisions of the Act to Amend the Nippon Telegraph and Telephone Company Act were promulgated in June 1997 and came into effect in July 1999. As a result, the Nippon Telegraph and Telephone Company Act was re-titled the “Act on Nippon Telegraph and Telephone Corporation, etc.” and NTT was reorganized as a holding company. This Act has been revised by the Act to Amend the Telecommunications Business Act, which was promulgated in June 2001 and took effect in November 2001, and by other subsequent amendments.

1. Purpose

- a. The NTT Act requires NTT to own all of the shares issued by NTT East and NTT West, to ensure appropriate and reliable provision of telecommunications services by these companies, and to engage in research activities relating to telecommunications technologies that form the foundation for telecommunications in Japan.
- b. The NTT Act also requires NTT East and NTT West to manage regional telecommunications businesses as joint-stock companies.

2. Business Activities

- a. The NTT Act requires NTT to engage in the following business activities:
 - (i) subscribing for and holding the shares issued by NTT East and NTT West and exercising rights as a shareholder of such shares;
 - (ii) providing necessary advice, assistance and other related support to NTT East and NTT West;
 - (iii) engaging in research activities relating to telecommunications technologies that form the foundation for telecommunications; and
 - (iv) engaging in business activities incidental to the business activities set forth in (i), (ii) and (iii) above.

- b. In addition to these business activities, the NTT Act provides that NTT may engage in actions necessary to complete such business activities after notifying the Minister.
- c. The NTT Act requires that NTT East and NTT West engage
- (i) in regional telecommunications business activities (activities conducted by establishing telecommunications facilities without using the facilities of other telecommunications business carriers) in prefectures in the following regions:
- A. for NTT East: Hokkaido Prefecture, Aomori Prefecture, Iwate Prefecture, Miyagi Prefecture, Akita Prefecture, Yamagata Prefecture, Fukushima Prefecture, Ibaraki Prefecture, Tochigi Prefecture, Gunma Prefecture, Saitama Prefecture, Chiba Prefecture, Tokyo, Kanagawa Prefecture, Niigata Prefecture, Yamanashi Prefecture and Nagano Prefecture; and
- B. for NTT West: Kyoto Prefecture, Osaka Prefecture and all other prefectures not listed above.
- (ii) in business activities incidental to those set forth above.
- d. Upon notification to the Minister, the NTT Act permits NTT East and NTT West to engage
- (i) in business activities necessary to achieve their respective purposes and
- (ii) in regional telecommunications business activities in any region or prefecture not otherwise designated.
- e. In addition, upon notification to the Minister, NTT East and NTT West may engage in telecommunications businesses and other business activities utilizing their equipment, technology or employees, to the extent that there is no interference with the smooth implementation of their regional telecommunications business activities and the maintenance of fair competition in regional telecommunications business activities.

3. Responsibilities

Pursuant to the NTT Act and the regulations promulgated thereunder, the management of NTT, NTT East and NTT West are required to give consideration to each company's contribution to securing the appropriate, fair, and reliable provision of telephone services throughout Japan that are indispensable to civil life, and to the innovative and advanced development of telecommunications in Japan through the promotion of research relating to telecommunications technologies and the dissemination of the results thereof. The NTT Act also requires that each company promote public welfare, in view of the important role that telecommunications services play in contributing to societal and economic development.

(b) Matters Requiring the Approval of the Minister

The NTT Act requires that the Minister approve the following actions of NTT, NTT East or NTT West, as applicable:

- Issuing new shares or bonds with share acquisition rights (Articles 4 and 5). Under the NTT Act, NTT may issue new shares upon notification to the Minister, and may continue to do so until the number of issued shares reaches a certain threshold specified in the applicable ministerial ordinance of the MIC, even if approval is not obtained (Supplementary Provisions, Article 14).
- Adopting resolutions on the appointment or dismissal of corporate directors or corporate auditors of NTT (Article 10). Under the NTT Act, non-Japanese citizens cannot be appointed as corporate directors or corporate auditors of NTT, NTT East or NTT West.
- Adopting resolutions to change the respective articles of incorporation of NTT, NTT East or NTT West, to merge or dissolve each company, or to appropriate any surplus (Article 11).

- Changing the business operation plans of NTT, NTT East or NTT West (Article 12).
- Transferring or mortgaging any significant telecommunications facilities of NTT East or NTT West (Article 14).

(c) Other Obligations to the Minister

In addition to the foregoing, the NTT Act imposes several additional duties on NTT, NTT East and NTT West, including:

- (i) a duty to submit balance sheets, profit and loss accounts and business reports to the Minister (Article 13);
- (ii) a duty to abide by orders issued by the Minister (Article 16); and
- (iii) a duty to comply with requests to submit reports on business activities (Article 17).

3. Radio Act (Act No. 131 of 1950)

- (a) Under the Radio Act, any establishment of a radio station requires a license from the Minister (Article 4) and
- (b) changes to the purpose of the radio station, intended audience and topics of communication require approval from the Minister (Article 17).

(Spectrum Band Allocation for Mobile Communication Businesses)

Mobile communications businesses are required to have a license from the MIC to use radio frequency spectrum. Spectrum band allocations are governed by the Radio Act and related statutes and regulations.

(2) Matters Relating to NTT's Shares

1. Restrictions on the Ratio of Foreign Ownership of the Voting Rights of NTT's Shares (Article 6 of the NTT Act)

If the ratio of foreign ownership of voting rights to the total voting rights of NTT's Shares would equal or exceed one-third, NTT is prohibited from recording the names and addresses of such foreign owners on its shareholder registry and registering such foreign ownership.

(Note)“Foreign ownership”refers to:

- (1) any person who is not of Japanese nationality;
- (2) any foreign government or any of its representatives;
- (3) any foreign juridical person or association; or
- (4) any juridical person or association whose voting rights are directly owned by entities listed in clauses (1) through (3) above in a ratio equal to or exceeding the ratio specified in the applicable ministerial ordinance of the MIC.

NTT's Articles of Incorporation provide that NTT may distribute dividends to its shareholders or registered pledgees of shares entered or recorded on the register of shareholders and shareholders or pledgees of shares for whom all or part of their shares were not entered or recorded in the register of shareholders pursuant to Article 6 of the NTT Act.

2. Government Ownership and of NTT Shares (Article 4 of the NTT Act)

The NTT Act requires the Government, at all times, to own one-third or more of the total number of issued Shares of NTT.
(Note)

The NTT Act sets forth special provisions regarding the method for calculating the total number of issued Shares of NTT for this purpose (NTT Act, Supplementary Provisions, Article 13), including: (i) if Shares are issued through new Share issuances or the exercise of stock acquisition rights, or in exchange for the acquisition of shares subject to call or put options, the increase in the number of Shares as a result thereof (“Shares Not to be Included in Calculation”) will not be included in the total number of issued Shares; and (ii) if there is a stock split or combination of Shares after the increase in Shares described in clause (i), the number obtained by multiplying the ratio of the stock split or the combination of Shares (if there is a stock split or combination of Shares in two or more stages, the ratio is equal to the product of the ratios for all stages) with the Shares Not to be Included in Calculation would not be included in the total number of issued Shares.

As of March 31, 2018, the total number of issued Shares of NTT was 2,096,394,470, of which the Government owned 679,122,752 Shares or 34.45% of outstanding Shares, excluding treasury stock.

(Note)

In December 2000, NTT issued 300,000 new Shares (equal to 60 million Shares after a 100-for-1 stock split in on January 4, 2009 and a 2-for-1 stock split on July 1, 2015) in a public offering. These Shares are not included in the total number of issued Shares when calculating the percentage of Government-owned Shares. The total number of Government-owned Shares includes Shares which are unregistered because of a failure in the transfer of title, and such Shares are therefore not actually owned by the Government. These Shares are nominally owned by the Government but are excluded from the total number of Shares owned by the Government when calculating the percentage of Government-owned Shares. If these conditions are taken into account, the percentage of Government-owned Shares is 33.33%.

NTT Group’s transactions with Government divisions and agencies are arm’s-length transactions, with the relevant division or agency acting as an individual customer. In its capacity as a shareholder, the Government is entitled to exercise voting rights at NTT general shareholders meetings, and as the largest shareholder, theoretically has the power to have a material impact on a large majority of shareholder meeting resolutions. However, the Government historically has not exercised this authority and has not been directly involved in NTT’s management.

3. Government Dispositions of NTT Shares

The NTT Act requires that any disposition of the Government’s NTT’s Shares must be within the limits determined by the Diet in the relevant annual budget (NTT Act, Article 7).

Background of Sales and Sale Policy

NTT was established with 15.6 million issued Shares; of the 10.4 million Shares that the Government was allowed to sell (the numbers of Shares held less the 5.2 million Shares representing the one-third of issued Shares that the Government was obligated to hold), the Government sold 5.4 million Shares from 1986 to 1988.

In addition, on December 17, 1990, the Ministry of Finance promulgated a sale policy under which, with respect to the 5.0 million Shares that remained unsold at that point: (a) 2.5 million Shares would systematically be sold at an approximate rate of 500,000 Shares per year; (b) if in later years the market environment allowed it, such sales would be carried out earlier than scheduled; and (c) sales of the remaining 2.5 million Shares would be frozen for a period of time. (However, until the fiscal year ended March 31, 1998, no sales were actually carried out, due to the market environment and other factors.)

For the fiscal year ended March 31, 1999, the Government sold one million Shares in December 1998.

For the fiscal year ended March 31, 2000, the Government designated one million Shares as the maximum number of Shares that it would sell; of these, NTT repurchased 48,000 Shares as treasury stock, and the Government sold the remaining 952,000 Shares in November 1999. The above sale policy announced in December 1990 has expired.

For the fiscal year ended March 31, 2001, the Government sold one million Shares in November 2000.

For the fiscal year ended March 31, 2003, the Government designated one million Shares as the maximum number of Shares that it would sell; of these, NTT repurchased 91,800 Shares as treasury stock on October 8, 2002.

For the fiscal year ended March 31, 2004, the Government designated one million Shares as the maximum number of Shares that it would sell; of these, NTT repurchased 85,157 Shares as treasury stock on October 15, 2003.

For the fiscal year ended March 31, 2005, the Government designated one million Shares as the maximum number of Shares that it would sell; of these, NTT repurchased 800,000 Shares as treasury stock on November 26, 2004.

For the fiscal year ended March 31, 2006, the Government designated 1,123,043 Shares as the maximum number of Shares that it would sell; NTT repurchased all 1,123,043 Shares as treasury stock on September 6, 2005.

For the fiscal year ended March 31, 2012, the Government designated 99,334,255 Shares as the maximum number of Shares that it would sell; of these, NTT repurchased 57,513,600 Shares as treasury stock on July 5, 2011 and an additional 41,820,600 Shares as treasury stock on February 8, 2012.

For the fiscal year ended March 31, 2014, the Government designated 62,166,721 Shares as the maximum number of Shares that it would sell; of these, NTT repurchased 26,010,000 Shares as treasury stock on March 7, 2014.

For the fiscal year ended March 31, 2015, the Government designated 36,156,721 Shares as the maximum number of Shares that it would sell; of these, NTT repurchased 35,088,600 Shares as treasury stock on November 14, 2014 and an additional 1,068,100 Shares as treasury stock on November 28, 2014.

For the fiscal year ended March 31, 2017, the Government designated 59,000,043 Shares as the maximum number of Shares that it would sell; of these, NTT repurchased 59,000,000 Shares as treasury stock on June 14, 2016.

3. Management's Analysis of Financial Condition, Results of Operations and Cash Flows

Summary of Results of Operations

Forward-looking statements included herein are made as of the date of the filing of this Annual Securities Report.

(1) Results of Operations

In the information and telecommunications market during the fiscal year ended March 31, 2018, a wide range of changes took place, with the increased spread and market penetration of devices that utilize fixed-line and mobile broadband, as well as the continued emergence of new services made possible by the evolution of technologies such as cloud services, IoT, Big Data and AI. Through these technologies, a range of data has been accumulated, and with improvements to the usage environment, the analysis and utilization of that data is expanding, leading to a wide range of changes including improved convenience in people's everyday lives and productivity in various industries. In addition, the role of information and telecommunications is becoming increasingly important, including strengthening security measures against increasingly sophisticated and complex cyberattacks, strengthening natural disaster countermeasures and managing safe and secure social systems. This change can be seen on a global scale.

In this business environment, NTT Group accelerated its self-transformation as a "Value Partner" and worked to place the entire NTT Group towards a profit growth track based on the medium-term management strategy "Towards the Next Stage 2.0" formulated and announced in May 2015.

Status of Initiatives to Expand Global Business and Increase Overseas Profit Generation

NTT Group seeks to establish and expand its global cloud service as a cornerstone of its business operations, and strengthened its efforts to accelerate overseas profit generation through the following initiatives.

- To expand its global cloud services operating base, NTT Group pursued M&A in various regions including North America, Europe, and Asia.
- While pursuing the integration of the former Dell Services Division, for which NTT Group completed the acquisition last year, NTT Group promoted cross-selling centered on its global network, cloud migration, and IT outsourcing projects, through collaboration with Group companies, and beginning with customers in the European energy industry, NTT Group received numerous orders in various global regions.
- NTT Group worked to strengthen and streamline the services and operations in its global cloud business, such as through the consolidation of its cloud services business at the major subsidiaries in its Long Distance and International Communications Business, NTT Communications and Dimension Data, while also working to reduce costs and improve profits through the coordinated strengthening of group-wide service provision.

Status of Initiatives to Improve Efficiency and Enhance Profitability of Domestic Network Businesses

NTT Group worked to enhance profitability by creating high value-added services as well as optimizing capital investments and reducing costs for its domestic network businesses.

- Through its efforts with the "Hikari Collaboration Model" and "+d" to promote collaboration among various businesses, NTT Group worked to create high value-added services.
- By simplifying and streamlining networks, NTT Group promoted the reduction of expenses in subsequent fiscal years. Furthermore, NTT Group worked to increase the efficiency of capital investment by increasing the usage of existing facilities and reducing procurement costs.
- By increasing productivity through the systematizing of work and streamlining development costs, and through other initiatives, NTT Group continually worked to reduce costs.

Status of Initiatives to Expand B2B2X Business

We are supporting the communications services field as a Gold Partner (Telecommunications Services) for the Olympic and Paralympic Games Tokyo 2020*, and we see the initiative to bring about Society 5.0 (the creation of a new smart society that helps resolve social issues), which is being promoted through public-private partnerships, as a great opportunity to utilize NTT's collective strength. We have further accelerated the transition to the B2B2X model and strengthened initiatives with businesses in other fields and local governments to create services that will be inherited by the next generation.

- In the sports business, NTT Group further deepened collaboration with the J. League by concluding a “top partner contract” and an “official technology partner contract.”

Aiming to expand the opportunities for fans and supporters of J. League club teams to view games and improve spectator capacity utilization at stadiums, NTT Group promoted fan-participation-type viewing experiences linked with NTT Group's ICT services and social media, etc. and large-screen public viewing to enable live viewing of away games at home stadiums. Furthermore, to pioneer a new group of fans, NTT Group developed a new entertainment experience using the latest technologies of NTT Group starting with AR and VR, promoted the use of past images owned by J. League, and while pursuing collaboration between digital content and docomo Shop, worked to strengthen the digital customer base of J. League club teams.

- NTT Group promoted collaboration in the entertainment field including traditional arts such as joint testing with SHOCHIKU Co., Ltd. on a collaboration between kabuki and the latest ICT technology aimed at an entirely new kabuki viewing experience.
- In addition to FANUC CORPORATION launching operations of domestic services in October 2017 as a result of its collaboration in the area of platforms for the manufacturing industry, NTT Group also promoted collaborations in a range of industrial fields, including initiatives to make the agriculture and livestock industries smarter by monitoring crop and livestock raising conditions through sensor information and image analysis.
- Since establishing the “Sapporo City ICT Utilization Platform Study Panel” through partnerships with industry, government, and academia including Sapporo City, Hokkaido University, and local companies, NTT Group created new value through the collection and combination of public-private data in a wide range of fields including tourism, traffic, and snow control, and promoted smart city initiatives aimed at increasing convenience for residents and visitors, resolving a range of regional issues, and revitalizing the region. In addition to implementing the first testing of automated driving on a public street in the center of Sapporo City, NTT Group pursued initiatives toward more active utilization of data by both Sapporo residents and local companies, including the launch of the open data website “DATA-SMART CITY SAPPORO,” a platform using Sapporo City ICT that provides information and data created and collected by Sapporo City and local companies.

Note: NTT, NTT East, NTT West, NTT Communications, and NTT DOCOMO are Gold Partners (Telecommunications Services) for the Olympic and Paralympic Games Tokyo 2020.

As a result of the initiatives described above, results of operations for the fiscal year ended March 31, 2018 were as follows.

	Year Ended March 31,			
	2017	2018	Change	Percent Change
	(in billions of yen)			
Operating revenues	11,391.0	11,799.6	408.6	3.6 %
Fixed voice related services	1,233.9	1,146.9	(87.0)	(7.0) %
Mobile voice related services	865.3	942.2	76.9	8.9 %
IP/Packet communications services	3,809.0	3,801.8	(7.2)	(0.2) %
Sales of telecommunications equipment	806.5	843.5	37.1	4.6 %
System integration	3,041.6	3,443.1	401.6	13.2 %
Other	1,634.8	1,622.0	(12.7)	(0.8) %
Operating expenses	9,851.2	10,156.7	305.5	3.1 %
Operating income	1,539.8	1,642.8	103.1	6.7 %
Other income (expenses)	(12.0)	112.8	124.8	—
Income before income taxes and equity in earnings (losses) of affiliated companies	1,527.8	1,755.6	227.9	14.9 %
Income tax expense (benefit)	468.4	541.9	73.5	15.7 %
Equity in earnings (losses) of affiliated companies	(0.0)	5.6	5.6	— %
Net income	1,059.4	1,219.3	159.9	15.1 %
Less—net income attributable to noncontrolling interests ...	259.2	309.6	50.4	19.4 %
Net income attributable to NTT	800.1	909.7	109.6	13.7 %

Operating Revenues

NTT Group's operating revenues are divided into six service categories, comprising fixed voice related services, mobile voice related services, IP/packet communications services, sales of telecommunications equipment, system integration and other.

Operating revenues in the fiscal year ended March 31, 2018 increased 3.6% from the previous fiscal year to ¥11,799.6 billion. This increase was due to such factors as an increase in revenues in the data communications business segment, primarily due to overseas sales, and an increase in revenues in the mobile communications business segment, primarily due to the expansion of mobile communications.

Operating revenues for each service category for the fiscal year ended March 31, 2018 are summarized as follows:

Fixed Voice Related Services

NTT Group's fixed voice related services include a portion of the services it provides in the regional communications business segment and long distance and international communications business segment, such as telephone subscriber lines, INS-Net, conventional leased circuits and high speed digital.

Fixed voice related revenues for the fiscal year ended March 31, 2018 decreased 7.0% from the previous fiscal year to ¥1,146.9 billion, accounting for 9.7% of total operating revenues. This decrease was due to a continued decline in the number of subscriptions for telephone subscriber lines and INS-Net caused by the increased popularization of mobile phones and optical IP telephones, and an increase in free or low-priced communications services offered by OTT operators (content distribution services utilizing other companies' communications infrastructure, allowing a service provider to distribute services without owning its own communications infrastructure).

Mobile Voice Related Services

Mobile voice related services include a portion of the services NTT Group provides in the mobile communications business segment, such as LTE (Xi).

Mobile voice related revenues for the fiscal year ended March 31, 2018 increased 8.9% from the previous fiscal year to ¥942.2 billion, accounting for 8.0% of total operating revenues. This increase was due to, among other things, an increased number of subscriptions for the “Kakehodai & Pake-aeru” billing plan.

IP/Packet Communications Services

NTT Group’s IP/packet communications services include a portion of the services it provides in the regional communications business segment, such as FLET’S Hikari, a portion of the services it provides in the long distance and international communications business segment, such as Arcstar Universal One, IP-VPN, and OCN, as well as a portion of the services it provides in the mobile communications business segment, such as LTE (Xi) packet communications services.

In the fiscal year ended March 31, 2018, revenues from IP/packet communications services decreased 0.2% from the previous fiscal year to ¥3,801.8 billion, accounting for 32.2% of total operating revenues. This decrease was due to, among other things, the increased number of transfers to the Hikari Collaboration Model in the regional communications business segment and a decrease in revenues in the mobile communications business segment due to strengthened efforts to enhance returns to customers, despite the continued increase in the number of “docomo Hikari” subscriptions in the mobile communications business segment.

Sales of Telecommunications Equipment

This category includes a portion of the services NTT Group provides in the mobile communications business segment and the regional communications business segment.

In the fiscal year ended March 31, 2018, revenues from telecommunications equipment sales increased 4.6% from the previous fiscal year to ¥843.5 billion, accounting for 7.1% of total operating revenues. This increase was primarily due to an increased number of wholesale sales of handsets, such as smartphones, in the mobile communications business segment.

System Integration

NTT Group’s system integration services include its data communications business segment and a portion of the services it provides in the long distance and international communications business segment and the regional communications business segment.

In the fiscal year ended March 31, 2018, revenues from system integration increased 13.2% from the previous fiscal year to ¥3,443.1 billion, accounting for 29.2% of total operating revenues. This increase was due to factors such as the impact of the expansion of consolidated subsidiaries resulting from the acquisition of the former Dell Services Division and the expanded scope of business in the data communications business segment.

Other

Other services principally comprise building maintenance, real estate rentals, systems development, leasing activities and the Smart Life area in the mobile communications business segment.

In the fiscal year ended March 31, 2018, revenues from other services decreased 0.8% from the previous fiscal year to ¥1,622.0 billion, accounting for 13.7% of total operating revenues. This decrease was due mainly to a decrease in revenues associated with real estate business in the other business segment.

Operating Expenses

Operating expenses in the fiscal year ended March 31, 2018 increased 3.1% from the previous fiscal year to ¥10,156.7 billion. The reasons for the increase are discussed below. Personnel expenses and expenses for purchase of goods and services and other expenses, described below, are included in cost of services, cost of equipment sold, cost of system integration, and selling, general and administrative expenses in the consolidated statements of income.

Personnel Expenses

Personnel expenses in the fiscal year ended March 31, 2018 increased 5.8% from the previous fiscal year to ¥2,408.3 billion. This increase was mainly due to the increase in personnel expenses as a result of the effect of the expansion of consolidated subsidiaries in the data communications business segment, despite a decrease in personnel expenses due to employee retirements in the regional communications business segment.

Expenses for Purchase of Goods and Services and Other Expenses

In the fiscal year ended March 31, 2018, expenses for purchase of goods and services and other expenses increased 4.5% from the previous fiscal year to ¥5,866.6 billion. This increase was mainly due to the impact of the expansion of consolidated subsidiaries in the data communications business segment and an increase in revenue-linked expenses resulting from an increase in wholesale sales in the mobile communications business segment.

Depreciation and Amortization Expenses

Depreciation and amortization expenses in the fiscal year ended March 31, 2018 decreased 8.4% from the previous fiscal year to ¥1,339.4 billion. This decrease was mainly due to the fact that the accelerated depreciation of prior-generation equipment that was recorded in the fiscal year ended March 31, 2017 was not recorded in the fiscal year ended March 31, 2018.

Operating Income

As a result of the foregoing, operating income for the fiscal year ended March 31, 2018 increased 6.7% from the previous fiscal year to ¥1,642.8 billion.

Other Income (Expenses)

Other expenses for the fiscal year ended March 31, 2018 was ¥112.8 billion compared to (12.0) billion for the previous fiscal year.

Income before Income Taxes and Equity in Earnings (Losses) of Affiliated Companies

Net income before income taxes in the fiscal year ended March 31, 2018 increased 14.9% from the previous fiscal year to ¥1,755.6 billion for the reasons discussed above.

Income Tax Expense (Benefit)

In the fiscal year ended March 31, 2018, income tax expense increased 15.7% from the previous fiscal year to ¥541.9 billion. This increase was due to an increase in net income before income taxes, in addition to other factors. As a result, effective tax rates for the fiscal year ended March 31, 2017 and for the fiscal year ended March 31, 2018 were 30.66% and 30.86%, respectively.

Equity in earnings (losses) of affiliated companies

Equity in earnings (losses) of affiliated companies for the fiscal year ended March 31, 2018 was ¥5.6 billion compared to ¥(0.0) billion for the previous fiscal year.

Net Income and Net Income Attributable to NTT

Medium-Term Financial Targets

As a result, net income for the fiscal year ended March 31, 2018 increased 15.1% from the previous fiscal year to ¥1,219.3 billion. Net income attributable to NTT (excluding the portion attributable to non-controlling interests) for the fiscal year ended March 31, 2018 increased 13.7% from the previous fiscal year to ¥909.7 billion.

In line with its Medium-Term Management Strategy “Towards the Next Stage 2.0,” NTT Group has continued to reform its business structure.

Regarding the financial targets of the Medium-Term Management Strategy from the fiscal year ended March 31, 2016 through the fiscal year ended March 31, 2018, in the fiscal year under review, the target fiscal year, EPS (earnings per share), the most important target, reached ¥456, achieving the target of ¥400 or more. In terms of the other targets, regarding capital investment in the domestic network business, NTT Group reduced costs by ¥204.9 billion compared to its target of ¥200.0 billion or more, and regarding fixed-line/mobile access-related costs, NTT Group reduced costs by ¥856.0 billion compared to its target of ¥800.0 billion or more, achieving both targets. Furthermore, overseas sales and overseas operating income totaled US\$19.5 billion and US\$1.0 billion, respectively, compared to targets of US\$22.0 billion and US\$1.5 billion. NTT Group will continue to work to achieve its targets.

While continuing to focus on profit growth by promoting the initiatives described below, NTT Group will also increase its capital efficiency through stock repurchases and other measures, aiming to further grow its EPS.

- Notes: 1. Increased efficiency in capital investment (domestic network business) is in comparison to the fiscal year ended March 31, 2015 and excludes NTT Communications' data centers and certain other assets.
2. Cost reductions (fixed-line/mobile access-related) are in comparison to the fiscal year ended March 31, 2015 and exclude the impact of the change of depreciation method for property, plant and equipment.
3. Overseas operating income excludes M&A-related temporary expenses, such as depreciation costs of intangible fixed assets.

(2) Segment Information

NTT Group has five business segments: regional communications business, long distance and international communications business, mobile communications business, data communications business and other business. (For further details, see Note 20 to the Consolidated Financial Statements.)

The regional communications business segment comprises fixed voice related services, IP/packet communications services, sales of telecommunications equipment, system integration services and other services.

The long distance and international communications business segment principally comprises fixed voice related services, IP/packet communications services, system integration services and other services.

The mobile communications business segment comprises mobile voice related services, IP/packet communications services, sales of telecommunications equipment and other services.

The data communications business segment comprises system integration services.

The other business segment principally comprises building maintenance, real estate rentals, systems development, leasing activities and other services related to research and development.

An overview of the operational results for each business segment is as follows (intersegment revenues are included in the operating revenues, operating expenses and operating income of operational results for each business segment). Because of the difficulty associated with presenting information classified as production or orders due to the fact that NTT Group is engaged in businesses such as the telecommunications business, NTT Group does not present segment production or order scale by amount or quantity. Accordingly, the summary of production, orders received and sales is presented in connection with operating results for each segment.

1. Regional Communications Business Segment

In the regional communications business, NTT Group worked to develop its B2B2X business through the Hikari Collaboration Model, the wholesale provision of fiber-optic access infrastructure services to various service providers.

- With regard to the “Hikari Collaboration Model,” the number of service providers providing wholesale service was approximately 700 companies at the end of the fiscal year ended March 31, 2018, as NTT Group continued to expand collaborative projects with not only business operators in the communications industry, energy industry, real estate industry, security industry, and housing industry, but also with business operators in diverse industries including social infrastructure operators and FinTech operators. New use cases were developed among business operators operating social infrastructure businesses, as the Hikari Collaboration Model was adopted to promote the conversion to fiber-optics in networks connected to traffic signals. As a result of these initiatives, the number of fiber-optic access service subscriptions using this model was 11.12 million.
- By increasing productivity and streamlining development costs, among other things, and through the systematizing of work, NTT Group continually worked to reduce costs. Furthermore, by simplifying and streamlining networks and further increasing the usage of existing facilities, NTT Group worked to make capital investment more efficient.
- As companies and local governments are proactively promoting the use of Wi-Fi as a powerful information service tool, in various regions, NTT Group continually worked to improve convenience for the increasing number of visitors to Japan by expanding the coverage area of Wi-Fi, resulting in the number of Wi-Fi area owners reaching 744.

Status of Provision of Major Services

- FLET’S Hikari: 20.53 million subscriptions (an increase of 0.48 million subscriptions from the previous fiscal year)
(Included in the above) Hikari Collaboration Model: 11.12 million subscriptions (an increase of 2.37 million subscriptions from the previous fiscal year)

- Hikari Denwa: 18.03 million channels (an increase of 0.27 million channels from the previous fiscal year)
- FLET'S TV: 1.62 million subscriptions (an increase of 0.09 million subscriptions from the previous fiscal year)

Note: "FLET'S Hikari," "Hikari Denwa" and "FLET'S TV" include the number of subscriptions for wholesale services provided to service providers through using of the Hikari Collaboration Model by NTT East and NTT West.

Summary of Segment Performance (April 1, 2017 to March 31, 2018)

	Fiscal Year Ended March 31,		Change	Percent Change
	2017	2018		
	(in billions of yen)			
Operating revenues	3,308.2	3,232.9	(75.3)	(2.3) %
Fixed voice related services	1,210.6	1,143.1	(67.4)	(5.6) %
IP/packet communications services	1,540.8	1,534.9	(6.0)	(0.4) %
System integration services	166.2	166.6	0.4	0.3 %
Other	390.6	388.3	(2.3)	(0.6) %
Operating expenses	2,948.7	2,878.6	(70.1)	(2.4) %
Operating income	359.5	354.3	(5.2)	(1.4) %

Operating revenues in the regional communications business segment for the fiscal year ended March 31, 2018 decreased to ¥3,232.9 billion (a decrease of 2.3% from the previous fiscal year) due to a decrease in revenues from fixed voice-related services, among other factors.

On the other hand, operating expenses decreased to ¥2,878.6 billion in the fiscal year ended March 31, 2018 (a decrease of 2.4% from the previous fiscal year), as a result of a decrease in depreciation and amortization expenses, a decrease in personnel expenses due to employee retirements and other factors, despite an impairment loss recorded relating to metal cables.

As a result, segment operating income in the fiscal year ended March 31, 2018 decreased 1.4% to ¥354.3 billion.

The state of operations for each service in the regional communications business segment was as follows:

(Fixed Voice Related Services)

Fixed voice related revenues for the fiscal year ended March 31, 2018 in this segment decreased to ¥1,143.1 billion (a decrease of ¥67.4 billion (5.6%) from the previous fiscal year), primarily due to the reasons below.

As a result of the shift in customer demand to mobile telephones, IP phones and broadband access services and to free or low-priced communications services offered by OTT operators, the aggregate number of fixed line subscriptions (fixed-line telephone & INS-Net) as of March 31, 2018 stood at 19,869 thousand, a decrease of 1,467 thousand from the previous fiscal year.

The numbers of fixed-line telephone and INS-Net subscriptions were as follows:

	As of March 31,		Change	Percent Change
	2017	2018 (in thousands)		
NTT East:				
Telephone subscriptions	9,315	8,707	(608)	(6.5) %
INS-Net subscriptions	1,293	1,188	(106)	(8.2) %
NTT West:				
Telephone subscriptions	9,482	8,832	(650)	(6.9) %
INS-Net subscriptions	1,246	1,143	(102)	(8.2) %

(1) Number of Telephone subscriptions is the total of individual lines and central station lines (including lines under the Subscriber Telephone Light Plan).

(2) INS-Net includes INS-Net 64 and INS-Net 1500. In terms of the number of channels, transmission rate, and line use rate (base rate), INS-Net 1500 is in all cases roughly ten times greater than INS-Net 64. For this reason, one INS-Net 1500 subscription is calculated as ten INS-Net 64 subscriptions (including INS-Net 64 Lite Plan subscriptions).

For the fiscal year ended March 31, 2018, aggregate fixed-line ARPU (telephone subscriber lines plus INS-Net subscriber lines) was ¥2,580 for NTT East and ¥2,540 for NTT West, a decrease of ¥30 (1.1%) and ¥40 (1.6%), respectively, from the corresponding figures in the previous fiscal year. This decline was due to, among other factors, the shift by high-volume users to IP telephone services and the migration of users from fixed-line services to mobile phone services.

See “-Footnote 2, ‘ARPU: Average monthly revenue per unit’” for a description of ARPU, and “Footnote 3, ‘Method of calculating ARPU-(a) NTT East and NTT West’” for a description of how aggregate fixed-line ARPU is calculated.

(IP/Packet Communications Services)

Revenues for IP/Packet Communications Services in this segment decreased to ¥1,534.9 billion (a decrease of ¥6.0 billion (0.4%) from the previous fiscal year), primarily due to a decrease in FLET’S Hikari ARPU, despite an increase in subscriptions for FLET’S Hikari (including the Hikari Collaboration Model). These reasons are explained in further detail below.

As a result of NTT’s initiatives to expand its B2B2X business through the Hikari Collaboration Model, as of March 31, 2018, the number of FLET’S Hikari subscriptions (including the Hikari Collaboration Model) had increased to 20,533 thousand channels, an increase of 480 thousand (2.4%) from the previous fiscal year; the number of Hikari Denwa subscriptions increased to 18,032 thousand channels, an increase of 273 thousand channels (1.5%) from the previous fiscal year; and the number of FLET’S TV subscriptions increased to 1,615 thousand channels, an increase of 94 thousand channels (6.2%) from the previous fiscal year.

The numbers of subscriptions for “FLET’S Hikari (including the Hikari Collaboration Model),” “FLET’S ADSL,” “Hikari Denwa,” and “FLET’S TV Transmission Service” were as follows:

	As of March 31,		Change	Percent Change
	2017	2018		
	(in thousands)			
NTT East:				
FLET’S Hikari (including the Hikari Collaboration Model)	11,173	11,491	318	2.8 %
FLET’S ADSL	411	342	(69)	(16.8) %
Hikari Denwa (channels)	9,369	9,558	190	2.0 %
FLET’S TV Transmission Service	951	992	41	4.3 %
NTT West:				
FLET’S Hikari (including the Hikari Collaboration Model)	8,880	9,041	162	1.8 %
FLET’S ADSL	508	438	(70)	(13.8) %
Hikari Denwa (channels)	8,390	8,474	83	1.0 %
FLET’S TV Transmission Service	570	624	53	9.4 %

- (1) FLET’S Hikari (including Hikari Collaboration Model) includes B FLET’S, FLET’S Hikari Next, FLET’S Hikari Light, FLET’S Hikari Lightplus and FLET’S Hikari WiFi Access provided by NTT East, B FLET’S, FLET’S Hikari Premium, FLET’S Hikari Mytown, FLET’S Hikari Next, FLET’S Hikari Mytown Next, FLET’S Hikari Light and FLET’S Hikari WiFi Access provided by NTT West, and the “Hikari Collaboration Model,” the wholesale provision of services by NTT East and NTT West to service providers.
- (2) “Hikari Denwa” and “FLET’S TV Transmission Service” include wholesale services provided to service providers by NTT East and NTT West.

FLET’S Hikari ARPU for the fiscal year ended March 31, 2018 for NTT East was ¥5,080, ¥170 (3.2%) lower than in the previous fiscal year. FLET’S Hikari ARPU for the fiscal year ended March 31, 2018 for NTT West was ¥5,100, ¥180 (3.4%) lower than in the previous fiscal year. These reductions were due to reduced earnings as a result of the progress of the Hikari Collaboration Model, among other factors.

See “Footnote 3, ‘Method of calculating ARPU-(a) NTT East and NTT West’” for a description of how FLET’S Hikari ARPU is calculated.

(Other Services)

With respect to system integration and other services, NTT Group worked to promote the utilization of ICT by providing services that are responsive to the issues and needs of each of its customers, including businesses and local governments.

2. Long Distance and International Communications Business Segment

In the Long Distance and International Communications Business, in addition to enhancing its provision of seamless ICT solutions combining network and security, and others, NTT Group worked to enhance its service provision in growth areas such as cloud services and IT outsourcing.

Details of Main Initiatives

- Aiming to strengthen its framework to efficiently maintain and operate a wide range of applications including SAP and Oracle, and to expand the provision capabilities of its managed services, which provide comprehensive maintenance and operations of ICT environments to its customers, NTT Group entered into a stock purchase agreement for Secure-24 Intermediate Holdings, a U.S. IT managed services business operator.
- To respond to the demand for cloud services and data centers in various regions worldwide, NTT Group advanced the expansion of its service provision systems in various countries with continuous market expansion. NTT Group launched the “Texas Dallas 1 (TX1) Data Center” and the “Virginia Ashburn 3 (VA3) Data Center” in the United States, the “Germany Munich 2 Data Center” and the “Germany Rhein-Ruhr 1 Data Center” in Germany, and new data center services in South Africa.
- To strengthen the competitiveness of its cloud services, NTT Group promoted the consolidation and strengthening of the cloud services business, such as through the transfer of cloud service facilities, development, and operational tasks from Dimension Data to NTT Communications.

Status of Provision of Major Services

- Number of customers for Cloud Services: 9,900 customers (an increase of 900 customers from the previous fiscal year)
- Hikari TV: 3.02 million subscriptions (a decrease of 0.01 million subscriptions from the previous fiscal year)

Summary of Segment Performance (April 1, 2017 to March 31, 2018)

	Fiscal Year Ended March 31,		Change	Percent Change
	2017	2018		
	(in billions of yen)			
Operating revenues	2,129.3	2,218.9	89.6	4.2 %
Fixed voice related services	262.6	239.9	(22.7)	(8.7) %
IP/packet communications services	397.2	412.4	15.2	3.8 %
System integration services	1,303.3	1,391.5	88.2	6.8 %
Other	166.2	175.1	8.9	5.4 %
Operating expenses	2,088.4	2,125.3	36.9	1.8 %
Operating income	40.8	93.6	52.7	129.1 %

Operating revenues in the Long Distance and International Communications Business Segment for the fiscal year ended March 31, 2018 were ¥2,218.9 billion (an increase of 4.2% from the previous fiscal year), as a result of an increase in revenues from system integration services due to the expansion of overseas business, as well as an increase in revenues from IP and packet communications services due to the expansion of Arcstar Universal One, despite a decrease in revenues from fixed voice-related services. On the other hand, operating expenses were ¥2,125.3 billion (an increase of 1.8% from the previous fiscal year), as a result of an increase in revenue-linked expenses due to the expansion of overseas business, among other things. As a result, operating income was ¥93.6 billion (an increase of 129.1% from the previous fiscal year).

Operations for each service in the long distance and international communications business segment were as follows:

(Fixed Voice Related Services)

Revenues for fixed voice-related services in this segment decreased to ¥239.9 billion (a decrease of ¥22.7 billion (8.7%) from the previous fiscal year). This decrease was primarily due to, a decreased number of fixed telephone subscriptions due to the increasing popularization of mobile phones and optical IP phones and an increased number of free or low-priced communications services offered by OTT operators.

(IP/Packet Communications Services)

Revenues for IP/packet communications services in this segment increased to ¥412.4 billion (an increase of ¥15.2 billion (3.8%) from the previous fiscal year). This increase was primarily due to the initiatives described below.

In terms of products for individual customers, for “OCN mobile ONE,” an LTE-compatible mobile data communications service, NTT Communications increased the number of its subscribers by making further quality improvements, such as improving communication speeds during busy time periods and reducing the time needed to display contents.

For enterprise customers, NTT Communications worked to increase the number of subscriptions for “Arcstar Universal One,” a corporate network service, by launching a number of advanced functions, such as providing functions that enable the development of a multi-cloud environment on a secure closed network.

The following table shows the number of subscriptions for IP/packet communications-related services in the long distance and international communications business segment:

	As of March 31,			
	2017	2018	Change	Percent Change
	(in thousands)			
Network Services (VPN) ⁽¹⁾ (lines)	353	386	33	9.3 %
OCN (ISP)	7,739	7,521	(217)	(2.8) %
Plala (ISP) ⁽²⁾	3,106	3,145	40	1.3 %
Hikari TV ⁽²⁾	3,023	3,016	(7)	(0.2) %

(1) “Network Services (VPN)” includes Arcstar Universal One and Arcstar Global IP-VPN.

(2) Revenues from Plala and Hikari TV are included in “Other” operating revenues.

(System Integration Services)

Revenues for systems integration services in this segment increased to ¥1,391.5 billion (an increase of ¥88.2 billion (6.8%) from the previous fiscal year). This increase was due to strengthened efforts to expand global cloud services as the foundation of the business for the entire NTT Group.

Among its primary initiatives, in order to further strengthen its ability to provide full-stack and full-lifecycle services, NTT Group worked to expand its cloud computing platforms through establishing data centers. NTT Group also worked to strengthen its ability to offer seamless ICT solutions combining network and security and other features and to strengthen its ability to provide services in the growth areas of cloud services and IT outsourcing.

In particular, NTT Group expanded the scope of cooperation with businesses partners and strengthened collaboration for “Enterprise Cloud,” NTT Com’s enterprise network service, and also improved the service provision structure for its data center service “Nexcenter” among other initiatives.

3. Mobile Communications Business Segment

In the Mobile Communications Business, NTT Group has worked toward the promotion of sales of the billing plan, “Kake-hodai & Pake-aeru,” and “docomo Hikari,” promoting collaboration with various business partners and providing new value-added services to enhance profitability in the smart life area.

Details of Main Initiatives

- In addition to continuing to promote the sales of its “Kake-hodai & Pake-aeru,” as a billing plan tailored to suit a customer’s stage of life that offers more affordable rates to long-term users, NTT Group began offering its “Simple Plan” and “docomo with,” among other initiatives, working to enhance returns to its customers. As a result, the number of subscriptions for “Kake-hodai & Pake-aeru” reached 41.96 million.
- By utilizing the Hikari Collaboration Model from the Regional Communications Business, NTT Group promoted the sales of the “docomo Hikari Pack,” which bundles fiber-optic access infrastructure services, internet access service, and mobile service. As a result, the number of subscriptions for “docomo Hikari” reached 4.76 million.
- With Komatsu Ltd. and other parties, NTT Group agreed to jointly plan and operate “LANDLOG,” a new platform connecting the entire construction manufacturing process. In addition to starting field testing of LANDLOG, NTT Group implemented initiatives utilizing advanced technology, including the launch of “AI Taxi®,” a taxi ride demand forecasting service utilizing AI, as well as “5G Trial Site,” advancing “d+” initiatives to jointly create new added value through collaboration with various business operators.

Status of Provision of Major Services

- Mobile phone services: 76.37 million subscriptions (an increase of 1.49 million subscriptions from the previous fiscal year)
(Included in the above) Kake-hodai & Pake-aeru: 41.96 million subscriptions (an increase of 4.90 million subscriptions from the previous fiscal year)
(Included in the above) LTE (Xi) services: 50.10 million subscriptions (an increase of 5.55 million subscriptions from the previous fiscal year)
(Included in the above) FOMA services: 26.27 million subscriptions (a decrease of 4.06 million subscriptions from the previous fiscal year)

Note: Mobile phone services subscriptions, LTE (Xi) services subscriptions and FOMA services subscriptions include communications module service subscriptions.

Summary of Segment Performance (April 1, 2017 to March 31, 2018)

	Fiscal Year Ended March 31,		Change	Percent Change
	2017	2018		
	(in billions of yen)			
Operating revenues	4,584.6	4,769.4	184.9	4.0 %
Mobile voice related services	875.2	951.7	76.5	8.7 %
IP/packet communications services	2,101.3	2,172.6	71.3	3.4 %
Other	1,608.1	1,645.2	37.1	2.3 %
Operating expenses	3,632.9	3,787.3	154.3	4.2 %
Operating income	951.6	982.1	30.5	3.2 %

Operating revenues for the mobile communications business segment for the fiscal year ended March 31, 2018 increased to ¥4,769.4 billion (an increase of 4.0% from the previous fiscal year) due to, among other things, an increase in the number of subscriptions for “docomo Hikari” and “Kake-hodai & Pake-aeru” billing plan, along with an increase in the number of wholesale sales of smartphones and other mobile devices, despite a decrease in revenues due to strengthened efforts to enhance returns to customers. On the other hand, operating expenses for the fiscal year ended March 31, 2018 increased to ¥3,787.3 billion (an increase of 4.2% from the previous fiscal year) due to, among other things, an increase in revenue-linked expenses as a result of the expansion of NTT Group’s docomo Hikari business and the increase in the number of wholesale sales, in addition to an increase in expenses for points. As a result, operating income increased to ¥982.1 billion (an increase of 3.2% from the previous fiscal year).

Operations for each service in the mobile communications business segment were as follows:

(Mobile Voice Related Services / IP/Package Communications Services)

Revenues for mobile voice-related services in this segment increased to ¥951.7 billion (an increase of ¥76.5 billion (8.7%) from the previous fiscal year). Furthermore, IP/Package Communications Services revenues increased to ¥2,172.6 billion (an increase of ¥71.3 billion (3.4%) from the previous fiscal year). This increase was due to an increase in the number of subscriptions for docomo Hikari and the “Kake-hodai & Pake-aeru” billing plan, as well as a reduction in the effect of the Monthly Support discount program, despite a decrease in revenues due to strengthened efforts to enhance returns to customers.

As of March 31, 2018, the number of subscriptions to NTT DOCOMO mobile phone services increased by 1.49 million, from 74.88 million at the end of the previous fiscal year to 76.37 million subscriptions. In addition, churn rates increased by five basis points to 0.65%.

The following table shows the number of mobile communications subscriptions and estimated market share:

	As of March 31,			
	2017	2018	Change	Percent Change
	(in thousands)			
Mobile phone services ⁽¹⁾	74,880	76,370	1,491	2.0 %
(Included in the above) Kake-hodai & Pake-aeru	37,066	41,964	4,899	13.2 %
LTE (Xi) services	44,544	50,097	5,553	12.5 %
FOMA services	30,336	26,273	(4,062)	(13.4) %
Estimated mobile phone market share ⁽²⁾	46.0%	45.3%	(0.7)point	—
sp-mode services	35,921	38,998	3,077	8.6 %
i-mode services	15,493	12,111	(3,381)	(21.8) %

(1) Mobile phone services subscriptions, LTE (Xi) services subscriptions and FOMA services subscriptions include communications module service subscriptions

(2) Market share data is based on number of subscriptions of other carriers, which is computed based on figures released by the Telecommunications Carriers Association.

Aggregate ARPU of mobile phone services increased by ¥250 (5.6%) to ¥4,680 in the fiscal year ended March 31, 2018, from ¥4,430 in the fiscal year ended March 31, 2017. This increase was due to an increase of ¥120 (9.6%) in Voice ARPU to ¥1,370 in the fiscal year ended March 31, 2018, from ¥1,250 in the fiscal year ended March 31, 2017, resulting from, among other things, the effect of continued transition to the “Kake-hodai & Pake-aeru” billing plan, and an increase of ¥130 (4.1%) in Data ARPU to ¥3,310 in the fiscal year ended March 31, 2018, from ¥3,180 in the fiscal year ended March 31, 2017, resulting from, among other things, an increase in the number of subscriptions for docomo Hikari and a reduction in the effect of the Monthly Support discount program.

The following table shows data regarding ARPU and MOU of mobile phone services:

	As of March 31,			
	2017	2018	Change	Percent Change
	(in thousands)			
Aggregate ARPU	4,430	4,680	250	5.6 %
Voice ARPU	1,250	1,370	120	9.6 %
Data ARPU	3,180	3,310	130	4.1 %
Packet ARPU	2,990	2,970	(20)	(0.7) %
“docomo Hikari” ARPU	190	340	150	78.9 %
MOU (minutes)	137	136	(1)	(0.7) %

See “Footnote 1, ‘MOU (average monthly minutes of use per unit): Average communication time per subscription’” at the end of this item for a description of how MOU is calculated. See “Footnote 3, ‘Method of calculating ARPU-(b) NTT DOCOMO’” at the end of this item for a description of how ARPU is calculated for mobile phone services.

(Other Services)

Revenues from other services in this segment increased by ¥37.1 billion (2.3%) from the previous fiscal year to ¥1,645.2 billion. This increase was due to an increase in the number of wholesale sales of smartphones and other mobile devices, among other things. In the Smart Life business, NTT Group worked to increase the brands and sites where “d POINTs” loyalty points can be stored and used, and worked to improve the convenience of d POINTs.

4. Data Communications Business Segment

In the Data Communications Business, NTT Group responded to the acceleration of its customers' expansion in the global market and the diversification and increased sophistication of their needs by working to expand its business in the global market and to expand and reliably provide a range of IT services, such as system integration, that are responsive to the changes in the market.

Details of Main Initiatives

- Under NTT DATA Services, launched in April 2017, NTT Group steadily achieved the integration of the former Dell Services Division, for which NTT Group completed the acquisition last year, and pursued the integration of its business centered on North America. In particular, NTT Group promoted initiatives to expand its businesses that utilize NTT Group's abundant outsourcing results and knowledge in various fields including healthcare, the public sector, and finance, and to further enhance its local presence.
- NTT Group pursued initiatives to utilize cutting-edge blockchain technology, establishing a consortium as the organizing office to complete a trade information collaborative platform, promoting activities together with 14 companies representing various industries. Furthermore, NTT Group was selected as a partner vendor in the Japanese Bankers Association's "Collaborative Blockchain Platform," contributing to the promotion of practical testing to develop new services.
- In terms of RPA solutions for the automation and streamlining of desk work, which is rapidly spreading due to the increasing move toward work style reforms in recent years, NTT Group promoted sales of "WinActor," developed by NTT Group. In addition to launching the English-language version, by strengthening the functions for financial accounting operations, which have a particularly strong need for automation, and by other initiatives, NTT Group was able to introduce WinActor to customers in a range of industries, supporting work style reforms.

Summary of Segment Performance (April 1, 2017 to March 31, 2018)

	Fiscal Year Ended March 31,		Change	Percent Change
	2017	2018		
	(in billions of yen)			
Operating revenues	1,718.7	2,043.1	324.4	18.9 %
Operating expenses	1,610.8	1,915.3	304.4	18.9 %
Operating income	107.9	127.8	19.9	18.5 %

Operating revenues in the data communications business segment for the fiscal year ended March 31, 2018 increased to ¥2,043.1 billion (an increase of 18.9% from the previous fiscal year) due to, among other things, the impact of the expansion of overseas consolidated subsidiaries resulting from the acquisition of the former Dell Services Division, and an expansion of the scale of its business, including in the fields of finance, corporate services and solutions. On the other hand, operating expenses increased to ¥1,915.3 billion (an increase of 18.9% from the previous fiscal year) due to, among other things, an increase in expenses for purchase of goods and services and personnel expenses and other expenses as a result of the increase in the number of consolidated subsidiaries.

As a result, operating income in the fiscal year ended March 31, 2018 increased 18.5% from the previous fiscal year to ¥127.8 billion.

5. Other Business Segment

In the Other Business, NTT Group mainly provided services related to the real estate business, finance business, construction and electric power business, and system development business.

Details of Main Initiatives

• Real Estate Business

In addition to its core office and retail operations and its residential operations led by the “Wellith” brand, NTT Group pursued its global and hotels & resorts businesses. NTT Group also launched “LIFORK,” a new type of shared-office business combining daycare facilities and office space.

• Finance Business

NTT Group developed financial services such as leasing, installation payment, and other finance areas in response to changes including diversification in needs and the economic environment, as well as advancing globalization. Furthermore, NTT Group provided billing and collection services for telecommunication service bills, and credit card transaction settlement services.

• Construction and Electric Power Business

By combining and utilizing its technology in “ICT, energy, and construction” to the fullest extent, NTT Group paved the way for both the utilization of natural energy and the efficient, waste-free use of limited energy, working toward safe and secure urban development that is resilient against the risk of natural disaster.

• System Development Business

To provide optimized, high-quality ICT services, NTT Group worked to develop network operation systems and application services. Additionally, NTT Group worked to develop solutions utilizing cutting-edge technologies such as AI.

Summary of Segment Performance (April 1, 2017 to March 31, 2018)

	Fiscal Year Ended March 31,		Change	Percent Change
	2017	2018		
	(in billions of yen)			
Operating revenues	1,282.3	1,236.6	(45.7)	(3.6) %
Operating expenses	1,205.0	1,158.0	(47.0)	(3.9) %
Operating income	77.3	78.6	1.3	1.7 %

In the other business segment, operating revenues for the fiscal year ended March 31, 2018 decreased to ¥1,236.6 billion (a decrease of 3.6% from the previous fiscal year), primarily due to decreased revenues in the real estate business. On the other hand, operating expenses for the fiscal year ended March 31, 2018 also decreased to ¥1,158.0 billion (a decrease of 3.9% from the previous fiscal year) due to, among other things, a decrease in revenue-linked expenses in the real estate business. As a result, operating income increased to ¥78.6 billion (an increase of 1.7% from the previous fiscal year).

Reference: Geographic Sales Information

	Fiscal Year Ended March 31,		Change	Percent Change
	2017	2018		
	(in billions of yen)			
Operating revenues.....	11,391.0	11,799.6	408.6	3.6 %
Domestic(*)	9,556.4	9,625.2	68.8	0.7 %
Overseas(*)	1,834.6	2,174.4	339.8	18.5 %

(*) Figures are shown based on the geographic location of the services and products provided.

Domestic operating revenues for the fiscal year ended March 31, 2018 increased to ¥9,625.2 billion (an increase of 0.7% from the previous fiscal year), due to, among other things, an increase in revenues in the mobile communications business segment. Overseas operating revenues for the fiscal year ended March 31, 2018 increased to ¥2,174.4 billion (an increase of 18.5% from the previous fiscal year) due to, among other things, the impact of the expansion of consolidated subsidiaries in the Data communications business segment.

Notes

1. MOU (average monthly minutes of use per unit): Average communication time per user

2. ARPU: Average monthly revenue per unit

Average monthly revenue per unit, or ARPU, is used to measure average monthly operating revenues on a per subscriber (user) basis. In the case of NTT Group's fixed-line business, ARPU is calculated by dividing revenue items included in the operating revenues of NTT Group's regional communications business segment (i.e., fixed-line (telephone subscriber lines plus INS-Net subscriber lines) and FLET'S Hikari) by the number of Active Subscribers to the relevant services. In the case of the mobile communications business, ARPU is calculated by dividing communications services revenue items included in operating revenues from NTT Group's mobile communications business segment, such as revenues from LTE (Xi) mobile phone services, FOMA mobile phone services and docomo Hikari services (with certain exceptions), by the number of Active users to the relevant services. The calculation of these figures excludes revenues that are not representative of monthly average usage, such as telecommunications equipment sales, activation fees and universal service charges.

NTT believes that its ARPU figures calculated in this way provide useful information regarding the monthly average usage of its subscribers. The revenue items included in the numerators of NTT Group's ARPU figures are based on its financial results comprising its U.S. GAAP results of operations.

3. Method of calculating ARPU

(a) NTT East and NTT West

NTT separately computes the following two categories of ARPU for the fixed-line business conducted by each of NTT East and NTT West, using the following measures:

- Aggregate Fixed-line ARPU (Telephone Subscriber Lines + INS-Net Subscriber Lines): Calculated based on revenues from monthly charges and call charges for Telephone Subscriber Lines and INS-Net Subscriber Lines, which are included in operating revenues from Voice Transmission Services (excluding IP Services), and revenues from FLET'S ADSL and FLET'S ISDN, which are included in operating revenues from IP Services.
- FLET'S Hikari ARPU: Calculated based on revenues from FLET'S Hikari (including FLET'S Hikari optional services), which are included in operating revenues from IP Services and Supplementary Business, revenues from monthly charges, call charges and device connection charges for Hikari Denwa, which are included in operating revenues from IP Services, and revenues from "FLET'S Hikari" optional services, which are included in Supplementary Business revenues.

(1) FLET'S Hikari includes B FLET'S, FLET'S Hikari Next, FLET'S Hikari Light, FLET'S Hikari Lightplus and FLET'S Hikari WiFi Access provided by NTT East, B FLET'S, FLET'S Hikari Premium, FLET'S Hikari Mytown, FLET'S Hikari Next, FLET'S Hikari Mytown Next, FLET'S Hikari Light and FLET'S Hikari WiFi Access provided by NTT West, and the "Hikari Collaboration Model" wholesale provision of services provided by NTT East and NTT West to service providers. FLET'S Hikari optional services include wholesale services provided to service providers by NTT East and NTT West.

(2) Revenues from interconnection charges are excluded from the calculation of Aggregate Fixed-line ARPU (Telephone Subscriber Lines + INS-Net Subscriber Lines) and FLET'S Hikari ARPU.

(3) For purposes of calculating Aggregate Fixed-line ARPU (Telephone Subscriber Lines + INS-Net Subscriber Lines), the number of subscribers is that for fixed-line services (telephone subscriber lines or INS Net subscriber lines).

- (4) In terms of number of channels, transmission rate, and line use rate (base rate), INS-Net 1500 is in all cases roughly ten times greater than INS-Net 64. For this reason, one INS-Net 1500 subscription is calculated as ten INS-Net 64 subscriptions.
- (5) For purposes of calculating FLET'S Hikari ARPU, the number of subscribers is determined based on the number of FLET'S Hikari subscribers (including B FLET'S, FLET'S Hikari Next, FLET'S Hikari Light, FLET'S Hikari Lightplus and FLET'S Hikari WiFi Access provided by NTT East, B FLET'S, FLET'S Hikari Premium, FLET'S Hikari Mytown, FLET'S Hikari Next, FLET'S Hikari Mytown Next, FLET'S Hikari Light and FLET'S Hikari WiFi Access provided by NTT West), and "Hikari Collaboration Model" wholesale services provided by NTT East and NTT West to service providers.

- (6) Number of Active Subscribers used in the ARPU calculation of NTT East and NTT West is as below:

FY Results: Sum of number of Active Subscribers for each month from April to March

Active Subscribers = (number of subscribers at end of previous month + number of subscribers at end of current month)/2

(b) NTT DOCOMO

NTT computes ARPU for NTT DOCOMO as follows:

Aggregate ARPU = Voice ARPU + Packet ARPU + "docomo Hikari" ARPU.

Voice ARPU: Voice ARPU-related revenues (basic monthly charges and voice communications charges) / Number of Active Users

Packet ARPU: Packet ARPU-related revenues (flat monthly fees and packet communication charges) / Number of Active Users

docomo Hikari ARPU: docomo Hikari ARPU-related revenues (basic monthly charges and voice communication charges) / Number of Active Users

The sum of Packet ARPU and docomo Hikari ARPU is referred to as "Data ARPU."

- (1) Number of Active Users used in the ARPU calculation of NTT DOCOMO is as below.

Sum of number of Active Users for each month during the applicable period

Active Users = (number of users at end of previous month + number of users at end of current month)/2.

- (2) The number of "users" used to calculate ARPU is basically total number of subscriptions, excluding the subscriptions listed below:

Number of active users = subscriptions

- a. Subscriptions of communication module services, "Phone Number Storage," "Mail Address Storage," "docomo Business Transceiver" and wholesale telecommunications services and interconnecting telecommunications facilities that are provided to MVNOs; and
- b. Data Plan subscriptions in the case where the customer contracting for such subscription in his/her name also has a subscription for Xi or FOMA services in his/her name.

Revenues from communication module services, "Phone Number Storage," "Mail Address Storage," "docomo Business Transceiver" and wholesale telecommunications services and interconnecting telecommunications facilities that are provided to MVNOs are not included in NTT DOCOMO's ARPU calculation.

(3) Liquidity and Capital Resources

The status of cash flows during the fiscal year ended March 31, 2017 and 2018 were as follows.

Year Ended March 31	Billions of yen	
	2017	2018
Cash flows provided by operating activities		2,637.5
Cash flows provided by operating activities (Excluding the effect of a non-business day*)	2,917.4	2,869.5
Cash flows used in investing activities	(2,089.3)	(1,841.8)
Cash flows used in financing activities	(981.5)	(931.7)
Cash and cash equivalents at the end of year		780.3
Cash and cash equivalents at the end of year (Excluding the effect of a non-business day*)	925.2	1,012.2

* An effect in the amount of ¥231.9 billion, caused by the last day of the fiscal year ended March 31, 2018 falling on a non-business day, resulting in the due date for certain bills, including telecommunication services bills, being set to the first business day of the fiscal year ending March 31, 2019.

Financing, Capital Resources and Use of Funds

Net cash provided by operating activities during the fiscal year ended March 31, 2018, excluding the effect of a non-business day, amounted to ¥2,869.5 billion, a decrease of ¥47.9 billion from ¥2,917.4 billion in the fiscal year ended March 31, 2017. This decrease was primarily due to a decrease in the amount of accounts receivable collected in the fiscal year ended March 31, 2018 compared to the fiscal year ended March 31, 2017. Net cash provided by operating activities during the fiscal year ended March 31, 2018, was ¥2,637.5 billion.

NTT Group used the net cash provided by operating activities mainly to acquire property, plant and equipment, pay dividends and complete stock repurchases.

Net cash used in investing activities during the fiscal year ended March 31, 2018 amounted to ¥1,841.8 billion, a decrease of ¥247.5 billion from ¥2,089.3 billion in the fiscal year ended March 31, 2017. This decrease was due to, among other things, a decrease of ¥309.4 billion in expenditures on acquisitions of subsidiaries, despite an increase of ¥8.9 billion in investments for property, plant and equipment and intangibles on a cash basis.

The increase in payments for investments in property, plant and equipment and intangibles for the fiscal year ended March 31, 2018 resulted from, among other things, an increase in capital expenditures due to the expansion of the scope of large-scale projects in the data communications business, despite a decrease in capital expenditures due to a reduction in fiber-optic-related capital expenditures in the regional communications business and improved efficiency in the construction of base stations in the mobile communications business. For the fiscal year ended March 31, 2018, capital investments amounted to ¥1,674.8 billion on an accrual basis, of which ¥549.6 billion was invested in the regional communications business and ¥576.4 billion was invested in the mobile communications business.

Net cash used in financing activities during the fiscal year ended March 31, 2018 amounted to ¥931.7 billion, a decrease in payments of ¥49.9 billion from ¥981.5 billion in the fiscal year ended March 31, 2017. The decrease in payments was due to, among other things, a net decrease of ¥138.9 billion in payments due to stock repurchases despite a net increase of ¥79.2 billion in expenses from the repayment of short-term and long-term debt. The capital raised from the issuance of long-term debt in the fiscal year ended March 31, 2018 includes ¥95.9 billion in net proceeds from corporate bond offerings and an aggregate of ¥345.0 billion in loans from financial institutions.

As of March 31, 2018, the total balance of the interest-bearing debt of NTT Group was ¥3,854.8 billion, a decrease of ¥233.4 billion from the balance of ¥4,088.2 billion as of March 31, 2017. The ratio of interest-bearing debt to shareholders' equity stood at 40.6% as of March 31, 2018 (from 45.2% as of March 31, 2017). Interest-bearing debt as of March 31, 2018 comprised short-term debt and long-term debt, as shown in Note 14 to the Consolidated Financial Statements, as well as ¥11.8 billion in deposits received pursuant to depositary agreements.

NTT Group believes that the net cash it expects to generate from operating activities, financing from banks and other financial institutions and/or offerings of equity or debt securities in the capital markets will provide the requisite financial resources to meet NTT Group's currently anticipated capital investment and other expenditure needs and payment of debt.

For the fiscal year ending March 31, 2019, NTT Group expects to make capital investments totaling ¥1,700.0 billion on an accrual basis, due to, among other things, an increase in capital investments due to data center construction and an increase in the number of consolidated overseas subsidiaries in the long distance and international communications business, despite a decrease in capital investments related to improved efficiency in the maintenance of equipment in the regional communications business and improved efficiency in the construction of base stations in the mobile communications business. The total amount of expected capital investments includes ¥545.0 billion in the regional communications business and ¥570.0 billion in the mobile communications business. The actual amount of capital investments may be different from expected one, since capital investments may be influenced by trends in demand, the competitive environment and other factors. In addition, the actual amount of NTT Group's financing will depend on its future performance, market conditions and other factors, and is therefore difficult to predict.

Liquidity

As of March 31, 2018, NTT Group had cash and cash equivalents balance (including short-term investments with principal maturities of less than three months), excluding the effect of a non-business day, at the end of the fiscal year of ¥1,012.2 billion, an increase of ¥87.0 billion compared to the balance of ¥925.2 billion as of March 31, 2017. Cash equivalents represent a temporary cash surplus used to repay debts and make capital investments, among other things, and are used as working capital. Accordingly, the balance of cash equivalents fluctuates each fiscal year depending on particular financing and working capital requirements. Cash and cash equivalents at the end of year for the fiscal year ended March 31, 2018, were ¥780.3 billion.

Contractual Obligations

NTT Group's existing contractual obligations as of March 31, 2018 were summarized as follows:

Contractual Obligations	Payments Due by Period				
	Total	Less than one year	One to three years	Three to five years	More than five years
(in millions of yen)					
Long-term debt ⁽¹⁾					
Bonds	1,233,835	222,248	511,497	324,653	175,437
Bank loans	2,338,495	402,137	482,506	562,123	891,729
Interest payments on long-term debt	186,800	39,675	59,558	32,478	55,089
Capital lease obligations ⁽²⁾	42,447	14,874	17,524	6,442	3,607
Operating leases	182,280	45,095	63,246	34,945	38,994
Purchase obligations ⁽³⁾	123,654	86,742	18,426	5,980	12,506
Other fixed liabilities ⁽⁴⁾	—	—	—	—	—
Total contractual obligations	4,107,511	810,771	1,152,757	966,621	1,177,362

(1) See Note 14 to the Consolidated Financial Statements for details on Long-term debt.

(2) Capital lease obligations include interest.

(3) Purchase obligations mainly represent outstanding commitments for the purchase of property, plant and equipment and other assets. The amount includes outstanding commitments with a remaining term of one year or less but excludes those which are cancelable.

(4) The amount of other long-term obligations is not shown in the above table, due to the immateriality of certain obligations and uncertainty of certain payments. In addition, NTT Group expects to contribute a total amount of ¥16,309 million to its pension plans in the fiscal year ending March 31, 2019 (see Note 15 to the Consolidated Financial Statements).

As of March 31, 2018, NTT Group had outstanding commitments mainly for the purchase of property, plant and equipment and other assets of approximately ¥126.0 billion. NTT Group expects to fund such commitments with cash provided by operating activities.

(4) Off-Balance Sheet Arrangements

As of March 31, 2018, NTT Group's contingent liabilities for loans and other loans that NTT Group guaranteed totaled ¥85.0 billion.

(5) Critical Accounting Policies

NTT Group's consolidated financial statements are prepared in accordance with accounting principles generally accepted in the United States. Note 3 to the Consolidated Financial Statements includes a summary of significant accounting policies used in the preparation of these financial statements. NTT believes that, of its significant accounting policies, the following may involve a higher degree of judgment or complexity.

Revenue recognition

Revenues from non-recurring upfront fees, such as activation fees, are deferred and recognized as revenue over the estimated average period of the customer contract for each service. The related direct costs are deferred only to the extent of the non-recurring upfront fee amount and are amortized over the same period. While this policy does not have a material impact on net income, the reported amounts of revenue and cost of services are affected by the level of revenues from non-recurring upfront fees, related direct costs and the estimated average customer relationship period. Factors that affect management's estimate of the average customer relationship period over which such fees and costs are amortized include subscriber churn rates and newly introduced or anticipated products, services and technologies. The current amortization periods are based on an analysis of historical trends and the experience of NTT and its subsidiaries.

In connection with revenues from system integration projects, provision for estimated losses, if any, is made in the fiscal year in which the loss first becomes probable and reasonably quantifiable. Such losses are recognized based on estimates of total expected contract revenues and costs upon completion. This method permits reasonably dependable estimates of revenues and costs to be made at various stages of a contract. Recognized losses are subject to revision as the contract progresses to completion. Revisions in loss estimates are recorded in the period in which the facts that give rise to the revision become known.

Property, plant and equipment, software and certain other amortizable intangible assets and intangible assets with indefinite useful lives

NTT Group estimates the useful lives and the residual values of property, plant and equipment, software and certain other intangibles with finite useful lives, in order to determine the amount of depreciation and amortization expense to be recorded during any reporting period. The useful lives and the residual values are estimated at the time the assets are acquired and are based on historical experience with similar assets as well as anticipated technological or other changes. If technological changes were to occur more rapidly than anticipated or in a different form than anticipated, the useful lives assigned to these assets may need to be shortened, resulting in the recognition of increased depreciation and amortization expenses in future periods.

NTT Group also reviews such assets for impairment whenever events or changes in circumstances indicate that their carrying amount may not be recoverable. If the total of the expected future undiscounted cash flow is less than the carrying amount of the asset, NTT Group records the difference between the carrying value of the asset and its fair value as measured through various valuation techniques, including the discounted cash flow method, quoted market value and third-party independent appraisals, as considered necessary, under "Impairment losses-Other." Impairment losses for a portion of metal cables for the telecommunications business described in Note 9 to the consolidated financial statements are recorded under "Impairment losses-Metal cables," and the corresponding fair value measurements are described in Note 19 to the consolidated financial statements.

Impairment losses recorded under "Impairment losses-Metal cables" and "Impairment losses-Other"

Year Ended March 31	Billions of yen	
	2017	2018
Impairment losses-Metal cables	—	124.8
Impairment losses-Other	20.6	18.5

Intangible assets with indefinite lives are not amortized and are tested for impairment at least once a year.

Goodwill

Goodwill is tested for impairment at the reporting unit level, which is either at the business segment level or one level below, at least annually and more frequently if there are indications of impairment. For further details regarding the goodwill impairment test, please see Note 3 — “(1) Principal Accounting Policies — Goodwill” in the consolidated financial statements.

The determinants used for the fair value measurement include management’s estimate of the reporting unit’s continuing ability to generate income from operations and cash flows in future periods, and the strategic significance of the reporting unit to NTT’s business objectives. NTT Group measures fair value based on certain assumptions that are determined to be currently reasonable. However, actual values may differ from those stated in the consolidated financial statements if unexpected changes occur in the business operation environment in the future.

NTT Group’s total “Impairment losses-Goodwill” in the fiscal years ended March 31, 2017 and 2018 were ¥53.3 billion and ¥18.9 billion, respectively.

As of March 31, 2018, out of the material reporting units, the carrying amounts of goodwill attributable to Dimension Data and “North America” in the data communications business segment were ¥236.6 billion and ¥328.8 billion, respectively. As a result of the annual impairment test conducted for the fiscal year ended March 31, 2018, the fair value of the reporting unit attributable to Dimension Data and “North America” exceeded their carrying amounts by 48.3% and 16.0%, respectively. During the fiscal year ended March 31, 2018, NTT Group realigned reporting units in the data communications business segment as described in Note 3 — “(1) Principal Accounting Policies — Goodwill ” in the consolidated financial statements.

Investments

NTT Group holds investments in other companies, which NTT Group accounts for under the cost method, equity method or at fair value. NTT Group recognizes an impairment loss when the decline in value below the carrying amount of the investment is other than temporary, which then establishes a new cost basis in the investment. When determining if the decline in value is other than temporary, NTT Group considers, the magnitude of the decline in value below the carrying amounts, the length of time the value has been below the carrying amounts, the financial condition of the investee company, the strength of the industry in which it operates, and NTT Group’s ability or intent to retain the investment. NTT Group performs a review for impairment whenever events or changes in circumstances indicate that the carrying amount of an investment may not be recoverable.

Further, NTT Group utilizes a variety of information, including cash flow projections, independent valuations and, if applicable, stock price analyses, in performing its evaluations. Such projections and valuations necessarily require estimates involving demographics (e.g., population, penetration rates and penetration speed, churn rates, etc.), technology changes, capital investments, market growth and share, ARPU and terminal values. NTT Group’s total impairment amounts for “Marketable securities and other investments” in the fiscal years ended March 31, 2017 and 2018 were approximately ¥3.0 billion and ¥5.0 billion, respectively. NTT Group reviews factors such as the financial condition and near-term prospects of those investees in order to determine if the value of any of its investments in them has suffered a decline that was other than temporary due to the recent economic and financial environment surrounding the industry of those equity method investees. For the fiscal year ended March 31, 2017 and 2018, NTT Group recorded an impairment loss of ¥23.9 billion and ¥2.6 billion, respectively, relating to investments in affiliated companies, including Hutchison Telephone Company Limited.

In the past, NTT Group experienced material impairments in the value of its investments in equity method affiliates that were included in “Equity in earnings (losses) of affiliated companies” in its consolidated statements of income and comprehensive income for relevant years. NTT Group may experience similar impairments with respect to “Marketable securities and other investments” and “Investments in affiliated companies” again in the future. NTT Group may also experience material gains or losses on the sale of investments.

Employees' retirement benefits

The total costs of employees' retirement benefits and pension plans represented approximately 1.0% of NTT Group's total operating expenses for each of the fiscal years ended March 31, 2017 and 2018. The amounts recognized in the consolidated financial statements related to employees' retirement benefits and pension plans are determined on an actuarial basis, which utilizes certain assumptions in the calculation of such amounts. The assumptions used in determining net periodic costs and liabilities for retirement benefits and pension plans include the expected long-term rate of return on plan assets, a discount rate, the rate of increase in compensation levels, average remaining years of service, and other factors. Specifically, the expected long-term rate of return on assets and the discount rate are two critical assumptions. Assumptions are evaluated at least annually, and events may occur or circumstances change that may have a significant effect on the critical assumptions. In accordance with accounting principles generally accepted in the United States, actual results that differ from NTT Group's assumptions are accumulated and amortized over future periods, thereby reducing the year-to-year volatility in pension expenses. As of March 31, 2018, the total amount of net actuarial loss was ¥379.2 billion. The net actuarial loss exceeding 10% of the greater of the projected benefit obligation or the fair value of plan assets will be amortized over the expected average remaining service period of employees on a straight-line basis. That amortization will increase future pension costs.

Expected long-term rate of return on plan assets

NTT Group used an expected long-term rate of return on pension plan assets of 2.0% to 2.5% for the fiscal year ended March 31, 2017 and 1.0% to 1.9% for the fiscal year ended March 31, 2018. In determining the expected long-term rate of return on pension plan assets, NTT considers the current and projected asset allocations, as well as expected long-term investment returns and risks for each category of plan assets based on NTT's analysis of historical results. The target allocation ratios for plan assets are developed in consideration of the expected long-term investment returns for each category of plan assets. The target allocation ratios for plan assets are as follows:

	Severance Payments and Contract-type Corporate Pension Plans	NTT Corporate Defined Benefit Pension Plan
Domestic bonds	65.0%	54.9%
Domestic stocks	10.0%	15.1%
Foreign bonds	—	6.4%
Foreign stocks	5.0%	10.8%
Life insurance company general accounts	20.0%	12.8%
Total	100.0%	100.0%

As of March 31, 2018, the actual allocations of plan assets were generally consistent with the projected allocations stated above. The actual returns for the fiscal years ended March 31, 2017 and 2018 were approximately 3% and 4%, respectively. The actual returns on pension plan assets may vary in future periods, depending on market conditions. The fair value of plan assets is measured using market values on the plan measurement date.

Discount rate

Another critical assumption is the discount rate used in the annual actuarial valuation of net periodic costs and benefit obligations. In determining the net periodic costs, NTT Group used a discount rate of 0.5% as of March 31, 2017 and 0.7% as of March 31, 2018. In determining the benefit obligations, NTT Group used a discount rate of 0.7% as of March 31, 2017 and 0.6% as of March 31, 2018. In determining the appropriate discount rate, NTT considers available information about the current yield on high-quality fixed-income investments with maturities corresponding to the expected duration of the pension benefit obligations ("PBO").

The following table illustrates the sensitivity to changes in the discount rate and the expected return on pension plan assets, while holding all other assumptions constant, for NTT Group's pension plans as of March 31, 2018:

Change in Assumption	Change in PBO	Change in Pre-Tax Pension Expenses	Change in Equity (Net of Tax)
		(in billions of yen)	
50 basis point increase / decrease in discount rate	-/+ 240.0	+/- 6.0	+/- 170.0
50 basis point increase / decrease in expected return on assets	—	-/+ 11.0	—

Income taxes

NTT Group recognizes deferred tax assets and liabilities for the expected future tax consequences attributable to temporary differences between the financial statement carrying amounts and the tax bases of assets or liabilities and operating loss carryforwards. Deferred tax assets and liabilities are measured using enacted tax rates that are expected to be applicable during the periods in which existing temporary differences reverse and loss carryforwards are utilizable. The effect on deferred tax assets and liabilities of a change in tax rates is recognized in income tax expenses in the period that includes the enactment date.

NTT Group recognizes a valuation allowance on deferred tax assets to reflect the amount of future tax benefits that are not expected to be realized. In determining the appropriate valuation allowance, NTT Group takes into account the level of expected future taxable income and available tax planning strategies. If future taxable income is lower than expected or if expected tax-planning strategies are not available as anticipated, NTT Group may recognize an additional valuation allowance through income tax expense (benefit) -Deferred in the period in which such judgment is made. As of March 31, 2017 and 2018, NTT Group had deferred tax assets of ¥1,732.3 billion and ¥1,544.6 billion, which included respective valuation allowance of ¥379.5 billion and ¥247.1 billion. The valuation allowance mainly related to deferred tax assets of NTT and certain subsidiaries with operating loss carryforwards for tax purposes that are not expected to be realized. The net change in the total valuation allowance for the fiscal years ended March 31, 2017 and 2018 were an increase of ¥212.3 billion and a decrease of ¥ 132.4 billion, respectively.

For additional details, please see Note 16 to the Consolidated Financial Statements.

Accrued liabilities for point programs

NTT Group grants “points” to customers based on the usage of mobile, credit card service and other services, which may be exchanged for benefits such as payments on merchandise and mobile phone charges, and records “Accrued liabilities for point programs” relating to the points that customers earn. The aggregate total amount of accrued liabilities for point programs recognized as short-term and long-term liabilities as of March 31, 2017 and 2018 was ¥114.6 billion and ¥124.9 billion, respectively. Point program expenses for the fiscal years ended March 31, 2017 and 2018 were ¥94.7 billion and ¥121.7 billion, respectively.

In determining the accrued liabilities for point programs, NTT Group estimates such factors as the point utilization rate, taking into account the forfeitures caused by, among other things, expected future subscription cancellations if NTT Group could estimate such forfeitures. Higher than estimated point utilization rates could result in the need to recognize additional expenses or accrued liabilities in the future.

In determining the accrued liabilities for point programs, NTT Group estimates that as of March 31, 2018, a one-percent increase in the point utilization rate would result in an immaterial amount of additional liability accrual, if all other factors are held constant.

(6) Application of New Accounting Standards Not Yet Adopted

Please see Note 3(3) in the consolidated financial statements.

4. Significant Management Contracts

Not applicable.

5. Research and Development

NTT Group pursued a range of R&D pursuant to its Medium-Term Management Strategy “Towards the Next Stage 2.0.” On the basis of “corevo®,” a collective term for the brand established for NTT Group’s AI technology, NTT Group promoted collaboration with partners in various industries. Furthermore, in order to commercialize the results of development, NTT Group developed business plans tailored to market trends based on its Comprehensive Commercialization System and worked to promote development for practical use.

Initiatives to Expand B2B2X Business

- To promote the creation of a platform to support the various services required for the realization of connected cars, such as driving support through vehicle control and cloud computing, NTT Group formed a consortium with partners such as Toyota Motor Corporation and Intel Corporation to create a network platform and a computing platform for automobile big data.
- With the goal of developing robot technology capable of proactively supporting human activities, NTT Group began joint research with Toyota Motor Corporation on robotic services making use of lifestyle support robots utilizing the AI technology “corevo®,” which achieves high-level dialogue with humans that includes both body language and hand gestures.
- To establish a next-generation platform for marine vessel IoT to monitor detailed ship data including operating conditions and equipment conditions, and to share information between the ship and the shore, NTT Group conducted successful joint testing with companies including Nippon Yusen Kabushiki Kaisha.
- NTT Group carried out field testing with Kubota Corporation aimed at achieving energy savings in the agricultural and aquatic environment fields, including energy savings in the monitoring of rice paddies and labor reduction in aquatic environment facilities, etc.
- In the rehabilitation field, in collaboration with the Fujita Academy Incorporated Educational Institution FUJITA HEALTH UNIVERSITY and Toray Industries, Inc., NTT Group promoted the field testing of optimized intervention and early recovery through 24-hour monitoring, quantitative results measurement, and visualization of the patient’s pulse and activity information using “hitoe®,” a functional material capable of measuring biomedical signals.

Research and Development to Improve Efficiency and Enhance Profitability of Network Businesses

- With the objective of reducing network costs and increasing the sophistication of services for carriers, to advance the introduction of universal devices such as white box switches, NTT Group promoted joint testing utilizing NTT-developed open-source software with companies including Taiwan’s Chungwa Telecom.
- In crowded environments such as stadiums that experience overcrowding of wireless LAN devices including smartphones, tablets, and laptop computers, NTT Group developed a new wireless LAN technology to increase communication speeds, and succeeded in transmission testing that achieved more than double the previous communication speeds.
- In anticipation of the spread of 5G and the increase in 5G mobile system base stations, NTT Group developed fiber-optic access network technology that contributes to reducing the number of fiber-optics required by base stations, and succeeded in the field testing of fiber-optic access systems in conjunction with mobile systems.

Research and Development that Enable Highly Immersive New Experiences

- NTT Group held a “New Music Experience Live Event” utilizing “Kirari!®” technology, whose ultra-high sense of presence makes it feel like you are actually there, and other transmission technologies that incorporate various visual technologies and 5G. Staging various performances in three cities around the world, NTT Group synchronized the coverage to remove any time lags in the visual and audio occurring due to the distance and combined it as a single live visual broadcast. NTT Group managed to provide a completely new, space-surpassing entertainment experience.
- As part of the joint testing being pursued with SHOCHIKU Co., Ltd., using “Kirari!®” technology, NTT Group transmitted the dances of kabuki actors being performed in different locations in real time, achieving the world’s first kabuki performance that merged the real with the virtual.
- To determine the utility of various technologies including “Kazashite Guidance®,” which allows valuable information to be obtained in one’s native language by simply pointing a smartphone camera at signage and other objects, and to create services offering valuable tools for use both inside and outside the airport, NTT Group implemented public testing of information universal design at Haneda Airport, offering real-world application.

Promoting Cutting-edge Research

- As part of its “Quantum Neural Network,” which performs high-speed computation utilizing the quantum nature of light, NTT Group released an online cloud service that allows users to experience the rapid solving of problems difficult for traditional computers to solve.
- NTT Group created the “Tsuchinikaeru Battery®,” a biodegradable battery made only of materials with a low environmental impact that returns to the soil without any negative effects on the soil or organisms, and confirmed its functioning as a battery.
- NTT Group started joint testing with the Japan Softball Association in the “Sports Brain Science Project” to discover how the brains of elite athletes regulate their mental state and control physical exercise to deliver top-level performance. The aim is to elucidate the information processing of the brain to “Tone up the Brain to Win.”

As a result of these research and development initiatives, total expenditures for the year ended March 31, 2018 were ¥99.7 billion yen (a 4.7% decrease from the previous fiscal year), partially offset by revenues from core research and development of ¥94.9 billion yen (a 5.0% decrease from the previous fiscal year).

The following table presents a summary of research and development costs by segment for the fiscal year ended March 31, 2018:

Segment	Millions of yen	Summary
Regional communications business...	¥81,121	Research and development relating to IP and broadband services, increasing access services to meet diversifying user needs, high value-added services, and other services.
Long distance and international communications business.....	¥16,148	Development of high value-added services in fields ranging from IP networks to platforms, and other services.
Mobile communications business.....	¥91,773	Research and development in the area of new products and services related to mobile communications, and research and development aimed at increasing the quality of existing services and enhancing the performance of network functions, among other things.
Data communications business.....	¥14,570	Technology development to strengthen competitiveness in systems integration and other fields.
Other business.....	¥105,329	Research and development relating to: (a) the creation of basic technologies required for the development of advanced networks and new services that will support the development of an ICT society, (b) technologies that contribute to reducing industry’s burden on the environment, (c) new principles, new parts and new materials expected to bring about extensive technological innovations in the information and communications sector, and (d) others.
Subtotal.....	¥308,941	
Elimination.....	(95,000)	
Total.....	¥213,941	

ITEM 3. PROPERTY, PLANT AND EQUIPMENT

1. Overview of Capital Investments

NTT Group (including its consolidated subsidiaries) has shifted its investment focus from investments primarily centered on telecommunications infrastructure project developments to investments that are responsive to various service needs.

The following table summarizes capital investments for the fiscal year ended March 31, 2018:

Segment	Millions of yen	Percent Change	Summary
Regional communications business.....	¥549,649	(5.8)%	Maintenance and improvements of voice communications equipment, expansion of data transmissions equipment, and others
Long distance and international communications business.....	¥232,501	(5.0)%	Expansion and improvement of data communications equipment, maintenance and improvements of voice communications equipment, and others
Mobile communications business	¥576,412	(3.5)%	Expansion and improvement of mobile communications transmissions equipment, and others
Data communications business	¥194,054	22.7 %	Expansion and maintenance of data communications equipment, and others
Other business.....	¥122,147	4.8 %	
Total.....	¥1,674,763	(1.5)%	

Notes: 1. The above figures do not include consumption taxes.

2. NTT Group plans to procure the required funds from cash on hand, the issuance of corporate bonds and long-term debt.

3. Capital investments include investments related to the acquisition of intangible fixed assets.

4. NTT Group used the capital investment amounts shown above, determined on an accrual basis, to acquire tangibles and intangibles. The table below presents the difference between the amount of capital investments shown above and the amount presented on the consolidated statements of cash flows under “Payments for property, plant and equipment” and “Payments for intangibles.”

	Year ended March 31, 2018
	(in millions of yen)
Payments for property, plant and equipment.....	¥1,308,727
Payments for intangibles.....	401,995
Total.....	1,710,722
Difference in capital investment amounts.....	¥35,959

2. Overview of Major Facilities

NTT Group's major facilities were as follows:

(1) Breakdown by Segment

As of March 31, 2018						
	Telecom Facilities	Land	Buildings	Other	Total	Number of Employees
	(in millions of yen)					(people)
Regional communications business.....	¥3,245,743	¥421,388	¥818,359	¥329,160	¥4,814,650	67,592
Long distance and international communications business.....	191,841	73,970	292,163	982,892	1,540,866	45,320
Mobile communications business.....	1,708,278	198,400	296,365	1,228,220	3,431,263	27,464
Data communications business.....	89,327	66,078	110,552	849,119	1,115,076	118,006
Other business.....	-	548,149	470,665	302,849	1,321,663	24,151
Total.....	¥5,235,189	¥1,307,985	¥1,988,104	¥3,692,240	¥12,223,518	282,533

Note: The above figures do not include consumption taxes.

(2) Overview of the Company and Consolidated Subsidiaries

As of March 31, 2018

<u>Company Name</u>	<u>Type of Asset</u>	<u>Book Value</u> <u>(Millions of Yen)</u>	<u>Land Area</u> <u>(m²)</u>	<u>Number of Branches</u>	<u>Number of</u> <u>Employees</u>
Nippon Telegraph and Telephone Corporation	Mechanical equipment	-	834,341.65	Headquarters (1)	2,644
	Antenna systems	-		Others (4)	
	Terminal equipment	-			
	Local lines equipment	-			
	Long-distance lines equipment	-			
	Civil engineering equipment	-			
	Underwater lines equipment	-			
	Land	29,151			
	Buildings	90,121			
	Leased assets	29			
	Other	36,278			
	Total	155,580			

As of March 31, 2018

<u>Company Name</u>	<u>Type of Asset</u>	<u>Book Value (Millions of Yen)</u>	<u>Land Area (m²)</u>	<u>Number of Branches</u>	<u>Number of Employees</u>
Nippon Telegraph and Telephone East Corporation	Mechanical equipment	335,097	8,052,453.74	Headquarters (1) Branches (29)	4,700
	Antenna systems	3,461			
	Terminal equipment	20,611			
	Local lines equipment	834,617			
	Long-distance lines equipment	2,862			
	Civil engineering equipment	580,874			
	Underwater lines equipment	586			
	Land	196,254			
	Buildings	398,749			
	Leased assets	1,166			
	Other	149,896			
	Total	2,524,178			
Nippon Telegraph and Telephone West Corporation	Mechanical equipment	291,153	10,382,556.18	Headquarters (1) Branches (30)	3,927
	Antenna systems	6,287			
	Terminal equipment	11,371			
	Local lines equipment	1,041,093			
	Long-distance lines equipment	1,625			
	Civil engineering equipment	506,096			
	Underwater lines equipment	3,815			
	Land	172,171			
	Buildings	318,360			
	Leased assets	140			
	Other	111,884			
	Total	2,464,000			

As of March 31, 2018

<u>Company Name</u>	<u>Type of Asset</u>	<u>Book Value (Millions of Yen)</u>	<u>Land Area (m²)</u>	<u>Number of Branches</u>	<u>Number of Employees</u>
NTT Communications	Mechanical equipment	132,029	1,302,311.70	Headquarters (1) Branches (14)	6,261
	Antenna systems	1,462			
	Terminal equipment	2,096			
	Local lines equipment	1,096			
	Long-distance lines equipment	5,082			
	Civil engineering equipment	49,490			
	Underwater lines equipment	14,609			
	Land	48,571			
	Buildings	202,770			
	Leased assets	8,111			
	Other	166,533			
	Total	631,854			
NTT DOCOMO, Inc.	Mechanical equipment	1,111,645	3,789,504	Headquarters (1) Branches (8)	7,767
	Antenna systems	537,762			
	Terminal equipment	-			
	Local lines equipment	28,540			
	Long-distance lines equipment	-			
	Civil engineering equipment	13,940			
	Underwater lines equipment	-			
	Land	196,488			
	Buildings	281,815			
	Leased assets	435			
	Other	689,999			
	Total	2,860,628			

As of March 31, 2018

<u>Company Name</u>	<u>Type of Asset</u>	<u>Book Value (Millions of Yen)</u>	<u>Land Area (m²)</u>	<u>Number of Branches</u>	<u>Number of Employees</u>
NTT DATA	Mechanical equipment	76,718	153,379	Headquarters (1) Branches (17)	11,263
	Antenna systems	-			
	Terminal equipment	11,061			
	Local lines equipment	-			
	Long-distance lines equipment	-			
	Civil engineering equipment	-			
	Underwater lines equipment	-			
	Land	56,064			
	Buildings	80,804			
	Leased assets	649			
	Other	242,774			
	Total	468,070			

3. Planned Capital Investments and Disposals of Property

At NTT Group (including NTT and its consolidated subsidiaries), plans for capital investments are generally made at the level of each subsidiary. Planned capital investments for the year ending March 31, 2019 are ¥1,700.0 billion yen, broken down by segment as follows:

<u>Segment</u>	<u>Amount</u> <u>(millions of yen)</u>	<u>Description and Purpose of Investment</u>
Regional communications business	545,000	Maintenance and improvements of voice communications equipment, expansion of data transmissions equipment, and others
Long distance and international communications business	252,000	Expansion and improvement of data communications equipment, maintenance and improvements of voice communications equipment, and others
Mobile communications business	570,000	Expansion and improvement of mobile communications transmissions equipment, and others
Data communications business	176,000	Expansion and maintenance of data communications equipment, and others

Notes: 1. The above figures do not include consumption taxes.

2. NTT Group plans to procure the required funds from cash on hand, the issuance of corporate bonds and long-term debt.

ITEM 4. INFORMATION ON NTT

1. Information on NTT's Shares

(1) Total Number of Shares

i. Total Number of Shares

<u>Class</u>	<u>Total Number of Shares Authorized to be Issued (shares)</u>
Common stock	6,192,920,900
Total	6,192,920,900

ii. Issued Shares

<u>Class</u>	<u>Number of Shares Issued as of March 31, 2018 (shares)</u>	<u>Number of Shares Issued as of the Filing Date (shares) (June 27, 2018)</u>	<u>Stock Exchange on which the Company is Listed</u>	<u>Description</u>
Common Stock	2,096,394,470	2,096,394,470	Tokyo Stock Exchange (First Section)	The number of shares per one unit of shares is 100 shares
Total	2,096,394,470	2,096,394,470	—	—

Notes: 1. Pursuant to the Board of Directors' resolution on December 12, 2016, NTT acquired 30,587,200 shares of its outstanding common stock between December 19, 2016 and April 12, 2017.

2. Pursuant to the Board of Directors' resolution on September 25, 2017, NTT acquired 26,946,400 shares of its outstanding common stock between October 4, 2017 and December 8, 2017.

3. Pursuant to the Board of Directors' resolution on February 21, 2018, NTT acquired 29,178,000 shares of its outstanding common stock between March 5, 2018 and May 23, 2018.

(2) Information on Share Acquisition Rights

i. Description of Stock Option System

Not applicable.

ii. Information on Shareholder Rights Plans

Not applicable.

iii. Information on Other Share Acquisition Rights

Not applicable.

(3) Information on Moving Strike Convertible Bonds

Not applicable.

(4) Changes in the Total Number of Issued Shares and Capital

<u>Date</u>	<u>Changes in the total number of issued shares (shares)</u>	<u>Balance of the total number of issued shares (shares)</u>	<u>Changes in Capital (millions of yen)</u>	<u>Balance of Capital (millions of yen)</u>	<u>Change in Capital Reserve (millions of yen)</u>	<u>Balance of Capital Reserve (millions of yen)</u>
November 15, 2013 ⁽¹⁾	(186,500,000)	1,136,697,235	—	937,950	—	2,672,826
July 1, 2015 ⁽²⁾	1,136,697,235	2,273,394,470	—	937,950	—	2,672,826
November 13, 2015 ⁽³⁾	(177,000,000)	2,096,394,470	—	937,950	—	2,672,826

Notes: 1. NTT cancelled 186,500,000 shares held as treasury stock on November 15, 2013.

2. NTT completed a two-for-one stock split of its common stock with an effective date of July 1, 2015.

3. NTT cancelled 177,000,000 shares held as treasury stock on November 13, 2015.

(5) Composition of Shareholders

As of March 31, 2018

Class	Status of Shares (100 shares per unit of stock)								Number of Less-than-One-Unit Shares (shares)
	National and Local Governments	Financial Institutions	Financial Instrument Business Operators	Other Institutions	Foreign Shareholders		Individuals and Others	Total	
					Non-Individuals	Individuals			
Number of Shareholders (people)	4	275	78	5,248	1,479	787	649,365	657,236	—
Share Ownership (units)	6,791,435	3,711,319	254,693	242,719	5,713,544	7,986	4,216,615	20,938,311	2,563,370
Percentage of Shares (%)	32.44	17.73	1.22	1.16	27.29	0.04	20.14	100.00	—

Notes: 1. “Individuals and Others” and “Number of Less-than-One-Unit Shares” above include 1,253,191 units and 58 shares of treasury stock, respectively. Furthermore, there were 125,319,158 shares of treasury stock recorded on the list of shareholders, and the actual number of treasury stock held was 125,318,558 as of March 31, 2018.

2. “Other Institutions” and “Number of Less-than-One-Unit Shares” above include 291 units and 44 shares registered in the name of Japan Securities Depository Center, Inc., respectively.

3. The number of persons holding less-than-one-unit shares was 185,282.

(6) Major Shareholders

As of March 31, 2018

Name	Address	Number of Shares Held (thousands of shares)	Ownership Percentage of the Total Number of Issued Shares
The Minister of Finance	1-1, Kasumigaseki 3-chome, Chiyoda-ku, Tokyo	679,122	34.45
Japan Trustee Services Bank, Ltd. (Trust Account)	8-11, Harumi 1-chome, Chuo-ku, Tokyo	84,566	4.29
The Master Trust Bank of Japan, Ltd. (Trust Account)	11-3, Hamamatsucho 2-chome, Minato-ku, Tokyo	72,864	3.70
JPMorgan Chase Bank 380055 (Standing proxy: Mizuho Bank, Ltd.)	270 PARK AVENUE, NEW YORK, NY 10017, UNITED STATES OF AMERICA (15-1, Konan 2-chome, Minato-ku, Tokyo)	39,826	2.02
Japan Trustee Services Bank, Ltd. (Trust Account 9)	8-11, Harumi 1-chome, Chuo-ku, Tokyo	28,099	1.43
Japan Trustee Services Bank, Ltd. (Trust Account 5)	8-11, Harumi 1-chome, Chuo-ku, Tokyo	26,911	1.37
Japan Trustee Services Bank, Ltd. (Trust Account 1)	8-11, Harumi 1-chome, Chuo-ku, Tokyo	19,993	1.01
Japan Trustee Services Bank, Ltd. (Trust Account 2)	8-11, Harumi 1-chome, Chuo-ku, Tokyo	19,728	1.00
Moxley & Co. LLC (Standing proxy: The Bank of Tokyo-Mitsubishi UFJ, Ltd.)	4 NEW YORK PLAZA, 13TH FLOOR, NEW YORK, NY 10004 U.S.A (7-1, Marunouchi 2-chome, Chiyoda-ku) 25 BANK STREET, CANARY WHARF, LONDON, E14 5JP, UNITED KINGDOM (15-1, Konan 2-chome, Minato-ku, Tokyo)	19,199	0.97
JPMorgan Chase Bank 385632 (Standing proxy: Mizuho Bank, Ltd.)		18,267	0.93
Total	—	1,008,581	51.17

Notes: 1. Ownership Percentage of the Total Number of Issued Shares does not include treasury stock.

2. The Bank of Tokyo-Mitsubishi UFJ, Ltd. changed its name to MUFG Bank, Ltd. as of April 1, 2018.

(7) Information on Voting Rights**i . Issued Shares**

As of March 31, 2018

<u>Classification</u>	<u>Number of Shares (shares)</u>	<u>Number of Voting Rights</u>	<u>Description</u>
Shares without Voting Rights	—	—	—
Shares with Restricted Voting Rights (treasury stock, etc.)	—	—	—
Shares with Restricted Voting Rights (others)	—	—	—
Shares with Full Voting Rights (treasury stock, etc.)	Treasury Stock: 125,318,500 shares of common stock Others: 36,800 shares of common stock	—	—
Shares with Full Voting Rights (others)	1,968,475,800 shares of common stock	19,684,752	—
Shares Representing Less than One Unit	2,563,370 shares of common stock	—	—
Number of Issued Shares	2,096,394,470 shares of common stock	—	—
Total Number of Voting Rights	—	19,684,752	—

Note: The total number of shares in “Shares with Full Voting Rights (others)” includes 29,100 shares held in the name of the Japan Securities Depository Center, and the number of shares in “Shares Representing Less Than One Unit” includes 44 shares held in the name of the Japan Securities Depository Center. “Number of Voting Rights” includes 291 voting rights associated with “Shares with Full Voting Rights” held in the name of the Japan Securities Depository Center, and does not include 6 voting rights associated with “Shares with Full Voting Rights” recorded on the shareholder register under NTT, but not actually owned by NTT.

ii. Treasury Stock

As of March 31, 2018

<u>Name of Shareholder</u>	<u>Address</u>	<u>Number of Shares Held Under Own Name (shares)</u>	<u>Number of Shares Held Under the Names of Others (shares)</u>	<u>Total Shares Held (shares)</u>	<u>Ownership Percentage to the Total Number of Issued Shares</u>
(Treasury Stock) Nippon Telegraph and Telephone Corporation	5-1, Otemachi 1-chome, Chiyoda-ku, Tokyo	125,318,500	—	125,318,500	6.0%
(Others) Nihon Meccs Corporation	6-3, Irifune 3-chome, Chuo-ku, Tokyo	36,800	—	36,800	0.0%
Total	—	125,355,300	—	125,355,300	6.0%

- Notes: 1. In addition to the above, there are 600 shares that are recorded on the shareholder register under NTT, but not actually owned by NTT. Such shares are included in “Shares with Full Voting Rights (others)” under “Issued Shares” above.
2. Pursuant to the Board of Directors’ resolution on December 12, 2016, NTT acquired 30,587,200 shares of its outstanding common stock between December 19, 2016 and April 12, 2017. See Note 18 to the Consolidated Financial Statements- for additional details.
3. Pursuant to the Board of Directors’ resolution on September 25, 2017, NTT acquired 26,946,400 shares of its outstanding common stock between October 4, 2017 and December 8, 2017. See Note 18 to the Consolidated Financial Statements- for additional details.
4. Pursuant to the Board of Directors’ resolution on February 21, 2018, NTT acquired 29,178,000 shares of its outstanding common stock between March 5, 2018 and May 23, 2018. See Note 18 to the Consolidated Financial Statements for additional details.

2. Information on Acquisitions of Treasury Stock

Class of Shares: Acquisitions of common stock pursuant to Article 155, Paragraph 3 and Article 155, Paragraph 7 of the Companies Act of Japan

(1) Status of Acquisitions of Treasury Stock Pursuant to Resolutions at the General Meeting of Shareholders

Not applicable.

(2) Status of Acquisitions of Treasury Stock Pursuant to Resolutions at Meetings of the Board of Directors

Acquisitions pursuant to Article 155, Paragraph 3 of the Companies Act of Japan:

<u>Classification</u>	<u>Numbers of Shares (shares)</u>	<u>Total Amount (yen)</u>
Resolution of the Board of Directors of December 12, 2016 (Acquisition Period: December 13, 2016 to June 30, 2017)	33,000,000	150,000,000,000
Treasury stock acquired prior to the fiscal year ended March 31, 2018	21,693,800	106,763,161,600
Treasury stock acquired during the fiscal year ended March 31, 2018	8,893,400	43,234,763,600
Total number and value of remaining shares of treasury stock authorized	2,412,800	2,074,800
Percentage unused as of March 31, 2018 (%)	7.3	0.0
Treasury stock acquired during the current period	—	—
Percentage unused as of the filing date (%)	7.3	0.0

<u>Classification</u>	<u>Numbers of Shares (shares)</u>	<u>Total Amount (yen)</u>
Resolution of the Board of Directors of September 25, 2017 (Acquisition Period: September 26, 2017 to March 31, 2018)	30,000,000	150,000,000,000
Treasury stock acquired prior to the fiscal year ended March 31, 2018	—	—
Treasury stock acquired during the fiscal year ended March 31, 2018	26,946,400	149,999,763,400
Total number and value of remaining shares of treasury stock authorized	3,053,600	236,600
Percentage unused as of March 31, 2018 (%)	10.2	0.0
Treasury stock acquired during the current period	—	—
Percentage unused as of the filing date (%)	10.2	0.0

<u>Classification</u>	<u>Numbers of Shares (shares)</u>	<u>Total Amount (yen)</u>
Resolution of the Board of Directors of February 21, 2018 (Acquisition Period: February 22, 2018 to June 30, 2018)	31,000,000	150,000,000,000
Treasury stock acquired prior to the fiscal year ended March 31, 2018	—	—
Treasury stock acquired during the fiscal year ended March 31, 2018	8,400,000	42,010,087,100
Total number and value of remaining shares of treasury stock authorized	22,600,000	107,989,912,900
Percentage unused as of March 31, 2018 (%)	72.9	72.0
Treasury stock acquired during the current period	20,778,000	107,989,838,400
Percentage unused as of the filing date (%)	5.9	0.0

(3) Description of Acquisitions of Treasury Stock Not Made Pursuant to Resolutions at the General Meeting of Shareholders or Meetings of the Board of Directors

Acquisitions pursuant to Article 155, Paragraph 7 of the Companies Act of Japan:

<u>Classification</u>	<u>Numbers of Shares (shares)</u>	<u>Total Amount (yen)</u>
Treasury stock acquired during the fiscal year ended March 31, 2018	54,223	286,303,431
Treasury stock acquired during the current period	4,900	25,344,912

Note: “Treasury stock acquired during the current period” does not include acquisitions of less-than-one-unit shares from June 1, 2018 to the date of the filing of this Annual Securities Report.

(4) Status of Dispositions and Holdings of Acquired Treasury Stock

<u>Classification</u>	<u>Fiscal year ended March 31, 2018</u>		<u>Current Period</u>	
	Number of Shares (shares)	Total Disposition Amount (yen)	Number of Shares (shares)	Total Disposition Amount (yen)
Acquired treasury stock offered to subscribers	—	—	—	—
Acquired treasury stock that was canceled	—	—	—	—
Acquired treasury stock that was transferred due to mergers, exchange offers or company split	—	—	—	—
Other (Sales through requests to purchase less-than-one-unit shares)	2,424	12,636,204	314	1,610,154
Total number of treasury stock held	125,318,558	—	146,101,144	—

Notes: 1. The amounts of treasury stock sold or otherwise disposed of during the current period does not include acquisitions of less-than-one-unit shares from June 1, 2018 to the date of the filing of this Annual Securities Report.

2. The total amount of treasury stock held does not include acquisitions of less-than-one-unit shares from June 1, 2018 to the date of the filing of this Annual Securities Report.

3. Dividend Policy

In addition to increasing corporate value over the medium- and long-term, NTT has identified the return of profits to shareholders as an important management goal. In determining the level of dividends, NTT, while giving consideration to stability and sustainability, takes into account a full range of factors, including business performance, financial condition and dividend payout ratio.

NTT has a fundamental policy of distributing surplus twice a year, as interim and year-end dividends. The distribution of surplus is authorized by the general meeting of shareholders for year-end dividends, and by the Board of Directors for interim dividends. For the year ended March 31, 2018, pursuant to the dividend policy described above, the interim dividend was ¥75 per share and the year-end dividend was ¥75 per share, for a total dividend amount of ¥150 for the fiscal year.

While maintaining sound financial condition and as part of its capital policy to improve capital efficiency, NTT intends to use retained earnings for investments in new business opportunities.

NTT's Articles of Incorporation state, "The company shall, by resolution of the board of directors, be entitled to make distributions of surplus in accordance with Article 454, Paragraph 5 of the Companies Act to persons designated as pledgees of shares, as stipulated in Paragraph 1 of the preceding Article, by the notice served on the 30th day of September of each year from the transfer institution pursuant to Article 151, Paragraph 1 of the Book-Entry Transfer Act."

Dividend payments for the fiscal year ended March 31, 2018 were as follows:

<u>Date of Resolution</u>	<u>Total Amount of Dividends</u> (millions of yen)	<u>Dividends Per Share</u> (yen)
November 10, 2017 Resolution of the Board of Directors	150,484	75
June 26, 2018 Resolution of the General Meeting of Shareholders	147,831	75

4. Stock Price Information

(1) Highest and Lowest Stock Prices for the Most Recent Five Fiscal Years

Business Term	29 th Business Term	30 th Business Term	31 st Business Term	32 nd Business Term	33 rd Business Term
Year End	March 2014	March 2015	March 2016	March 2017	March 2018
Highest Price (yen)	6,009	7,763	9,147 □5,419	5,180	5,905
Lowest Price (yen)	3,925	5,051	7,252 □4,005	4,156	4,545

Notes: 1. The highest and lowest stock prices are from the First Section of the Tokyo Stock Exchange.

2. NTT conducted a two-for-one stock split of its common stock with an effective date of July 1, 2015. The top-line highest and lowest stock prices for the 31st Business Term are from before the stock split, and the highest and lowest stock prices marked with a “□” symbol are from after the stock split.

(2) Highest and Lowest Stock Prices for the Most Recent Six Months of the Fiscal Year Ended March 31, 2018

Month	October 2017	November 2017	December 2017	January 2018	February 2018	March 2018
Highest Price (yen)	5,486	5,905	5,904	5,451	5,304	5,086
Lowest Price (yen)	5,092	5,488	5,257	5,145	4,545	4,812

Note: The highest and lowest stock prices are from the First Section of the Tokyo Stock Exchange.

5. Members of the Board

Composition: 15 men and two women (percentage of women: 11.8%)

<u>Position</u>	<u>Responsibility</u>	<u>Name</u>	<u>Date of Birth</u>	<u>Brief Career Summary</u>	<u>Term</u>	<u>Share Ownership (shares)</u>
Chairman of the Board		Hiromichi Shinohara	March 15, 1954	April 1978: Joined Nippon Telegraph and Telephone Public Corporation June 2009: Senior Vice President Head of Research and Development Planning Member of the Board of the Company June 2011: Senior Vice President Head of Research and Development Planning Head of the Information Sharing Laboratory Group Member of the Board of the Company October 2011: Senior Vice President Head of Research and Development Planning Member of the Board of the Company June 2012: Executive Vice President Head of Research and Development Planning Member of the Board of the Company June 2014: Senior Executive Vice President Head of Research and Development Planning Representative Member of the Board of the Company June 2018: Chairman of the Board of the Company (present post)	Note 3	17,400
President and Chief Executive Officer		Jun Sawada	July 30, 1955	April 1978: Joined Nippon Telegraph and Telephone Public Corporation June 2008: Senior Vice President Executive Manager of Corporate Strategy Planning Department Member of the Board of NTT Communications Corporation June 2011: Executive Vice President Executive Manager of Corporate Strategy Planning Department Member of the Board of NTT Communications Corporation June 2012: Senior Executive Vice President Executive Manager of Corporate Strategy Planning Department Representative Member of the Board of NTT Communications Corporation June 2013: Senior Executive Vice President Representative Member of the Board of NTT Communications Corporation June 2014: Senior Executive Vice President Representative Member of the Board of the Company June 2018: President and Chief Executive Officer Representative Member of the Board of the Company (present post)	Note 3	13,600

<u>Position</u>	<u>Responsibility</u>	<u>Name</u>	<u>Date of Birth</u>	<u>Brief Career Summary</u>	<u>Term</u>	<u>Share Ownership (shares)</u>
Senior Executive Vice President	In charge of business strategy and risk management	Akira Shimada	December 18, 1957	April 1981: Joined Nippon Telegraph and Telephone Public Corporation June 2007: Vice President of Corporate Strategy Planning of the Company July 2007: General Manager of the Accounts and Finance Department of Nippon Telegraph and Telephone West Corporation July 2009: General Manager of the General Affairs and Personnel Department of Nippon Telegraph and Telephone East Corporation June 2011: Senior Vice President General Manager of the General Affairs and Personnel Department Member of the Board of Nippon Telegraph and Telephone East Corporation June 2012: Senior Vice President Head of the General Affairs Member of the Board of the Company June 2015: Executive Vice President Head of General Affairs Member of the Board of the Company June 2018: Senior Executive Vice President Representative Member of the Board of the Company (present post)	Note 3	8,804

<u>Position</u>	<u>Responsibility</u>	<u>Name</u>	<u>Date of Birth</u>	<u>Brief Career Summary</u>	<u>Term</u>	<u>Share Ownership (shares)</u>
Senior Executive Vice President	In charge of technical strategy and international standardization Head of Technology Planning	Motoyuki Ii	November 17, 1958	April 1983: Joined Nippon Telegraph and Telephone Public Corporation June 2011: Senior Vice President Executive Manager of the Plant Department of the Network Business Headquarters Executive Manager of the Planning Department of the Network Business Headquarters Member of the Board of Nippon Telegraph and Telephone East Corporation July 2013: Senior Vice President Executive Manager of the Plant Planning Department of the Network Business Headquarters Member of the Board of Nippon Telegraph and Telephone East Corporation June 2014: Senior Vice President Senior Executive Manager of the Corporate Sales Promotion Headquarters Member of the Board of Nippon Telegraph and Telephone East Corporation June 2015: Executive Vice President Senior Executive Manager of the Corporate Sales Promotion Headquarters Representative Member of the Board of Nippon Telegraph and Telephone East Corporation June 2016: Senior Executive Vice President Senior Executive Manager of the Corporate Sales Promotion Headquarters Representative Member of the Board of Nippon Telegraph and Telephone East Corporation July 2017: Senior Executive Vice President Senior Executive Manager of the Business Innovation Headquarters Representative Member of the Board of Nippon Telegraph and Telephone East Corporation June 2018: Senior Executive Vice President Head of Technology Planning Representative Member of the Board of the Company (present post)	Note 3	5,700
Executive Vice President	Head of Global Business	Tsunehisa Okuno	October 12, 1960	April 1983: Joined Nippon Telegraph and Telephone Public Corporation July 2007: Vice President of the Corporate Business Strategy of the Company June 2008: Head of the Global Business Strategy Office of Strategic Business Development of the Company January 2011: Senior Vice President of Dimension Data Holdings plc (present post) June 2011: Head of Global Business of the Company June 2012: Senior Vice President Head of Global Business Member of the Board of the Company June 2016: Director of NTT Security Corporation (present post) June 2018: Executive Vice President Head of Global Business Member of the Board of the Company (present post)	Note 3	5,500

<u>Position</u>	<u>Responsibility</u>	<u>Name</u>	<u>Date of Birth</u>	<u>Brief Career Summary</u>	<u>Term</u>	<u>Share Ownership (shares)</u>
Senior Vice President	Head of Strategic Business Development In charge of 2020 Project	Hiroki Kuriyama	May 27, 1961	April 1985: Joined the Company February 2003: Vice President of Department I of the Company May 2005: Vice President of Corporate Business Strategy of the Company June 2008: Vice President of Corporate Strategy Planning of the Company June 2012: Vice President of President's Office of General Affairs of the Company June 2014: Senior Vice President Head of Strategic Business Development Member of the Board of the Company (present post)	Note 3	4,370
Senior Vice President	Head of Finance and Accounting	Takashi Hiroi	February 13, 1963	April 1986: Joined the Company May 2005: Vice President of Corporate Business Strategy of the Company June 2008: Vice President of Strategic Business Development of the Company July 2009: Vice President of Corporate Strategy Planning of the Company June 2014: Head of Finance and Accounting of the Company June 2015: Senior Vice President Head of Finance and Accounting Member of the Board of the Company (present post)	Note 3	3,800
Senior Vice President	Head of General Affairs	Eiichi Sakamoto	September 3, 1963	April 1986: Joined the Company October 2005: Head of the Business Management Group of the Corporate Strategy Planning Department of Nippon Telegraph and Telephone East Corporation July 2009: Head of the Planning Group of the Corporate Strategy Planning Department of Nippon Telegraph and Telephone East Corporation July 2011: Head of the Public Relations of the Corporate Strategy Planning of the Company June 2015: Senior Vice President, Managing Director of Corporate Marketing Strategy Department of NTT DOCOMO, INC. June 2016: Senior Vice President Head of the Corporate Strategy Planning of the Company Member of the Board of the Company Member of the Board of Nippon Telegraph and Telephone East Corporation (present post) June 2018: Senior Vice President Head of General Affairs Member of the Board of the Company (present post)	Note 3	3,400

<u>Position</u>	<u>Responsibility</u>	<u>Name</u>	<u>Date of Birth</u>	<u>Brief Career Summary</u>	<u>Term</u>	<u>Share Ownership (shares)</u>
Senior Vice President	Head of Research and Development Planning	Katsuhiko Kawazoe	September 5, 1961	April 1987: Joined the Company August 2003: Senior Research Engineer of the Cyberspace Laboratories of the Cyber Communications Laboratory Group of the Company October 2007: Senior Research Engineer of the Cyber Solutions Laboratories of the Cyber Communications Laboratory Group of the Company July 2008: Vice President of Research and Development Planning of the Company July 2014: Head of the Service Evolution Laboratories of the Service Innovation Laboratory Group of the Company July 2016: Head of the Service Innovation Laboratory Group of the Company June 2018: Senior Vice President Head of Research and Development Planning Member of the Board of the Company (present post)	Note 3	600
Senior Vice President	Head of Corporate Strategy Planning	Ryota Kitamura	January 20, 1965	April 1988: Joined the Company October 2003: Senior Manager of the Corporate Strategy Planning Department of Nippon Telegraph and Telephone East Corporation June 2011: Head of the Marketing Strategy Group of the Corporate Strategy Planning Department of Nippon Telegraph and Telephone East Corporation July 2015: Vice President of Corporate Strategy Planning of the Company June 2018: Member of the Board of Nippon Telegraph and Telephone West Corporation (present post) Senior Vice President Head of the Corporate Strategy Planning of the Company Member of the Board of the Company (present post)	Note 3	1,500

<u>Position</u>	<u>Responsibility</u>	<u>Name</u>	<u>Date of Birth</u>	<u>Brief Career Summary</u>	<u>Term</u>	<u>Share Ownership (shares)</u>
Outside Member of the Board		Katsuhiko Shirai	September 24, 1939	April 1965: Assistant of the First Faculty of Science and Engineering of Waseda University April 1968: Full-time lecturer of the Faculty of Science and Engineering of Waseda University April 1970: Assistant Professor of the Faculty of Science and Engineering of Waseda University April 1975: Professor of the Faculty of Science and Engineering of Waseda University November 1994: Director of Academic Affairs and Director of the International Exchange Center of Waseda University November 1998: Executive Director of Waseda University November 2002: President of Waseda University November 2010: Educational Advisor of Waseda University April 2011: Chairperson of the Foundation for the Open University of Japan June 2012: Member of the Board of the Company (present post) June 2012: Director of Japan Display, Inc. (present post) November 2016: Honorary Advisor of Waseda University (present post)	Note 3	3,800
Outside Member of the Board		Sadayuki Sakakibara	March 22, 1943	April 1967: Joined Toyo Rayon Co., Ltd. (currently registered as Toray Industries, Inc.) June 1994: Director of the Corporate Planning Department of Toray Industries, Inc. June 1996: Director of the Board of Toray Industries, Inc. June 1998: Managing Director of Toray Industries, Inc. June 1999: Senior Managing Director of Toray Industries, Inc. June 2001: Executive Vice President of Toray Industries, Inc. June 2002: President of Toray Industries, Inc. June 2010: Chairman and Representative Member of the Board of Toray Industries, Inc. Director of the Board of Mitsui O.S.K. Lines, Ltd. June 2012: Member of the Board of the Company (present post) June 2013: Director of Hitachi, Ltd. June 2014: Chairman of the Japan Business Federation (Keidanren) June 2014: Chairman of the Board of Directors, Toray Industries, Inc. June 2015: Chief Senior Adviser and Chief Senior Counselor of Toray Industries, Inc. June 2017: Senior Adviser of Toray Industries, Inc. (present post)	Note 3	8,800

<u>Position</u>	<u>Responsibility</u>	<u>Name</u>	<u>Date of Birth</u>	<u>Brief Career Summary</u>	<u>Term</u>	<u>Share Ownership (shares)</u>
Audit & Supervisory Board Member		Akiko Ide	February 28, 1955	April 1977: Joined Nippon Telegraph and Telephone Public Corporation June 2003: General Manager of Customer Services of NTT DOCOMO, INC. September 2004: Concurrently General Manager of Customer Services and General Manager of Information Security of NTT DOCOMO, INC June 2005: General Manager of Customer Services of NTT DOCOMO, INC. April 2006: General Manager of Corporate Citizenship Department of NTT DOCOMO, INC. June 2006: Executive Director and General Manager of Corporate Citizenship Department of NTT DOCOMO, INC. July 2008: Executive Director and General Manager for Chugoku regional office of NTT DOCOMO, INC. June 2012: Executive Director and Director of Information Security of NTT DOCOMO, INC. May 2013: President and Chief Executive Officer of Radishbo-ya Co., Ltd. June 2013: Executive Director and Senior Manager in Charge of Commerce Business Promotion of NTT DOCOMO, INC. June 2014: Full Time Audit & Supervisory Board Member of the Company (present post)	Note 4	9,000
Audit & Supervisory Board Member		Takao Maezawa	October 24, 1955	April 1978: Joined Nippon Telegraph and Telephone Public Corporation June 2006: Executive Manager of Human Resources Management Department, General Manager of Training Institute Executive Manager of the General Affairs of NTT Communications Corporation June 2008: Senior Vice President Deputy General Manager of the Enterprise Business Division Member of the Board of NTT Communications Corporation June 2011: Executive Vice President Deputy General Manager of the Enterprise Business Division Member of the Board of NTT Communications Corporation August 2011: Executive Vice President Head of Second Sales Division Member of the Board of NTT Communications Corporation June 2012: President and CEO of NTT PC Communications Incorporated June 2016: Full Time Audit & Supervisory Board Member of the Company (present post)	Note 4	9,504

<u>Position</u>	<u>Responsibility</u>	<u>Name</u>	<u>Date of Birth</u>	<u>Brief Career Summary</u>	<u>Term</u>	<u>Share Ownership (shares)</u>
Outside Audit & Supervisory Board Member		Michiko Tomonaga	July 26, 1947	March 1975: Registered as a certified public accountant (certification up-to-date) July 2007: Vice President of the Japanese Institute of Certified Public Accountants July 2008: Senior Partner at Ernst & Young Japan June 2010: Outside Corporate Auditor of Keikyu Corporation June 2011: Outside Audit & Supervisory Board Member of the Company (present post) February 2012: Audit & Supervisory Board Member of the Corporation for Revitalizing Earthquake affected Business June 2014: Outside Director of Japan Exchange Group, Inc. June 2016: Outside Director of Keikyu Corporation (present post)	Note 4	2,700
Outside Audit & Supervisory Board Member		Seiichi Ochiai	April 10, 1944	April 1974: Instructor in the Faculty of Law of the University of Tokyo April 1977: Associate Professor in the Faculty of Law of Seikei University April 1981: Professor in the Faculty of Law of Seikei University April 1990: Professor at the University of Tokyo Graduate Schools for Law and Politics and the Faculty of Law of the University of Tokyo April 2007: Professor at Chuo Law School April 2007: Registered as attorney-at-law (Dai-Ichi Tokyo Bar Association) (registration up-to-date) June 2007: Emeritus Professor at the University of Tokyo (present post) June 2008: Outside Director of EBARA CORPORATION June 2012: Outside Audit & Supervisory Board Member of the Company (present post) July 2012: Outside Director of Meiji Yasuda Life Insurance Company (present post) June 2013: Outside Auditor of Ube Industries, Ltd. (present post)	Note 4	5,304
Outside Audit & Supervisory Board Member		Takashi Iida	September 5, 1946	April 1974: Registered as attorney-at-law (Daini Tokyo Bar Association) (registration up-to-date) Joined Mori Sogo Law Offices (currently Mori, Hamada and Matsumoto) April 1991: Deputy Chairman of the Daini Tokyo Bar Association April 1997: Executive Governor of the Japan Federation of Bar Associations April 2006: Chairman of the Daini Tokyo Bar Association April 2006: Vice President of the Japan Federation of Bar Associations January 2012: Established Kowa Law Office (present post) June 2012: Corporate Auditor (Part-Time) for Shimadzu Corporation (present post) June 2013: Corporate Auditor of JAFECO Co., Ltd June 2013: Outside Director of Alps Electric Co., Ltd. (present post) June 2014: Outside Audit & Supervisory Board Member of the Company (present post)	Note 4	2,900
Total						106,682

Notes: 1. Mr. Katsuhiko Shirai and Mr. Sadayuki Shirai are Outside Members of the Board.

2. Ms. Michiko Tomonaga, Mr. Seiichi Ochiai and Mr. Takashi Iida are Outside Audit & Supervisory Board Members.

3. The length of term for Members of the Board is two years following the June 26, 2018 Ordinary General Meeting of Shareholders.

4. The length of term for Audit & Supervisory Board Members is four years following the June 26, 2015 Ordinary General Meeting of Shareholders.

6. Status of Corporate Governance

(1) Status of Corporate Governance

As the holding company of NTT Group, NTT believes that raising the effectiveness of corporate governance is an important management issue for meeting the expectations of various stakeholders, including shareholders and other investors, as well as customers, business partners, and employees, and for maximizing corporate value. Accordingly, NTT is working to strengthen corporate governance based on the purpose of the principles of the Corporate Governance Code promulgated by the Tokyo Stock Exchange. Based on NTT's "Towards the Next Stage 2.0," in order to accelerate its own self-transformation as a "value partner" and place the entire group on a profit growth track, NTT will work towards: ensuring sound management; executing appropriate decision-making and business activities; clarifying accountability; and maintaining thorough compliance as basic policies.

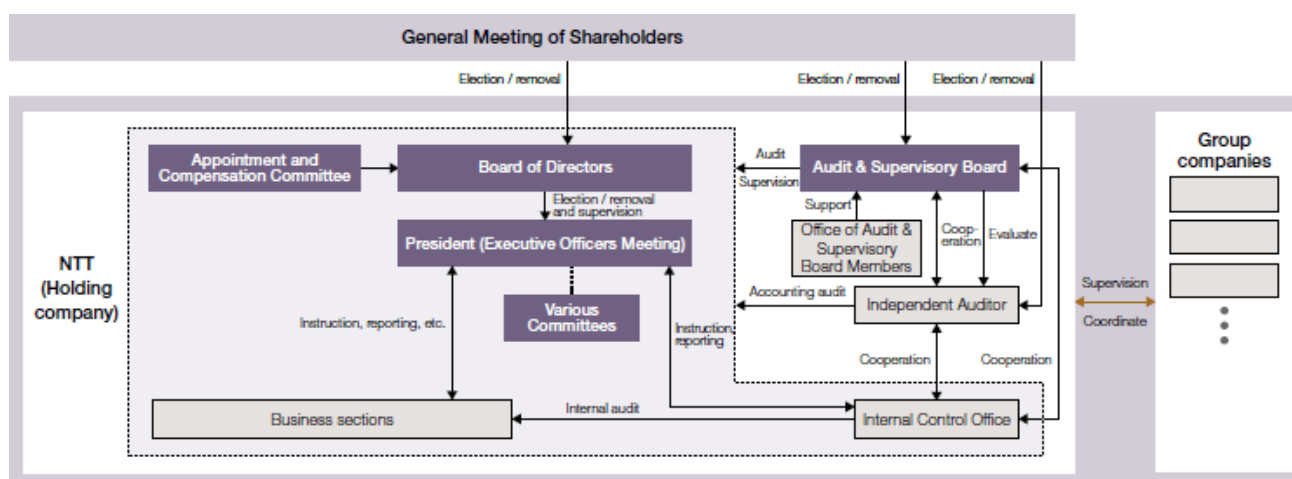
i . Corporate Governance Structure

Overview of Corporate Governance Structure

NTT, in order to strengthen functions for appropriately supervising and auditing business execution, seeks to strengthen its auditing system by appointing several outside independent Members of the Board, and by establishing an Audit & Supervisory Board, of which outside independent Audit & Supervisory Board Members make up a majority. Additionally, NTT has voluntarily established an "Appointment and Compensation Committee," which consists of four Members of the Board, including two outside independent Members of the Board, to further increase the objectivity and transparency of decisions relating to appointment and compensation. NTT has determined that governance functions based on a Board of Corporate Auditors (Audit & Supervisory Board) are sufficiently effective to achieve this purpose.

Business execution at NTT is conducted in accordance with the organizational regulations governing the functions and operations of each organization. Important decisions are made under the supervision of the Board of Directors and based on the responsibility regulations that define the responsibilities and authorities for the president, senior executive vice presidents, and the head of each organization. In addition, NTT has established various meetings and committees as has been deemed necessary to discuss important matters related to corporate management and Group management in order to ensure that appropriate decisions are made for facilitating effective Group management.

The following chart illustrates NTT's corporate governance structure:



Board of Directors

The Board of Directors consists of 12 Members of the Board, including two outside independent Members of the Board. In principle, the ordinary meetings of the Board of Directors are held once per month. In addition, extraordinary meetings are held as needed. The Board of Directors makes decisions on matters stipulated by law and on important matters related to company management and Group management. Moreover, through such means as periodic reports from Members of the Board on the status of business execution, the Board of Directors supervises the business execution of Members of the Board.

NTT's Board of Directors, whose members are elected based on those who have a high level of integrity and insight, consists of 17 Members (of which 12 are Members of the Board and five are Audit & Supervisory Board Members), including two female members who are Audit & Supervisory Board Members.

Audit & Supervisory Board

The Audit & Supervisory Board consists of a total of five Audit & Supervisory Board Members, comprising two internal Audit & Supervisory Board Members and three outside independent Audit & Supervisory Board Members (including two women, one in each category).

Appointment and Compensation Committee

For the purpose of improving objectivity and transparency in the decisions of appointments and compensation of Members of the Board, NTT has established on a non-statutory basis the Appointment and Compensation Committee, which consists of four Members of the Board, including two outside independent Members of the Board, as a preliminary review institution of the Board of Directors.

Executive Officers Meeting

Important corporate matters to be decided are, in principle and in advance, discussed by "Executive Officers Meetings," which is made up of the president, senior executive vice presidents, full-time directors, and the heads of staff organizations. The Executive Officers Meeting is held about once a week. To improve the transparency of management decision-making, one Audit & Supervisory Board Member participates in the Executive Officers Meeting.

Various Committees

A number of committees have been established below the Executive Officers Meeting to discuss specific issues related to corporate and Group management strategies. Major committees include the Technology Strategy Committee, which deliberates on the Group's R&D vision and technology development strategy; the Investment Strategy Committee, which examines investment projects that are larger than a certain scale; and the Finance Strategy Committee, which discusses basic financial strategies and financial issues. These committees, which are held as necessary throughout the year, are in principle chaired by the president or a senior executive vice president, and are attended by relevant Members of the Board and others.

Contracts Limiting the Liabilities for Damages

Contracts limiting the liabilities for damages in Article 423 (1) of the Companies Act of Japan are put in place between NTT and outside Members of the Board and Audit & Supervisory Board Members based on Article 427 (1) of the same act. Under these contracts, the maximum amount of liability for damages is defined as the lowest amount of liability set forth in Article 425 (1) of the Companies Act.

Shareholder Meeting Matters that May Be Resolved by the Board of Directors

NTT's Articles of Incorporation state that NTT may purchase its own shares in open market transactions or otherwise pursuant to resolutions of the Board of Directors. This is intended to enable a flexible capital policy that is responsive to the current business environment.

NTT's Articles of Incorporation state that, in accordance with the provisions of Article 454, Paragraph 5 of the Companies Act of Japan, NTT may declare interim dividends with a record date of September 30 each year pursuant to resolutions of the Board of Directors. This is intended to enable the expeditious return of profits to shareholders.

NTT's Articles of Incorporation state that NTT may exempt Members of the Board and Audit & Supervisory Board Members for liabilities to the extent permitted by law pursuant to resolutions of the Board of Directors. This is intended to enable Members of the Board and Audit & Supervisory Board Members to fully engage in their expected roles when fulfilling their responsibilities.

Special Resolution Requirements for Shareholder Meetings

NTT's Articles of Incorporation state that, with respect to resolutions set forth in Article 309, Paragraph 2 of the Companies Act of Japan, resolutions may be adopted by at least two-thirds (2/3) of the voting rights of the shareholders who are present at such shareholder meetings if they represent at least one-third (1/3) of the total voting rights of the shareholders who can exercise their voting rights. This is intended to enable the more reliable satisfaction of quorum requirements.

ii. Status of the Board of Directors

Composition of the Board of Directors

The Board of Directors is of a size appropriate to the Group's business, and the composition of the Board of Directors reflects consideration for a balance of experience and specialties and for diversity. The Board of Directors has 12 Members of the Board, including two outside independent Members of the Board who have been appointed in order to strengthen functions for appropriately supervising business execution.

Activities of the Board of Directors

In principle, the ordinary meetings of the Board of Directors are held once per month. In addition, extraordinary meetings are held as needed. The Board of Directors makes decisions on matters stipulated by law and on important matters related to company management and Group management. Moreover, through such means as periodic reports from Members of the Board on the status of business execution, the Board of Directors supervises the business execution of Members of the Board.

Evaluation of the Effectiveness of the Board of Directors

The Board of Directors of NTT, which is a pure holding company, plays the role of monitoring the specific business operations of the Group companies based on the medium to long-term business strategy of the entire Group.

The Board of Directors of NTT decides important items related to the Group's management which have passed the "Executive Officers Meeting," made up of the president, senior executive vice presidents, full-time directors, and the heads of the staff organization, as well as the review of the various committees chaired by the president or a senior executive vice president and attended by the relevant directors, while also monitoring the status of the execution of the duties of the individual Members of the Board.

At the meetings of the Board of Directors, based on the authority of the individual Members of the Board, current issues in Group management and the initiatives being taken to resolve them are reported and reviewed, and in the fiscal year ended March 31, 2018, active discussions were held over initiatives undertaken on the basis of the medium-term management strategy, particularly business acquisitions and other initiatives to increase profits in the near term for global cloud services. With respect to monitoring the status of the execution of business, the Board of Directors reviewed the status of initiatives in each significant execution area in easily comprehensible summaries and worked to strengthen the supervisory function of the Board of Directors.

Furthermore, in order to enable the independent outside Members of the Board to gain a deeper understanding of NTT Group's business operations, the outside Members of the Board exchanged opinions with management of each major subsidiary regarding management strategies, and also made on-site visits to observe the status of the research and development initiatives and security business that NTT Group has been focusing on.

Additionally, ideas and opinions on issues in Group management were exchanged among the outside independent Members of the Board and the Audit & Supervisory Board Members, among the outside independent Members of the Board and the Representative Members of the Board, among the outside independent Members of the Board and the executives of the major Group companies in and outside Japan, and among the outside independent Members of the Board of NTT and the outside independent Members of the Board of the major Group companies and other members.

In these meetings, we received opinions on NTT's Board of Directors from the outside independent Members of the Board and the Audit & Supervisory Board Members that adequate information is provided and Members of the Board engage in active discussion, thereby ensuring the Board's effectiveness.

Taking into account these initiatives, we have evaluated that the effectiveness of the Board of Directors is being ensured, and NTT will work to further improve the Board's effectiveness going forward.

Appointment and Dismissal Policies and Procedure for Members of the Board

The organization of the Board of Directors is determined on the basis of the management appointment policies set forth in the NTT Group Human Resources Policy, selecting from a wide range of personnel from both within and outside of NTT Group who possess skills that can contribute to the resolution of NTT Group issues.

Furthermore, appointments and dismissals of Members of the Board are made upon deliberation by the Appointment and Compensation Committee, which consists of four Members of the Board, including two outside independent Members of the Board.

NTT Group strives to contribute to the resolution of social issues and the realization of a safer, more secure, and more affluent society. To accomplish this goal, the Group acts as a trusted "Value Partner" that customers continue to select in order to provide them with new value on a global basis. NTT has established the policy of positioning individuals that share these ideals in the upper ranks of NTT Group's management, and NTT is electing such individuals from both inside and outside the Group.

In regard to Member of the Board candidates, individuals are elected based on the broad-ranging perspective and experience, superior management skill and leadership, business sense and motivation necessary to contribute to the overall development of NTT Group in order to facilitate the improvement of NTT Group's corporate value. The Board of Directors is of a size appropriate to the Group's business, and the composition of the Board of Directors takes into account a balance of specialties and diversity.

From the perspective of strengthening the function of supervising business execution, for outside independent Members of the Board, NTT elects individuals who present no risk of a conflict of interest with general shareholders. In principle, NTT appoints several outside independent Members of the Board.

Regarding the appointment procedure for candidate Members of the Board, the Appointment and Compensation Committee discusses candidates and then makes proposals to be approved by the Board of Directors and presented for voting at the General Meeting of Shareholders.

Support System for Members of the Board

The secretariat of the Board of Directors is made available as a venue of contact for outside independent Members of the Board, which they can use to receive support with regard to their daily duties through explanations, responses to inquiries about business execution, and other means.

Training for Members of the Board

NTT Group works to cultivate candidates suitable for top management who are able to respond to the rapidly changing management environment, by creating a range of training opportunities in areas including domestic and overseas economic and social issues, compliance, and risk management, and by allowing employees to accumulate new job experiences. Additionally, outside independent Members of the Board can gain a deeper understanding of NTT's group businesses through opportunities to deepen their understanding of the business trends of Group companies and of the latest R&D results at the research facilities of NTT.

Number of Members of the Board

NTT's Articles of Incorporation state that the number of Members of the Board shall be 15 people or fewer.

Requirements for Resolutions to Appoint Members of the Board

NTT's Articles of Incorporation state that resolutions to appoint Members of the Board may be made by a majority of shareholders present if they represent at least one-third (1/3) of the total voting rights of the shareholders who can exercise their voting rights. NTT's Articles of Incorporation further state that such resolutions are not subject to cumulative voting.

iii. Audit & Supervisory Board Members

Composition of the Audit & Supervisory Board

The Audit & Supervisory Board comprises three outside independent Audit & Supervisory Board Members (including one female member), who have experience and knowledge in a range of fields-as a Certified Public Accountant, university professor, and lawyer and two internal Audit & Supervisory Board Members (including one female member). NTT conducts effective audits by combining the independence of outside Audit & Supervisory Board Members with the superior information collection capabilities of internal Audit & Supervisory Board Members. Among the board members, the Audit & Supervisory Board Member, Takao Maezawa, has experience in the accounting division of NTT and its affiliated companies while Audit & Supervisory Board Member, Michiko Tomonaga, a Certified Public Accountant, has considerable knowledge in the areas of finance and accounting.

Activities of the Audit & Supervisory Board

Audit & Supervisory Board Members attend meetings of the Board of Directors and other important meetings. In addition, Audit & Supervisory Board Members meet periodically with Representative Members of the Board and Members of the Board to exchange ideas and opinions and hold discussions on various topics. In this way, Audit & Supervisory Board Members maintain an understanding of the execution of duties by Members of the Board and provide their opinions as needed.

In the fiscal year ended March 31, 2018, the Audit & Supervisory Board met 22 times. Moreover, separate from meetings of the Audit & Supervisory Board, the Audit & Supervisory Board Members Preliminary Deliberation Meeting met 36 times. These meetings provide a venue for the sharing of information. For example, at these meetings Audit & Supervisory Board Members receive explanations from corporate officers of matters to be discussed at the Executive Officers Meeting. Furthermore, Audit & Supervisory Board Members work closely with Independent Auditors and the Internal Control Office. Audit & Supervisory Board Members exchanged opinions with Independent Auditor 11 times and the Internal Control Office 10 times, and receive explanations of audit plans and reports on the status of internal control systems and provide advice as needed.

In initiatives related to Group companies, Audit & Supervisory Board Members received information from the Representative Members of the Board of 21 major Group companies regarding the status of corporate governance and measures to maintain and enhance corporate governance, and discussions were conducted on those matters. In addition, Audit & Supervisory Board Members visited major bases in Japan and overseas (19 bases), received information from local representatives, and conducted discussions. Furthermore, Audit & Supervisory Board Members received reports regarding audit results from Audit & Supervisory Board Members of major Group companies and exchanged opinions with them. In addition, the Audit & Supervisory Board is implementing initiatives that contribute to enhancing the auditing activities of Audit & Supervisory Board Members of major Group companies, including regularly holding training sessions by outside experts for Audit & Supervisory Board Members of major Group companies.

Through these activities, Audit & Supervisory Board Members support the sound, steady growth of NTT and Group companies from an independent perspective that differs from that of executives. In addition, Audit & Supervisory Board Members contribute to the strengthening of corporate governance systems and the fostering of awareness of compliance matters.

Nomination Policies and Procedure for Audit & Supervisory Board Members

NTT has the policy of electing candidates for Audit & Supervisory Board Members that have the capacity to provide audits based on specialized experience and insight. From the perspective of guaranteeing fair audits of the execution of duties by Members of the Board, for outside independent Audit & Supervisory Board Members NTT elects individuals who present no risk of a conflict of interest with general shareholders. In accordance with the Companies Act, NTT ensures that outside independent Audit & Supervisory Board Members make up half or more of the Audit & Supervisory Board.

With regard to the nomination of Audit & Supervisory Board Members, the procedure for nomination involves Members of the Board proposing Audit & Supervisory Board Member candidates based on the nomination policy described above. These proposals are then discussed by the Audit & Supervisory Board, which consists of half or more of outside independent Audit & Supervisory Board Members, and consent is granted if appropriate. The candidates are then approved by the Board of Directors and presented for voting at the General Meeting of Shareholders.

Support Structures for Audit & Supervisory Board Members

The Office of Audit & Supervisory Board Members, which has four dedicated NTT employees, has been established as a structure to support audits by the Audit & Supervisory Board Members. In addition, NTT has concluded contracts with lawyers and other specialists who may be called upon as necessary to provide advice at the expense of NTT. In addition, when Audit & Supervisory Board Members are elected, they are trained with respect to market trends and compliance. They then continue to undergo training on broad spectrum of topics, including domestic and overseas economic and social issues, after appointment. Moreover, NTT is creating opportunities for tours and implementing other initiatives so that outside Audit & Supervisory Board Members can further deepen their understanding of NTT and NTT Group.

iv. Outside Members of the Board and Audit & Supervisory Board Members

Nomination Policies and Procedure for Outside Members of the Board and Audit & Supervisory Board Members

From the perspectives of strengthening supervising functions for execution and guaranteeing appropriate audits of the execution of duties by Members of the Board, NTT has the policy of selecting individuals to serve as outside Members of the Board and outside Audit & Supervisory Board Members who do not represent risks of conflicts of interest with general shareholders. NTT designates outside Members of the Board and outside Audit & Supervisory Board Members who fulfill both the independence criteria stipulated by Tokyo Stock Exchange, Inc., and NTT's own independence standards as outside independent Members of the Board or outside independent Audit & Supervisory Board Members.

Independence Standards for the Independent Directors/ Audit & Supervisory Board Members (Kansayaku)

In order to meet the independence standards, a person may not fall under any of the categories below in the last three fiscal years:

- (1) A person who executes business in a partner company that exceeds NTT's standards ⁽¹⁾
- (2) A person who executes business in a lending company that exceeds NTT's standards ⁽²⁾
- (3) A consultant, accountant, lawyer, or any other person providing professional services, who received monetary payments or any other gain in assets equal to or more than ¥10 million, excluding the Board Members' or Audit & Supervisory Board Members' compensation, from NTT or its major subsidiaries ⁽³⁾ in any of the last three fiscal years
- (4) A person who executes business in an organization that received donations exceeding NTT's standards ⁽⁴⁾

Even if any of (1) through (4) above applies to a person, where it has been decided that a person meets the independence standards, the reasons shall be explained and disclosed at the time of the person's appointment as the Independent Member of the Board or Audit & Supervisory Board Member.

Notes: 1. "A partner company that exceeds NTT's standards" is defined as a company that has had any business dealing with NTT and its major subsidiaries ⁽³⁾ in any of the last three fiscal years equal to or more than 2% of the total operating revenues of NTT and its major subsidiaries for the respective fiscal year.

2. “A lending company that exceeds NTT's standards” is defined as a company in which the total amount of borrowings on a consolidated basis in any of the last three fiscal years equals to or is more than 2% of NTT's consolidated total assets for the respective fiscal year.
3. The major subsidiaries are NIPPON TELEGRAPH AND TELEPHONE EAST CORPORATION, NIPPON TELEGRAPH AND TELEPHONE WEST CORPORATION, NTT COMMUNICATIONS CORPORATION, NTT DATA CORPORATION, and NTT DOCOMO, INC.
4. “An organization that received donations exceeding NTT's standards” is defined as an organization which received donations from NTT and its major subsidiaries*3 in any of the last three fiscal years exceeding ¥10 million or 2% of the total income of the organization, whichever is larger, during the respective fiscal year.

Criteria for Selection and Activities of Outside Members of the Board and Audit & Supervisory Board Members

NTT, in order to strengthen functions for appropriately supervising and auditing business execution, seeks to strengthen its auditing system by appointing two outside independent Members of the Board. Each outside independent member of the board has a wealth of experience as operational director of an educational institution or as a corporate manager, has a high level of integrity and insight and, by providing advice from a wide-ranging managerial perspective, plays an important role in helping to strengthen the supervisory function for business execution.

Outside Members of the Board receive reports from the corporate auditors and Internal Control Office regarding audit plans and results, and also oversee business operations by providing input as needed.

NTT appoints three outside independent Audit & Supervisory Board Members out of the five total Audit Supervisory & Board Members. NTT expects that each outside independent Audit & Supervisory Board Member conduct future audits based on the knowledge and insight they have gained throughout their careers. NTT's Audit & Supervisory Board, including the outside independent Audit & Supervisory Board Members, periodically exchange information with NTT's accounting auditors regarding audit plans, audit results and other information. The Audit & Supervisory Board also exchanges information with the Internal Control Office, including information relating to internal audit results.

v. Compensation of Members of the Board and Audit & Supervisory Board Members Policy

For the purpose of improving objectivity and transparency in the decisions of compensation of Members of the Board, NTT has established on a non-statutory basis an “Appointment and Compensation Committee,” which consists of four Members of the Board including two outside Members of the Board, as a preliminary review institution of the Board of Directors.

Compensation of Members of the Board (excluding outside Members of the Board) consists of a base salary and a bonus. The base salary is paid monthly on the basis of the scope of each Member of the Board's roles and responsibilities. The bonus is paid taking into account NTT's business results for the current term. Also, Members of the Board make monthly contributions of a certain defined amount or more from their base salary and bonuses for the purchase of NTT shares through the Board Members Shareholding Association in order to reflect NTT's medium and long-term business results in compensation. Purchased shares are to be held by the Members of the Board throughout their terms of office.

In order to maintain a high level of independence, compensation of outside Members of the Board consists of a base salary only, and is not linked to NTT's business results.

Total Compensation of Members of the Board and Audit & Supervisory Board Members

(Fiscal Year Ended March 31, 2018)

<u>Class</u>	<u>Number of Persons Paid</u> (persons)	<u>Monthly Remuneration</u> (millions of yen)	<u>Board Member Bonuses</u> (millions of yen)	<u>Total Amount</u> (millions of yen)
Members of the Board (excluding Outside Members of the Board)	10	¥418	¥101	¥519
Audit & Supervisory Board Members (excluding Outside Audit & Supervisory Board Members)	2	¥74	—	¥74
Total	12	¥492	¥101	¥593

Notes: 1. At the 21st Ordinary General Meeting of Shareholders held on June 28, 2006, the maximum limit on total annual compensation of Members of the Board was set at an aggregate of ¥750 million and the maximum limit on total annual compensation of Audit & Supervisory Board Members was set at an aggregate of ¥200 million.

2. In addition to the above, there was a bonus of ¥14 million paid to five Members of the Board who concurrently serve as employees.

Total Amount of Compensation for Outside Members of the Board

(Fiscal Year Ended March 31, 2018)

	<u>Number of Persons Paid</u> (persons)	<u>Monthly Remuneration</u> (millions of yen)
Total Compensation for Outside Members of the Board	5	¥75

vi. Independent Auditor

Activities of the Independent Auditor

NTT has appointed KPMG AZSA LLC as its Independent Auditor. The Independent Auditor maintains the level of coordination with the Audit & Supervisory Board and the Internal Control Office necessary to conduct appropriate audits. As part of this coordination, the Independent Auditor appropriately audits through reporting the audit plans and audit results to the Audit & Supervisory Board and working together with the Internal Control Office to establish systems for monitoring the status of oversight related to evaluating internal control systems for financial reports.

For the fiscal year ended March 31, 2018, the Independent Auditors who carried out the audit were Takuji Kanai, Kensuke Sodekawa and Masashi Oki, whose years of experience as Independent Auditor are within the statutory guidelines. In addition, 30 public certified accountants and 23 other staff assisted in conducting the audits.

Nomination of the Independent Auditor

NTT believes that it is important to maintain and enhance audit quality while increasing audit efficiency. Based on this policy, the Audit & Supervisory Board evaluates Independent Auditor candidates from the perspectives of their independence and specialties and the appropriateness and adequateness of their auditing activities. The candidates that are approved by the Audit & Supervisory Board are then presented for voting at the Ordinary General Meeting of Shareholders.

The Audit & Supervisory Board may choose to dismiss or not reappoint the Independent Auditor in any of the cases described in Article 340 (1) of the Companies Act based on a unanimous vote by all Audit & Supervisory Board Members. In addition, if the Board of Directors determines that it would be difficult for the Independent Auditor to perform proper audits, the Audit & Supervisory Board may propose a resolution to the Ordinary General Meeting of Shareholders that the Independent Auditor be discharged or that the Independent Auditor not be reappointed.

vii. Internal Control

Overview of Internal Control Systems

NTT maintains internal control systems related to financial reporting based on the U.S. Public Company Accounting Reform and Investor Protection Act of 2002 (the “Sarbanes-Oxley Act”), Section 404, and the Financial Instruments and Exchange Act of Japan. Based on tests and evaluations of the design and operational effectiveness of these systems, we have been able to confirm the effectiveness of these systems without any particular issues.

The Internal Control Office verifies the internal control systems in place throughout the Group and the status of their implementation. Internal audits are conducted by the internal auditing divisions of each Group company, and the results of these auditing activities are reviewed by NTT. In addition, standardized audits are performed with regard to major risk factors that are common issues throughout the Group, and we are continuously enhancing and verifying their effectiveness. At the same time, NTT is continuously accelerating its efforts to develop and implement IT and other Groupwide internal control systems and to improve their operational procedures and efficiency.

NTT has established the Basic Policies Concerning the Maintenance of Internal Control Systems for NTT Group, which was approved via resolution by the Board of Directors. The basic concepts of these policies are as follows.

1. NTT shall develop a system of internal controls by taking measures for the prevention and minimization of losses, with the objectives of ensuring compliance with legal requirements, managing risks, and achieving appropriate and efficient business operations.
2. NTT shall establish the Internal Control Office, which oversees the establishment of internal control rules and frameworks. The Internal Control Office shall evaluate the effectiveness of the internal control systems based on internal audits regarding high risk matters affecting the entire NTT Group, and shall make sure that necessary corrective measures and improvements are implemented.
3. NTT shall also take appropriate measures to ensure the reliability of its internal control systems for financial reporting based on the U.S. Public Company Accounting Reform and Investor Protection Act of 2002 (“Sarbanes-Oxley Act”) and the Financial Instruments and Exchange Act.
4. As a chief executive officer, the president shall be responsible for ensuring the development and operation of the internal control systems.

Overview of Internal Compliance Systems

Establishment of NTT Group Corporate Ethics Charter

It is imperative to conduct business in compliance with laws and regulations, and maintain high ethical standards in order to promote sound corporate activities. Recognizing this, NTT drew up the NTT Group Corporate Ethics Charter in November 2002.

The NTT Group Corporate Ethics Charter, which applies to all officers and employees of the NTT Group, lays out the basic principles of corporate ethics and provides specific guidelines for ethical behavior. The stipulations in the guidelines are intended to remind everyone of their duty as members of a large corporate group that bears responsibility to society in terms of preventing dishonesty, misconduct, and the disclosure of corporate secrets, as well as refraining from exchanging excessive favors with customers and suppliers, and ensuring that they conduct themselves according to the highest ethical standards in both private and public activities.

Initiatives to Promote Awareness of the NTT Group Corporate Ethics Charter

To ensure the effectiveness of the NTT Group Corporate Ethics Charter, we offer training sessions on corporate ethics to employees, and through a website for employees, we explain the NTT Group Corporate Ethics Charter in detail and give examples of corporate ethics issues in an effort to raise employee’s level of understanding. Furthermore, NTT conducts annual surveys of employees to measure their awareness, and the results are then used for awareness enhancement initiatives.

Establishment of Corporate Ethics Help Line (Outside of the Company)

To prevent illegal conduct or a scandal, each Group company has set up an internal consulting center to handle reports of improper activities. In addition, NTT has established the Corporate Ethics Help Line as an external contact point for NTT Group companies and outsources its operation to a law firm.

The content of the consultations and reports are investigated and handled by the staff member in charge, and a report is submitted to the Corporate Ethics Committee of each Group company. All reports are collected at least once a year by NTT, where the response status is ascertained and reported to the Board of Directors.

Furthermore, the NTT Group Corporate Ethics Charter clearly states that people who file reports with these help lines will be protected from any disadvantage arising from the fact that they filed a report.

In addition, NTT Group has established and operates an independent reporting route to Audit & Supervisory Board Members as a contact point that is independent from management. In general, reports made through external reporting lines are also simultaneously sent directly to Audit & Supervisory Board Members, and it is also possible to make reports directly to Audit & Supervisory Board Members only.

Prevention of Bribery

Understanding that it is essential to comply with laws and regulations and to operate its business with high ethical standards, NTT Group prohibits all forms of corruption, including bribery, improper benefits and facilitation payments*. In particular, with respect to the prevention of bribery, NTT Group has created a “Anti-Bribery Handbook” and distributed it to employees of Group companies, including its overseas subsidiaries, and has also posted the handbook on its internal website to ensure thorough awareness. Furthermore, for NTT, NTT East and NTT West, bribery is prohibited pursuant to the NTT Act, and any violations are subject to legal penalties.

* Note: “Facilitation payments” are small payments made for purposes of facilitating procedures for ordinary administrative services.

Collaboration with Suppliers

NTT has established and announced the “Supply Chain CSR Promotion Guidelines” in order to fulfill its social responsibility by following social norms and laws with all of its suppliers against wrongful actions in the supply chain, including bribery.

Through these Supply Chain CSR Promotion Guidelines, NTT is working to prevent misconduct, including among suppliers, by requesting compliance with statements such as “maintain a clean and normal relationship with the government and administration, and do not engage in bribery, illegal political contributions or other such misconduct” and “do not engage in the exchange of inappropriate profits in relationships with stakeholders.”

viii. Promotion of Risk Management

With respect to business risk management, NTT has established Risk Management Rules stipulating basic policies on risk management with the aims of, among others, anticipating and preventing the materialization of potential risks and minimizing losses if any risk materializes. Chaired by a senior executive vice president, the Business Risk Management Committee spearheads efforts to develop and operate a PDCA cycle for managing risks. During the fiscal year under review, the committee held one meeting during which discussions involved identifying risks that could potentially have a Companywide impact, policies for managing such risks, and other such matters.

NTT has also formulated the NTT Group Business Risk Management Manual, and distributed it to each Group company, in order to facilitate Groupwide risk management initiatives. On the basis of the manual, which stipulates matters that include proactive measures for potential risks, collaborative Groupwide approaches and policies for addressing risks that materialize, and pathways for communicating information, systems have been developed and implemented that enable swift action to be taken.

Risk Analysis and Identification of Key Risks

From time to time, NTT reviews assumed risks and management policies based on changes in the social environment.

In the identification of risks, the Business Risk Management Committee plays the central role. Analysis processes for the risks faced by NTT Group are formulated, and risk analysis is periodically implemented in accordance with these processes. In this way, Companywide risks are identified. In addition, correlation analyses are implemented for these risks. Those risks with the potential to have the greatest influence are specified as "material risks," and countermeasures are formulated.

Please see page 17 for further discussion of risks, including risks related to NTT's business.

ix. Shareholdings

NTT does not hold so-called "cross-shareholdings" to create stable shareholders, and has no plans to hold them in the future.

On the other hand, as one of its business policies, the Company pursues collaboration and open innovation with partners in various industries to contribute to medium- to long-term improvement in corporate value. Based on this policy, NTT holds and sells shares based on its determination of whether doing so would contribute to the improvement of medium- and long-term corporate value.

With respect to exercising voting rights of strategic shareholdings, NTT exercises voting rights acquired through share ownership, as it sees fit and appropriate and upon determining whether it is an initiative that would contribute to the improvement of medium- and long-term corporate value, from the perspective of sustainable growth of the companies NTT invests in and improving corporate value for both NTT and the companies.

The status of NTT's holding of such stock is as follows:

- (a) Total number of companies and balance sheet value of shares in other companies held for purposes other than net investments: 7 companies, ¥11,388 million
- (b) Classification, name, and number of shares, balance sheet value and purpose of holding, for listed shares in other companies held for purposes other than net investment:

Specified Investment Shares (as of March 31, 2017)

<u>Company Name</u>	<u>Number of Shares</u>	<u>Balance Sheet Value</u> (millions of yen)	<u>Purpose of Holding</u>
KADOKAWA DWANGO CORPORATION	2,040,000	3,255	Strengthening business collaboration in the field of research and development primarily for media and big data

Specified Investment Shares (as of March 31, 2018)

<u>Company Name</u>	<u>Number of Shares</u>	<u>Balance Sheet Value</u> (millions of yen)	<u>Purpose of Holding</u>
KADOKAWA DWANGO CORPORATION	2,040,000	2,262	Strengthening business collaboration in the field of research and development primarily for media and big data

- (c) Total balance sheet value of shares held for investment purposes in the fiscal years ended March 31, 2017 and 2018, and the total amount of dividends received, gains/losses on disposal and valuation gains/losses for the fiscal year ended March 31, 2018: Not applicable.

The status of NTT DOCOMO, which has the highest amount of investment shares on its balance sheet amongst NTT and its consolidated subsidiaries, is as follows:

- (a) Total number of companies and balance sheet value of shares in other companies held for purposes other than net investments: 61 companies, ¥282,745 million
- (b) Classification, name, and number of shares, balance sheet value and purpose of holding, for listed shares in other companies held for purposes other than net investment:

Specified Investment Shares
(as of March 31, 2017)

<u>Company Name</u>	<u>Number of Shares</u>	<u>Balance Sheet Value</u> (millions of yen)	<u>Purpose of Holding</u>
PLDT Inc.	31,330,155	114,841	Business alliance in mobile communications business
KT Corporation	22,711,035	50,512	Business alliance in mobile communications business
Far EasTone Telecommunications Co.,Ltd	153,543,573	42,324	Business alliance in mobile communications business
FamilyMart UNY Holdings Co.,Ltd.	2,930,500	19,458	Business alliance in mobile communications business
LAWSON, INC.	2,092,000	15,794	Business alliance in mobile communications business
Nippon Television Holdings, Inc.	7,779,000	14,912	Business alliance in mobile communications business
FUJI MEDIA HOLDINGS, INC.	7,700,000	11,827	Business alliance in mobile communications business
TOKYO BROADCASTING SYSTEM HOLDINGS, INC.	5,713,000	11,357	Business alliance in mobile communications business
Pioneer Corporation	25,773,100	5,695	Business alliance in mobile communications business
Tata Teleservices (Maharashtra) Limited	229,856,926	2,843	Business alliance in mobile communications business
KADOKAWA DWANGO CORPORATION	1,204,208	1,921	Business alliance in mobile communications business
SKY Perfect JSAT Holdings Inc.	2,048,100	962	Business alliance in mobile communications business
NTT DATA INTRAMART CORPORATION	500,000	651	Business alliance in mobile communications business
FueTrek Co., Ltd.	568,000	567	Business alliance in mobile communications business
NEOS COMPANY LIMITED	1,020,000	464	Business alliance in mobile communications business
Nippon BS Broadcasting Corporation	80,000	85	Business alliance in mobile communications business
Aplix Corporation	137,500	61	Business alliance in mobile communications business
BIC CAMERA INC.	50,000	51	Business alliance in mobile communications business

Notes: 1. The number of shares and balance sheet book value listed above for PLDT Inc. include 8,533,253 American Depositary Receipts ("ADRs") with a value of ¥30,788 million.

2. The number of shares and balance sheet book value listed above for KT Corporation include 16,906,444 American Depositary Receipts ("ADRs") with a value of ¥31,922 million.

Specified Investment Shares
(as of March 31, 2018)

<u>Company Name</u>	<u>Number of Shares</u>	<u>Balance Sheet Value</u> <u>(millions of yen)</u>	<u>Purpose of Holding</u>
PLDT Inc.	31,330,155	94,417	Business alliance in mobile communications business
Far EasTone Telecommunications Co.,Ltd	153,543,573	43,713	Business alliance in mobile communications business
KT Corporation	22,711,035	40,582	Business alliance in mobile communications business
FamilyMart UNY Holdings Co.,Ltd.	2,930,500	26,257	Business alliance in mobile communications business
LAWSON, INC.	2,092,000	15,167	Business alliance in mobile communications business
Nippon Television Holdings, Inc.	7,779,000	14,663	Business alliance in mobile communications business
FUJI MEDIA HOLDINGS, INC.	7,700,000	13,975	Business alliance in mobile communications business
TOKYO BROADCASTING SYSTEM HOLDINGS, INC.	5,713,000	12,894	Business alliance in mobile communications business
Pioneer Corporation	25,773,100	4,536	Business alliance in mobile communications business
PKSHA Technology Inc.	107,000	1,449	Business alliance in mobile communications business
KADOKAWA DWANGO CORPORATION	1,204,208	1,335	Business alliance in mobile communications business
NTT DATA INTRAMART CORPORATION	500,000	1,111	Business alliance in mobile communications business
SKY Perfect JSAT Holdings Inc.	2,048,100	978	Business alliance in mobile communications business
Oisix.daichi Inc.	500,000	864	Business alliance in mobile communications business
NEOS COMPANY LIMITED	1,020,000	408	Business alliance in mobile communications business
FueTrek Co., Ltd.	568,000	382	Business alliance in mobile communications business
Nippon BS Broadcasting Corporation	80,000	100	Business alliance in mobile communications business
BIC CAMERA INC.	50,000	83	Business alliance in mobile communications business

Notes: 1. The number of shares and balance sheet book value listed above for PLDT Inc. include 8,533,253 American Depositary Receipts ("ADRs") with a value of ¥25,719 million.

2. The number of shares and balance sheet book value listed above for KT Corporation include 16,906,444 American Depositary Receipts ("ADRs") with a value of ¥24,607 million.

(c) Total amount of investment shares held for investment purposes in the fiscal years ended March 31, 2017 and 2018, and the total amount of dividends received, gains/losses on disposal and valuation gains/losses for the fiscal year ended March 31, 2018: Not applicable.

The status of NTT Communications Corporation, which has the next-highest amount of investment shares on its balance sheet amongst NTT and its consolidated subsidiaries, is as follows:

- (a) Total number of companies and balance sheet value of shares in other companies held for purposes other than net investments: 27 companies, ¥100,931 million
- (b) Classification, name, and number of shares, balance sheet value and purpose of holding, for listed shares in other companies held for purposes other than net investment:

Specified Investment Shares
(as of March 31, 2017)

<u>Company Name</u>	<u>Number of Shares</u>	<u>Balance Sheet Value</u> (millions of yen)	<u>Purpose of Holding</u>
PLDT Inc.	12,633,487	46,580	Business alliance in long-distance and international communications business
StarHub Ltd	171,490,520	39,644	Business alliance in long-distance and international communications business
SKY Perfect JSAT Corporation	26,057,000	12,246	Business alliance in long-distance and international communications business
Internet Initiative Japan Inc.	2,040,000	4,098	Business alliance in long-distance and international communications business
WOWOW Inc.	580,200	2,239	Business alliance in long-distance and international communications business
GMO CLOUD K.K.	470,000	1,080	Business alliance in long-distance and international communications business
PIA Corporation	100,000	293	Business alliance in long-distance and international communications business
TV Asahi Holdings Corporation	93,000	195	Business alliance in long-distance and international communications business
BIC CAMERA INC.	60,000	61	Business alliance in long-distance and international communications business
Nippon BS Broadcasting Corporation	12,960	13	Business alliance in long-distance and international communications business

Specified Investment Shares
(as of March 31, 2018)

<u>Company Name</u>	<u>Number of Shares</u>	<u>Balance Sheet Book Value</u> (millions of yen)	<u>Purpose of Holding</u>
PLDT Inc.	12,633,487	38,071	Business alliance in long-distance and international communications business
StarHub Ltd	171,490,520	31,956	Business alliance in long-distance and international communications business
SKY Perfect JSAT Corporation	26,057,000	12,455	Business alliance in long-distance and international communications business
Internet Initiative Japan Inc.	2,040,000	4,400	Business alliance in long-distance and international communications business
WOWOW Inc.	580,200	1,940	Business alliance in long-distance and international communications business
PIA Corporation	100,000	545	Business alliance in long-distance and international communications business
TV Asahi Holdings Corporation	93,000	215	Business alliance in long-distance and international communications business
BIC CAMERA INC.	60,000	100	Business alliance in long-distance and international communications business
Nippon BS Broadcasting Corporation	12,960	16	Business alliance in long-distance and international communications business

(c) Total balance sheet value of investment shares held for investment purposes in the fiscal years ended March 31, 2017 and 2018, and the total amount of dividends received, gains/losses on disposal and valuation gains/losses for the fiscal year ended March 31, 2018: Not applicable.

x. Dialogue with Shareholders and Other Investors

NTT promotes management that prioritizes discussions with shareholders, which not only includes discussions at General Meetings of Shareholders but also involves senior management, including the president, actively promoting discussions with shareholders about medium-term management strategies, corporate governance, business performance trends, and other topics through one-on-one meetings with institutional investors and briefings targeting individual investors.

The opinions received from shareholders through such discussions are shared in the Company. NTT considered and formulated the "Towards the Next Stage 2.0" Medium-Term Management Strategy that was announced in May 2015 in light of shareholder opinions.

During discussions with shareholders, insider information is strictly controlled, and information is proactively disclosed with due consideration to fair disclosure (timely, fair, and impartial information disclosure). To increase convenience for overseas investors, we strive to release Japanese- and English-language disclosure materials at the same time. The Japanese- and English-language versions of the entire Notice of Convocation for the Ordinary General Meeting of Shareholders, including the business report, were released at the same time, more than one month prior to the date of the Ordinary General Meeting of Shareholders.

Policy for Constructive Dialogue with Shareholders and Other Investors

• *Appointment of Executives/Members of the Board*

The Head of Finance and Accounting is responsible for communications with investors, and the IR office is established within the Finance and Accounting Department.

• *Measures to Ensure Positive Cooperation between Internal Departments*

The Finance Strategy Committee takes steps to enhance communications based on cooperation with related departments, such as periodically discussing the settlement of accounts.

• *Promotion of Opportunities for Dialogue*

In addition to one-on-one meetings, we hold briefings, etc., in accordance with themes that reflect investor needs.

• *Appropriate and Effective Feedback*

Input from shareholders and other investors is shared with management and Group companies and is used to enhance communications.

• *Control of Insider Information*

We are implementing information disclosure in a fair and impartial manner in accordance with our disclosure policy.

Initiatives to Enhance Dialogue (fiscal year ended March 31, 2018)

For institutional investors:

- Implementing quarterly financial results presentations (4 times)
- Participating in IR conferences in Japan and overseas (10 times)
- Holding NTT IR DAY (briefing for institutional investors, 1 time)
- Implementing one-on-one briefings in Japan and overseas (total of more than 350 times) (topics: medium-term management strategy, financial results, corporate governance, etc.)

For individual investors:

- Implementing Company briefings (19 times) (including 4 company briefings by senior executives)
- Implementing online Company briefings (1 time)
- Participating in individual investor fairs (1 time)
- Holding facility tours (1 time)

(2) Description of Audit Fees**i . Compensation of Independent Auditor**

<u>Category</u>	<u>Fiscal year ended March 31, 2017</u>		<u>Fiscal year ended March 31, 2018</u>	
	<u>Compensation for Audit Services</u> (millions of yen)	<u>Compensation for Non-Audit Services</u> (millions of yen)	<u>Compensation for Audit Services</u> (millions of yen)	<u>Compensation for Non-Audit Services</u> (millions of yen)
NTT	289	176	380	84
Consolidated subsidiaries	2,640	266	2,801	159
Total	2,930	442	3,181	243

ii. Other Material Fees**Fiscal year ended March 31, 2017**

NTT and its major consolidated subsidiaries pay compensation to KPMG AZSA LLC, NTT's Independent Auditor, and other member firms of the KPMG network for audit services and non-audit services.

Of these services, audit services provided by entities other than KPMG AZSA LLC consisted of audits of the financial statements of 498 overseas consolidated subsidiaries, for a total compensation amount of ¥2,074 million for the fiscal year ended March 31, 2017. Non-audit services consisted of the preparation of tax returns for 56 consolidated subsidiaries in Japan and overseas, tax consulting work, and other services, for a total compensation amount of ¥124 million for the fiscal year ended March 31, 2017.

Fiscal year ended March 31, 2018

NTT and its major consolidated subsidiaries pay compensation to KPMG AZSA LLC, NTT's Independent Auditor, and other member firms of the KPMG network for audit services and non-audit services.

Of these services, audit services provided by entities other than KPMG AZSA LLC consisted of audits of the financial statements of 471 overseas consolidated subsidiaries, for a total compensation amount of ¥2,855 million for the fiscal year ended March 31, 2018. Non-audit services consisted of the preparation of tax returns for 71 consolidated subsidiaries in Japan and overseas, tax consulting work, and other services, for a total compensation amount of ¥155 million for the fiscal year ended March 31, 2018.

iii. Description of Non-Audit Services to the Company**Fiscal year ended March 31, 2017**

Non-audit services for which NTT pays compensation to the independent auditor includes advisory and guidance services relating to International Financial Reporting Standards.

Fiscal year ended March 31, 2018

Non-audit services for which NTT pays compensation to the independent auditor included advisory and guidance services relating to International Financial Reporting Standards.

iv. Policy for Determining Audit Fees

Not applicable. However, audit fees are determined with the consent of the Audit & Supervisory Board in accordance with applicable laws and regulations, taking into consideration such factors as the size and characteristics of NTT and its subsidiaries and the days required for the audits.

(3) Social and Environmental Initiatives

In accordance with the guidelines set out in “NTT Group CSR Charter,” NTT Group will help resolve the many social and environmental issues that exist both in and outside of Japan and promote collective initiatives toward improved corporate value and the sustainable development of society.

For example, while working to minimize medium- to long-term business risks by appropriately responding to social and environmental issues at NTT Group, NTT Group is promoting initiatives toward sustained improvement in corporate value by making effective contributions to the resolution of social and environmental issues through NTT Group’s business activities. During the fiscal year ended March 31, 2018, NTT Group engaged in various activities with the “NTT Group CSR Charter,” which was developed taking into account the United Nations’ “Sustainable Development Goals” (SDGs), as its fundamental policy.

i . Initiatives for Cybersecurity

To continue to counter increasingly diverse and large-scale cyberattacks on international events, governments, and companies, while promoting the introduction of the latest R&D results, NTT Group will enhance its initiative to develop security personnel with high-level skills.

For example, during the fiscal year ended March 31, 2018, while promoting cutting-edge R&D and moving forward with the development of the latest R&D results, NTT Group coordinated with global experts in both technology and policy on an industry-by-industry basis. To evaluate effective and practical solutions, with other international companies in the IT and telecommunications industries, NTT Group participated in the creation of the Council to Secure the Digital Economy (CDSE), which aims for a secure digital economy. Furthermore, through NTT Security Corporation, established as an integrated organization to provide security services to NTT Group’s customers, NTT Group promoted coordination among NTT Group companies to provide the advanced, high-level security technology of NTT Group. Additionally, in terms of the nationwide issue of developing IT security engineers, NTT Group continued to promote human resource development within NTT Group.

ii. Initiatives to Ensure Diverse Personnel Can Demonstrate their Talents

NTT Group respects and utilizes personnel with diverse values and individuality, creating a work environment that ensures diverse personnel can demonstrate their talents, irrespective of gender, age, race, nationality, disability status, sexual orientation, or gender identity, advancing initiatives to deepen understanding of work-life management among all of its employees, and promoting its “Work Style Reform.”

For example, during the fiscal year ended March 31, 2018, recognizing diversity management as a key part of NTT Group’s management strategy, NTT Group has striven to ensure diverse personnel can demonstrate their talents, and in terms of sexual minorities such as LGBT persons, in addition to NTT receiving the highest level “GOLD” evaluation for two straight years in the “PRIDE Index,” which evaluates companies’ approaches to sexual minorities such as LGBT persons, a total of 16 NTT Group companies won PRIDE Index awards. Furthermore, in terms of overall systems relating to spouses and families, NTT Group promoted initiatives to further expand systems to same-sex partners. Regarding NTT Group’s “Work Style Reform,” NTT Group issued the “NTT Group Work Style Reform Declaration,” and while working with its business partners to improve its overall business processes, in addition to promoting flexible work styles utilizing teleworking, including working from home, NTT Group had managers show initiative in reforming ways of taking breaks so that it may lead to more proactive taking of leave. Furthermore, NTT Group worked to create an easy-to-work environment for all employees, such as by opening a company-led daycare center.

iii. Initiatives for the Environment

In accordance with the “NTT Group Environmental Statement,” NTT Group is promoting initiatives to contribute to lowering the environmental burden and adapting to climate change through the services and technologies provided by the Group companies such as its ICT services, as well as to preserve ecosystems in cooperation with all of its stakeholders including its business partners and local communities. Furthermore, NTT Group is continually working to improve energy efficiency and resource circulation throughout its business activities.

For example, during the fiscal year ended March 31, 2018, based on the “NTT Group Environmental Statement” and “The Eco Strategy 2030,” NTT Group promoted initiatives to contribute to lowering the environmental impact on society while contributing to adapting to climate change and preserving the ecosystem by providing ICT services and cutting-edge technology. Furthermore, NTT Group began practical testing aimed at making climate-control systems in data centers more efficient, pursuing initiatives aimed at providing services with a low environmental impact.

In addition to the above initiatives, to secure high levels of stability and reliability for its network, NTT Group will work to provide even safer and more secure services through the accumulation of everyday network operational knowhow and implementation of disaster drills based on its collaborative frameworks with external agencies. For example, during the fiscal year ended March 31, 2018, while quickly and efficiently recovering networks following disasters such as the July 2017 torrential rains in Northern Kyushu by utilizing past experience from large-scale disasters, NTT Group also provided support to those affected by the disaster by installing temporary free Wi-Fi hotspots in the evacuation centers.

ITEM 5. FINANCIAL INFORMATION

1. Basis of Preparation of Consolidated Financial Statements

Pursuant to the provisions of Article 95 of the Ordinance on Terminology, Forms and Preparation Methods of Consolidated Financial Statements, etc. (Ordinance of the Ministry of Finance of Japan No. 28 of 1976) (the “Ordinance on Consolidated Financial Statements”), NTT Group’s consolidated financial statements are prepared in accordance with the terms, forms and methods of preparation required in connection with the issuance of American Depositary Receipts (“ADRs”), i.e., generally accepted accounting principles in the United States (“U.S. GAAP”). Amounts stated in the consolidated financial statements are rounded to the nearest million yen.

2. Auditor’s Report

In accordance with Article 193-2, Paragraph 1 of the Financial Instruments and Exchange Act of Japan, NTT Group’s consolidated financial statements for the consolidated fiscal year (from April 1, 2017 to March 31, 2018) have been audited by KPMG AZSA LLC.

3. Special Measures to Ensure the Appropriateness of the Consolidated Financial Statements

NTT Group undertakes special measures to ensure the appropriateness of its consolidated financial statements. Specifically, NTT Group participates in organizations such as the Financial Accounting Standards Foundation in order to put in place a system in which NTT Group can ensure it has an appropriate grasp on the contents of accounting standards and can accurately respond to changes in accounting standards. In addition, NTT Group periodically undertakes reviews of accounting standards, and maintains internal regulations.

1. Consolidated financial statements

(1) Consolidated financial statements

① Consolidated balance sheets

As of March 31	Millions of yen	
	2017	2018
ASSETS (Note 20)		
Current assets :		
Cash and cash equivalents (Notes 6 and 7)	¥925,213	¥780,300
Short-term investments	63,844	31,641
Notes and accounts receivable, trade (Notes 4, 7 and 24)	2,699,708	2,976,467
Allowance for doubtful accounts (Note 25)	(48,626)	(52,332)
Accounts receivable, other	505,145	662,190
Inventories (Note 8)	365,379	393,582
Prepaid expenses and other current assets (Note 24)	573,170	575,704
Deferred income taxes (Note 16)	228,590	—
Total current assets	5,312,423	5,367,552
Property, plant and equipment (Note 21):		
Telecommunications equipment	11,046,115	10,917,851
Telecommunications service lines (Note 9)	16,064,732	14,217,566
Buildings and structures	6,147,869	6,280,584
Machinery, vessels and tools	2,032,389	2,127,201
Land	1,292,685	1,307,985
Construction in progress	421,819	438,604
	37,005,609	35,289,791
Accumulated depreciation	(27,286,588)	(25,468,698)
Net property, plant and equipment	9,719,021	9,821,093
Investments and other assets:		
Investments in affiliated companies (Note 10)	484,596	502,936
Marketable securities and other investments (Note 11)	495,290	525,170
Goodwill (Notes 12 and 27)	1,314,645	1,329,275
Software (Note 13)	1,209,485	1,223,985
Other intangible assets (Note 13)	453,918	394,489
Other assets (Notes 15 and 24)	1,492,076	1,590,636
Deferred income taxes (Note 16)	768,871	920,634
Total investments and other assets	6,218,881	6,487,125
Total assets	¥21,250,325	¥21,675,770

As of March 31	Millions of yen	
	2017	2018
LIABILITIES AND EQUITY		
Current liabilities:		
Short-term borrowings (Note 14)	¥227,207	¥270,743
Current portion of long-term debt (Notes 14 and 24)	681,904	624,385
Accounts payable, trade (Note 4)	1,612,996	1,613,516
Current portion of obligations under capital leases (Note 21)	14,430	12,567
Accrued payroll	443,308	460,357
Accrued taxes on income	239,755	245,326
Accrued consumption tax	75,083	88,420
Advances received	324,342	374,444
Other (Notes 16 and 24)	512,368	549,263
Total current liabilities	4,131,393	4,239,021
Long-term liabilities:		
Long-term debt (excluding current portion) (Notes 14 and 24)	3,168,478	2,947,945
Obligations under capital leases (excluding current portion) (Note 21)	25,568	22,587
Liability for employees' retirement benefits (Note 15)	1,599,381	1,619,907
Accrued liabilities for point programs	103,047	105,037
Deferred income taxes (Note 16)	166,751	128,833
Other (Note 24)	497,132	529,959
Total long-term liabilities	5,560,357	5,354,268
Redeemable noncontrolling interests (Note 17):	50,819	49,930
Equity (Note 18):		
Nippon Telegraph and Telephone Corporation ("NTT") shareholders' equity		
Common stock	937,950	937,950
Additional paid-in capital	2,862,035	2,853,613
Retained earnings (Note 10)	5,626,155	6,260,631
Accumulated other comprehensive income (loss) (Notes 11, 15 and 24)	1,562	44,529
Treasury stock, at cost	(375,223)	(610,742)
Total NTT shareholders' equity	9,052,479	9,485,981
Noncontrolling interests	2,455,277	2,546,570
Total equity	11,507,756	12,032,551
Total liabilities and equity	¥21,250,325	¥21,675,770

As of March 31	Yen	
	2017	2018
Per share of common stock (Note 18):		
NTT shareholders' equity	¥4,491.73	¥4,812.59

② Consolidated statements of income

Millions of yen, except per share data

Year Ended March 31	2017	2018
Operating revenues (Notes 4 and 20):		
Fixed voice related services	¥1,233,885	¥1,146,901
Mobile voice related services	865,293	942,183
IP / packet communications services	3,808,972	3,801,771
Sale of telecommunication equipment	806,493	843,548
System integration	3,041,587	3,443,147
Other	1,634,786	1,622,037
	11,391,016	11,799,587
Operating expenses (Notes 4 and 22):		
Cost of services (excluding items shown separately below)	2,487,588	2,348,541
Cost of equipment sold (excluding items shown separately below)	879,725	915,540
Cost of system integration (excluding items shown separately below)	2,161,007	2,471,347
Depreciation and amortization (Notes 13 and 20)	1,462,235	1,339,423
Impairment losses (Note 20)		
Goodwill (Note 12)	53,294	18,864
Metal cables (Note 9)	—	124,800
Other	20,558	18,505
Selling, general and administrative expenses (Note 22)	2,786,820	2,919,724
	9,851,227	10,156,744
Operating income (Note 20)	1,539,789	1,642,843
Other income (expenses):		
Interest and amortization of bond discounts and issue costs	(37,761)	(32,188)
Interest income	17,753	19,094
Income from arbitration award (Note 10)	—	147,646
Other, net (Notes 10, 11, 23 and 24)	7,988	(21,771)
	(12,020)	112,781
Income before income taxes and equity in earnings (losses) of affiliated companies	1,527,769	1,755,624
Income tax expense (benefit) (Note 16):		
Current	472,711	532,525
Deferred	(4,341)	9,339
	468,370	541,864
Income before equity in earnings (losses) of affiliated companies	1,059,399	1,213,760
Equity in earnings (losses) of affiliated companies (Notes 10 and 20)	(21)	5,551
Net income	1,059,378	1,219,311
Less - Net income attributable to noncontrolling interests	259,249	309,616
Net income attributable to NTT	¥800,129	¥909,695
Per share of common stock (Note 18):		
Weighted average number of shares outstanding (shares)	2,046,678,144	1,995,912,757
Net income attributable to NTT (yen)	¥390.94	¥455.78
Cash dividends to be paid to shareholders of record date (yen)	¥120.00	¥150.00

③ Consolidated statements of comprehensive income

Year Ended March 31	Millions of yen	
	2017	2018
Net income	¥ 1,059,378	¥ 1,219,311
Other comprehensive income (loss), net of tax (Note 18)		
Unrealized gain (loss) on securities	12,308	25,720
Unrealized gain (loss) on derivative instruments	495	1,982
Foreign currency translation adjustments	(24,657)	9,419
Pension liability adjustments	91,034	23,712
Total other comprehensive income (loss)	79,180	60,833
Total comprehensive income (loss)	1,138,558	1,280,144
Less - Comprehensive income attributable to noncontrolling interests	278,358	324,131
Total comprehensive income (loss) attributable to NTT	¥ 860,200	¥ 956,013

④ Consolidated statements of changes in equity

	Millions of yen							
	Year Ended March 31, 2017							
	NTT shareholders' equity							Total Equity (Note 18)
	Common stock	Additional paid-in capital	Retained earnings (Note 10)	Accumulated other comprehensive income (loss) (Notes 11, 15 and 24)	Treasury stock, at cost	Total	Noncontrolling interests	
At beginning of year	¥937,950	¥2,879,560	¥5,074,234	¥(57,055)	¥(883)	¥8,833,806	¥2,406,276	¥11,240,082
Adjustments due to change in fiscal year end of consolidated subsidiaries (Note 3)			(214)	(1,454)		(1,668)	(1,408)	(3,076)
At beginning of year (as adjusted)	937,950	2,879,560	5,074,020	(58,509)	(883)	8,832,138	2,404,868	11,237,006
Net income			800,129			800,129	257,593	1,057,722
Other comprehensive income (loss)				60,071		60,071	20,389	80,460
Cash dividends			(247,994)			(247,994)	(113,167)	(361,161)
Changes in NTT's ownership interest in subsidiaries		(18,700)				(18,700)	(114,406)	(133,106)
Stock compensation transactions		1,175				1,175		1,175
Acquisition of treasury stock					(374,348)	(374,348)		(374,348)
Resale of treasury stock					8	8		8
At end of year	¥937,950	¥2,862,035	¥5,626,155	¥1,562	¥(375,223)	¥9,052,479	¥2,455,277	¥11,507,756

	Millions of yen							
	Year Ended March 31, 2018							
	NTT shareholders' equity							Total Equity (Note 18)
	Common stock	Additional paid-in capital	Retained earnings (Note 10)	Accumulated other comprehensive income (loss) (Notes 11, 15 and 24)	Treasury stock, at cost	Total	Noncontrolling interests	
At beginning of year	¥937,950	¥2,862,035	¥5,626,155	¥1,562	¥(375,223)	¥9,052,479	¥2,455,277	¥11,507,756
Adjustments due to change in fiscal year end of consolidated subsidiaries (Note 3)			964	(3,351)		(2,387)	(2,012)	(4,399)
At beginning of year (as adjusted)	937,950	2,862,035	5,627,119	(1,789)	(375,223)	9,050,092	2,453,265	11,503,357
Net income			909,695			909,695	307,980	1,217,675
Other comprehensive income (loss)				46,318		46,318	14,101	60,419
Cash dividends			(271,405)			(271,405)	(126,362)	(397,767)
Changes in NTT's ownership interest in subsidiaries		(1,836)				(1,836)	(102,414)	(104,250)
Stock compensation transactions		(6,587)				(6,587)		(6,587)
Acquisition of treasury stock					(235,531)	(235,531)		(235,531)
Resale of treasury stock		1			12	13		13
Adjustment of redeemable noncontrolling interests to redemption value			(4,778)			(4,778)		(4,778)
At end of year	¥937,950	¥2,853,613	¥6,260,631	¥44,529	¥(610,742)	¥9,485,981	¥2,546,570	¥12,032,551

* Changes in the redeemable noncontrolling interest are not included in the table.

⑤ Consolidated statements of cash flows

Year Ended March 31	Millions of yen	
	2017	2018
Cash flows from operating activities:		
Net income	¥1,059,378	¥1,219,311
Adjustments to reconcile net income to net cash provided by operating activities -		
Depreciation and amortization (Notes 13 and 20)	1,462,235	1,339,423
Impairment losses (Notes 9, 12 and 20)	73,852	162,169
Deferred taxes (Note 16)	(4,341)	9,339
Losses on disposals of property, plant and equipment	105,790	69,585
Gains on sales of property, plant and equipment	(15,633)	(9,201)
Equity in (earnings) losses of affiliated companies (Note 10)	21	(5,551)
(Increase) decrease in notes and accounts receivable, trade (Note 7)	63,842	(231,845)
(Increase) decrease in inventories (Note 8)	(731)	(44,491)
(Increase) decrease in other current assets	(30,143)	(139,684)
Increase (decrease) in accounts payable, trade and accrued payroll	52,872	12,437
Increase (decrease) in accrued consumption tax	(7,258)	12,918
Increase (decrease) in advances received	36,925	52,790
Increase (decrease) in accrued taxes on income	(8,931)	7,516
Increase (decrease) in other current liabilities	8,934	72,822
Increase (decrease) in liability for employees' retirement benefits	7,133	35,930
Increase (decrease) in other long-term liabilities	41,785	21,703
Other	71,627	52,376
Net cash provided by operating activities	¥2,917,357	¥2,637,547

Year Ended March 31	Millions of yen	
	2017	2018
Cash flows from investing activities:		
Payments for property, plant and equipment	¥(1,301,697)	¥(1,308,727)
Payments for intangibles	(400,110)	(401,995)
Proceeds from sales of property, plant and equipment	24,920	15,842
Payments for purchases of non-current investments	(40,344)	(53,843)
Proceeds from sales and redemptions of non-current investments	58,835	27,018
Acquisitions of subsidiaries, net of cash acquired (Note 27)	(329,005)	(19,614)
Payments for purchases of short-term investments	(178,939)	(208,043)
Proceeds from redemptions of short-term investments	146,132	249,987
Other	(69,103)	(142,402)
Net cash used in investing activities	(2,089,311)	(1,841,777)
Cash flows from financing activities:		
Proceeds from issuance of long-term debt (Note 14)	320,464	440,903
Payments for settlement of long-term debt (Note 14)	(485,612)	(635,900)
Proceeds from issuance of short-term debt (Note 14)	4,987,795	6,810,893
Payments for settlement of short-term debt (Note 14)	(4,897,024)	(6,769,488)
Dividends paid	(247,994)	(271,405)
Proceeds from sale of (payments for acquisition of) treasury stock, net (Note 18)	(374,436)	(235,570)
Acquisitions of shares of subsidiaries from noncontrolling interests	(155,905)	(132,466)
Other	(128,799)	(138,625)
Net cash used in financing activities	(981,511)	(931,658)
Effect of exchange rate changes on cash and cash equivalents	(6,959)	(3,106)
Net increase (decrease) in cash and cash equivalents	(160,424)	(138,994)
Cash and cash equivalents at beginning of year	1,088,275	925,213
Increase (decrease) in cash and cash equivalents due to change in fiscal year end of consolidated subsidiaries (Note 3)	(2,638)	(5,919)
Cash and cash equivalents at end of year (Notes 6 and 7)	¥925,213	¥780,300

Supplemental Information

Year Ended March 31	Millions of yen	
	2017	2018
Cash paid during the year for:		
Interest	¥37,339	¥32,262
Income taxes, net	468,357	575,943
Noncash investing and financing activities:		
Capital lease obligations incurred during the year	16,809	13,594

1. Accounting principles, procedures and basis of presentation of consolidated financial statements

The Company's consolidated financial statements are prepared on the basis of generally accepted accounting principles in the United States (the Accounting Standards Codification ("ASC") of the Financial Accounting Standards Board ("FASB")), collectively referred to as U.S. GAAP.

In June 1961, the Company registered the issuance of its ADRs with the United States Securities and Exchange Commission (the "SEC"). Accordingly, the Company prepares and files with the SEC its consolidated financial statements on the basis of the terms, forms and methods of preparation required in connection with the issuance of ADRs.

Certain significant accounting principles and procedures and methods of presentation of consolidated financial statements used by the Company and its subsidiaries (collectively, "NTT Group") differ from accounting principles, procedures and methods of presentation used in Japan. Material differences are summarized below.

(1) Classification of Presentation of "Equity in earnings (losses) of affiliated companies"

"Equity in earnings (losses) of affiliated companies" is presented after "Income tax expense (benefit)."

(2) Goodwill and Other Intangible Assets

Goodwill and intangible assets acquired through business combinations with indefinite lives are not amortized, and are tested for impairment on an annual basis and when indicators of impairment are present.

(3) Commissions Paid to Distributors

Certain commissions paid to distributors who purchase devices from NTT Group for sale (resale) to customers are accounted for as reductions in revenues from the sales of telecommunication equipment, rather than as expenses. Furthermore, these reductions in revenues are recognized at the time when the devices are sold to the distributors, rather than when the commissions are paid.

(4) Accrued Pension Expenses

Actuarial gains or losses in excess of 10% of the greater of the projected benefit obligation or the fair value of plan assets, and past service costs resulting from the change in benefit plan, each as recorded under "Accumulated other comprehensive income (loss)," are amortized over the expected average remaining service period of employees on a straight-line basis.

(5) Compensated Absences

The unused balances of paid compensated absences at year-end that employees are eligible to receive based on the Company's rules of employment are recognized on an accrual basis.

(6) Reduction Entries

Reduction entries that reduce the price for the acquisition of fixed assets are treated as if there were no reduction entries.

(7)Real Estate Subject to Leases

NTT Group owns leased office buildings and other leased properties. The carrying amount of such leased real estate assets in the consolidated balance sheets for the fiscal years ended March 31, 2017 and 2018, as well as changes during the year and market value, are as follows. The following items are prepared in accordance with Guideline 98-3 of the Ordinance on Consolidated Financial Statements.

Year Ended March 31	Millions of yen	
	2017	2018
Amounts recorded on consolidated balance sheets:		
Balance at beginning of year *1	975,829	1,008,418
Change during period	32,589	34,732
Balance at end of year *1	1,008,418	1,043,150
Market Value at Year-End *2	1,971,774	2,118,767

*1 The carrying amounts in the consolidated balance sheets are deducted accumulated depreciation and impairment losses from the acquisition cost.

*2 Market values are amounts calculated primarily on the basis of real estate appraisal standards.

Gains (losses) on leases for leased real estate for the fiscal years ended March 31, 2017 and 2018 were ¥34,015 million and ¥39,964 million, respectively.

Gains (losses) from the sale of leased real estate for the fiscal years ended March 31, 2017 and 2018 were ¥14,104 million and ¥2,731 million, respectively.

2. Nature of operations

Nippon Telegraph and Telephone Corporation (“NTT”) and its subsidiaries (collectively with NTT, “NTT Group”) conduct the following main business activities: regional communications (domestic intra-prefectural communication services and incidental services), principally operated by Nippon Telegraph and Telephone East Corporation (“NTT East”) and Nippon Telegraph and Telephone West Corporation (“NTT West”); long-distance and international communications (domestic inter-prefectural communication services, international communication services, solution services and related services), principally operated by NTT Communications Corporation (“NTT Communications”); mobile communications (mobile phone services and related services), principally operated by NTT DOCOMO, Inc. (“NTT DOCOMO”); and data communications (network system services, system integration services, etc.), principally operated by NTT DATA CORPORATION (“NTT DATA”).

Pursuant to the Act on Nippon Telegraph and Telephone Corporation, etc. (“NTT Act”), NTT was incorporated on April 1, 1985, upon which all the assets and liabilities of Nippon Telegraph and Telephone Public Corporation (“Public Corporation”) were transferred to NTT. As provided for in the supplementary provisions of the NTT Act, all the new shares held by Public Corporation were transferred to the Japanese Government upon the dissolution of Public Corporation on April 1, 1985. The NTT Act specifies, however, that such government ownership may eventually be reduced to one-third. Since NTT’s incorporation, the Japanese Government has sold NTT’s common stock to the public. The Japanese Government’s ownership ratio of NTT’s issued stock, taking into account the special provisions regarding the method of calculation under the supplementary provisions of the NTT Act (as described in further detail under “Item 2 — Business Overview” — “2. Risk Factors”), is 33.3% as of March 31, 2018. As a normal part of its business operations, NTT provides various telecommunications and other services to the Japanese Government.

3. Summary of significant accounting policies

(1) Principal Accounting Policies

Basis of consolidation —

The consolidated financial statements include the accounts of NTT, its subsidiaries, and variable interest entities (“VIEs”*) for which NTT Group has been determined to be the primary beneficiary. All significant intercompany transactions and accounts are eliminated in consolidation.

*VIEs: Special-purpose vehicles and other entities that NTT utilizes in the ordinary course of business, mainly to facilitate the securitization of certain assets, such as real estate, and in which NTT Group holds decision-making authority that is disproportionate to the equity interests NTT Group holds in such entities, are classified as VIEs under U.S. GAAP. If NTT Group has both the authority to direct the activities of a VIE and the obligation to absorb losses of the VIE that could potentially be significant to the VIE or the right to receive benefits from the VIE that could potentially be significant to the VIE, then NTT Group determines that it is the VIE’s primary beneficiary and consolidates the VIE.

The fiscal years of certain foreign subsidiaries end on December 31. However, any significant transactions for the period from January 1 to March 31 are reflected in the consolidated financial statements.

As of April 1, 2016, certain of NTT's consolidated subsidiaries changed their fiscal year ends from December 31 to March 31, thereby eliminating a three-month lag between their fiscal year ends and NTT's fiscal year end in NTT's consolidated financial statements. The elimination of this lag was applied as a change in accounting policy. NTT did not make any retrospective adjustments to its financial statements as these changes did not have a material impact on the consolidated financial statements for the fiscal year ended March 31, 2016.

As of April 1, 2017, certain of NTT's consolidated subsidiaries changed their fiscal year ends from December 31 or January 31 to March 31, thereby eliminating a three-month or two-month lag between their fiscal year ends and NTT's fiscal year end in NTT's consolidated financial statements. The elimination of this lag was applied as a change in accounting policy. NTT did not make any retrospective adjustments to its financial statements as these changes did not have a material impact on the consolidated financial statements for the year ended March 31, 2017.

The effect of the changes of the fiscal year ends of certain foreign subsidiaries described above is as follows:

	Millions of yen	
	April 1, 2016	April 1, 2017
Retained earnings	(214)	964
Accumulated other comprehensive income (loss)	(1,454)	(3,351)
Noncontrolling interests	(1,408)	(2,012)

In addition, the change in cash and cash equivalents resulting from those changes in fiscal year ends are presented in the consolidated statements of cash flows under "Increase (decrease) in cash and cash equivalents due to change in fiscal year end of consolidated subsidiaries."

Investments in affiliated companies —

Investments in affiliated companies where NTT Group has the ability to exercise significant influence over the affiliated companies, but which are not categorized as consolidated subsidiaries or VIEs, are accounted for under the equity method. NTT evaluates its investments in affiliates for impairment due to declines in value considered to be other than temporary. In performing its evaluations, NTT utilizes various information, as available, including cash flow projections, independent valuations and, if applicable, stock price analysis. In the event of a determination that a decline in value is other than temporary, a charge to earnings is recorded for the loss and a new cost basis in the investment is established.

Use of estimates —

The preparation of NTT's consolidated financial statements requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the consolidated financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates. Significant items subject to such estimates and assumptions include revenue recognition, estimated useful lives and recovery of the carrying amount of property, plant and equipment, software and certain other intangible assets, goodwill, investments, employees' retirement benefit obligations, income tax uncertainties and realizability of deferred tax assets and accrued liabilities for point programs.

Revenue recognition —

Revenues arising from fixed voice related services, mobile voice related services, IP/packet communications services and other services are recognized at the time these services are provided to customers.

With regard to revenues from mobile voice related services and IP/packet communications services, monthly billing plans for mobile phone services generally include a certain amount of allowances (free minutes and/or packets), and the used amount of the allowances is subtracted from total usage in calculating the airtime revenue from a subscriber for the month. NTT Group offers billing arrangements, called "Zutto Kurikoshi" and "Packet Kurikoshi," in which the unused allowances are automatically carried over.

"Zutto Kurikoshi" is a billing arrangement in which the unused allowances of the monthly free minutes and/or packets are automatically carried over for up to the upper limit set by the billing plan. Out of the unused allowance in a month, NTT Group defers the revenues based on the portion which is estimated to be used in the following months. For the fiscal year ended March 31, 2017, NTT Group did not have sufficient historical evidence to reasonably estimate unused allowances that will be utilized in the following months. NTT Group therefore deducted and deferred amounts allocated to unused allowances from revenues, which did not exceed the upper limit set by each billing plan. For the fiscal year ended March 31, 2018, for the unused allowances in each month, NTT Group deferred revenues based on the portion estimated to be used starting from the following month. The deferred revenues are recognized as revenues in accordance with an actual use of the allowances in the following months.

"Packet Kurikoshi" is a billing arrangement in which the unused allowances of the monthly packet data which can be used without speed cap are automatically carried over for up to the following month. Out of the unused allowance in a month, NTT Group defers the revenues based on the portion which is estimated to be used prior to expiration. As for the portion which is estimated to expire, NTT Group recognizes the revenue attributable to such portion of allowances ratably as the remaining allowances are utilized, in addition to the revenue recognized when subscribers utilize data transmissions. The deferred revenues are recognized as revenues in the next month.

Non-recurring upfront fees such as activation fees are deferred and recognized as revenues over the estimated average period of the subscription for each service. The related direct costs are deferred only to the extent of the non-recurring upfront fee amount and are amortized over the same period.

Sales of telecommunication equipment are recognized as income upon delivery of the equipment to purchasers, primarily distributor, when title to the product, and the risk and rewards of ownership, have been substantially transferred. Certain commissions paid to purchasers, primarily distributor, and incentives given to subscribers are recognized as a reduction of sales of telecommunication equipment.

With regard to sales of telecommunication equipment in the mobile communications business, NTT Group provides subscribers with options to select installment payments for the purchase of the handset over a period of 12 or 24 months. When installment payments are selected, under agreements entered into among NTT Group, subscribers and distributor, NTT Group provides financing by providing funds for the purchase of the handset by the subscribers. NTT Group then includes current installments for the receivable for the purchased handset with basic monthly charges and airtime charges for the installment payment term. Because equipment sales are recognized upon delivery of handsets to distributor, the advance payment for the purchased handset to distributor and subsequent cash collection of the installment receivable for the purchased handset from subscribers do not have an impact on our revenues.

Revenues from system integration services are recognized as work on contracts progresses. However, in cases where the contract period is short and the impact on the financial position or results of operations, of the difference between recognizing revenue upon completion and as work on contracts progress, is immaterial, or in cases where it is difficult to make a reasonable estimate on the progress of the contracted work, revenues are recognized upon completion of the contracted services.

Provision for estimated losses on system integration projects, if any, is made in the fiscal period in which the loss becomes evident.

Cash and cash equivalents, short-term investments —

Excess cash is mainly invested in time deposits, marketable bonds of the Japanese Government or commercial paper. Those with original maturities of three months or less are classified as “Cash and cash equivalents” in the consolidated balance sheets. Those with original maturities of longer than three months and remaining maturities of 12 months or less at the end of the fiscal year are classified as “Short-term investments” in the consolidated balance sheets.

NTT Group has maintained a global cash management system (“Global CMS”) with a single financial institution since the fiscal year ended March 31, 2013 in order to improve the efficiency and effectiveness of its cash management. The group companies joining the Global CMS receive excess cash and extend loans through the financial institution. With respect to offsetting in the Global CMS, as all of the criteria for offsetting have been met, NTT Group offsets positive and negative cash balances, which correspond to “Cash and cash equivalents” and “Short-term borrowings” in the consolidated balance sheets. NTT’s consolidated balance sheets as of March 31, 2017 and 2018 reflect such offsets of ¥172,208 million and ¥129,103 million, respectively.

For information on “Cash and cash equivalents”, see Note 6.

Foreign currency translation and transactions —

All asset and liability accounts of foreign subsidiaries and affiliates are translated into Japanese yen at appropriate year-end exchange rates and all income and expense accounts are translated at the average exchange rates prevailing during the year. The resulting translation adjustments are recognized as a component of “Accumulated other comprehensive income (loss).”

Foreign currency receivables and payables are re-measured at appropriate year-end exchange rates and the resulting foreign currency transaction gains or losses are recorded as “Other, net” in the consolidated statements of income.

As for foreign currency-denominated transactions, the effect of exchange rate fluctuations from the initial transaction date to the settlement date is recorded as “Other, net” in the consolidated statements of income.

For information on “Foreign currency translation and transactions”, see Note 23.

Marketable securities and other investments —

NTT Group's equity securities and debt securities included in "Marketable securities and other investments" are classified and accounted for as follows:

Equity securities and debt securities classified as marketable securities which are available for sale

Unrealized gains and losses, which are the differences between fair values and costs, are reported as a component of accumulated other comprehensive income (loss), net of taxes. NTT Group periodically reviews the carrying amounts of its marketable securities for instances in which fair value has declined below cost and resulted in impairments that are other than temporary. If this evaluation indicates there is an impairment that is other than temporary, the full amount by which the cost of the security exceeds its fair value is recorded as an impairment loss.

Equity securities classified as non-marketable securities and equity securities for which sales are restricted by contractual requirements

These securities are carried at cost.

Debt securities designated as held-to-maturity

These securities are carried at amortized cost, and any amount by which the book value exceeds the net realizable value is recorded as an impairment loss, unless such declines are deemed to be temporary. Realized gains and losses, which are determined on the average cost method, are reflected in income.

For information on "Marketable securities and other investments", see Note 11.

Inventories —

Inventories consist of telecommunications equipment and materials to be sold, projects in progress and supplies, which are stated at the lower of cost or net realizable value. Net realizable value is the estimated selling prices in the ordinary course of business, less reasonably predictable costs of completion, disposal and transportation. The cost of telecommunications equipment to be sold and materials is determined on a first-in first-out basis. The cost of projects in progress is mainly attributable to that of software production for customers or that of construction of real estate held for resale, including labor and subcontractors' cost base. The cost of supplies is determined by the average cost method or by the specific identification method. NTT Group recognized losses on write-downs in the mobile communication business as a result of conducting evaluations, among other things, obsolescence for the fiscal years ended March 31, 2017 and 2018 totaling ¥11,043 million and ¥5,699 million, respectively, which were included in "Cost of equipment sold" in the consolidated statements of income.

For information on "Inventories", see Note 8.

Property, plant and equipment and depreciation —

Property, plant and equipment are stated at cost. Depreciation is computed principally using the straight-line method at rates based on estimated useful lives of the assets. With minor exceptions, the estimated useful lives of depreciable properties (estimated economic life) are as follows:

Digital switch equipment (including wireless telecommunications equipment)	8 to 16 years
Cables	13 to 36 years
Tubes and tunnels	50 years
Reinforced concrete buildings	42 to 56 years
Machinery, vessels and tools	3 to 26 years

Depreciation expense is computed based on the total depreciable amount, which is cost, net of estimated residual value. Maintenance and repairs, including minor renewals and betterments, are charged to income as incurred.

Capitalized interest —

NTT Group capitalized interest related to the construction of property, plant and equipment over the period of construction. NTT Group also capitalizes interest associated with the development of internal-use software. NTT Group amortizes such capitalized interest over the estimated useful lives of the related assets. Total interest costs incurred and capitalized interest amounts included therein for the fiscal years ended March 31, 2017 and 2018 are as follows:

Year ended March 31	Millions of yen	
	2017	2018
Total interest costs incurred	41,114	35,899
Capitalized interest amounts included in the above	3,353	3,711

Impairment of long-lived assets —

Long-lived assets to be held and used, including property, plant and equipment, software and certain other intangible assets with finite useful lives are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount may not be recoverable. As the first step, if the total of the undiscounted cash flows expected to result from the use and eventual disposition of the asset is less than the carrying amount of the asset, NTT Group determines that the carrying amount of the asset is not recoverable, and then as the second step, recognizes the impairment loss at the amount by which the carrying amount of the asset exceeds its fair value as measured through various valuation techniques, including the discounted cash flow method, quoted market value and third-party independent appraisals, as considered necessary.

Long-lived assets held for sale are reported at the lower of the carrying amount or estimated fair value less costs to sell.

For information on the "impairment of long-lived assets", see Note 9.

Goodwill —

Goodwill is an asset representing the future economic benefits arising from other assets acquired in a business combination that are not individually identified and recognized. Goodwill is not amortized, but testing for impairment is required at least annually and more frequently when indicators of impairment are present.

Impairment test

Goodwill impairment tests are generally quantitative, but NTT Group may perform a qualitative assessment to some or all of the reporting units before performing the quantitative goodwill impairment test. If, based on this qualitative assessment, NTT Group concludes that it is not more likely than not that the fair value of a reporting unit is less than its carrying amount including goodwill, it is not required to perform the quantitative goodwill impairment test. NTT Group performs the qualitative assessment for certain goodwill but bypasses this qualitative assessment and proceeds directly to the quantitative impairment test for other goodwill.

As described in Note 3(2) — Application of New Accounting Standards, NTT Group had applied the two-step goodwill impairment test in and before the fiscal year ended March 31, 2017, and has newly applied the one-step goodwill impairment test starting with the fiscal year ended March 31, 2018.

Quantitative assessment based on the two-step goodwill impairment test in the fiscal year ended March 31, 2017

Under the first step, the fair value of the reporting unit is compared with its carrying amount (including goodwill). If the fair value of the reporting unit is less than its carrying amount, an indication of goodwill impairment exists for that reporting unit and NTT Group must perform the second step of the impairment test (measurement). Under the second step, an impairment loss is recognized for any excess of the carrying amount of the reporting unit's goodwill over the implied fair value of the goodwill. The implied fair value of goodwill is determined by allocating the fair value of the reporting unit in a manner similar to a purchase price allocation and the residual fair value after this allocation is the implied fair value of the reporting unit goodwill. If the fair value of the reporting unit exceeds its carrying amount, the second step does not need to be performed.

Quantitative assessment based on the one-step goodwill impairment test in the fiscal year ended March 31, 2018

An impairment loss is recognized for any excess of the carrying amount of the reporting unit including the goodwill over the fair value of the reporting unit.

Fair values of the reporting units are determined using a discounted cash flow method or the guideline public company method, among other methods.

Realignment of reporting units

During the fiscal year ended March 31, 2018, NTT DATA realigned its operating segments in order to reflect its changing business management. As a result of this realignment of operating segments, NTT Group reorganized the reporting structure of "global business" reporting unit of the data communications business segment into "North America", "EMEA & LATAM" and "China & APAC" reporting units. In conjunction with this change, NTT Group reassigned the goodwill attributable to these reporting units using a relative fair value allocation approach.

For information on "Goodwill", see Note 12.

Software and other intangible assets —

Intangible assets other than goodwill primarily consist of computer software. NTT Group capitalizes the cost of internal-use software, which has a useful life in excess of one year. Subsequent additions, modifications or upgrades to internal-use software are capitalized only to the extent that they allow the software to perform a task it previously did not perform. Software maintenance and training costs are expensed in the period in which they are incurred. Capitalized computer software costs are amortized on a straight-line basis over a period of generally from five to seven years.

The intangible assets with indefinite lives are not amortized, but tested for impairment on an annual basis and when indicators of impairment are present.

For information on "Software and other intangible assets", see Note 13.

Income taxes —

Income taxes are accounted for under the asset and liability method. Deferred tax assets and liabilities are recognized for the expected future tax consequences attributable to temporary differences between the financial statement carrying amounts and the tax bases of assets or liabilities and operating loss carryforwards. Deferred tax assets and liabilities are measured using enacted tax rates expected to be applicable during the periods in which existing temporary differences reverse and operating loss carryforwards are utilized.

A valuation allowance is recognized to reduce deferred tax assets to the amount more likely than not to be realized.

Realization of the deferred tax assets depends upon the generation of future taxable income during the periods in which those temporary differences become deductible and loss carryforwards are utilizable. Management considers the projected future taxable income, tax-planning strategies and scheduled reversal of deferred tax liabilities in making this assessment. Realization of substantially all of our deferred tax assets is dependent upon continued profitability, and NTT anticipates that it will continue to generate substantial income. Although realization is not assured, management believes it is more likely than not that all of the deferred tax assets, less valuation allowance, will be realized. The amount of such net assets considered realizable, however, could be reduced in the near term if estimates of future taxable income during the carryforward period are reduced.

The effect of income tax positions are recognized only if those positions are more likely than not of being sustained. Recognized income tax positions are measured at the largest amount that is greater than 50 percent likely of being realized. Changes in recognition or measurement are reflected in the period in which the change in judgment occurs.

For information on "Income taxes", see Note 16.

Consumption tax —

Consumption tax payable or receivable is determined based on consumption taxes levied on operating revenues offset by consumption taxes directly incurred by the company when purchasing goods and services. Items in the consolidated statements of income are presented exclusive of consumption tax.

Derivative financial instruments —

Risk management objective and strategy

In the normal course of business, NTT Group has certain financial instruments including long-term debt and other financial assets and liabilities. Such financial instruments are exposed to market risks such as interest rate changes and foreign currency fluctuations. For the purpose of hedging such risks, NTT Group uses derivative financial instruments. NTT Group formally documents all relationships between hedging instruments and hedged items, as well as its risk management objective and strategy for undertaking various hedging transactions. This process includes linking all derivatives that are designated as fair value or cash flow hedges to (1) specific assets or liabilities on the balance sheet or (2) specific firm commitments or forecasted transactions. NTT Group does not use derivative financial instruments for trading or speculative purposes.

Foreign currency exchange rate risk management

NTT Group enters into forward foreign exchange contracts, currency swap agreements and currency option agreements to hedge the risk of fluctuations in foreign currency exchange rates principally associated with long-term debt issued by NTT Group denominated in foreign currencies. Such contracts and agreements have the same maturity as the underlying debt.

Interest rate risk management

NTT Group's exposure to market risk for changes in interest rates relates principally to its debt obligations. NTT Group has long-term debt primarily with fixed rates. Interest rate swap agreements are entered into mainly to convert floating rate underlying debt or assets into fixed rate debt or assets. Interest rate option contracts are entered into to hedge the risk of a rise in the interest rate of underlying debt. These instruments are executed with creditworthy financial institutions.

Presentation and measurement

All derivatives are recognized at fair value either assets or liabilities and reported in "Prepaid expenses and other current assets," "Other assets," "Current liabilities - Other" and "Long-term liabilities - Other" in the consolidated balance sheets. Classification of each derivative as current or non-current is based upon whether the maturity of each instrument is less than or greater than 12 months. Changes in fair value of derivative financial instruments are either recognized in income or shareholders' equity (as a component of accumulated other comprehensive income (loss)), depending on whether the derivative financial instrument qualifies as a hedge and it is being used to hedge changes in fair value or cash flows.

Cash flows from financial instruments accounted for as hedges are classified in the consolidated statements of cash flows under the same category as the items being hedged.

The fair values of derivatives are measured by inputs derived principally from observable market data provided by financial institutions.

Assessment of hedge effectiveness

NTT Group assesses (both at the hedge's inception and on an ongoing basis at least quarterly) whether the derivatives that are used in hedging transactions have been highly effective in offsetting changes in the fair value or cash flows of hedged items and whether those derivatives may be expected to remain highly effective in future periods. When it is determined that a derivative is not highly effective as a hedge, NTT Group discontinues hedge accounting. The amounts representing hedges' ineffectiveness and the component of derivative instruments' gain or loss excluded from the assessment of hedge effectiveness are reported as "Other, net" in the consolidated statements of income.

Fair value hedges

For derivatives classified as fair value hedges, changes in the fair value of derivatives designated and effective as fair value hedges for recognized assets or liabilities or unrecognized firm commitments are recognized in gains or losses as offsets to changes in the fair value of the related hedged assets or liabilities. There were no derivatives designated as fair value hedges for the fiscal years ended March 31, 2017 and 2018.

Cash flow hedges

For derivatives classified as cash flow hedges, changes in the fair value of derivatives designated and effective as cash flow hedges for forecasted transactions or exposures associated with recognized assets or liabilities are initially recorded in other comprehensive income (loss) and reclassified into gains or losses when the hedged transaction affects gains or losses.

As discussed in Note 14, NTT Group has foreign currency exposures related to its long-term debt denominated in currencies other than yen. NTT Group fixes the anticipated cash flows of paying interest and principal amounts by entering into foreign currency contracts and foreign currency swaps, to ensure its cash flows are fixed in yen.

Also, as discussed in Note 14, NTT Group has floating rate debt exposures related to its long-term debt. NTT Group fixes the anticipated cash flows of interest payment by entering into pay-fixed/receive-floating interest rate swaps. For all periods presented, these cash flow hedges were effective and the amount representing the ineffectiveness of the hedges was not material. In addition, there was no material amount excluded from the assessment of hedge effectiveness of cash flow hedges.

Derivatives not designated as hedging instruments

NTT Group may enter into derivatives that economically hedge certain of its risks, even though hedge accounting does not apply. In these cases, changes in the fair values of these derivatives are recognized in gains or losses.

For information on derivative financial instruments, see Note 24.

Earnings per share —

Basic earnings per share ("EPS") is computed based on the average number of shares outstanding during the year. Diluted EPS assumes the dilution that could occur if securities or other contracts to issue common stock were exercised or converted into common stock or resulted in the issuance of common stock. However NTT did not issue dilutive securities for the fiscal years ended March 31, 2017 and 2018, there was no difference between basic EPS and diluted EPS.

Asset Retirement Obligations —

NTT Group's legal obligations associated with the retirement of tangible long-lived assets are recognized as liabilities, measured at fair value, when those obligations are incurred if a reasonable estimate of fair value can be made. Those retirement cost is capitalized by an increase in the carrying amount of the related tangible long-lived assets.

NTT Group's asset retirement obligations are primarily related to obligations to restore leased land and buildings for NTT Group's telecommunications equipment to their original condition. NTT has concluded that their estimates of the fair value of these liabilities are immaterial.

Employees' retirement benefits —

NTT Group recognizes the funded status of its benefit plan, measured as the difference between the plan assets at fair value and the projected benefit obligation, in the consolidated balance sheets. Changes in the funded status are recognized as changes in comprehensive income (loss) during the fiscal year in which such changes occur.

Service costs, which are pension benefits earned during the year, as well as interest costs, which are interest costs on projected benefit obligations, are recognized as gains or losses for the fiscal years in which they occurred. Prior service cost and net actuarial loss in excess of 10% of the greater of the projected benefit obligation or the fair value of plan assets, both of which are included in "Accumulated other comprehensive income (loss)," are amortized over the expected average remaining service period of employees on a straight-line basis.

For information on "Employees' retirement benefits", see Note 15.

Accrued liabilities for point programs —

NTT Group grants "points" to customers based on the usage of mobile, credit card service and other services, which may be exchanged for benefits such as payments on merchandise and mobile phone charges, and records "Accrued liabilities for point programs" relating to the points that it grants to customers.

Redeemable noncontrolling interests —

A portion of noncontrolling interests of certain subsidiaries can be put to NTT Group upon certain events. As redemption of the noncontrolling interests is not solely in the control of NTT Group, the estimated redemption amount is considered as "Redeemable noncontrolling interests" and presented in between Liabilities and Equity in the consolidated balance sheets. Changes in the estimated redemption amount are recognized as changes in retained earnings.

As of March 31, 2017 and 2018, NTT Group believes that subsequent adjustment of the presented amount of certain redeemable noncontrolling interests is unnecessary mainly because they are not currently redeemable or it is not probable that they will become redeemable. NTT Group will annually reassess the probability.

For information on "Redeemable noncontrolling interests", see Note 17.

Reclassifications —

Certain items for prior periods' financial statements have been reclassified to conform to the presentation for the fiscal year ended March 31, 2018.

(2)Adoption of New Accounting Standards

Balance Sheet Classification of Deferred Taxes —

On November 20, 2015, the FASB issued ASU2015-17 “Balance sheet classification of deferred taxes” which requires that all deferred tax liabilities and assets be classified as noncurrent on the balance sheet.

Effective April 1, 2017, NTT Group adopted this ASU prospectively and prior periods were not retrospectively adjusted.

Simplifying the Test for Goodwill Impairment —

On January 26, 2017, the FASB issued ASU 2017-04 “Simplifying the Test for Goodwill Impairment,” which replaces the two-step goodwill impairment test with the one-step goodwill impairment test. The amendments in this update require that an entity should perform its annual, or interim, goodwill impairment test by comparing the fair value of a reporting unit with its carrying amount and an entity should recognize an impairment charge for the amount by which the carrying amount exceeds the reporting unit’s fair value. The adoption of ASU 2017-04 would be permitted for goodwill impairment tests with measurement dates after January 1, 2017. NTT Group adopted this ASU for the goodwill impairment test with measurement date on July 1, 2017.

(3) Recently issued Accounting Standards

NTT Group decided to adopt International Financial Reporting Standards (“IFRS”) for its consolidated financial statements beginning with the first quarter of the fiscal year ending March 31, 2019, however, assuming NTT Group had continued to apply U.S. GAAP, the recently issued accounting standards that would have been expected to have an effect on NTT Group’s financial position and results of operation are as follows.

Revenue from Contracts with Customers —

On May 28, 2014, the FASB issued ASU 2014-09 “Revenue from Contracts with Customers,” which requires an entity to recognize revenue when the entity transfers control of promised goods or services to customers. Revenue is recognized in an amount that reflects the consideration an entity expects to receive in exchange for those goods or services. An entity also is required to disclose sufficient quantitative and qualitative information to enable users of financial statements to understand the nature, amount, timing, and uncertainty of revenue and cash flows arising from contracts with customers. The ASU will replace most existing revenue recognition guidance in U.S. GAAP when it becomes effective.

On August 12, 2015, the FASB issued ASU 2015-14 “Revenue from Contracts with Customers: Deferral of the Effective Date,” and deferred the effective date of ASU 2014-09 by one year. Consequently, the new standard is effective for annual reporting periods beginning after December 15, 2017. The standard is expected to take effect for NTT Group on April 1, 2018. The two permitted transition methods under the new standard are the full retrospective method, or the modified retrospective method. Under the full retrospective method, all periods presented will be updated upon adoption to conform to the new standard and a cumulative adjustment for effects on periods prior to the reporting period will be recorded to retained earnings at the beginning of the initial reporting period. Under the modified retrospective approach, the current reporting period will be updated to conform to the new standard and a cumulative adjustment for effects of applying the new standard to periods prior to the reporting period that includes the date of initial application is recorded to retained earnings as of the date of initial application, and also incremental disclosures related to the amount affected by the application of this new standard are required.

Upon the application of the modified retrospective approach, “Retained earnings” as of April 1, 2018, after adjusting for the effect of taxes, would increase by approximately ¥100,500 million. The items currently expected to be affected by the application of this standard are as follows:

- The new standard requires the recognition of incremental costs of obtaining contracts and direct costs of fulfilling contracts with customers as assets. Under the current standard, those costs relating to communication services provided on the Regional communications business, the Long distance and international communications business, and the Mobile communications business are capitalized and amortized up to the upfront fees as the upper limit over the estimated average period of the subscription for each service. After adopting the new standard, all of those costs will be capitalized, and therefore, part of the sales commissions and other charges that have previously been treated as expenses will be recognized as additional assets.
- The new standard requires that if customers are granted by an entity the option to acquire additional goods or services at a discount by a contract agreed between the customer and the entity, the entity shall identify this option as a separate performance obligation upon granting such option as a part of the consideration of the transaction being recognized as contract liabilities, and recognize revenue when the additional good or service is transferred at a discount to the customer or when such option expires. Under the current standard, NTT Group records accrued liabilities relating to the points that customers earn. After adopting the new standard, NTT Group will recognize a part of the consideration for transactions of services as contract liabilities at the time when the points are granted, and recognize revenue when points are used for additional goods or services at a discount.

NTT Group had been in the process of setting up operating processes and internal controls for the adoption of the new revenue recognition standard.

Recognition and Measurement of Financial Assets and Financial Liabilities —

On January 5, 2016, the FASB issued ASU 2016-01 “Recognition and Measurement of Financial Assets and Financial Liabilities,” which makes targeted improvements to the accounting for, presentation and disclosure of, financial instruments. ASU 2016-01 requires that most equity investments be measured at fair value, with subsequent changes in fair value recognized in net income. ASU 2016-01 does not affect the accounting for investments that would otherwise be consolidated or accounted for under the equity method. The new standard also affects the recognition of changes in fair value of financial liabilities under the fair value option and the presentation and disclosure requirements for financial instruments. ASU 2016-01 is effective for fiscal years beginning after December 15, 2017. The new standard is expected to take effect for NTT Group on April 1, 2018.

Upon the application of the modified retrospective approach, “Retained earnings” as of April 1, 2018, after adjusting for the effect of taxes, would increase by approximately ¥102,600 million.

Leases —

On February 25, 2016, the FASB issued ASU 2016-02 “Leases,” which requires all lessees to recognize right-of-use assets and lease liabilities, principally. The new standard is effective for fiscal years beginning after December 15, 2018. The new standard is expected to take effect for NTT Group on April 1, 2019. Early adoption is permitted.

While NTT Group is currently continuing to assess the effects of adopting this standard, the most significant effect is the recognition of right-of-use assets and lease liabilities related to leases for offices and for land required for the installation of telecommunications equipment. By newly recognizing these assets and liabilities, it is anticipated that the balance of assets and of liabilities on the consolidated balance sheet would increase.

4. Related party transactions

NTT Group has entered into various types of transactions with affiliated companies, the most significant of which are the purchases of terminal equipment and materials and the receipt of certain services. Transactions with affiliated companies are based on the values that approximate arm’s-length prices.

Transactions with affiliated companies

Year ended March 31	Millions of yen	
	2017	2018
Operating revenues	¥69,134	¥82,531
Operating expenses	¥136,200	¥149,573

Receivables and payables from transactions with affiliated companies

As of March 31	Millions of yen	
	2017	2018
Receivables	¥31,653	¥29,616
Payables	¥149,862	¥208,196

Dividends from affiliated companies for the fiscal years ended March 31, 2017 and 2018 were ¥16,068 million and ¥15,881 million, respectively.

5. Variable Interest Entities

Consolidated VIEs —

NTT Group makes investments in business entities that develop and lease real estates. Those entities have been determined to be a VIE as most of the decision-making authority for the entities does not reside within the entities' equity interests, but rather is embedded in the real estate management contracts between those entities and NTT Group, under which decision-making authority is delegated to real estate companies or other companies within NTT Group. In addition, NTT Group has the greater part of the equity interests in such entities, and NTT Group has therefore determined that it is the primary beneficiary of those entities, and such entities are considered consolidated subsidiaries.

Assets and liabilities of VIEs relating to real estate development and rental included in NTT Group's consolidated balance sheets

As of March 31	Millions of yen	
	2017	2018
Current assets	¥15,984	¥17,956
Property, plant and equipment	165,701	163,302
Investments and other assets*1	3,021	3,279
Current liabilities*2	2,098	38,044
Long-term liabilities*2	64,569	28,346

*1 Property, plant and equipment included "Land" totaling ¥122,878 million and ¥122,878 million at March 31, 2017 and 2018, respectively.

*2 Current liabilities included "Current portion of long-term debt" totaling ¥800 million and ¥36,400 million, and Long-term liabilities included "Long-term debt" totaling ¥36,500 million and ¥100 million at March 31, 2017 and 2018, respectively.

"Current portion of long-term debt" and "Long-term debt" above are secured by the VIEs' land and buildings totaling ¥227,796 million and ¥225,621 million at March 31, 2017 and 2018, respectively.

Non-consolidated VIEs —

In addition, there are certain investments in business entities that develop and lease real estates for which NTT Group is not the primary beneficiary. Those entities have been determined to be a VIE as most of the decision-making authority for such entities does not reside within the entities' equity interests, but rather is embedded in the real estate management contracts between those entities and third parties. Under these real estate management contracts, decision-making authority is not granted to NTT Group, and NTT Group has therefore determined that it is not the primary beneficiary of those entities. As of March 31, 2017 and 2018, the total investment amount in these entities was ¥6,999 million and ¥9,997 million, respectively, which represent NTT Group's maximum loss amount.

6. Cash and cash equivalents

As of March 31	Millions of yen	
	2017	2018
Cash and cash equivalents		
Cash	¥893,797	¥641,151
Commercial paper and certificates of deposit, commercial paper and marketable securities purchased under agreements to resell	236	194
Time deposits, certificates of deposit and other	31,180	138,955
Total	¥925,213	¥780,300

Commercial paper and certificates of deposit, commercial paper and marketable securities purchased under agreements to resell, and time deposits, certificates of deposit and other are stated at amounts that approximate fair value.

Commercial paper are classified as available-for-sale securities.

Cash is mainly deposited into several domestic financial institutions and there is no significant concentration of cash deposits in any particular financial institution.

7. Impact on the consolidated financial statements due to the non-business day at the end of the fiscal year

The last day of the fiscal year ended March 31, 2018 fell on a non-business day, resulting in the due date for certain bills, including telecommunication service bills, being set to the first business day of the fiscal year ending March 31, 2019. Consequently, in the consolidated balance sheets and consolidated statements of cash flows for the fiscal year ended March 31, 2018, there was a decrease of cash and cash equivalents and an increase of notes and accounts receivable, ¥231,929 million respectively.

8. Inventories

As of March 31	Millions of yen	
	2017	2018
Inventories		
Telecommunications equipment to be sold and materials	¥155,248	¥188,199
Projects in progress	112,514	108,689
Supplies	97,617	96,694
Total	¥365,379	¥393,582

9. Impairment of long-lived assets

Impairment losses for a portion of metal cables for the telecommunications business —

In December 2017, NTT Group determined that a portion of the metal cables used for its telecommunications business was idle assets with no prospect of future use.

The usage rate of metal cables has been decreasing continuously. In addition to the downward trend in the number of subscribers to the fixed-line services that use these cables, NTT Group and other related parties such as service providers have recognized that the decrease in such services is unavoidable going forward.

Based on the changes in the business environment described above, NTT Group determined that a certain unused portion of the metal cables was idle assets with no prospect of future use and thus reduced the carrying amount to the fair value. Consequently, in the consolidated statement of income for the fiscal year ended March 31, 2018, NTT Group recorded ¥124,800 million of impairment losses for “Telecommunications service lines” as “Impairment losses-Metal cables” in the regional communications business segment. For information on the details related to fair value measurements, see Note 19.

10. Investments in affiliated companies

PLDT Inc. —

PLDT Inc. (“PLDT”) is a telecommunication operator in the Philippines and a public company listed on the Philippine Stock Exchange and the New York Stock Exchange.

NTT Group held approximately 20% of PLDT’s outstanding common shares (excluding treasury shares) and approximately 12% of voting interest in PLDT as of March 31, 2017 and 2018. The ratio of outstanding common shares and voting interest in PLDT held by NTT Group as of March 31, 2017 and 2018 are disproportionate because PLDT issued voting preferred stock in October, 2012.

NTT Group applies the equity method of accounting for the investment in PLDT, as NTT Group has the ability to exercise significant influence over PLDT given NTT DOCOMO’s board representation and the right to exercise its voting rights in accordance with an agreement between PLDT and its major shareholders.

The carrying amounts of NTT Group’s its investment in PLDT were ¥133,823 million and ¥130,693 million as of March 31, 2017 and 2018, respectively. The aggregate market value of the PLDT shares owned by NTT Group were ¥162,096 million and ¥132,484 million as of March 31, 2017 and 2018, respectively.

Tata Teleservices Limited —

Tata Teleservices Limited (“TTSL”) is a telecommunication operator in India and a privately held company.

Until October 31 2017, NTT Group had held approximately 21.6% of the outstanding common shares of TTSL and accounted for the investment under the equity method.

In accordance with the Court (London Court of International Arbitration) decision as to Tata Sons Limited’s (“Tata Sons”) breach regarding the execution of an option for the sale of a stake in TTSL pursuant to the shareholders agreement among TTSL, Tata Sons and NTT DOCOMO, NTT DOCOMO received payment of an arbitration award* from Tata Sons on October 31, 2017. As a result of this transaction, NTT Group recorded the award amount of ¥147,646 million as “Income from arbitration award” in the consolidated statement of income for the fiscal year ended March 31, 2018. Concurrently with the receipt of the above award amount, all shares in TTSL held by NTT DOCOMO were transferred to Tata Sons and companies designated by Tata Sons. Upon the transfer of NTT DOCOMO’s shares in TTSL, NTT Group discontinued the application of the equity method to the investment in TTSL. As a result, NTT Group recorded a loss of ¥29,841 million on transfer of investment in an affiliate, equal to the reclassification adjustments of foreign currency translation adjustments, in “Other, net” of “Other income (expenses)” in the consolidated statement of income for the fiscal year ended March 31, 2018.

* The amount received included interest earned and other costs awarded.

Impairment —

NTT Group reviews factors such as the financial condition and near-term prospects of its affiliates on a regular basis in order to determine if any decline in investment values was other-than-temporary.

NTT Group determined that there were other-than-temporary declines in values, of certain investments including Hutchison Telephone Company Limited and recognized impairment losses aggregating ¥23,920 million and ¥2,561 million, for the fiscal year ended March 31, 2017 and 2018, respectively. These impairment losses were included in the consolidated statements of income under “Equity in earnings (losses) of affiliated companies.”

NTT’s share of undistributed earnings of its affiliated companies included in its consolidated retained earnings —

NTT’s share of undistributed earnings of its affiliated companies included in its consolidated retained earnings were ¥94,857million and ¥106,311 million as of March 31, 2017 and 2018, respectively.

NTT’s affiliated publicly-held companies —

NTT Group's total investments in its affiliated publicly-held companies at March 31, 2017 and 2018 were ¥152,725 million and ¥150,913 million, respectively, and based on quoted market prices at that date, the related market values were ¥189,553 million and ¥160,683 million, respectively.

Carrying amounts and underlying equity in net assets —

The total carrying amounts of NTT’s investments in affiliates in the consolidated balance sheets at March 31, 2017 and 2018 were greater by ¥206,661 million and by ¥143,040 million, respectively, than its aggregate underlying equity in net assets of such affiliates as of the date of the most recent available financial statements of the investees. The differences mainly consist of investor level goodwill and fair value adjustments for amortizable intangible assets.

11. Marketable securities and other investments

Available-for-sale securities & Held-to-maturity securities —

NTT Group holds available-for-sale securities composed of equity securities and debt securities and held-to-maturity debt securities, and mainly includes them under “Marketable securities and other investments.”

Cost, gross unrealized gains & losses, and fair value

	Millions of yen			
	As of March 31, 2017			
	Cost	Gross unrealized gains	Gross unrealized losses	Fair value
Available-for-sale:				
Equity securities	¥140,673	¥194,501	¥780	¥334,394
Debt securities	96,231	1,635	368	97,498
Held-to-maturity:				
Debt securities	4,479	82	7	4,554
Total	¥241,383	¥196,218	¥1,155	¥436,446

	Millions of yen			
	As of March 31, 2018			
	Cost	Gross unrealized gains	Gross unrealized losses	Fair value
Available-for-sale:				
Equity securities	¥134,270	¥215,822	¥892	¥349,200
Debt securities	116,562	1,055	709	116,908
Held-to-maturity:				
Debt securities	4,508	80	6	4,582
Total	¥255,340	¥216,957	¥1,607	¥470,690

Gross unrealized losses which were shown in above tables and their corresponding fair value of available-for-sale securities and held-to-maturity securities, aggregated by investment category and length of time that individual securities had been in a continuous unrealized loss position are as follows:

	Millions of yen			
	As of March 31, 2017			
	Gross unrealized losses		Fair value	
	Less than 12 months	12 months or longer	Less than 12 months	12 months or longer
Available-for-sale:				
Equity securities	¥757	¥23	¥8,827	¥81
Debt securities	238	130	26,143	13,835
Held-to-maturity:				
Debt securities	2	5	201	301

Millions of yen				
As of March 31, 2018				
	Gross unrealized losses		Fair value	
	Less than 12 months	12 months or longer	Less than 12 months	12 months or longer
Available-for-sale:				
Equity securities	¥869	¥23	¥6,110	¥73
Debt securities	617	92	15,649	17,410
Held-to-maturity:				
Debt securities	5	1	499	101

Proceeds, gross realized gains and losses from sales of available-for-sale securities

Year ended March 31	Millions of yen	
	2017	2018
Proceeds	¥25,231	¥16,517
Gross realized gains*	18,659	4,873
Gross realized losses*	377	105

* Gross realized gains and losses shown in above table were included in “Other, net” of “Other income (expenses)” in the consolidated statements of income.

Maturities of debt securities classified as held-to-maturity

As of March 31	Millions of yen			
	2017		2018	
	Carrying Amount	Fair value	Carrying Amount	Fair value
Due within 1 year	¥349	¥346	¥210	¥211
Due after 1 year through 5 years	623	630	2,082	2,089
Due after 5 years through 10 years	3,007	3,039	1,616	1,642
Due after 10 years	500	539	600	640
Total	¥4,479	¥4,554	¥4,508	¥4,582

Equity securities accounted for under the cost method —

In the ordinary course of business, NTT Group maintains equity securities as long-term investment accounted for under the cost method, which are included in “Marketable securities and other investments.” Unless NTT Group identifies events or changes in circumstances that may have had a significant adverse effect on the fair value of these investments, the fair value of such cost method investments is not estimated.

As of March 31	Millions of yen	
	2017	2018
Total carrying amounts of equity securities accounted for under the cost method	¥61,474	¥66,545
Aggregate carrying amount of investment securities included in the amount above whose fair values were not evaluated	61,465	65,886

12. Goodwill

Changes in goodwill by business segment

	Millions of yen				
	2017				
	Long distance and international communications business	Mobile communications business	Data communications business	Other	Total
Balance at March 31, 2016					
Gross goodwill	527,864	490,384	257,321	2,571	1,278,140
Accumulated impairment losses	(31,225)	(7,281)	(10,426)	—	(48,932)
Net carrying amount	¥496,639	¥483,103	¥246,895	¥2,571	¥1,229,208
Goodwill acquired during year	5,915	—	154,637	—	160,552
Impairment losses	(53,294)	—	—	—	(53,294)
Foreign currency translation adjustments	(21,263)	(3,033)	7,364	—	(16,932)
Other	(867)	—	(4,022)	—	(4,889)
Balance at March 31, 2017					
Gross goodwill	511,649	487,351	415,300	2,571	1,416,871
Accumulated impairment losses	(84,519)	(7,281)	(10,426)	—	(102,226)
Net carrying amount	¥427,130	¥480,070	¥404,874	¥2,571	¥1,314,645

	Millions of yen				
	2018				
	Long distance and international communications business	Mobile communications business	Data communications business	Other	Total
Balance at March 31, 2017					
Gross goodwill	511,649	487,351	415,300	2,571	1,416,871
Accumulated impairment losses	(84,519)	(7,281)	(10,426)	—	(102,226)
Net carrying amount	¥427,130	¥480,070	¥404,874	¥2,571	¥1,314,645
Goodwill acquired during year	3,589	—	1,810	—	5,399
Impairment losses	(18,864)	—	—	—	(18,864)
Foreign currency translation adjustments	1,094	1,681	(10,104)	—	(7,329)
Other	6,130	—	29,294	—	35,424
Balance at March 31, 2018					
Gross goodwill	522,462	489,032	436,300	2,571	1,450,365
Accumulated impairment losses	(103,383)	(7,281)	(10,426)	—	(121,090)
Net carrying amount	¥419,079	¥481,751	¥425,874	¥2,571	¥1,329,275

As a result of the annual impairment test, as of October 31, 2016, an impairment loss of ¥48,823 million was recognized for goodwill attributable to the Dimension Data reporting unit in the long distance and international communications business segment. This impairment loss was a result of the decrease in the estimated fair value of the reporting unit which was from the re-evaluation of Dimension Data's business plan considering declining profitability due to business expansion and investments in infrastructure business, and the impact of measures expected to be promoted by NTT Group going forward. The fair value of the reporting unit was determined using the discounted cash flow method.

As a result of the annual impairment test, as of October 31, 2017, an impairment loss of ¥18,864 million was recognized for goodwill attributable to the NTT America reporting unit in the long distance and international communications business segment. This impairment loss was a result of the decrease in the estimated fair value of the reporting unit which was from the re-evaluation of NTT America's medium-term business plan taking into consideration the latest business markets related to cloud services and data network services. The fair value of the reporting unit was determined using the discounted cashflow method and the guideline public company method.

The amount of goodwill attributable to the North America reporting unit in the data communications business segment has been updated due to the finalization of the accounting procedures for business acquisitions related to Dell Systems Corporation and other corporations in the fiscal year ended March 31, 2018. For additional details, see Note 27.

The amount of goodwill included in the mobile communications business segment is mainly related to NTT DOCOMO's share repurchase program. Until the end of March 2009, increases in NTT Group's ownership interest in NTT DOCOMO resulting from NTT DOCOMO stock repurchases were accounted for as purchases of minority interests and accounted for using the purchase method. Although repurchases of shares by NTT DOCOMO resulting in increases in NTT's ownership interest in NTT DOCOMO were previously accounted for as acquisitions of minority interests using the purchase method, they have been accounted for as equity transactions with noncontrolling interests since April 2009.

13. Software and other intangible assets

Major components of software and other intangible assets

	Millions of yen		
	As of March 31, 2017		
	Gross Carrying Amount	Accumulated amortization	Net carrying amount
Amortizable intangible assets:			
Computer software	¥6,401,191	¥5,191,706	¥1,209,485
Rights to use utility facilities	338,437	300,519	37,918
Other	586,775	274,343	312,432
Total amortizable intangible assets *	7,326,403	5,766,568	1,559,835
Non-amortizable intangible assets:			
Trademarks and trade names			49,863
Rights to acquire the building			16,792
Other			36,913
Total non-amortizable intangible assets			103,568
Total			¥1,663,403

	Millions of yen		
	As of March 31, 2018		
	Gross Carrying Amount	Accumulated amortization	Net carrying amount
Amortizable intangible assets:			
Computer software	¥6,559,545	¥5,335,560	¥1,223,985
Rights to use utility facilities	339,267	301,786	37,481
Other	568,373	316,615	251,758
Total amortizable intangible assets*	7,467,185	5,953,961	1,513,224
Non-amortizable intangible assets:			
Trademarks and trade names			50,144
Rights to acquire the building			16,792
Other			38,314
Total non-amortizable intangible assets			105,250
Total			¥1,618,474

* The amount of amortizable intangible assets acquired during the fiscal year ended March 31, 2018 was ¥395,602million, the main component of which was Computer software in the amount of ¥376,527 million.

The aggregate amortization expense for amortizable intangible assets for the fiscal years ended March 31, 2017 and 2018 were ¥408,789 million and ¥412,470 million, respectively.

Computer software —

Computer software is recognized at cost and is amortized on a straight-line basis over its estimated useful life, which is generally from five to seven years.

Rights to use utility facilities —

Rights to use utility facilities are acquired using lump-sum cash payments and mainly consist of cable tunnels (special purposes underground tunnels exclusively for the use of communications cables) and public use joint tunnels. Such rights are recorded at cost and are amortized on a straight-line basis over their estimated useful lives of 50 years.

Other intangible assets —

Other intangible assets are also recognized at cost and amortized on a straight-line basis over their estimated useful lives averaging 16 years.

Trademarks and trade names —

Trademarks and trade names are intangible assets with indefinite lives acquired through business combinations.

Estimated aggregate amortization expenses for intangible assets

Year ending March 31	Millions of yen
2019	¥402,849
2020	314,547
2021	245,753
2022	169,908
2023	115,514

14. Short-term debt and long-term debt

Short-term debt —

As of March 31	Millions of yen	
	2017	2018
Borrowings denominated in Japanese yen:		
Unsecured short-term loans from financial institutions*1	¥40,804	¥37,051
Commercial paper bearing interest*2	15,000	59,000
	55,804	96,051
Borrowing denominated in foreign currencies:		
Unsecured short-term loans from financial institutions	171,403	174,692
Total short-term debt	¥227,207	¥270,743

*1 Interest at weighted average rates at March 31, 2017 and 2018 were 0.12% and 0.13% per annum, respectively.

*2 Interest at weighted average rates at March 31, 2017 and 2018 were (0.00)% and (0.01)% per annum, respectively.

Long-term debt —

		Millions of yen	
As of March 31	Maturity Date	2017	2018
Debt denominated in Japanese yen:			
Corporate bonds			
0.05% - 1.99% coupon bonds	2018-2032	¥1,266,000	¥1,001,000
0.18% floating rate bond	2022	100	100
Secured indebtedness to financial institutions -			
0.50% (weighted average) loans	2018-2029	37,782	36,779
0.29% (weighted average) floating rate loans	2018-2032	24,950	22,668
Unsecured indebtedness to financial institutions -			
0.78% (weighted average) loans	2018-2048	1,711,482	1,729,319
0.19% (weighted average) floating rate loans	2018-2033	56,960	54,924
Subtotal		3,097,274	2,844,790
Debt denominated in foreign currencies:			
Corporate bonds			
1.90% - 2.15% U.S. dollar notes	2020-2021	286,085	138,113
2.20% - 2.83% floating rate U.S. dollar notes	2019-2020	22,438	74,368
0.85% - 1.30% Euro notes	2024-2027	—	20,452
Unsecured indebtedness to financial institutions -			
2.46% (weighted average) U.S. dollar loans	2018-2023	11,940	15,347
2.41% (weighted average) U.S. dollar floating rate loans	2018-2029	349,497	396,857
1.89% (weighted average) U.K. pound loans	2022-2024	7,704	11,163
0.75% (weighted average) U.K. pound floating rate loans	2018-2020	11,212	14,140
1.04% (weighted average) Euro loans	2018-2027	14,473	20,430
0.20% (weighted average) Euro floating rate loans	2018-2027	26,624	21,576
Other loans	2018-2026	23,420	15,292
Subtotal		753,393	727,738
Total long-term debt principal		3,850,667	3,572,528
Less - Deferred bond discounts		(285)	(198)
		3,850,382	3,572,330
Less - Current portion		(681,904)	(624,385)
Total long-term debt		¥3,168,478	¥2,947,945

Interest rates and due dates in the above table are stated at March 31, 2018.

All holders of the bonds and notes totaling ¥493,050 million issued by NTT, referred to in the above table, generally have preferential rights under the NTT Act to be paid prior to other unsecured indebtedness, after certain general preferential rights provided for in the Japanese Civil Code, such as preferential rights of employees to wages, are exercised.

In general, the bond and notes may be repurchased by NTT in the market or directly from the holders. Additionally, certain of the bonds and notes at March 31, 2018 were redeemable at the option of NTT, at the principal amount.

Aggregate amounts of annual maturities

Year ending March 31	Millions of yen
2019	¥624,385
2020	495,840
2021	498,163
2022	440,047
2023	446,729
Thereafter	1,067,166
Total	¥3,572,330

As of March 31, 2018, NTT Group has unused committed lines of credit amounting to ¥56.9 billion.

15. Employees' retirement benefits

NTT and certain subsidiaries have defined contribution pension plans and defined benefit pension plans. Defined benefit pension plans consist of (i) Severance Payments and Contract-type Corporate Pension Plans and (ii) the NTT Kigyō-Nenkin-Kikin (NTT Corporate Defined Benefit Pension Plan ("NTT CDBP")).

(1) Defined Contribution Pension Plan —

NTT and certain subsidiaries recorded retirement benefit expenses of ¥22,783 million and ¥28,628 million related to NTT Group's defined contribution benefit plan in the fiscal years ended March 31, 2017 and 2018, respectively.

(2) Severance Payments and Contract-type Corporate Pension Plans —

Employees are generally entitled to lump-sum severance payments based on NTT's severance payment plans, determined by reference to the employee's basic rate of pay, length of service and other conditions.

NTT and certain subsidiaries sponsor non-contributory funded contract-type corporate pension plans, which cover 28% of the severance benefits under the severance payment plans to employees who are 50 years old or above and retire after twenty or more years of service. The employees have a option to receive the benefit as a lump sum payment.

NTT Group transitioned from the contract-type corporate pension plans to a defined contribution pension plan, effective from future contributions subsequent to April 1, 2014. NTT Group's contract-type corporate pension plan continues to remain for the pension benefit earned up to March 31, 2014.

Reconciliation of the changes in the plans' projected benefit obligations and fair value of plan assets

	Millions of yen	
	2017	2018
Projected benefit obligation:		
Projected benefit obligation, beginning of year	¥1,882,026	¥1,778,499
Change in projected benefit obligations:		
Service cost	65,930	62,972
Interest cost	9,490	11,773
Net actuarial loss (gain)	(24,665)	11,578
Other	(1,267)	(5,506)
Benefit payments -Lump-sum severance payments and Pension	(153,015)	(133,777)
Projected benefit obligation, end of year	1,778,499	1,725,539
Fair value of plan assets:		
Fair value of plan assets, beginning of year:	1,041,561	962,120
Change in fair value of plan assets:		
Actual return on plan assets	15,085	24,130
Employer contributions	4,810	2,154
Other	200	(2,949)
Benefit payments -Pension	(99,536)	(88,971)
Fair value of plan assets, end of year	962,120	896,484
At March 31:		
Under-funded status	¥(816,379)	¥(829,055)

NTT uses a March 31 measurement date.

There are no material differences between the accumulated benefit obligation and the projected benefit obligation.

Projected benefit obligation and fair value of plan assets in the plans with projected benefit obligations in excess of fair value of plan assets

	Millions of yen	
As of March 31	2017	2018
Projected benefit obligation	¥1,773,590	¥1,719,908
Fair value of plan assets	954,678	887,424

Amounts recognized in the consolidated balance sheets

	Millions of yen	
As of March 31	2017	2018
At March 31:		
Liability for employees' retirement benefits	¥(924,291)	¥(951,357)
Other assets	107,912	122,302
Accumulated other comprehensive loss (income):		
Net actuarial loss	208,000	197,964
Transition obligation	354	307
Prior service cost*	(57)	682
Net amount recognized	¥(608,082)	¥(630,102)

* Prior service cost has been amortized on the straight-line method over the expected average remaining service period of employees expected to receive benefits under the plans.

Amounts recognized in the consolidated statements of income

	Millions of yen	
Year ended March 31	2017	2018
Service cost	¥65,930	¥62,972
Interest cost on projected benefit obligation	9,490	11,773
Expected return on plan assets	(19,936)	(9,848)
Amortization of net actuarial loss	8,702	7,569
Amortization of transition obligation	48	47
Amortization of prior service cost	(1,067)	(486)
Total	¥63,167	¥72,027

Amounts recognized in the consolidated statements of comprehensive income

	Millions of yen	
Year ended March 31	2017	2018
Other comprehensive loss (income):		
Net actuarial loss arising during the period	¥(19,814)	¥(2,704)
Amortization of net actuarial loss	(8,702)	(7,569)
Amortization of transition obligation	(48)	(47)
Prior service cost arising during the period	—	(388)
Amortization of prior service cost	1,067	486
Other	(101)	878
Total	¥(27,598)	¥(9,344)

The amounts of net actuarial loss, transition obligation and prior service cost included as accumulated other comprehensive loss (income) expected to be reclassified to components of net periodic benefit cost for the fiscal year ending March 31, 2019 are ¥6,413 million, ¥47 million and ¥83 million, respectively.

Weighted-average assumptions used to determine the benefit obligations and net periodic benefit cost

	2017	2018
Weighted-average assumption used to determine projected benefit obligations at March 31		
Discount rate	0.7%	0.6%
Weighted-average assumption used to determine net periodic benefit cost for years ended March 31		
Discount rate	0.5%	0.7%
Expected long-term rate of return on plan assets	2.0%	1.0%

In determining the expected long-term rate of return on plan assets, NTT Group considers the current and projected asset allocations, as well as expected long-term investment returns and risks for each category of plan assets based on analysis of historical results.

Fair values of pension plan assets of contract-type corporate pension plans

	Millions of yen			
	As of March 31, 2017			
	Total	Fair value measurements using		
		Level 1	Level 2	Level 3
Cash and cash equivalents	¥26,855	¥26,855	—	—
Debt securities				
Japanese government bonds/local government bonds	491,057	477,584	13,473	—
Domestic corporate bonds	65,561	—	65,561	—
Equity securities				
Domestic	57,145	57,145	—	—
Foreign	22,808	22,808	—	—
Life insurance company general accounts	163,762	—	163,762	—
Others	905	—	3	902
Subtotal	828,093	584,392	242,799	902
Investments valued at NAV				
Securities investment trust beneficiary certificates				
Domestic/debt securities	33,465			
Domestic/equity securities	9,954			
Foreign/equity securities	3,321			
Pooled funds	87,287			
Total	¥962,120			

	Millions of yen			
	As of March 31, 2018			
	Total	Fair value measurements using		
		Level 1	Level 2	Level 3
Cash and cash equivalents	¥109,850	¥109,850	—	—
Debt securities				
Japanese government bonds/local government bonds	355,298	346,396	8,902	—
Domestic corporate bonds	67,043	—	67,043	—
Equity securities				
Domestic	52,502	52,502	—	—
Foreign	26,548	26,548	—	—
Life insurance company general accounts	148,268	—	148,268	—
Others	25	—	—	25
Subtotal	759,534	535,296	224,213	25
Investments valued at NAV				
Securities investment trust beneficiary certificates				
Domestic/debt securities	26,996			
Domestic/equity securities	14,449			
Foreign/equity securities	4,276			
Pooled funds	91,229			
Total	¥896,484			

Descriptions of fair value hierarchy and the inputs used in measuring fair value are presented in Note 19.

Cash and cash equivalents —

Cash and cash equivalents include foreign currency deposits and call loans, and are all classified as Level 1.

Debt securities —

Debt securities include Japanese government bonds and local government bonds, and domestic corporate bonds. If active market prices are available, fair value is measured by quoted prices for identical assets in active markets, which is classified as Level 1. If active market prices are not available, fair value is measured by inputs derived principally from observable market data provided by financial institutions, which is classified as Level 2.

Equity securities —

Equity securities include domestic stocks and foreign stocks. If active market prices are available, fair value is measured by quoted prices for identical assets in active markets, which is classified as Level 1.

Securities investment trust beneficiary certificates —

Securities investment trust beneficiary certificates include bond investment trusts and foreign stock investment trusts. Fair value is evaluated on the basis of net asset value (NAV) per unit, which is reported by the trust operator. The NAV per unit is based on the total net asset value of the fund divided by the number of units outstanding.

Pooled funds —

Underlying investments in pooled funds include government bonds, local government bonds, domestic stocks and foreign stocks. Fair value of pooled funds is measured based on NAV as reported by the trust operator.

Life insurance company general accounts —

Life insurance company general accounts are the financial assets which the life insurance company guarantees a specified rate of return and principal and they are all classified as Level 2.

Others —

Others include the assets whose fair value is measured by inputs derived from unobservable data, which is classified as Level 3.

Level 3 reconciliation is not disclosed, since the amounts in Level 3 are immaterial.

Domestic stocks include NTT's and its affiliates' common stock with an aggregate fair value of ¥3,866 million (0.4% of total plan assets) and ¥2,696 million (0.3% of total plan assets) at March 31, 2017 and 2018, respectively.

NTT Group's policy with respect to asset management planning

NTT Group's policy with respect to asset management planning is formulated with the ultimate objective of ensuring the steady disbursement of benefits in future periods. Therefore, the long-term objective of asset management is to secure the total profits deemed necessary to ensure pension financing. To achieve this, NTT Group selects various investments and takes into consideration their expected returns and risks and the correlation among them. NTT Group then sets the target allocation ratio for plan assets and endeavors to maintain that ratio. The target allocation ratio for plan assets is formulated from a mid- to long-term perspective and is reviewed annually. In the event that there is a significant change in the investment environment, NTT Group also reviews the target allocation ratio for plan assets as necessary.

Target allocation ratio for plan assets

Year ended March 31	2017	2018
Domestic bonds	65.0%	65.0%
Domestic stocks	10.0%	10.0%
Foreign bonds	—	—
Foreign stocks	5.0%	5.0%
Life insurance company general accounts	20.0%	20.0%
Total	100.0%	100.0%

Estimated future benefit payments

Year ending March 31	Millions of yen
2019	¥128,086
2020	121,171
2021	112,196
2022	109,216
2023	103,668
2024-2028	565,664
Total	¥1,140,002

(3) Social Welfare Pension Scheme and NTT Kigyō-Nenkin-Kikin (NTT CDBP) —

Since its incorporation in April 1985, both NTT Group and its employees made contributions every year to the Nippon Telegraph and Telephone Mutual Aid Plan (the “NTT Mutual Aid Plan”), which was one of the Japanese government-regulated social welfare pension schemes, based on the Public Corporation Employee Mutual Aid Association Law. As a result of structural reforms, including those due to the amendments to the Japanese Welfare Pension Insurance Law that became effective April 1, 1997, the Law Concerning Defined Benefit Corporate Pension Plans which came into force in June 2001, and the transfer to the Japanese Government of the substitutional portion of the benefit obligations under the Law Concerning Defined Benefit Corporate Pension Plans, the NTT Mutual Aid Plan under the Public Corporation Employee Mutual Aid Association Law converted into (a) the national Kosei-Nenkin (the “National Plan”), (b) NTT CDBP and (c) the Special Accounting Fund for the NTT CDBP.

(a) The National Plan —

The National Plan is a government-regulated social welfare pension plan under the Japanese Welfare Pension Insurance Law and since April 1997, both NTT Group and its employees have made contributions to such plan every year. It is considered as a multi-employer plan and contributions are recognized as expenses when contributions are required. The total amounts of contributions were ¥123,667 million and ¥123,820 million for the fiscal years ended March 31, 2017 and 2018, respectively. In addition, the National Plan is a social welfare pension scheme, and because the information required by its accounting standards is limited, additional quantitative information relating to participation in the multi-employer plan is not disclosed.

(b) The NTT CDBP —

The NTT CDBP is a pension plan structure under which both NTT Group and its employees make contributions to the plan. As the NTT CDBP is considered a defined benefit pension plan, it is accounted for separately from the severance payments and the contract-type corporate pension plans as described in (2) above.

Reconciliation of the changes in the plans’ projected benefit obligations and fair value of plan assets

	Millions of yen	
	2017	2018
Projected benefit obligations:		
Projected benefit obligation, beginning of year	¥1,910,252	¥1,837,405
Change in projected benefit obligations:		
Service cost	48,077	43,793
Interest cost	9,363	12,579
Net actuarial loss (gain)	(86,300)	6,669
Other	(392)	(1,643)
Benefit payments	(43,595)	(42,041)
Projected benefit obligation, end of year	1,837,405	1,856,762
Fair value of plan assets:		
Fair value of plan assets, beginning of year	1,146,880	1,162,315
Change in fair value of plan assets:		
Actual return on plan assets	38,071	49,419
Employer contributions	17,407	16,582
Employee contributions	3,350	3,422
Other	199	(1,485)
Benefits payments	(43,592)	(42,041)
Fair value of plan assets, end of year	1,162,315	1,188,212
At March 31:		
Under-funded status	¥(675,090)	¥(668,550)

NTT uses a March 31 measurement date.

The accumulated benefit obligation amounts were ¥1,569,815 million and ¥1,589,798 million at March 31, 2017 and 2018, respectively.

Amounts recognized in the consolidated balance sheets

As of March 31	Millions of yen	
	2017	2018
Liability for employees' retirement benefits	¥(675,090)	¥(668,550)
Accumulated other comprehensive loss		
Net actuarial loss	212,898	181,271
Prior service cost*	(50,308)	(42,849)
Net amount recognized	¥(512,500)	¥(530,128)

* Prior service cost has been amortized on the straight-line method over the expected average remaining service period of employees expected to receive benefits under the plan.

Amounts recognized in the consolidated statements of income

Year ended March 31	Millions of yen	
	2017	2018
Service cost	¥48,077	¥43,793
Interest cost on projected benefit obligation	9,363	12,579
Expected return on plan assets	(28,008)	(21,921)
Amortization of net actuarial loss	17,717	10,395
Amortization of prior service cost	(7,464)	(7,464)
Employee contributions	(3,350)	(3,422)
Total	¥36,335	¥33,960

Amounts recognized in the consolidated statements of comprehensive income

Year ended March 31	Millions of yen	
	2017	2018
Other comprehensive loss (income)		
Net actuarial loss arising during the period	¥(96,363)	¥(20,829)
Amortization of net actuarial loss	(17,717)	(10,395)
Amortization of prior service cost	7,464	7,464
Other	(229)	(408)
Total	¥(106,845)	¥(24,168)

The amounts of net actuarial loss and prior service cost included as accumulated other comprehensive loss (income) expected to be reclassified to components of net periodic benefit cost for the fiscal year ending March 31, 2019 are ¥8,446 million and ¥(7,464) million, respectively.

Weighted-average assumptions used to determine projected benefit obligations and net periodic benefit cost

	2017		2018	
Weighted-average assumption used to determine projected benefit obligations at March 31				
Discount rate	0.7%		0.6%	
Rate of compensation increase	3.4%		3.4%	
Weighted-average assumption used to determine net periodic benefit cost for years ended March 31				
Discount rate	0.5%		0.7%	
Rate of compensation increase	3.4%		3.4%	
Expected long-term rate of return on plan assets	2.5%		1.9%	

In determining the expected long-term rate of return on plan assets, NTT Group considers the current and projected asset allocations, as well as expected long-term investment returns and risks for each category of the plan assets based on analysis of historical results.

Fair values of pension plan assets of NTT CDBP

	Millions of yen			
	As of March 31, 2017			
	Total	Fair value measurements using		
		Level 1	Level 2	Level 3
Cash and cash equivalents	¥20,678	¥20,678	—	—
Debt securities				
Japanese government bonds/local government bonds	371,990	356,634	15,356	—
Domestic corporate bonds	99,497	—	99,497	—
Foreign government bonds	33,706	28,317	5,389	—
Foreign corporate bonds	736	655	81	—
Equity securities				
Domestic	117,906	117,906	—	—
Foreign	62,799	62,799	—	—
Life insurance company general accounts	138,539	—	138,539	—
Others	1,324	—	1	1,323
Subtotal	847,175	586,989	258,863	1,323
Investments valued at NAV				
Securities investment trust beneficiary certificates				
Domestic/debt securities	112,629			
Domestic/equity securities	71,141			
Foreign/debt securities	25,640			
Foreign/equity securities	18,582			
Pooled funds	87,148			
Total	¥1,162,315			

	Millions of yen			
	As of March 31, 2018			
	Total	Fair value measurements using		
		Level 1	Level 2	Level 3
Cash and cash equivalents	¥51,575	¥51,575	—	—
Debt securities				
Japanese government bonds/local government bonds	343,681	331,160	12,521	—
Domestic corporate bonds	107,127	—	107,127	—
Foreign government bonds	35,096	13,973	21,123	—
Foreign corporate bonds	1,554	671	883	—
Equity securities				
Domestic	122,479	122,475	4	—
Foreign	63,622	63,622	—	—
Life insurance company general accounts	140,239	—	140,239	—
Others	1,081	—	2	1,079
Subtotal	866,454	583,476	281,899	1,079
Investments valued at NAV				
Securities investment trust beneficiary certificates				
Domestic/debt securities	109,927			
Domestic/equity securities	74,418			
Foreign/debt securities	27,784			
Foreign/equity securities	18,908			
Pooled funds	90,721			
Total	¥1,188,212			

Descriptions of fair value hierarchy and the inputs used in measuring fair value are presented in Note 19.

Cash and cash equivalents —

Cash and cash equivalents include foreign currency deposits and call loans, and are all classified as Level 1.

Debt securities —

Debt securities include Japanese government bonds and local government bonds, domestic corporate bonds, foreign government bonds and foreign corporate bonds. If active market prices are available, fair value is measured by quoted prices for identical assets in active markets, which is classified as Level 1. If active market prices are not available, fair value is measured by inputs derived principally from observable market data provided by financial institutions, which is classified as Level 2.

Equity securities —

Equity securities include domestic stocks and foreign stocks. If active market prices are available, fair value is measured by quoted prices for identical assets in active markets, which is classified as Level 1. If active market prices are not available, fair value is measured by inputs derived principally from observable market data provided by financial institutions, which is classified as Level 2.

Securities investment trust beneficiary certificates —

Securities investment trust beneficiary certificates include bond investment trusts and foreign stock investment trusts. Fair value is evaluated on the basis of net asset value (NAV) per unit, which is reported by the trust operator. The NAV per unit is based on the total net asset value of the fund divided by the number of units outstanding.

Pooled funds —

Underlying investments in pooled funds include government bonds, local government bonds, domestic stocks and foreign stocks. Fair value of pooled funds is measured based on NAV as reported by the trust operator.

Life insurance company general accounts —

Life insurance company general accounts are the financial assets which the life insurance company guarantees a specified rate of return and principal and they are all classified as Level 2.

Others —

Others include loans to employees and leasing receivables, which are classified as Level 3.

Level 3 reconciliation is not disclosed, since the amounts in Level 3 are immaterial.

Domestic stocks include NTT's and its affiliates' common stock with an aggregate fair value of ¥4,375 million (0.4% of total plan assets) and ¥4,680 million (0.4% of total plan assets) at March 31, 2017 and 2018, respectively.

NTT Group's policy with respect to asset management planning

NTT Group's policy with respect to asset management planning is as described in the section relating to Severance Payments and Contract-type Corporate Pension Plans.

Weighted-average target allocation ratios for plan assets

Year ended March 31	2017	2018
Domestic bonds	55.8%	54.9%
Domestic stocks	15.0%	15.1%
Foreign bonds	6.2%	6.4%
Foreign stocks	10.6%	10.8%
Life insurance company general accounts	12.4%	12.8%
Total	100.0%	100.0%

Estimated future benefit payments of the NTT CDBP

Year ending March 31	Millions of yen
2019	¥42,966
2020	45,279
2021	47,204
2022	48,866
2023	48,811
2024-2028	256,744
Total	¥489,868

Employer contribution

NTT Group expects to contribute ¥16,309 million to the NTT CDBP in the fiscal year ending March 31, 2019.

(c) The Special Accounting Fund for the NTT CDBP —

Based on the provisions of the Law to Partially Amend the Japanese Welfare Pension Insurance Law and other legislation, NTT pays contributions set by the Japanese Government every year to the Special Accounting Fund for the NTT CDBP to cover the costs of pension benefits based on the Former Public Corporation Employee Mutual Aid Association Law to cover benefits for the period of service in and prior to June 1956 of employees who retired in July 1956 or later from NTT, Public Corporation, and/or their predecessor government organizations (Ministry of Communications in the area of telecommunications and the Ministry of Telecommunications).

The Special Accounting Fund for the NTT CDBP is a social welfare pension scheme, as are the former NTT Mutual Aid Plan from before the system transition in April 1997 and the current National Plan. It is considered a multi-employer plan and therefore contributions are recognized as expenses when contributions are required. The amounts of contributions were ¥30,801 million and ¥28,011 million for the fiscal years ended March 31, 2017 and 2018, respectively, and NTT expects such contributions will decrease year by year. In addition, the Special Accounting Fund for the NTT CDBP is a social welfare pension scheme, and because the information required by its accounting standards is limited, additional quantitative information relating to participation in the multi-employer plan is not disclosed.

16. Income taxes

Total income taxes recognized for the fiscal years

Year ended March 31	Millions of yen	
	2017	2018
Income from continuing operations	¥468,370	¥541,864
Other comprehensive income (loss) (Note 18)	43,359	41,289
Additional paid-in capital (Note 18)	(28,808)	(19,232)
Total income taxes	¥482,921	¥563,921

Substantially all of NTT Group's income before income taxes and equity in earnings (losses) of affiliated companies for all periods presented and the related income tax expenses (benefits) are related to domestic operations.

Tax rate for NTT and its domestic subsidiaries

Year ended March 31	2017	2018
National Corporate Tax	24.43%	24.43%
Corporate Inhabitant Tax	approximately 4%	approximately 4%
Corporate Enterprise Tax	approximately 4%	approximately 4%
Combined statutory income tax rate	approximately 31%	approximately 31%

The rate of the Corporate Inhabitant Tax and Corporate Enterprise Tax differs depending on the municipalities.

The "Tax Cuts and Jobs Act" was enacted in the United States on December 22, 2017 (U.S. time), and included a change in the federal corporate income tax rate starting on January 1, 2018. Although the amounts of deferred tax assets and deferred tax liabilities with respect to NTT Group's U.S. subsidiaries were reduced as a result of the change in tax rate, the impact on NTT's financial condition and results of operation due to this change of tax rate is immaterial.

NTT files a consolidated tax return with its wholly owned subsidiaries for National Corporate Tax purposes. The realizable amounts of deferred tax assets related to National Corporate Tax are assessed on the basis of the projected future taxable income of NTT and its wholly owned subsidiaries. As of March 31, 2018, NTT had 78 wholly owned subsidiaries in Japan, including NTT East, NTT West and NTT Communications.

Reconciliations of the difference between the actual effective income tax rate of NTT Group and the statutory tax rate

Year ended March 31	Percent of income before income taxes and equity in earnings of affiliated companies	
	2017	2018
Statutory tax rate	30.83%	30.83%
Expenses not deductible for tax purposes	1.36	0.51
Tax credits	(2.73)	(0.88)
Net change in valuation allowance for deferred tax assets	13.29	(1.05)
Equity in earnings (losses) of affiliated companies	0.40	0.23
Net effect of Verio Inc.'s worthless stock deduction	(13.16)	-
Other	0.67	1.22
Effective tax rate	30.66%	30.86%

Significant components of deferred tax assets and liabilities

As of March 31	Millions of yen	
	2017	2018
Deferred tax assets:		
Liability for employees' retirement benefits	¥505,000	¥512,914
Accrued enterprise tax	14,551	16,158
Property, plant, equipment, software and other	354,481	351,964
Compensated absences	77,275	77,026
Accrued bonus	34,386	35,333
Unamortized purchases of leased assets	4,035	3,568
Operating loss carryforwards	393,703	281,118
Accrued liabilities for loyalty programs	38,645	43,270
Deferred revenues regarding "Zutto Kurikoshi" and "Packet Kurikoshi"	9,235	6,147
Investments in affiliates	91,070	7,633
Marketable securities and other investments	25,715	24,784
Accounts receivable, trade	34,724	40,066
Other	149,529	144,584
Total gross deferred tax assets (before deducting valuation allowance)	1,732,349	1,544,565
Less - Valuation allowance	379,493	247,088
Total deferred tax assets	1,352,856	1,297,477
Deferred tax liabilities:		
Unrealized gains on securities	(51,566)	(59,015)
Investment in subsidiary, principally arising upon issuance of stock	(168,961)	(145,724)
Property, plant, equipment and other	(123,137)	(118,017)
Identifiable intangible assets	(71,770)	(50,290)
Investments in affiliates	(45,527)	(62,544)
Prepaid pension costs	(31,479)	(36,853)
Other	(36,991)	(33,233)
Total gross deferred tax liabilities	(529,431)	(505,676)
Net deferred tax assets	¥823,425	¥791,801

Deferred tax assets related to investments in affiliates

Deferred tax assets related to investments in affiliates for the fiscal year ended March 31, 2018 decreased due to the transfer of all shares in TTSL held by NTT DOCOMO.

Changes in valuation allowance and main factors

Year ended March 31	Millions of yen	
	2017	2018
Changes in valuation allowance	*1212,346	(132,405)
Changes in valuation allowance on deferred tax assets related to Operating loss carryforwards in NTT America, Inc. included in the above	202,529	(119,603)
Impact due to recording deduction for income tax purpose for the shares of Verio Inc. held by NTT America, Inc.	*2201,043	—
Impact of the decreased U.S. federal corporate income tax rate due to the enactment of the “Tax Cuts and Jobs Act” in the United States	—	*3(91,772)
Impact of changes in estimates about the realizability of deferred tax assets in NTT America, Inc.*4	(9,815)	(19,085)

*1 The balance of the valuation allowance at March 31, 2016 was ¥167,147 million.

*2 NTT America, a subsidiary of NTT Communications, received an approval from the Internal Revenue Service in July 2016 of recognizing the loss on the shares of Verio Inc. relating to NTT America, Inc.’s merger with Verio Inc. in April 2015 as a deductible for income tax purposes. As a result of this approval, instead of an extinguishment of ¥234,268 million of existing operating loss carryforwards, NTT Group recognized ¥761,589 million of new operating loss carryforwards. This transaction resulted in a net increase of ¥201,043 million of deferred tax assets (before valuation allowance) related to operating loss carryforwards, and an increase of the same amount of valuation allowance.

*3 The deferred tax assets (before deducting the valuation allowance) related to operating loss carryforwards decreased ¥91,722 million and the valuation allowance decreased in the same amount due to the enactment of the “Tax Cuts and Jobs Act” in the United States.

*4 This impact was due to recording the deferred tax assets (net), caused by changes in estimates about the realizability of deferred tax assets for the fiscal years ended March 31, 2017 and 2018.

Changes in valuation allowance due to the impact of change in estimates about the realizability of deferred tax assets and main factors

Year ended March 31	Millions of yen	
	2017	2018
Impact of changes in estimates about the realizability of deferred tax assets	(18,372)	(24,341)
Impact attributable to NTT America, Inc. included in the above*4	(9,815)	(19,085)

Other information related to NTT America, Inc.

Year ended March 31	Millions of yen	
	2017	2018
Operating loss carryforwards	830,193	780,032
Valuation allowance for deferred tax assets related to operating loss carryforwards*5	292,676	173,073
Deferred tax assets (net)*6	13,914	21,930
Taxable income needed to realize the deferred tax assets (net)	*736,495	*886,748

*5 Large amounts of valuation allowance for deferred tax assets related to operating loss carryforwards were recorded despite the histories of three years cumulative income for the fiscal years ended March 31, 2017 and 2018 due to, among other factors, insufficient taxable income level compared with the operating loss carryforwards and the inherent risk associated with the future

forecasted results. The recorded amount of the valuation allowance is reassessed at the end of each accounting year based on the forecast for taxable income and the realizability of deferred tax assets, which may lead to the recorded amount of the valuation allowance being reduced in the future.

*6 The balance of deferred tax assets (net) at March 31, 2016 was ¥4,099 million.

*7 Calculated on the basis of US\$1 = ¥112.19 (as of March 31, 2017)

*8 Calculated on the basis of US\$1 = ¥106.24 (as of March 31, 2018)

Net deferred tax assets at March 31, 2017 and 2018 included in the consolidated balance sheets

As of March 31	Millions of yen	
	2017	2018
Deferred income taxes (current assets)	¥228,590	¥—
Deferred income taxes (investments and other assets)	768,871	920,634
Other current liabilities	(7,285)	—
Deferred income taxes (long-term liabilities)	(166,751)	(128,833)
Total	¥823,425	¥791,801

At March 31, 2018, NTT and certain subsidiaries had operating loss carryforwards for tax purposes of ¥1,147,125 million, which may be used as a deduction in determining taxable income in future periods.

The period available to offset future taxable income

As of March 31, 2018	Millions of yen
Within 5 years	¥92,381
6 to 20 years	906,447
Indefinite periods	148,297
Total	¥1,147,125

The period available to offset future taxable income varies by each tax jurisdiction.

At March 31, 2017 and 2018, the amount of unrecognized deferred tax liabilities related to the undistributed earnings of NTT's foreign subsidiaries was immaterial.

At March 31, 2017 and 2018, unrecognized tax benefit (the amount which would favorably affect the effective income tax rate in future periods but which is not recognized in the financial statements as NTT does not expect income tax positions are more likely than not of being sustained) was immaterial. And NTT does not expect any material changes in its accrued liabilities for unrecognized tax benefits in the next 12 months. As of March 31, 2018, tax inquiries for NTT and its principal subsidiaries for fiscal years ended March 31, 2015 and prior have been completed by the tax authorities.

17. Redeemable noncontrolling interests

Analysis of the changes for the fiscal years in Redeemable noncontrolling interests

Year ended March 31	Millions of yen	
	2017	2018
Balance at beginning of year	¥45,097	¥50,819
Acquisition of new subsidiaries	-	3,158
Comprehensive income (loss)		
Net income	1,656	1,636
Other comprehensive income (loss)		
Foreign currency translation adjustments	(1,280)	414
Cash dividends	(69)	(374)
Transactions with noncontrolling interests	5,415	(10,501)
Adjustment of redeemable noncontrolling interests to redemption value	-	4,778
Balance at end of year	¥50,819	¥49,930

18. Equity

Change in NTT's shares of common stock and treasury stock —

	Change in shares	
	Issued shares	Treasury stock
Balance at March 31, 2016	2,096,394,470	255,269
Acquisition of treasury stock under resolution of the board of directors	-	80,731,900
Acquisition of treasury stock through purchase of less-than-one-unit shares	-	41,446
Resale of treasury stock to holders of less-than-one-unit shares	-	(1,656)
Balance at March 31, 2017	2,096,394,470	81,026,959
Acquisition of treasury stock under resolution of the board of directors	-	44,239,800
Acquisition of treasury stock through purchase of less-than-one-unit shares	-	54,223
Resale of treasury stock to holders of less-than-one-unit shares	-	(2,424)
Balance at March 31, 2018	2,096,394,470	125,318,558

According to the NTT Act, NTT must obtain authorization from the Minister of Internal Affairs and Communications for certain financial matters including certain new share issuance, including shares issuable upon the exercise of stock acquisition rights and an appropriation of profits. For information on the details related the NTT Act, see "2. Risk Factors" under "Item 2 — Business Overview".

On November 24, 1995, based upon the resolution of the Board of Directors' meeting held on April 28, 1995, NTT capitalized the aggregate amount of ¥15,600 million of its additional paid-in capital to the common stock account and made a free share distribution of 312,000 shares to shareholders of record at September 30, 1995, representing 2% of outstanding shares. Under generally accepted accounting principles in Japan, no accounting entry is required for such a free share distribution. Had the distribution been accounted for entities in the United States, ¥234,624 million would have been transferred from retained earnings to the common stock account.

Treasury stock

On May 13, 2016, the Board of Directors resolved that NTT may acquire up to 68 million shares of its outstanding common stock for an amount in total not exceeding ¥350 billion from May 16, 2016 through March 31, 2017. Based on this resolution, NTT repurchased 59,038,100 shares of its common stock at ¥267,384 million on June 14, 2016 using the ToSTNeT-3, and concluded the repurchase of its common stock authorized by Board of Directors' resolution.

On December 12, 2016, the Board of Directors resolved that NTT may acquire up to 33 million shares of its outstanding common stock for an amount in total not exceeding ¥150 billion from December 13, 2016 through June 30, 2017. Based on this resolution, NTT repurchased 21,693,800 shares of its common stock for a total purchase price of ¥106,763 million between December 2016 and March 2017. NTT also repurchased 8,893,400 shares of its common stock for a total purchase price of ¥43,235 million in April 2017 and concluded the repurchase of its common stock authorized by Board of Directors' resolution.

On September 25, 2017, the Board of Directors resolved that NTT may acquire up to 30 million shares of its outstanding common stock for an amount in total not exceeding ¥150 billion from September 26, 2017 through March 31, 2018. Based on this resolution, NTT repurchased 26,946,400 shares of its common stock for a total purchase price of ¥150,000 million between October 2017 and December 2017 and concluded the repurchase of its common stock authorized by Board of Directors' resolution.

On February 21, 2018, the Board of Directors resolved that NTT may acquire up to 31 million shares of its outstanding common stock for an amount in total not exceeding ¥150 billion from February 22, 2018 through June 30, 2018. Based on this resolution, NTT repurchased 8,400,000 shares of its common stock for a total purchase price of ¥42,010 million in March 2018. NTT also repurchased 20,778,000 shares of its common stock for a total purchase price of ¥107,990 million between April 2018 and May 2018 and concluded the repurchase of its common stock authorized by Board of Directors' resolution.

Distribution of retained earnings

The amount of statutory retained earnings of NTT available for the payments of dividends to shareholders as of March 31, 2018 was ¥856,251 million. The amount of final cash dividends, which were approved at the shareholders' meeting held on June 26, 2018 was ¥147,831 million, or ¥75 per share.

Dividends paid from retained earnings are accounted for on the effective date of the dividends.

Accumulated other comprehensive income (loss) —

Analysis of the changes in accumulated other comprehensive income (loss)

Millions of yen					
	Unrealized gain (loss) on securities	Unrealized gain (loss) on derivative instruments	Foreign currency translation adjustments	Pension liability adjustments	Total
Balance at March 31, 2016	¥109,211	¥(10,272)	¥119,053	¥(275,047)	¥(57,055)
Adjustments due to change in fiscal year end of consolidated subsidiaries (Note 3)	—	107	(1,591)	30	(1,454)
Balance at March 31, 2016 (as adjusted)	109,211	(10,165)	117,462	(275,017)	(58,509)
Other comprehensive income (loss)					
Amounts arising during the period	23,617	2,957	(25,168)	78,247	79,653
Amounts reclassified from accumulated other comprehensive income (loss) to Net income	(11,309)	(2,462)	511	12,787	(473)
Net change	12,308	495	(24,657)	91,034	79,180
Less-Other comprehensive income (loss) attributable to noncontrolling interests	7,236	(1,139)	5,427	7,585	19,109
Balance at March 31, 2017	¥114,283	¥(8,531)	¥87,378	¥(191,568)	¥1,562

Millions of yen					
	Unrealized gain (loss) on securities	Unrealized gain (loss) on derivative instruments	Foreign currency translation adjustments	Pension liability adjustments	Total
Balance at March 31, 2017	¥114,283	¥(8,531)	¥87,378	¥(191,568)	¥1,562
Adjustments due to change in fiscal year end of consolidated subsidiaries (Note 3)	(9)	—	(3,342)	—	(3,351)
Balance at March 31, 2017 (as adjusted)	114,274	(8,531)	84,036	(191,568)	(1,789)
Other comprehensive income (loss)					
Amounts arising during the period	27,738	(7,794)	(17,591)	17,884	20,237
Amounts reclassified from accumulated other comprehensive income (loss) to Net income	(2,018)	9,776	27,010	5,828	40,596
Net change	25,720	1,982	9,419	23,712	60,833
Less-Other comprehensive income (loss) attributable to noncontrolling interests	11,635	26	1,234	1,620	14,515
Balance at March 31, 2018	¥128,359	¥(6,575)	¥92,221	¥(169,476)	¥44,529

Details of other comprehensive income (loss)

	Millions of yen		
	Year ended March 31, 2017		
	Pre-tax amount	Tax benefit / (expense)	Net-of-tax amount
Unrealized gain (loss) on securities:			
Amounts arising during the period	¥32,774	¥(9,157)	¥23,617
Amounts reclassified from accumulated other comprehensive income (loss) to Net income	(16,301)	4,992	(11,309)
Net change in unrealized gain (loss) on securities	16,473	(4,165)	12,308
Unrealized gain (loss) on derivative instruments:			
Amounts arising during the period	¥4,897	¥(1,940)	¥2,957
Amounts reclassified from accumulated other comprehensive income (loss) to Net income	(3,577)	1,115	(2,462)
Net change in unrealized gain (loss) on derivative instruments	1,320	(825)	495
Foreign currency translation adjustments:			
Amounts arising during the period	¥(28,933)	¥3,765	¥(25,168)
Amounts reclassified from accumulated other comprehensive income (loss) to Net income	776	(265)	511
Net change in foreign currency translation adjustments	(28,157)	3,500	(24,657)
Pension liability adjustments:			
Amounts arising during the period			
Actuarial loss (gain)	¥116,297	¥(36,918)	¥79,379
Amounts reclassified from accumulated other comprehensive income (loss) to Net income			
Amortization of net actuarial loss (gain)	26,692	(8,152)	18,540
Amortization of transition obligation	48	(15)	33
Amortization of prior service cost	(8,532)	2,746	(5,786)
Other	(1,602)	470	(1,132)
Net change in pension liability adjustments	132,903	(41,869)	91,034

Millions of yen			
Year ended March 31, 2018			
	Pre-tax amount	Tax benefit / (expense)	Net-of-tax amount
Unrealized gain (loss) on securities:			
Amounts arising during the period	¥39,965	¥(12,227)	¥27,738
Amounts reclassified from accumulated other comprehensive income (loss) to Net income	(2,854)	836	(2,018)
Net change in unrealized gain (loss) on securities	37,111	(11,391)	25,720
Unrealized gain (loss) on derivative instruments:			
Amounts arising during the period	¥(11,195)	¥3,401	¥(7,794)
Amounts reclassified from accumulated other comprehensive income (loss) to Net income	14,145	(4,369)	9,776
Net change in unrealized gain (loss) on derivative instruments	2,950	(968)	1,982
Foreign currency translation adjustments:			
Amounts arising during the period	¥(17,814)	¥223	¥(17,591)
Amounts reclassified from accumulated other comprehensive income (loss) to Net income	45,224	(18,214)	27,010
Net change in foreign currency translation adjustments	27,410	(17,991)	9,419
Pension liability adjustments:			
Amounts arising during the period			
Actuarial loss (gain)	¥26,962	¥(8,784)	¥18,178
Prior service cost	388	(124)	264
Amounts reclassified from accumulated other comprehensive income (loss) to Net income			
Amortization of net actuarial loss (gain)	15,967	(4,840)	11,127
Amortization of transition obligation	47	(15)	32
Amortization of prior service cost	(7,901)	2,570	(5,331)
Other	(812)	254	(558)
Net change in pension liability adjustments	34,651	(10,939)	23,712

Reclassifications out of accumulated other comprehensive income (loss) to Net income

Millions of yen		
Year ended March 31, 2017		
	Amounts reclassified from accumulated other comprehensive income (loss) to Net income	Affected line items in consolidated statements of income
Unrealized gain (loss) on securities	¥16,248 (4,992) 53 ¥11,309	Other, net Income tax expense (benefit) Equity in earnings (losses) of affiliated companies Net income
Unrealized gain (loss) on derivative instruments	¥3,647 (1,115) (70) ¥2,462	Other, net Income tax expense (benefit) Equity in earnings (losses) of affiliated companies Net income
Foreign currency translation adjustments	¥265 (776) ¥(511)	Income tax expense (benefit) Equity in earnings (losses) of affiliated companies Net income
Pension liability adjustments	¥(18,208) 5,421 (12,787)	* Income tax expense (benefit) Net income
Total	¥473	Net income

Millions of yen		
Year ended March 31, 2018		
	Amounts reclassified from accumulated other comprehensive income (loss) to Net income	Affected line items in consolidated statements of income
Unrealized gain (loss) on securities	¥2,781 (836) 73 ¥2,018	Other, net Income tax expense (benefit) Equity in earnings (losses) of affiliated companies Net income
Unrealized gain (loss) on derivative instruments	¥(14,082) 4,369 (63) ¥(9,776)	Other, net Income tax expense (benefit) Equity in earnings (losses) of affiliated companies Net income
Foreign currency translation adjustments	¥(29,841) 18,214 (15,383) ¥(27,010)	Other, net Income tax expense (benefit) Equity in earnings (losses) of affiliated companies Net income
Pension liability adjustments	¥(8,113) 2,285 (5,828)	* Income tax expense (benefit) Net income
Total	¥(40,596)	Net income

* Amounts reclassified from pension liability adjustments are included in the computation of net periodic pension cost. Please see Note 15 for the details related net periodic pension cost.

Equity transactions with noncontrolling interests —

The changes for the fiscal years ended March 31, 2017 and 2018 in Net income attributable to NTT and Additional paid in capital as a result of Equity transactions with noncontrolling interests are as follows:

Year ended March 31	Millions of yen	
	2017	2018
Net income attributable to NTT	¥800,129	¥909,695
Transfers (to) from the noncontrolling interests:		
Increase in additional paid-in capital attributable to tax effect by NTT DOCOMO's share repurchase of its common stock (Note 16)	28,808	19,232
Increase (decrease) in additional paid-in capital attributable to change in NTT's ownership interest by NTT DOCOMO's share repurchase of its common stock	(45,316)	9
Other	(2,192)	(21,077)
Subtotal	(18,700)	(1,836)
Change from net income attributable to NTT's shareholders and transfers from the noncontrolling interests	¥781,429	¥907,859

On April 28, 2016, the Board of Directors of NTT DOCOMO resolved that NTT DOCOMO may acquire up to 99,132,938 shares of its outstanding common stock for an amount in total not exceeding ¥192,514 million from May 2, 2016 through December 31, 2016. Based on this resolution, NTT DOCOMO repurchased 9,021,000 shares of its common stock at ¥24,433 million using the ToSTNeT-3 on May 18, 2016, and also repurchased 47,010,000 shares of its common stock at ¥125,174 million by way of market purchases based on the discretionary dealing contract until December 31, 2016. As a result, NTT's ownership interest in NTT DOCOMO increased from 65.7% to 66.7%. Due primarily to these transactions, "Additional paid-in capital" decreased by ¥16,508 million in the consolidated balance sheet as of March 31, 2017.

On October 26, 2017, the Board of Directors of NTT DOCOMO resolved that NTT DOCOMO may repurchase up to 120 million outstanding shares of its common stock for an amount in total not exceeding ¥300,000 million during the period from October 27, 2017 through March 31, 2018. On December 11, 2017, the Board of Directors of NTT DOCOMO resolved that NTT DOCOMO may acquire up to 93,248,787 shares of its outstanding common stock by way of tender offer at an amount in total not exceeding ¥250,000 million from December 12, 2017 through January 15, 2018 and repurchased 75,678,037 shares of its common stock at ¥202,893 million on February 6, 2018, 74,599,000 shares of which NTT sold back to NTT DOCOMO at ¥200,000 million. The Board of Directors of NTT DOCOMO also resolved to acquire outstanding shares of its common stock in an amount up to the limit specified in its resolution of October 27, 2017 minus the number of shares acquired in the tender offer, from the date following the completion of the tender offer through March 31, 2018, through open-market purchases on the Tokyo Stock Exchange, and as of March 31, 2018, had acquired 35,722,900 shares for ¥97,107 million. As a result, NTT's ownership interest in NTT DOCOMO slightly decreased, but not in a material amount. Due primarily to these transactions, "Additional paid-in capital" increased by ¥19,241 million in the consolidated balance sheet as of March 31, 2018.

19. Fair Value Measurements

The inputs to valuation techniques used to measure fair value are required to be categorized into three levels based on their observability. Valuation techniques are required to prioritize the use of more observable inputs. The highest priority is given to unadjusted quoted prices in active markets for identical assets or liabilities (Level 1 measurements) and the lowest priority is given to measurements involving significant unobservable inputs (Level 3 measurements). The three levels of the fair value hierarchy are as follows:

Level 1 - Quoted prices for identical assets or liabilities in active markets

Level 2 - Quoted prices for similar assets or liabilities in active markets, quoted prices for identical or similar assets or liabilities in inactive markets, inputs derived principally from observable market data

Level 3 - Unobservable inputs

Assets and liabilities measured at fair value on a recurring basis —

	Millions of yen			
	As of March 31, 2017			
	Fair value measurements using			
	Total	Level 1	Level 2	Level 3
Assets				
Available-for-sale securities:				
Domestic equity securities	¥198,482	¥198,482	¥—	¥—
Foreign equity securities	135,912	135,912	—	—
Domestic debt securities	59,138	214	58,759	165
Foreign debt securities	38,360	9	38,118	233
Derivatives:				
Forward exchange contracts	1,137	—	1,137	—
Interest rate swap agreements	289	—	289	—
Currency swap agreements	71,930	—	71,930	—
Liabilities				
Derivatives:				
Forward exchange contracts	1,032	—	1,032	—
Interest rate swap agreements	3,938	—	3,938	—
Currency swap agreements	12,555	—	12,555	—
Currency option agreements	1,336	—	1,336	—

Millions of yen				
As of March 31, 2018				
Fair value measurements using				
	Total	Level 1	Level 2	Level 3
Assets				
Available-for-sale securities:				
Domestic equity securities	¥232,886	¥232,886	¥—	¥—
Foreign equity securities	116,314	116,314	—	—
Domestic debt securities	76,512	—	76,340	172
Foreign debt securities	40,396	97	40,299	—
Derivatives:				
Forward exchange contracts	832	—	832	—
Interest rate swap agreements	928	—	928	—
Currency swap agreements	6,721	—	6,721	—
Liabilities				
Derivatives:				
Forward exchange contracts	6,142	—	6,142	—
Interest rate swap agreements	3,079	—	3,079	—
Currency swap agreements	27,788	—	27,788	—
Currency option agreements	842	—	842	—

There has been no significant change in the input levels used to measure fair values.

Available-for-sale securities —

Available-for-sale securities comprise marketable equity securities and debt securities. If active market prices are available, fair value is measured by inputs which are classified as Level 1. If active market prices are not available, fair value is measured by inputs derived principally from observable market data provided by financial institutions, which are classified as Level 2. In cases in which fair value is measured by inputs derived from unobservable data, they are classified as Level 3.

Derivatives —

Derivatives comprise forward exchange contracts, interest rate swap agreements, currency swap agreements and currency option agreements. Fair value of derivatives is measured by inputs derived principally from observable market data provided by financial institutions, which is classified as Level 2.

Assets measured at fair value on a nonrecurring basis in particular circumstances —

Millions of yen					
Year Ended March 31, 2017					
Fair value measurements using					
	Total	Level 1	Level 2	Level 3	Impairment losses (before tax)
Assets					
Real estate held for resale	¥7,338	—	—	¥7,338	¥1,129
Investments in affiliated companies	30,078	1,703	—	28,375	23,920
Cost method investments	1,289	—	—	1,289	3,523
Goodwill	227,871	—	—	227,871	53,294
Long-lived assets and other intangible assets	13,750	—	—	13,750	20,558

Millions of yen					
Year Ended March 31, 2018					
Fair value measurements using					
	Total	Level 1	Level 2	Level 3	Impairment losses (before tax)
Assets					
Real estate held for resale	¥7,273	—	—	¥7,273	¥463
Investments in affiliated companies	16,443	—	—	16,443	2,561
Cost method investments	40	—	—	40	693
Goodwill	57,523	—	—	57,523	18,864
Long-lived assets and other intangible assets	111,410	—	—	111,410	143,305

Real estate —

If a decline in value or an increase in estimated costs of completion of real estate held for resale included in inventories causes inventory cost to be unrecoverable, the real estate is written down to its fair value. In measuring the fair value of such inventories, fair value is measured by using various evaluation models based on inputs that are unobservable in the market, such as a salable price based on a real-estate appraisal, which is classified as Level 3.

Real estate in the table above includes that transferred from inventories to property, plant and equipment as a result of a change in use or sold to others after measuring fair value.

Investments in affiliated companies —

The fair value of investments in affiliated companies that are impaired as a result of an other than temporary decline in value are measured by using various evaluation models based on inputs that are unobservable in the market such as discounted cash flow projection, which is classified as Level 3.

The discount rates, the weighted average cost of capital used to measure fair value of major investments in affiliated companies for the fiscal year ended March 31, 2017 and 2018 were 7.9% and 7.3%, respectively.

Cost method investments —

If a decline in value of cost method investments is evaluated as other than temporary, the investment is written down to its fair value. In measuring the fair value of such investments, the fair value is measured by using various evaluation models based on inputs that are unobservable in the market such as discounted cash flow projection, which is classified as Level 3.

Goodwill —

If the carrying amounts of goodwill are evaluated to be unrecoverable, the carrying amount is written down based on the fair value of the reporting unit. The fair value of the reporting units is determined by using various evaluation models including the discounted cash flow method and the guideline public company method based on inputs that are unobservable in the market, which are classified as Level 3.

Inputs and business segments where goodwill impairment losses are recorded

Year Ended March 31	2017	2018
Inputs		
Permanent growth rate	2.3%	2.0%
Weighted average cost of capital	10.0%	8.0%
EBITDA multiple	-	8.0x
Business segments where goodwill impairment losses are recorded	Long distance and international communications business	Long distance and international communications business

Long-lived assets and other intangible assets —

If the carrying amount of a long-lived asset or other intangible asset is evaluated to be unrecoverable, the long-lived asset or other intangible asset is written down to its fair value.

The fair value of the metal cables used for the telecommunications business which were determined to be idle assets as described in Note 9 was measured based on the market valuation approach, which was classified as Level 3. With this approach, the fair value was measured by using the market price of the metal cables' major materials less the related cost for removal, transportation and others incurred if the metal cables are made available for sale.

Except for the metal cables described above, fair value of long-lived assets and other intangible assets were principally measured using the discounted cash flow method or appraisal by third parties, which were classified as Level 3.

20. Segment and geographic information

Operating segments are components of the NTT Group 1) that engage in business activities, 2) whose operating results are regularly reviewed by NTT Group's chief operating decision maker to make decisions on the allocation of financial resources and to evaluate business performance, and 3) for which discrete financial information is available. Accounting policies used to determine segment profit/loss and segment assets are consistent with those used to prepare the consolidated financial statements in accordance with accounting principles generally accepted in the United States.

The regional communications business segment comprises revenues from fixed voice related services, IP/packet communications services, sales of telecommunications equipment, system integration services and other operating revenues.

The long distance and international communications business segment principally comprises revenues from fixed voice related services, IP/packet communications services, system integration services and other operating revenues.

The mobile communications business segment comprises revenues from mobile voice related services, IP/packet communications services and sales of telecommunications equipment and other operating revenues.

The data communications business segment comprises revenues from system integration services.

The other segment principally comprises operating revenues from such activities as building maintenance, real estate rental, systems development, leasing activities, and other services related to research and development.

Operating revenue —

Year Ended March 31	Millions of yen	
	2017	2018
Operating revenue:		
Regional communications business -		
External customers	¥2,736,664	¥2,581,751
Intersegment	571,542	651,182
Total	3,308,206	3,232,933
Long distance and international communications business -		
External customers	2,040,209	2,124,443
Intersegment	89,055	94,443
Total	2,129,264	2,218,886
Mobile communications business -		
External customers	4,535,829	4,709,448
Intersegment	48,723	59,961
Total	4,584,552	4,769,409
Data communications business -		
External customers	1,609,163	1,926,272
Intersegment	109,558	116,802
Total	1,718,721	2,043,074
Other -		
External customers	469,151	457,673
Intersegment	813,120	778,897
Total	1,282,271	1,236,570
Elimination	(1,631,998)	(1,701,285)
Consolidated total	¥11,391,016	¥11,799,587

Segment profit —

Year Ended March 31	Millions of yen	
	2017	2018
Operating income		
Regional communications business	¥359,491	¥354,339
Long distance and international communications business	40,836	93,575
Mobile communications business	951,634	982,143
Data communications business	107,875	127,799
Other	77,308	78,615
Total segment profit	1,537,144	1,636,471
Elimination	2,645	6,372
Consolidated total	1,539,789	1,642,843

Operating income is operating revenue less costs and operating expenses.

Year Ended March 31	Millions of yen	
	2017	2018
Equity in earnings (losses) of affiliated companies:		
Regional communications business	¥180	¥264
Long distance and international communications business	(7)	(341)
Mobile communications business	(15,395)	(13,503)
Data communications business	(618)	909
Other	15,819	18,222
Consolidated total	¥(21)	¥5,551

Segment assets —

As of March 31	Millions of yen	
	2017	2018
Segment Assets:		
Regional communications business	¥7,027,689	¥6,797,640
Long distance and international communications business	2,772,961	2,913,622
Mobile communications business	7,599,619	7,906,325
Data communications business	2,364,387	2,372,963
Other*1	10,891,660	10,859,594
Total segment assets	30,656,316	30,850,144
Elimination*2	(9,405,991)	(9,174,374)
Consolidated total	¥21,250,325	¥21,675,770

*1 “Other” segment assets include the shares of subsidiaries owned by NTT.

*2 “Elimination” includes offsetting the carrying amount of the parent’s investment in each subsidiary and the parent’s portion of equity of each subsidiary.

Goodwill resulting from an acquisition is included in segment assets of the respective business in which the acquired business has been included. See Note 12 for additional details on segment goodwill.

Other significant items —

Year Ended March 31	Millions of yen	
	2017	2018
Depreciation and amortization:		
Regional communications business	¥586,772	¥454,672
Long distance and international communications business	171,670	166,617
Mobile communications business	455,779	487,521
Data communications business	155,352	150,843
Other	89,260	78,532
Total segment	¥1,458,833	¥1,338,185
Elimination	3,402	1,238
Consolidated total	¥1,462,235	¥1,339,423
Capital investments for segment assets:		
Regional communications business	¥583,358	¥549,649
Long distance and international communications business	244,859	232,501
Mobile communications business	597,078	576,412
Data communications business	158,140	194,054
Other	116,592	122,147
Consolidated total	¥1,700,027	¥1,674,763
Point program expenses:		
Regional communications business	¥(467)	¥1,280
Long distance and international communications business	908	998
Mobile communications business	94,291	119,399
Consolidated total	¥94,732	¥121,677
Impairment losses - Goodwill:		
Long distance and international communications business	¥53,294	¥18,864
Consolidated total	¥53,294	¥18,864
Impairment losses - Metal cables:		
Regional communications business	¥—	¥124,800
Consolidated total	¥—	¥124,800
Impairment losses - Other:		
Regional communications business	¥1,439	¥2,737
Long distance and international communications business	12,580	10,866
Mobile communications business	2,242	3,173
Data communications business	2,154	1,727
Other	2,143	2
Consolidated total	¥20,558	¥18,505

The capital investments in the above table represent the additions to fixed assets of each segment.

For additional details regarding Impairment losses - Goodwill, see Note 12.

For additional details regarding Impairment losses - Metal cables, see Note 9.

Transfers between operating segments are based on the values that approximate arm's-length prices.

Geographic information —

Year Ended March 31	Millions of yen	
	2017	2018
Operating revenue:		
Domestic	¥9,556,408	¥9,625,189
Foreign	1,834,608	2,174,398
Consolidated total	¥11,391,016	¥11,799,587

Operating Revenues are classified based on the geographic location of the service and products provided. NTT Group has not disclosed foreign long-lived assets, as such amounts were immaterial.

There were no operating revenue from transactions with a single external customer amounting to 10% or more of NTT Group's revenues for the fiscal years ended March 31, 2017 and 2018.

21. Leases

NTT Group leases certain office space, employees' residential facilities and other assets, recorded as either capital leases or operating leases.

Capital Lease - Lessee —

Assets acquired under capital leases

As of March 31	Millions of yen	
	2017	2018
Buildings	¥9,484	¥6,456
Machinery, vehicles and tools	62,430	61,721
Accumulated depreciation	(39,032)	(37,038)
Total	¥32,882	¥31,139

Future minimum lease payments under capital leases

Year ending March 31	Millions of yen
2019	¥14,874
2020	10,706
2021	6,818
2022	4,245
2023	2,197
Thereafter	3,607
Total minimum lease payments	42,447
Less - Amount representing interest	3,401
Present value of net minimum lease payments	39,046
Less - Amounts representing estimated executory costs	3,892
Net minimum lease payments	35,154
Less - Current portion of obligations under capital leases	12,567
Obligations under capital leases (excluding current portion)	¥22,587

Operating Lease - Lessee —

Rental expenses under operating leases

Rental expenses under operating leases for land, buildings and equipment as recorded under the consolidated statements of income for the fiscal years ended March 31, 2017 and 2018 were ¥226,455 million and ¥238,739 million, respectively.

Minimum future rental payments under operating leases

Minimum future rental payments under operating leases that have initial or remaining non-cancellable lease terms in excess of one year at March 31, 2018 are as follows.

Year ending March 31	Millions of yen
2019	¥45,095
2020	36,117
2021	27,129
2022	20,924
2023	14,021
Thereafter	38,994
Total	¥182,280

22. Research and development expenses and advertising costs

Research and development expenses —

Research and development costs are charged to expense as incurred. Research and development expenses amounted to ¥211,616 million and ¥213,941 million for the fiscal years ended March 31, 2017 and 2018, respectively. For information on the detail of research and development, see "5. Research and Development" under "Item2 — Business Overview."

Advertising expenses —

Advertising costs are charged to expense as incurred. Advertising expenses which are included in "Selling, general and administrative expenses" in the consolidated statements of income amounted to ¥95,280 million and ¥94,745 million for the fiscal years ended March 31, 2017 and 2018, respectively.

23. Foreign currency exchange gain and loss

Foreign currency exchange results for the fiscal years ended March 31, 2017 and 2018 were a loss of ¥13,936 million and a gain of ¥19,826 million, respectively, and are included in "Other, net" of "Other income (expenses)" in the consolidated statements of income.

24. Financial instruments

Derivatives designated as hedging instruments —

Notional principal amounts of cash flow hedges

As of March 31	Millions of yen	
	2017	2018
Forward exchange contracts	¥14,842	¥18,128
Interest rate swap agreements	157,387	146,039
Currency swap agreements	379,929	409,316

Changes in the fair value of cash flow hedges recorded in other comprehensive income (loss)

Year Ended March 31	Millions of yen	
	2017	2018
Forward exchange contracts	¥476	¥141
Interest rate swap agreements	2,453	1,531
Currency swap agreements	(1,599)	1,608
Total	¥1,330	¥3,280

Amounts of gain (loss) on cash flow hedges reclassified from accumulated other comprehensive income (loss) into net income

Year Ended March 31	Consolidated statements of income item	Millions of yen	
		2017	2018
Forward exchange contracts	Other, net	¥205	¥628
Interest rate swap agreements	Other, net	(1,304)	(1,116)
Currency swap agreements	Other, net	4,746	(13,594)
Total		¥3,647	¥(14,082)

As of March 31, 2018, approximately ¥5,937 million of unrealized gain on derivative instruments in accumulated other comprehensive income (loss) is expected to be reclassified to earnings during the next twelve months.

Derivatives not designated as hedging instruments —

Notional principal amounts

As of March 31	Millions of yen	
	2017	2018
Forward exchange contracts	¥89,494	¥184,497
Interest rate swap agreements	34,145	14,345
Currency swap agreements	203,097	93,708
Currency option agreements	28,937	11,538

Changes in the fair value recorded in the consolidated statements of income

Year Ended March 31	Consolidated statements of income item	Millions of yen	
		2017	2018
Forward exchange contracts	Other, net	¥(28,667)	¥(8,211)
Interest rate swap agreements	Other, net	(99)	(33)
Currency swap agreements	Other, net	15,286	(21,771)
Currency option agreements	Other, net	1,079	493
Total		¥(12,401)	¥(29,522)

Fair value of financial instruments —

Fair value of derivatives

The fair values of derivative instruments and amounts recognized in the consolidated balance sheets are as follows. The fair values of derivative instruments are measured by inputs derived principally from observable market data provided by financial institutions.

Derivative assets

As of March 31	Millions of yen	
	2017	2018
Derivatives designated as hedging instruments:		
Forward exchange contracts		
Prepaid expenses and other current assets	¥640	¥419
Other assets	18	35
Interest rate swap agreements		
Prepaid expenses and other current assets	—	1
Other assets	289	927
Currency swap agreements		
Prepaid expenses and other current assets	41,142	—
Other assets	13,889	6,076
Subtotal	55,978	7,458
Derivatives not designated as hedging instruments:		
Forward exchange contracts		
Prepaid expenses and other current assets	479	378
Currency swap agreements		
Prepaid expenses and other current assets	11,970	29
Other assets	4,929	616
Subtotal	17,378	1,023
Total	¥73,356	¥8,481

Derivative liabilities

As of March 31	Millions of yen	
	2017	2018
Derivatives designated as hedging instruments:		
Forward exchange contracts		
Other (Current liabilities)	¥297	¥31
Other (Long-term liabilities)	77	—
Interest rate swap agreements		
Other (Current liabilities)	15	53
Other (Long-term liabilities)	3,633	2,703
Currency swap agreements		
Other (Current liabilities)	547	—
Other (Long-term liabilities)	11,635	21,935
Subtotal	16,204	24,722
Derivatives not designated as hedging instruments:		
Forward exchange contracts		
Other (Current liabilities)	488	6,079
Other (Long-term liabilities)	170	32
Interest rate swap agreements		
Other (Current liabilities)	39	1
Other (Long-term liabilities)	251	322
Currency swap agreements		
Other (Current liabilities)	52	2
Other (Long-term liabilities)	321	5,851
Currency option agreements		
Other (Current liabilities)	112	349
Other (Long-term liabilities)	1,224	493
Subtotal	2,657	13,129
Total	¥18,861	¥37,851

Fair value of other financial instruments

The table that follows provides the estimated fair value of other financial instruments. Assets and liabilities with carrying amounts that approximate fair values, such as cash and cash equivalents, notes and accounts receivable (excluding loans receivable), trade, short-term borrowings, accounts payable, trade, and accrued payroll are not included in the table. Fair value information regarding “Marketable securities and other investments” is disclosed in Note 11.

As of March 31	Millions of yen			
	2017		2018	
	Carrying amount	Fair value	Carrying amount	Fair value
Loans receivable	¥287,790	¥288,103	¥347,107	¥347,297
Long-term debt including current portion	¥3,850,382	¥3,953,632	¥3,572,330	¥3,638,118

Loans receivable—

Loans receivable referred to above is mainly included in “Notes and accounts receivable, trade” and “Other assets.”

The carrying amounts of loans receivable with variable interest rates approximate their fair values because such loans receivable reflect market rates in the short term and credit conditions of counterparties do not significantly change after loan executions. The fair values of loans receivable with fixed interest rates are calculated by discounting contractual cash flows using interest rates currently available to the NTT Group for similar transactions, which is classified as Level 2.

Long-term debt—

The fair values of long-term debt referred to above, including the current portion, are measured using discount rates for similar debt instruments of comparable maturities currently offered by NTT Group, which is classified as Level 2.

Contingent features in derivative instruments —

At March 31, 2018, NTT Group had no material derivative instruments that contain credit risk-related contingent features which would have a material adverse effect on NTT’s consolidated financial position or results of operations.

Concentrations of credit risk —

NTT Group does not have any significant concentration of business transacted with an individual counter-party or groups of counter-parties that could, if suddenly eliminated, severely impact its operations at March 31, 2018.

25. Financing receivables

NTT Group has certain “Financing receivables” including loans and lease receivables. These financing receivables are mainly held by the financial subsidiaries of NTT. NTT manages these financing receivables by classifying them into “Installment sales receivable,” “Lease receivable,” “Loans receivable,” “Credit receivable” and “Others.”

Allowance for doubtful accounts —

The allowance for doubtful accounts against financing receivables collectively evaluated for impairment is computed based on each historical bad debt experience. The allowance for doubtful accounts against financing receivables individually evaluated for impairment is computed by the estimated uncollectible amount based on the analysis of certain individual accounts. In addition, financing receivables that are determined to be uncollectible due to, among other factors, the condition of the debtor are written off at the time of determination.

Rollforward of allowance for credit losses and recorded investment in financing receivables

	Millions of yen					
	2017					
	Installment sales receivable	Lease receivable	Loans receivable	Credit receivable	Others	Total
Allowance for credit losses:						
Balance at March 31, 2016	¥5,174	¥4,359	¥940	¥11,006	¥4,303	¥25,782
Provision	(1,036)	507	19	13,116	5,361	17,967
Charge off	(36)	(724)	(154)	(10,479)	—	(11,393)
Balance at March 31, 2017	4,102	4,142	805	13,643	9,664	32,356
collectively evaluated for impairment	4,013	1,457	523	13,643	52	19,688
individually evaluated for impairment	89	2,685	282	—	9,612	12,668
Financing receivable:						
Balance at March 31, 2017	938,413	438,070	96,189	400,093	10,217	1,882,982
collectively evaluated for impairment	938,316	435,122	94,777	400,093	547	1,868,855
individually evaluated for impairment	97	2,948	1,412	—	9,670	14,127

Millions of yen

	2018					
	Installment sales receivable	Lease receivable	Loans receivable	Credit receivable	Others	Total
Allowance for credit losses:						
Balance at March 31, 2017	¥4,102	¥4,142	¥805	¥13,643	¥9,664	¥32,356
Provision	(742)	704	29	18,032	(1,178)	16,845
Charge off	(46)	(714)	(20)	(13,103)	(4,078)	(17,961)
Balance at March 31, 2018	3,314	4,132	814	18,572	4,408	31,240
collectively evaluated for impairment	3,245	1,475	519	18,572	56	23,867
individually evaluated for impairment	69	2,657	295	—	4,352	7,373
Financing receivable:						
Balance at March 31, 2018	947,777	474,783	92,612	488,385	6,034	2,009,591
collectively evaluated for impairment	947,707	472,041	92,311	488,385	1,646	2,002,090
individually evaluated for impairment	70	2,742	301	—	4,388	7,501

Financing receivables on nonaccrual status —

Among financing receivables, the main receivables held by the financial subsidiaries are monitored past due status by length of past due date. Financing receivables on nonaccrual status are determined with no prospects for collecting contractual interest on the basis of past due date and other factors. Financing receivables on nonaccrual status were as follows:

	Millions of yen	
As of March 31	2017	2018
Installment sales receivable	¥1,963	¥1,477
Lease receivable	2,619	2,604
Loans receivable	1,251	1,099
Credit receivable	12,299	16,008
Others	3,304	3,645
Total	¥21,436	¥24,833

Analysis of the age of the recorded investment in financing receivables —

NTT Group determines the credit quality of financing receivables on the the status of past due and the conditions of debtors, among other factors. Financing receivables with past due over a long period are classified as “nonperforming receivables,” and all other receivables are classified as “performing receivables.”

	Millions of yen				
	As of March 31, 2017				
	Performing		Nonperforming	Total	Greater than 90 days and accruing
	Current	1-89 days past due	Greater than 90 days		
Installment sales receivable	¥933,579	¥2,868	¥1,966	¥938,413	¥3
Lease receivable	524,262	2,498	2,700	529,460	81
Credit receivable	386,373	1,421	12,299	400,093	—
Others	7,076	4	3,391	10,471	—
Total	¥1,851,290	¥6,791	¥20,356	¥1,878,437	¥84

	Millions of yen				
	As of March 31, 2017				
	Performing		Nonperforming	Total	Past due and accruing
	Current	Past due	Past due		
Loans receivable		¥295,506	¥1,338	¥296,844	¥—

	Millions of yen				
	As of March 31, 2018				
	Performing		Nonperforming	Total	Greater than 90 days and accruing
	Current	1-89 days past due	Greater than 90 days		
Installment sales receivable	¥944,405	¥1,891	¥1,481	¥947,777	¥4
Lease receivable	585,863	2,461	2,668	590,992	64
Credit receivable	470,272	2,106	16,007	488,385	—
Others	2,952	2	3,737	6,691	39
Total	¥2,003,492	¥6,460	¥23,893	¥2,033,845	¥107

	Millions of yen				
	As of March 31, 2018				
	Performing		Nonperforming	Total	Past due and accruing
	Current	Past due	Past due		
Loans receivable		¥346,702	¥1,134	¥347,836	¥11

Each financing receivable amount includes accrued interest.

26. Commitments and contingent liabilities

Purchase commitments —

The aggregate amount of payments for commitments outstanding, including commitments for purchase of property, plant and equipment and other assets is as follows:

Year ending March 31	Millions of yen
2019	¥29,649
2020	13,850
2021	4,576
2022	3,155
2023	2,825
Thereafter	12,506
Total	¥66,561

Loan commitments —

NTT Group provides the cash advance service accompanying credit cards and other loan services. Total outstanding credit lines related to loan commitments of them as of March 31, 2017 and 2018 were ¥249,100 million and ¥275,111 million, respectively. Credit lines are not necessarily executed to the maximum amount because these contracts contain a clause to lower the credit lines if there are reasonable grounds.

Loans guaranteed, among other things —

Contingent liabilities, such as loan guarantee obligations, which are not presented in the consolidated financial statements pursuant to accounting standards due to uncertainty regarding the possibility of loss, at March 31, 2017 and 2018 for loans guaranteed, among other things, amounted to ¥75,791 million and ¥85,025 million, respectively.

At March 31, 2018, NTT Group had no material litigation or claims outstanding, pending or threatened against it, which would be expected to have a material adverse effect on NTT's consolidated financial position or results of operations.

27. Business combinations

Acquisitions of Dell Systems Corporation and Other Companies and IT Services-Related Businesses —

On November 2, 2016 (U.S. time), NTT DATA acquired Dell Systems Corporation and other corporations (currently, NTT DATA Services Corporation) through its subsidiaries, and such companies became its subsidiaries. NTT DATA also acquired Dell group's IT services-related business. The accounting procedures for these business acquisitions were preliminary in the fiscal year ended March 31, 2017 and were finalized in the fiscal year ended March 31, 2018.

The acquisition cost for the acquired companies and business has been updated through reconciliation to payments in the fiscal year ended March 31, 2018.

Amount of assets acquired and liabilities assumed by NTT on the date of acquisitions

	Millions of yen		
	Preliminary	Measurement Period Adjustment	Final
Assets acquired			
Current assets	¥52,415	¥-	¥52,415
Property, plant and equipment	47,306	(6,394)	40,912
Intangible assets and Other	103,443	(29,268)	74,175
Total assets acquired	203,164	(35,661)	167,503
Liabilities assumed			
Current liabilities	21,210	-	21,210
Long-term liabilities	14,446	(9,759)	4,687
Total liabilities assumed	35,656	(9,759)	25,897
Total net assets acquired	167,508	(25,902)	141,606
Goodwill	149,671	29,328	178,999
Acquisition cost	¥317,179	¥3,426	¥320,605

The recognized goodwill represents a reasonable estimate of the expected synergies of the NTT DATA Services department from its future business expansion and is recorded in the data communications business segment. In this goodwill, ¥89,460 million is expected to be deductible for tax purposes.

Amortizable intangible assets acquired of ¥63,510 million consist of customer-related assets having a weighted average useful life of 16 years.

28. Subsequent events

For information on NTT's acquisition of treasury stock, see Note 18.

⑥ Consolidated Financial Statements Schedules

Schedule of Corporate Bonds

Applicable information is included under Note 14 to the notes to the consolidated financial statements.

Schedule of Company Borrowings

Applicable information is included under Note 14 to the notes to the consolidated financial statements.

Schedule of Valuation Allowances

	Millions of yen			
	Balance at beginning of period	Additions	Deductions	Balance at end of period
Year ended March 31, 2018:				
Allowance for doubtful accounts	¥48,626	¥30,066	¥(26,360)	¥52,332

	Millions of yen			
	Balance at beginning of period	Additions		Balance at end of period
		Charged to income tax expense	Charged to other Accounts	
Year ended March 31, 2018:				
Valuation allowance -				
Deferred tax assets	¥379,493	¥6,008	¥51	¥(138,464)
				¥247,088

* Deductions during the fiscal year primarily related to a decrease in the valuation allowance recorded at NTT America, Inc. due to changes in the U.S. corporate tax rate.

(2) Other

Quarterly Information for the Year Ended March 31, 2018

Cumulative period	Three months ended June 30, 2017	Six months ended September 30, 2017	Nine months ended December 31, 2017	Fiscal year ended March 31, 2018
Operating revenues (millions of yen)	2,809,782	5,664,795	8,722,036	11,799,587
Income before income taxes and equity in earnings (losses) of affiliated companies (millions of yen)	496,233	982,025	1,441,310	1,755,624
Net income attributable to NTT (millions of yen)	271,472	527,505	736,590	909,695
Basic earnings per share attributable to NTT (yen)	135.24	262.84	367.98	455.78

Fiscal period	Three months ended June 30, 2017	Three months ended September 30, 2017	Three months ended December 31, 2017	Three months ended March 31, 2018
Basic earnings per share attributable to NTT (yen)	135.24	127.60	104.99	87.51

ITEM 6. STOCK-RELATED ADMINISTRATION FOR THE COMPANY

Fiscal year	From April 1 to March 31
Annual General Meeting of Shareholders	During June
Record Date	March 31
Record Date for Distributions of Surplus	September 30 March 31
Number of Shares Constituting One Unit	100 shares
Purchases and Sales of Less-than-one-Unit Shares	
Handling Office	Sumitomo Mitsui Trust Bank, Limited(Headquarters), 4-1 Marunouchi 1-chome, Chiyoda-ku, Tokyo
Transfer Agent	Sumitomo Mitsui Trust Bank, Limited 4-1 Marunouchi 1-chome, Chiyoda-ku, Tokyo
Forwarding Address	—
Purchase and Sale Fees	None
Method of Public Notice	NTT's method of public notice is through electronic disclosure. However, if NTT cannot use electronic disclosure due to accidents or for other unforeseen circumstances, NTT will provide public notice through <i>Nihon Keizai Shimbun</i> . NTT's URL for public notice is: http://www.ntt.co.jp/ir/index_e.html
Special Benefits to Shareholders	Not applicable.
Restrictions on Shareholder Eligibility	Pursuant to Article 6 of the Act on Nippon Telegraph and Telephone Corporation, Etc., the ratio of foreign ownership of voting rights to the total amount of voting rights of NTT's shares is permitted to be up to one-third.

Note: Pursuant to NTT's Articles of Incorporation, shareholders of NTT may not exercise rights with respect to shares representing less than one unit other than the following rights: rights set forth in Article 189, Paragraph 2 of the Companies Act; the right of request pursuant to the stipulations of Article 166, Paragraph 1 of the Companies Act; the right to receive allocations of offered shares and offered stock acquisition rights in accordance with the number of shares owned by the Shareholder; and the right to request the Company to sell shares in a number which, when combined with the shares representing less than one unit.

ITEM 7. REFERENCE INFORMATION ON THE COMPANY

1. Information about the Parent Company of the Company

NTT has no “parent company” as such term is defined in Article 24, Paragraph 7-1 of the Financial Instruments and Exchange Act of Japan.

2. Other Reference Information

NTT filed the following materials during period from April 1, 2017 to the date of the filing of this Annual Securities Report:

(1) Annual Securities Report, Including Attachments and Confirmation Letter

Fiscal Year (32 nd Business Term) (from April 1, 2016 to March 31, 2017)	Filed with the Director of the Kanto Local Finance Bureau on June 28, 2017
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(2) Internal Control Report, Including Attachments

Fiscal Year (32 nd Business Term) (from April 1, 2016 to March 31, 2017)	Filed with the Director of the Kanto Local Finance Bureau on June 28, 2017
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(3) Quarterly Reports and Confirmation Letters

First Quarter, 33 rd Business Term (from April 1, 2017 to June 30, 2017)	Filed with the Director of the Kanto Local Finance Bureau on August 7, 2017
Second Quarter, 33 rd Business Term (from July 1, 2017 to September 30, 2017)	Filed with the Director of the Kanto Local Finance Bureau on November 13, 2017
Third Quarter, 33 rd Business Term (from October 1, 2017 to December 31, 2017)	Filed with the Director of the Kanto Local Finance Bureau on February 13, 2018

(4) Extraordinary Reports

Extraordinary Report Pursuant to Article 19, Paragraph 2, Item 9-2 of the Cabinet Office Ordinance Concerning Disclosure of Corporate Affairs, etc.	Filed with the Director of the Kanto Local Finance Bureau on June 28, 2017
Extraordinary Report Pursuant to Article 19, Paragraph 2, Item 12 of the Cabinet Office Ordinance Concerning Disclosure of Corporate Affairs, etc.	Filed with the Director of the Kanto Local Finance Bureau on December 11, 2017
Extraordinary Report Pursuant to Article 19, Paragraph 2, Item 9-2 of the Cabinet Office Ordinance Concerning Disclosure of Corporate Affairs, etc.	Filed with the Director of the Kanto Local Finance Bureau on June 27, 2018

(5) Stock Repurchase Status Reports

Reporting Period (from June 1, 2017 to June 30, 2017)	Filed with the Director of the Kanto Local Finance Bureau on July 5, 2017
Reporting Period (from September 1, 2017 to September 30, 2017)	Filed with the Director of the Kanto Local Finance Bureau on October 10, 2017
Reporting Period (from October 1, 2017 to October 31, 2017)	Filed with the Director of the Kanto Local Finance Bureau on November 1, 2017
Reporting Period (from November 1, 2017 to November 30, 2017)	Filed with the Director of the Kanto Local Finance Bureau on December 1, 2017
Reporting Period (from December 1, 2017 to December 31, 2017)	Filed with the Director of the Kanto Local Finance Bureau on January 5, 2018
Reporting Period (from January 1, 2018 to January 31, 2018)	Filed with the Director of the Kanto Local Finance Bureau on February 2, 2018
Reporting Period (from February 1, 2018 to February 28, 2018)	Filed with the Director of the Kanto Local Finance Bureau on March 6, 2018
Reporting Period (from March 1, 2018 to March 31, 2018)	Filed with the Director of the Kanto Local Finance Bureau on April 2, 2018
Reporting Period (from April 1, 2018 to April 30, 2018)	Filed with the Director of the Kanto Local Finance Bureau on May 1, 2018

Reporting Period (from May 1, 2018 to May 31, 2018)

Filed with the Director of the Kanto Local
Finance Bureau on June 1, 2018

PART II. INFORMATION ABOUT GUARANTORS OF THE COMPANY

Not applicable.

[English Translation of the Independent Auditor's Report Originally Issued in the Japanese Language]

Independent Auditor's Report on the Financial Statements
and
Internal Control Over Financial Reporting

June 27, 2018

To The Board of Directors of
Nippon Telegraph and Telephone Corporation

KPMG AZSA LLC

Takuji Kanai (Seal)
Designated Limited Liability Partner
Engagement Partner
Certified Public Accountant

Kensuke Sodekawa (Seal)
Designated Limited Liability Partner
Engagement Partner
Certified Public Accountant

Masashi Oki (Seal)
Designated Limited Liability Partner
Engagement Partner
Certified Public Accountant

Financial Statement Audit

We have audited the accompanying consolidated financial statements of Nippon Telegraph and Telephone Corporation (the "Company") and its consolidated subsidiaries provided in the "Item 5. Financial Information" section in the Nippon Telegraph and Telephone Corporation's Annual Securities Report ("Yukashoken Hokokusho"), which comprise the consolidated balance sheet as at March 31, 2018, and the related consolidated statement of income, the consolidated statement of comprehensive income, the consolidated statement of changes in equity and the consolidated statement of cash flows for the year then ended, and the notes to consolidated financial statements and the consolidated financial statements schedules, in accordance with Article 193-2, Paragraph 1 of the Financial Instruments and Exchange Act of Japan.

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 accounting principles generally accepted in the United States of America, pursuant to Article 95 of the Ordinance on Terminology, Forms and Preparation Methods of Consolidated Financial Statements, 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 independently 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 and applied depend on our judgment, including the assessment of the risks of material misstatement of the consolidated financial statements, whether due to fraud or error. In making those risk assessments, we consider internal control relevant to the entity's preparation and fair presentation of the consolidated financial statements in order to design audit procedures that are appropriate in the circumstances, while the objective of the financial statements audit is not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. An audit also includes evaluating the appropriateness of accounting policies used, the method of their application, and the reasonableness of accounting estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Opinion

In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of Nippon Telegraph and Telephone Corporation and its consolidated subsidiaries as at March 31, 2018, and their financial performance and cash flows for the year then ended, in accordance with accounting principles generally accepted in the United States of America.

Internal Control Audit

Opinion on Internal Control Over Financial Reporting

We have audited Nippon Telegraph and Telephone Corporation's internal control over financial reporting as at March 31, 2018, based on criteria established in Internal Control – Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO), in accordance with Article 193-2, Paragraph 2 of the Financial Instruments and Exchange Act of Japan. In our opinion, Nippon Telegraph and Telephone Corporation maintained, in all material respects, effective internal control over financial reporting as at March 31, 2018, based on criteria established in Internal Control – Integrated Framework (2013) issued by COSO.

Basis for Opinion

Nippon Telegraph and Telephone Corporation's management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting, included in the Report of Management on Internal Control Over Financial Reporting. Our responsibility is to independently express an opinion on the Company's internal control over financial reporting based on our audit. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (PCAOB) and are required to be independent with respect to Nippon Telegraph and Telephone Corporation in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audit in accordance with auditing standards for internal control over financial reporting prescribed by the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audit also included performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

Major Differences with Auditing Standards for Internal Control over Financial Reporting Generally Accepted in Japan

We conducted an internal control audit in accordance with the PCAOB auditing standards. Major differences between the PCAOB auditing standards and the auditing standards for internal control over financial reporting generally accepted in Japan are as follows:

1. We express an audit opinion on the Report of Management on Internal Control Over Financial Reporting prepared by the company's management under the auditing standards generally accepted in Japan, while we express an audit opinion on the internal control over financial reporting under the PCAOB auditing standards.
2. Our internal control audit only covers internal controls for preparation of the consolidated financial statements provided in the "Item 5. Financial Information" section, and does not cover internal controls related only to non-consolidated financial statements or internal controls related to disclosure items which could have material effects on the reliability of the company's financial statements.
3. Our audit does not cover internal controls over financial reporting of affiliated companies accounted for by the equity method.

Definition and Limitations of Internal Control Over Financial Reporting

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Other Matter

Our firm and engagement partners have no interest in the Company which should be disclosed pursuant to the provisions of the Certified Public Accountants Act.

Notes to the Reader of Independent Auditor's Report on the Financial Statements and Internal Control Over Financial Reporting:

The Independent Auditor's Report on the Financial Statements and Internal Control Over Financial Reporting herein is the English translation of the Independent Auditor's Report and Internal Control Over Financial Reporting as required by the Financial Instruments and Exchange Act of Japan.

[Cover]

[Document Filed]	Internal Control Report
[Applicable Law]	Article 24-4-4, Paragraph 1 of the Financial Instruments and Exchange Act of Japan
[Filed With]	Director, Kanto Local Finance Bureau
[Filing Date]	June 27, 2018
[Company Name]	Nippon Denshin Denwa Kabushiki Kaisha
[Company Name in English]	NIPPON TELEGRAPH AND TELEPHONE CORPORATION
[Title and Name of Representative]	Jun Sawada, President and Chief Executive Officer
[Title and Name of Chief Financial Officer]	Akira Shimada, Senior Executive Vice President
[Address of Head Office]	5-1, Otemachi 1-chome, Chiyoda-ku, Tokyo
[Place Where Available for Public Inspection]	Tokyo Stock Exchange, Inc. (2-1, Nihombashi Kabutocho, Chuo-ku, Tokyo)

1. Matters Related to the Basic Framework for Internal Control over Financial Reporting

The management of NTT is responsible for establishing and maintaining adequate internal control over financial reporting, as defined in Rule 13a-15 (f) or 15d-15 (f) under the Exchange Act. NTT's internal control over financial reporting is a process designed to provide reasonable assurance as to the reliability of financial reporting and the preparation and presentation of the consolidated financial statements for external purposes in accordance with generally accepted accounting principles.

NTT's internal control over financial reporting includes those policies and procedures relating to:

- (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of NTT's assets;
- (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that NTT's receipts and expenditures are being made only in accordance with authorizations of management and directors; and
- (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use or disposition of NTT's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness for future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with these policies or procedures may deteriorate.

2. Matters Related to Scope of Assessment, Record Date, and Assessment Procedures

Management assessed the effectiveness of its internal control over financial reporting as of March 31, 2018. In making this assessment, NTT's management used the criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission in "Internal Control-Integrated Framework (2013)."

In conducting this assessment, management reviewed the results of its evaluation of internal controls that have a material effect on the entirety of NTT's financial reporting on a consolidated basis ("company-level controls") and conducted an evaluation of business processes. In management's evaluation of business processes, management analyzed the targeted business process, identified key controls that have a material effect on the reliability of the NTT's financial reporting, and assessed the maintenance and operation status of these key controls. These procedures were the basis of management's evaluation of the effectiveness of NTT's internal control.

Management determined the required scope of assessment of internal control over financial reporting for NTT and its consolidated subsidiaries from the perspective of the materiality of the effect on the reliability of financial reporting. This materiality of the effect on the reliability of financial reporting is determined by reasonably assessing the materiality of quantitative and qualitative impacts.

3. Matters Related to the Results of the Assessment

As a result of the assessment described above, management concluded that, as of March 31, 2018, NTT's internal control over financial reporting is effective based on those criteria.

NTT's independent registered public accounting firm, KPMG AZSA LLC, has issued an audit report on NTT's internal control over financial reporting as of March 31, 2018.

4. Supplementary Matters

Pursuant to Article 18 of the Cabinet Office Ordinance on the System for Ensuring the Adequacy of Documents on Financial Calculation and of Other Information, NTT conducts its evaluation and reports on the effectiveness of internal control in compliance with the requirements of Section 404 of the Sarbanes-Oxley Act.

The primary difference compared assessments of internal control over financial reporting performed in accordance with generally accepted assessment standards for internal control in Japan are as follows:

- The scope of financial reporting is consolidated financial statements, and does not include internal controls related to disclosure matters that have a material effect on the reliability of financial statements, aside from those relating to the internal controls and accounting related only to specific financial statements.
- The scope of the consolidated basis for the evaluation does not include affiliates accounted for under the equity method.

5. Special Notes

None.

[Cover]

[Document Filed]	Confirmation Letter
[Applicable Law]	Article 24-4-2, Paragraph 1 of the Financial Instruments and Exchange Act of Japan
[Filed With]	Director, Kanto Local Finance Bureau
[Filing Date]	June 27, 2018
[Company Name]	Nippon Denshin Denwa Kabushiki Kaisha
[Company Name in English]	NIPPON TELEGRAPH AND TELEPHONE CORPORATION
[Title and Name of Representative]	Jun Sawada, President and Chief Executive Officer
[Title and Name of Chief Financial Officer]	Akira Shimada, Senior Executive Vice President
[Address of Head Office]	5-1, Otemachi 1-chome, Chiyoda-ku, Tokyo
[Place Where Available for Public Inspection]	Tokyo Stock Exchange, Inc. (2-1, Nihombashi Kabutocho, Chuo-ku, Tokyo)

1. Matters Related to Adequacy of Statements Contained in the Annual Securities Report

Mr. Jun Sawada, President and Chief Executive Officer, and Mr. Akira Shimada, Senior Executive Vice President, confirmed that statements contained in the Annual Securities Report for the 33rd Business Term (from April 1, 2017 to March 31, 2018) were adequate under the Financial Instruments and Exchange Act.

2. Special Notes

None.