JR-CENTRAL



# CENTRAL JAPAN RAILWAY COMPANY

## Annual Report 2019

**For the Year Ended March 31, 2019**

# CENTRAL JAPAN RAILWAY COMPANY Annual Report 2019

## Management Philosophy

# Contribute to the development of Japan's main transportation artery and social infrastructure

### Japan's Main Transportation Artery

JR Central's mission is to undertake high-speed, large-capacity passenger transport between Tokyo, Nagoya, and Osaka. "Japan's main transportation artery" refers to this passenger transport. Since the artery runs through this area of Japan, which plays an important role as the center of the country's economy and culture, it is possible that stagnancy in the main transportation artery will cause Japan's economic and societal movements in general to also stagnate. JR Central must continue to carry out its mission of managing Japan's main transportation artery today and in the future through operation of the Tokaido Shinkansen and the Chuo Shinkansen.

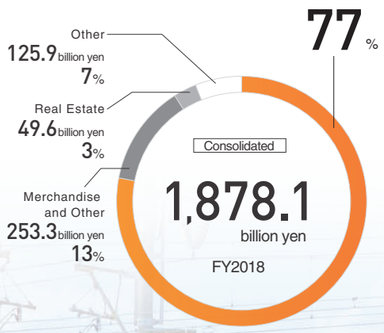
### Social Infrastructure

On a broader perspective, JR Central also undertakes the mission of supporting the social infrastructure. That is, along with the management of Japan's main artery, we take a locally oriented approach in operating a network of conventional lines in the Tokai Region, centered on the Nagoya and Shizuoka areas, and manage affiliated business focused on the local communities, thereby supporting the people in these areas. We will remain committed to operating conventional lines while managing and further enhancing affiliated businesses.

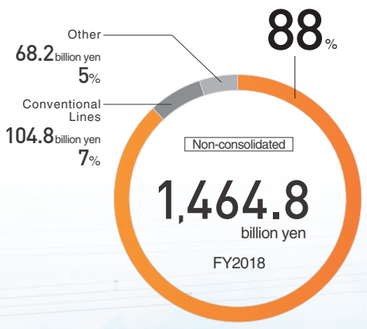
## Operating Revenues Composition

The transportation business accounts for approximately 80% of consolidated operating revenues and earnings from the Tokaido Shinkansen account for roughly 90% of non-consolidated operating revenues.

**Transportation** 1,449.1 billion yen




**Tokaido Shinkansen** 1,291.8 billion yen




Note 1: Consolidated operating revenues composition is based on revenues from external customers
Note 2: The total of items in the breakdown may not be 100% due to rounding.

## Contents


### CENTRAL JAPAN RAILWAY COMPANY

Management Philosophy
Operating Revenues Composition
1 Contents
2 Market Area Characteristics and Transportation Capacity
4 Enhancing Our Competitive Strength

### Messages from the Management

6 Greetings
8 Interview with the President

### Key Measures and Management Strategies

10 Key Measures and Capital Investment
14 Ensuring Safe and Reliable Transportation
18 Enhancing Transportation Services
22 Promoting the Chuo Shinkansen Project Using the Superconducting Maglev System
24 Refining the Superconducting Maglev Technology and Reducing Costs
26 Enhancing Sales and Marketing
28 Technological Development and Enhancement of Technical Capability
29 Overseas Deployment of High-Speed Railway Systems
30 Developing Affiliated Businesses

### ESG* Information

32 Engagement in Global Environment Preservation
36 Human Resources Development
38 Cooperation with Local Communities / International Exchanges / Restoration of Culture & Art and Lifelong Learning
40 Corporate Governance
46 Directors, Audit and Supervisory Board Members, and Executive Officers

### Corporate Data

47 Profile / Organization Chart
48 Operating Area
49 History
50 Summary of Performance
52 Financial Highlights(Consolidated, Non-consolidated)
53 Other Related Materials
54 Financial Section

### Appendices

82 Financial and Transportation Data
84 Financial Data Comparison of Three JR Companies (Consolidated)
85 Stock Information


* Environmental, Social, and Governance.
Companies appropriately considering/responding to ESG issues and the existence of shareholders who make investments in response to such efforts by the companies are thought to lead to the solution/improvement of global environmental issues and social issues and even to the sound development/expansion of capital markets, thus contributing to the establishment of a sustainable society.
Source: Japan Exchange Group, Inc.

[Remarks regarding forecasts, etc.]

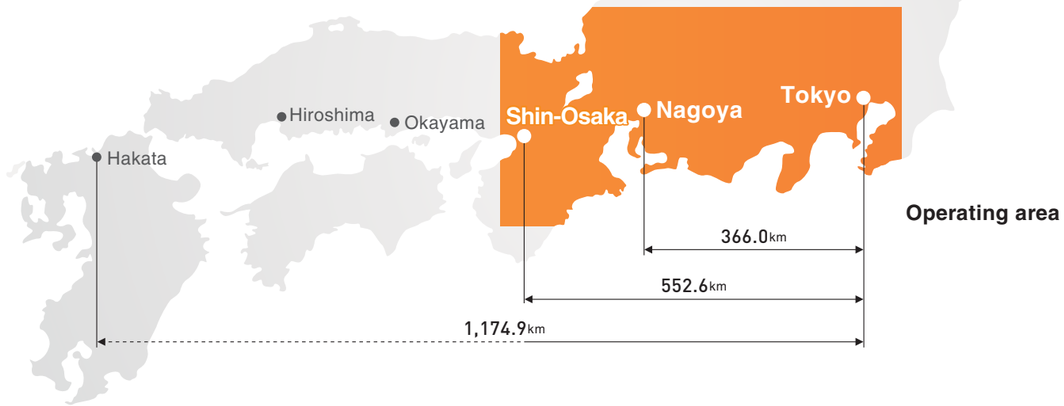
Future plans, forecast figures, etc. in this report are an outlook based on the information that is currently available for JR Central and may contain risks and uncertainty. Examples of potential risks and uncertainty include economic trends, business environment developments, consumption trends, competition situation for JR Central and subsidiaries, and changes in relevant laws and legal provisions. This report is compiled based on information available as of the end of May 2019 in principle.

- In this report, figures of financial information are truncated, while statistical data and all percentages are rounded.
- FY2018 signifies the fiscal year ended March 31, 2019.

# Market Area Characteristics and Transportation Capacity

## Representing a powerful presence in the inter-city transportation market, one that is unrivaled all over the world.

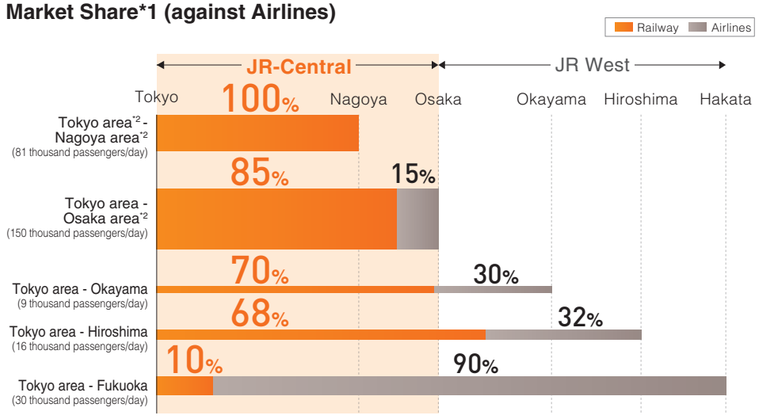
# Tokaido Shinkansen




**Operating area**

### JR Central boasts an overwhelming market share within its operating areas

**Market Share*1 (against Airlines)**



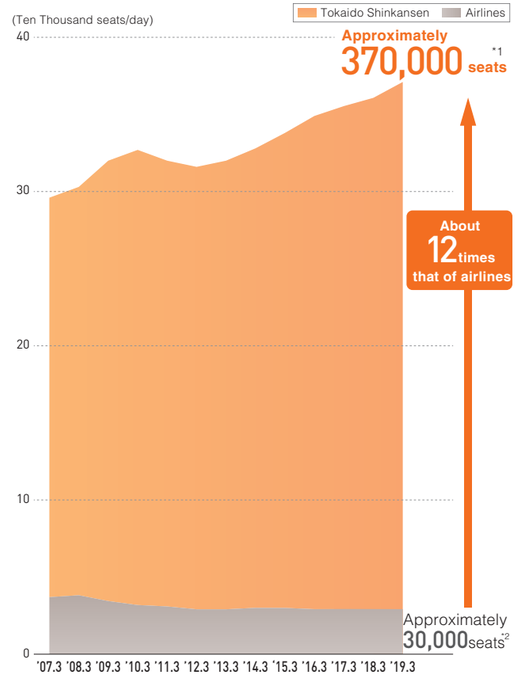

**(Example)**

| Shinkansen Operating Kilometers | (Reference*3) |
|---|---|
| Tokyo ~ Nagoya | New York ~ Washington D.C. (LGA-IAD) |
| 366.0km | 369km |
| Tokyo ~ Shin-Osaka | Los Angeles ~ San Francisco (LAX-SFO) |
| 552.6km | 542km |
| Tokyo ~ Hakata | New York ~ Chicago (LGA-ORD) |
| 1,174.9km | 1,180km |

*1 Market share is calculated by JR Central based on the Inter-prefectural data of the inter-Regional Passenger Mobility Survey, published by the Ministry of Land, infrastructure, Transport and Tourism for FY2017.
*2 Tokyo area: Tokyo, Kanagawa, Chiba, Saitama, Ibaraki / Nagoya area: Aichi, gifu, Mie / Osaka area: Osaka, Kyoto, Hyogo, Nara
*3 Based on the U.S. Department of Transportation website

### An overwhelming capacity for transporting passengers along its main route, from Tokyo to Osaka

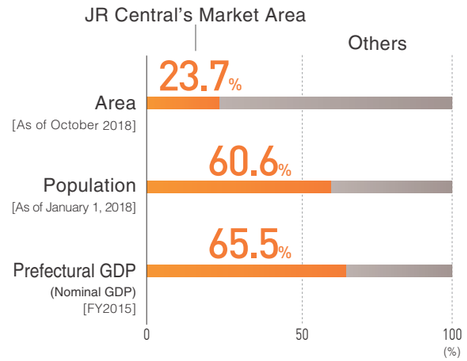
Changes in daily transportation capacity (comparison between the Tokaido Shinkansen and airline transportation services operating between the Tokyo Metropolitan area and the Osaka region)




*1 Tokaido Shinkansen: The number of passenger seating provided (including extra train services) on through-service "Nozomi" and "Hikari" lines operating between Tokyo Station and Shin-Osaka Station in each respective fiscal year.
*2 Airlines: Calculated by JR Central based on information pertaining to specified Japanese air carriers (Ministry of Land, Infrastructure, Transport and Tourism) for FY2006 to FY2018.

### Japan's population and economic activity are concentrated in the area covering the Tokyo Metropolitan area, the Nagoya region, and the Osaka region

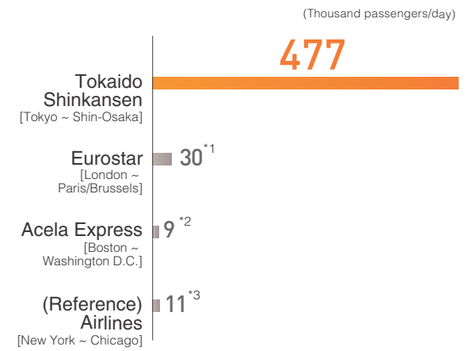
Percentages of our market area in Japan as a whole




[Source]
JR Central's market area is calculated taking the following prefectures into account
Tokyo, Kanagawa, Chiba, Saitama, Ibaraki, Shizuoka, Yamanashi, Nagano, Aichi, Mie, Gifu, Shiga, Osaka, Kyoto, Hyogo, Nara
Population: Ministry of Internal Affairs and Communications "Population, Demographics and Number of Households Derived from Basic Resident Registration"
Total production by prefecture: Cabinet Office "Report on Prefectural Accounts"

### An inter-city transportation capacity that is unrivaled all over the world

Comparison with overseas transportation services




[Source]
*1 Calculated by JR Central based on figures provided on the Eurotunnel website (2018.1-2018.12)
*2 Calculated by JR Central based on figures provided by the National Fact Sheet: FY2018 (Amtrak)
*3 Calculated by JR Central based on figures provided on the U.S. Department of Transportation website (2018.1-2018.12)

# Enhancing Japan's main transportation artery

## Transportation Service

We succeeded in lifting the maximum speed of our services from 220 km/h, to 270 km/h, and then to 285 km/h. We successively increased the number of services for our fastest speed train, the "Nozomi", through increased investment in rolling stock and ground facilities. We established an operational system running up to 10 "Nozomi" services each hour each direction. We continued to introduce new rolling stock incorporating the latest technology.

N700S validation test vehicles

**FY2020**
- July 2020 Put N700S into commercial service

**FY2019**
- Standardize all rolling stock to the N700A type and"12 Nozomi Timetable," scheduled for the spring of 2020

**FY2017**
- Running tests using N700S validation test vehicles starts

**FY2014**
- Increase of the maximum speed to 285 km/h

**FY2013**
- Revise the timetable to have a maximum of 10 "Nozomi" services running per hour for nearly all operating hours

**FY2012**
- Put N700A into commercial service
- Extend platforms at Shin-Osaka Station

**FY2007**
- Put the Series N700 into commercial service

**FY2003**
- Shinagawa Station on the Tokaido Shinkansen is opened
- Maximum speed of all Tokaido Shinkansen trains increased to 270 km/h
- Shift to train scheduled centered on "Nozomi"

**FY2009**
- The "EX-IC" service expands to the Sanyo Shinkansen
- Corporate member service starts

**FY2007**
- The "EX-IC" service starts for the Tokaido Shinkansen

**FY2006**
- "Express Reservation" service expands to the total length of Tokaido and Sanyo Shinkansen lines

**FY2001**
- "Express Reservation" was launched for Tokaido Shinkansen

**FY2017**
- The "smartEX" service starts for the Tokaido Shinkansen and the Sanyo Shinkansen

## Passenger Service

We expanded the lineup and sections covered by the "Express Reservation" online reservation service, establishing it as a core Tokaido Shinkansen service. And we improved convenience through our ticketless boarding service EX-IC. We aim to improve convenience for light users and overseas visitors to Japan with our new online reservation and ticketless boarding service, the "smartEX", introduced at the end of September 2017.

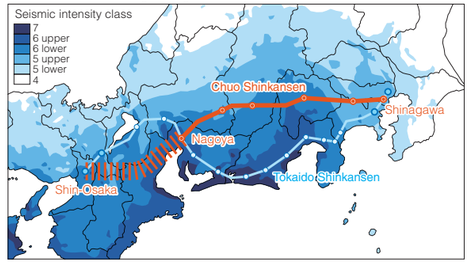
"EX-IC"

## The Chuo Shinkansen Project

Under the condition that we bear all the construction cost, we are promoting the Chuo Shinkansen Project using the Superconducting Maglev system based on the Nationwide Shinkansen Railway Development Act to continually carry out our mission of operation of high-speed railway linking the Tokyo Metropolitan area, Chukyo region, and Kinki region, and to ensure the future foundation of the company.

We will duplicate our artery transportation system linking Tokyo, Nagoya, and Osaka with the Chuo Shinkansen, thereby preparing for future risk.

Distribution map of the estimated biggest seismic intensity of the Eastern Nankai Trough Large Earthquake




*Prepared by JR Central based on" Countermeasure against Eastern Nankai Trough Large Earthquake (Final Report)" (May. 2013)

The overwhelming time-reduction effect of the Chuo Shinkansen will merge the three main regions into a "Super Mega Region", energizing economic and social activity.

○Operating speed
500 km/h

○Time required (fastest train)

| Tokyo ~ Nagoya City | Tokyo ~ Osaka City |
|---|---|
| 40 minutes | 67 minutes |

○First Phase (Shinagawa Station ~ Nagoya Station)

| | |
|---|---|
| Tokaido Shinkansen | 1 hr 26 min* |
| Chuo Shinkansen (Superconducting Maglev System) | 40 minutes |

*As of the March 2019 timetable revision (arrival time based on the fastest trains in service)

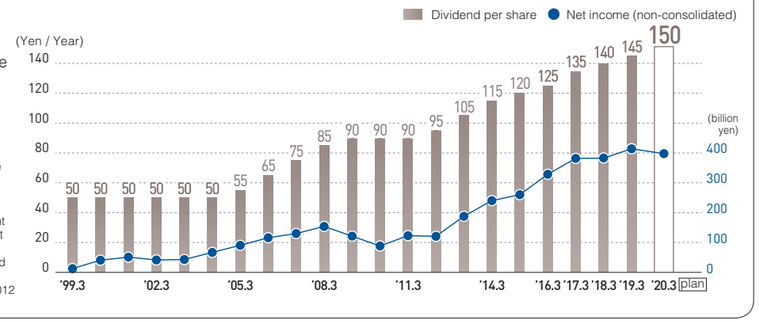
Significant portion of "Nozomi" users will shift from the Tokaido Shinkansen to the Chuo shinkansen, which enables more flexible use of the Tokaido Shinkansen.

Image of the Number of Operations


## Providing stable dividends

Our policy on dividends has always been to decide the specific dividend amount in accordance with the management environment/performance in each FY based on the principle of continuously providing stable dividends.

*1: The planned figures for FY2019 are as of the publication of the financial report for FY2018.
*2: With respect to the amount of dividend per share for FY2012, given the adoption of the unit share system of splitting 1 share of common stock into 100 shares and setting one (1) unit of shares as 100 shares effective October 1, 2012, the amount was calculated on assumption that the stock split was conducted at the beginning of the period.
*3: The amount of dividend per share for FY2011 and prior is shown by dividing the amount by 100 for the ease of comparison with the amount for FY2012 and thereafter.



# *To all persons reading the Central Japan Railway Company Annual Report 2019*

In the railway business, JR Central sets the highest priority on ensuring safe and reliable transportation under its management philosophy of "Contribute to the development of Japan's main artery and social infrastructure." JR Central's fundamental policy is to continue executing the long-term mission to integrally maintain and develop the Tokaido Shinkansen, which serves as Japan's main transportation artery, and the conventional line network in the Tokai region through continuous efforts, such as providing services that are preferred by customers and streamlining of work, as well as to operate the "three generations of railways" by constructing the Chuo Shinkansen to make Japan's main transportation artery a dual system.

The railway business, which is the core business of the JR Central Group, requires long-term massive capital investment and technological development with considerable lead times. Due to such a business structure, it is vital that we manage our railway business based on a long-term outlook rather than pursuing short-term profitability. Therefore, we are promoting mid-to-long term projects in a well-planned manner while simultaneously providing high quality services in our daily railway operations and aiming to enhance our management base.

K. Tsuge

Chairman and Representative Director
**Koei Tsuge**

Shin Kaneko

President and Representative Director
**Shin Kaneko**

## Ensuring Safe and Reliable Transportation

In the railway business, JR Central will place top priority on ensuring safe and reliable transportation. We will pursue derailment and deviation countermeasures for the Tokaido Shinkansen by implementing derailment prevention guards for the entire line. We will also proceed with the implementation of measures to prevent suspended ceilings at stations from falling in the event of an earthquake and reinforcing the quake resistance of the Nagoya Workshop, viaduct pillars of conventional lines, etc. In addition, JR Central will steadily proceed with large-scale renovation of the Tokaido Shinkansen.

Furthermore, when typhoons, heavy rain or other climate conditions are expected to have a major impact on train operation. We will place the highest priority on ensuring safety and determine the appropriate train operation plan, including prompt suspension of operation. If train operation is suspended, we will make efforts to resume operation in a timely manner, as well as provide information on train operation in a more prompt and precise manner.

We will also perform practical training repeatedly so as to be able to respond to various conditions expected in the event of extraordinary situations such as natural disasters or contingencies. And we will cooperate with relevant organizations in holding the G20 Osaka Summit and the Rugby World Cup Japan 2019 and work to ensure safety at stations, trains, etc., and provide smooth transportation services.

## Enhancing Transportation Services

In terms of the Tokaido Shinkansen, we will continue to work on setting more flexible train services in accordance with demand during seasons and time frames with increased customer use by applying the "10 Nozomi" Timetable. And we will complete the launch of the N700A (3rd edition) to standardize all rolling stock to the N700A type and finish the enhancement work to reflect features of the third-edition trainsets, such as reducing the stopping distance of the Earthquake Brake on existing trains. Furthermore JR Central will make the best of the operation of all Tokaido Shinkansen trains at a maximum speed of 285 km/h in conjunction with securing rolling stock consistency, and update train timetables to further heighten convenience and stability in the spring of 2020. In addition, we will steadily proceed with preparations for the launch of the next-generation Shinkansen N700S that will enable us to increase safety and stability by reducing the stopping distance of the Earthquake Brake and strengthening the monitoring function, and to reinforce our ability to respond to extraordinary situations by adopting a battery-based self-running system, and other features.

In terms of conventional line, we will flexibly increase the frequency and number of cars in train services to meet demand for express trains, such as for Shinano and Hida. And we will advance construction and preparations for the opening of Mikuriya Station on the Tokaido Line Scheduled to open between Fukuroi Station and Iwata Station on the Tokaido Line.

In terms of passenger-related facilities, JR Central will proceed with the installation of movable platform fences on the Shinkansen platforms No. 20 through No. 26 at Shin-Osaka Station, and begin using them upon completion. Meanwhile, for conventional lines, we will promote the installation of the fences on the Tokaido Line platform at Kanayama Station. We will also proceed with the replacement work for the installation of braille blocks with a line that indicates where the inner platform edge is located by expanding the scope of stations of conventional lines to those servicing 1,000 or more passengers.

We will also promote the installation of barrier-free facilities at stations of conventional lines, such as elevators and multifunction toilets.





## Enhancing Sales and Marketing

In sales and marketing, JR Central will take initiatives so that more customers become aware of the convenience of Express Reservation and smartEX and use these services and promote tourist products, such as "EX Nozomi Family Hayatoku," to widely spur demand. We will also Enhance tourism campaigns and products that convey the attractiveness of Kyoto, Nara, Tokyo, Hida, etc and coordinate with local governments, travel agencies and other parties through the "Shizuoka Destination Campaign (Shizuoka DC)" and make efforts to develop attractive sightseeing materials and products and operate sightseeing trains. JR Central will take initiatives so that customers from overseas can conveniently use its railroad services. We will promote expanded use of "smartEX" services for foreigners visiting Japan as well as work to boost sales of sightseeing value tickets, etc., while capturing demand from the Rugby World Cup Japan 2019. In addition, We will make efforts to enhance the provision of information to foreigners visiting Japan by adopting announcements using tablet devices, etc., and by utilizing the Company's website for enhanced disclosure of information on train status and complete the introduction of free-of-charge WiFi service on all Shinkansen trains.

## Promoting the Chuo Shinkansen Project Using the Superconducting Maglev System

The Chuo Shinkansen that employs the Superconducting Maglev System will enable us to continue our mission of operating a high-speed railway linking the Tokyo Metropolitan areas, Chukyo regions and Kinki regions, which is also the lifeline of our business. It is being planned in order to ensure the future foundation of the company.

As for the Chuo Shinkansen Project, we will maintain sound management and stable dividends, and take steady steps with a greater sense of seriousness toward completing the project while demonstrating flexibility. We will also continue promoting close coordination with local communities and carry out measurement, design, acquisition of land, etc., according to plan. Furthermore, JR Central will steadily continue to make progress with various types of construction work, including tunnel and emergency exit excavation and diaphragm wall work of the Southern Alps tunnel, Shinagawa Station, Nagoya Station, tunnels in mountainous areas, emergency exit sites in urban areas, and other locations where work is challenging and construction periods will be long by giving serious consideration to construction safety and environmental protection. In addition, given the approval obtained for the use of the deep underground section in October 2018, we will begin production of the shield machine and make other preparations for the excavation of tunnels in urban areas.

## Refining Superconducting Maglev Technology and Reducing Costs

In regard to the Yamanashi Maglev Line, we will proceed with verification testing, etc. to establish a maintenance system that responds to commercial services by alternately operating 2 trainsets and continuing to conduct long distance running tests by using rolling stock and facilities in commercial line specifications. We will also strive to further refine the Superconducting Maglev technology and reduce the costs for the construction, operation, and maintenance of commercial lines. We will also produce an improved testing vehicle for formulating commercial rolling stock specifications and while steadily performing the necessary running tests in anticipation of the launch of the improved testing vehicle, conduct public "Superconducting Maglev Test Ride" events to further promote understanding of Superconducting Maglev.

## Overseas deployment of high-speed railway systems

In our projects for the overseas deployment of high-speed rail systems, we will proceed with technical assistance to the main development entity of the Texas Project in the U.S. through the local subsidiary (High-Speed-Railway Technology Consulting Corporation), while carrying on full-scale discussions through the local subsidiary (High-Speed-Railway Integration Corporation) along with firms on the Japan side toward concluding the contract for the core system. In addition, bolster promotional activities for the use of the Superconducting Maglev system in the Northeast Corridor Project in the U.S. and continuing to proceed with the technical consulting services for the Taiwan High Speed Rail.

We will also promote initiatives to establish the Japanese highspeed rail system, which is based on the core principle of "Crash Avoidance", as a global standard.

## Technological Development and Enhancement of Technical Capability

In an effort to promote technological development, JR Central will conduct tests using the N700S validation test vehicles, such as the long-term endurance testing and acceleration enhancement testing at 360 km/h. In addition, we will proceed with the new production of a testing vehicle for next-generation limited express rolling stock that uses a hybrid system for conventional lines and begin running tests. Furthermore, We will also implement more advanced and power-saving inspections and maintenance that utilize condition monitoring technologies. We will also promote technical development that can lead to cost reductions for maintenance and upgrading of facilities.

## Developing Affiliated Businesses

In businesses other than the railway business, JR central will operate JR Central Towers and JR Gate Tower in an increasingly uniform manner and respond to diverse needs by demonstrating synergistic effects to the fullest to boost earnings. Also, we will further invigorate the merchandizing business and the station building business by developing stores in station buildings and renovating commercial facilities, as well as work to make effective use of land owned by the Company to further expand earnings. In addition, we will proceed with the commercial development at Tokyo Station in light of the upcoming Tokyo 2020 Olympic and Paralympic Games.

## Engagement in Global Environment Preservation

In regard to global environmental issues, JR Central will not only make the public aware of the superiority of railways to the global environment, but also continue promoting various policies that contribute to engagement in global environment preservation, such as introduction of the N700A, which enables significant energy conservation, as well as working toward resource and energy conservation in our daily operations.

We will strive to promote efficiency and reduce costs throughout our business execution activities, including capital investments, with a view to enhancing our management strength.

# *Realize Our Management Philosophy at a Higher Level*

Shin Kaneko

President and Representative Director
Shin Kaneko

## Management

**Please tell us what is the emphasis of your management policy.**

- Our basic management policy is to continue to take necessary measures to realize our management philosophy of “contributing to the development of Japan’s main transportation artery and social infrastructure” at a higher level.
- In order to achieve this ambitious goal, we have to improve our corporate capabilities accordingly. In particular, we will strive to strengthen the following three capabilities: (1) capability to safely proceed with business activities; (2) capability to provide even better services; and (3) capability to work efficiently at low cost. We would like to continue to hone these three capabilities.
- Looking back on our past efforts, I would say that we have focused on ensuring safe and reliable transportation. This has always been the top-priority management issue for our company and the basis for all of our businesses. In fact, investment for safety represents approximately 70% of our annual capital investment, excluding the Chuo Shinkansen, and has amounted to 3,670 billion yen since the foundation of our company (as of the end of FY2018). Safety is also the main theme of our technological development and staff training. These efforts have built great trust in our ability to ensure the safety of customers.
- In addition, we improved our transportation services, especially the “Nozomi” service, by launching a new rolling stock model and renovating Shin-Osaka Station. We also honed our services through sales and marketing initiatives such as promoting online reservation and ticketless boarding services. These efforts have led to a significant increase in the passenger volume of the Tokaido Shinkansen.
- The Chuo Shinkansen Project currently underway is also intended to strengthen this main transportation artery. The increased convenience resulting from this groundbreaking high-speed rail and the duplication of the main transportation artery will allow us to continue to carry out our mission.
- We will continue enhancing the convenience of the main transportation artery while placing top priority on safety with an eye toward attracting more passengers and increasing revenue. At the same time, we will work to ensure operational efficiency and profitability as we lay a foundation for investments designed to enhance safety and services that will set a positive cycle in motion. These measures will enable us to significantly strengthen our operating foundation so that we can continue to pay stable dividends and ensure long-term, steady employment.We will strive not only to contribute to the economic prosperity of Japan but also to earn the trust of all stakeholders, including shareholders, customers, employees, and business partners, to promote the sustainable development of our company.

## Tokaido Shinkansen

**The Tokaido Shinkansen saw steady ridership in FY2018, again achieving a record-high passenger volume. What factors do you think are behind these results?**

- It was partly because the Japanese economy remained steady but also because the various initiatives we took to strengthen our competitive edge in a medium- to long-term context came to fruition.
- Ever since our company was founded, we have consistently made an effort to increase transportation capacity. In FY2018, the average number of services per day reached a record high of 373. This high capacity was realized by the "10 Nozomi Timetable" (operating up to 10 Nozomi services in both directions), which was introduced after more than five years of preparation, including the construction of additional platforms and installation of additional draw-out tracks at Shin-Osaka Station. Other factors that have contributed to the current high-level of the Shinkansen service include the continuous launch of new rolling stock models and the enhancement of sales and marketing, such as new online reservation and ticketless boarding services known as “Express Reservation” and “smartEX.”

**The introduction of a “12 Nozomi Timetable” was announced. What is this aimed at?**

- With the timetable change in the spring of 2020, we will introduce a “12 Nozomi Timetable,” which will significantly improve our transportation services. We will make this possible by improving equipment and completing the update to the N700A type to allow all trains to run at the same highest speed of 285km/h.
- There are two points to note about this new timetable. First, an increasing number of “Nozomi” services will be provided. The maximum number of “Nozomi” services per hour will increase by 2 from 10 to 12 in either direction. “Nozomi” will be operated at an average interval of 5 minutes during busy hours.
- Secondly, the travel time of “Nozomi” will be reduced. Under the current “10 Nozomi Timetable,” seven “Nozomi” services run between Tokyo and Shin-Osaka with a travel time ranging from 2 hours 33 minutes to 2 hours 37 minutes. Under the “12 Nozomi Timetable,” all “Nozomi” services will travel between Tokyo and Shin-Osaka within 2 hours 30 minutes.
- With this “12 Nozomi Timetable,” additional “Nozomi” services will be provided during busy hours. Passengers can reduce their travel time by reserving train seats online at their convenience and using a new, faster “Nozomi.” This will make the Tokaido Shinkansen even more convenient.
- We will maintain a long-term perspective and continue to strive to enhance our transportation services so that more and more passengers will use our services.





**Can you describe the N700S, the next series of rolling stock for the Tokaido Shinkansen? In addition, please let us know the schedule for launching this new series.**

- The N700S, which will be the first full model change since the Series N700, is designed based on the results of years of technological development, and is equipped with features such as enhanced safety and stability, higher emergency response capability, enhanced comfort and convenience, and a standardized design that can easily be constituted to any length of trainsets.
- We started test runs using validation test vehicles last year and verified that the N700S performed as expected, so we decided to manufacture a total of 40 trainsets over the three years from 2020 through 2022. Commercial operation is scheduled to begin in July 2020.

▸Reference P.20
Development of the next-generation rolling stock, N700S

## Conventional lines

**Can you tell us about what initiatives you have taken to expand the use of conventional lines?**

- With regard to conventional lines, we have steadily improved our services by, for example, launching new rolling stock and increasing the frequency of services. We will further enhance flexibility in the operation of limited express services, such as “Shinano” and “Hida,” by increasing the frequency of services and the number of cars per train accordingly to meet the demand in busy seasons and at the time of wayside events. Coupled with this, we will strengthen ties with local communities in order to promote the use of railways.
- Moreover, with an eye toward the replacement of diesel railcars currently used for “Hida” and other limited express trains, we will produce hybrid type test trains for the next-generation limited express rolling stock, and start test runs at the end of 2019 to establish such technology. We are aiming to put this hybrid rolling stock into commercial operation with a top speed of 120km/h without compromising safety and comfort. We are considering launching the operation of mass-produced hybrid rolling stock by around FY2022.
- As part of our efforts to strengthen ties with local communities to promote the use of limited express services on conventional lines, we are conducting the “Shupo” Campaign to introduce various tourist attractions along our railway lines and “Sawayaka Walking” to offer free-of-charge walking tours that start from one of our stations and go around wayside sightseeing spots. This year, we will also collaborate with local governments, travel agencies, etc. through the “Shizuoka Destination Campaign” organized jointly by the six JR passenger rail operators to develop attractive tourism resources and products and operate sightseeing trains, etc. to promote the use of our services, including the Shinkansen.

## Chuo Shinkansen

**Construction work is now in full swing in different sections of the Chuo Shinkansen line. Can you explain the significance of this project once more?**

- The Chuo Shinkansen Project is intended to allow us to continue to carry out our founding mission of operating a high-speed railway that runs from the Tokyo Metropolitan area through the Chubu region to the Kinki region (from Tokyo through Nagoya to Osaka).
- At present, the Tokaido Shinkansen is serving this role. However, now that it has surpassed its 50th anniversary, it is about time to consider drastic measures against the need for future large scale renovation and major disasters. Moreover, in the wake of the Great East Japan Earthquake, it has become even more important to prepare for potential disasters by duplicating the main transportation artery. Therefore, we have decided to complete the construction of this alternative Chuo Shinkansen line as soon as possible by accelerating the development of our Superconducting Maglev System at our own expense and to operate the Chuo and Tokaido Shinkansen lines in an integrated manner.

**What risk factors do you foresee in the Chuo Shinkansen Project? In addition, can you tell us what countermeasures you have in mind?**

- We are taking steady steps towards the completion of the project while maintaining sound management and stable dividends and demonstrating our flexibility. Although the construction of the Chuo Shinkansen will take years and therefore can inevitably be affected by economic shifts, such as fluctuations in business conditions, interest rates, prices, labor costs, and land values, we will work to increase our earning power, improve the efficiency of operations, and cut costs to strengthen our management base while striving to further reduce construction costs for the Chuo Shinkansen Project.
- Moreover, in order to mitigate management risks, we obtained a long-term, fixed low-rate loan in FY2016 and FY2017, totaling 3 trillion yen, by making use of Long-Term Loan through the Fiscal Investment and Loan Program.

For details, please refer to “Long-Term Loan through the Fiscal Investment and Loan Program (Long-term debt for the Chuo Shinkansen construction)” on p. 55.

## Affiliated Businesses

**Please tell us about your affiliated business.**

- We are working to expand our revenue base, especially in businesses that allow us to make full use of our station areas and other businesses that are expected to generate synergies with our railway business.
- In particular, the development of Nagoya Station, the largest station in our network, is a pillar of our affiliated business. JR Central Towers, opened in 2000, and JR Gate Tower, opened in 2017, have been attracting large numbers of visitors. Already recognized as landmarks of Nagoya, these buildings have made a significant contribution to the economic development of the Chubu region. Going forward, we will continue to operate JR Central Towers and JR Gate Tower in an integrated manner and maximize their synergies to meet various needs.
- We will continue to collaborate with our Group Companies to expand revenues and profits.

## Dividends

**Can you tell us about your dividend policy?**

- Due to the nature of the railway business, which operates from a long-term perspective, a specific dividend amount is determined considering the business environment and results of each fiscal year based on the Company’s consistent and basic policy for the continuation of stable dividends.
- When we say “from a long-term perspective,” we mean that we will not cut corners as we use current proceeds from our business to take necessary steps to ensure that our rail services continue to operate steadily over the long term. For example, we will undertake such measures as large-scale renovations as well as derailment and deviation countermeasures for the Shinkansen along with working on the Chuo Shinkansen, a major long-term project. We believe that continuing a stable dividends policy will best meet the long term benefits of our shareholders.
- We will maintain this principle of stable dividends during the construction of the Chuo Shinkansen.

# Key Measures and Capital Investment FY2019

## 1 Ensuring Safe and Reliable Transportation

▶P.14

Capital investment amount: 159.0 billion yen

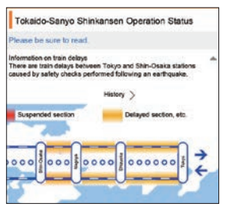
### JR Central will work to further reinforce structures along with earthquake countermeasures.

- Advance construction work for the installation of derailment prevention guards for the entire Tokaido Shinkansen line as part of implementing derailment and deviation prevention measures.
- Proceed with the implementation of measures to prevent suspended ceilings at stations from falling in the event of an earthquake and reinforce the quake resistance of the Nagoya Workshop, viaduct pillars of conventional lines, etc.
- Steadily proceed with large-scale renovation of the Tokaido Shinkansen while making efforts to achieve cost reductions by introducing the results of technological development and improving construction methods.

### JR Central will advance initiatives to respond more safely and properly to natural disasters, etc.

- When typhoons, heavy rain or other climate conditions are expected to have a major impact on train operation, place the highest priority on ensuring safety and determine the appropriate train operation plan, including prompt suspension of operation. If train operation is suspended, make efforts to resume operation in a timely manner, as well as provide information on train operation in a more prompt and precise manner.
- Repeatedly perform practical training so as to be able to respond to various conditions expected in the event of extraordinary situations such as natural disasters or contingencies.
- Cooperate with relevant organizations during the G20 Osaka Summit and the Rugby World Cup Japan 2019 and work to ensure safety at stations, trains,etc., and provide smooth transportation services.

Large-scale renovation


Sample illustration of information provided

**Reference**

| | |
|---|---|
| Laying derailment-prevention guards: | FY2019 approximately 98 km |
| Measures to prevent suspended ceilings at stations from falling: | All 17 Shinkansen stations, 30 conventional line stations (FY2016 to FY2026 approximately 13.0 billion yen) |
| Large-scale renovation: | FY2019 34.0 billion yen (FY2016 to FY2019 145.0 billion yen) |

## 2 Enhancing Transportation Services

▶P.18

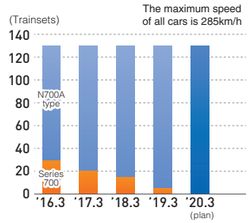
Capital investment amount: 62.0 billion yen

### JR Central will advance initiatives to offer greater convenience and comfort, including updating timetables that make the most of operating all Tokaido Shinkansen trains at a maximum speed of 285 km/h in the spring of 2020.

- Continue to work on setting more flexible train services in accordance with demand during seasons and time frames with increased customer use by applying the "10 Nozomi" Timetable.
- Complete the launch of the N700A (3rd edition) to secure standardize all rolling stock to the N700A type and finish the enhancement work to reflect features of the N700A (3rd edition), such as reducing the stopping distance of the Earthquake Brake on existing trains.
- Make the most of the operation of all Tokaido Shinkansen trains at a maximum speed of 285 km/h and update train timetables to further heighten convenience and stability in the spring of 2020.
- Steadily proceed with preparations for the launch of the next-generation Shinkansen N700S that enables us to increase safety and stability by reducing the stopping distance of the Earthquake Brake and strengthening condition monitoring system, and to reinforce our ability to respond to extraordinary situations by adopting a battery-based selfrunning system, and other features.
- Flexibly increase the frequency and number of cars in train services to meet demand for limited express trains, such as for Shinano and Hida.

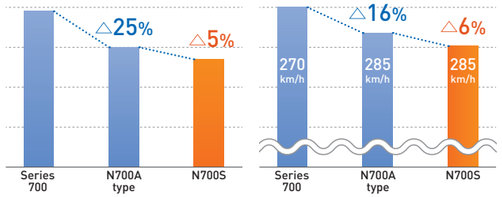
N700S

Shift in the number of trainsets by series for the Tokaido Shinkansen Wide-View Shinano




Braking distance from traveling at 285km/h in the advent of an earthquake

Power consumption volume




Features of the N700S

**Reference**

| | |
|---|---|
| N700A (3rd edition): | FY2019 5 trainsets (Launch 20 trainsets from FY2016 to FY2019) |
| Enhancement work to reflect the features of the N700A (3rd edition): | FY2019 19 trainsets (applicable for 111 trainsets from FY2017 to FY2019) |
| N700S: | FY2020 12 trainsets (Launch 40 trainsets from FY2020 to FY2022: ), scheduled to begin commercial operation in July 2020 |

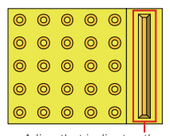
### JR Central will move ahead with the implementation of facilities, etc., so that customers can use railways with a greater sense of convenience and security.

- Proceed with the installation of movable platform fences on the Shinkansen platforms No. 20 through No. 26 at Shin-Osaka Station, and begin using them upon completion. Meanwhile, for conventional lines, promote the installation of the fences on the Tokaido Line platform at Kanayama Station.
- Advance construction and preparations for the opening of Mikuriya Station on the Tokaido Line.
- Proceed with the replacement work for the installation of braille blocks with a line that indicates where the inner platform edge is located by expanding the scope of stations of conventional lines to those servicing 1,000 or more passengers.
- Promote the installation of barrier-free facilities at stations of conventional lines, such as elevators and multifunction toilets.

Sample illustration of a large-opening movable platform fence at Shin-Osaka Station

Illustrated image of completed Mikuriya Station

Braille blocks with a line that indicates the inner platform edge



A line that indicates the inner platform edge

**Reference**

| | |
|---|---|
| Installation of movable platform fences at Shin-Osaka Station: | To be completed by FY2022 for platforms #20 through #26. (Completed installations on platform #27)<br>To start operation on platforms #25 and #26 in FY2019 |
| Movable fences at Kanayama Station: | To start operation on the platform for Toyohashi-bound trains in March 2021 and on the platform for Nagoya-bound trains in December 2021 |
| Mikuriya Station: | Scheduled to open between Fukuroi Station and Iwata Station on the Tokaido Line in the spring of 2020 |
| Braille blocks with a line that indicates the inner platform edge | Stations servicing 3,000 or more passengers:<br>Installations completed in FY2018<br>Stations servicing 1,000 to 2,999 passengers:<br>Initiated new installations in 45 stations in FY2019 |

## 3 Promoting the Chuo Shinkansen Project involving the Superconducting Maglev System

▶P.22

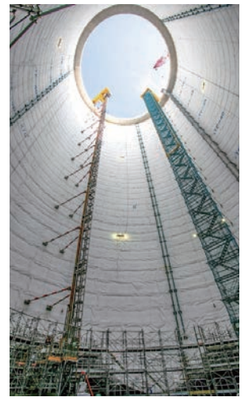
Capital investment amount: 310.0 billion yen

### With regard to the Chuo Shinkansen Project using Superconducting Maglev System, JR Central will proceed steadily with the construction work in respective areas of the line while giving serious consideration to safety, the environment, and coordination with local communities along the planned route.

- As for the Chuo Shinkansen Project, maintain sound management and stable dividends, and take steady steps with a greater sense of seriousness toward completing the project while demonstrating flexibility.
- Continue promoting close coordination with local communities and carry out measurement, design, acquisition of land, etc., according to plan.
- Steadily continue to make progress with various types of construction work, including tunnel and emergency exit excavation and diaphragm wall work of the Southern Alps tunnel, Shinagawa Station, Nagoya Station, tunnels in mountainous areas, emergency exit sites in urban areas, and other locations where work is challenging and construction periods will be long by giving serious consideration to construction safety and environmental protection. In addition, given the approval obtained for the use of the deep underground section in October 2018, produce the shield machine and make other preparations for the excavation of tunnels in urban areas.
- Promote efforts to establish sophisticated and efficient operation/maintenance systems for the Chuo Shinkansen.

Excavation of Southern Alps tunnel (Yamanashi Section) on the main line

Provisional installation of construction beams at Nagoya Station



Construction of frames at Kita-Shinagawa emergency exit

**Reference**

| | |
|---|---|
| Construction beams: | Steel bridge beams temporarily installed to prevent deformation of existing tracks when excavation work is performed below the tracks for the construction of an underground station |

# Key Measures and Capital Investment FY2019

## 4 Brushing Up Superconducting Maglev Technology and Cost Reduction

▶P.24

Capital investment amount: 2.0 billion yen

### JR Central will continue brushing up Superconducting Maglev Technology and pursuing cost reduction.

- Continue to conduct long-distance running tests by alternately operating two trainsets with rolling stock and facilities for commercial use at the Yamanashi Maglev Line.
- Produce an improved testing vehicle for formulating commercial rolling stock specifications.
- Proceed with verification, etc., toward establishing a maintenance system that can handle commercial services. At the same time, work to further refine the Superconducting Maglev Technology and reduce costs for construction, operation and maintenance of the commercial line.
- While steadily performing the necessary running tests in anticipation of the launch of the improved testing vehicle, conduct "Public Superconducting Maglev Test Ride events" to further promote public understanding of Superconducting Maglev.

Running test being performed with Series L0

Improved testing vehicle

**Reference**

| | |
|---|---|
| Long-distance running tests for the Yamanashi Maglev Line: | Cumulative running distance of 2.76 million km (as of February 28, 2019) |
| Improved testing vehicle: | To be completed in the spring of 2020 (Number of rolling stock produced: 1 first car, 1 middle car) |

## 5 Enhancing Sales and Marketing

▶P.26

Capital investment amount: 8.0 billion yen

### JR Central will take initiatives to attract more customers to use online reservation services for the Shinkansen.

- Take initiatives so that more customers become aware of the convenience of Express Reservation and smartEX and use these services.
- Promote tourist products, such as "EX Nozomi Family Hayatoku," to widely spur demand.

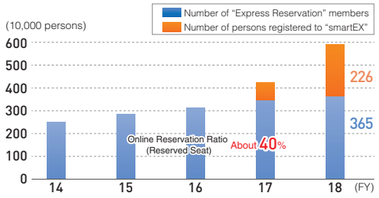
### JR Central will make use of the tourist attractions along its railway lines to actively deploy sales and marketing measures.

- Enhance tourism campaigns and products that convey the attractiveness of Kyoto, Nara, Tokyo, Hida, etc.
- Coordinate with local governments, travel agencies and other parties through the "Shizuoka Destination Campaign (Shizuoka DC)" organized by the 6 JR passenger rail operators, and make efforts to develop attractive sightseeing materials and products and operate sightseeing trains.

### JR Central will take initiatives so that customers from overseas can conveniently use its railroad services.

- Promote expanded use of "smartEX" services for customers from overseas as well as work to boost sales of sightseeing value tickets, etc., while capturing demand related to the Rugby World Cup Japan 2019.
- Make efforts to enhance the provision of information to foreigners visiting Japan by adopting announcement using tablet devices, etc., and by utilizing the Company's website for enhanced disclosure of information on train status. In addition, complete the introduction of free Wi-Fi service on all Shinkansen trains.

EX Service Members and Registered Persons (as of fiscal year-end)





Shizuoka DC poster

Guiding a customer using a mobile translation machine

**Reference**

| | |
|---|---|
| Free Wi-Fi service coverage: | On the Tokaido Shinkansen N700A type and Express "Hida" and "Nanki," in 17 Shinkansen stations and in 24 conventional line stations (including 6 stations servicing both Shinkansen and conventional lines) |
| Shizuoka DC: | Held from April to June 2019, co-hosted by Shizuoka Prefecture and the JR Group. |

## 6 Promoting Technological Development, Engagement in Global Environment Preservation, Deploying the High-Speed Railway System Overseas

▶P.28

Capital investment amount: 1.0 billion yen

### JR Central will strengthen efforts in technological development that contributes to enhancing safety and reducing costs and in promoting global environment preservation.

- Conduct tests using the N700S validation test vehicles, such as the long-term endurance testing and acceleration enhancement testing at 360 km/h.
- Proceed with the new production of a testing vehicle for next-generation limited express rolling stock that uses a hybrid system for conventional lines and begin running tests.
- Implement more advanced and power-saving inspections and maintenance that utilize condition monitoring technologies. Also, promote technological development that can lead to cost reductions for maintenance and upgrading of facilities.
- Carry out technological development to further heighten safety against earthquakes, heavy rain and other disasters.
- Promote various policies that contribute to global environment preservation, such as shifting to the N700A and other energy-saving rolling stock.

### JR Central will work to deploy the high-speed railway system overseas.

- Proceed with technical assistance to the main development entity of theTexas Project in the U.S. through HTeC, while carrying on full-scale discussions through HInC along with firms on the Japan side toward concluding the contract for the core system. In addition, bolster promotional activities for the use of the Superconducting Maglev system in the Northeast Corridor Project in the U.S.
- Continue to proceed with the technical consulting services for the operation control system renovation work, etc., for the Taiwan High Speed Rail.
- Advance initiatives to make the Japanese high-speed railway system, which is based on the principle of Crash Avoidance, a global standard.

Next-generation limited express rolling stock that uses a hybrid system (testing vehicle)

HTeC members reviewing a candidate station site (Dallas)

**Reference**

| | |
|---|---|
| Next-generation limited express rolling stock that uses a hybrid system for conventional lines: | To complete the testing vehicle at the end of 2019, with consideration to launch a mass-production vehicle in FY2022. |
| HTeC, HInC: | Local subsidiaries established by the Company to promote the Texas Project in the U.S. |

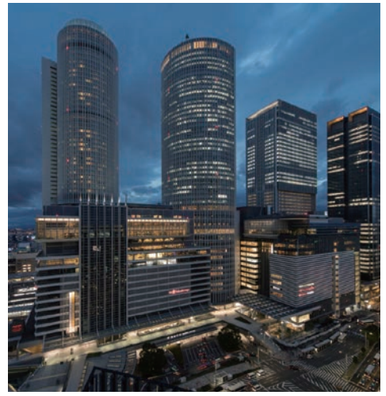
## 7 Steadily promoting affiliated businesses

▶P.30

Capital investment amount: 41.0 billion yen
(including capital investment of 38.0 billion yen by consolidated subsidiaries)

### JR Central will promote affiliated businesses, with JR Central Towers and JR Gate Tower at the core, to further enhance customer satisfaction.

- Respond to diverse needs to boost earnings by Operating JR Central Towers and JR Gate Tower in an increasing uniform manner and demonstrating synergistic effects to the fullest.
- Further invigorate the merchandizing business and the station building business by developing stores in station buildings and renovating commercial facilities, as well as work to make effective use of land owned by the Company to further expand earnings.
- Proceed with the commercial development at Tokyo Station in light of the upcoming Tokyo 2020 Olympic and Paralympic Games.



Central Towers and Gate Tower

Renovated PARCHÊ in Shizuoka Station building

**Reference**

| | |
|---|---|
| Commercial development at Yaesu North Exit of Tokyo Station: | To start operation in the spring of 2020 following the re-development of First Avenue Tokyo Station. |

# Ensuring Safe and Reliable Transportation

General Principles of Safety

**Ensuring safe and reliable transportation marks the foundation of the railway business. If we were to cause a major accident, the trust placed in the Company would be lost in an instant, and the Company's very existence would be put in danger. With this frame of mind, the Company has worked to ensure safety across all its operations since its founding.**

**Total safety-related investments have now exceeded 3.6 trillion yen in total, accounting for approximately 70% of all annual capital investment when excluding investments made towards the Chuo Shinkansen. We will also continue with steadfast initiatives aimed at further improving the technical skills and safety consciousness of employees, such as by implementing practical training and large-scale recovery training in preparation for emergency situations, etc.**

▶Refer to P. 53 for further related information (Column 1 "Learning safety from accidents")

## Renovation and Upgrade of Structures and Other Facilities

### Tokaido Shinkansen

### Large-scale renovation

Our civil engineering structures are sufficiently maintained through daily and thorough inspections and repair. However, in future, it will be inevitable to replace many of the facilities due to aging. We received the approval of the Minister of Land, Infrastructure, Transport and Tourism for our allowance reserve plan for the large-scale renovation of Shinkansen infrastructure based on the Nationwide Shinkansen Railway Development Act, and began building the reserve from 2002. Along with this, we have advanced our research on a new construction method, led by our Komaki Research Center. As a result of our R&D efforts, we developed a new construction method that allows us to significantly reduce the impact on train operations during construction work, and to considerably cut construction costs. With this method in place, JR Central began the renovation work in FY2013, ahead of the original schedule*1.We are expecting to engage in renovations for a period of about 10 years. We will begin with the implementation of "measures to inhibit aging damage"*2 and, while checking the effect of those measures, perform "overall renovations"*3 as necessary.

The reserve of 350 billion yen accumulated by FY2012 is appropriated at a rate of 35 billion each year from FY2013.

We will continue to actively incorporate the results of our R&D efforts and make improvements, etc. to construction methods, thereby bringing down related costs in making sure steps forward with our construction work.


Large-scale renovation

*1 Received the approval of the Minister of Land, Infrastructure, Transport and Tourism for our allowance reserve plan for the large-scale renovation of Shinkansen infrastructure in FY2012 and began the renovation work in FY2013.
*2 "Measures to inhibit aging damage": Measures to extend the life of structures by inhibiting the occurrence of cracking and other damage from aging.
*3 "Overall renovation": Replacement of components, etc. .

### Conventional Lines

### Counter-disaster measures and other efforts

JR Central's conventional lines operate not only in urban areas but also along steep natural slopes and other varied terrain. As such, we have been making efforts to adopt measures against falling rocks, heavy rainfall, and other disaster situations. In FY2019, we will continue to take measures against falling rocks, such as newly installing falling rock detection nets and protective equipment, and against heavy rainfall, such as reinforcing slope protection and newly installing drainage facilities.

We will also continue to advance our efforts to improve safety devices on grade crossings together with making replacements due to aging in order to enhance safety.

## Further Reinforcement of Earthquake Countermeasures

### Tokaido Shinkansen

### Implementation of derailment and deviation countermeasures

We are promoting derailment and deviation countermeasures to prevent expansion of damage from derailment caused by an earthquake. These measures come in a dual system where the highest priority is set on preventing rolling stock from derailment with "derailment prevention guards", and when derailment cannot be avoided, it prevents the rolling stock from a major derailment with "deviation prevention stoppers".

In regard to measures for ground facilities, we are installing "derailment prevention guards" as well as adopting measures for civil engineering structures to have the derail prevention guards function effectively. While we expect to complete implementing these measures to the entire line by FY2028, considering the nature of these measures, we will continue to study the possibility of completing the work as early as possible.

As for measures adopted for rolling stock, "deviation prevention stoppers" have already been installed on all of our Shinkansen rolling stock.


Derailment prevention guards

### Reinforcement of structures

JR Central has been implementing earthquake-resistance measures for various civil engineering structures and buildings related to transportation by the Shinkansen so as to prevent the Shinkansen from going out of service for a long period of time in the event of a major earthquake.

Since 2010, we have been carrying out large-scale renovation work for the Hamamatsu Workshop, which conducts general overhauls*1 of Shinkansen rolling stock. This includes rebuilding and reinforcement so that the general overhaul function can be maintained even in the event of a major earthquake. Most of renovation work has already been completed, and we have been conducting general overhauls using the new inspection and repair lines since January 2017.

Reviewing the inspection and repair lines in conjunction with this renovation work resulted in improving operating efficiency. As a result, the number of days required for the general overhauls has been reduced from 15 days to 14 days, enabling us to use rolling stock for operating trains more promptly.

Measures taken and progress

| Measures taken | Progress (as of the end of FY2018) |
|---|---|
| Elevated track columns, bridges, and embankments | Completed * Except for some areas under discussion(Elevated track columns: Approximately 19,600; Bridges: Approximately 900 units; Embankments: Approximately 9.4 km) |
| Bridge railing (Fall prevention) | Under way (Completed about 2,070 beams out of about 2,125 beams concerned) |
| Station buildings | Completed * Except for some areas under discussion |
| Rolling stock workshops, etc. | Rolling stock depot buildings: Completed<br>Hamamatsu Workshop: Completed |

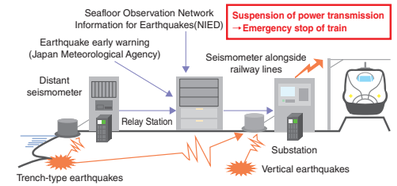
*1 General overhauls (Shinkansen): Overhauls required for Shinkansen rolling stock within 36 months or under the distance of 1,200,000 km.

### Initiatives to stop trains quickly

In order to prevent expansion of damage caused by earthquakes, it is important to stop trains quickly. JR Central adopts an earthquake prevention system*1 which detects tremors, automatically stops power transmission, and issues an order to moving trains to make an emergency stop. We also made improvements to the "Earthquake Brake" on rolling stock in an effort to reduce the stopping distance at the time of an earthquake. For the next-generation Shinkansen rolling stock N700S, which we are planning to launch in FY2020, we will make improvements to ATC and the brake system to further reduce the stopping distance at the time of an earthquake by roughly 5% compared to the stopping distance of N700A (3rd edition)

*1 After introducing the "Urgent Earthquake Detection and Alarm System (UrEDAS)" before other companies, we introduced the "Tokaido Shinkansen Earthquake Rapid Alarm System (TERRA-S)" in 2005, thereby improving the system in the speed of the alarm, etc. In 2019, we continue to further accelerate the speed of the alarm by utilizing information from the Seafloor Observation Network for Earthquakes and Tsunamis.

Tokaido Shinkansen Earthquake Rapid Alarm System (TERRA-S)



Detects P-wave (primary tremors) and S-wave (secondary tremors), and once a certain level of tremors is detected, issues an order for trains to stop

### Conventional Lines

### Reinforcement of structures

In order to minimize the impact of earthquakes also on conventional lines, we are implementing earthquake-resistance measures on various civil engineering structures.

Measures taken and progress

| Measures taken | Progress (as of the end of FY2018) |
|---|---|
| Elevated track columns and bridges | Earthquake-resistance reinforcements under way in sections where there are at least 10 departures per peak hour, and in sections where a long, strong earthquake vibration is expected, as in the case of the Tokai Earthquake<br>* Elevated track columns: Completed 5,078 columns previous concerned by the end of FY2018.The target has been expanded for the purpose of further early recovery at the time of disaster and Newly 3,338 columns under way.<br>* Bridges: Completed two out of the four bridges concerned |
| Bridge railing (prevention of falling from bridges) | Earthquake-resistance reinforcements under way in sections including those where there are at least 10 departures per peak hour and where a long, strong earthquake vibration is expected, as in the case of the Tokai Earthquake<br>* Completed about 1,975 beams out of about 1,985 beams concerned |
| Station buildings | Implementation of earthquake-resistance measures under way for station buildings servicing at least 5,000 passengers per day<br>* Completed for 74 stations out of 76 stations concerned |
| Rolling stock workshops, etc. | Nagoya Workshop: Rebuilding and reinforcement of buildings under way<br>* Plan to complete by the end of FY2021 |

### Initiatives to stop trains quickly

Information from the aforementioned earthquake prevention system will be used for conventional lines to detect the initial weak tremors in case of an earthquake, and give a warning to the driver's cabin of trains traveling in segments that are likely to be impacted significantly by the earthquake. Every driver who received the warning would immediately hit the brake and stop the train. Furthermore, we have been strengthening the functions of seismometers since FY2016. We will be able to issue warnings to trains more quickly than before.

Common Initiatives for the Tokaido Shinkansen and Conventional lines

## Earthquake-resistance measures for ceilings of stations

In order to heighten safety at stations in case of an earthquake, we install earthquake resistance measures on suspended ceilings*1 at stations that service a large number of customers.*2

We prevent suspended ceilings from falling by firmly joining the building frame and the ceiling with wires and taking other measures.

*1 A type of ceiling with a structure that hangs from the building frame
*2 Applicable for all 17 stations of the Shinkansen and 30 stations of conventional lines that service at least 10,000 customers per day

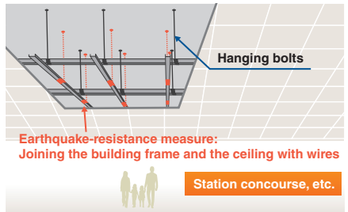



Illustration of anti-falling measure

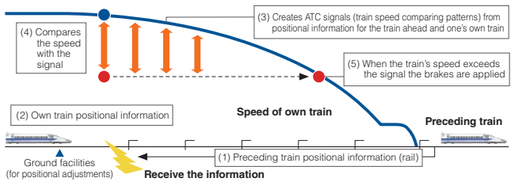
# Operation Management and Safety Measures

Tokaido Shinkansen

## Features of Japanese high-speed rail system

The Japanese high-speed rail system led by the Tokaido Shinkansen is based on a principle of Crash Avoidance, which is the biggest feature for ensuring safety. This principle has been derived to prevent the possibility of a collision by using (1) dedicated tracks for high speed passenger rail service, which completely exclude freight and commuter rail and have no grade crossings, and (2) an Automatic Train Control (ATC) system, which automatically controls the speed limit of high-speed trains and prevents collisions from happening.

How ATC works




## Shinkansen General Control Center / Operational control systems

The safe and reliable transportation of the Shinkansen is supported by the Shinkansen General Control Center in Tokyo, where directors work in close collaboration using various systems, such as Computer Aided Traffic Control (COMTRAC*), to accurately grasp a significant amount of information, including the operational status of trains and the utilization status of facilities, control overall transportation services, and manage their safety. Moreover, the Shinkansen Second General Control Center has been established in Osaka jointly by JR West, and is equipped with the same functions as the Shinkansen General Control Center in Tokyo so that it can serve as an alternative control center should Tokyo's General Control Center become non-operational due to a disaster. Thus, we have strengthened our crisis management in preparation for emergencies.

* COMTRAC (COMputer-aided TRAffic Control): COMTRAC is the system that controls train routes, manages train operations, and operates and manages the allocation of staff (drivers and conductors) and rolling stock. Based on input data prescribing the operational conditions for each train (such as station departure and arrival time, platform, and order) in the computer, the system can monitor the status of all trains in operation at all times.

## The Shinkansen Multiple Inspection Train (Dr. Yellow)

We have also introduced the "Shinkansen Multiple Inspection Train (Dr. Yellow)" to test ground facilities, such as electrical facilities and tracks. This rolling stock, which is based on the Series 700, aids safe and reliable transportation by efficiently conducting high precision inspections at speeds of 270km/h.

Dr. Yellow

Conventional Lines

## ATS-PT (Automatic Train Stop)

ATS-PT continuously checks the speed for conventional lines according to the distance between the train and the signal, the curve, and the points. It ensures safety by automatically applying emergency brakes in situations where the train risks overrunning. We have completed the introduction of ATS-PT to all of our conventional lines.

ATS-PT function


**ATS-PT overview**
- A brake pattern is generated in the train based on the distance to the signal derived from information from the ground
- The emergency brakes are automatically applied to stop trains running at speeds in excess of this pattern by the time they get to the signal
- Continuous control is performed using brake patterns

## Tokai General Control Center(Nagoya) / Shizuoka General Control Center / Operation management systems

The operation of our conventional lines is managed by the Tokai General Control Center (in Nagoya) and the Shizuoka General Control Center. In these Control Centers, directors work in close collaboration using various systems, such as CTC* (Centralized Traffic Control), to accurately grasp a significant amount of information, including the operational status of trains and the utilization status of facilities, control overall transportation services, and manage their safety to support safe and reliable transportation on conventional lines.

Tokai General Control Center

* CTC: The CTC system not only remotely and integrally controls station signaling equipment, etc. in order to efficiently manage train operations, but also has the function of conducting real-time monitoring of the operational status of trains.

## Multiple Inspection Train and Track Inspection Train (Dr. Tokai)

We efficiently and thoroughly manage and maintain facilities with regard to the maintenance of railway tracks and electrical facilities on conventional lines, using the "Multiple Inspection Train" (Dr. Tokai).

Dr. Tokai

Common Initiatives for the Tokaido Shinkansen and Conventional lines

## Safe and appropriate responses to natural disasters

Whenever a typhoon or other weather condition is expected to affect train operations, we place the highest priority on ensuring passenger safety. We may impose drastic restrictions on train operations in light of specific weather conditions and determine optimal operations that will enable trains to avoid being impacted by windborne projectiles, etc., and prevent the risk of overcrowding in stations or that of trains being stranded between stations for long periods of time.

Once adverse weather-related conditions subside, we will promptly resume train services after conducting thorough safety checks to verify whether there is any debris on the tracks or damage to equipment, when necessary.

We will communicate information about train operations via our corporate website, press releases, and official Twitter account. In addition to these communication channels, we will actively use information boards installed at stations as well as station and train public address systems.


Sample illustration of information provided

## Measures to ensure security

In order to ensure security within railway stations and trains, we have been implementing a series of concrete measures, such as installing security cameras, equipping Shinkansen trains with shields and other protective devices as well as medical equipment in addition to enhancing security and patrols. At the same time, we are working to improve our emergency response capability through training, etc.

# Education and Training

## Technical skills training

We implement safety education and training for staff engaging in train operations and facility maintenance. We conduct education and training especially for staff engaging in train operations (such as drivers, conductors, directors, and those who handle signals or operate switch stands) according to the content and time stipulated for each duty.

We introduce simulators, which can perform operations simulation training, etc. for emergencies, to field offices for drivers and conductors. We also conduct various training sessions using ground facilities, such as actual rolling stock, overhead contact lines, so that employees on each system can swiftly and accurately respond to emergencies.

## Employee training in preparation for contingencies

We train all employees to go beyond the call of duty in working together with staff, etc., to respond appropriately in ensuring our customers' safety should employees happen to be present when unforeseen circumstances occur while commuting or on a business trip.

Employee training in preparation for contingencies

## Emergency conditions response training

We conduct various training every year as an opportunity for us to enhance quick response to safety in case of accidents and to learn the work of other specialized fields. We conducted practical training in FY2018, such as passenger evacuation guide training sessions, information communication training sessions, and line facility restoration training, based on the assumption of natural disasters, such as earthquakes, and contingencies.

Passenger rescue training

Tsunami evacuation guidance training

## Other training

The General Education Center offers education on specialized knowledge and skills for each function, and provides sessions for various qualifications and train conductors and drivers by using various training facilities that can simulate various events that occur in actual situations.

Training for Shinkansen conductors

# Other Initiatives

## Efforts to eliminate industrial accident.

We are also working hard to eliminate labor accidents. The number of labor accidents has significantly decreased compared to when our company was founded. We set "priority execution items" each fiscal year to make a company-wide effort to eliminate labor accidents. More specifically, we provide continuous safety education at the General Education Center as well as at workplaces. We also promote research activities on labor accident prevention, led by a group of field staff.

## Safety audits

Internal audits are performed on the Company's business organizations and affiliated companies from three main standpoints. The confirmation of the level of compliance with laws and regulations, etc., the confirmation of systems in place to prevent train and labor accidents that occurred in the past, and the confirmation of the state of accident prevention measure implementation. We strive to prevent violations of laws and regulations, the fading out of past countermeasures, and rules from losing their substance before an incident occurs by having a third party inspect our business operations and share these results.

# Enhancing Transportation Services

**JR Central strives to improve its transportation service to fulfill its mission of integrally maintaining and developing the Tokaido Shinkansen, which serves as Japan's main transportation artery, and the conventional line network in the Tokai region. With continual long-term capital investments, we have improved the Tokaido Shinkansen service not only by bolstering safety and accuracy, but also by the high speed, frequency, and capacity, such as by boosting speeds to 285 km/h, or introducing the "10 Nozomi timetable" (operating up to 10 "Nozomi" services in both directions). We will look to further maintain and enhance the competitive advantages offered by the Tokaido Shinkansen as the earnings received from this service are vitally important in proceeding with the Chuo Shinkansen Project.**

## Tokaido Shinkansen

**Since its inauguration in 1964, approximately 6.4 billion people have used the Tokaido Shinkansen, the transportation artery linking Japan's three largest metropolitan areas, Tokyo, Nagoya, and Osaka. The Tokaido Shinkansen has literally supported Japan's economic growth. We will continue operating Japan's main transportation artery while ensuring safe and reliable transportation as the first priority.**

Diagram 1 Characteristics of the Tokaido Shinkansen (Safety, Punctuality, High Speeds, High Frequency and High Capacity, Environmental feasibility, Comfort)

### Safety

**0** accidents

- No accidents resulting in fatalities or injuries of passengers on board since operations commenced
- Improvement of safety awareness and skills through human resources education and training
- Continual investment in safety-related facilities

### Punctuality

**0.9** minutes

- Average delay time: 0.9 minutes / 1 train in service
  Note: Results for FY2018. Including delays caused by natural disasters, etc.

### High Speeds

**285** km/h

- Maximum speed: 285 km/h
- Tokyo ~ Shin-Osaka: 2 hours 22 minutes
  Note: Accurate as of the March 2019 timetable revision (arrival time based on the fastest trains in service)

▶Refer to P. 53 for further related information
(Column 2 "Shortening of arrival time by speed increase")

### High Frequency and High Capacity

**373** services,
**477,000** passengers

- Number of train services per day: 373
  Note: Results for FY2018 (including extra trains)
- Number of passengers per day: 477,000
  Note: Results for FY2018
- Number of seating available: 1,323 seats/train

### Environmental feasibility

Approx. **1/8**
Approx. **1/12**

- The energy consumption amount per seat when traveling between Tokyo and Osaka is approximately 1/8th of that of an aircraft
- The $CO_2$ emission rate for the same is around 1/12th

### Comfort

- Wide open, quiet space

## "12 Nozomi Timetable" expected to significantly improve our services

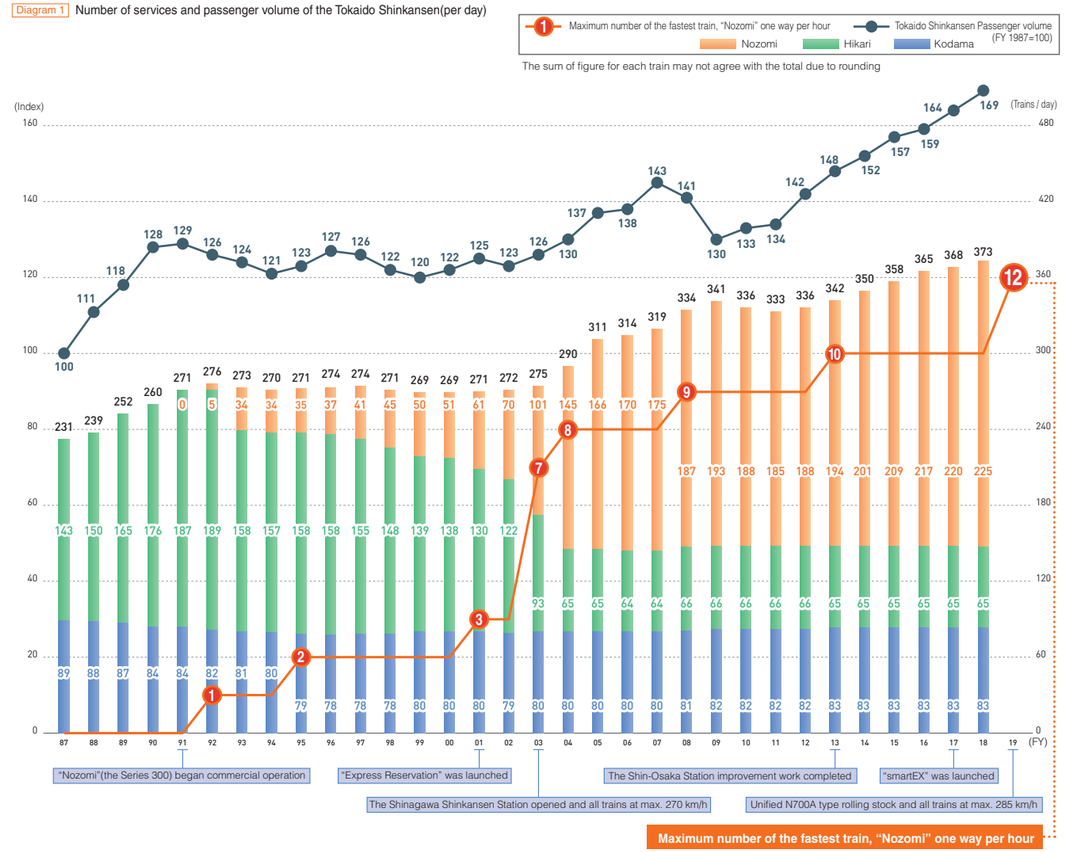
We have worked to enhance our transportation services on the Tokaido Shinkansen for years. We put the Series 300 "Nozomi" into operation in 1992 with a maximum speed of 270km/h, and then opened Shinagawa Station and replaced all trains with the Series 300 trains in 2003, shifting to a Nozomi-centered timetable. This timetable also underwent successive improvements, with the update to the current "10 Nozomi Timetable" version (operating up to 10 Nozomi services in both directions) to fulfill the needs of customers. Then, in 2015, the speed of the Tokaido Shinkansen increased for the first time in 23 years, reaching a top speed of 285km/h Diagram 1 .

At the time of the next timetable change in the spring of 2020, we will introduce a "12 Nozomi Timetable," which will again significantly improve our transportation services. We will make this possible by improving the equipment and completing the update to the N700A type* to allow all trains to run at the same top speed of 285km/h. The maximum number of "Nozomi" services per hour will increase by 2 from 10 to 12 in either direction, and "Nozomi" will be operated at an average interval of 5 minutes during busy hours.

Under the current "10 Nozomi Timetable," seven "Nozomi" services run between Tokyo and Shin-Osaka with a travel time ranging from 2 hours 33 minutes to 2 hours 37 minutes. Under the "12 Nozomi Timetable," all "Nozomi" services will travel between Tokyo and Shin-Osaka within 2 hours 30 minutes Diagram 2 . With this "12 Nozomi Timetable," additional "Nozomi" services will be provided during busy hours. Passengers can reduce their travel time by reserving train seats online at their convenience and using a new, faster "Nozomi." This will make the Tokaido Shinkansen even more convenient.

* This is a collective name for the Series N700 rolling stock remodeled to reflect the key functions of the N700A and the N700A and later-generation rolling stock.

Diagram 1 Number of services and passenger volume of the Tokaido Shinkansen(per day)




Note 1. Departures shown include extra trains.
Note 2. Usage status is shown by means of an index with the sectional transportation volume for FY1987 as 100.
Note 3. Station stops **Nozomi**: Shinagawa, Shin-Yokohama, Nagoya, and Kyoto **Hikari**: Same as "Nozomi", plus a few additional stations **Kodama**: Stops at each station
Note 4. The sum of figures for "Nozomi", "Hikari", and "Kodama" may not agree with the total due to rounding.

Diagram 2 Travel Time of "Nozomi" between Tokyo and Shin-Osaka

| | Current Timetable | New Timetable |
|---|---|---|
| Within 2 hr 30 min | 3 trains | 12 trains |
| 2 hr 33 min – 37min | 7 trains | None |

## Development of the next-generation rolling stock, N700S

The N700S, the next-generation Shinkansen rolling stock, is designed based on the results of years of technological development, and is equipped with features such as enhanced safety and stability, higher emergency response capability, enhanced comfort and convenience, and a standardized design that can easily be constituted to any length of trainsets.

Based on the results of the test runs of N700S test trains, we determined the mass production specifications for the rolling stock that will replace the Series N700 trains in FY2020 and developed a launch plan Diagram 1 as shown below.

N700S validation test vehicles

Diagram 1 Launch Plan

| Fiscal Year | 2020 | 2021 | 2022 | Total |
|---|---|---|---|---|
| Number of Rolling Stock | 12 | 14 | 14 | 40 |

General specifications of mass production cars

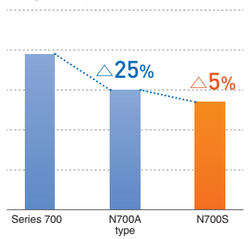
**Enhanced safety and stability**
- Shorter braking distance in the event of an earthquake Diagram 2
- Enhanced snow-resistant features
- Enhanced status monitoring function Diagram 5

**Higher emergency response capability**
- Battery-based self-propelled system Diagram 4
- Additional security cameras
- Enhanced intercom functions
- Toilet functions during power outage

**Enhanced comfort and convenience**
- Equipped with a fully active damping control system
- Additional outlets for mobile devices

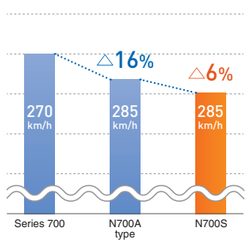
**Lower running cost**
- Reduced power consumption Diagram 3
- Labor-saving inspection/repair work

Diagram 2 Shorter braking distance in the event of an earthquake




The braking distance during an earthquake is 5% shorter than the N700A type thanks to an improved ATC and brake system.

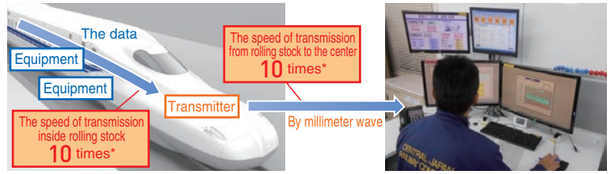
Diagram 3 Reduced power consumption




Employing the Dual Supreme Wing design that reduces air resistance and a drive system that uses next-generation silicon carbide semiconductors, the N700S consumes 6% less electricity than the N700A type.

Diagram 5 Enhanced status monitoring function

Transmit more detailed information on on-board equipment to the rolling stock analysis center

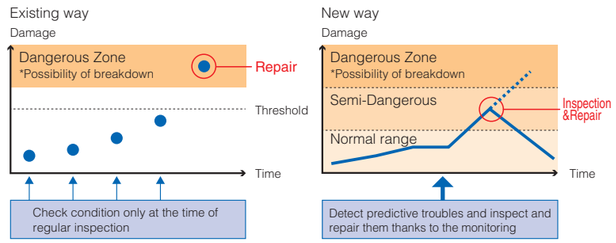



*Compared with N700A (3rd edition)



The rolling stock analysis center in the inspection and repair center

Monitoring rolling stock with more detailed data on on-board equipment at the rolling stock analysis center
[Image of Monitoring]




Equipment data that is more detailed than ever is consolidated at the rolling stock analysis center via large-volume data communications. The data will be used for more precise equipment monitoring, so potential problems can be investigated and fixed in order to prevent failures from occurring. The data will also be used to save labor on future inspection and repair work.

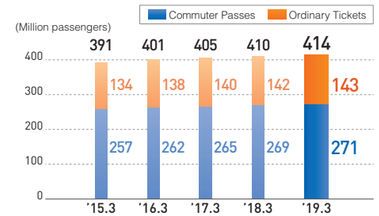
Diagram 4 The battery-based self-propelled system


The N700S is the first high-speed train equipped with a battery-based self-propelled system. It can travel to a location where passengers can safely evacuate in the event of a long power outage following a natural disaster, etc.

### Conventional Lines

We operate a network of 12 conventional lines, which form an integrated network with the Tokaido Shinkansen. These lines have contributed to the development of communities and the regional economy in the Tokai region, mainly around Nagoya and Shizuoka.

Shifts in the number of passengers on conventional lines




## Improvement of service on conventional lines

With regard to conventional lines, we have steadily improved our services by, for example, launching new rolling stock and thereby increasing the speed and frequency of services. In order to enhance the convenience of limited express trains, we developed an integrated network of Shinkansen and conventional lines by improving connections between them and increased flexibility in the operation of major limited express trains to absorb the demand fluctuations caused by seasonal factors and events. Going forward, we will continue to work to further enhance safety and comfort by introducing next-generation hybrid limited express rolling stock.

Moreover, in order to offer convenient timetables for local train passengers, we are working to develop rapid train systems, operate trains at regular intervals, and increase the frequency of services and the number of cars per train, especially during the morning and evening commuting hours.

Limited Express Train "Wide-View Shinano"

## New production of next-generation limited express train rolling stock (testing vehicle) using the hybrid method

In anticipation of the replacement of electric cars currently used for the "Hida" and "Nanki" limited express trains, we will newly develop a testing vehicle for the next-generation limited express rolling stock that uses the hybrid system, the first of its kind for us, by the end of 2019 and conduct test runs to establish relevant technologies to prospect for one year. We are aiming to commercially operate the country's first hybrid-type railway rolling stock that runs at speeds up to 120 km/h, while enhancing the safety and comfort of such trains. We are currently reviewing plans to commercially introduce massproduced vehicles by FY2022.

The hybrid method utilizes a combination of power generated by the engine and the power stored in a storage battery during braking, etc., to rotate the motor for running the train. By adopting this method, we do not need the rotary components unique to diesel railcars and can achieve increased safety and reliability. In terms of comfort, we can improve quietness and comfort by not having to make the gear changes unique to diesel railcars, reducing the number of engines, etc.

In addition to the hybrid rolling stock, we will also introduce new technologies to further enhance safety, such as a new one-piece cast truck frame, vibration detectors, and data communications between trains and wayside.

Exterior illustration

## Installation of movable fences on the Tokaido Line platform at Kanayama Station

We have been working on developing movable platform fences for conventional lines that can accommodate different types of rolling stock with doors located at varying positions. The width of the fence opening measures more than 4 meters, which is the widest among conventional line platform fences with two sliding gates. In order to accommodate trains with different numbers of cars, the fences are fitted with sensors that detect the number of cars in a trainset and their positions when the train stops, allowing the gates to automatically open. The gates are then closed by the conductor.

In developing the fences, we focused on ensuring safety in light of the large width of the gate opening, reducing weight, increasing opening and closing speeds, and cutting costs. In January 2018, we started testing the fences using a prototype installed on the Tokaido Line platform at Kanayama Station. Now that the movable fences have been fully verified for practical use, they will be installed on both sides of the Tokaido Line platform at Kanayama Station. They are slated to be put into service in 2021.

Movable fence

# Promoting the Chuo Shinkansen Project Using the Superconducting Maglev System


**We are promoting the Chuo Shinkansen Project using the Superconducting Maglev System based on the Nationwide Shinkansen Railway Development Act (hereinafter referred to as "the Act") to continually carry out our mission of operating a high-speed railway linking the Tokyo Metropolitan area, Chukyo, and Kinki regions, which is the lifeline of our business, and to ensure the future foundation of the company.**

## Significance of the Chuo Shinkansen Project using the Superconducting Maglev System
### - Promoting the Project while ensuring sound management and providing stable dividends

50 years have passed since the inauguration of the Tokaido Shinkansen, which serves as Japan's main transportation artery. Therefore, we must consider drastic measures to respond to aging in the future and large-scale disasters based on the fact that it takes a long time to construct and build a new railway line. In the wake of the Great East Japan Earthquake, the need for a new line that enables us to offer multiple routes in our main transportation artery has become even more important to prepare for the risk from natural disasters. This is the reason we decided to complete the Chuo Shinkansen as quickly as possible, as it can be used as an alternate to the role of the Tokaido Shinkansen by utilizing the Superconducting Maglev System, which we have developed, under the condition that we bear the cost of its construction. We will operate the Chuo Shinkansen in an integrated manner along with the Tokaido Shinkansen.

While steadily working towards the successful completion of this project and maintaining our ability to react in a flexible manner, we will make necessary investments to ensure safe and reliable transportation, and to enhance competitiveness in the railway business, as well as ensure sound management and provide stable dividends. We will first realize the project between Tokyo and the City of Nagoya, where we have received approval for the construction plan, and strive to further extend to the City of Osaka.

In order to confirm that the principles of a privately owned company, such as freedom of management and autonomy of capital investment, would not be hindered by application of the Act, we referred fundamental clauses regarding application of the Act to the Ministry of Land, Infrastructure, Transport and Tourism and received a reply in January 2008 indicating that those principles would not be hindered.

►Contents of Development Plan (Note) The estimated amount of expenditures for construction does not include interest.

| | | |
|---|---|---|
| Construction line | Chuo Shinkansen | |
| Section | Tokyo - Osaka City | |
| Technology used for running | Superconducting magnetic levitation technology | |
| Maximum design speed | 505 km / h | |
| Estimated amount of costs required for construction (including rolling stock costs) | 9,030 billion yen | |
| Other necessary items | Main areas passed through | Kofu City area, south-central Akaishi Mountains (Southern Alps), Nagoya City area, Nara City area |

Diagram 1 Flow of work based on the Nationwide Shinkansen Railway Development Act

| | | |
|---|---|---|
| Article 4 | Basic Plan | Decided in November 1973 |
| Article 5 | Researches and Reports | Topological and geological surveys Ordered in February 1990 →Reported in October 2008<br>"Research on the residual 4 items" * Ordered in December 2008 →Reported in December 2009 |
| Article 14-2 | The Transport Policy Council | Consulted on February 24, 2010 →Replied on May 12, 2011 |
| Article 6 | Designation of Operator and Constructor | Consented on May 18, 2011 →Designated on May 20, 2011 |
| Article 7 | Development Plan | Consented on May 23, 2011 →Decided on May 26, 2011 |
| Article 8 | Instruction to Construct | Instructed on May 27, 2011 |
| Environmental Impact Assessment | | |
| Article 9 | Construction Implementation Plan | Construction Implementation Plan (Part1) : Submission on August 26, 2014 →Approved on October 17, 2014<br>Construction Implementation Plan (Part2) : Submission on September 25, 2017 →Approved on March 2, 2018 |
| | Start of Construction | |

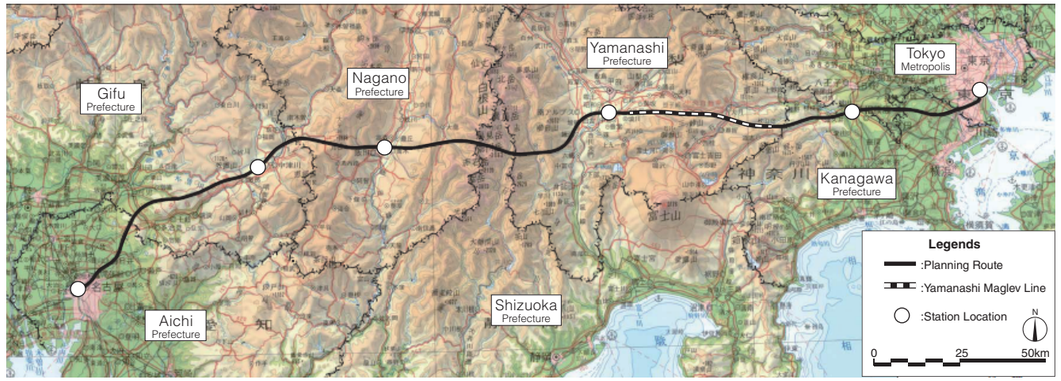
* "Research on the residual 4 items"
- Items related to transportation capacity in response to the transportation demand
- Items related to the development of facility and rolling stock technologies
- Items related to construction costs
- Other necessary items

►Outline of the Construction Implementation Plan (Part2) of the Chuo Shinkansen section between Shinagawa and Nagoya

| | |
|---|---|
| Section | Between Shinagawa and Nagoya |
| Station Location | Shinagawa Station, Kanagawa Prefecture Station (provisional name), Yamanashi Prefecture Station (provisional name), Nagano Prefecture Station (provisional name), Gifu Prefecture Station (provisional name), Nagoya Station |
| Line extension | 285.6km |
| Construction costs | 4,853.6 billion yen [Total construction costs of 5,523.5 billion yen (Includes rolling stock costs. Excludes the construction costs for the existing Yamanashi Maglev Line)] |
| Expected completion year | 2027 |

## Progress of the Project

Diagram 2 Route of the Chuo Shinkansen (Between Tokyo and the City of Nagoya)




This map is copied from a Japanese map (with a scale of 1 to 1,000,000) published by the Geographical Survey Institute with their authorization. (Authorization number: H25 Jo Fuku, 310)

According to the Act, JR Central follows the procedures for the Chuo Shinkansen (between the Tokyo Metropolis and the City of Osaka) as shown in Diagram 1. Since receiving the order for construction in May 2011, we have taken the procedures of environmental assessment between Tokyo and the City of Nagoya, which is promoted as the first stage. In August 2014, we submitted the final Environment Impact Statement to the Minister of Land, Infrastructure, Transport and Tourism (the Minister) and made a public announcement. In addition, we simultaneously made necessary preparations to apply for the approval of the construction implementation plan along with the environmental assessment procedures. We submitted the application for the approval of the Construction Implementation Plan (Part 1) mainly on civil engineering structures for the Chuo Shinkansen section between Shinagawa and Nagoya to the Ministry on the same day as the submission of the final Environment Impact Statement, and received approval in October of the same year. Subsequently, in September 2017, we submitted the application for the approval of the Construction Implementation Plan (Part 2) primarily on electrical facilities and received approval on March 2018.

We have continued to hold briefings introducing our project for individual municipalities and local governments along the planned route to explain the ways in which we work with local communities in as detailed a manner as possible, and introduce region-oriented information etc. Further, we have proceeded carefully with preparations toward initiating construction work, including conducting center line surveys, implementing designs and holding discussions, acquiring land, concluding construction contracts, and conducting briefings.

We concluded construction contracts for an order that started with the most time-consuming and most difficult construction work, such as the construction of the Southern Alps tunnel and Shinagawa and Nagoya Terminal Stations. We are now drilling the main tunnel at the Southern Alps tunnel construction site (the Yamanashi section) and building construction beams to replace railway tracks at Shinagawa and Nagoya Stations. We are also implementing other construction work in full swing, drilling tunnels in mountainous areas and installing emergency exits in urban areas.

Moreover, in October 2018, we received approval from the Minister of Land, Infrastructure, Transport and Tourism to use deep underground areas; since then, we have been manufacturing shield machines to drill tunnels in urban areas.

We will continue to go forward with our plan based on the major premise of strictly ensuring sound management, and by focusing on construction safety, environmental protection, and coordination with local communities.

The Act on the Japan Railway Construction, Transport and Technology Agency, Independent Administrative Agency was revised in November 2016, and a system in which the Agency provides JR Central with the loans for part of the funds required for the construction of the Chuo Shinkansen was put in place. We borrowed a total of 3 trillion yen before July 2017 as scheduled.

We will see that sound management and stable dividends are strictly maintained by securing freedom of management and autonomy of investment, and effectively make use of long-term, fixed and low-interest rate financing to reduce management risk as we actively move ahead with the construction efforts. After launching the service to Nagoya Station, we will continue on to promptly initiate the construction of the route to Osaka with a view to exerting full efforts to move up live operation of the entire line by up to 8 years.


Excavation at Southern Alps tunnel (Yamanashi section)

## Reducing Costs thoroughly while Ensuring Safety

We are responsible for the entire construction cost of the Chuo Shinkansen, therefore all construction expenses and costs will be examined by the internally established "Chuo Shinkansen Construction Cost Reduction Committee", which will thoroughly reduce costs while ensuring safety. At the same time, we will flexibly distribute resources in an optimal fashion in accordance with the managerial environment.

## Superconducting Maglev System and Engagement in Global Environment Preservation

Tokyo and Osaka will be connected in as fast as 67 minutes by the Chuo Shinkansen using the Superconducting Maglev System, and the actual travel time required to move between the centers of Tokyo and Osaka City can be shortened to approximately half of airplanes. In addition, the amount of CO2 emissions that Superconducting Maglev System produces per seat between Tokyo and Osaka is approximately one-third of airplanes. As this shows, Superconducting Maglev is a transport system suitable for the 21st century in which global environment preservation is becoming more and more important.

# Refining Superconducting Maglev Technology and Reducing Costs

Accumulated traveling distance (Yamanashi Maglev Line)

**Approx. 2.89 million km**

Accumulated investment amount (includes consumption tax in part)

**706.8 billion yen**

**JR Central has promoted technological development based on our long-term belief that the Superconducting Maglev System is the most suitable for use on the Chuo Shinkansen due to its speed and advanced technology.**

**The Superconducting Maglev System Technology has been completed as a practical technology. We will continue to make efforts in further brushing up the Superconducting Maglev System Technology, including improving comfort and enhancing efficiency of maintenance, toward the opening of the Shinagawa-Nagoya route of the Chuo Shinkansen, as well as work to reduce costs for the construction, operation, and maintenance of commercial lines.**

## Initiatives with the Yamanashi Maglev Line

We started running tests on the initial 18.4 km section of the Yamanashi Maglev Line in April 1997. The level of the Superconducting Maglev Technology was evaluated in multiple stages, resulting in the Superconducting Magnetic Levitation Technological Practicality Evaluation Committee of the Ministry (hereinafter, the Evaluation Committee) acknowledging that the Superconducting Maglev Technology had already achieved levels sufficient for commercial service in July 2009. The Minister established the technological standards of the Superconducting Maglev in December 2011.

Work extending the Yamanashi Maglev Line to 42.8 km and fully renewing the facilities was completed in August 2013, and running tests were started with the Series L0 (L-zero) rolling stock based on commercial line specifications. In April 2015 we recorded the maximum daily running distance of 4,064 km, and beat our own world record for the fastest running train with a record of 603 km/h. In February 2017, the Evaluation Committee confirmed its evaluation that the technology development required for commercial lines was completed.

We will continue to make efforts in further brushing up Superconducting Maglev System Technology, including improving comfort and enhancing efficiency of maintenance for the practical technologies already established, and produce an improved testing vehicle for formulating commercial rolling stock specifications as well as work to reduce costs for the construction, operation, and maintenance of commercial lines.

## Superconducting Maglev Ride

We have been conducting “Public Superconducting Maglev Test Ride events” since FY2014, and approximately 100,000 people to date have experienced the high-speed travel at 500 km/h, and the high level of performance of Superconducting Maglev Technology, with many giving their positive impressions, such as “traveled in extreme comfort” and “wishing for early launch of the service.” Diagram 1

## Investment in the Yamanashi Maglev Line and Superconducting Maglev Technological Development

We have invested heavily in developing the practical technologies required to establish Superconducting Maglev commercial lines. We will proceed with initiatives to realize Superconducting Maglev Project in the Northeast Corridor of the United States while constructing Superconducting Maglev-based Chuo Shinkansen ourselves. The construction, operation and maintenance for these projects all rely on technologies we have developed.

▶Investment in the Yamanashi Maglev Line and Superconducting Maglev technological development

| | Accumulated investment amount |
|---|---|
| Special investments for the Yamanashi Maglev Line *1 | **170.6** billion yen |
| Extension of the Yamanashi Maglev Line and upgrading of facilities *2 | **339.1** billion yen |
| Investment in proprietary Superconducting Maglev technological development *3 | **197.1** billion yen |
| Total | **706.8** billion yen |

*1 Special investment of 196.5 billion yen (including consumption tax) planned for test infrastructure (above-ground facilities for general purpose use), etc., such as civil engineering structures along initial sections of track. The above amount is the amount paid from FY1990 to FY2018.
*2 355 billion yen (including tax) in construction costs planned as a new investment framework for work extending the Yamanashi Maglev Line to 42.8 km and renewing the facilities. The above amount is the amount paid from FY2006 to FY2018.
*3 The above amount is the amount paid separate to the amounts listed for *1 and *2 from FY1987 when the company was founded to FY2018.

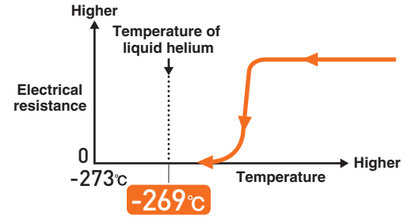
## Progress on the Superconducting Maglev System Technology

| | |
|---|---|
| June 1990 | JR Central applies to the Minister of Transport for the approval of the construction plan of the Yamanashi Maglev Line and gains approval. |
| April 1997 | Running tests start on the Yamanashi Maglev Line. |
| March 2000 | The Superconducting Magnetic Levitation Technological Practicality Evaluation Committee of the Ministry of Transport (hereafter, the “Evaluation Committee”) acknowledges that “there is potential from a technological standpoint that the technology could have practical applications” |
| December 2003 | JR Central records the world speed record for a manned rail vehicle at 581 km/h |
| November 2004 | JR Central performs exercises of trains passing each other at 1,026 km/h relative to one another |
| March 2005 | The Evaluation Committee of the Ministry of Land, Infrastructure, Transport and Tourism acknowledges that “the core technologies for practical application have been established” |
| September 2006 | A facility investment plan is established to extend the Yamanashi Maglev Line and upgrade facilities |
| January 2007 | Application for changes of “Yamanashi Maglev Line Construction Plan” is approved by the Minister of Land, Infrastructure and Transport (hereafter, the “Minister”) |
| July 2009 | The Evaluation Committee of the Ministry of Land, Infrastructure, Transport and Tourism acknowledges that “the technologies required for commercial services have been established from a comprehensive and systematic standpoint, and it is possible to move forward with detailing the specifications for commercial services and the technical standards” |
| May 2011 | The Minister of Land, Infrastructure, Transport and Tourism determines development plans for the Chuo Shinkansen (between Tokyo and the City of Osaka), which is based on a Superconducting Magnetic Levitation System |
| December | The Minister establishes the technical standards for Superconducting Maglev |
| August 2013 | Work extending the Yamanashi Maglev Line to 42.8km and renewing the facilities is completed, and running tests starts with the Series L0 |
| April 2015 | JR Central records a travel distance of 4,064 km in one day<br>JR Central records the world speed record for a manned rail vehicle at 603 km/h |
| February 2017 | The Evaluation Committee of the Ministry of Land, Infrastructure, Transport and Tourism evaluates that “the technology development required for commercial lines was completed” |

Diagram 1 Superconducting Maglev Ride

## What is superconductivity?

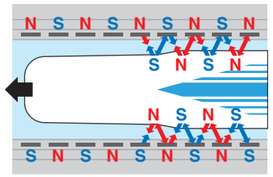
Superconductivity is the phenomenon that the electrical resistance of certain materials approaches zero at very low temperatures. When an electrical current is applied to a coil in a superconductive state (superconducting coil), this current continues to flow almost indefinitely, resulting in the creation of a very large magnetic field. Niobium-titanium alloy has been used for the Superconducting Maglev and superconductive state is achieved when cooling it with liquid helium to a temperature of minus 269°C.




## The Principles of the Superconducting Maglev System

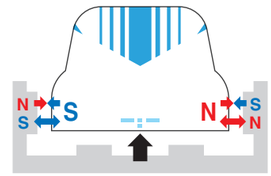
### Propulsion System

By passing current through the Propulsion Coils on the ground, a magnetic field (north and south poles) is produced, thus the vehicle is propelled forward by the attractive force of opposite poles and the repulsive force of same poles acting between the ground coils and the Superconducting Magnets built into the vehicles.



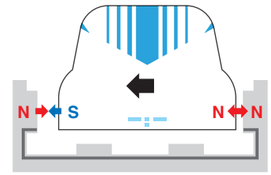

### Levitation System

The Levitation and Guidance Coils are installed on both sides of the guideway (track). When the on-board Superconducting Magnets pass through at high speed, an electric current is induced in the Levitation and Guidance Coils, causing them to become electromagnets. This generates a force that both pushes and pulls up the vehicle.

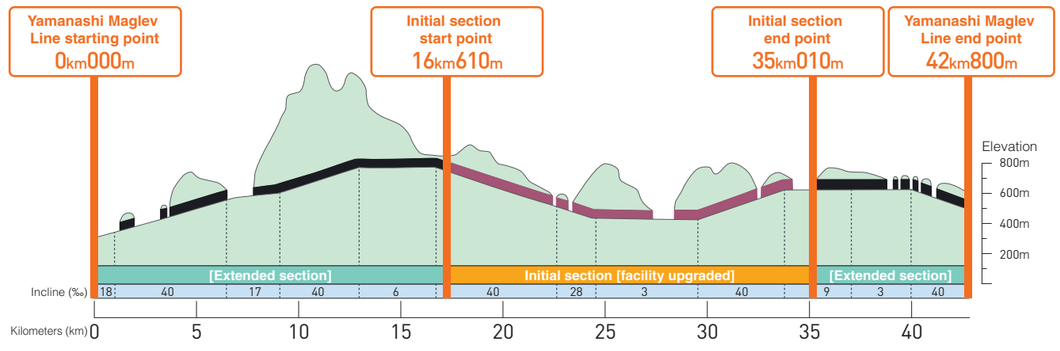



### Guidance System

The Levitation and Guidance Coils on both sides of the guideway keep the vehicle in the center of the guideway at all times by exerting an attractive force on the far side of the vehicle and a repulsive force on the near side when the vehicle moves off center to either side.




## Overview of the Yamanashi Maglev Line



# Enhancing Sales and Marketing

"Express Reservation" and "smartEX" are reservation services that enable seat reservations and the changing of reservations easily online while eliminating the need to pick up tickets, thereby making the most use of the high volume Tokaido Shinkansen. In particular, "smartEX", which we introduced in September 2017, is an online reservation and ticketless boarding service that can be used by following a simple registration procedure. The service offers greater convenience also for non-members of Express Reservation and for foreign tourists visiting Japan, etc., when using the Tokaido Shinkansen.

In terms of tourism, we will roll out measures to stimulate demand, such as the Kyoto campaign, and continue to strengthen our relationship with local residents and travel agencies at tourist spots in our operating areas. We will also strive to increase Shinkansen ridership by providing attractive travel products and bolstering initiatives aimed at various members.


Number of uses of online reservation services*1 per day*2

**207,000 uses**

Number of "Express Reservation" members *2

**3.65 million**

Number of persons registered to "smartEX" *2

**2.26 million**

*1 The number of uses of "Express Reservation" and "smartEX"
*2 As of March 2019

## Improving Convenience for the Tokaido Shinkansen

### Promoting Online Reservation and Ticketless Boarding Services

In an effort to have customers more conveniently use the Tokaido Shinkansen, JR Central takes initiatives to promote online reservation and ticketless boarding services.

We provide the "Express Reservation" service for customers who frequently ride the Shinkansen for business or other reasons. Members of the service can smoothly ride the Shinkansen by simply touching their member IC card at the automatic ticketing gates after reserving their seats with a smartphone or other device beforehand. There is no need to stop at the ticket counter of a station, which allows customers to significantly reduce the total transit time, plus enjoy the benefit of using the Shinkansen at a discounted member price. Additionally, as members can change their reservation as many times as they want without any additional charges, they can always select the train that best suits their need from a vast selection of trains including the "Nozomi", which has a maximum of 10 departures every hour.

We also offer "smartEX" with no membership fee for customers who only occasionally use the Shinkansen, including people traveling to visit their hometowns, tourists, and foreigners visiting Japan, so that they can also use the convenient online reservation and ticketless boarding service. This ticketless service enables customers to board the Tokaido Shinkansen and the Sanyo Shinkansen by simply registering their credit cards and the widely-used commuting type IC card from their smartphone, etc. As a result, we offer greater convenience for even more customers, including people traveling to visit their hometowns, tourists, and foreigners visiting Japan, in addition to customers on business trips, to use the Shinkansen.

Reservations for reserved seats using these services currently account for over 40% of all reservations. We will step up efforts for increasing the use of online booking and ticketless boarding services and make online booking the norm for Tokaido Shinkansen passengers. In addition, we will concentrate on developing more user-friendly and efficient sales systems ahead of the launch of the Chuo Shinkansen.

*Scheduled to run up to 12 trains from spring 2020

Shifts in usage of online reservation services.

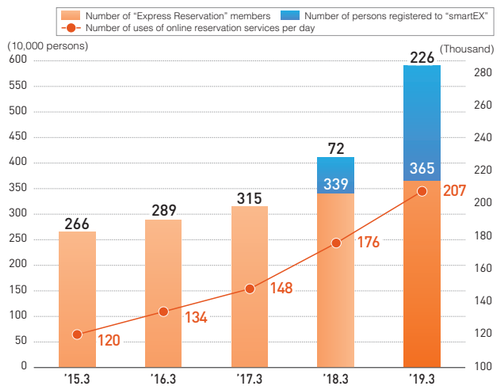
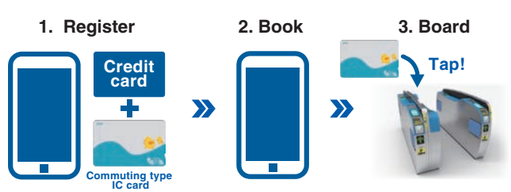



Illustration of using "smartEX"




## Stimulating Tourist Demand

### Deployment of Tourism Campaigns

We have continuously implemented travel campaigns, such as the Kyoto Campaign, for Kyoto and Nara, which are the largest and most sustainable tourist resources in our market area, and we are promoting the use of the Shinkansen mainly from the Tokyo Metropolitan area to the Kansai region. In particular, we run promotional advertisements for the "Kyoto Campaign" based on a concept of enabling customers to re-acknowledge Japanese beauty and profundity. Last fiscal year, when the Kyoto Campaign celebrated its 25th anniversary, we held special campaigns such as holding past campaign poster exhibitions and publishing TV commercials broadcast on the web site.

In our "Tokyo Bookmark Campaign" to promote the use of the Shinkansen to visit Tokyo from the Kansai and Chukyo areas, we also introduce tourism information about Tokyo, travel items, etc., on the website. In addition, we are working on coming up with attractive products associated with Hida, Ise-Shima and other locations.

In addition, we will coordinate with local governments, travel agencies and other parties through the "Shizuoka Destination Campaign" organized by the 6 JR passenger rail operators between April and June 2019, and make efforts to develop attractive sightseeing materials and products and operate tourist trains.

Kyoto Campaign (Gionji)

### Enhancement of Tourist Products for the Users of "Express Reservation" and "smartEX"

For customers using these services, we are expanding tourist products that offer the use of the Shinkansen at discounted prices when customers plan ahead for sightseeing and other purposes.

For example, by launching various products, such as "EX Nozomi Family Hayatoku" and other services that offer a discount for family or friends traveling together using the Shinkansen, although the travel dates, number of seats, sections of travel and hours of boarding may be limited, we are stimulating demand for Shinkansen use. In addition, we are working to stimulate a wide range of demand by enhancing convenient benefits that are useful when traveling.

### "50+ (Fifty Plus)" Travel Plan

Given the aging population in Japan, the senior age group, which is said to have more leisure time and disposable income than other age groups, is growing. We expanded the target group to include persons aged 50 and above, and have been operating a travel club "50+", which anyone over 50 years old can participate in. The number of members as of the end of FY2018 totaled approximately 950,000 members of which a total of approximately 200,000 members enjoyed "50+" brand products in FY2018.

We not only inform the members of seasonal tourism information through the magazine and the website but also offer affordable travel products that use the Tokaido Shinkansen.

### Efforts toward Foreign Tourists

We offer a smartphone app for our smart EX service that is designed for international tourists.* It allows them to book a train before they leave their home country, enhancing the convenience of using the Tokaido and Sanyo Shinkansen.

As to our travel products, working in cooperation with municipalities located along our train lines and other transportation companies, we offer sightseeing value tickets covering destinations that are popular among international tourists, such as "Takayama and Hokuriku." We also have the FLEX JAPAN line for Tokaido Shinkansen tour packages, including a set that comes with a roundtrip Shinkansen ticket for an unreserved seat and day trip excursion tickets to destinations we serve.

We operate various websites in order to stimulate travel demand. In partnership with municipalities and travel associations in central Japan, we operate Japan Highlights Travel, a website offering travel information about areas along the Tokaido Shinkansen line. The Central Japan Shinkansen/Train Portal website showcases JR Central products designed for international travelers. We also operate BEING JAPAN jointly with Japan Airlines to communicate wonderful things about Japan and help travelers get around.

In addition to these initiatives, we are making efforts to be better at providing information to travelers by making announcements via tablets and other devices, offering extensive train status information on our corporate website, and expanding free Wi-Fi service at stations and in the Tokaido Shinkansen, Express Hida and Nanki trains. The service is currently available at all Shinkansen stations, 27 conventional line stations that are frequently used by international travelers, as well as in all Express Hida and Nanki rolling stock. The service will be extended to all Tokaido Shinkansen trains by the end of FY2019.

*As of April 30, 2019, the service is available in eight countries and regions.

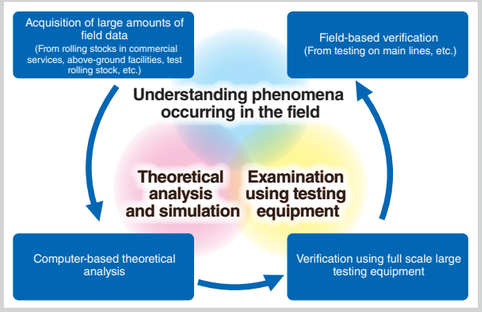

Japan Highlights Travel

# Technological Development and Enhancement of Technical Capability

The railway business is supported by employees who thoroughly execute their tasks using various skills and cooperation with each other, and supported by various types of equipment, such as rolling stock, civil engineering structures, tracks, and electric and signal communications equipment, functioning seamlessly. In order to further ensure safety and strengthen the future managerial foundation, it is vital to continue developing core technologies which serve as the base of the foundation.

Looking ahead, we will continue to proceed with development using the latest technology in relation to rolling stock and other equipment towards further improving safety and enriching our transportation service, and have this lead back to the building of an efficient management structure that emphasizes reducing unnecessary costs.

Basic railway R&D cycle




## Promoting Technological Development at the Komaki Research Center

To proactively deepen the existing railroad technologies, JR Central pursues development of technologies that support the future of the Company, and takes initiatives to enhance technical capabilities and develop human resources. At the Komaki Research Center, by leveraging the development capability using actual-size testing equipment, which is the main distinctive feature of the research center, we have made accomplishments in proprietary technology development, including the development of new rolling stock

▶ refer to page 20 for features of the N700S; refer to page 21 for features of the next-generation limited express rolling stock using the hybrid method), the development of countermeasures against derailment and deviation for the Tokaido Shinkansen, the development of large-scale renovation methods for civil engineering structures in relation to our Shinkansen trains, and the development of high-speed heavy simple catenary for our Shinkansen trains.

In FY2019, we will conduct tests using the N700S validation test vehicles which are the next-generation rolling stock of the Tokaido Shinkansen, such as the long-term endurance testing and increased speed testing at 360 km/h.

In regard to conventional lines, we will proceed with the new production of a testing vehicle for next-generation limited express rolling stock that uses a hybrid system for conventional lines and begin running tests.

In addition, we implement more advanced and power-saving inspections and maintenance that utilize condition monitoring technologies. Also, promote technological development that can lead to cost reductions for maintenance and upgrading of facilities.

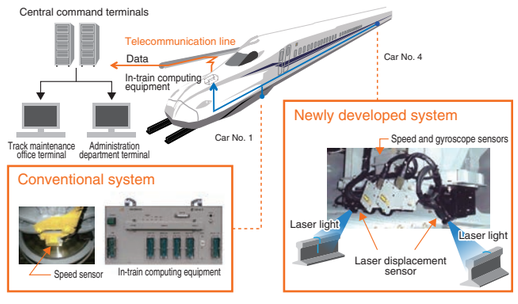
Furthermore, we will carry out technological development to further heighten safety against earthquakes, heavy rain and other disasters.

## Development of a Next-Generation Track Monitoring System

In order to maintain and further enhance the comfort of passengers traveling on the Tokaido Shinkansen, we use an in-train system that measures track conditions while the train is running.

We have developed a next-generation track monitoring system that adds general-purpose sensors, such as speed, gyroscope, and laser displacement sensors, to the conventional system, which was designed to monitor only vertical rail irregularities. Combined with our proprietary computing program, the new system enables us to monitor not only vertical but also horizontal rail irregularities as well as the distance between the rails and differences in rail height for enhanced monitoring accuracy. Figure In June 2018, we started test runs of our N700S validation test vehicles equipped with this system.

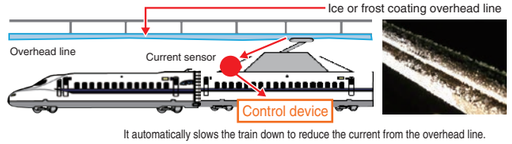
Capable of monitoring various aspects of track conditions with high precision on a daily basis, the system enables us to conduct maintenance work in a timely manner and further enhance passenger comfort.




## Development of Anti-Icing Technology for Overhead Lines

In the winter months, Tokaido Shinkansen staff check overhead lines for ice or frost during the morning inspection conducted before the day's service begins. If any ice or frost is found on the line, the train operator runs Shinkansen trains at a reduced speed over a predetermined section that includes the area where the ice or frost has been found. This prevents an arc from being generated due to the interaction between the pantograph and the ice- or frost-coated line, which can damage the pantograph.

We are the first in Japan to develop a technology that enables a train to detect ice or frost on an overhead line in real time and automatically decelerate to reduce the electric current collected from the overhead line and prevent a large arc from occurring. Figure The new technology minimizes not only the risk of pantograph damage but also train delays since trains decelerate only in the section where the overhead line is coated with ice or frost. The technology has been tested on ten N700A trainsets since December 2018 and is scheduled to be put into service in FY2020.



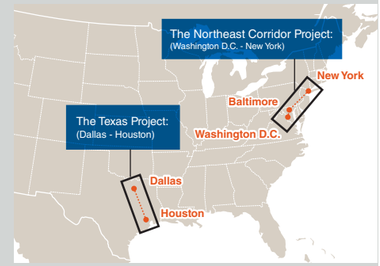

It automatically slows the train down to reduce the current from the overhead line.

# Overseas Deployment of High-Speed Railway Systems

We currently offer consultation to overseas high-speed railway projects and take associated initiatives by utilizing our comprehensive technologies in the highest level high-speed railway system in the world with the aim of realizing overseas deployment of high-speed rail systems. We believe that the overseas deployment of our high-speed railway system will be a meaningful project that enables Japanese manufacturers to maintain and strengthen their technology and skills through the expansion of the international high-speed railway market, that will lead to the stable provision of materials and equipment, and that will lead to technological innovation and cost reductions in railway-related equipment.

We target countries and regions where it can be expected to introduce total systems involving new high-speed passenger railway lines in which our superior high-speed railway systems can be used to their full potential. Furthermore, we realize the need for target countries and regions to have a complete legal system where intellectual property rights and the sanctity of agreements are established as socially-accepted ideas, a stable political situation, and the economic strength to invest in large-scale infrastructure investments. Therefore, the U.S. is currently the main target for promotional activities.

Target lines for overseas expansion




## Consulting & Coordination Business

Our policy regarding the overseas deployment of high-speed railway systems is that we do not lead the implementing body of development projects but contribute to projects primarily through consulting. Specifically, we propose the deployment of high-speed railway as a total system, which includes civil engineering structures, tracks, electrical equipment, signaling equipment, rolling stock, operation management systems, maintenance and repair, etc., to overseas markets. We not only formulate technical specifications and provide support and consultation to ensure safe and reliable operation of the high-speed railway by supplying various manuals regarding operations and maintenance, and conducting education and training for staff, etc., but also coordinate with relevant Japanese companies when projects become concrete.

### Initiatives in the US project

We have been working on getting the Tokaido Shinkansen system, which boasts the highest level of safety and precision in the world, up and running in the state of Texas while introducing the SCMAGLEV, our superconducting maglev system that is capable of an operating speed of 500 km/h, to the Northeast Corridor.

#### The Texas Project

The Texas Project is a private business venture that aims to link two major cities, Dallas and Houston, via the Tokaido Shinkansen rail system. The key players in the project, Texas Central Partners and its subsidiary (collectively referred to as "TC"), are working on securing the capital needed for construction and drawing up preliminary designs.

In order to provide TC with the technological assistance needed to move the project forward, we launched a local subsidiary, High-Speed-Railway Technology Consulting Corporation (HTeC), in 2016. HTeC currently provides TC with technical consulting for its project-related operations, such as developing specifications, formulating operation and maintenance plans, drafting preliminary designs for stations and maintenance facilities, and preparing personnel training and education programs. In August 2018, we launched another local subsidiary, High-Speed-Railway Integration Corporation (HInC), to work with TC on signing contracts for core systems with other Japanese manufacturers and has been preparing for the project.

HTeC members reviewing a candidate station site

#### The Northeast Corridor Project

With regard to the Northeast Corridor connecting Washington D.C. to New York City, we are aiming to introduce our SCMAGLEV, starting with promotional activities to realize cooperation between the Japanese and U.S. Governments for the development of the Washington D.C.-Baltimore section. Now, the Federal Railroad Association and other relevant organizations are making preparations for environmental impact assessment and other procedures, using a federal grant of 27.8 million USD provided by the U.S. Federal Government to the State Government of Maryland to cover the survey costs for the section. The Government of Japan also commenced research in FY2016 to introduce the SCMAGLEV in the U.S. Meanwhile, both the Japanese and U.S. Governments are showing more understanding and support for this project, in part because we provided the U.S. Secretary of Transportation, the Governor of Maryland, and other leading officials with an opportunity to ride on a Maglev train in Yamanashi Prefecture and realize the strong potential of the technology. We are planning to provide comprehensive technical support when the project is put into action. HTeC surveying a potential station site.

### Technical consulting for Taiwan High Speed Rail

In response to a request for technical assistance from Taiwan High Speed Rail Corporation, which operates Taiwan's high-speed rail system based on the Japanese high-speed rail system, we started providing technical consulting in FY2014. We have completed three projects so far, and we have been implementing technical consulting for renewal work of the operation management system conducted by Taiwan High Speed Rail Corporation.

## Making Efforts to Promote Japanese High-Speed Rail Systems as a Global Standard

We will continue to promote initiatives to establish the Japanese high-speed rail system, which is based on the core principle of "Crash Avoidance", as a global standard, through the International High-Speed Rail Association (IHRA).

# Developing Affiliated Businesses

Operating Revenues of Consolidated Subsidiaries (simply aggregated)

FY1989 **52.6** (3 companies) billion yen

FY2018 **630.1** (29 companies) billion yen

JR Central Towers (center/right) and JR Gate Tower (left)

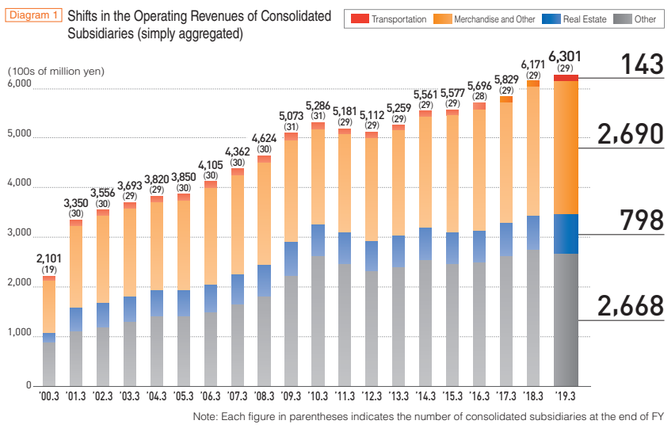
**As seen in JR Central Towers and the JR Gate Tower in Nagoya Station, we have improved our revenue base by engaging in businesses that are expected to generate synergistic effects with the railway business, such as in areas that make full use of the good location of railway stations. We will continue to expand our revenues and profits in cooperation with group companies.**

## JR Central Group's affiliated business

The JR Central Group undertakes businesses in the areas of Transportation, Merchandise and Other, Real Estate, and Other. The Transportation segment involves railway and bus businesses. The Merchandise and Other segment manages department stores and provides sales services for goods and food in stations and trains, utilizing the merit of having good railway station locations to attract customers. The Real Estate segment develops commercial facilities in stations and areas under elevated track columns, and also leases real estate such as station buildings. In the Other segment, we manage hotels, travel agencies, and advertising agencies, etc. We also manufacture rolling stock and maintain, inspect, and repair our railway facilities in this segment.

Operating revenues of consolidated subsidiaries, excluding JR Central, totaled 630.1 billion yen (simply aggregated) in FY2018.

Diagram 1 Shifts in the Operating Revenues of Consolidated Subsidiaries (simply aggregated)




Note: Each figure in parentheses indicates the number of consolidated subsidiaries at the end of FY

## Development of Nagoya Station boasting the highest number of passengers among our stations

The development of Nagoya Station, which boasts an average 220,000 passengers per day, the highest number of passengers of any our stations, forms a pillar of our affiliated businesses.

At Nagoya Station, we opened JR Central Towers (hereinafter, "Towers") right above the station in 2000 and then fully opened JR Gate Tower (hereinafter, "Gate Tower") adjacent to the Towers in April 2017.We will continue to operate Towers and Gate Tower in a uniform manner and take initiatives to maximize earnings by demonstrating synergistic effects through clearly segregating the concepts of businesses of both facilities, while maximizing profits based on business cooperation and by pursuing efficient management.

### JR Central Towers

Towers, the skyscraper complex with a height of 245 meters and a total floor area of approximately 417,000 m², built right above Nagoya Station at a total cost of roughly 200 billion yen, is the core of our affiliated businesses. Our three consolidated subsidiaries run a department store, a hotel and offices. After the full opening in 2000, earnings of our affiliated businesses increased significantly. Diagram 1

In the department store business, JR Nagoya Takashimaya, ideally located directly above the Nagoya station, attracts large numbers of visitors. This fiscal year, working jointly with the Takashimaya Gate Tower Mall (which will be covered later on), JR Nagoya Takashimaya will continue to actively implement sales and marketing strategies while hosting events that will draw lots of attention. It will also undergo a major renovation designed to double the floor area of the cosmetics department with an aim to enhance customer satisfaction and expand its customer base to increase revenue.

The hotel business has seen Nagoya Marriott Associa Hotel being rated highly for its convenient location directly above the station, its spectacular view from the top floors, and upscale facilities, etc. Maintaining a high guest room occupancy rate of over 80% (annual average) for the year ending March 2019, the hotel has been offering flexible room rates based on demand in an effort to increase revenue. This fiscal year, the hotel will enhance its services with an eye toward better meeting customers' needs, such as relocating and expanding the concierge lounge, and sharpening its competitive edge in the luxury hotel market.

The office business has enjoyed a high occupancy rate since its launch. All office spaces were almost fully occupied in the year ending March 2019. This fiscal year, we will commence office renovation work and implement other initiatives that will enable us to gain a leg up in this market over the long run.

Nagoya Marriott Associa Hotel (Concierge lounge)

### JR Gate Tower

JR Gate Tower is a high-rise complex building that stands adjacent to JR Central Towers and consists of commercial facilities, a hotel, offices, a bus terminal, and parking lots. With a height of approximately 220m and a total floor area of approximately 260,000m², Gate Tower is roughly 60% as large as the Towers. Constructed at a total cost of approximately 105 billion yen, Gate Tower began accepting offices in November 2016, and opened Takashimaya Gate Tower Mall, Nagoya JR Gate Tower Hotel, and other commercial facilities in April 2017. Together with the Towers, Gate Tower provides a highly convenient and attractive urban environment.

Takashimaya Gate Tower Mall is operated in conjunction with JR Nagoya Takashimaya. Housing about 160 fashion stores and more, the mall offers products in categories and price ranges not found in JR Nagoya Takashimaya and is a magnet for customer attraction. As a result, the combined net sales of the two facilities came to 162.7 billion yen in the year ending February 2019.

Nagoya JR Gate Tower Hotel is a sophisticated, functional hotel that specializes in lodging services and features 350 guest rooms. It offers the convenience of being directly connected to the station as well as a comfortable sleeping environment. Attracting a large number of travelers, the hotel enjoyed a guest room occupancy rate of over 90% (annual average) in the year ending March 2019.

The office spaces are almost fully occupied due to their prime location directly above Nagoya Station, which the Chuo Shinkansen will serve in the future. JR Gate Tower also houses an electronics retail store, clothing stores, a fitness club, as well as child care, medical care, and other facilities in addition to a dining zone. When combined with JR Central Towers' restaurant floors, it's one of the largest collections of restaurants under one roof in the entire country. The JR Central Group integrates the management and operation of JR Gate Tower and JR Central Towers for maximum efficiency. Changes in restaurant zone tenants and the renovation of the common areas in JR Central Towers will be completed in FY2019. We will enhance the integrated management of both facilities' restaurant zones with an eye toward increasing sales.

JR Tokai Takashimaya Co., Ltd. (Merchandise and Other segment), which operates department stores in the two buildings, JR Tokai Hotels Co., Ltd. (Other segment), JR Central's wholly-owned subsidiary that operates the hotel business, and JR CENTRAL BUILDING, Co., Ltd. (Real Estate segment), JR Central's wholly-owned subsidiary that is responsible for the management and operation of the two buildings as well as the operation of the office and restaurant businesses, generated a combined total of 202.5 billion yen (simple aggregation) in operating revenues in the year ending March 2019.

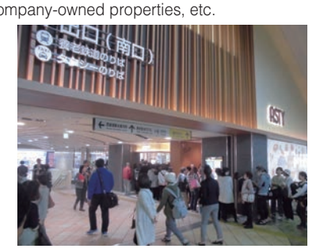
Takashimaya Gate Tower Mall

## Other Initiatives

In addition to the development of Nagoya Station as described above, we operate commercial facilities using spaces inside stations and under elevated tracks within our service area as well as engage in real estate and related businesses using former company housing sites.

As for the development of commercial facilities, such as station buildings, the activities in FY2018 included the launch of the Tokyo Gourmet Zone, a new section featuring a variety of eateries along Tokyo Station's shopping strip dubbed First Avenue Tokyo Station, as well as the renovation of station buildings, including the food and souvenirs section of Parche, Shizuoka Station's commercial facility. In FY2019 we plan to expand the commercial zone in Tokyo Station's Yaesu North Exit area to make it almost double the size of what it is now to accommodate renovated souvenir stores and new cafes, etc. ahead of the Tokyo Olympic and Paralympic Games. We will also renovate ASTY, our commercial facilities in Shizuoka, Ogaki, and Mikawa-Anjo.

The developments in our real estate business in FY2018 included sales of condominium units at Central Garden Residence Gifu Kano in Gifu City, Gifu Prefecture and Central Garden Residence Kariya in Kariya City, Aichi Prefecture. We will continue to work steadily on real estate development using company-owned properties, etc.



ASTY Ogaki

# Engagement in Global Environment Preservation





Source: For transportation volume/energy consumption, created based on data from Handbook of Energy & Economic Statistics, and for $CO_2$ emissions, based on the National Institute for Environmental Studies, Greenhouse Gas Inventory Office of Japan.
* The total of items in the breakdown may not be 100% due to rounding.

Diagram 1 Distribution of Passenger Transportation Share, in terms of Transportation Volume, Energy Consumption and $CO_2$ Emissions

* JR Central defines Energy Consumption Unit as the "Amount of energy consumed when running 1 car for 1 kilometer", due to total rolling stock kilometers being the value which is the most relevant to our business activities.

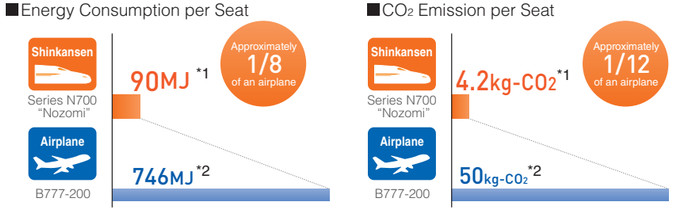
**Railways have the outstanding characteristic of being highly energy efficient compared to other transportation modes and having minimal adverse impact on the global environment. In addition to directly reducing the load on the environment by further improving energy efficiency in its railway operations, such as by lowering power consumption in rolling stock, JR Central also considers suppression of the load placed on the environment across its entire Transportation section, brought about by having as many passengers as possible opt to use railway services that reduce the burden on the global environment, as linked to efforts related to the engagement in global environment preservation.**

## Environmental Superiority of Railway

The problem of global warming is an issue that should be dealt with on a global scale. While it is regarded that $CO_2$, among greenhouse gasses, in particular has the largest impact on global warming, railways account for only 7% of $CO_2$ emissions despite undertaking 30% of the country's overall passenger transport volume. Diagram 1

Compared with an airplane (B777-200), the Tokaido Shinkansen (Series N700 "Nozomi") consumes approximately 1/8th of the amount of energy per seat when traveling between Tokyo and Osaka, and discharges about 1/12th of the $CO_2$ emissions. The data shows that the Tokaido Shinkansen has overwhelming environmental superiority. Diagram 2

Diagram 2 Comparison of the Tokaido Shinkansen and Airplanes (between Tokyo and Osaka)




*1 Calculation based on running performance of Series N700 Nozomi (Tokyo - Shin-Osaka) conducted by JR Central.
*2 Calculated by JR Central using ANA's "Annual Report 2011" B777-200 (Haneda - Itami/Kansai Airport) for reference.

## Guidelines and Objectives

### Environmental Action Guidelines

JR Central has established a set of Environmental Action Guidelines consisting of the following seven items as part of its engagement in global environment preservation.

1. Provide comfortable transportation services to promote further use of railways, which offer superior global environment preservation
2. Promote technological development that contributes to global environment preservation
3. Use fuel and energy efficiently
4. Promote waste control and recycling
5. Appropriately manage chemical substances
6. Procure environmentally friendly goods and materials
7. Contribute to society and raise awareness for global environment preservation

### Environmental goal

JR Central has formulated the Implementation Plan of Low Carbon Society Phase II, in which our Energy Consumption Unit(*) as of FY2030 will be improved by 25% compared with that of FY1995 (refer to the Japan Business Federation (Keidanren) website for further details), and is striving to make sure that the plan is executed. Up to now we established a Voluntary Plan in which we achieved our target of a 15% reduction in energy consumption as of the end of FY2010, and we have proactively developed and introduced energy-conserving rolling stock. We will continue promoting proactive initiatives, such as the continuous development and introduction of energy-conserving rolling stock, while setting train services flexibly to meet the needs of passengers.

## Initiatives with the Shinkansen

### Introducing Energy-Conserving Rolling Stock

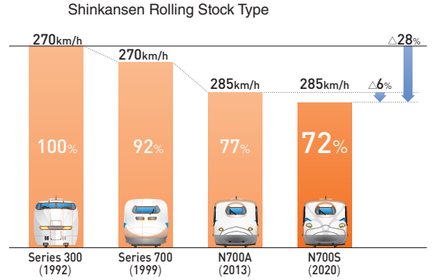
We are actively developing and introducing energy-conserving rolling stock in an effort to further reduce the Shinkansen's energy consumption. In the five years following FY2007, we added a total of 80 Series N700 trainsets to our fleet. As of FY2018, we have added 46 trainsets made up of the latest N700A rolling stock in an effort to replace our fleet of Series 700 trains. We plan to add 5 more trainsets this fiscal year to make all Shinkansen rolling stock N700A type.*

When operating between Tokyo and Shin-Osaka at a highest speed of 285 km/h, the N700A type consumes 23% less energy than the Series 300 and 16% less energy than the Series 700 when both are running at a highest speed of 270 km/h. This means that the N700A type is not only faster but also much more energy-efficient. As a result, the Energy Consumption unit as of the end of FY2018 decreased approximately 34% from what it was in FY1990.

The next-generation N700S Shinkansen rolling stock, which is slated to be put into service in July 2020, will reduce energy consumption by an additional 6% compared with the N700A type thanks to its silicon carbide semiconductor drive system, lighter car body, reduced air resistance, and other features.

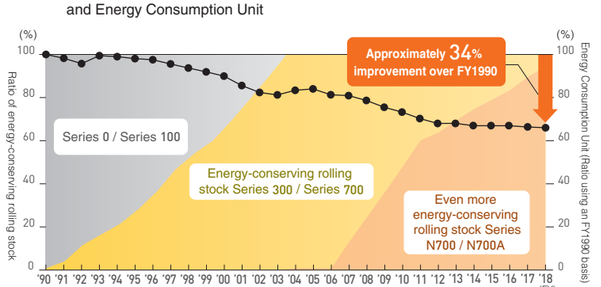
* Note: Generic name of Series N700 and N700A and later reflecting the main functions adopted in N700A

Diagram 3 Comparison of Electricity Consumption by Tokaido Shinkansen Rolling Stock Type




* Note: Simulated run from Tokyo to Shin-Osaka at the maximum speed above

Diagram 4 Shifts in the Ratio of the Tokaido Shinkansen Energy-Conserving Rolling Stock and Energy Consumption Unit




### Great environmental performance of Tokaido Shinkansen

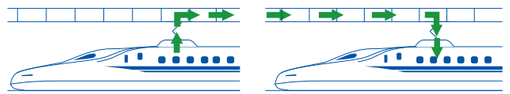
Tokaido Shinkansen has greatly improved in environmental performance both in terms of speed and comfort due to the introduction of the following technologies.

| | | |
|---|---|---|
| 1 | **Reduction in running resistance** Diagram 5 | We reduce the running resistance by introducing a nose shape with great aerodynamic attributes, using flush windowpanes, which have no unevenness between the outside panel and windowpane, and installing coverall hoods between all cars, etc. The N700S's Dual Supreme Wing design contributes to reducing air resistance even further. |
| 2 | **Use of silicon carbide semiconductor drive system** | The N700S's drive system employs next-generation low-loss silicon carbide semiconductors with superior high temperature performance. The N700S is the first Shinkansen rolling stock that employs a smaller sixtupole magnet instead of a quadrupole magnet in its motor, making the drive motor more compact and more lightweight than ever before. The overall weight of the drive system is 11 tons lighter than that of the Series N700. |
| 3 | **Introducing the Body Inclining System** | The Body Inclining System is introduced to N700A type for the first time in the Shinkansen in order to increase the speed at curves currently subject to speed restriction. This system makes it possible to increase speed while securing comfort and shortening travel time, and to simultaneously cut power consumption by reducing the frequency of speed acceleration and deceleration. |
| 4 | **Expansion of Electric Power Regenerative Braking System** Diagram 6 | We adopt the Electric Power Regenerative Braking System, in which the motor is used as a generator during braking to produce electricity and return it to the catenary While 12 of the 16 cars in one trainset of Series 700 were regenerative, 14 of the 16 cars in one trainset of N700A type are regenerative. The Electric Power Regenerative Braking System provides all of the braking power needed for one trainset during normal braking. |
| 5 | **Lighter, smaller blower-less CI in all motor cars** | The power converter (CI) converts electricity from the catenary and sends it to the motor at the time of acceleration, and returns the electricity generated by the motor back to the catenary at the time of deceleration. JR Central was the first to put the blower-less power converter, which uses airflow from running for air cooling, into practical use in the Shinkansen and uses the system in part of the rolling stock of Series N700. For N700A, these CI were made 17% smaller and lighter and are installed on all motor cars. |
| 6 | **Optimization of cabin lighting and introduction of LED lighting** | In the cabins of regular cars on the N700A, lighting has been optimized in accordance with the bright seat colors. LED lights with a dimmer function have also been installed in the toilets and powder rooms. These measures have contributed to achieving a reduction in lighting energy consumption by approximately 20% compared to Series N700. We have been installing LED lights in passenger cabins of rolling stock introduced in FY2016 and thereafter to reduce power consumed for lighting. |
| 7 | **Using eco-friendly materials** | Approximately 90% (weight ratio) of the waste generated after scrapping the Shinkansen rolling stock is recyclable. With the N700A, 100% recyclable polyester has been used for seat cushions, and conventional fiber-reinforced plastic (FRP) bogie skirts, which cover bogies to lower air resistance, have been replaced with stainless steel ones to utilize highly recyclable materials. |

Diagram 5 Reduction in Running Resistance (Coverall Hoods)


Series 700 (Not Equipped with Coverall Hoods)
N700A (Equipped with Coverall Hoods)

Diagram 6 Electric Power Regenerative Braking System



Brakes (Power generation)
The motor is used as a generator during braking to produce electricity and return it to catenary

Power running (Power consumption)
The regenerated power returned to catenary is reused when accelerating other trains

### Enhancement of electricity supply efficiency by replacing ground facilities

By replacing the electricity compensation devices from FY2011 to FY2020, which inhibit voltage reduction as rolling stock travels away from a substation, with a facility with less electricity loss, we expect to be able to reduce the electricity use on the Shinkansen by approximately 3%.

Also, by replacing part of the frequency converters from FY2014 to FY2021, which convert 50 Hz electricity to 60 Hz electricity required to operate the Shinkansen, with a stationary type with less loss, we expect to be able to reduce Shinkansen electricity consumption by approximately 2%.

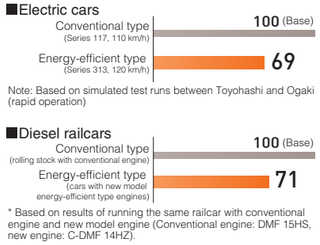
## Initiatives with Conventional Lines

### Introducing Energy-Conserving Rolling Stock

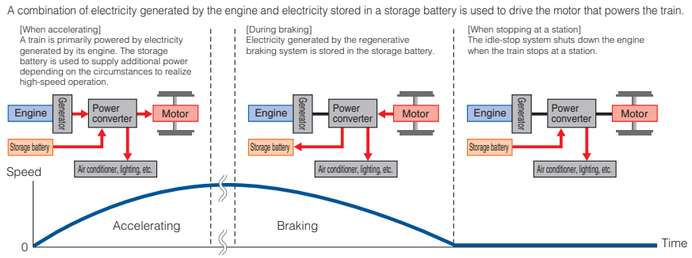
JR Central has also been striving to conserve the energy of rolling stock on conventional lines. We will promote the introduction of rolling stock with better energy efficiency by introducing the Electric Power Regenerative Braking System, higher efficiency power control conversion methods, lighter rolling stock, etc. to electric cars, and will do the same for diesel railcars by introducing lighter rolling stock and high mileage diesel engines, etc. As a result of these initiatives, all of the conventional line rolling stock is energy-conserving rolling stock. For our new rolling stock (Series 313 5th edition; Series Ki-Ha 25 2nd edition), we look to further reducing the load on the environment by using LED lights and some existing trains have been replacing LED lights.

In anticipation of the replacement of the 85 Series diesel rail cars currently used for the “Hida” limited express and other trains, the Company will newly develop testing vehicles for the next-generation limited express rolling stock that uses the hybrid system, and conduct test runs to establish relevant technologies from the end of 2019. The next-generation limited express train rolling stock (testing vehicle) is expected to achieve an approximately 15% improvement in fuel efficiency and reduction in exhaust fumes, such as $CO_2$ and NOx, by making use of power stored in batteries when accelerating and stopping. We are currently reviewing plans to commercially introduce mass-produced vehicles by FY2022. ▶ Refer to P. 21 for further details.

Comparison of electricity consumption and diesel fuel consumption of cars on conventional lines (electric cars and diesel railcars)




How the hybrid system works




## Common Initiatives for the Shinkansen and Conventional Lines

### Energy-saving by replacing high-pressure mercury lamps with LED

JR Central had conventionally used high-pressure mercury lamps for lighting in stations, railroad crossings, and other railway facilities. However, we are proceeding to replace high-pressure mercury lamps with LED lamps. We plan to complete the replacement process by the end of 2020, as a result of which we will cut our annual power consumption associated with lighting of railway facilities by approximately 70% (down 20 million kWh) compared to the level prior to the replacement work. At the same time, we expect to also reduce the annual $CO_2$ emission volume by approximately 70% (down 10,000 t) compared to the prior level, thereby decreasing environmental burden.

## Legal Compliance

JR Central has established a system to comply with relevant environmental laws.

### Management of chemical substances

Based on the PRTR Law (Pollutant Release and Transfer Register Law), we report the amount of emissions and transfer of relevant substances to local municipalities and manage those substances appropriately.

### Measures against soil contamination

In FY2018, specific hazardous substances were detected exceeding the standard value from part of the soil when we conducted soil surveys in the former dormitory in Inazawa. We reported the matter to relevant administrative agencies and took appropriate measures. We will submit a report should any substances exceeding the standard value set be detected in such surveys, and will take appropriate measures as instructed by laws and regulations and the administrative authorities.



## Effective Use of Resources/Use of Natural Energies and Introduction of Energy-Efficient Facilities

JR Central promotes effective utilization of resources through the 3R (Reduce, Reuse, and Recycle) initiative, etc. Specifically, we aim to reduce emissions from waste materials during construction, utilize rain water, recycle tickets and uniforms, and recycle rolling stock, etc.

In addition, we strive to leverage natural energies and introduce energy-efficient facilities when constructing new buildings and renovating existing buildings.

### Green Procurement Guidelines

JR Central implements a green procurement policy, prioritizing the procurement of eco-friendly materials. To this end, we established the JR Central Green Procurement Guidelines to enhance coordination with our business partners and work with them to contribute towards global environment preservation. URL https://company.jr-central.co.jp/company/material_procurement/_pdf/green_guide_line.pdf

**Facility and workshop status**

### JR Gate Tower

With the JR Gate Tower, the construction of which was completed in February 2017, we worked on creating an energy-efficient environment within the entire building and reduce the environmental burden by introducing regional air-conditioning systems, adopting LED lighting, installing solar power generation panels, creating green areas in the 15th-floor rooftop garden and on roofs of low-rise buildings, etc. We not only achieved “Rank S” in environmental performance, which is the highest rank on the “CASBEE (Comprehensive Assessment System for Built Environment Efficiency)” scale, but also reduced approximately 25% of $CO_2$ emissions from the building compared to standard model buildings, according to the CASBEE Nagoya 2010 standard.

### General Education Center

At the General Education Center, which was newly built in September 2011, we aim to conserve energy by introducing a ventilation system which uses ice thermal storage achieved by the utilization of nighttime electricity service as its heat source and LED lighting, etc. Furthermore, we designed the building to use natural energy effectively by improving external insulation efficiency through arranging a rooftop garden and taking advantage of natural wind and light as much as possible. As a result, we were able to obtain “Rank S”, which is the highest assessment level under the “CASBEE”.


General Education Center (rooftop gardening)

### SCMAGLEV and Railway Park

At the SCMAGLEV and Railway Park, which opened in March 2011, we introduced a solar energy generation system on the expansive roof. The system has a generation capacity of approximately 500 kW, or roughly 630,000 kWh annually, which can cover approximately 30% of the SCMAGLEV and Railway Park’s energy needs.


SCMAGLEV and Railway Park (solar power generation system)

### Hamamatsu Workshop

The Hamamatsu Workshop, which conducts general overhauls of Shinkansen rolling stock, has been conducting renovation construction since July 2010. In FY2015 the rooftop of the workshop was used to install a solar power generation system with the capacity to generate approximately 300 kW or about 300,000 kWh annually. In addition, we implemented a highly efficient substation facility, boilers, and other equipment in FY2015.

Meanwhile, in regard to painting for the body of trains, although we had been using oil-based paint containing volatile organic compounds, we adopted a new painting facility which now allows us to use water-based paint that is harmless to the environment, thereby reducing environmental burden. Furthermore, we implemented the country’s first water-based paint coating robot to improve the working environment for our employees.

### Nagoya Workshop

JR Central has been taking anti-earthquake measures and upgrading facilities in February 2014 in the Nagoya Workshop where general overhauls, etc. of conventional line rolling stock are conducted. We aim to reduce approximately 20% of electricity consumption for the entire workshop by introducing high ceiling LED lighting and highly efficient transforming equipment as energy saving measures.

## Activity Status for FY2018

### Environmental accounting

The investments, costs, and their principal effect involved in environment preservation activities during FY2018 are estimated as listed below.

Environmental accounting

| Classification | Main Initiatives | Environment preservation cost (100 million yen) *1 Investment | Expenditures | Notes |
|---|---|---|---|---|
| Global environment preservation cost | ●Introduction of energy-conserving rolling stock<br>●Improved energy-efficiency at stations and office buildings, etc. | 445.3 | 9.4 | ●Energy-conserving rolling stock ratios: 100% (Shinkansen electric cars), 100% (conventional line (electric cars and diesel railcars))<br>Energy efficiency of Series N700A ▲23% (more efficient than Series 300), New production of N700S validation test vehicles, Replacing lamps of railway facilities with LED lamps |
| Research and development cost | ●Development of energy-conserving rolling stock<br>●Development related to environment preservation along railway lines, etc. | 0.1 | 145.3 | ●Energy efficiency of Series N700A ▲23%(more efficient than Series 300)<br>* Comparison between the Series 300 (traveling at 270 km/h) and the N700A (traveling at 285 km/h) |
| Resource recycling cost | ●Proper disposal and recycling of station and train refuse, etc.<br>●Proper disposal and recycling of items generated by workshops and construction work | 0.2 | 96.5 | ●Recycle rate of Shinkansen rolling stock: Approximately 90%<br>●Recycle rate of uniforms: Basically 100% |
| Environment conservation cost along railway lines | ●Countermeasures for noise and vibration<br>●Proper management of environmental load substances, etc. | 113.0 | 38.1 | ●Protection of the surrounding environment by modifying noise-blocking walls and increasing their height, shaving rail surfaces, etc. |
| Management activity cost | ●Environmental advertising<br>●Environmental management education etc. | 0.0 | 0.1 | ●Acquisition of ISO14001 certification in Technology Research and Development Department |
| Social activity cost | ●Support and cooperation for organizations and other groups undertaking environment preservation | 0.0 | 0.0 | ●Participation in environmental partnership organizing club (EPOC) |
| | Total *2 | 558.7 | 289.7 | |

*1. Fractions below 10 million yen are omitted.*2. Totals do not add up due to rounding.

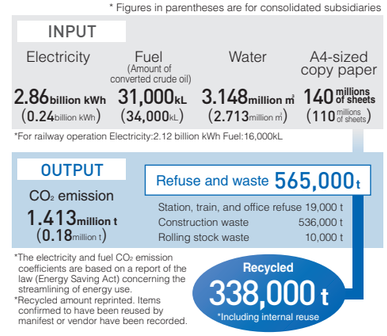
[Approach to environment preservation cost]
●Compilation is applicable only to JR Central. ●The applicable period is April 1, 2018 to March 31, 2019.
●“Environmental Accounting Guidelines 2005”, a publication of the Ministry of the Environment, was consulted with regard to aspects of style.
●Depreciation is not included in the calculations for expenditures.
●In the event of multiple-purpose expenditures, the full amount with greater environment preservation effect is included in the calculation.

### Environmental load in business activities

The main resources and energy utilized as well as waste generated during JR Central’s business activities during the year FY2018 are as shown below.

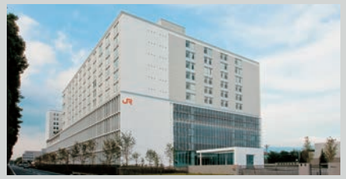
INPUT/OUTPUT

* Figures in parentheses are for consolidated subsidiaries



# Human Resources Development

Female employees at work



General Education Center (Mishima City, Shizuoka Prefecture)

Sufficient childcare support system

Turnover rate

**Around 1%**

JR Central views its employees as its greatest management resource. It is the people who operate railways that protect the safety of railways. The railway business is also referred to as experience engineering, and employee skills development does not happen short term. Therefore, we focus on human resources development and skills development from a long-term perspective based on long-term employment in order to develop employees with the awareness to thoroughly execute their duties and great skills.

We also provide various welfare benefits beyond that called for by law, including programs for health management and nursing care and childcare support. By making efforts to secure favorable work-life balance for employees, we encourage employees to continue working and demonstrate their strengths at JR Central.

As a result of these initiatives, we have an extremely high employee retention rate despite the fact that we employ many new employees every year, as the labor turnover rate of approximately 1% indicates.

## Basic Policy of Human Resources Development

JR Central's Basic Policy of Human Resources Development is based on three fundamental principles: Discipline, technical capability, and sense of unity. Given these three fundamental principles, we develop human resources that undertake the businesses of the Company. The basic education system mainly involves on-the-job training (OJT), in which employees learn the knowledge and skills required for work through daily operations in each workplace. They also acquire additional knowledge and skills through group training, which is held in the General Education Center*1, etc., and various self-betterment opportunities, such as internal and external correspondence training systems, etc., that help employees learn knowledge and skills on their own.

In OJT, we have in place the "N-OJT" program particularly for employees in younger generations to attain specialized knowledge and technical skills. Under the N-OJT program, we take a fine-tuned approach in developing employees by using the so-called the "List", which indicates the requirements to attain in order to be regarded as being qualified and the attained level, and the "Chart" for recording each individual's development plan, details of guidance, and results of guidance. Meanwhile, approximately 240 group training sessions were held in FY2018 and about 9,600 employees*2 attended these sessions. Taking this number multiplied by the number of days of training sessions held came to roughly 83,000 man days. This means that we provided approximately 5 days of training per employee in a year. To promote self-betterment, we offered 30 internal correspondence training courses to employees of JR Central, its group companies, etc. Approximately 7,100 employees in total voluntarily participated in these courses.

In addition to these programs, employees work in teams to study challenges facing the company and participate in small group activities where they solve problems in their workplace and make improvements using their own creativity and ingenuity. Through these activities, we help employees develop skills and build a rewarding workplace where everyone can thrive. We will remain committed to enhancing educational opportunities by continuously working to brush up various training programs and measures aimed at human resources development.

*1 With focus on safety and service, the General Education Center conducts training for employees, including personnel from affiliated companies that are engaged in railway operations.
*2 Simple aggregation of the number of persons participating in each training program or course.

## Initiatives for Improving Employee Health

It is the important issue of JR Central to maintain and promote healthy minds and bodies of employees and to secure an environment in which employees can be motivated to work. To date, we have taken a number of initiatives in addition to providing health check-ups, etc. required under law. Such initiatives include measures to promote sound mental health, measures against life-style related diseases and sleep apnea syndrome, subsidies for fees for complete physical check-ups and influenza vaccinations, and efforts to maintain reasonable working hours.

As for measures to maintain sound mental health, we take various steps to prevent mental disorders based on the "JR Central Plan for Promoting Healthy Minds." We also hold training sessions based on employee level concerning ways to put in place the division of roles and coordination among relevant departments, methods to make improvements to the workplace environment, and so on. Furthermore, we conduct stress checks for all employees at the annual checkup as well as following a change in assignment, etc.

In regard to measures against lifestyle-related diseases, we have been providing specific health checkups and specific health guidance for employees aged 40 and above since FY2008. In FY2015, we expanded the target of guidance to also include employees below the age of 40 and have since been offering guidance on various matters as necessary from the perspective of taking measures early.

We have established the Health Promotion Guidelines to provide a company-wide policy on measures aimed at promoting sound physical and mental health and to specify the roles of the company and its employees. The health and wellness administrator assigned to each workplace helps develop systems designed to enable employees to perform to the best of their abilities regardless of their age or gender and to take voluntary actions to improve their health as well as create a healthier workplace. At the same time, we will conduct ongoing assessments and make improvements based on objective data to improve the health and wellbeing of all workers.

## Promoting Female Employees in Active Roles

At JR Central, there is no gender bias in terms of the content of work performed, and a number of female workers are undertaking active roles in the Company.

Due to the characteristics of the work involved, the railway business requires so-called late-night work (work between 10 p.m. and 5 a.m.). However, the Labor Standards Act at the time of the Company's establishment prohibited late-night work by women in principle, excluding some job types. Due to this situation, the ratio of female employees as of the end of FY1996 was only 1.3%.

Subsequently, in response to the revision of the Labor Standards Act in 1997, we have actively employed female employees. As of the end of FY2018, the number of female employees was approximately 2,000 (approximately 11% of all employees), reflecting a significant increase.

## Support for Maintaining Balance between Child care, Nursing Care, and Work

JR Central has been actively making efforts to enhance various programs so that employees, regardless of gender, can maintain a good home-work balance and be motivated to work with enthusiasm in active roles over many years. In 2006, JR Central became the first company in the transport and railway industry to receive the "Minister of Health, Labour and Welfare Effort Award" as a Family Friendly Corporation*1. We have continued to make further efforts even after receiving the award and many of our programs greatly exceed the level required by law.

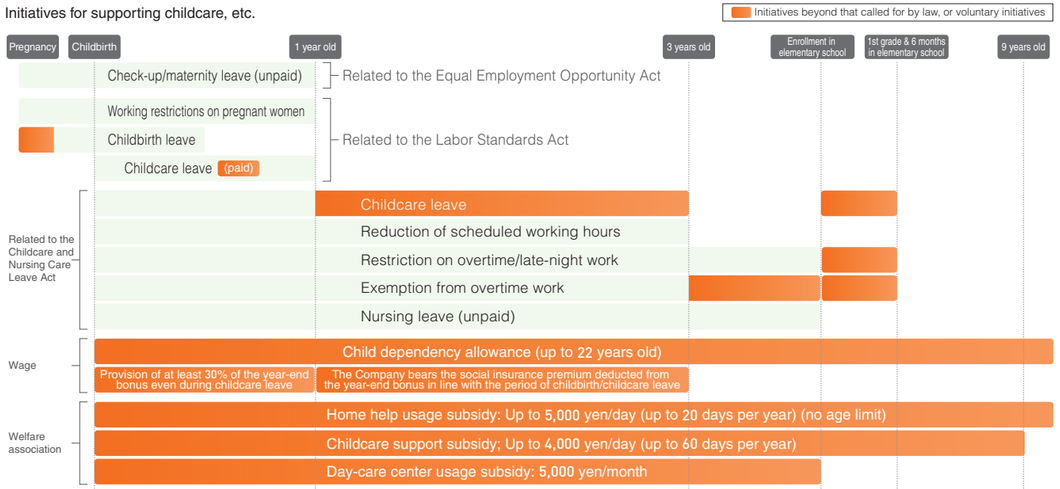
At JR Central, employees are entitled to longer maternity, child care, and nursing care leave than is stipulated in the Child Care and Nursing Care Leave Act. We are currently taking specific measures to maintain and increase the percentage of employees who take child care leave by setting targets.*2 In FY2017, the percentage of employees who took child care leave was 100% for female employees and 8.29% for male employees.

We use flexible work arrangements, including flex time for clerical workers and reduced work days, which allows field office employees who provide care to a child in the third grade of elementary school or younger to take multiple unpaid leave days each month, all with an eye to helping employees maintain a healthy work-life balance. We also have a wide range of employee benefits,*3 which are enjoyed by many employees.

In addition to these programs, we have a system designed to rehire former employees who resigned for child care or nursing care reasons or due to other similar circumstances, as long as a certain set of conditions is met, as well as a system that allows an employee whose work location is limited to be transferred, upon request, to a location outside the area where he or she normally works. These measures are all part of our efforts to create a better work environment where employees can reach their full potential at different life stages.

*1 A system introduced by the Ministry of Health, Labour and Welfare in which companies are rewarded for taking initiatives to establish various programs to support employees in achieving a good balance between work, childcare and nursing care, and for putting in place a mechanism in which employees have the option of selecting diverse, flexible working styles.
*2 JR Central formulated an action plan for the fifth period from FY2016 to FY2020. Under this action plan, we set targets on childcare leave, including 100% of female employees to take childcare leave, and 3% or more of male employees to take childcare leave. Given that we achieved the targets set in our action plan for the period from FY2005 to FY2014, we were certified by the Minister of Health, Labour and Welfare as a Childcare Support Company.
*3 We offer various benefits, including a monetary gift when an employee gives birth, a subsidy for day-care, a childcare support benefit when using a babysitter, nursing care relief money of nursing care leave, and a nursing care subsidy when using the nursing-care service, etc. set forth under the Long-Term Care Insurance Act.
*4 Treatment described above differs in part based on the type of employee

Initiatives for supporting childcare, etc.




## Healthy Labor-Management Relations

JR Central currently complies with the various laws and regulations, including the Labor Union Act, and has signed labor agreements with all four labor unions currently in place. [Total union membership of 19,500 employees as of March 31, 2019].We hold joint management council meetings and engage in collective bargaining based on these labor agreements, and will continue to strive to build healthy and stable labor management relations.

# Cooperation with Local Communities / International Exchanges / Promotion of Culture & Art and Lifelong Learning

**Railways, which are a mode of public transportation, are extremely closely connected to local communities. We are enhancing the convenience of stations, which are the gateway to local communities, as well as contributing to local communities, through operating medical facilities and museums, etc. in the Nagoya region, where our head office is located, in addition to rolling out sales and marketing efforts and operating websites that spread the attractive features of communities located along our railway lines by selling locally produced goods, etc. Furthermore, we interact with experts on railways from other countries and engage in activities toward promoting culture, art, and lifelong learning.**

## Contribution to Local Communities

### Initiatives to improve the level of convenience and accessibility of stations, etc.

JR Central cooperates with the requests from local municipalities to establish new stations, improve station buildings, develop plazas in front of stations, and promote railway elevation projects, etc., thereby contributing to community development.

Based on relevant laws, such as the so-called Barrier-Free Act, JR Central cooperates with governments and municipalities to jointly establish and improve facilities to enable all passengers, including persons with disabilities and elderly passengers, to use our services safely and with a sense of security.

As part of our initiatives taken in stations, we are proceeding with our plan to eliminate uneven ground by installing elevators, etc. and to install multi-functional toilets sequentially in stations used by 3,000 or more passengers per day. Basically in all of the stations, installations have been completed or are under way. We have completed installation of guiding blocks for visually impaired persons and braille blocks that prevent such persons from falling from platforms. Furthermore, in regard to braille blocks, we are sequentially replacing them with the type of braille blocks that indicate where platform edges are located. In addition, we are working to install platform screen doors to further enhance safety on platforms. On the Tokaido Shinkansen line, installation work commenced in FY2011, aimed at fencing off platforms at busy stations where Nozomi stops. Currently, all of the platforms at stations where Nozomi stops have been fenced off, except for Platforms No. 20 to 26 at Shin-Osaka Station, which are planned to be fenced off by FY2022. On the conventional lines, installation work commenced with the inbound and outbound Tokaido line platforms at Kanayama Station. They are planned to be put into use in 2021.

Further, nearly all of JR Central's trains include support facilities for passengers using a wheelchair.

Our station staff members offer assistance and guidance, whenever necessary, to customers with disabilities using our facilities.

### Setting general hospitals for local communities (Nagoya Central Hospital)

As an acute care hospital, Nagoya Central Hospital, located in Nakamura-ku, Nagoya, performs over 1,500 surgeries year round, providing some of the most advanced medical care services available using the latest medical equipment. The hospital is also a committed emergency health care provider, coordinating with local ambulance services to take in over 4,100 ambulance calls per year. Looking ahead, the Nagoya Central Hospital will look to leverage its distinctive features and expertise to further contribute to the local community.

Nagoya Central Hospital

### Participating in programs to vitalize local communities

#### SCMAGLEV and Railway Park - A museum of memories and dreams -

We opened the "SCMAGLEV and Railway Park" in March 2011 in Kinjo Futo, Minatoku, Nagoya, as part of our participation in the "Monozukuri (manufacturing) Culture Exchange Area Project", hosted by the City of Nagoya.

At the "SCMAGLEV and Railway Park", we introduce the progress of the high-speed railway technology through displays of rolling stock mainly of the Tokaido Shinkansen, as well as conventional lines and Superconducting Maglev. The number of visitors exceeded 4.8 million by the end of FY2018.

SCMAGLEV and Railway Park

#### Roll out of initiatives in coordination with communities located along our lines

As part of sales and marketing, we are deepening ties with communities located along our lines while rolling out initiatives such as the "Shupo" campaign, "Sawayaka Walking", and "Japan Highlights Travel".

Further, as an initiative aimed at revitalizing local communities along the railway lines we operate, in October 2016 we began selling locally produced goods on our "IIMONOTANBOU" website that introduces attractive features of local communities through local delicacies in cooperation with producers in communities.


Shupo


Japan Highlights Travel

IIMONOTANBOU website

### International Exchanges

JR Central proactively undertakes a wide range of international operations, such as gathering mainly railway information from around the world via the company's network of overseas offices (Washington D.C. , London, and Sydney), exchanging technological and management information with specialists in various countries, and issuing press releases overseas as part of our PR activities, etc.

We also offer technical cooperation in the field of railways in response to government requests, and promote human resources development by hosting interns from overseas universities and international organizations, etc.

Accepting interns from foreign universities

### Promotion of culture, art, and lifelong learning (JR Tokai Lifelong Learning Foundation)

JR Tokai Lifelong Learning Foundation is a public interest incorporated foundation established in October 1990 with the purpose of contributing to society through promotion of culture, art, and lifelong learning. The Foundation's main activities include holding exhibits of artwork of Hoshun Yamaguchi, known as a pioneer in new Japanese art at Hoshun Yamaguchi Memorial Hall which opened in Hayama-machi, Kanagawa in October 1991, and disclosing the ateliers and gardens that offer seasonal flowers and trees for public viewing. Further, in an effort to support lifelong learning, the Foundation engages in a wide range of cultural activities, including holding classes for painting, photography, etc. and organizing classes to learn about history and culture.

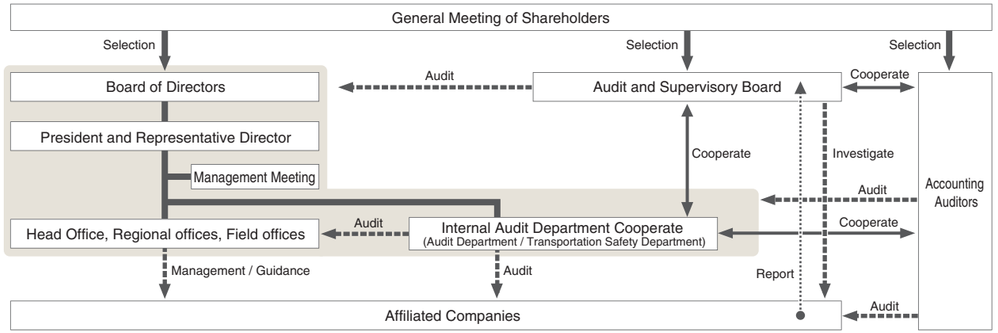
Hoshun Yamaguchi "Ryokutei" 1927

Hoshun Yamaguchi "Bokyo (esquisse)" 1953

# Corporate Governance

JR Central strives to enhance our corporate governance to ensure soundness, efficiency, and transparency of management, to implement long-term development of the company, and to enhance sustainable corporate value.

**JR Central's Corporate Governance System**




## Overview of Corporate Governance System

JR Central's Board of Directors is composed of 18 members (including three outside directors) and chaired by the company chairman.

JR Central also employs an auditor system, and its Audit and Supervisory Board consists of five members (four of whom are outside auditors). (The figures are as of June 21, 2019.)

The Board of Directors meets at least once a month, and makes legal and appropriate decisions upon fully discussing issues stipulated by the law, following conscientious briefings that are given to bring all concerned up to speed on the background of issues discussed, and the progress status for such, and issues of importance to management, and monitors the work of directors. A Management Meeting is held ahead of a Board of Directors meeting for in-depth discussion of important management issues. Chaired by the president, the Management Meeting is attended by all full-time directors, Audit and Supervisory Board members, and some corporate officers. We request members of the Audit and Supervisory Board to attend meetings of the Board of Directors, the Management Meeting and other important meetings, as we endeavor to ensure the legality of management measures during the deliberation process. Further, JR Central strives to ensure the appropriate execution of business by managing and providing guidance to affiliated companies where necessary.

Although we introduced the corporate officer system in May 2003, we introduced an executive system in June 2012 with the aim of further accelerating decision-making, enhancing discussions, and further clarifying roles for directors and corporate officers, who are responsible for operation, in order to appropriately respond to changes in the business environment influencing our management decisions in a timely manner.

Audit and Supervisory Board Members not only attend important meetings such as the Board of Directors and the Management Meetings, but also inspect the state of execution carried out at head offices, railway operations divisions, branch offices, field offices, and affiliated companies based on plans enacted by the Audit and Supervisory Board to strictly promote their audit work. To ensure effective audits by the members of the Audit and Supervisory Board, JR Central also provides an assistant system in which our employees are assigned as full-time staff to support auditors work.

Internal audits are performed by the Audit Department on the overall work of JR Central, its affiliated companies and related companies from the perspective of compliance, efficiency and effectiveness of operations. The audits are performed by checking business materials, contracts and other documents, observing operations, interviewing related persons and taking other methods, and the results are reported to management. In addition, to prevent operational and labor accidents, safety audits are performed by the Transportation Safety Department, and the results are also reported to management.

Based on generally accepted accounting standards, JR Central has appropriate accounting audits made by an audit corporation, and by Deloitte Touche Tohmatsu LLC, which has been selected to be our accounting auditor.

Audit and Supervisory Board Members, internal audit departments, and accounting auditors cooperate with each other by exchanging information periodically or as necessary and receive necessary information from each department involved in internal control to confirm the status of implementation of each item stipulated in the Fundamental Corporate Governance Policies.

## Outside Directors and Outside Audit and Supervisory Board Members

Based on our policy to make the most appropriate execution system for Outside Directors and Outside Audit and Supervisory Board Members, JR Central appoints three Outside Directors and four Outside Audit and Supervisory Board Members. The Company determines the level of independence of Outside Directors and Outside Audit and Supervisory Board Members based on the criteria for independence established by the Japan Exchange Group, Inc. in order to ensure that the opinions provided by Outside Directors and Outside Audit and Supervisory Board Members on matters raised are formed from an independent standpoint, and are based on the high degree of experience and insight accumulated outside the Company.

JR Central receives beneficial opinions about the execution of our business from Outside Directors and Outside Audit and Supervisory Board Members who provide advice based on their various experience and great insight gained outside of the company from their independent standpoints, both in and outside of the Board of Directors and Audit and Supervisory Board. We utilize the advice given by Outside Directors and Outside Audit and Supervisory Board Members to execute audits by Audit and Supervisory Board Members, internal audits, safety audits, accounting audits, as well as items stipulated in the Fundamental Corporate Governance Policies.

Each Outside Director and Outside Audit and Supervisory Board Member is submitted to the Tokyo Stock Exchange and the Nagoya Stock Exchange as an independent officer who does not have any conflicts of interest with general shareholders.

**● Election of Outside Directors and Outside Audit and Supervisory Board Members**

[As of June 21, 2019]

| | Name | Reasons for election |
|---|---|---|
| Directors | **Fujio Cho** | Mr. Cho was appointed as an Outside Director because of his corporate management experience and his great insight. |
| Directors | **Kenji Koroyasu** | Mr. Koroyasu was appointed as an Outside Director because of his experience as a public prosecutor and lawyer, and his great insight. |
| Directors | **Takashi Saeki** | Mr. Saeki was appointed as an Outside Director because of his corporate management experience and his great insight. |
| Audit and Supervisory Board Member | **Hajime Ishizu** | Mr. Ishizu was appointed as an Outside Audit and Supervisory Board Member because of his experience in transportation administration and his great insight. |
| Audit and Supervisory Board Member | **Fumio Yamashita** | Mr. Yamashita was appointed as an Outside Audit and Supervisory Board Member because of his experience in police administration and his great insight. |
| Audit and Supervisory Board Member | **Shigeo Kifuji** | Mr. Kifuji was appointed as an Outside Audit and Supervisory Board Member because of his experience as a public prosecutor and lawyer and his great insight. |
| Audit and Supervisory Board Member | **Kunihiro Nasu** | Mr. Nasu was appointed as an Outside Audit and Supervisory Board Member because of his experience as a lawyer and his great insight. |

**● State of main posts held concurrently for Outside Directors and Outside Audit and Supervisory Board Members**

[As of March 31, 2019]

| | Name | Name of other company, etc. | Titles |
|---|---|---|---|
| Directors | **Takashi Saeki** | FamilyMart UNY Holdings Co., Ltd. | Outside Director |
| Directors | **Takashi Saeki** | The Ogaki Kyoritsu Bank, Ltd. | Outside Audit and Supervisory Board Member |
| Directors | **Takashi Saeki** | Aichi Prefecture Public Safety Commission | Committee Chairman |
| Audit and Supervisory Board Member | **Shigeo Kifuji** | Mori Building CO., LTD. | Outside Audit and Supervisory Board Member |
| Audit and Supervisory Board Member | **Kunihiro Nasu** | Sangetsu Corporation | Outside Director (Audit Member) |

**● Activity status of Outside Directors and Outside Audit and Supervisory Board Members**

[FY2018]

| | Name | Principal activity |
|---|---|---|
| Directors | **Fujio Cho** | Attended all 12 meetings of the Board of Directors held in FY2018. In the Board of Directors meetings, he has stated his opinions based on his experience in corporate management, etc. |
| Directors | **Kenji Koroyasu** | Attended all 12 meetings of the Board of Directors held in FY2018. In the oard of Directors meetings, he has stated his opinions based on his experience as a public prosecutor and lawyer, etc. |
| Directors | **Takashi Saeki** | Attended all 12 meetings of the Board of Directors held in FY2018. In the Board of Directors meetings, he has stated his opinions based on his experience in corporate management, etc. |
| Audit and Supervisory Board Members | **Hajime Ishizu** | Attended all 12 meetings of the Board of Directors, and attended all 14 meetings of the Audit and Supervisory Board held in FY2018. In the Board of Directors meetings and meetings of the Audit and Supervisory Board, he has stated his opinions based on his experience in transportation administration, etc. |
| Audit and Supervisory Board Members | **Hiroyuki Ota** | Attended all 12 meetings of the Board of Directors, and attended all 14 meetings of the Audit and Supervisory Board held in FY2017. In the Board of Directors meetings and meetings of the Audit and Supervisory Board, he has stated his opinions based on his experience in police administration, etc. |
| Audit and Supervisory Board Members | **Shigeo Kifuji** | Attended all 12 meetings of the Board of Directors, and attended all 14 meetings of the Audit and Supervisory Board held in FY2017. In the Board of Directors meetings and meetings of the Audit and Supervisory Board, he has stated his opinions based on his experience as a public prosecutor and lawyer, etc. |
| Audit and Supervisory Board Members | **Kunihiro Nasu** | Attended all 10 meetings of the Board of Directors, and attended all 11 meetings of the Audit and Supervisory Board held since taking office on June 22, 2018. In the Board of Directors meetings and meetings of the Audit and Supervisory Board, he has stated his opinions based on his experience as a lawyer, etc. |

## Content of Compensation for Officers

Directors' remuneration is comprised of basic compensation, which is paid in a fixed amount, and a bonus. The basic compensation amount is determined through a comprehensive assessment of a director's position, length of service, and other factors while the bonus amount is determined in consideration of the performance of assigned duties.

The remuneration of outside directors includes only fixed basic compensation.

The Board of Directors passed a resolution to have the president determine specific remuneration amounts at his discretion after he explained the above remuneration policy at a Board of Directors meeting. A decision was made at the 25th Ordinary General Meeting of Shareholders held on June 22, 2012 to keep the annual amount of the directors' remuneration at 1.2 billion yen or less (and up to 50 million yen for the outside directors' remuneration). The amounts are ultimately determined by the president within these limits. When this decision was made at the 25th Ordinary General Meeting of Shareholders held on June 22, 2012, the number of directors was specified as being 20 or fewer in the company's Articles of Incorporation.

The remuneration of Audit and Supervisory Board members consists only of fixed basic compensation, and the appropriate amount is determined via discussions among Audit and Supervisory Board Members. A decision was made at the 20th Ordinary General Meeting of Shareholders held on June 22, 2007 to keep the annual amount of Audit and Supervisory Board members' remuneration at 250 million yen or less. The final amount is set within this limit. When this decision was made at the 20th Ordinary General Meeting of Shareholders held on June 22, 2007, the number of Audit and Supervisory Board members was specified as being 5 or fewer in the company's Articles of Incorporation.

**Total amount of compensation, etc. by officer classification, total amount of compensation, etc. by type, and number of target officers [FY2018]**

| Classification | Basic Compensation | | Bonus | | Total amount for the compensation/ bonus, etc. (Million yen) |
|---|---|---|---|---|---|
| | Number of target officers (People) | Total amount (Million yen) | Number of target officers (People) | Total amount (Million yen) | |
| Directors (Excluding Outside Directors) | 18 | 578 | 14 | 231 | 810 |
| Audit and Supervisory Board Members (Excluding Outside Auditors) | 2 | 49 | - | - | 49 |
| Outside Officers | 7 | 138 | - | - | 138 |

## Respond to the Corporate Governance Code

JR Central has announced its stance on, and the initiatives it has put in place, in relation to the Corporate Governance Code (hereafter, “the Code”) found within Corporate Governance Report*.

Further, The reasons for not implementing the principles of the code and matters disclosed based on each principle of the code are as follows.

* Corporate Governance Report can be found on the Japan Exchange Group, Inc. website.

### The reasons for not implementing the principles of the code

| General principle | Supplementary principle | Disclosed contents |
|---|---|---|
| **Principle 4-1**<br>Roles and responsibilities of the Board of Directors (1) | Supplementary principle<br>**4-1 2** | • In the railway business, the core pillar of JR Central’s business, ensuring safe and reliable transportation is an issue of utmost importance, and all aspects of our business, from our daily business operations, to employee training and capital investment, are implemented with the highest priority given to increasing the level of reliability of the services we provide and, as such, we do not implement a system of management whereby company-wide mid-term business plans are formulated and managerial targets are pursued in a manner that can neatly serve as a cross-sectional look at the state of the business at set moments.<br>• While JR Central neither formulate mid-term management plans nor establish numerical targets in this manner, the Company does promote its railway business from a long-term perspective. Specifically, in addition to the construction of the Chuo Shinkansen, which is now underway, other measures that require a long-term capital investment, such as large-scale renovation for the Tokaido Shinkansen, the implementation of earthquake countermeasures, and plans to upgrade rolling stock in service, are established with a long-term perspective in mind, and we are steadily proceeding forward these projects. Plans and results of other major measures are announced publicly as appropriate, and steady progress continues to be made in these areas. We will continue to announce annual income and expenditure plans, key measures, and capital investment plans each year in light of our immediate management environment, and will continue to steadily enhance our management foundation in order to firmly maintain a sound management outlook based on efficient operational management stemming from the securing of safe and reliable transportation. |
| **Principle 5-2**<br>Establishing and Disclosing Business Strategies and Business Plans | | |
| **Principle 4-10**<br>Use of Optional Approach | Supplementary principle<br>**4-10 1** | Three independent outside directors serve on our Board of Directors, and participate in discussions related to important management decisions and provide adequate oversight of the directors’ performance of duties.<br>Although we do not have an independent advisory committee, all three outside directors and part-time outside Audit Supervisory Board members exchange opinions with management on important management issues including appointments and remuneration. We also provide other information sharing opportunities that lead to constructive discussions and the exchange of opinions at Board of Directors meetings in order to ensure appropriate involvement and advice from independent outside directors. |

### Disclosure based on Corporate Governance Code principles

| General principle | Supplementary principle | Disclosed contents |
|---|---|---|
| **Principle 1-4**<br>Cross-shareholdings | | **[1] Policy concerning cross-shareholdings**<br>Our strategy for cross-holdings is grounded in the belief that maintaining and bolstering business relationships through holding other companies’ stock facilitates our operations and enhances our corporate value over the medium to long term. If any of our cross-holdings are deemed to be unnecessary in light of this policy, we will assess and possibly divest in them.<br>**[2] Assessment of cross-holdings**<br>Our Board of Directors examines whether it is beneficial to retain specific cross-holdings after scrutinizing them in light of the medium- to long-term economic rationale and outlook, purpose of owning such cross holdings, etc.<br>**[3] Criteria for the exercising of voting rights**<br>In terms of the exercising of cross-shareholding voting rights, JR Central closely examines the content of each resolution and decides how to vote in consideration of improving the corporate value of the Company over the mid- to long-term and the sustainable growth of business partners, etc. |
| **Principle 1-7**<br>Related party transactions | | All transactions involving Directors which may pose a conflict of interest, and transactions between Directors and the Company, require the approval of, and reporting to, the Board of Directors as stipulated in relevant laws and regulations and rules governing the Board of Directors. Every year confirmations are made on a regular basis with officers as to whether related party transactions have been made between officers or relatives and the Company. |
| **Principle 2-6**<br>Roles of Corporate Pension Funds as Asset Owners | | Since we do not offer a corporate-type defined benefit corporate pension plan, this principle does not apply to us. We use a defined contribution pension plan instead. We provide employees who participate in the defined contribution pension plan with adequate training on asset management since the plan affects their asset accumulation. |
| **Principle 3-1**<br>Full disclosure | | **[1]** • JR Central was founded in 1987 as part of the reform of the national railway system with a mission of integrally maintaining, developing and future-proofing the Tokaido Shinkansen, which serves as Japan’s main transportation artery linking Tokyo, Nagoya and Osaka, and the conventional line network in the Tokai region with a central focus around Nagoya and Shizuoka.<br>Furthermore, JR Central established its management philosophy to “Contribute to the development of Japan’s main transportation artery and social infrastructure” to reflect the direction the Company should aim at in line with the expanding scope of business activities going forward, including the operation, etc. of the three generations of railways, i.e. conventional lines, the Tokaido Shinkansen, and the Chuo Shinkansen. This management philosophy can be found on our website.<br>URL https://global.jr-central.co.jp/en/company/about/outline.html<br>• In the railway business, JR Central sets the highest priority on ensuring safe and reliable transportation. JR Central’s fundamental policy is to stably and fully execute the long-term social mission described in detail above through the continuous efforts of providing services that are preferred by customers as well as the streamlining of work, etc. This Management Philosophy is included in the A Message from the Management section of the Annual Report, and can be found at the following URL.<br>▶ **Annual Report**<br>URL https://global.jr-central.co.jp/en/company/ir/annualreport/ |
| **Principle 3-1**<br>Full disclosure | | • Specific measures to be implemented in the current business year based on this Management Philosophy are described in Key Measures and Capital Investment, and can be found at the URL below.<br>▶ **Key Measures and Capital Investment**<br>URL https://company.jr-central.co.jp/company/achievement/capital-investment/<br>**[2]** The basic outlook on corporate governance is described in 1.1. Basic Outlook in the Corporate Governance Report.<br>**[3]** Details on the policy and procedures concerning the setting of Director compensation are described in 2.1. [Director Compensation-related] Disclosure of Policy for Determining the Amount of Compensation and the Calculation Method for Such in the Corporate Governance Report.<br>**[4]** It is our policy to appoint individuals who are most fit to perform the given duties for the company as directors and Audit and Supervisory Board members. In accordance with this policy, we select candidates based on a comprehensive review of their abilities, knowledge, work history, etc. via a resolution of the Board of Directors and appoint them upon approval at a General Meeting of Shareholders. In appointing or dismissing a representative director, we follow the same policy as well as the provisions of relevant laws and the rules of the Board of Directors.<br>**[5]** Director and Audit and Supervisory Board member candidates are appropriately selected in consideration of their career background provided in the General Meeting of Shareholders material. We disclose information concerning the change of a representative director as required by the Tokyo Stock Exchange’s Timely Disclosure Rules. |
| **Principle 4-1**<br>Roles and responsibilities of the Board of Directors (1) | Supplementary principle<br>**4-1 1** | The Board of Directors is involved in decision making processes concerning matters stipulated in relevant laws and regulations and the articles of incorporation, matters put in their charge at a general shareholders’ meeting, and important matters related to the execution of business. A specific outline of such matters is established in the rules governing the Board of Directors.<br>Further, the Board of Directors clearly defines the division of duties and job functions for each department based on internal regulations, clarifies the scope of authority for Directors and corporate officers, while also defining the division of roles of Directors and areas in which corporate officers are put in charge. |
| **Principle 4-9**<br>Independence standards and qualification for Independent Directors | | The Company determines the level of independence of Outside Directors and Outside Audit and Supervisory Board Members based on the criteria for independence established by the Japan Exchange Group, Inc. in order to ensure that the opinions provided by Outside Directors and Outside Audit and Supervisory Board Members on matters raised are formed from an independent standpoint, and are based on the high degree of experience and insight accumulated outside the Company. |
| **Principle 4-11**<br>Premises for ensuring the effectiveness of the Board of Directors and the Audit and Supervisory Board | Supplementary principle<br>**4-11 1** | The appointment of Directors is conferred to General Shareholders Meetings following a resolution of the Board of Directors concerning the appropriate election of candidates deemed to be the most fitting for the role as selected based upon a general consideration of their abilities, knowledge, and work history, etc. The number of Directors elected, and the division of Director roles, etc. is determined based on a comprehensive consideration of the level of progress of each project at the time based on a policy of establishing the most appropriate management structure for the execution of the Company’s business activities. |
| | Supplementary principle<br>**4-11 2** | The status of Directors and Audit and Supervisory Board Members holding important concurrent positions is as described in business reports and General Shareholders Meeting Reference Materials. All currently held positions bear no hindrance on the Director or Audit and Supervisory Board Member’s ability to fulfill the roles and responsibilities of such a position for the Company. |
| | Supplementary principle<br>**4-11 3** | The Board of Directors of the Company meets once or more a month to make legal and appropriate decisions upon fully discussing issues stipulated by law, following conscientious briefings that are given to bring all concerned up to speed on the background of issues discussed, and the progress status for such. Further, the status of the execution of duties by Directors is monitored by having Directors report back on business functions under their charge when needed. JR Central receives valuable broad-view advice on management from Outside Directors, which is brought into consideration in regulating the management of the Company.<br>Additionally, round-table conferences for opinion exchanges between Outside Directors, Outside Audit and Supervisory Board Members and members of management are set up ahead of meetings of the Board of Directors in order to further improve the effectiveness of the Board of Directors.<br>Through the above-mentioned initiatives, we find at meetings of the Board of Directors that the effectiveness of the entire Board of Directors is ensured to a satisfactory degree. |
| **Principle 4-14**<br>Director and Audit and Supervisory training | Supplementary principle<br>**4-14 2** | All Directors and Audit and Supervisory Board Members of the Company have the sufficient ability and insight to fulfill their roles and responsibilities, and perform their duties with an appropriate sense of responsibility as entrusted by all shareholders, while continuing to refine their skills and knowledge by actively participating in external training programs, etc.<br>JR Central takes necessary measures to ensure that all Directors and Audit and Supervisory Board Members perform the duties required of them, such as in instances where relevant laws and regulations are revised, for example, by making the content of such revisions commonly known through meetings, etc., and by holding training events to share management issues faced by the Company so that the Company can make decisions concerning such issues in an appropriate manner. |
| **Principle 5-1**<br>Policy for constructive dialog with shareholders | | JR Central has established a Policy for Promoting Constructive Dialog with Shareholders as follows.<br>• JR Central positions the General Meeting of Shareholders as an important opportunity for dialog with shareholders and strives to improve the quality of questions and answers sessions in the meeting as a means of contributing to sustainable growth and enhancing corporate value over the mid- to long-term. All dialog with shareholders is overseen by the General Manager of the Administration Department, and questions, opinions and requests are fielded from shareholders and responded to in the form of an individual meeting or over the telephone, etc. where it is reasonable to do so.<br>• Of this, dialog with institutional investors is overseen by the Director General of the Corporate Planning Division, and the IR team is placed in the Business Administration Department, Corporate Planning Division in order to further improve shareholder dialog by organically coordinating with the Administration, Finance, Legal Departments, etc. Dialog response is the purview of the IR team, and a response is made together with members of management and Directors, where reasonable, based on a general consideration of the requests and interests, etc. put forth by the institutional investor. Specifically, we strive to improve upon dialog measures by not only holding individual meetings but also holding conference calls and facility tours, etc., where necessary, in addition to holding financial results briefings biannually.<br>• We also strive to enrich the broader provision of information to shareholders by sending reports on information presented at financial results briefings biannually, on top of posting this information on our website. Moreover, we work to ensure that a sufficient degree of information concerning decisions made on important measures and important capital investments reaches as large a number of stakeholders as possible using the mass media services to deliver detailed information at press conferences held by the President, and by presenting such information to the press.<br>• The content of discussions with shareholders is reported to members of management and, if necessary, feedback is given to the Board of Directors.<br>• Under no circumstances is insider information communicated during discussions with shareholders. Furthermore, the 14-day period in the lead up to the day in which financial results are announced each quarter is designated as a silent period, in which the Company refrains from discussing financial results. |

## Fundamental Corporate Governance Policies

JR Central resolved the Fundamental Corporate Governance Policies* in the Board of Directors meetings.

*The Fundamental Corporate Governance Policies can be found at the URL below.

URL https://company.jr-central.co.jp/company/about/governance.html

## Compliance / Whistle-blowing System

JR Central not only stipulates internal regulations based on the law, etc. but also conducts employee education on various occasions with the aim of thoroughly complying with the law, etc. when executing work. In addition, we also have established a whistle-blowing system. We have whistle-blowing contact points not only within the Company but also in an external law firm in order to establish a system in which employees, etc. can report any violation of the law, etc. at work. We also post fliers describing the whistle-blowing system and contact information for the contact points in all workplaces with the aim of widely disseminating the system.

## Risk-management System

JR Central has established the Railway Safety Promotion Committees, etc. at the head office, railway operation divisions, branch offices, and in each area from the perspective of preventing train and labor accidents, and formulating and promoting safety measures through an integrated organization that stretches from the head office to each field office.

JR Central also manages a control center, which plays a key role in information communication, on call 24 hours a day at each railway operation division to respond to emergencies, such as accidents and disasters, and has also established a fast-response restoration structure in which employees can be gathered anytime according to the scale or impact of an accident or disaster. Additionally, in preparation for emergencies such as large-scale natural disasters, we have established the second Shinkansen General Control Center that can substitute for the Shinkansen General Control Center for the Tokaido Shinkansen.

## Response to Internal Control Related to Financial Reporting

We periodically investigate the system and execution situation, etc. within JR Central and JR Central Group companies in accordance with a basic framework offered by the Business Accounting Council in order to confirm that they are effectively functioning. JR Central also engages in efforts to maintain the level of internal control related to financial reporting by providing feedback from these investigations to duties.

## Concept of Capital Policy and Shareholder Return

Our policy on dividends has always been to decide the specific dividend amount in accordance with the management environment and performance in each FY based on the principle of continuously providing stable dividends. JR Central considers that shareholder returns through dividends are appropriate in principle, and we do not plan to purchase additional treasury stock at this point.

We will finance our projects by issuing corporate bonds and borrowing, in addition to the long-term loan totaling 3 trillion yen acquired using the Fiscal Investment and Loan Program (FILP) to promote the construction of the Chuo Shinkansen, and we do not plan to use treasury shares or pursue capital increase at this point.

## Summary of the 32th Ordinary General Meeting of Shareholders (Held June 21, 2019)

The following resolutions were passed at the 32th Ordinary General Meeting of Shareholders held June 21, 2019.

**(1) Content of the resolved matters:**

Proposal 1 : Appropriation of retained earnings

(i) Matters concerning year-end dividends
Seventy five (75) yen per common share of the Company
(ii) Other matters concerning the appropriation of retained earnings:
- Line item relating to retained earnings showing an increase and the amount thereof
  General reserve: 380,000,000,000 yen
- Line item relating to retained earnings showing a decrease and the amount thereof
  Retained earnings carried forward: 380,000,000,000 yen

Proposal 2 : Election of one (1) Directors

Mr. Shunsuke Niwa was elected as Directors.

Proposal 3 : Election of five (5) Audit and Supervisory Board Member

Messrs. Hidenori Fujii, Hajime Ishizu, Fumio Yamashita, Shigeo Kifuji and Kunihiro Nasu were elected as Audit and Supervisory Board Member.

**(2) Number of votes, indicating approval, disapproval, and abstention regarding the resolved matters, requirements for the resolved matters to be adopted, and results of voting:**

| Proposal | Approval (number of votes) | Disapproval (number of votes) | Abstention (number of votes) | Approval Rate (%) | Result of Voting |
|---|---|---|---|---|---|
| **Proposal 1** | 1,754,966 | 11,278 | 1,193 | 98.73 | Approved |
| **Proposal 2** | | | | | |
| Shunsuke Niwa | 1,620,576 | 142,204 | 4,641 | 91.17 | Approved |
| **Proposal 3** | | | | | |
| Hidenori Fujii | 1,739,590 | 26,640 | 1,193 | 97.87 | Approved |
| Hajime Ishizu | 1,604,762 | 161,462 | 1,193 | 90.28 | Approved |
| Fumio Yamashita | 1,765,287 | 958 | 1,193 | 99.31 | Approved |
| Shigeo Kifuji | 1,679,407 | 86,837 | 1,193 | 94.48 | Approved |
| Kunihiro Nasu | 1,764,912 | 1,333 | 1,193 | 99.29 | Approved |

(Note) The requirements for the proposals to be resolved were as follows:
1. For proposal 1, a majority of votes indicating the approval of the shareholders who attended the meeting was required.
2. For proposals 2 and proposal 3, a majority of votes indicating the approval of the shareholders who attended the meeting with the attendance of shareholders representing 1/3 or more of all voting rights that can be exercised were required.

**(3) Reason for not adding some of the votes of shareholders who attended the ordinary general meeting of shareholders to the final number of votes:**

The votes of shareholders who attended the general meeting of shareholders on the meeting date, but have not been confirmed as to whether they indicated approval, disapproval or abstention, were not added to the final count because the requirements for the proposals to be resolved were already met by adding the votes from the exercise of voting rights as of the day before the general meeting of shareholders was held to the votes of shareholders who attended the general meeting of shareholders, which were confirmed as approvals or disapprovals, and the proposals were duly adopted in accordance with the Companies Act.

# Board of Directors, Audit and Supervisory Board Members, and Corporate Officers (as of June 21, 2019)

Chairman and Representative Director
**Koei Tsuge**

President and Representative Director
**Shin Kaneko**

Executive Vice President and Representative Director
**Yoshiki Suyama**

Executive Vice President and Representative Director
**Shun-ichi Kosuge**

Executive Vice President and Representative Director
**Mamoru Uno**

Executive Vice President and Representative Director
**Hideyuki Shoji**

## Board of Directors and Audit and Supervisory Board Members

Chairman and Representative Director
**Koei Tsuge**

President and Representative Director
**Shin Kaneko**

Executive Vice Presidents and Representative Directors

**Yoshiki Suyama** in charge of the Administrative Departments

**Shun-ichi Kosuge** in charge of the General Technology Division, and in charge of the Overseas High Speed Railway Project

**Mamoru Uno** (Ph.D.) in charge of the Chuo Shinkansen Promotion Division

**Hideyuki Shoji** in charge of the Shinkansen and Conventional Lines Operations Division, in charge of Transportation Safety Section

Chairman Emeritus and Director
**Yoshiyuki Kasai**

Counselor and Director
**Yoshiomi Yamada**

Directors
**Takanori Mizuno**
**Toshio Otake** (Ph.D.)
**Akihiko Ito**
**Mamoru Tanaka**
**Shunsuke Niwa**
**Hiroshi Suzuki**
**Torkel Patterson**
**Fujio Cho** (Outside)
**Kenji Koroyasu** (Outside)
**Takashi Saeki** (Outside)

Full-time Audit and Supervisory Board Members
**Hidenori Fujii**
**Hajime Ishizu** (Outside)
**Fumio Yamashita** (Outside)

Audit and Supervisory Board Members
**Shigeo Kifuji** (Outside)
**Kunihiro Nasu** (Outside)

## Corporate Officers

Senior Corporate Executive Officers

**Sumio Atsuchi** In charge of the Secretarial Department, the Audit Department, the Public Relations Department, the Administration Department and the Marketing Division

**Takanori Mizuno** Director General of the Chuo Shinkansen Promotion Division and in charge of controlling the Construction Section

Corporate Executive Officers

**Motoaki Terai** Director General of the Maglev Systems Development Division of the Chuo Shinkansen Promotion Division

**Toshio Otake** (Ph.D.) Director General of the General Technology Division and in charge of controlling the Tracks and Structures Section

**Atsuhito Mori** Deputy Director General of the General Technology Division, General Manager of the Technology Planning Department of the General Technology Division and in charge of controlling the Electrical Engineering Section

**Shin Iwata** Deputy Director General of the Chuo Shinkansen Promotion Division and General Manager of the Chuo Shinkansen Construction Department of the Chuo Shinkansen Promotion Division

**Akihiko Ito** Director General of the Business Promotion Division and in charge of the Property Management Department

**Mamoru Tanaka** Director General of the Shinkansen Operations Division and in charge of controlling the Rolling Stock Section

Corporate Officers

**Shunsuke Niwa** Director General of the Corporate Planning Division

**Hajime Ikuta** Deputy Director General of the Chuo Shinkansen Promotion Division

**Yutaka Hatano** Deputy Director General of the Maglev Systems Development Division of the Chuo Shinkansen Promotion Division and General Manager of Yamanashi Maglev Center of the Maglev Systems Development Division of the Chuo Shinkansen Promotion Division

**Hiroto Takeuchi** (Ph.D.) Deputy Director General of the Chuo Shinkansen Promotion Division and Deputy General Manager of the Chuo Shinkansen Construction Department of the Chuo Shinkansen Promotion Division

**Tatsuhiko Yamada** General Manager of the Finance Department

**Atsushi Honda** (Ph.D.) General Manager of the Construction Department, General Manager of the Nagoya Construction Subdivision of the Chuo Shinkansen Construction Department of the Chuo Shinkansen Promotion Division

**Tomohisa Furuhashi** General Manager of the Transportation Safety Department and in charge of controlling the Transportation Section

**Hiroshi Suzuki** Director General of the Conventional Lines Operations Division

**Masayuki Ueno** Deputy Director General of the Shinkansen Operations Division and General Manager of the Rolling Stock Department of the Shinkansen Operations Division

**Takayuki Oyama** Director General of the Shizuoka Branch Office

**Manabu Ishibashi** Deputy Director General of the Corporate Planning Division and General Manager of the Information Systems Department of the Corporate Planning Division

**Tatsuya Okajima** Deputy Director General of the General Technology Division and General Manager of the Technology Research and Development Department of the General Technology Division

**Kenichi Niimi** Deputy Director General of the Chuo Shinkansen Promotion Division and General Manager of the Planning and Promotion Department of the Chuo Shinkansen Promotion Division

**Yoshihiko Uchida** Deputy Director General of the Chuo Shinkansen Promotion Division and Deputy General Manager of the Chuo Shinkansen Construction Department of the Chuo Shinkansen Promotion Division

**Hiroshi Oshima** Deputy Director General of the Maglev Systems Development Division of the Chuo Shinkansen Promotion Division

**Shigeki Miyamoto** Deputy Director General of the Maglev Systems Development Division of the Chuo Shinkansen Promotion Division

**Masami Nitta** General Manager of the Administration Department

**Masahiro Yamamoto** General Manager of the Legal Affairs Department

**Masaya Sugiura** Director General of the Marketing Division

**Hajime Kobayashi** Deputy Director General of the Business Promotion Division

**Hiroshi Matsuo** General Manager of the General Education Center

**Atsushi Tsujimura** Deputy Director General of the Shinkansen Operations Division and General Manager of the Transportation and Marketing Department

**Michihiro Matsuzaki** Director General of the Kansai Branch Office

**Kentaro Takeda** General Manager of the Public Relations Department

**Kenji Hagihara** General Manager of the Personnel Department





# Corporate Data

## Profile

**Name**
CENTRAL JAPAN RAILWAY COMPANY (JR Central)

**Established**
April 1, 1987

**Business activities**
Railways business, Affiliated businesses

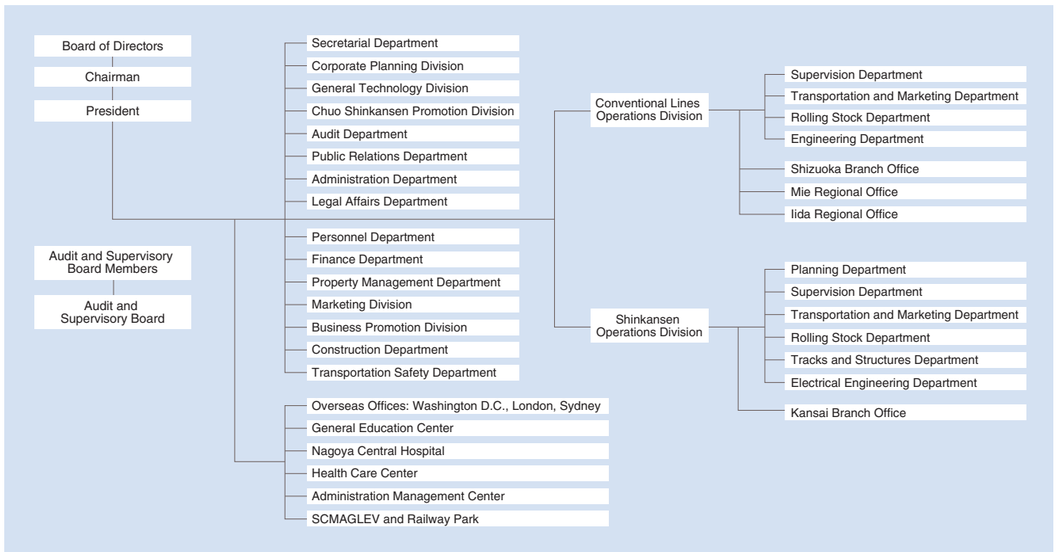
**Key data**
(As of the end of March 2019)

| | |
|---|---|
| Capital | 112.0 billion yen |
| Operating Revenues | 1,464.8 billion yen |
| Number of Shares Outstanding | 206 million |
| Share Listings | Nagoya / Tokyo Stock Exchange |
| Number of Shareholders | 84,757 |
| Number of Employees | 18,148 |
| Operating Kilometers | 1,970.8km |
| Number of Stations | 405 |
| Number of Rolling Stock | 4,848 |
| Double-and Multi-Tracked Section | 55.1%(1,086.8km) |
| Electrified Section | 76.7%(1,511.0km) |
| CTC System Adoption Rate | 97.5%(1,922.3km) |
| Automatic Signaling System Adoption Rate | 97.8%(1,927.3km) |

**Head Office and Other Main Offices**

| | |
|---|---|
| Head Office | Meieki 1-1-4, Nakamura-ku, Nagoya-shi, Aichi 450-6101, Japan<br>JR Central Towers |
| Head Office (Tokyo) | JR Central Shinagawa Building -A Wing 2-1-85, Konan, Minato- ku, Tokyo 108-8204, Japan |
| Conventional Lines Operations Division | JR Central Taiko Building, Meieki 1-3-4, Nakamura-ku, Nagoya- shi, Aichi 453-8520, Japan |
| Shizuoka Branch Office | 4, Kurogane-cho, Aoi-ku, Shizuoka-shi, Shizuoka 420-0851, Japan |
| Mie Regional Office | Ust-Tsu 12F, 700, Hadokoro-cho, Tsu-shi, Mie 514-0009, Japan |
| Iida Regional Office | 5356, Kami-Iida, Iida-shi, Nagano 395-0000, Japan |
| Shinkansen Operations Division | Marunouchi Chuo Building, 1-9-1, Marunouchi, Chiyoda-ku, Tokyo 100-0005, Japan |
| Kansai Branch Office | Shin-Osaka Hankyu Building 10F, 1-1-1, Miyahara, Yodogawa- ku, Osaka-shi, Osaka 532-0003, Japan |
| Washington D.C. Office | 900 17th Street, N.W., Suite 520, Washington, DC 20006, U.S.A. |
| London Office | 6th Floor, 4 Eastcheap, London, EC3M 1AE, U.K. |
| Sydney Office | Suite 5.01A, Level5, 20 Hunter Street, Sydney, NSW 2000, Australia |

## Organization Chart



## Corporate Data

### Operating Area

JR Central operates the Tokaido Shinkansen, the main transportation artery linking Tokyo, Nagoya, and Osaka, and a network of 12 conventional lines centered on the Nagoya and Shizuoka City areas.


#### Operating Kilometers by line

| | |
|---|---|
| **Tokaido Shinkansen** | 552.6km |
| **Conventional Lines** | |
| Tokaido Line | 360.1km |
| Gotemba Line | 60.2km |
| Minobu Line | 88.4km |
| Iida Line | 195.7km |
| Taketoyo Line | 19.3km |
| Takayama Line | 189.2km |
| Chuo Line | 174.8km |
| Taita Line | 17.8km |
| Kansai Line | 59.9km |
| Kisei Line | 180.2km |
| Meisho Line | 43.5km |
| Sangu Line | 29.1km |
| **Conventional Line Total** | 1,418.2km |
| **Total** | 1,970.8km |

### History

| | | |
|---|---|---|
| 1987 | **April** | • Central Japan Railway Company (JR Central) is established. |
| 1988 | **March** | • Three stations are established on the Tokaido Shinkansen (Shin-Fuji, Kakegawa, Mikawa-Anjo)<br>• JR Tokai Bus Company is established (now a consolidated subsidiary).<br>In April of the same year, automobile transport business is transferred to the company. |
| 1989 | **March** | • A new model diesel railcar is introduced to the Hida Express on the Takayama Line. |
| 1990 | **February** | • JR Central starts topographical and geological surveys along the Chuo Shinkansen following orders from the Minister of Transport. |
| | **June** | • JR Central applies to the Minister of Transport for approval of the construction plan of the Yamanashi Maglev Line and gains approval. |
| 1991 | **October** | • JR Central takes over the Tokaido Shinkansen facilities. |
| 1992 | **March** | • The first Nozomi begins commercial service on the Tokaido Shinkansen using Series 300 rolling stock. |
| | **July** | • JR Tokai Hotels Co., Ltd. is established (now a consolidated subsidiary). |
| | **December** | • JR Central Department Store Co., Ltd. is established. Company name changed to JR Tokai Takashimaya Co., Ltd. in September 1997 (now a consolidated subsidiary). |
| 1994 | **June** | • JR CENTRAL BUILDING CO., LTD. is established (now a consolidated subsidiary). |
| 1997 | **April** | • Running tests start on the Yamanashi Maglev Line. |
| | **October** | • JR Central lists on the first section of the Nagoya, Tokyo, and Osaka stock exchanges (integrated with the Tokyo Stock Exchange in July 2013) and also on the Kyoto Stock Exchange (merged with the Osaka Stock Exchange in March 2001). |
| 1999 | **March** | • Series 700 rolling stock is introduced on the Tokaido Shinkansen Nozomi. |
| | **December** | • Construction of JR Central Towers is completed |
| 2000 | **March** | • JR Nagoya Takashimaya opens (operated by JR Tokai Takashimaya Co., Ltd.). |
| | **May** | • Nagoya Marriott Associa Hotel opens (operated by JR Tokai Hotels Co., Ltd.). |
| 2001 | **March** | • JR Tokai Real Estate Co., Ltd. is established (now a consolidated subsidiary). |
| | **December** | • JR Central is excluded from the jurisdiction of the JR Law through the enactment of amendment to the JR Law. |
| 2002 | **July** | • A new research center is constructed in Komaki City in Aichi Prefecture. |
| 2003 | **October** | • Shinagawa Station on the Tokaido Shinkansen opens. The timetable is drastically revised by the increase of the maximum speed on all Tokaido Shinkansen trains to 270km/h. |
| 2005 | **July** | • The Japan National Railways (JNR) Settlement Headquarters, an independent division within the Japan Railway Construction, Transport and Technology Agency (JRTT), sells 600,000 shares of JR Central. |
| 2006 | **March** | • New Automatic Train Control (ATC) system is introduced to the Tokaido Shinkansen. |
| | **April** | • JR Central repurchases 268,686 shares of its treasury stock based on a decision made by the Board of Directors, authorized by the articles of incorporation.<br>• The JNR Settlement Headquarters within the JRTT completes the sale of all of its shares of JR Central by selling 286,071 shares of common stock of the company. |
| 2007 | **January** | • Application for changes to the Yamanashi Maglev Line Construction Plan is approved by the Minister of Land, Infrastructure and Transport (hereafter, the “Minister”) |
| | **July** | • JR Central introduces the new Series N700 rolling stock for the Tokaido Shinkansen Nozomi services. |
| 2008 | **October** | • JR Central makes NIPPON SHARYO, LTD. a consolidated subsidiary.<br>• JR Central submits a report to the Minister of Land, Infrastructure, Transport and Tourism (the “Minister”) concerning topographical and geological surveys of the Chuo Shinkansen in response to the order received in 1990. |
| | **December** | • JR Central starts conducting the remaining four surveys under Article 5 of the Nationwide Shinkansen Railway Development Act (hereinafter referred to as “the Act”) related to the Chuo Shinkansen in response to the order by the Minister. |
| 2009 | **May** | • JR Central cancels 90,000 shares of treasury stock. |
| | **December** | • JR Central submits a report regarding the remaining four surveys under Article 5 of the Act related to the Chuo Shinkansen in response to the order by the Minister received in 2008. |
| 2011 | **May** | • The Minister designates JR Central as the operator and constructor of the Chuo Shinkansen between Tokyo and Osaka City.<br>• The Minister approves the development plan and instructs JR Central to construct the Chuo Shinkansen. |
| 2012 | **May** | • JR Central cancels 90,000 shares of treasury stock. |
| 2013 | **February** | • JR Central introduces the new Series N700A rolling stock for the Tokaido Shinkansen Nozomi services. |
| | **August** | • Extension of the Yamanashi Maglev Line to 42.8km and upgrading of facilities are completed, and running operation is restarted. |
| 2014 | **October** | • The Minister approves the Construction Implementation Plan (Part 1) between Shinagawa and Nagoya along the Chuo Shinkansen. |
| 2015 | **March** | • The Taketoyo Line (between Obu and Taketoyo stations) is electrified.<br>• Increase in the maximum speed of the Tokaido Shinkansen to 285km/h. |
| 2016 | **November** | • Applies for long-term loan totaling 3 trillion yen (plan) using the Fiscal Investment and Loan Program (FILP) for the construction of the Chuo Shinkansen to the Japan Railway Construction, Transport and Technology Agency. |
| 2017 | **February** | • Construction of JR Gate Tower is completed. |
| | **April** | • Takashimaya Gate Tower Mall (operated by JR Tokai Takashimaya Co., Ltd.), Nagoya JR Gate Tower Hotel (operated by JR Tokai Hotels Co., Ltd.) open along with other facilities, resulting in the full-opening of JR Gate Tower. |
| 2018 | **March** | • The Minister approves the Construction Implementation Plan (Part 2) between Shinagawa and Nagoya along the Chuo Shinkansen. |

## Summary of Performance

**Segment-by-Segment Performance for FY2018**

JR Central Group continues to put top priority on ensuring safe and reliable transportation in its core railway business and works to further enhance its services. At the same time, the Group strives to take various initiatives, such as enhancing the business execution capabilities of employees, reinforcing facilities, and promoting efficiency while reducing costs across all areas of business execution, including capital investments, with a view to strengthening earning power. As a result, the overall railway performance for the term (passenger-kilometers) rose favorably in terms of both business and tourism use, increasing by 2.4% YoY to 65.736 billion passenger-kilometers. Operating revenue also increased by 3.1% YoY to 1,878.1 billion yen, ordinary income increased by 8.4% YoY to 632.6 billion yen, and net income attributable to owners of the parent increased by 10.9% YoY to 438.7 billion yen.

Long-term debt was 4,851.1 billion yen, down 5.0 billion yen from the end of the previous fiscal year.

The year-end dividend was set at 75 yen, which increased by 5 yen per share from the forecast of 70 yen per share, which was announced in January this year. As a result, the annual dividend came to 145 yen per share.

Business performance in each segment was as follows.

### 1) Transportation

JR Central steadily moved forward with the large-scale renovation work of the Tokaido Shinkansen while continuously working to achieve cost reductions to maintain and enhance the soundness of civil engineering structures. As a precaution against earthquakes, we took derailment and deviation countermeasures on the entire Tokaido Shinkansen line, such as installing safer derailment prevention guards. We also worked on setting more flexible train services in accordance with demand during seasons and time frames with increased customer use by applying the "10 Nozomi Timetable"(operating up to 10 Nozomi services in both directions) and welcomed a large of number of customers using our services. Furthermore, we proceeded with the launch of the N700A (3rd edition), while moving forward with the enhancement work to reflect features of the third-edition trainsets, such as reducing the stopping distance of the Earthquake Brake on existing rolling stock. We conducted basic performance tests using N700S test trains to validate acceleration and braking performance in 16- and 8-car trainset. We also conducted basic performance tests using battery-based self-propelled system and commenced long-term durability tests. In addition, we proceeded with the installation of platform screen doors on Platforms No. 20 to 26 at Shin-Osaka Station to ensure safe and reliable transportation and further improve our transportation services.

In terms of conventional lines, we have continued proceeding with earthquake countermeasures, such as anti-earthquake constructions in the Nagoya Workshop, which conducts general overhauls for conventional line rolling stock, etc., in addition to anti-quake reinforcement for elevated track columns, etc. We have also systematically promoted measures against rainfall, measures against falling rocks, and the improvement of safety devices on grade crossings. We flexibly increased the frequency or the number of train cars to meet demands for the "Shinano", "Hida", and other limited express trains.

We also proceeded with the development of platform screen doors to adapt them to our conventional lines, which are characterized by their wide variation in car model and train formation. We completed validation testing at Kanayama Station and prepared for the installation of platform screen doors on the Tokaido Honsen-line platforms at the station. Moreover, we worked to replace the existing braille blocks with those that indicate where platform edges are located, completing the replacement work at all stations handling more than 3,000 passengers. In addition, we changed the onboard ticket examination method on limited express and other trains by using new portable terminals provided to conductors. Thus, we worked hard to ensure safe and reliable transportation and further improve our transportation services. Lastly, it should also be noted that we quickly restored the Takayama Honsen line, which was damaged by heavy rains in July 2018, and resumed services on the entire line on November 21, 2018.

Our initiatives related to both the Shinkansen and conventional lines included measures to detect and handle irregularities in facilities and trains as quickly as possible and practical training to improve readiness in various emergencies such as natural disasters and contingencies. We also took precautions against earthquakes, such as taking measures to prevent suspended ceilings from falling in stations. Moreover, we started providing up-to-date information on the status of services via Twitter, in addition to detailed information published on our website, such as real-time train locations and schedule delays.

As part of our sales and marketing, we conducted aggressive promotional activities so that more customers would use our online reservation and ticketless boarding services for the Tokaido and Sanyo Shinkansen, known as "Express Reservation" and "smartEX." We also worked to promote the sales of tourist products, such as "EX Nozomi Family Hayatoku," spurring a wide range of demand.

Moreover, we rolled out various campaigns using tourism resources, including Kyoto, Nara, Tokyo, Hida, and Ise-Shima, and introduced relevant tourist products. We collaborated with local governments, travel agencies, etc. through the "Aichi Destination Campaign" organized jointly by six JR operators to develop attractive tourism resources and products and operate sightseeing trains. Through campaigns such as "Japan Highlights Travel" and "Shupo," we strengthened ties with local communities to expand the use of our transportation services. In addition, we improved convenience for international tourists by introducing a station numbering system on our conventional lines, starting a free WiFi service on the Tokaido Shinkansen and the "Hida" limited express lines, replacing some of the existing Japanese-style toilets with Western-style toilets on the "Hida" limited express trains, and using tablets, smartphones, and other devices to increase train and station announcements in English. Meanwhile, we expanded the service area of TOICA by installing the system at 18 stations on three lines in March.

Due to the successive use of the railway for business and tourism, performance for the Tokaido Shinkansen increased by 2.8% YoY to 56.277 billion passenger-kilometers for FY2017. For conventional lines, it was 9.456 billion passenger-kilometers that is the same level as the previous fiscal year.

In our bus business, we have worked to create products tailored to customers' needs and ensure profitability with safety as the first priority.

As a result of the aforementioned, operating revenues for the term increased by 2.6% YoY to 1,461.3 billion yen, and operating income increased by 6.7% YoY to 664.8 billion yen.

### 2) Merchandise and Other

In Merchandise and Other, we worked to increase our earning power by rolling out a campaign to celebrate the first anniversary of Takashimaya Gate Tower Mall and promoting sales and marketing in a collaboration by JR Nagoya Takashimaya and Takashimaya Gate Tower Mall to meet the needs of customers. Moreover, we strengthened the competitiveness of stores within our stations by renovating them and increasing their product lines.

As a result of the aforementioned, operating revenues for the term increased by 3.8% YoY to 264.9 billion yen, and operating income increased by 17.2% YoY to 9.6 billion yen.

### 3) Real Estate

In Real Estate, we worked to strengthen our sales and competitive capabilities by opening Tokyo Gourmet Zone in the restaurant area of the First Avenue Tokyo Station and ASTY Shinfuji at Shin-Fuji Station and renovating Shokusaikan in the Shizuoka Station Terminal Building "PARCHÉ." We also proceeded with the project to redevelop the land where our company houses used to be located, selling condominium units at Central Garden Residence Gifu Kano in Gifu City and at Central Garden Residence Kariya, which was developed in Kariya City, Aichi Prefecture, in the second phase of the project. Eventually, all of the units were sold.

As a result of the aforementioned, operating revenues for the term increased by 5.3% YoY to 82.1 billion yen, and operating income increased by 9.4% YoY to 20.2 billion yen.

### 4) Other

In our hotel business, we have worked on creating attractive products and on enhancing our sales capabilities. We have also worked to offer higher quality services to respond to the needs of foreign customers. Further, we moved ahead with preparations, including marketing and promotional activities.

With our travel business, we have proactively marketed attractive travel products and promoted sales of such products in collaboration with travel campaigns for Kyoto, Nara, Tokyo, Hida, Ise-Shima, etc.

In our rolling stock manufacturing business, we have endeavored to increase orders for and the manufacture of rolling stock, construction machinery, and other items.

As a result of the aforementioned, operating revenues for the term decreased by 0.2% YoY to 261.0 billion yen, and operating income increased by 21.9% YoY to 16.1 billion yen.

### Efforts for FY2019

In the railway business, next fiscal year, we will continue to place the highest priority on safe and reliable transportation, steadily promoting the large-scale renovation of civil engineering structures as well as anti-seismic construction, such as installing derailment and deviation countermeasures on the Tokaido Shinkansen line. Moreover, in order to further enhance our transportation services, we will introduce a "Nozomi 12 Timetable" in the spring of 2020, when we complete the update to the N700A type (third generation), so that all trains can run at the same highest speed of 285km/h. In addition, we will prepare for the commercial operation of the N700S next-generation Shinkansen rolling stock, which is scheduled for July 2020. We will also produce hybrid test trains and start test runs for the next-generation limited express rolling stock on conventional lines. Meanwhile, we will proceed steadily with the Chuo Shinkansen Project involving the Superconducting Maglev System, while giving serious consideration to safety, the environment, and coordination with local communities. We will take steady steps forward also in pursuing overseas deployment of high-speed railway systems. Simultaneously, JR central will operate JR Central Towers and JR Gate Tower in an increasingly uniform manner and respond to diverse needs by demonstrating synergistic effects to the fullest to boost earnings. To smoothly move forward with these initiatives, JR Central will continue to work on strengthening its earning power and achieving ceaseless improvement in its technological capabilities. We will also strive to enhance efficiency and reduce costs in all areas of our business execution, including making capital investments, with a view to enhancing our management capabilities.

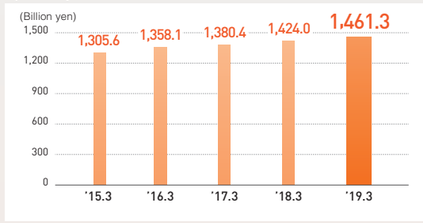
**■Performance forecast for FY2019(consolidated)**

| | (Billion yen) | (YoY) |
|---|---|---|
| Operating Revenues | 1,891.0 | 100.7% |
| Operating Income | 676.0 | 95.2% |
| Ordinary Income | 599.0 | 94.7% |
| Net income attributable to owners of the parent | 416.0 | 94.8% |

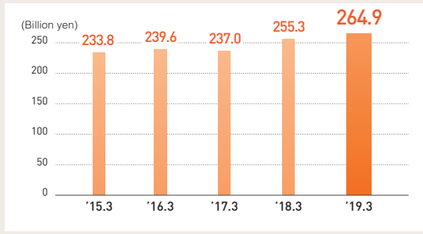
Note: As of the release of the financial report for FY2018.

### ■Shifts in Operating Revenues

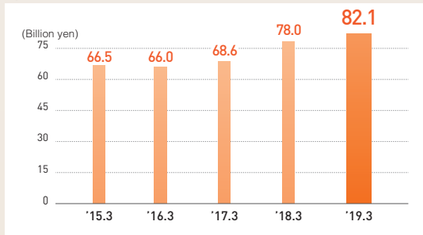
**1) Transportation**



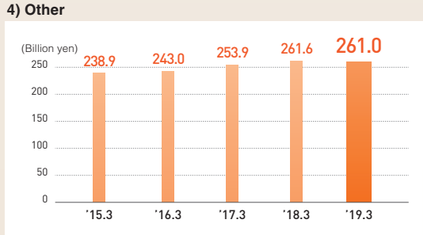

**2) Merchandise and Other**




**3) Real Estate**




**4) Other**




Note: Operating revenues by segment include sales to other segments in addition to sales to external customers

# Corporate Data

## Financial Highlights

### ▶ Consolidated

| | FY2014 | FY2015 | FY2016 | FY2017 | FY2018 |
|---|---|---|---|---|---|
| | (Billion yen) | (Billion yen) | (Billion yen) | (Billion yen) | (Billion yen) |
| Operating Revenues | ¥1,672.2 | ¥1,738.4 | ¥1,756.9 | ¥1,822.0 | ¥1,878.1 |
| Operating expenses | 1,165.6 | 1,159.7 | 1,137.4 | 1,160.0 | 1,168.3 |
| Operating Income | 506.5 | 578.6 | 619.5 | 662.0 | 709.7 |
| Income before income taxes | 404.6 | 508.1 | 560.0 | 561.8 | 630.2 |
| Net income attributable to owners of the parent | 264.1 | 337.4 | 392.9 | 395.5 | 438.7 |
| Depreciation and amortization | 271.5 | 242.3 | 225.3 | 216.0 | 211.2 |
| Capital expenditure*1 | 214.5 | 238.3 | 329.9 | 325.6 | 414.3 |
| Total assets | 5,217.9 | 5,268.5 | 7,052.6 | 8,908.6 | 9,295.7 |
| Total equity | 2,063.9 | 2,352.5 | 2,726.7 | 3,084.7 | 3,508.0 |
| Equity | 2,020.1 | 2,316.3 | 2,692.4 | 3,055.4 | 3,471.2 |
| Equity Ratio | 38.7% | 44.0% | 38.2% | 34.3% | 37.3% |
| Operating income/Total assets | 9.7% | 11.0% | 10.1% | 8.3% | 7.8% |
| Return on Equity | 14.0% | 15.6% | 15.7% | 13.8% | 13.4% |
| | (Yen) | (Yen) | (Yen) | (Yen) | (Yen) |
| Earnings per Share | ¥1,342 | ¥1,714 | ¥1,996 | ¥2,015 | ¥2,238 |
| Annual Dividends per share | 120 | 125 | 135 | 140 | 145 |

*1: Increase in tangible fixed assets and intangible fixed assets

### ▶ Non-consolidated

| | FY2014 | FY2015 | FY2016 | FY2017 | FY2018 |
|---|---|---|---|---|---|
| | (Billion yen) | (Billion yen) | (Billion yen) | (Billion yen) | (Billion yen) |
| Operating Revenues | ¥1,306.6 | ¥1,357.9 | ¥1,380.7 | ¥1,427.4 | ¥1,464.8 |
| Railways Business | 1,297.8 | 1,349.7 | 1,371.9 | 1,414.8 | 1,452.0 |
| Affiliated Businesses | 8.7 | 8.2 | 8.8 | 12.5 | 12.8 |
| Operating expenses | 831.1 | 800.3 | 784.9 | 802.1 | 797.1 |
| Railways Business | 826.5 | 794.1 | 779.9 | 793.5 | 788.7 |
| Affiliated Businesses | 4.6 | 6.1 | 4.9 | 8.6 | 8.3 |
| Operating Income | 475.4 | 557.6 | 595.8 | 625.2 | 667.7 |
| Income before income taxes | 397.8 | 491.7 | 541.1 | 549.5 | 590.1 |
| Net income | 260.2 | 328.6 | 381.8 | 384.4 | 414.0 |
| Depreciation and amortization | 255.8 | 227.0 | 210.9 | 198.6 | 193.4 |
| Total capital investments | 257.2 | 259.1 | 330.8 | 384.5 | 448.8 |
| Total assets | 5,013.4 | 5,059.4 | 6,814.3 | 8,726.4 | 9,092.1 |
| Total equity | 1,931.0 | 2,219.9 | 2,582.8 | 2,929.8 | 3,315.4 |

## Other Related Materials

### • List of consolidated subsidiaries (Table 1)

| Segment | Company Name | Capital (Million yen) | Capital Ratio (%) | Main Business |
|---|---|---|---|---|
| Transportation | JR Tokai Bus Company | 1,747 | 100.0 | Bus services |
| | JR TOKAI LOGISTICS COMPANY | 300 | 90.0 | Logistics business |
| | Tokai Transport Service Company | 295 | 100.0 | Railway business, entrusted business |
| Merchandise and Other | JR Tokai Takashimaya Co., Ltd. | 10,000 | 59.2 | Department store operations |
| | JR-CENTRAL PASSENGERS Co., Ltd. | 998 | 100.0 | Wholesale and retail sales, food and beverage service |
| | Tokai Kiosk Company | 700 | 100.0 | Wholesale and retail sales |
| | Tokai Food Service co., Ltd. | 295 | 51.6 | Food and beverage service |
| | JR Tokai Corporation | 100 | 70.0 | Wholesale and retail sales |
| Real Estate | JR CENTRAL BUILDING CO., LTD. | 45,000 | 100.0 | Real estate leasing |
| | JR Tokai Real Estate Co., Ltd. | 16,500 | 100.0 | Real estate leasing and sales |
| | Shin-Yokohama Station Development Co., Ltd. | 9,304 | 100.0 | Real estate leasing |
| | Toyohashi Station Building Co., Ltd. | 1,880 | 52.5 | Real estate leasing |
| | Tokyo Station Development Co., Ltd. | 1,750 | 100.0 | Real estate leasing |
| | Shizuoka Terminal Development Company Limited | 624 | 67.0 | Real estate leasing |
| | HAMAMATSU TERMINAL DEVELOPMENT CO., Ltd. | 600 | 76.8 | Real estate leasing |
| | Nagoya Station Area Development Corporation | 480 | 100.0 | Real estate leasing |
| | JR DEVELOPMENT AND MANAGEMENT CORPORATION OF SHIZUOKA | 363 | 100.0 | Real estate leasing |
| | JR Development and Management Corporation of Kansai | 30 | 100.0 | Real estate leasing |

| Segment | Company Name | Capital (Million yen) | Capital Ratio (%) | Main Business |
|---|---|---|---|---|
| Other | JR Tokai Hotels Co., Ltd. | 14,000 | 100.0 | Hotel business |
| | JR Tokai Tours | 490 | 70.0 | Travel agency services |
| | JR TOKAI AGENCY CO., LTD. | 61 | 90.0 | Advertising |
| | NIPPON SHARYO, LTD. | 11,810 | 51.2 | Manufacturing of railway rolling stock |
| | JR TOKAI CONSTRUCTION Co., Ltd. | 300 | 100.0 | Construction |
| | CHUOH LINEN SUPPLY Co., Ltd. | 150 | 87.6 | Linen supply services |
| | JR TOKAI Information Systems Company | 100 | 100.0 | Development, improvement and maintenance of systems |
| | The Japan Mechanised Works and Maintenance of Way Co., Ltd. | 100 | 92.1 | Track maintenance and inspection |
| | JR Tokai Financial Management Co., Ltd. | 80 | 100.0 | Contracted accounting operations and financial business |
| | Tokai Rolling Stock & Machinery Co., Ltd. | 80 | 88.4 | Rolling stock and machinery inspections and repair |
| | JR Central Consultants Company | 50 | 100.0 | Construction consulting business |

Note: Two affiliated companies, SHINSEI TECHNOS CO., LTD. and RAILWAY INFORMATION SYSTEMS CO., LTD., are accounted for by the equity method.

### • Learning safety from accidents (Column 1)

"Learning Safety from Accidents," a booklet that uses illustrations to explain past accidents and disasters in an easy-to-understand manner, has been published in seven volumes since its first volume was released in FY2007. In FY2018, we also developed digital content (DVD), combining the illustrations with action, voices and sound effects, and recorded it on DVDs. These materials were distributed to the General Education Center and field offices for use in training and workplace OJT.

The above-mentioned booklet and DVD were designed around the theme of applying lessons learned from past experiences. They are used as training materials to accurately understand why rules and facilities are as they are.

### • Shortening of arrival time by speed increase (Column 2)

With the inauguration of the Tokaido Shinkansen in 1964, the time required to travel between Tokyo and Osaka was shortened to 3 hours and 10 minutes from 6 hours and 30 minutes (4 hours at the time of inauguration). Furthermore, with the introduction of the "Nozomi" in 1992, that time was shortened to 2 hours and 30 minutes.

In October 2003, the investment in rolling stock and ground facilities that we had continuously engaged in for approximately 15 years culminated with the upgrading of the maximum speed of all trains to 270 km/h and the drastic timetable revision that resulted in a maximum of seven Nozomi services operating each hour.

With the introduction of the "10 Nozomi Timetable (operating up to 10 Nozomi services in both directions)" in 2014 and the increase in maximum speed to 285 km/h in 2015, the shortest travel time between Tokyo and Osaka has now been reduced to 2 hours and 22 minutes.

**Acceleration by increasing the speed of the Tokaido Shinkansen**

| | | Tokyo - Osaka Shortest travel time |
|---|---|---|
| October 1, 1964 | Series 0 210km/h | 4 hr (3 hr 10 min in the following fiscal year) |
| November 1, 1986 | Series 100 220km/h | 2 hr 52 min |
| March 14, 1992 | Series 300 270km/h | 2 hr 30 min |
| March 14, 2015 | N700A 285km/h | 2 hr 22 min |

# Management's Discussion and Analysis of Consolidated Financial Condition and Results of Operations (MD&A)

### *1) Overview of FY2017*

In FY2017, amid the continuing satisfactory level of railway use, JR Central strived to enhance services placing the top priority on ensuring safe and reliable transportation in the railway business, which is the core of our operations.

In our railway business, in terms of the Tokaido Shinkansen, we have steadily proceeded a large-scale renovation and earthquake countermeasures, such as countermeasures to derailment and deviation. Also, we utilized the "10 Nozomi Timetable" to schedule trains flexibly. Furthermore, we have introduced the N700A(3rd edition) and reflected the features of the third-edition trainsets on existing rolling stock.

In terms of the conventional lines, we have systematically promoted earthquake countermeasures, such as anti-earthquake reinforcement for elevated columns, etc., measures against rainfall and falling rocks, and improvement of safety devices on grade crossings. Also, we flexibly increased the frequency and the number of train cars to meet demand for the "Shinano", "Hida", and other limited express trains.

In terms of sales and marketing, we have promoted proactive initiatives, such as measures to expand our tourist products in order to stimulate demand for use of our services.

In non-railway business, we worked to enhance existing businesses. We have conducted integrated management of both the JR GATE TOWER, which fully opened in April 2017, and the JR CENTRAL TOWERS and carried out active sales and advertising promotion.

Our commitment to the aforementioned series of measures led to continuing favorable railway transportation volume for both business and tourism, resulting in increase in transportation revenues for JR Central, while we saw an increase in revenue from the opening of the JR GATE TOWER. As a result, overall consolidated operating revenues increased. Overall consolidated operating expenses increased because of increase in expenses relating to the JR Central's technological development and the opening of the JR GATE TOWER. Moreover, non-operating income/loss worsened due to an increase in interest expenses from the long-term debt for the Chuo Shinkansen construction.

Despite the increase in consolidated operating expenses and non-operating loss, both revenue and income increased for FY2017 with operating revenue ending at 1,822.0 billion yen, operating income at 662.0 billion yen, and net income attributable to owners of the parent at 395.5 billion yen.

### *2) Operating Performance*

**a) Operating Revenue**

Operating revenue increased by 65.0billion yen (3.7%) YoY to 1,822.0 billion yen.

In terms of our transportation business, JR Central's transportation revenues increased by 42.4billion yen (3.2%) YoY to 1,358.3 billion yen. Passenger volume on the Tokaido Shinkansen increased by 3.5% YoY, pushing up transportation revenues 3.4% YoY to 1,253.2 billion yen. Passenger volume on conventional lines increased by 1.0% YoY with transportation revenues increasing 1.1% YoY to 105.1 billion yen.

In our non-transportation businesses, operating revenues for the merchandise and other segment, real estate segment, and other segment increased respectively by 7.7%, by 13.7%, and by 3.0% YoY.

**b) Operating Expenses**

Operating expenses increased by 22.5 billion yen (2.0%) YoY to 1,160.0 billion yen because of an increase in expenses relating to the Company's technological development and the opening of the JR GATE TOWER despite of decrease in depreciation and amortization associated with the Yamanashi Maglev Line.

**c) Operating Income**

Operating income increased by 42.4 billion yen (6.9%) YoY to 662.0 billion yen.

**d) Non-Operating Income/Loss**

Non-operating income/loss worsened 22.8 billion yen over the FY2016 due to an increase in interest expenses from the long-term debt for the Chuo Shinkansen construction.

**e) Net Income Attributable to Owners of the Parent**

As a result, net income attributable to owners of the parent increased by 2.5 billion yen (0.7%) YoY to 395.5 billion yen.

### *3) Cash Flow*

Cash and cash equivalents (hereinafter, "capital") as of the end of FY2017 increased by 367.8 billion yen YoY to 782.4 billion yen.

Capital gained from operating activities increased by 29.0 billion yen YoY to 609.5 billion yen due to a decrease in income tax paid and the fact that non-consolidated transportation revenues of JR Central increased as the use of JR Central's services for business as well as tourism maintained high levels.

Capital expended through investing activities decreased by 233.0 billion yen YoY to 1,676.4 billion yen due to an increase in proceeds from the reversal of money held in trust for the Chuo Shinkansen construction and a drop in expenditures (net) associated with fund management.

Capital gained from financing activities increased by 9.5 billion yen YoY to 1,434.7 billion yen mainly due to a decrease in the amount of liquidation of long-term debt and payables despite a drop in the amount of bonds issued.

(Reference)

Substantial free cash flow (amount obtained by subtracting an expenditure for purchase of property, plant, and equipment, and intangible assets, etc. (306.9 billion yen) within net cash used in investing activities from net cash provided by operating activities (609.5 billion yen)) increased by 52.1 billion yen YoY to 302.5 billion yen.

### *4) Long-Term Debt and Payables*

During FY2017, the balance of long-term debt and payables increased to 4,856.2 billion yen both on a consolidated and non-consolidated basis, mainly due to borrowing of 1,500.0 billion yen in long-term debt for the Chuo Shinkansen construction. The balance of long-term debt and payables other than long-term debt for the Chuo Shinkansen construction decreased by 12.8 billion yen to 1,856.2 billion yen on a non-consolidated basis.

When JR Central purchased the Tokaido Shinkansen facilities in October 1991, we were burdened with total long-term debt and payables of more than five times our annual transportation revenues, including the liabilities inherited from Japanese National Railways at the time of its break-up and privatization. We regarded reducing long-term debt and payables as our most important financial task, and we have endeavored to trim debt and payables as rapidly as possible. Consequently, the 5,456.2 billion yen in total long-term debt and payables at the end of March 1992, immediately after we acquired the Tokaido Shinkansen assets, has been reduced to 1,856.2 billion yen (excluding long-term debt for the Chuo Shinkansen construction).

JR Central will continue working to enhance the earning capability and make every effort to pursue efficiency and cost reduction across all operations including capital investment while steadily promoting efforts to strengthen our managerial foundation for various businesses, such as the Tokaido Shinkansen, and to construct the Chuo Shinkansen. At the same time, we will strive to improve our financial strength as the entire group by, among others, procuring capital effectively as well as efficiently.

### *5) Net Asset Balance*

Net asset balance at the end of FY2017 increased by 358.0 billion yen over the end of FY2016 to 3,084.7 billion yen, and our equity ratio decreased from 38.2% at the end of FY2016 to 34.3% at the end of FY2017.

### *6) Capital Procurement*

In order to procure capital from various sources and facilitate smooth fundraising, we have acquired issuer credit ratings from Moody's Japan, Rating and Investment Information, Inc., Standard and Poor's Ratings Japan K.K. and Japan Credit Rating Agency, Ltd. The rating is respectively Aa3, AA, AA-, and AAA.

Furthermore, in order to secure short-term liquidity, we have established a commitment of 100 billion yen as of the end of FY2017.

# Consolidated Balance Sheet

Central Japan Railway Company and Consolidated Subsidiaries — March 31, 2019

| ASSETS | Millions of Yen (Note 2) | | Thousands of U.S. Dollars (Note 2) |
|---|---|---|---|
| | **2019** | 2018 | **2019** |
| **CURRENT ASSETS:** | | | |
| Cash and cash equivalents (Note 12) | **¥ 751,636** | ¥ 782,454 | **$ 6,833,054** |
| Money held in trust for the Chuo Shinkansen construction (Notes 3.c and 12) | **2,670,591** | 2,840,931 | **24,278,100** |
| Trade receivables (Note 12) | **112,845** | 102,021 | **1,025,863** |
| Allowance for doubtful accounts | **(61)** | (13) | **(554)** |
| Inventories | **46,358** | 38,116 | **421,436** |
| Prepaid expenses and other | **49,322** | 41,258 | **448,381** |
| ***Total current assets*** | ***3,630,692*** | *3,804,768* | ***33,006,290*** |
| **NONCURRENT ASSETS:** | | | |
| Investments and other assets: | | | |
| Investment securities (Notes 4 and 12) | **663,350** | 294,242 | **6,030,454** |
| Investments in and advances to unconsolidated subsidiaries and affiliates (Note 4) | **17,588** | 18,212 | **159,890** |
| Asset for retirement benefits (Note 8) | **7,939** | 5,652 | **72,172** |
| Deferred tax assets (Note 11) | **170,574** | 166,438 | **1,550,672** |
| Prepaid expenses and other | **98,926** | 74,634 | **899,327** |
| ***Total investments and other assets*** | ***958,378*** | *559,181* | ***8,712,527*** |
| Property, plant and equipment (Note 3.f): | | | |
| Buildings and structures | **4,863,017** | 4,827,013 | **44,209,245** |
| Machinery, rolling stock and vehicles | **1,426,907** | 1,415,850 | **12,971,881** |
| Land | **2,354,886** | 2,354,570 | **21,408,054** |
| Construction in progress | **616,395** | 401,234 | **5,603,590** |
| Other | **189,859** | 178,720 | **1,725,990** |
| ***Total*** | ***9,451,067*** | *9,177,390* | ***85,918,790*** |
| Accumulated depreciation | **(4,744,393)** | (4,632,657) | **(43,130,845)** |
| ***Net property, plant and equipment*** | ***4,706,673*** | *4,544,732* | ***42,787,936*** |
| ***Total noncurrent assets*** | ***5,665,052*** | *5,103,914* | ***51,500,472*** |
| ***TOTAL ASSETS (Note 5)*** | ***¥ 9,295,745*** | *¥ 8,908,682* | ***$ 84,506,772*** |

See notes to consolidated financial statements.

March 31, 2019

| LIABILITIES AND EQUITY | Millions of Yen (Note 2) | | Thousands of U.S. Dollars (Note 2) |
|---|---|---|---|
| | **2019** | 2018 | **2019** |
| **CURRENT LIABILITIES:** | | | |
| Short-term loans payable (Notes 5 and 12) | **¥ 28,392** | ¥ 27,509 | **$ 258,109** |
| Current portion of long-term debt (Notes 5 and 12) | **110,493** | 82,047 | **1,004,481** |
| Current portion of long-term debt of the employee—stock ownership plan trust (Notes 3.1, 10 and 12) | **5,400** | 5,400 | **49,090** |
| Current portion of long-term accounts payable—railway facilities (Notes 7 and 12) | **5,444** | 5,126 | **49,490** |
| Trade payables (Note 12) | **246,282** | 227,523 | **2,238,927** |
| Provision for bonuses | **28,716** | 28,218 | **261,054** |
| Income taxes payable (Note 12) | **105,698** | 109,783 | **960,890** |
| Advances received | **51,113** | 44,234 | **464,663** |
| Other | **68,719** | 72,979 | **624,718** |
| ***Total current liabilities*** | ***650,260*** | *602,823* | ***5,911,454*** |
| **NONCURRENT LIABILITIES:** | | | |
| Long-term debt (Notes 5 and 12) | **1,196,732** | 1,225,134 | **10,879,381** |
| Long-term debt for the Chuo Shinkansen construction (Notes 3.c, 6 and 12) | **3,000,000** | 3,000,000 | **27,272,727** |
| Long-term debt of the employee stock ownership—plan trust (Notes 3.1, 10 and 12) | **9,700** | 15,100 | **88,181** |
| Long-term accounts payable—railway facilities (Notes 7 and 12) | **538,451** | 543,897 | **4,895,009** |
| Provision for large-scale renovation of the Shinkansen infrastructure (Note 3.j) | **140,000** | 175,000 | **1,272,727** |
| Liability for retirement benefits (Note 8) | **194,347** | 201,006 | **1,766,790** |
| Other (Note 11) | **58,188** | 60,980 | **528,981** |
| ***Total noncurrent liabilities*** | ***5,137,419*** | *5,221,118* | ***46,703,809*** |
| **CONTINGENCIES (Note 15):** | | | |
| **EQUITY (Notes 9 and 18):** | | | |
| Common stock—authorized, 824,000,000 shares; issued, 206,000,000 shares in 2019 and 2018 | **112,000** | 112,000 | **1,018,181** |
| Capital surplus | **53,497** | 53,498 | **486,336** |
| Retained earnings | **3,387,569** | 2,976,434 | **30,796,081** |
| Treasury stock—at cost, 9,923,059 shares in 2019 and 10,173,749 shares in 2018 (Note 3.1 and 10) | **(116,912)** | (121,687) | **(1,062,836)** |
| Accumulated other comprehensive income: | | | |
| Unrealized gain on available-for-sale securities | **33,024** | 38,011 | **300,218** |
| Deferred loss on hedges | | (3) | |
| Remeasurements of defined benefit plans (Note 8) | **2,116** | (2,842) | **19,236** |
| ***Total*** | ***3,471,294*** | *3,055,410* | ***31,557,218*** |
| ***Noncontrolling interests*** | ***36,770*** | *29,329* | ***334,272*** |
| ***Total equity*** | ***3,508,065*** | *3,084,739* | ***31,891,500*** |
| ***TOTAL LIABILITIES AND EQUITY*** | ***¥ 9,295,745*** | *¥ 8,908,682* | ***$ 84,506,772*** |

See notes to consolidated financial statements.

# Consolidated Statement of Income

Central Japan Railway Company and Consolidated Subsidiaries — Year Ended March 31, 2019

| | Millions of Yen (Note 2) | | | Thousands of U.S. Dollars (Note 2) |
|---|---|---|---|---|
| | **2019** | 2018 | 2017 | **2019** |
| **OPERATING REVENUES** | **¥ 1,878,137** | ¥ 1,822,039 | ¥ 1,756,980 | **$ 17,073,972** |
| **OPERATING EXPENSES (Note 3.m):** | | | | |
| Transportation, other services and cost of sales (Note 3.j) | **970,811** | 966,688 | 954,512 | **8,825,554** |
| Selling, general and administrative expenses | **197,551** | 193,326 | 182,903 | **1,795,918** |
| ***Total operating expenses*** | ***1,168,362*** | *1,160,015* | *1,137,415* | ***10,621,472*** |
| ***Operating income*** | ***709,775*** | *662,023* | *619,564* | ***6,452,500*** |
| **OTHER INCOME (EXPENSES):** | | | | |
| Interest and dividend income | **4,939** | 3,314 | 2,030 | **44,900** |
| Interest expense (Note 7) | **(80,723)** | (78,722) | (60,285) | **(733,845)** |
| Other—net (Note 3.n) | **(3,719)** | (24,762) | (1,279) | **(33,809)** |
| ***Other expenses—net*** | ***(79,503)*** | *(100,171)* | *(59,534)* | ***(722,754)*** |
| **INCOME BEFORE INCOME TAXES** | **630,271** | 561,852 | 560,029 | **5,729,736** |
| **INCOME TAXES (Note 11):** | | | | |
| Current | **190,699** | 183,663 | 160,669 | **1,733,627** |
| Deferred | **(5,465)** | (11,710) | 8,098 | **(49,681)** |
| ***Total income taxes*** | ***185,233*** | *171,952* | *168,768* | ***1,683,936*** |
| **NET INCOME** | **445,037** | 389,899 | 391,261 | **4,045,790** |
| **NET INCOME (LOSS) ATTRIBUTABLE TO NONCONTROLLING INTERESTS** | **6,322** | (5,603) | (1,652) | **57,472** |
| ***NET INCOME ATTRIBUTABLE TO OWNERS OF THE PARENT*** | ***¥ 438,715*** | *¥ 395,502* | *¥ 392,913* | ***$ 3,988,318*** |

| | Yen | | | U.S. Dollars |
|---|---|---|---|---|
| | **2019** | 2018 | 2017 | **2019** |
| **PER SHARE OF COMMON STOCK (Note 3.t):** | | | | |
| Basic net income | **¥ 2,238.95** | ¥ 2,015.48 | ¥ 1,996.52 | **$ 20.35** |
| Cash dividends applicable to the year | **145.00** | 140.00 | 135.00 | **1.32** |

See notes to consolidated financial statements.

# Consolidated Statement of Comprehensive Income

Central Japan Railway Company and Consolidated Subsidiaries — Year Ended March 31, 2019

| | Millions of Yen (Note 2) | | | Thousands of U.S. Dollars (Note 2) |
|---|---|---|---|---|
| | **2019** | 2018 | 2017 | **2019** |
| **NET INCOME** | **¥ 445,037** | ¥ 389,899 | ¥ 391,261 | **$ 4,045,790** |
| **OTHER COMPREHENSIVE INCOME (Note 16):** | | | | |
| Unrealized (loss) gain on available-for-sale securities | **(4,409)** | 9,521 | 6,507 | **(40,081)** |
| Deferred gain (loss) on hedges | **7** | (4) | 2 | **63** |
| Remeasurements of defined benefit plans | **5,519** | 4,704 | 2,020 | **50,172** |
| Share of other comprehensive income in affiliates | **58** | 78 | 63 | **527** |
| ***Total other comprehensive income*** | ***1,175*** | *14,299* | *8,595* | ***10,681*** |
| **COMPREHENSIVE INCOME** | **¥ 446,213** | ¥ 404,198 | ¥ 399,856 | **$ 4,056,481** |
| **TOTAL COMPREHENSIVE INCOME ATTRIBUTABLE TO:** | | | | |
| Owners of the parent | **¥ 438,691** | ¥ 409,065 | ¥ 401,667 | **$ 3,988,100** |
| Noncontrolling interests | **7,521** | (4,866) | (1,810) | **68,372** |

See notes to consolidated financial statements.



# Consolidated Statement of Changes in Equity

Central Japan Railway Company and Consolidated Subsidiaries — Year Ended March 31, 2019

| | Thousands | Millions of Yen (Note 2) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Accumulated Other Comprehensive Income | | | | | |
| | Outstanding Number of Shares of Common Stock | Common Stock | Capital Surplus | Retained Earnings | Treasury Stock | Unrealized Gain on Available-for-Sale Securities | Deferred Loss on Hedges | Remeasurements of Defined Benefit Plans | Total | Noncontrolling Interests | Total Equity |
| **BALANCE, APRIL 1, 2016** | 196,799 | ¥112,000 | ¥53,499 | ¥2,241,207 | ¥(103,157) | ¥22,227 | ¥ (2) | ¥ (9,375) | ¥2,316,397 | ¥36,168 | ¥2,352,566 |
| Net income attributable to owners of the parent | | | | 392,913 | | | | | 392,913 | | 392,913 |
| Dividends from surplus, ¥130 per share | | | | (25,610) | | | | | (25,610) | | (25,610) |
| Purchase of treasury stock | (0) | | | | (2) | | | | (2) | | (2) |
| Changes in the ownership interest by purchases of shares | | | (0) | | | | | | (0) | | (0) |
| Net change in the year | | | | | | 6,605 | 1 | 2,146 | 8,753 | (1,891) | 6,861 |
| **BALANCE, MARCH 31, 2017** | 196,799 | 112,000 | 53,498 | 2,608,511 | (103,159) | 28,832 | (1) | (7,229) | 2,692,451 | 34,277 | 2,726,729 |
| Net income attributable to owners of the parent | | | | 395,502 | | | | | 395,502 | | 395,502 |
| Dividends from surplus, ¥140 per share | | | | (27,580) | | | | | (27,580) | | (27,580) |
| Purchase of treasury stock | (1,121) | | | | (21,365) | | | | (21,365) | | (21,365) |
| Disposal of treasury stock | 149 | | 0 | | 2,838 | | | | 2,838 | | 2,838 |
| Changes in the ownership interest by purchases of shares | | | (0) | | | | | | (0) | | (0) |
| Net change in the year | | | | | | 9,178 | (2) | 4,387 | 13,562 | (4,947) | 8,615 |
| **BALANCE, MARCH 31, 2018** | 195,826 | 112,000 | 53,498 | 2,976,434 | (121,687) | 38,011 | (3) | (2,842) | 3,055,410 | 29,329 | 3,084,739 |
| Net income attributable to owners of the parent | | | | 438,715 | | | | | 438,715 | | 438,715 |
| Dividends from surplus, ¥140 per share | | | | (27,580) | | | | | (27,580) | | (27,580) |
| Purchase of treasury stock | 0 | | | | (0) | | | | (0) | | (0) |
| Disposal of treasury stock | 250 | | | | 4,774 | | | | 4,774 | | 4,774 |
| Changes in the ownership interest by purchases of shares | | | (0) | | | | | | (0) | | (0) |
| Net change in the year | | | | | | (4,986) | 3 | 4,958 | (23) | 7,440 | 7,417 |
| ***BALANCE, MARCH 31, 2019*** | *196,076* | *¥112,000* | *¥53,497* | *¥3,387,569* | *¥(116,912)* | *¥33,024* | *¥* | *¥ 2,116* | *¥3,471,294* | *¥36,770* | *¥3,508,065* |

| | Thousands of U.S.Dollars (Note 2) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Accumulated Other Comprehensive Income | | | | | |
| | Common Stock | Capital Surplus | Retained Earnings | Treasury Stock | Unrealized Gain on Available-for-Sale Securities | Deferred Loss on Hedges | Remeasurements of Defined Benefit Plans | Total | Noncontrolling Interests | Total Equity |
| **BALANCE, MARCH 31, 2018** | $1,018,181 | $486,345 | $27,058,490 | $(1,106,245) | $345,554 | $ (27) | $(25,836) | $27,776,454 | $266,627 | $28,043,081 |
| Net income attributable to owners of the parent | | | 3,988,318 | | | | | 3,988,318 | | 3,988,318 |
| Dividends from surplus, $1.27 per share | | | (250,727) | | | | | (250,727) | | (250,727) |
| Purchase of treasury stock | | | | (0) | | | | (0) | | (0) |
| Disposal of treasury stock | | | | 43,400 | | | | 43,400 | | 43,400 |
| Changes in the ownership interest by purchases of shares of consolidated subsidiaries | | (0) | | | | | | (0) | | (0) |
| Net change in the year | | | | | (45,327) | 27 | 45,072 | (209) | 67,636 | 67,427 |
| ***BALANCE, MARCH 31, 2019*** | *$1,018,181* | *$486,336* | *$30,796,081* | *$(1,062,836)* | *$300,218* | *$* | *$ 19,236* | *$31,557,218* | *$334,272* | *$31,891,500* |

See notes to consolidated financial statements.

# Consolidated Statement of Cash Flows

Central Japan Railway Company and Consolidated Subsidiaries — Year Ended March 31, 2019

| | Millions of Yen (Note 2) | | | Thousands of U.S. Dollars (Note 2) |
|---|---|---|---|---|
| | **2019** | 2018 | 2017 | **2019** |
| **OPERATING ACTIVITIES:** | | | | |
| Income before income taxes | **¥ 630,271** | ¥ 561,852 | ¥ 560,029 | **$ 5,729,736** |
| Adjustments for: | | | | |
| Income taxes—paid | **(194,689)** | (159,463) | (183,562) | **(1,769,900)** |
| Depreciation and amortization | **211,262** | 216,027 | 225,386 | **1,920,563** |
| Equity in earnings of affiliates | **(294)** | (603) | (363) | **(2,672)** |
| Proceeds from contribution for construction | **(2,984)** | (9,981) | (2,641) | **(27,127)** |
| Loss on reduction of noncurrent assets | **3,531** | 10,222 | 2,566 | **32,100** |
| Loss on retirement of noncurrent assets | **8,272** | 8,746 | 13,433 | **75,200** |
| Gain on sales of noncurrent assets—net | **(926)** | (11,737) | (341) | **(8,418)** |
| Changes in assets and liabilities: | | | | |
| Decrease in provision for large-scale renovation of the Shinkansen infrastructure | **(35,000)** | (35,000) | (35,000) | **(318,181)** |
| Increase in trade receivables | **(10,824)** | (7,244) | (9,278) | **(98,400)** |
| (Increase) decrease in inventories | **(7,697)** | (971) | 1,946 | **(69,972)** |
| Increase in trade payables | **425** | 17,675 | 10,409 | **3,863** |
| Increase in advances received | **6,940** | 1,018 | 434 | **63,090** |
| (Decrease) increase in liability for retirement benefits | **(675)** | 1,040 | 764 | **(6,136)** |
| Other—net | **(7,292)** | 18,015 | (3,216) | **(66,290)** |
| ***Net cash provided by operating activities*** | ***600,319*** | *609,595* | *580,565* | ***5,457,445*** |
| **INVESTING ACTIVITIES:** | | | | |
| Placement of time deposits | | | (78,700) | |
| Withdrawal of time deposits | | | 110,700 | |
| Payments for money held in trust for the Chuo Shinkansen construction | | (1,500,000) | (1,500,000) | |
| Proceeds from cancellation of money held in trust for the Chuo Shinkansen construction | **170,340** | 131,810 | 27,259 | **1,548,545** |
| Purchases of marketable securities | | | (555,100) | |
| Proceeds from redemption of marketable securities | | 138,700 | 416,400 | |
| Purchases of property, plant and equipment | **(365,446)** | (280,424) | (305,151) | **(3,322,236)** |
| Proceeds from contribution for construction | **4,564** | 3,130 | 6,022 | **41,490** |
| Purchases of investment securities | **(375,002)** | (142,004) | (19,600) | **(3,409,109)** |
| Proceeds from sales of investment securities | **15** | 423 | 33 | **136** |
| Other—net | **(31,973)** | (28,124) | (11,410) | **(290,663)** |
| ***Net cash used in investing activities*** | ***(597,502)*** | *(1,676,489)* | *(1,909,547)* | ***(5,431,836)*** |
| **FORWARD** | **¥ 2,817** | ¥(1,066,893) | ¥(1,328,981) | **$ 25,609** |
| **FINANCING ACTIVITIES:** | | | | |
| Net increase in short-term loans payable | **882** | 1,946 | 877 | **8,018** |
| Proceeds from long-term debt | **94,543** | 95,277 | 140,288 | **859,481** |
| Repayments of long-term debt | **(94,543)** | (129,740) | (112,236) | **(859,481)** |
| Proceeds from long-term debt for the Chuo Shinkansen construction | | 1,500,000 | 1,500,000 | |
| Payments for long-term accounts payable—railway facilities | **(5,127)** | (4,829) | (77,668) | **(46,609)** |
| Cash dividends paid | **(27,580)** | (27,580) | (25,610) | **(250,727)** |
| Purchases of treasury stock (Note 3.v) | **(0)** | (21,365) | (2) | **(0)** |
| Proceeds from sales of treasury stock | **5,758** | 3,056 | | **52,345** |
| Cash dividends paid to noncontrolling interests | **(79)** | (79) | (79) | **(718)** |
| Other—net (Note 3.v) | **(7,486)** | 18,103 | (379) | **(68,054)** |
| ***Net cash (used in) provided by financing activities*** | ***(33,635)*** | *1,434,788* | *1,425,188* | ***(305,772)*** |
| **NET (DECREASE) INCREASE IN CASH AND CASH EQUIVALENTS** | **(30,817)** | 367,894 | 96,207 | **(280,154)** |
| **CASH AND CASH EQUIVALENTS, BEGINNING OF YEAR** | **782,454** | 414,559 | 318,352 | **7,113,218** |
| **CASH AND CASH EQUIVALENTS INCREASED BY MERGER WITH AN UNCONSOLIDATED SUBSIDIARY** | | | 0 | |
| ***CASH AND CASH EQUIVALENTS, END OF YEAR*** | ***¥ 751,636*** | *¥ 782,454* | *¥ 414,559* | ***$ 6,833,054*** |
| **ADDITIONAL CASH FLOW INFORMATION:** | | | | |
| Interest paid | **¥ 80,366** | ¥ 74,240 | ¥ 58,812 | **$ 730,600** |

See notes to consolidated financial statements.



# Notes to Consolidated Financial Statements

## Central Japan Railway Company and Consolidated Subsidiaries

### 1.INCORPORATION OF CENTRAL JAPAN RAILWAY COMPANY

Central Japan Railway Company (Tokai Ryokaku Tetsudo Kabushiki Gaisha, the "Company") was incorporated on April 1, 1987, as a private business company, pursuant to the Law for Japanese National Railways Restructuring enacted upon the resolution of the Japanese Diet.

The business of the Japanese National Railways (the "JNR") was succeeded by the following newly established organizations: seven railway companies including the Company, the former Shinkansen Holding Corporation (a predecessor entity to the Railway Development Fund (1991–1997), which was subsequently succeeded by the Corporation for Advanced Transport and Technology (the "CATT") (1997–2003) and in turn by the Japan Railway Construction, Transport and Technology Agency (the "JRTT")), the former Railway Telecommunication Co., Ltd., Railway Information Systems Co., Ltd., and the Railway Technical Research Institute (the "RTRI") which reorganized as a public interest corporation as of April 1, 2011. The JNR itself became the JNR Settlement Corporation (the "JNRSC"). All of the assets and liabilities of the JNR were transferred to such organizations, including the JNRSC.

Prior to December 1, 2001, the Law Concerning Passenger Railway Companies and the Japan Freight Railway Company (the "Law") required that authorization be obtained from the Minister of Land, Infrastructure, Transport and Tourism (the "Minister of Transport") regarding fundamentals such as: (1) commencement of business other than railway and its related business, (2) the appointment or dismissal of representative directors and corporate auditors, (3) the issuance of new shares and bonds, (4) long-term loans payable, (5) amendments to the Articles of Incorporation, (6) operating plans, (7) sales of material assets, (8) appropriations of earnings and (9) merger or dissolution. As of December 1, 2001, since the Law was revised and the Company was no longer in scope of the Law, the Company was not required to obtain the aforementioned authorizations.

On October 8, 1997, the Company's shares were listed on the Nagoya and Tokyo stock exchanges in Japan. The JNRSC, which held all 2,240,000 of the Company's outstanding shares prior to the listing, sold 1,353,929 shares in the initial public offerings. Pursuant to the Law for Disposal of Debts and Liabilities of the JNRSC enacted in October of 1998, the Company's shares held by the JNRSC were transferred to Japan Railway Construction Public Corporation (the "JRCPC"). On October 1, 2003, the CATT and the JRCPC were fully integrated, pursuant to the Law of Japan Railway Construction, Transport and Technology enacted on October 1, 2003, and designated as the JRTT. In July 2005, the JRTT sold 600,000 shares of the Company. On April 5, 2006, the JRTT also sold its remaining 286,071 shares of the Company. As a result of this sale, all of the Company's shares held by the JRTT were sold.

The shares above do not reflect the effect of the hundred-for-one stock split effective as of October 1, 2012.

### 2.BASIS OF PRESENTATION OF CONSOLIDATED FINANCIAL STATEMENTS

The accompanying consolidated financial statements have been prepared in accordance with the provisions set forth in the Japanese Financial Instruments and Exchange Act and its related accounting regulations, and in accordance with accounting principles generally accepted in Japan, which are different in certain respects as to the application and disclosure requirements of International Financial Reporting Standards.

In preparing these consolidated financial statements, certain reclassifications and rearrangements have been made to the consolidated financial statements issued domestically in order to present them in a form which is more familiar to readers outside Japan. In addition, certain reclassifications have been made in the 2017 consolidated financial statements to conform to the classifications used in 2019 and 2018.

The consolidated financial statements are stated in Japanese yen, the currency of the country in which the Company is incorporated and operates. The translations of Japanese yen amounts into U.S. dollar amounts are included solely for the convenience of readers outside Japan and have been made at the rate of ¥110 to $1, the approximate rate of exchange as of March 31, 2019. Such translations should not be construed as representations that the Japanese yen amounts could be converted into U.S. dollars at that or any other rate. Japanese yen figures of less than one million yen are rounded down to the nearest million of yen, except for per share information, and U.S. dollar figures of less than one thousand U.S. dollars are also rounded down to the nearest thousand of U.S. dollars, except for per share information.

### 3.SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

***a.Principles of Consolidation***

—The accompanying consolidated financial statements as of March 31, 2019, include the accounts of the Company and its 29 (29 in 2018 and 29 in 2017) significant subsidiaries (together, the "Companies").

Under the control and influence concepts, those companies in which the Company, directly or indirectly, is able to exercise control over operations are consolidated, and those companies over which the Company has the ability to exercise significant influence are accounted for using the equity method.

Investments in two affiliates are accounted for using the equity method. Investments in the remaining unconsolidated subsidiaries and affiliates are stated at cost. If the equity method of accounting had been applied to the investments in these companies, the effect on the accompanying consolidated financial statements would not be material.

The difference between the cost of acquisition and the fair value of the equity of an acquired subsidiary at the date of acquisition is fully amortized when incurred.

All significant intercompany balances and transactions have been eliminated in consolidation. All significant material unrealized profit included in assets resulting from transactions within the Companies is also eliminated.

A certain consolidated subsidiary has adopted a fiscal year ending on February 28, which is different from that of the Company. The necessary adjustments for preparing consolidated financial statements as of the Company's year-end were appropriately made, such as adjustments for significant intercompany accounts and transactions which occur between the fiscal year-end of the subsidiary and that of the Companies.

***b.Cash Equivalents***

—Cash equivalents are short-term investments that are readily convertible into cash and that are exposed to insignificant risk of changes in value. Cash equivalents include time deposits, certificates of deposit and others, all of which mature or become due within three months of the date of acquisition.

***c.Money Held in Trust for the Chuo Shinkansen Construction and Long-Term Debt for the Chuo Shinkansen Construction***

—The Company has received loans from the JRTT for promoting the construction of the Chuo Shinkansen, and the money is placed in the trust fund to segregate it from other money.

***d.Inventories***

— Inventories are stated at the lower of cost, principally determined by the retail method for merchandise, by the specific identification method for land and buildings held for sale in lots, by the specific identification method for work in process and by the moving-average cost method for materials and supplies, or net selling value.

***e.Marketable and Investment Securities***

— Marketable and investment securities are classified and accounted for, depending on management's intent, as follows: (1) held-to-maturity debt securities, for which there is a positive intent and ability to hold to maturity, are reported at amortized cost; and (2) available-for-sale securities, which are not classified as the aforementioned securities, are reported at fair value, with unrealized gains and losses, net of applicable taxes, reported in a separate component of equity.

Nonmarketable securities classified as available-for-sale securities are carried at cost, determined by the moving-average method. For other-than-temporary declines in fair value, investment securities are reduced to net realizable value by a charge to income.

***f.Property, Plant and Equipment***

—Property, plant and equipment are stated at cost. Certain contributions in aid for construction of railways and other property are deducted directly from the cost of the related assets. The accumulated contributions deducted from the cost of property, plant and equipment as of March 31, 2019 and 2018 amounted to ¥290,680 million ($2,642,545 thousand), and ¥289,130 million, respectively.

Depreciation is computed substantially by the declining-balance method over the estimated useful lives of the assets. Additional depreciation is provided for the Shinkansen rolling stock based on kilometers traveled.

The range of useful lives is principally from 2 to 60 years for buildings and structures, and from 2 to 20 years for machinery, rolling stock and vehicles.

Depreciation of certain railway structures, except for the Shinkansen railway facilities, is computed by the replacement-accounting method.

***g.Long-Lived Assets***

—The Companies review their long-lived assets for impairment whenever events or changes in circumstances indicate the carrying amount of an asset or asset group may not be recoverable. An impairment loss is recognized if the carrying amount of an asset or asset group exceeds the sum of the undiscounted future cash flows expected to result from the continued use and eventual disposition of the asset or asset group. The impairment loss would be measured as the amount by which the carrying amount of the asset exceeds its recoverable amount, which is the higher of the discounted cash flows from the continued use and eventual disposition of the asset or the net selling price at disposition.

***h.Software Costs***

—Software costs are amortized by the straight-line method mainly over five years.

***i.Deferred Charges***

—Bond issuance costs are fully charged to income as incurred.

***j.Provision for Large-Scale Renovation of the Shinkansen Infrastructure***

—Provision for large-scale renovation of the Shinkansen infrastructure is provided based on the Nationwide Shinkansen Railway Development Law. In accordance with the Nationwide Shinkansen Railway Development Law and Regulations, the Company reversed the provision in the amount of ¥35,000 million ($318,181thousand) for the year ended March 31, 2019 and ¥35,000 million for the years ended March 31, 2018 and 2017.

***k.Retirement and Pension Plans***

—The Company and 28 consolidated subsidiaries have unfunded retirement plans covering substantially all of their employees. Six consolidated subsidiaries have noncontributory defined benefit pension plans and one consolidated subsidiary has a defined contribution pension plan, some of those subsidiaries also have unfunded retirement plans. Some of the subsidiaries adopt the simplified accounting method for calculation of liability for retirement benefits and retirement benefit expenses.

Liability for retirement benefits is mainly calculated based on the projected benefit obligations and plan assets at the balance sheet date. The projected benefit obligations are attributed to periods on a benefit formula basis. Actuarial gains and losses are amortized on a straight-line basis mainly over five years, which is within the average remaining service period. Prior service costs are amortized on a straight-line basis mainly over five years, which is within the average remaining service period.

***l.Employee stock ownership plan***

—In accordance with Accounting Standards Board of Japan ("ASBJ") Practical Issues Task Force No. 30, "Practical Solution on Transactions of Delivering the Company's Own Stock to Employees etc. through Trusts," at year-end, the Company shall record (1) the Company stock held by the employee stock ownership trust as treasury stock in equity, (2) all other assets and liabilities of the employee stock ownership trust on a line-by-line basis, and (3) a liability/asset for the net of (i) any gain or loss on delivery of the stock by the employee stock ownership trust to the employee shareholding association, (ii) dividends received from the entity for the stock held by the employee stock ownership trust, and (iii) any expenses relating to the employee stock ownership trust.

***m.Research and Development Costs***

—Research and development costs are charged to income as incurred. Research and development costs charged to income were ¥55,001 million ($500,009 thousand), ¥58,797 million and ¥66,609 million for the years ended March 31, 2019, 2018 and 2017, respectively.

***n.Other Income (Expenses)***

—Other income (expenses) in the consolidated statement of income for the year ended March 31, 2018 included settlement of the railway rolling stock production business of ¥26,445 million. As for NIPPON SHARYO, LTD., a consolidated subsidiary of the Company, the large railway rolling stock project for the U.S.A was taken over by another manufacturer. Accordingly, NIPPON SHARYO, LTD. recognized a loss resulting from the conclusion of the contract to pay the settlement money to Sumitomo Corporation and Sumitomo Corporation of Americas.

***o.Leases***

—Lease assets of finance leases that were not deemed to transfer ownership of the leased property are depreciated and amortized by the straight-line method over the lease period.

***p.Income Taxes***

—The provision for income taxes is computed based on the pretax income included in the consolidated statement of income. The asset and liability approach is used to recognize deferred tax assets and liabilities for the expected future tax consequences of temporary differences between the carrying amounts and the tax bases of assets and liabilities. Deferred taxes are measured by applying currently enacted tax laws to the temporary differences.

***q.Appropriations of Retained Earnings***

—Appropriations of retained earnings are reflected in the consolidated financial statements for the following year upon shareholders' approval.

***r.Consumption Tax***

—Unless otherwise stated, all figures are presented net of tax.

***s.Derivatives and Hedging Activities***

—The Companies use derivative financial instruments mainly to manage exposure to market risks of changes in foreign currency exchange rates and in interest rates. Foreign currency swaps are utilized by the Companies to reduce foreign currency exchange rate risks. Interest rate swaps are utilized by the Companies to reduce interest rate risks. Interest rate and currency swap contracts are utilized by the Companies to reduce interest rate and foreign exchange risks. The Companies do not enter into derivatives for trading or speculative purposes.

Foreign currency swaps, which qualify for hedge accounting and specific matching criteria, are not remeasured at market value, but the hedged debt is translated at the contracted rates of the foreign currency swaps. Interest rate swaps, which qualify for hedge accounting and meet specific matching criteria, are not remeasured at market value, but the differential paid or received under the swap agreements is recognized and included in interest expense. When interest and currency swap contracts meet the above criteria, hedged debt is translated at the contracted rates, and the differential paid or received under the swap agreement is recognized and included in interest expense.

***t.Per Share Information***

—Basic net income per share is computed by dividing net income attributable to owners of the parent available to common shareholders by the weighted-average number of common shares outstanding for the period.

The net income attributable to owners of the parent available to common shareholders used in the computation for 2019, 2018 and 2017 was ¥438,715 million ($3,988,318 thousand), ¥395,502 million and ¥392,913 million, respectively. The average number of common shares used in the computation for 2019, 2018 and 2017 was 195,947,224 shares, 196,233,039 shares and 196,799,182 shares, respectively. The average number of shares of the Companies held by the employee stock ownership trust for the year ended March 31, 2019 and 2018 was 851,924 shares and 566,089 shares, and it has been deducted from the weighted-average number of shares outstanding during the fiscal year.

Diluted net income per share is not presented in the accompanying consolidated financial statements as the Companies do not have any dilutive securities.

Cash dividends per share presented in the accompanying consolidated statement of income are dividends applicable to the respective years, including dividends to be paid after the end of the year.

***u.New accounting pronouncements***

—On March 30, 2018, the ASBJ issued ASBJ Statement No. 29, "Accounting Standard for Revenue Recognition," and ASBJ Guidance No. 30, "Implementation Guidance on Accounting Standard for Revenue Recognition. " The core principle of the standard and guidance is that an entity should recognize revenue to depict the transfer of promised goods or services to customers in an amount that reflects the consideration to which the entity expects to be entitled in exchange for those goods or services. An entity should recognize revenue in accordance with that core principle by applying the following steps:

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

The accounting standard and guidance are effective for annual periods beginning on or after April 1, 2021. Earlier application is permitted for annual periods beginning on or after April 1, 2018.

The Company expects to apply the accounting standard and guidance for annual periods beginning on April 1, 2021, and is in the process of measuring the effects of applying the accounting standard and guidance in future applicable periods.

***v.Changes in presentation***
***(Consolidated Statements of Cash Flows)***

"Purchase of treasury stock" was included in "Other—net" under financing activities of the consolidated statement of cash flows for the years ended March 31, 2017. Since the amount increased significantly during the year ended March 31, 2018, such amount is disclosed separately in the financing activities of the consolidated statement of cash flows.

As a result, the amounts of ¥(381) million recorded as “Other—net” under financing activities of the consolidated statement of cash flows for the years ended March 31, 2017 was reclassified to “Purchases of treasury stock” in the amounts of ¥(2) million and to “Other—net” in the amounts of ¥(379) million, respectively, in the consolidated statement of cash flows for the years ended March 31, 2017.

***w.Accounting Changes and Error Corrections***

—In December 2009, the ASBJ issued ASBJ Statement No. 24, "Accounting Standard for Accounting Changes and Error Corrections" and ASBJ Guidance No. 24, "Guidance on Accounting Standard for Accounting Changes and Error Corrections." Accounting treatments under this standard and guidance are as follows: (1) Changes in Accounting Policies—When a new accounting policy is applied following revision of an accounting standard, the new policy is applied retrospectively unless the revised accounting standard includes specific transitional provisions, in which case the entity shall comply with the specific transitional provisions. (2) Changes in Presentation—When the presentation of financial statements is changed, prior-period financial statements are reclassified in accordance with the new presentation. (3) Changes in Accounting Estimates—A change in an accounting estimate is accounted for in the period of the change if the change affects that period only, and is accounted for prospectively if the change affects both the period of the change and future periods. (4) Corrections of Prior-Period Errors—When an error in prior-period financial statements is discovered, those statements are restated.

## 4. INVESTMENT SECURITIES

Information regarding investment securities with readily determinable fair values classified as available-for-sale and held to maturity as of March 31, 2019 and 2018, was as follows:

| | Millions of Yen | | | |
|---|---|---|---|---|
| | 2019 | | | |
| | Cost | Unrealized Gain | Unrealized Loss | Fair Value |
| Securities classified as: | | | | |
| Available for sale: | | | | |
| Equity securities | ¥ 88,785 | ¥ 52,603 | ¥ 3,491 | ¥ 137,897 |
| Trust fund investment and other | 276 | 67 | | 343 |
| Held to maturity | 510,000 | 4,777 | 90 | 514,687 |
| ***Total*** | *¥ 599,061* | *¥ 57,449* | *¥ 3,581* | *¥ 652,928* |

| | Millions of Yen | | | |
|---|---|---|---|---|
| | 2018 | | | |
| | Cost | Unrealized Gain | Unrealized Loss | Fair Value |
| Securities classified as: | | | | |
| Available for sale: | | | | |
| Equity securities | ¥ 83,782 | ¥ 56,940 | ¥ 1,970 | ¥ 138,752 |
| Trust fund investment and other | 276 | 60 | | 336 |
| Held to maturity | 140,000 | 136 | 26 | 140,110 |
| ***Total*** | *¥ 224,058* | *¥ 57,137* | *¥ 1,997* | *¥ 279,198* |

| | Thousands of U.S. Dollars | | | |
|---|---|---|---|---|
| | 2019 | | | |
| | Cost | Unrealized Gain | Unrealized Loss | Fair Value |
| Securities classified as: | | | | |
| Available for sale: | | | | |
| Equity securities | $ 807,136 | $ 478,209 | $ 31,736 | $ 1,253,609 |
| Trust fund investment and other | 2,509 | 609 | | 3,118 |
| Held to maturity | 4,636,363 | 43,427 | 818 | 4,678,972 |
| ***Total*** | *$5,446,009* | *$ 522,263* | *$ 32,554* | *$ 5,935,709* |

The information for available-for-sale securities whose fair value is not readily determinable as of March 31, 2019 and 2018, is disclosed in Note 12.

The impairment loss on investment securities for the year ended March 31, 2019 and 2018 was not presented as the effect was immaterial.

Investment securities of ¥5,887 million ($53,518 thousand) as of March 31, 2019 were pledged as collateral for issuing a letter of credit on railway rolling stock production business.

## 5. SHORT-TERM LOANS PAYABLE AND LONG-TERM DEBT

The interest rates applicable to short-term loans payable were 0.15% as of March 31, 2019, 0.10% as of March 31, 2018, and 0.12% as of March 31, 2017.
Long-term debt as of March 31, 2019 and 2018, consisted of the following:

| | Millions of Yen | | Thousands of U.S. Dollars |
|---|---|---|---|
| | **2019** | 2018 | **2019** |
| **The Company** | | | |
| Unsecured 2.39% bonds due 2026 | **¥ 29,792** | ¥ 29,790 | **$ 270,836** |
| Unsecured 2.31% bonds due 2027 | **9,993** | 9,992 | **90,845** |
| Unsecured 2.30% bonds due 2027 | **4,998** | 14,994 | **45,436** |
| Unsecured 2.39% bonds due 2028 | **19,989** | 19,987 | **181,718** |
| Unsecured 2.391% bonds due 2028 | **30,000** | 30,000 | **272,727** |
| Unsecured 2.646% bonds due 2038 | **10,000** | 10,000 | **90,909** |
| Unsecured 2.166% bonds due 2029 | **30,000** | 30,000 | **272,727** |
| Unsecured 2.312% bonds due 2029 | **30,000** | 30,000 | **272,727** |
| Unsecured 2.556% bonds due 2039 | **10,000** | 10,000 | **90,909** |
| Unsecured 2.321% bonds due 2029 | **30,000** | 30,000 | **272,727** |
| Unsecured 2.157% bonds due 2029 | **40,000** | 40,000 | **363,636** |
| Unsecured 2.375% bonds due 2039 | **10,000** | 10,000 | **90,909** |
| Unsecured 2.212% bonds due 2030 | **30,000** | 30,000 | **272,727** |
| Unsecured 2.111% bonds due 2030 | **20,000** | 20,000 | **181,818** |
| Unsecured 1.797% bonds due 2030 | **10,000** | 10,000 | **90,909** |
| Unsecured 2.083% bonds due 2031 | **20,000** | 20,000 | **181,818** |
| Unsecured 1.895% bonds due 2031 | **10,000** | 10,000 | **90,909** |
| Unsecured 1.824% bonds due 2032 | **10,000** | 10,000 | **90,909** |
| Unsecured 1.725% bonds due 2033 | **10,000** | 10,000 | **90,909** |
| Unsecured 1.807% bonds due 2033 | **15,000** | 15,000 | **136,363** |
| Unsecured 1.786% bonds due 2033 | **15,000** | 15,000 | **136,363** |
| Unsecured 1.629% bonds due 2033 | **10,000** | 10,000 | **90,909** |
| Unsecured 1.623% bonds due 2034 | **15,000** | 15,000 | **136,363** |
| Unsecured 1.584% bonds due 2034 | **15,000** | 15,000 | **136,363** |
| Unsecured 1.502% bonds due 2034 | **20,000** | 20,000 | **181,818** |
| Unsecured 1.309% bonds due 2032 | **15,000** | 15,000 | **136,363** |
| Unsecured 1.917% bonds due 2044 | **10,000** | 10,000 | **90,909** |
| Unsecured 1.362% bonds due 2034 | **20,000** | 20,000 | **181,818** |
| Unsecured 1.014% bonds due 2035 | **20,000** | 20,000 | **181,818** |
| Unsecured 1.685% bonds due 2045 | **10,000** | 10,000 | **90,909** |
| Unsecured 1.196% bonds due 2035 | **15,000** | 15,000 | **136,363** |
| Unsecured 1.297% bonds due 2035 | **15,000** | 15,000 | **136,363** |
| Unsecured 1.210% bonds due 2035 | **15,000** | 15,000 | **136,363** |
| Unsecured 1.018% bonds due 2036 | **15,000** | 15,000 | **136,363** |
| Unsecured 0.421% bonds due 2036 | **10,000** | 10,000 | **90,909** |
| Unsecured 0.001% bonds due 2020 | **10,000** | 10,000 | **90,909** |
| Unsecured 0.020% bonds due 2020 | **10,000** | 10,000 | **90,909** |
| Unsecured 0.020% bonds due 2021 | **10,000** | | **90,909** |
| U.S. dollar 4.25% bonds due 2045 issued abroad | **36,440** | 36,418 | **331,272** |
| U.S. dollar 2.8% bonds due 2022 issued abroad | **68,123** | 68,110 | **619,300** |
| U.S. dollar 3.40% bonds due 2023 issued abroad | **38,956** | | **354,145** |
| Unsecured loans from Japanese banks and others, with interest rates ranging from 0.61% to 4.65% (2019), from 0.61% to 4.65% (2018), due 2018 to 2045 | **533,931** | 572,886 | **4,853,918** |
| ***Total*** | ***1,307,225*** | *1,307,181* | ***11,883,863*** |
| Less current portion | **(110,493)** | (82,047) | **(1,004,481)** |
| ***Long-term debt, less current portion*** | ***¥ 1,196,732*** | *¥ 1,225,134* | ***$ 10,879,381*** |

Annual maturities of long-term debt outstanding at the principal amounts as of March 31, 2019, were as follows:

| Year Ending March 31 | Millions of Yen | Thousands of U.S. Dollars |
|---|---|---|
| 2020 | ¥ 110,493 | $ 1,004,481 |
| 2021 | 85,869 | 780,627 |
| 2022 | 130,359 | 1,185,081 |
| 2023 | 87,777 | 797,972 |
| 2024 | 85,600 | 778,181 |
| Thereafter | 807,815 | 7,343,772 |
| ***Total*** | *¥ 1,307,914* | *$ 11,890,127* |

The Company has entrusted cash for the repayment of a portion of its outstanding bonds based on debt assumption agreements with financial institutions; however, the Company is not released from the primary responsibility for the liability by these agreements. The outstanding bonds covered by these agreements as of March 31, 2019 and 2018, were as follows:

| | Millions of Yen | | Thousands of U.S. Dollars |
|---|---|---|---|
| | **2019** | 2018 | **2019** |
| Secured 2.180% bonds due 2018 | | ¥ 29,900 | |
| Secured 2.600% bonds due 2020 | **¥ 49,800** | 49,800 | **$ 452,727** |
| Unsecured 2.390% bonds due 2022 | **18,995** | 18,995 | **172,681** |
| Unsecured 2.200% bonds due 2022 | **18,200** | 18,200 | **165,454** |
| Unsecured 1.740% bonds due 2022 | **20,000** | 20,000 | **181,818** |
| Unsecured 1.150% bonds due 2022 | **25,000** | 25,000 | **227,272** |
| Unsecured 1.310% bonds due 2033 | **10,000** | 10,000 | **90,909** |
| Unsecured 2.015% bonds due 2023 | **9,000** | 9,000 | **81,818** |
| Unsecured 2.200% bonds due 2024 | **9,900** | 9,900 | **90,000** |
| Unsecured 2.190% bonds due 2019 | | 9,900 | |
| Unsecured 1.875% bonds due 2019 | **20,000** | 20,000 | **181,818** |
| Unsecured 2.210% bonds due 2024 | **9,650** | 9,650 | **87,727** |
| Unsecured 1.775% bonds due 2020 | **20,000** | 20,000 | **181,818** |
| Unsecured 2.140% bonds due 2018 | | 18,400 | |
| Unsecured 2.405% bonds due 2026 | **9,900** | 9,900 | **90,000** |
| Unsecured 2.040% bonds due 2018 | | 18,800 | |
| Unsecured 2.310% bonds due 2027 | **10,000** | 10,000 | **90,909** |
| Unsecured 2.300% bonds due 2027 | **10,000** | | **90,909** |
| Unsecured 1.790% bonds due 2020 | **19,900** | 19,900 | **180,909** |
| Unsecured 1.830% bonds due 2018 | | 10,000 | |
| Unsecured 1.557% bonds due 2019 | | 19,800 | |
| Unsecured 1.667% bonds due 2019 | **10,000** | 10,000 | **90,909** |
| Unsecured 1.472% bonds due 2020 | **14,100** | 14,100 | **128,181** |
| ***Total*** | ***¥ 284,445*** | *¥ 381,245* | ***$ 2,585,863*** |

The aforementioned bonds for which the Company entered into debt assumption agreements have been derecognized in the consolidated balance sheet and disclosed as contingent liabilities (see Note 15).

The Company has credit commitments from banks. Total unused credit available to the Company as of March 31, 2019, was ¥100,000 million ($909,090 thousand).

All assets of the Company were pledged for the above secured bonds of ¥49,800 million ($452,727 thousand), as an enterprise mortgage, which gives the holder thereof a security interest in all assets junior to that of other present or future secured creditors, but senior to that of general creditors.

## 6. LONG-TERM DEBT FOR THE CHUO SHINKANSEN CONSTRUCTION

Long-term debt for the Chuo Shinkansen construction is a loan in total of ¥3,000,000 million from the JRTT using the Fiscal Investment and Loan Program (the "FILP") in accordance with the Order for Enforcement of the Act on the Japan Railway Construction, Transport and Technology Agency (the "JRTT Act") for promoting the construction of the Chuo Shinkansen.

The average interest rates of long-term debt for the Chuo Shinkansen construction as of March 31, 2019, were 0.86%.

Annual maturities of long-term debt for the Chuo Shinkansen construction as of March 31, 2019, were as follows:

| Year Ending March 31 | Millions of Yen | Thousands of U.S. Dollars |
|---|---|---|
| 2020 | | |
| 2021 | | |
| 2022 | | |
| 2023 | | |
| 2024 | | |
| Thereafter | ¥ 3,000,000 | $ 27,272,727 |
| ***Total*** | *¥ 3,000,000* | *$ 27,272,727* |

## 7. LONG-TERM ACCOUNTS PAYABLE—RAILWAY FACILITIES

Long-term accounts payable—railway facilities were incurred in the amount of ¥5,095,661 million in 1991 for the purchase of the Shinkansen railway ground facilities and serially repaid to the JRTT. Payment terms are 25.5 years for ¥4,494,466 million and 60 years for ¥601,195 million. Payment terms and interest rates of the payables were determined based on the agreements on the purchase of the Shinkansen railway ground facilities. The Company had paid off ¥4,494,466 million by January 2017.

The average interest rates of long-term accounts payable—railway facilities excluding current portion as of March 31, 2019, were 6.49%.

Annual maturities of long-term accounts payable—railway facilities as of March 31, 2019, were as follows:

| Year Ending March 31 | Millions of Yen | Thousands of U.S. Dollars |
|---|---|---|
| 2020 | ¥ 5,444 | $ 49,490 |
| 2021 | 5,782 | 52,563 |
| 2022 | 6,142 | 55,836 |
| 2023 | 6,526 | 59,327 |
| 2024 | 6,935 | 63,045 |
| Thereafter | 513,063 | 4,664,209 |
| ***Total*** | *¥ 543,896* | *$ 4,944,509* |

Interest expense on the aforementioned long-term accounts payable—railway facilities amounted to ¥35,464 million ($322,400 thousand), ¥35,839 million and ¥37,523 million for the years ended March 31, 2019, 2018 and 2017, respectively.

## 8. RETIREMENT AND PENSION PLANS

Employees whose service with the Company and consolidated subsidiaries is terminated are entitled to retirement and pension benefits determined by reference to accumulated points during their employment calculated by their position or basic rates of pay at the time of termination, length of service and other conditions under which the termination occurs. Some of the subsidiaries adopt the simplified accounting method for calculation of liability of retirement benefits and retirement benefit expenses.

a. The changes in defined benefit obligation for the years ended March 31, 2019, 2018 and 2017, were as follows:

| | Millions of Yen | | | Thousands of U.S. Dollars |
|---|---|---|---|---|
| | **2019** | 2018 | 2017 | **2019** |
| Balance at beginning of year (as previously reported) | **¥ 222,243** | ¥ 226,417 | ¥ 228,531 | **$ 2,020,390** |
| Current service cost | **15,772** | 15,768 | 15,510 | **143,381** |
| Interest cost | **899** | 918 | 934 | **8,172** |
| Actuarial (gains) losses | **(1,044)** | (919) | 1,451 | **(9,490)** |
| Benefits paid | **(20,840)** | (19,888) | (20,009) | **(189,454)** |
| Prior service cost | **(775)** | (53) | | **(7,045)** |
| ***Balance at end of year*** | ***¥ 216,255*** | *¥ 222,243* | *¥ 226,417* | ***$ 1,965,954*** |

The retirement benefit expenses recognized by the consolidated subsidiaries, which adopt the simplified accounting method, are included in the current service cost.

b. The changes in plan assets for the years ended March 31, 2019, 2018 and 2017, were as follows:

| | Millions of Yen | | | Thousands of U.S. Dollars |
|---|---|---|---|---|
| | **2019** | 2018 | 2017 | **2019** |
| Balance at beginning of year | **¥ 26,890** | ¥ 25,117 | ¥ 24,920 | **$ 244,454** |
| Expected return on plan assets | **350** | 333 | 322 | **3,181** |
| Actuarial gains (losses) | **2,107** | 1,288 | (411) | **19,154** |
| Contributions from the employer | **1,069** | 1,111 | 1,100 | **9,718** |
| Benefits paid | **(570)** | (960) | (815) | **(5,181)** |
| ***Balance at end of year*** | ***¥ 29,847*** | *¥ 26,890* | *¥ 25,117* | ***$ 271,336*** |

c. Reconciliation between the liability recorded in the consolidated balance sheet and the balances of defined benefit obligation and plan assets as of March 31, 2019 and 2018, was as follows:

| | Millions of Yen | | Thousands of U.S. Dollars |
|---|---|---|---|
| | **2019** | 2018 | **2019** |
| Funded defined benefit obligation | **¥ 23,579** | ¥ 23,483 | **$ 214,354** |
| ***Plan assets*** | ***(29,847)*** | *(26,890)* | ***(271,336)*** |
| Total | **(6,267)** | (3,407) | **(56,972)** |
| ***Unfunded defined benefit obligation*** | ***192,675*** | *198,760* | ***1,751,590*** |
| Net liability arising from defined benefit obligation | **186,407** | 195,353 | **1,694,609** |
| Liability for retirement benefits | **194,347** | 201,006 | **1,766,790** |
| Asset for retirement benefits | **(7,939)** | (5,652) | **(72,172)** |
| ***Net liability arising from defined benefit obligation*** | ***¥ 186,407*** | *¥ 195,353* | ***$ 1,694,609*** |

d. The components of net periodic benefit costs for the years ended March 31, 2019, 2018 and 2017, were as follows:

| | Millions of Yen | | | Thousands of U.S. Dollars |
|---|---|---|---|---|
| | **2019** | 2018 | 2017 | **2019** |
| Service cost | **¥ 15,772** | ¥ 15,768 | ¥ 15,510 | **$ 143,381** |
| Interest cost | **899** | 918 | 934 | **8,172** |
| Expected return on plan assets | **(350)** | (333) | (322) | **(3,181)** |
| Recognized actuarial losses | **4,068** | 4,418 | 4,695 | **36,981** |
| Amortization of prior service (benefit) cost | **(92)** | 24 | 33 | **(836)** |
| ***Net periodic benefit costs*** | ***¥ 20,296*** | *¥ 20,796* | *¥ 20,851* | ***$ 184,509*** |

The retirement benefit expenses recognized by the consolidated subsidiaries, which adopt the simplified accounting method, are included in service cost.

e. Amounts recognized in other comprehensive income (before income tax effect) in respect of defined retirement benefit plans for the years ended March 31, 2019, 2018 and 2017, were as follows:

| | Millions of Yen | | | Thousands of U.S. Dollars |
|---|---|---|---|---|
| | **2019** | 2018 | 2017 | **2019** |
| Actuarial losses | **¥ 7,219** | ¥ 6,626 | ¥ 2,832 | **$ 65,627** |
| Prior service cost | **682** | 77 | 33 | **6,200** |
| ***Total*** | ***¥ 7,902*** | *¥ 6,704* | *¥ 2,866* | ***$ 71,836*** |

f. Amounts recognized in accumulated other comprehensive income (before income tax effect) in respect of defined retirement benefit plans as of March 31, 2019 and 2018, were as follows:

| | Millions of Yen | | Thousands of U.S. Dollars |
|---|---|---|---|
| | **2019** | 2018 | **2019** |
| Unrecognized actuarial losses (gains) | **¥ 5,839** | ¥ (1,380) | **$ 53,081** |
| Unrecognized prior service cost | **779** | 96 | **7,081** |
| ***Total*** | ***¥ 6,619*** | *¥ (1,283)* | ***$ 60,172*** |

g. Plan assets

***(1) Components of plan assets***

Plan assets as of March 31, 2019 and 2018, consisted of the following:

| | **2019** | 2018 |
|---|---|---|
| Equities | **57 %** | 55 % |
| General security account | **25** | 27 |
| Bonds | **11** | 11 |
| Others | **7** | 7 |
| ***Total*** | ***100 %*** | *100 %* |

The employee retirement benefit trust for the Companies' contributory pension plans accounted for 50% and 47% of total plan assets for the years ended March 31, 2019 and 2018, respectively.

***(2) Method of determining the expected rate of return on plan assets***

The expected rate of return on plan assets is determined considering the current and future asset portfolio and the long-term rates of return which are expected currently and in the future from the various components of the plan assets.

h. Assumptions used for the years ended March 31, 2019, 2018 and 2017, were set forth as follows:

| | **2019** | 2018 | 2017 |
|---|---|---|---|
| Discount rate | **Mainly 0.4%** | Mainly 0.4% | Mainly 0.4% |
| Expected rate of return on plan assets | **1.2% to 2.0%** | 1.2% to 2.0 % | 1.2% to 2.0 % |

i. Defined Contribution Plan

Total contribution by the Companies for the defined contribution plan was ¥128 million ($1,163 thousand) for the year ended March 31, 2019, ¥125 million for the year ended March 31, 2018, and ¥121 million for the year ended March 31, 2017.

## 9.EQUITY

Japanese companies are subject to the Companies Act of Japan (the "Companies Act"). The significant provisions in the Companies Act that affect financial and accounting matters are summarized below:

***a.Dividends***

Under the Companies Act, companies can pay dividends at any time during the fiscal year in addition to the year-end dividend upon resolution at the shareholders' meeting. Additionally, for companies that meet certain criteria including (1) having a Board of Directors, (2) having independent auditors, (3) having an Audit & Supervisory Board, and (4) the term of service of the directors being prescribed as one year rather than the normal two-year term by its articles of incorporation, the Board of Directors may declare dividends (except for dividends-in-kind) at any time during the fiscal year if the Company has prescribed so in its articles of incorporation. However, the Company does not meet all the above criteria.

The Companies Act permits companies to distribute dividends-in-kind (noncash assets) to shareholders subject to a certain limitation and additional requirements.

Semiannual interim dividends may also be paid once a year upon resolution by the Board of Directors if the articles of incorporation of the company so stipulate. The Companies Act provides certain limitations on the amounts available for dividends or the purchase of treasury stock. The limitation is defined as the amount available for distribution to the shareholders, but the amount of equity after dividends must be maintained at no less than ¥3 million.

***b.Increases/Decreases and Transfer of Common Stock, Reserve and Surplus***

The Companies Act requires that an amount equal to 10% of dividends must be appropriated as a legal reserve (a component of retained earnings) or as additional paid-in capital (a component of capital surplus), depending on the equity account charged upon the payment of such dividends, until the aggregate amount of legal reserve and additional paid-in capital equals to 25% of the common stock. The Company has already appropriated defined amount as a legal reserve or additional paid-in capital. Under the Companies Act, the total amount of additional paid-in capital and legal reserve may be reversed without limitation. The Companies Act also provides that common stock, legal reserve, additional paid-in capital, other capital surplus and retained earnings-unappropriated can be transferred among the accounts within equity under certain conditions upon resolution of the shareholders.

***c.Treasury Stock and Treasury Stock Acquisition Rights***

The Companies Act also provides for companies to purchase treasury stock and dispose of such treasury stock by resolution of the Board of Directors. The amount of treasury stock purchased cannot exceed the amount available for distribution to the shareholders which is determined by a specific formula.

Under the Companies Act, stock acquisition rights are presented as a separate component of equity.

The Companies Act also provides that companies can purchase both treasury stock acquisition rights and treasury stock. Such treasury stock acquisition rights are presented as a separate component of equity or deducted directly from stock acquisition rights.

## 10.EMPLOYEE STOCK OWNERSHIP PLAN

The Company holds the Employee Stock Ownership Plan by transactions of delivering its own stock to the JR Tokai Employee Shareholding Association (the "Shareholding Association") through trusts for the purpose of improving the employee benefit program for employees participating in the Shareholding Association and revitalizing the Shareholding Association.

**(1)Transaction outline**

The Company introduced an "Employee Stock Ownership Plan (employee shareholding association purchase-type)" (the "Plan") in September, 2017. To introduce the Plan, the Company, as the trustor, entered into a Stock Benefit Trust (Employee Shareholding Association Purchase-type) Agreement (the "Trust Agreement") with Mizuho Trust & Banking Co., Ltd. as the trustee (hereinafter the trust to be established pursuant to the Trust Agreement is referred to as the "Trust"). Mizuho Trust & Banking Co., Ltd. will enter into an agreement with Trust & Custody Services Bank, Ltd. to re-entrust the administration of trust assets such as securities with Trust & Custody Services Bank, Ltd. as the re-trustee.

Trust & Custody Services Bank, Ltd. will collectively acquire the equivalent number of the Company's shares that the Shareholding Association is expected to purchase for four years after introducing the Plan, and place them in the trust account E established at Trust & Custody Services Bank, Ltd. ("Trust Account E"), and thereafter, will sell the Company's shares to the Shareholding Association upon its acquisition of shares. If the amount equivalent to the net gains on the sale of the Company's shares to the Shareholding Association by the Trust Account E accumulates within the trust assets of the Trust by the time of termination of the Trust, such money will be distributed as the residual assets to members of the Shareholding Association who meet the beneficiary requirements (employees).

Meanwhile, the Company will act as guarantor for the borrowing undertaken by the trust bank to purchase the Company's shares, and will repay any outstanding portion of the loan if there are remaining borrowings equivalent to the loss on the sale of the shares at the time of termination of the Trust due to a decrease in the market price of the Company's shares or otherwise.

**(2)The Trust held the treasury stock and long-term debt, which was included in the consolidated balance sheet as follows:**

| | Millions of Yen | | Thousands of U.S. Dollars |
|---|---|---|---|
| | **2019** | 2018 | **2019** |
| Treasury stock | **¥ 13,753** | ¥ 18,527 | **$ 125,027** |
| (shares) | **(722,200)** | (972,900) | |
| Long-term debt of the employee stock ownership plan trust | **¥ 15,100** | ¥ 20,500 | **$ 137,272** |

**(3) Annual maturities of long-term debt of the employee stock ownership plan trust as of March 31, 2019, were as follows:**

| Year Ending March 31 | Millions of Yen | Thousands of U.S. Dollars |
|---|---|---|
| 2020 | ¥ 5,400 | $ 49,090 |
| 2021 | 5,400 | 49,090 |
| 2022 | 4,300 | 39,090 |
| 2023 | | |
| 2024 | | |
| Thereafter | | |
| ***Total*** | *¥ 15,100* | *$ 137,272* |

## 11. INCOME TAXES

The Companies are subject to Japanese national and local income taxes which, in the aggregate, resulted in a normal effective statutory tax rate of approximately 30.3% for the year ended March 31, 2019,and 30.6% for the year ended March 31, 2018 and 2017.

The tax effects of significant temporary differences which resulted in deferred tax assets and liabilities as of March 31, 2019 and 2018, were as follows:

| | Millions of Yen | | Thousands of U.S. Dollars |
|---|---|---|---|
| | **2019** | 2018 | **2019** |
| **Deferred tax assets:** | | | |
| Depreciation and amortization | **¥ 75,302** | ¥ 72,739 | **$ 684,563** |
| Liability for retirement benefits | **61,742** | 63,408 | **561,290** |
| Software | **12,106** | 11,168 | **110,054** |
| Loss on write down of investment securities | **9,726** | 9,742 | **88,418** |
| Provision for bonuses | **8,723** | 8,591 | **79,300** |
| Unrealized profit on property, plant and equipment | **7,566** | 7,459 | **68,781** |
| Accrued railway usage charges | **3,089** | 3,015 | **28,081** |
| Other | **43,173** | 44,840 | **392,481** |
| ***Total*** | ***221,430*** | *220,966* | ***2,013,000*** |
| Less valuation allowance | **(31,368)** | (34,715) | **(285,163)** |
| ***Deferred tax assets*** | ***190,061*** | *186,250* | ***1,727,827*** |
| Deferred tax liabilities: | | | |
| Unrealized gain on available-for-sale securities | **14,971** | 16,411 | **136,100** |
| Deferred gain on transfer of certain fixed assets | **4,286** | 4,308 | **38,963** |
| Other | **5,829** | 5,079 | **52,990** |
| ***Deferred tax liabilities*** | ***25,087*** | *25,799* | ***228,063*** |
| ***Net deferred tax assets*** | ***¥ 164,974*** | *¥ 160,450* | ***$ 1,499,763*** |

Since the difference between the normal effective statutory tax rate and the actual effective tax rate was not significant, reconciliations were not presented for the years ended March 31, 2019, 2018 and 2017.

## 12. FINANCIAL INSTRUMENTS AND RELATED DISCLOSURES

***a. Policy for Financial Instruments***

The Companies use only financial instruments with high degrees of safety for the management of funds and raise funds from bank loans, bonds and others.

Derivatives are used, not for speculative purposes, but to manage exposure to financial risks as described in Note 13.

***b.Nature and Extent of Risks Arising from Financial Instruments***

Money held in trust for the Chuo Shinkansen construction is set to segregate loans from the JRTT from other cash on hand for purposes of promoting the construction of the Chuo Shinkansen. The trust property is comprised of deposits.

Trade receivables are exposed to customer credit risk.

Investment securities, mainly held to maturity debt securities and equity instruments of customers and suppliers of the Companies, are exposed to the risk of market price fluctuations.

Payment terms of trade payables and income taxes payable are within one year.

Short-term bank loans are used to fund the Companies' ongoing operations. Bonds and long-term loans are used for renewal of long-term debt and capital spending. Please see Note 5 for a maturity analysis for bank loans and bonds payable.

Long-term debt for the Chuo Shinkansen construction is a loan in the amount of ¥3,000,000 million from the JRTT using the FILP in accordance with the JRTT Act for purposes of promoting the construction of the Chuo Shinkansen.

Long-term debt of the employee stock ownership plan trust is a loan which the Trust borrowed from financial institutions.

Long-term accounts payable—railway facilities were incurred in the amount of ¥5,095,661 million in 1991 for the purchase of the Shinkansen railway ground facilities and serially repaid to the JRTT. Payment terms are 25.5 years for ¥4,494,466 million and 60 years for ¥601,195 million. Payment terms and interest rates of the payables were determined based on the agreements from the purchase of the Shinkansen railway ground facilities. The Company had paid off ¥4,494,466 million by January 2017.

Derivatives include foreign currency swaps, which are used to manage exposure to market risks of changes in foreign exchange rates of foreign currency denominated long-term debt, and interest rate swaps, which are used to manage exposure to market risks of changes in interest rates of long-term debt. Please see Note 13 for details on derivatives.

***c.Risk Management for Financial Instruments***

***Credit Risk Management***

Credit risk is the risk of economic loss arising from a counterparty's failure to repay or service debt according to the contractual terms. The Companies manage their credit risk from trade receivables by monitoring of payment terms and balances of major customers by each business administration department to identify the default risk of customers in the early stage. With respect to held-to-maturity debt securities, the Companies manage exposure to credit risk by limiting debt securities to high credit rated bonds.

***Market Risk Management***

Investment securities are managed by monitoring market values and the financial position of issuers on a regular basis.

Foreign currency swaps are used to manage exposure to market risks of changes in exchange rates of foreign currency long-term debt. Interest rate swaps are used to manage exposure to market risks of changes in interest rates of long-term debt.

***d. Fair Values of Financial Instruments***

Fair values of financial instruments are based on quoted prices in active markets. If a quoted price is not available, other rational valuation techniques are used instead. Also, please see Note 13 for the details of fair value for derivatives.

**(1) Fair Value of Financial Instruments**

| | Millions of Yen | | |
|---|---|---|---|
| March 31, 2019 | Carrying Amount | Fair Value | Unrealized Gain/(Loss) |
| Cash and cash equivalents | ¥ 751,636 | ¥ 751,636 | |
| Money held in trust for the Chuo Shinkansen construction | 2,670,591 | 2,670,591 | |
| Trade receivables | 112,845 | 112,845 | |
| Investment securities | 648,241 | 652,928 | ¥ 4,687 |
| ***Total*** | *¥ 4,183,314* | *¥ 4,188,002* | *¥ 4,687* |
| Short-term loans payable | ¥ (28,392) | ¥ (28,392) | |
| Trade payables | (246,282) | (246,282) | |
| Income taxes payable | (105,698) | (105,698) | |
| Long-term debt including current potion | (1,307,225) | (1,462,039) | ¥ 154,814 |
| Long-term debt for the Chuo Shinkansen construction | (3,000,000) | (3,263,563) | 263,563 |
| Long-term debt of the employee stock ownership plan trust including current potion | (15,100) | (15,100) | 0 |
| Long-term accounts payable—railway facilities including current potion | (543,896) | (1,193,032) | 649,136 |
| ***Total*** | *¥ (5,246,593)* | *¥ (6,314,108)* | *¥ 1,067,515* |

| | Millions of Yen | | |
|---|---|---|---|
| March 31, 2018 | Carrying Amount | Fair Value | Unrealized Gain/(Loss) |
| Cash and cash equivalents | ¥ 782,454 | ¥ 782,454 | |
| Money held in trust for the Chuo Shinkansen construction | 2,840,931 | 2,840,931 | |
| Trade receivables | 102,021 | 102,021 | |
| Investment securities | 279,088 | 279,198 | ¥ 110 |
| ***Total*** | *¥ 4,004,495* | *¥ 4,004,605* | *¥ 110* |
| Short-term loans payable | ¥ (27,509) | ¥ (27,509) | |
| Trade payables | (227,523) | (227,523) | |
| Income taxes payable | (109,783) | (109,783) | |
| Long-term debt including current potion | (1,307,181) | (1,456,992) | ¥ 149,810 |
| Long-term debt for the Chuo Shinkansen construction | (3,000,000) | (2,995,100) | (4,899) |
| Long-term debt of the employee stock ownership plan trust including current potion | (20,500) | (20,459) | (40) |
| Long-term accounts payable—railway facilities including current potion | (549,024) | (1,180,003) | 630,979 |
| ***Total*** | *¥ (5,241,523)* | *¥ (6,017,372)* | *¥ 775,849* |

| | Thousands of U.S. Dollars | | |
|---|---|---|---|
| March 31, 2019 | Carrying Amount | Fair Value | Unrealized Gain/(Loss) |
| Cash and cash equivalents | $ 6,833,054 | $ 6,833,054 | |
| Money held in trust for the Chuo Shinkansen construction | 24,278,100 | 24,278,100 | |
| Trade receivables | 1,025,863 | 1,025,863 | |
| Investment securities | 5,893,100 | 5,935,709 | $ 42,609 |
| ***Total*** | *$ 38,030,127* | *$ 38,072,745* | *$ 42,609* |
| Short-term loans payable | $ (258,109) | $ (258,109) | |
| Trade payables | (2,238,927) | (2,238,927) | |
| Income taxes payable | (960,890) | (960,890) | |
| Long-term debt including current potion | (11,883,863) | (13,291,263) | $ 1,407,400 |
| Long-term debt for the Chuo Shinkansen construction | (27,272,727) | (29,668,754) | 2,396,027 |
| Long-term debt of the employee stock ownership plan trust including current potion | (137,272) | (137,272) | 0 |
| Long-term accounts payable—railway facilities including current potion | (4,944,509) | (10,845,745) | 5,901,236 |
| ***Total*** | *$ (47,696,300)* | *$ (57,400,981)* | *$ 9,704,681* |

**Cash and Cash Equivalents**

The carrying values of cash and cash equivalents approximate fair value because of their short maturities.

**Money Held in Trust for the Chuo Shinkansen Construction**

The fair value of money held in trust for the Chuo Shinkansen construction is determined based on financial assets which are held by the trust property. Their carrying values approximate fair value because the trust property consists of a deposit.

**Investment Securities**

The fair values of investment securities are measured at the quoted market price of the stock exchange for the equity instruments, and at the quoted price obtained from the financial institution for certain debt instruments. Fair value information for investment securities by classification is included in Note 4.

**Trade Receivables and Payables, Short-Term Loans Payable and Income Taxes Payable**

The carrying values of trade receivables and payables, short-term loans payable and income taxes payable approximate fair value because of their short maturities.

**Long-Term Debt Including Current Portion, Long-Term Debt for the Chuo Shinkansen Construction and Long-Term Debt of the Employee Stock Ownership Plan Trust Including Current Portion**

Domestic bonds are measured at the quoted market prices. Fair values of foreign currency bonds are measured in combination with foreign currency swaps, which qualify for hedge accounting and meet specific matching criteria and are accounted for by the method stated in Note 3.s, by discounting the total amounts of principal and interest of the bonds in combination with foreign currency swaps at the Company's assumed bond issuing rate.

Fair values of long-term debt with floating interest rates are measured in combination with interest rate swaps or interest rate and currency swaps, which qualify for hedge accounting and are accounted for by the method stated in Note 3.t, by discounting the total amounts of the principal and interest at the Company's assumed borrowing rate.

The fair values of other debt, long-term debt for the Chuo Shinkansen construction and long-term debt of the employee stock ownership plan trust are determined by discounting the cash flows related to the debt at the Company's assumed bond issuing rate or corporate borrowing rate.

**Long-Term Accounts Payable—Railway Facilities Including Current Portion**

Long-term accounts payable represents monetary liability for purchase of railway facilities assumed under a special law, and it is difficult for the Company to raise funds again in the same manner. The fair value of such long-term accounts payable is determined based on the present value of the total amounts of principal and interest payment discounted at an interest rate to be applied if similar new bonds were issued.

**(2) Financial Instruments Whose Fair Value Cannot be Reliably Determined**

| | Carrying Amount | |
|---|---|---|
| March 31, 2019 | Millions of Yen | Thousands of U.S. Dollars |
| Investments in equity instruments that do not have a quoted market price in an active market: | | |
| Investment securities | ¥ 15,108 | $ 137,345 |
| Investments in unconsolidated subsidiaries and affiliates | 13,070 | 118,818 |
| ***Total*** | *¥ 28,178* | *$ 256,163* |

| | Carrying Amount |
|---|---|
| March 31, 2018 | Millions of Yen |
| Investments in equity instruments that do not have a quoted market price in an active market: | |
| Investment securities | ¥ 15,154 |
| Investments in unconsolidated subsidiaries and affiliates | 12,694 |
| ***Total*** | *¥ 27,848* |

***e. Maturity Analysis for Financial Assets and Securities with Contractual Maturities***

| | Millions of Yen | | |
|---|---|---|---|
| March 31, 2019 | Due within One Year | Due after One Year through Five Years | Due after Five Years |
| Cash and cash equivalents | ¥ 751,636 | | |
| Money held in trust for the Chuo Shinkansen construction | 2,670,591 | | |
| Trade receivables | 112,845 | | |
| Investment securities | | ¥ 156,900 | ¥ 353,100 |
| ***Total*** | *¥ 3,535,073* | *¥ 156,900* | *¥ 353,100* |

| | Thousands of U.S. Dollars | | |
|---|---|---|---|
| March 31, 2019 | Due within One Year | Due after One Year through Five Years | Due after Five Years |
| Cash and cash equivalents | $ 6,833,054 | | |
| Money held in trust for the Chuo Shinkansen construction | 24,278,100 | | |
| Trade receivables | 1,025,863 | | |
| Investment securities | | $ 1,426,363 | $ 3,210,000 |
| ***Total*** | *$ 32,137,027* | *$ 1,426,363* | *$ 3,210,000* |

***f. Annual Maturities of Long-Term Debt, Long-Term Debt for the Chuo Shinkansen Construction, Long-Term Debt of the Employee Stock Ownership Plan Trust and Long-Term Accounts Payable—Railway Facilities***

Please see Note 5 for annual maturities of long-term debt, Note 6 for long-term debt for the Chuo Shinkansen construction, Note 10 for long-term debt of the employee stock ownership plan trust and Note 7 for long-term accounts payable—railway facilities.

## 13.DERIVATIVES

The Companies enter into foreign currency swap agreements to manage exposure to market risks of changes in foreign exchange of foreign currency long-term debt, and interest rate swap agreements to manage exposure to market risks of changes in interest rates of certain liabilities.

Derivative transactions are mainly entered into to hedge foreign exchange exposures and interest rate exposures incorporated within their business. Accordingly, market risk in these derivatives is basically offset by opposite movements in the value of hedged liabilities.

Because the counterparties to these derivatives are limited to major international financial institutions, the Companies do not anticipate any losses arising from credit default.

Derivative transactions have been made in accordance with internal policies and have been subject to due internal formalities.

**Derivative Transactions to Which Hedge Accounting Is Applied**

| | | Millions of Yen | | |
|---|---|---|---|---|
| March 31, 2019 | Hedged Item | Contract Amount | Contract Amount Due after One Year | Fair Value |
| Foreign currency swaps:(fixed amount payment in yen, fixed amount receipt in U.S. dollars) | Foreign currency bonds | ¥ 144,183 | ¥ 144,183 | * |
| Interest rate swaps:(fixed rate payment, floating rate receipt) | Bank loans | ¥ 75,500 | ¥ 41,500 | * |
| Interest rate and currency swaps: (fixed rate / amount payment in yen, floating rate receipt and fixed amount receipt in U.S. dollars ) | Foreign currency bank loans | ¥ 53,062 | ¥ 53,062 | * |

| | | Millions of Yen | | |
|---|---|---|---|---|
| March 31, 2018 | Hedged Item | Contract Amount | Contract Amount Due after One Year | Fair Value |
| Foreign currency swaps:(fixed amount payment in yen, fixed amount receipt in U.S. dollars) | Foreign currency bonds | ¥ 105,175 | ¥ 105,175 | * |
| Interest rate swaps:(fixed rate payment, floating rate receipt) | Bank loans | ¥ 110,000 | ¥ 75,500 | * |
| Interest rate and currency swaps: (fixed rate / amount payment in yen, floating rate receipt and fixed amount receipt in U.S. dollars ) | Foreign currency bank loans | ¥ 49,769 | ¥ 49,769 | * |

| | | Thousands of U.S. Dollars | | |
|---|---|---|---|---|
| March 31, 2019 | Hedged Item | Contract Amount | Contract Amount Due after One Year | Fair Value |
| Foreign currency swaps:(fixed amount payment in yen, fixed amount receipt in U.S. dollars) | Foreign currency bonds | $ 1,310,754 | $ 1,310,754 | * |
| Interest rate swaps:(fixed rate payment, floating rate receipt) | Bank loans | $ 686,363 | $ 377,272 | * |
| Interest rate and currency swaps: (fixed rate / amount payment in yen, floating rate receipt and fixed amount receipt in U.S. dollars ) | Foreign currency bank loans | $ 482,381 | $ 482,381 | * |

* Foreign currency swaps, interest rate swaps, or interest rate and currency swaps which qualify for hedge accounting are accounted for in combination with hedged items such as the foreign currency bonds, long-term debt, or foreign currency bank loans and the fair values of these swaps are included in those of hedged items in Note 12.

## 14.LEASES

As a lessee, the minimum rental commitments under noncancelable operating leases as of March 31, 2019 and 2018 were due as follows.

| | Millions of Yen | | Thousands of U.S. Dollars |
|---|---|---|---|
| | **2019** | 2018 | **2019** |
| Due within one year | **¥ 495** | ¥ 468 | **$ 4,500** |
| Due after one year | **2,711** | 2,716 | **24,645** |
| ***Total*** | ***¥ 3,207*** | *¥ 3,184* | ***$ 29,154*** |

As a lessor, the minimum rental commitments under noncancelable operating leases as of March 31, 2019 and 2018, were due as follows:

| | Millions of Yen | | Thousands of U.S. Dollars |
|---|---|---|---|
| | **2019** | 2018 | **2019** |
| Due within one year | **¥ 7,923** | ¥ 5,704 | **$ 72,027** |
| Due after one year | **22,584** | 25,334 | **205,309** |
| ***Total*** | ***¥ 30,507*** | *¥ 31,038* | ***$ 277,336*** |

## 15.CONTINGENCIES

As of March 31, 2019, the Company has joint and several obligations with the RTRI to make payments on long-term debt of ¥2,609 million ($23,718 thousand) borrowed by the RTRI. The proceeds are being used for the enhancement of technological development of the Maglev system. In addition, as of March 31, 2019, the Company is contingently liable for guarantees of loans of RTRI amounting to ¥13,400 million ($121,818 thousand).

As discussed in Note 5, based on debt assumption agreements with financial institutions, the Company has transferred the debt repayment obligations for certain bonds to such financial institutions. As of March 31, 2019, the Company had contingent obligations of ¥284,445 million ($2,585,863 thousand) for the bonds.

## 16.OTHER COMPREHENSIVE INCOME

The components of other comprehensive income for the years ended March 31, 2019, 2018 and 2017, were as follows:

| | Millions of Yen | | | Thousands of U.S. Dollars |
|---|---|---|---|---|
| | **2019** | 2018 | 2017 | **2019** |
| Unrealized (loss) gain on available-for-sale securities: | | | | |
| (Loss) gain arising during the year | **¥ (5,850)** | ¥ 13,824 | ¥ 8,490 | **$ (53,181)** |
| Reclassification adjustments to profit or loss | | (0) | (23) | |
| Amount before income tax effect | **(5,850)** | 13,824 | 8,466 | **(53,181)** |
| Income tax effect | **1,440** | (4,303) | (1,959) | **13,090** |
| ***Total*** | ***¥ (4,409)*** | *¥ 9,521* | *¥ 6,507* | ***$ (40,081)*** |
| Deferred gain (loss) on hedges: | | | | |
| Gain (loss) arising during the year | **¥ 7** | ¥ (4) | ¥ 2 | **$ 63** |
| Amount before income tax effect | **7** | (4) | 2 | **63** |
| Income tax effect | | | | |
| ***Total*** | ***¥ 7*** | *¥ (4)* | *¥ 2* | ***$ 63*** |
| Remeasurements of defined benefit plans: | | | | |
| Adjustments arising during the year | **¥ 3,927** | ¥ 2,261 | ¥ (1,862) | **$ 35,700** |
| Reclassification adjustments to profit | **3,975** | 4,442 | 4,729 | **36,136** |
| Amount before income tax effect | **7,902** | 6,704 | 2,866 | **71,836** |
| Income tax effect | **(2,382)** | (1,999) | (845) | **(21,654)** |
| ***Total*** | ***¥ 5,519*** | *¥ 4,704* | *¥ 2,020* | ***$ 50,172*** |
| Share of other comprehensive income in affiliates | | | | |
| Gain arising during the year | **¥ 41** | ¥ 39 | ¥ 27 | **$ 372** |
| Reclassification adjustments to profit | **16** | 38 | 36 | **145** |
| ***Total*** | ***¥ 58*** | *¥ 78* | *¥ 63* | ***$ 527*** |
| ***Total other comprehensive income*** | ***¥ 1,175*** | *¥ 14,299* | *¥ 8,595* | ***$ 10,681*** |

## 17.SEGMENT INFORMATION

Under ASBJ Statement No. 17, "Accounting Standard for Segment Information Disclosures" and ASBJ Guidance No. 20, "Guidance on Accounting Standard for Segment Information Disclosures," an entity is required to report financial and descriptive information about its reportable segments. Reportable segments are operating segments or aggregations of operating segments that meet specified criteria. Operating segments are components of an entity for which separate financial information is available and such information is evaluated regularly by the chief operating decisionmaker in deciding how to allocate resources and in assessing performance. Generally, segment information is required to be reported on the same basis as is used internally for evaluating operating segment performance and deciding how to allocate resources to operating segments.

**a. Description of Reportable Segments**

The Companies' reportable segments are those for which separate financial information is available and regular evaluation by the Companies' management is being performed in order to decide how resources are allocated among the Companies.

The Companies are composed of three reportable segments by nature of products and services: Transportation, Merchandise and Other and Real Estate are disclosed.

The Transportation segment manages the Companies' railway operations, such as the Tokaido Shinkansen and conventional railway operations in the Tokai area, bus operations and others. The Merchandise and Other segment includes a department store in JR Central Towers, retail sales in trains and stations and others. The Real Estate segment include real estate leasing business, such as station building leasing and real estate sales in lots.

**b. Methods of Measurement for the Amounts of Operating Revenues, Profit (Loss), Assets, Liabilities and Other Items for Each Reportable Segment**

The accounting policies of each reportable segment are consistent with those disclosed in Note 3, "Summary of Significant Accounting Policies." Reportable segment profit represents operating income. Prices of intersegment transactions or transfers are determined based upon arm's length transactions.

**c. Information about Operating Revenues, Profit (Loss), Assets, Liabilities and Other Items**

| | Millions of Yen | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 2019 | | | | | | | |
| | Reportable Segment | | | | | | | |
| | Transportation | Merchandise and Other | Real Estate | Total | Other | Total | Reconciliations | Consolidated |
| Operating revenues: | | | | | | | | |
| External customers | ¥ 1,449,198 | ¥ 253,312 | ¥ 49,646 | ¥ 1,752,156 | ¥ 125,980 | ¥ 1,878,137 | | ¥ 1,878,137 |
| Intersegment transactions or transfers | 12,146 | 11,672 | 32,488 | 56,307 | 135,090 | 191,398 | ¥ (191,398) | |
| ***Total*** | *¥ 1,461,345* | *¥ 264,984* | *¥ 82,134* | *¥ 1,808,464* | *¥ 261,071* | *¥ 2,069,535* | *¥ (191,398)* | *¥ 1,878,137* |
| Segment profit | ¥ 664,897 | ¥ 9,638 | ¥ 20,279 | ¥ 694,814 | ¥ 16,103 | ¥ 710,918 | ¥ (1,143) | ¥ 709,775 |
| Segment assets | 8,711,224 | 127,619 | 370,244 | 9,209,088 | 408,015 | 9,617,103 | (321,358) | 9,295,745 |
| Other: | | | | | | | | |
| Depreciation and amortization | 186,166 | 4,101 | 16,930 | 207,198 | 4,064 | 211,262 | | 211,262 |
| Amounts of investments in equity in affiliates | 9,909 | | | 9,909 | | 9,909 | | 9,909 |
| Increase in property, plant and equipment and intangible assets | 392,471 | 2,999 | 10,436 | 405,907 | 8,492 | 414,399 | | 414,399 |

Millions of Yen

2018

| | Reportable Segment | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Transportation | Merchandise and Other | Real Estate | Total | Other | Total | Reconciliations | Consolidated |
| Operating revenues: | | | | | | | | |
| External customers | ¥ 1,412,182 | ¥ 243,228 | ¥ 46,117 | ¥ 1,701,528 | ¥ 120,510 | ¥ 1,822,039 | | ¥ 1,822,039 |
| Intersegment transactions or transfers | 11,869 | 12,164 | 31,902 | 55,936 | 141,115 | 197,052 | ¥ (197,052) | |
| ***Total*** | *¥ 1,424,051* | *¥ 255,393* | *¥ 78,020* | *¥ 1,757,465* | *¥ 261,626* | *¥ 2,019,091* | *¥ (197,052)* | *¥ 1,822,039* |
| Segment profit | ¥ 623,077 | ¥ 8,224 | ¥ 18,534 | ¥ 649,836 | ¥ 13,208 | ¥ 663,045 | ¥ (1,021) | ¥ 662,023 |
| Segment assets | 8,191,415 | 119,640 | 371,961 | 8,683,018 | 398,838 | 9,081,856 | (173,173) | 8,908,682 |
| Other: | | | | | | | | |
| Depreciation and amortization | 190,763 | 4,009 | 17,164 | 211,936 | 4,090 | 216,027 | | 216,027 |
| Amounts of investments in equity in affiliates | 9,648 | | | 9,648 | | 9,648 | | 9,648 |
| Increase in property, plant and equipment and intangible assets | 305,974 | 5,732 | 8,673 | 320,379 | 5,224 | 325,604 | | 325,604 |

Millions of Yen

2017

| | Reportable Segment | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Transportation | Merchandise and Other | Real Estate | Total | Other | Total | Reconciliations | Consolidated |
| Operating revenues: | | | | | | | | |
| External customers | ¥ 1,368,604 | ¥ 227,201 | ¥ 41,244 | ¥ 1,637,050 | ¥ 119,929 | ¥ 1,756,980 | | ¥ 1,756,980 |
| Intersegment transactions or transfers | 11,798 | 9,888 | 27,400 | 49,087 | 134,036 | 183,124 | ¥ (183,124) | |
| ***Total*** | *¥ 1,380,403* | *¥ 237,089* | *¥ 68,645* | *¥ 1,686,138* | *¥ 253,966* | *¥ 1,940,104* | *¥ (183,124)* | *¥ 1,756,980* |
| Segment profit | ¥ 593,192 | ¥ 7,501 | ¥ 18,144 | ¥ 618,838 | ¥ 1,684 | ¥ 620,522 | ¥ (958) | ¥ 619,564 |
| Segment assets | 6,295,736 | 111,093 | 376,295 | 6,783,124 | 369,461 | 7,152,585 | (99,910) | 7,052,675 |
| Other: | | | | | | | | |
| Depreciation and amortization | 205,970 | 3,463 | 12,147 | 221,581 | 3,804 | 225,386 | | 225,386 |
| Amounts of investments in equity in affiliates | 9,048 | | | 9,048 | | 9,048 | | 9,048 |
| Increase in property, plant and equipment and intangible assets | 270,710 | 12,786 | 39,720 | 323,217 | 6,706 | 329,924 | | 329,924 |

Thousands of U.S. Dollars

2019

| | Reportable Segment | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Transportation | Merchandise and Other | Real Estate | Total | Other | Total | Reconciliations | Consolidated |
| Operating revenues: | | | | | | | | |
| External customers | $ 13,174,527 | $ 2,302,836 | $ 451,327 | $ 15,928,690 | $ 1,145,272 | $ 17,073,972 | | $ 17,073,972 |
| Intersegment transactions or transfers | 110,418 | 106,109 | 295,345 | 511,881 | 1,228,090 | 1,739,981 | $ (1,739,981) | |
| ***Total*** | *$ 13,284,954* | *$ 2,408,945* | *$ 746,672* | *$ 16,440,581* | *$ 2,373,372* | *$ 18,813,954* | *$ (1,739,981)* | *$ 17,073,972* |
| Segment profit | $ 6,044,518 | $ 87,618 | $ 184,354 | $ 6,316,490 | $ 146,390 | $ 6,462,890 | $ (10,390) | $ 6,452,500 |
| Segment assets | 79,192,945 | 1,160,172 | 3,365,854 | 83,718,981 | 3,709,227 | 87,428,209 | (2,921,436) | 84,506,772 |
| Other: | | | | | | | | |
| Depreciation and amortization | 1,692,418 | 37,281 | 153,909 | 1,883,618 | 36,945 | 1,920,563 | | 1,920,563 |
| Amounts of investments in equity in affiliates | 90,081 | | | 90,081 | | 90,081 | | 90,081 |
| Increase in property,plant and equipment and intangible assets | 3,567,918 | 27,263 | 94,872 | 3,690,063 | 77,200 | 3,767,263 | | 3,767,263 |

Notes: 1. Other includes business in hotel, travel, advertising, rolling stock production, construction, etc., which are not included in a reportable segment.
2. Reconciliations are as follows:
a. The amount of the elimination of intersegment transactions included in the reconciliations was ¥(1,143) million ($(10,390) thousand), ¥(1,021) million and ¥(958) million for the years ended March 31, 2019, 2018 and 2017, respectively.
b. The reconciliations for segment assets include corporate assets, which are not allocated to a reportable segment, and the elimination of intersegment transactions.
Corporate assets principally consist of investment securities and certificates of deposit. The amounts of corporate assets were ¥288,709 million ($2,624,627 thousand), ¥441,612 million and ¥426,429 million for the years ended March 31, 2019, 2018 and 2017, respectively.
The elimination of intersegment transactions consists of intersegment receivables and others. The amounts of the elimination were ¥610,068 million ($5,546,072 thousand), ¥614,785 million and ¥526,340 million for the years ended March 31, 2019, 2018 and 2017, respectively.
3. Segment profit is reconciled to operating income in the consolidated statement of income.
4. Information about products and services was omitted since equivalent information was disclosed above.
Information about geographical areas was not presented since the Companies have no significant overseas operations.

## 18.SUBSEQUENT EVENTS

***Appropriations of Retained Earnings***

The following appropriation of retained earnings as of March 31, 2019, was approved at the Company's shareholders' meeting held on June 21, 2019. The total amount of dividends includes ¥54 million ($490 thousand) in dividends to be paid to the Trust.

| | Millions of Yen | Thousands of U.S. Dollars |
|---|---|---|
| Year-end cash dividends, ¥75 ($0.68) per share | ¥ 14,775 | $ 134,318 |

# Nonconsolidated Balance Sheet (Unaudited)

Central Japan Railway Company — March 31, 2019

## ASSETS

| | Millions of Yen (Note 1) | | Thousands of U.S. Dollars (Note 1) |
|---|---|---|---|
| | **2019** | 2018 | **2019** |
| **CURRENT ASSETS:** | | | |
| Cash and cash equivalents | **¥ 740,989** | ¥ 772,744 | **$ 6,736,263** |
| Money held in trust for the Chuo Shinkansen construction | **2,670,591** | 2,840,931 | **24,278,100** |
| Trade receivables | **57,967** | 49,823 | **526,972** |
| Supplies | **13,019** | 11,151 | **118,354** |
| Prepaid expenses and other | **45,598** | 39,009 | **414,527** |
| ***Total current assets*** | ***3,528,165*** | *3,713,661* | ***32,074,227*** |
| **NONCURRENT ASSETS:** | | | |
| Investments and other assets: | | | |
| Investment securities | **642,676** | 275,306 | **5,842,509** |
| Investments in and advances to subsidiaries and affiliates | **227,964** | 239,179 | **2,072,400** |
| Deferred tax assets | **156,910** | 151,383 | **1,426,454** |
| Prepaid expenses and other | **47,902** | 39,053 | **435,472** |
| ***Total investments and other assets*** | ***1,075,453*** | *704,923* | ***9,776,845*** |
| Property, plant and equipment (Note 2): | | | |
| Railway business property | **8,104,274** | 8,050,659 | **73,675,218** |
| Construction in progress | **647,505** | 420,438 | **5,886,409** |
| Other | **219,545** | 216,992 | **1,995,863** |
| ***Total*** | ***8,971,325*** | *8,688,090* | ***81,557,500*** |
| Accumulated depreciation | **(4,482,824)** | (4,380,236) | **(40,752,945)** |
| ***Net property, plant and equipment*** | ***4,488,500*** | *4,307,853* | ***40,804,545*** |
| ***Total noncurrent assets*** | ***5,563,954*** | *5,012,776* | ***50,581,400*** |
| ***TOTAL ASSETS*** | ***¥ 9,092,120*** | *¥ 8,726,438* | ***$ 82,655,636*** |

## LIABILITIES AND EQUITY

| | Millions of Yen (Note 1) | | Thousands of U.S. Dollars (Note 1) |
|---|---|---|---|
| | **2019** | 2018 | **2019** |
| **CURRENT LIABILITIES:** | | | |
| Short-term loans payable | **¥ 158,540** | ¥ 147,249 | **$ 1,441,272** |
| Current portion of long-term debt | **110,493** | 82,047 | **1,004,481** |
| Current portion of long-term debt of the employee stock ownership plan trust | **5,400** | 5,400 | **49,090** |
| Current portion of long-term accounts payable—railway facilities | **5,444** | 5,126 | **49,490** |
| Trade payables | **197,565** | 182,958 | **1,796,045** |
| Provision for bonuses | **21,334** | 21,340 | **193,945** |
| Income taxes payable | **98,502** | 102,291 | **895,472** |
| Prepaid fares received | **34,103** | 31,570 | **310,027** |
| Inter-line fares received | **188** | 476 | **1,709** |
| Other | **56,989** | 52,445 | **518,081** |
| ***Total current liabilities*** | ***688,562*** | *630,906* | ***6,259,654*** |
| **NONCURRENT LIABILITIES:** | | | |
| Long-term debt | **1,196,732** | 1,225,134 | **10,879,381** |
| Long-term debt for the Chuo Shinkansen construction | **3,000,000** | 3,000,000 | **27,272,727** |
| Long-term debt of the employee stock ownership plan trust | **9,700** | 15,100 | **88,181** |
| Long-term accounts payable—railway facilities | **538,451** | 543,897 | **4,895,009** |
| Provision for large-scale renovation of the Shinkansen infrastructure | **140,000** | 175,000 | **1,272,727** |
| Provision for retirement benefits | **177,815** | 179,242 | **1,616,500** |
| Other | **25,359** | 27,277 | **230,536** |
| ***Total noncurrent liabilities*** | ***5,088,058*** | *5,165,651* | ***46,255,072*** |
| **EQUITY:** | | | |
| Common stock—authorized, 824,000,000 shares; issued, 206,000,000 shares in 2019 and 2018 | **112,000** | 112,000 | **1,018,181** |
| Capital surplus | **53,500** | 53,500 | **486,363** |
| Retained earnings: | | | |
| Legal reserve | **12,504** | 12,504 | **113,672** |
| Unappropriated | **3,223,861** | 2,837,396 | **29,307,827** |
| Treasury stock-at cost, 9,721,439 shares in 2019 and 9,972,129 shares in 2018 | **(115,959)** | (120,733) | **(1,054,172)** |
| Unrealized gain on available-for-sale securities | **29,591** | 35,211 | **269,009** |
| ***Total equity*** | ***3,315,499*** | *2,929,880* | ***30,140,900*** |
| ***TOTAL LIABILITIES AND EQUITY*** | ***¥ 9,092,120*** | *¥ 8,726,438* | ***$ 82,655,636*** |

See notes to nonconsolidated financial statements.

## Nonconsolidated Statement of Income (Unaudited)

Central Japan Railway Company — Year Ended March 31, 2019

| | Millions of Yen (Note 1) | | | Thousands of U.S. Dollars (Note 1) |
|---|---|---|---|---|
| | **2019** | 2018 | 2017 | **2019** |
| **OPERATING REVENUES:** | | | | |
| Railway business | **¥ 1,452,005** | ¥ 1,414,884 | ¥ 1,371,906 | **$ 13,200,045** |
| Other | **12,881** | 12,560 | 8,863 | **117,100** |
| ***Total operating revenues*** | ***1,464,886*** | *1,427,444* | *1,380,770* | ***13,317,145*** |
| **OPERATING EXPENSES:** | | | | |
| Railway business | **788,754** | 793,541 | 779,970 | **7,170,490** |
| Other | **8,386** | 8,608 | 4,978 | **76,236** |
| ***Total operating expenses*** | ***797,140*** | *802,150* | *784,949* | ***7,246,727*** |
| ***Operating income*** | ***667,745*** | *625,293* | *595,821* | ***6,070,409*** |
| **OTHER INCOME (EXPENSES):** | | | | |
| Interest and dividend income | **3,636** | 3,194 | 2,233 | **33,054** |
| Interest expense | **(81,271)** | (79,105) | (60,177) | **(738,827)** |
| Other—net | **86** | 208 | 3,273 | **781** |
| ***Other expenses—net*** | ***(77,548)*** | *(75,702)* | *(54,670)* | ***(704,981)*** |
| **INCOME BEFORE INCOME TAXES** | **590,197** | 549,591 | 541,150 | **5,365,427** |
| **INCOME TAXES:** | | | | |
| Current | **179,709** | 172,961 | 151,746 | **1,633,718** |
| Deferred | **(3,557)** | (7,780) | 7,505 | **(32,336)** |
| ***Total income taxes*** | ***176,151*** | *165,181* | *159,252* | ***1,601,372*** |
| ***NET INCOME*** | ***¥ 414,045*** | *¥ 384,410* | *¥ 381,898* | ***$ 3,764,045*** |

| | Yen | | | U.S. Dollars |
|---|---|---|---|---|
| | **2019** | 2018 | 2017 | **2019** |
| **PER SHARE OF COMMON STOCK:** | | | | |
| Basic net income | **¥ 2,110.87** | ¥ 1,956.94 | ¥ 1,938.56 | **$ 19.19** |
| Cash dividends applicable to the year | **145.00** | 140.00 | 135.00 | **1.32** |

See notes to nonconsolidated financial statements.

## Nonconsolidated Statement of Changes in Equity (Unaudited)

Central Japan Railway Company — Year Ended March 31, 2019

| | Thousands | Millions of Yen (Note 1) | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | | Retained Earnings | | | | |
| | Outstanding Number of Shares of Common Stock | Common Stock | Capital Surplus | Legal Reserve | Unappropriated | Treasury Stock | Unrealized Gain on Available-for-Sale Securities | Total Equity |
| **BALANCE, APRIL 1, 2016** | 197,000 | 112,000 | 53,500 | 12,504 | 2,124,277 | (102,203) | 19,831 | 2,219,910 |
| Net income | | | | | 381,898 | | | 381,898 |
| Dividends from surplus, ¥130 per share | | | | | (25,610) | | | (25,610) |
| Purchase of treasury stock | (0) | | | | | (2) | | (2) |
| Net change in the year | | | | | | | 6,643 | 6,643 |
| **BALANCE, MARCH 31, 2017** | 197,000 | 112,000 | 53,500 | 12,504 | 2,480,566 | (102,205) | 26,474 | 2,582,839 |
| Net income | | | | | 384,410 | | | 384,410 |
| Dividends from surplus, ¥140 per share | | | | | (27,580) | | | (27,580) |
| Purchase of treasury stock | (972) | | | | | (21,365) | | (21,365) |
| Disposal of treasury stock | | | | | | 2,838 | | 2,838 |
| Net change in the year | | | | | | | 8,736 | 8,736 |
| **BALANCE, MARCH 31, 2018** | 196,027 | 112,000 | 53,500 | 12,504 | 2,837,396 | (120,733) | 35,211 | 2,929,880 |
| Net income | | | | | 414,045 | | | 414,045 |
| Dividends from surplus, ¥140 per share | | | | | (27,580) | | | (27,580) |
| Purchase of treasury stock | | | | | | (0) | | (0) |
| Disposal of treasury stock | 250 | | | | | 4,774 | | 4,774 |
| Net change in the year | | | | | | | (5,620) | (5,620) |
| ***BALANCE, MARCH 31, 2019*** | *196,278* | *¥ 112,000* | *¥ 53,500* | *¥ 12,504* | *¥3,223,861* | *¥ (115,959)* | *¥ 29,591* | *¥ 3,315,499* |

| | Thousands of U.S. Dollars (Note 1) | | | | | |
|---|---|---|---|---|---|---|
| | | | Retained Earnings | | | |
| | Common Stock | Capital Surplus | Legal Reserve | Unappropriated | Treasury Stock | Unrealized Gain on Available-for-Sale Securities | Total Equity |
| **BALANCE, MARCH 31, 2018** | $ 1,018,181 | $ 486,363 | $ 113,672 | $25,794,509 | $ (1,097,572) | $ 320,100 | $26,635,272 |
| Net income | | | | 3,764,045 | | | 3,764,045 |
| Dividends from surplus, $1.27 per share | | | | (250,727) | | | (250,727) |
| Purchase of treasury stock | | | | | (0) | | (0) |
| Disposal of treasury stock | | | | | 43,400 | | 43,400 |
| Net change in the year | | | | | | (51,090) | (51,090) |
| ***BALANCE, MARCH 31, 2019*** | *$ 1,018,181* | *$ 486,363* | *$ 113,672* | *$ 29,307,827* | *$ (1,054,172)* | *$ 269,009* | *$ 30,140,900* |

See notes to nonconsolidated financial statements.

# Notes to Nonconsolidated Financial Statements (Unaudited)

Central Japan Railway Company

## 1. BASIS OF PRESENTATION OF NONCONSOLIDATED FINANCIAL STATEMENTS

The accompanying nonconsolidated financial statements have been prepared in accordance with the provisions set forth in the Companies Act, the Japanese Financial Instruments and Exchange Act, the Law for Railway Business Enterprise and their related accounting regulations, and in accordance with accounting principles generally accepted in Japan, which are different in certain respects as to the application and disclosure requirements of International Financial Reporting Standards.

In preparing these nonconsolidated financial statements, certain reclassifications and rearrangements have been made to the nonconsolidated financial statements issued domestically in order to present them in a form which is more familiar to readers outside Japan.

The nonconsolidated financial statements are stated in Japanese yen, the currency of the country in which the Company is incorporated and operates. The translations of Japanese yen amounts into U.S. dollar amounts are included solely for the convenience of readers outside Japan and have been made at the rate of ¥110 to $1, the approximate rate of exchange as of March 31, 2019. Such translations should not be construed as representations that the Japanese yen amounts could be converted into U.S. dollars at that or any other rate. Japanese yen figures of less than one million yen are rounded down to the nearest million of yen, except for per share information, and U.S. dollar figures of less than one thousand U.S. dollars are also rounded down to the nearest thousand of U.S. dollars, except for per share information.

## 2. PROPERTY, PLANT AND EQUIPMENT

Property, plant and equipment as of March 31, 2019 and 2018, consisted of the following:

| | Millions of Yen | | Thousands of U.S. Dollars |
|---|---|---|---|
| | **2019** | 2018 | **2019** |
| Land | **¥ 2,326,941** | ¥ 2,326,709 | **$ 21,154,009** |
| Buildings | **612,049** | 609,112 | **5,564,081** |
| Structures | **3,816,563** | 3,788,243 | **34,696,027** |
| Rolling stock | **906,235** | 898,687 | **8,238,500** |
| Machinery and equipment | **658,822** | 641,905 | **5,989,290** |
| Lease assets | **3,207** | 2,993 | **29,154** |
| Construction in progress | **647,505** | 420,438 | **5,886,409** |
| ***Total*** | ***8,971,325*** | *8,688,090* | ***81,557,500*** |
| Accumulated depreciation | **(4,482,824)** | (4,380,236) | **(40,752,945)** |
| ***Net property, plant and equipment*** | ***¥ 4,488,500*** | *¥ 4,307,853* | ***$ 40,804,545*** |

Property, plant and equipment are stated at cost.

Depreciation is computed by the declining-balance method over the estimated useful lives of the assets. Additional depreciation is provided for the Shinkansen rolling stock based on kilometers traveled.

The range of useful lives is principally from 3 to 50 years for buildings, from 4 to 60 years for structures, from 10 to 20 years for rolling stock and from 4 to 17 years for machinery and equipment.

Depreciation of certain railway structures, except for the Shinkansen railway facilities, is computed by the replacement-accounting method.



Deloitte.

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# INDEPENDENT AUDITOR'S REPORT

***To the Board of Directors of***
***Central Japan Railway Company:***

We have audited the accompanying consolidated balance sheet of Central Japan Railway Company and its consolidated subsidiaries as of March 31, 2019, and the related consolidated statements of income, comprehensive income, changes in equity, and cash flows for the year then ended, and a summary of significant accounting policies and other explanatory information, all expressed in Japanese yen.

**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 Japan, and for such internal control as management determines is necessary to enable the preparation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

**Auditor's Responsibility**

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

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

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

**Opinion**

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the consolidated financial position of Central Japan Railway Company and its consolidated subsidiaries as of March 31, 2019, and the consolidated results of their operations and their cash flows for the year then ended in accordance with accounting principles generally accepted in Japan.

**Convenience Translation**

Our audit also comprehended the translation of Japanese yen amounts into U.S. dollar amounts and, in our opinion, such translation has been made in accordance with the basis stated in Note 2 to the consolidated financial statements. Such U.S. dollar amounts are presented solely for the convenience of readers outside Japan.

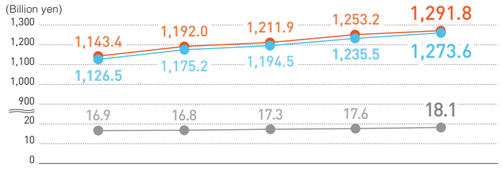
Deloitte Touche Tohmatsu LLC

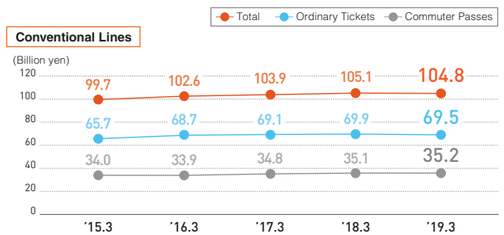
**June 21, 2019**

Member of
**Deloitte Touche Tohmatsu Limited**

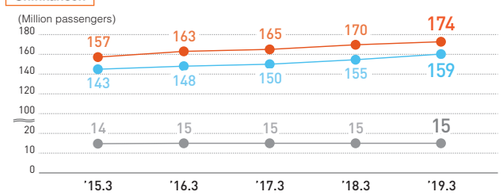
# Financial and Transportation Data

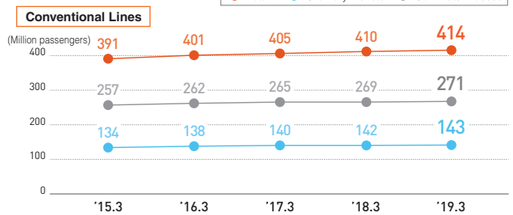
## Transportation revenues



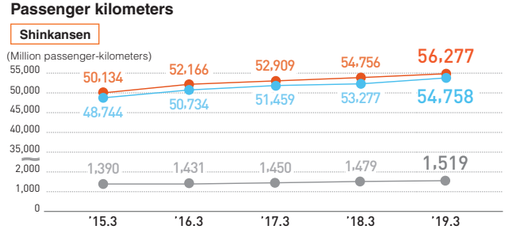



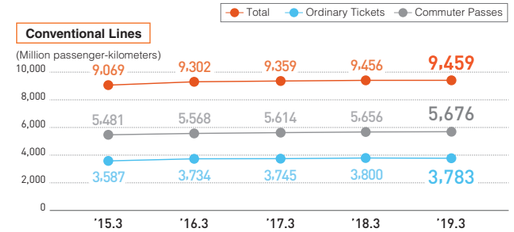

## Passenger Ridership



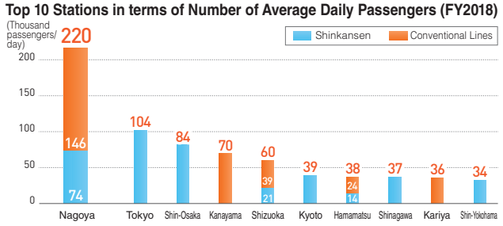




## Passenger kilometers

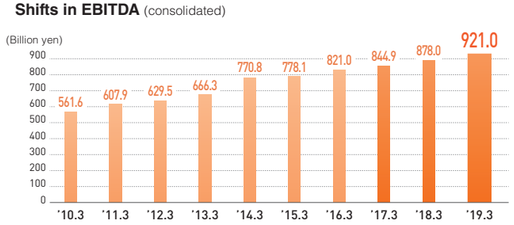



## Top 10 Stations in terms of Number of Average Daily Passengers (FY2018)

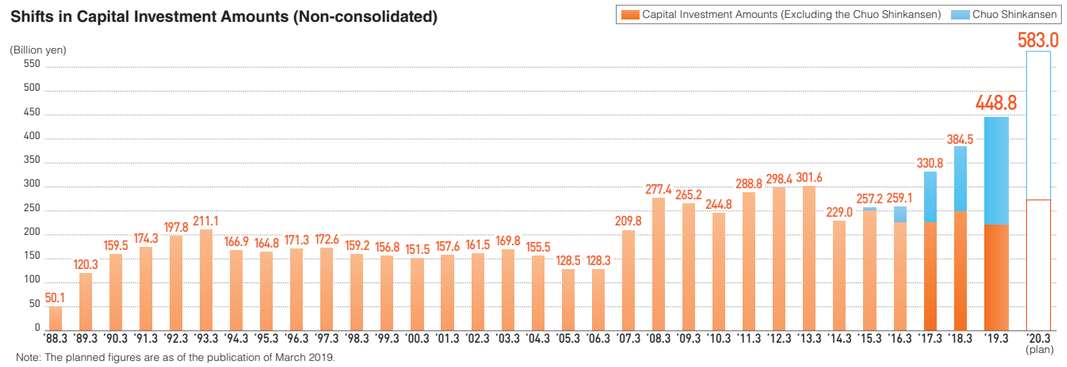



## Shifts in EBITDA (consolidated)




Note: EBITDA figures are calculated as the sum of operating income and depreciation and amortization

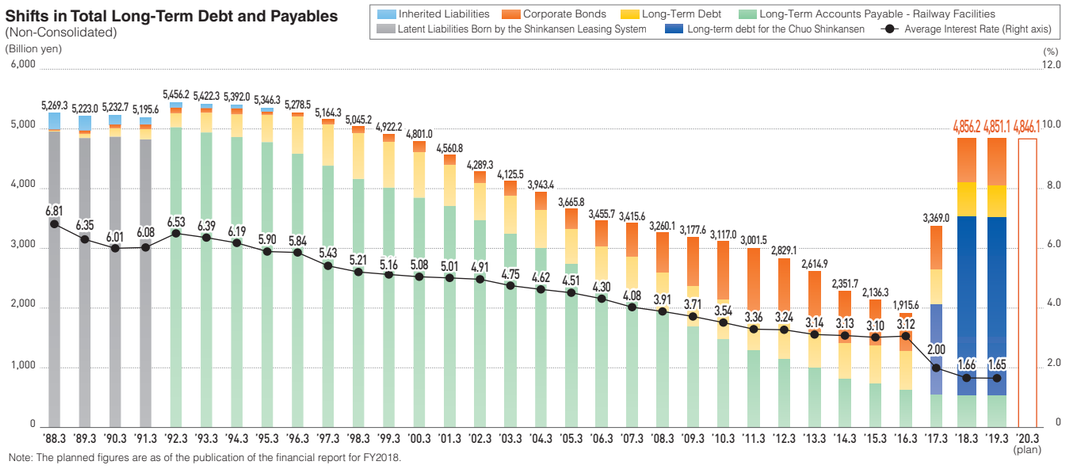
## Shifts in Capital Investment Amounts (Non-consolidated)




Note: The planned figures are as of the publication of March 2019.

## Shifts in Total Long-Term Debt and Payables

(Non-Consolidated)




Note: The planned figures are as of the publication of the financial report for FY2018.

### Long-Term Loan Using the Fiscal Investment and Loan Program (Long-term debt for the Chuo Shinkansen)

In November 2016, JR Central applied for a long-term loan using the Fiscal Investment and Loan Program (hereinafter, "FILP Loan") for 3 trillion yen (plan) to Japan Railway Construction, Transport and Technology Agency ("JRTT") to promote the construction of the Chuo Shinkansen. We proceeded to borrow funds in five lots sequentially thereafter and secured financing for a planned total of 3 trillion yen in July 2017.

The advantage we gain from the FILP loan lies in mitigating three management risks, which are interest-rate increase risk, financing risk, and redemption risk. Specifically, since we can secure long-term, fixed- and low-interest rate funds, we are able to mitigate the risk of interest rates rising in the future and fix interest payments at a low level for a long period of time.

Under the original plan, roughly 3 trillion yen of the construction cost for the route between Shinagawa and Nagoya, which is approximately 5.5 trillion yen, was expected to require new financing. However, by securing the amount through the FILP Loan, we have the funds needed until live operation in Nagoya without being considerably impacted by future economic conditions and interest rate fluctuations, thereby reducing financing risk.

Furthermore, since the FILP Loan matures after the construction period of the Chuo Shinkansen, during which time a large amount of funds is needed, we are able to build up cash from operating activities to provide for the redemption of liabilities, thereby also mitigating redemption risk.

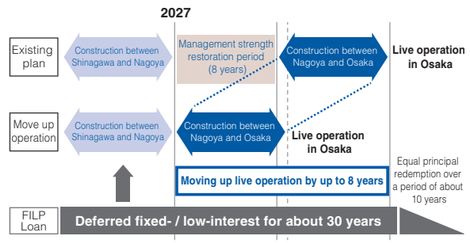
In the material submitted to the Transport Policy Council of the Ministry of Land, Infrastructure, Transport and Tourism in 2010, we indicated in our outlook that a period of 8 years after live operation in Nagoya will be set to recover management strength. After reducing long-term debt by a certain amount, construction on the route between Nagoya and Osaka will be initiated while seeing that sound management and stable dividends are strictly maintained, and ensuring that the balance of long-term debt does not exceed 5 trillion yen throughout the project period until live operation of the entire line. By utilizing this FILP Loan, we are able to reduce this period for restoring management strength and promote construction efforts in an aim to moving up live operation of the entire line by up to 8 years.

The Chuo Shinkansen Project is pursued based on the premise that JR Central, as a private corporation, covers full cost of construction, while securing management autonomy in investment and seeing that sound management and stable dividends are strictly maintained until the construction work is fully completed. The FILP Loan poses no change to this premise.

As for the terms of the FILP Loan, the weighted average rate is 0.86%, which is fixed throughout the entire period, and the annual interest expenses are 25.7 billion yen. The repayment method is equal principal payment over a period of roughly 10 years after deferring the payment of principal for about 30 years,

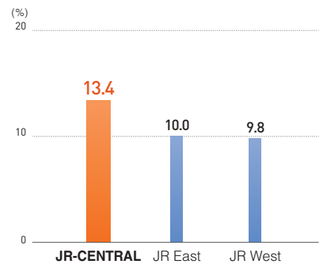
The funds procured from the FILP Loan will be applied only for the cost of construction of the Chuo Shinkansen. We ensure the transparency of funds by setting a trust aimed at segment-based management.

#### Illustrated plan of moving up live operation

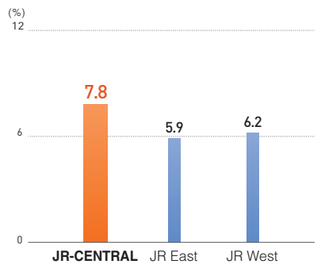


## Financial Data Comparison of Three JR Companies (Consolidated)*1

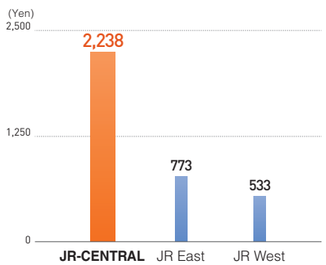
### Return on Equity



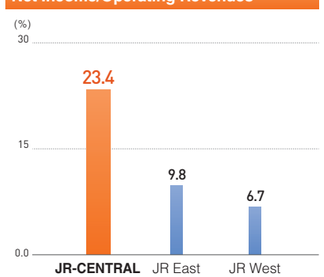

### Operating Income/Total Assets



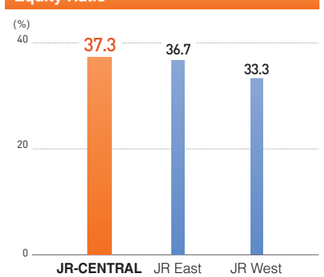

### Earnings per Share



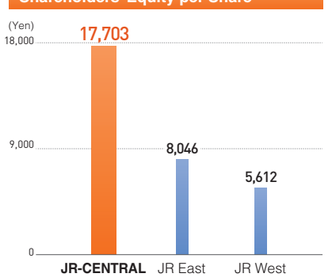

### Net Income/Operating Revenues



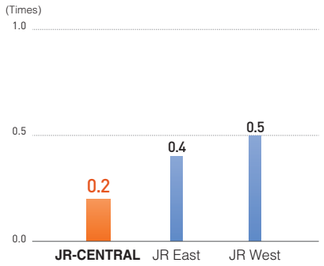

### Equity Ratio



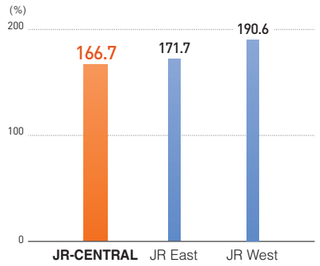

### Shareholders' Equity per Share



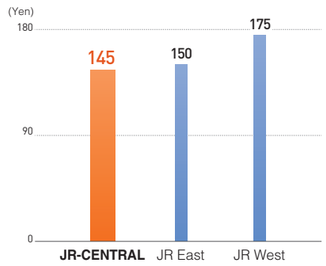

### Asset Turnover



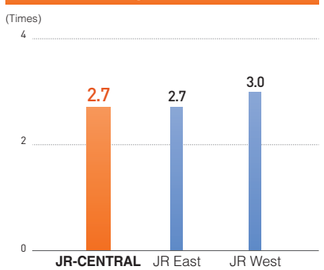

### Debt Ratio



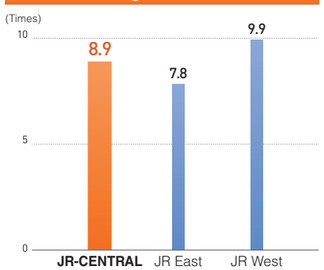

### Dividend per Share



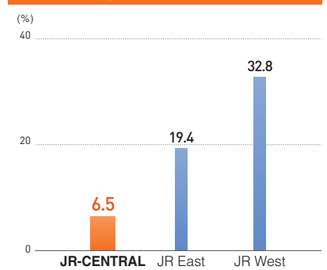

### Financial Leverage




### Interest Coverage Ratio*2



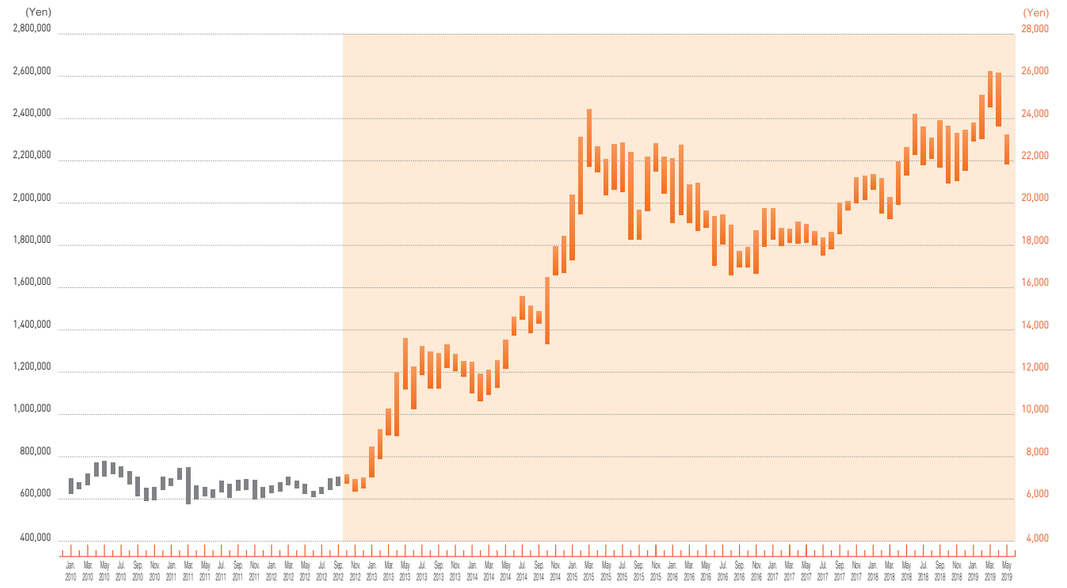

### Dividend Payout Ratio




*1 Figures are calculated by JR Central based on Financial Report of all JR companies for FY2018.
*2 (Operating income + Interest and dividend income) / Interest expense

## Stock Information

### Shifts in JR Central's Stock Price




Note: On October 1, 2012, the Company implemented a 100-for-1 stock split and employed a share unit system by which one share unit equals 100 shares.
Please refer to the left axis for stock prices before September 2012 and the right axis for stock prices after October 2012.

### Major Shareholders

| Name | Number of shares held | Percentage of total issued shares |
|---|---|---|
| The Master Trust Bank of Japan, Ltd. (Trust Account) | 11,161,400 | 5.67% |
| Japan Trustee Services Bank, Ltd. (Trust Account) | 10,546,500 | 5.35% |
| Mizuho Bank, Ltd. | 8,642,300 | 4.39% |
| The Nomura Trust and Banking Co., Ltd. (Holder in Retirement Benefit Trust for MUFJ Bank, Ltd.) | 7,125,000 | 3.62% |
| MUFJ Bank, Ltd. | 6,678,100 | 3.39% |
| Nippon Life Insurance Company | 5,000,000 | 2.54% |
| Toyota Motor Corporation | 4,000,000 | 2.03% |
| Japan Trustee Services Bank, Ltd. (Trust Account 5) | 3,514,000 | 1.78% |
| The Dai-ichi Life Insurance Company, Ltd | 3,423,900 | 1.74% |
| The Norinchukin Bank | 3,350,000 | 1.70% |
| Total | 63,441,200 | 32.20% |

Note: In addition to the above, JR Central holds 8,999,239 shares of treasury stock. [As of March 31, 2019]

JR Central has been included in the following index for socially responsible investment (SRI).

MSCI Japan ESG Select Leaders Index

MSCI Japan ESG Select Leaders Index is a SRI index consisting of companies with high Environmental, Social, and Governance (ESG) performance relative to their sector peers, provided MSCI.

ECPI Sense in sustainability

ECPI Indices is a socially responsible investment index provided by ECPI, which investigates ESG (Environmental, Social and Governance) in a company and provides its rating information. ECPI's main offices are located in Luxembourg and Italy.

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