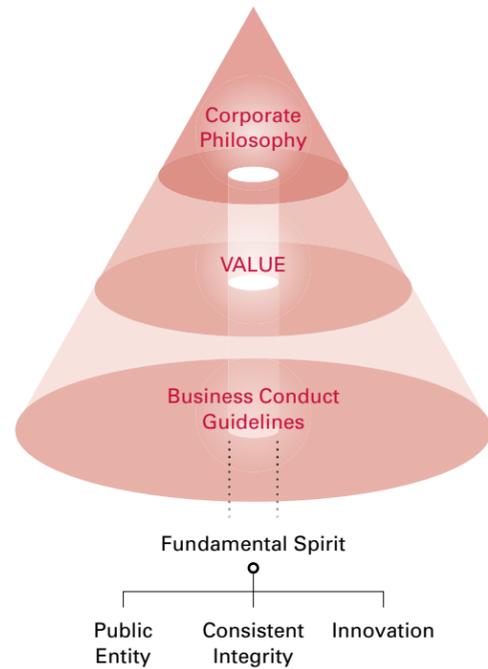




# Corporate Philosophy

Based on its commitment to VALUE and its Business Conduct Guidelines, which are derived from the Corporate Philosophy, the Nisshinbo Group aims to increase corporate value together with stakeholders as an *Environment and Energy Company* group that works to create a sustainable society.



## Nisshinbo Group Corporate Philosophy

### Change and Challenge!

### For the creation of the future

### of Earth and People.

**E = Environment**  
Prevent climate change and atmospheric pollution, protect biodiversity, manage water resources, etc.

**S = Social**  
Respect human rights, promote diversity, ensure employee health and safety, etc.

**G = Governance**  
Compliance, risk management, etc.

## VALUE

— The value we provide and the approach we take to realize our Corporate Philosophy

- We provide our customers with eco-friendly products and services to create a safer and more secure society with integrity.
- We create new value to inspire and satisfy our customers.
- We improve upon our corporate value and meet the expectations of our shareholders.
- We hold dear a corporate culture in which our employees can proudly work with vigor and boldly engage in new endeavors.

## Business Conduct Guidelines

— Standards of behaviour expected of every Group employee

- Respect for Human Rights
- Respect for Diversity
- Awareness and Concern towards our Environmental Impact
- Safety is the Basis for Everything
- Fair and Transparent Business Practices
- Innovation
- Thorough-Going Compliance
- Boldly Striving Forward
- Quality Communication

### Guidelines Used to Prepare the Report

- "International Integrated Reporting Framework," International Integrated Reporting Council (IIRC)
- "Guidance for Integrated Corporate Disclosure and Company-Investor Dialogues for Collaborative Value Creation," Ministry of Economy, Trade and Industry (METI)
- "Sustainability Reporting Standards," Global Reporting Initiative (GRI)



## Integrated Report Rationale

The Nisshinbo Group's business strategy is to help create a super smart society as an *Environment and Energy Company* group, in line with its Corporate Philosophy – "Change and Challenge! For the creation of the future of Earth and People." At Nisshinbo, everything we do is anchored by the concept of contributing to society through our business activities as a Public Entity, which aligns with our stance on environmental, social and governance (ESG) themes and will support efforts to realize the sustainable development goals (SDGs).

With this year's Integrated Report, we have provided more non-financial information, such as details about our stance on the SDGs, ESG and risk management, aiming to create an informative tool as part of dialogue with investors and other stakeholders. Going forward, we will work even harder to provide useful information that contributes to constructive dialogue.

Masahiro Murakami  
President  
Nisshinbo Holdings Inc.

## Supporting Efforts to Realize the SDGs

The Nisshinbo Group's Corporate Philosophy is "Change and Challenge! For the creation of the future of Earth and People." That philosophy coincides with the aims of the Sustainable Development Goals (SDGs), which we are working towards through our business activities as an *Environment and Energy Company* group.



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  - 1 Integrated Report Rationale / Supporting Efforts to Realize the SDGs
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As of 2020, Nisshinbo Holdings Inc. received an MSCI ESG Rating of AA.



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2020 CONSTITUENT MSCI JAPAN ESG SELECT LEADERS INDEX

2020 CONSTITUENT MSCI JAPAN EMPOWERING WOMEN INDEX (WIN)

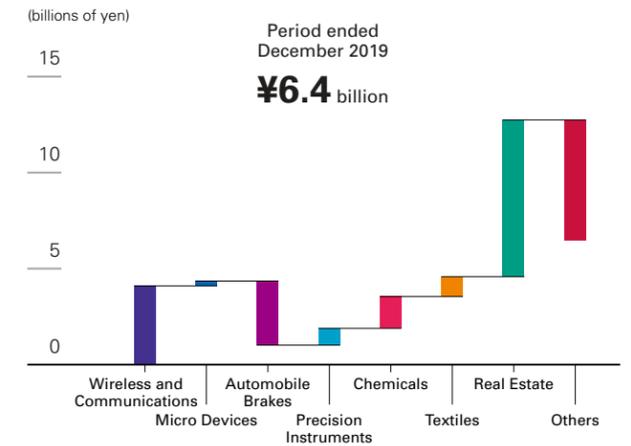
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Note: The fiscal period ended December 2018 is a nine-month transitional period (Mar-Dec 2018) due to a change in fiscal year-end.

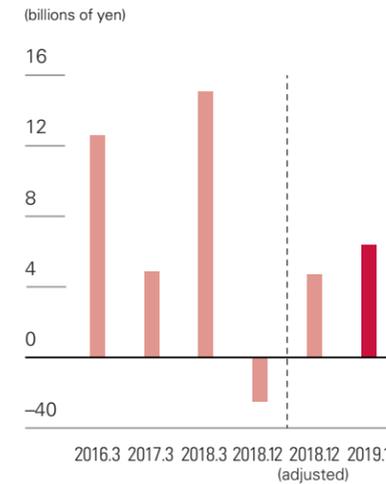
Net Sales



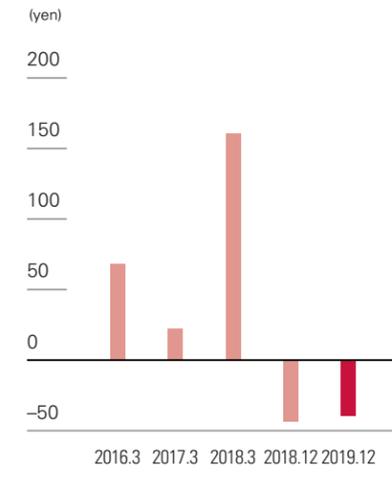
Operating Income



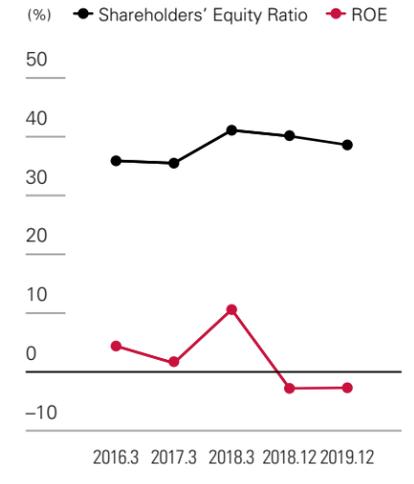
Operating Income / Loss\*



EPS

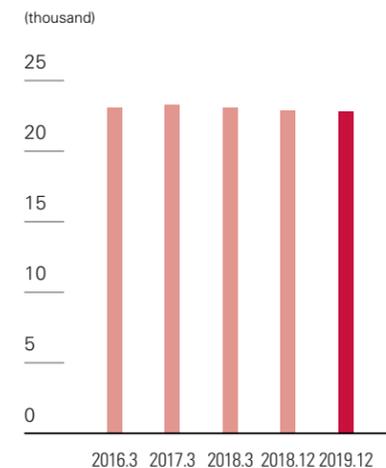


Shareholders' Equity Ratio and ROE

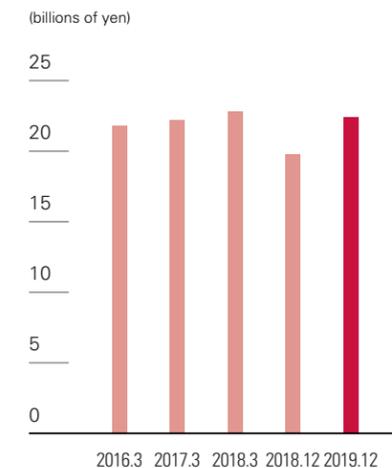


\* Operating income for the fiscal year ended December 2018 has been adjusted to facilitate year-on-year comparison.

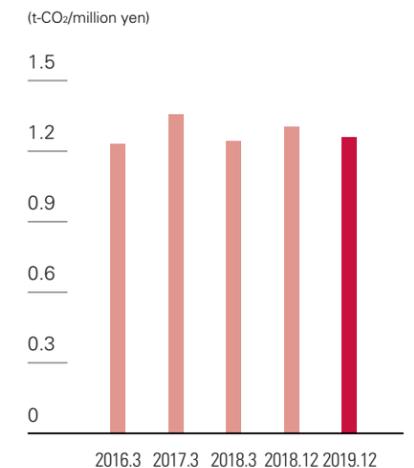
Number of Employees



Research and Development Expenses



Greenhouse Gas Emissions per Unit of Sales



## Transforming the Business Portfolio to Address Society's Changing Needs

TMD's brake business has the longest history of any business in the Nisshinbo Group, tracing its roots back to 1878. Nisshin Cotton Spinning Co., Ltd. was established not long after that in 1907. From those starting points, the Group has continued to expand by actively reorganizing its portfolio to align its businesses with society's changing needs. Nisshinbo's mission is to contribute to society through its business activities, guided by the Nisshinbo Group Corporate Philosophy – "Change and Challenge! For the creation of the future of Earth and People."

From 1945, the Group stepped up moves into new business fields such as automobile brakes and chemicals, diversifying its operations during Japan's recovery and rapid economic growth in the postwar period. In the 1960s, the automobile brakes business expanded, spurred by the growing popularity of cars in Japan. Nisshinbo also actively developed its precision instruments and chemicals businesses, building new plants and adding capacity. The yen's appreciation after the Plaza Accord in 1985 forced Nisshinbo to reorganize its operations and actively move into overseas markets. Today, more than 50% of the Group's sales are generated overseas and over half of the Group's workforce is outside Japan. There have also been major changes in the consolidated sales ratio of each business.

1878-	1940-	1950-	2000-	2010.3	2011.3	2012.3	2013.3	2014.3	2015.3	2016.3	2017.3	2018.3	2018.12*	2019.12
<b>Business portfolio reforms</b>				<b>Corporate governance reforms</b>										
<p><b>1878</b></p> <ul style="list-style-type: none"> <li>Walter Willson Cobbett Ltd., TMD's forerunner company, founded</li> </ul> <p><b>1907</b></p> <ul style="list-style-type: none"> <li>Nisshin Cotton Spinning Co., Ltd. founded</li> </ul> <p><b>1915</b></p> <ul style="list-style-type: none"> <li>Nippon Radio Telegraph Manufacturing Co. founded (now Japan Radio Co., Ltd.)</li> </ul>	<p><b>1944</b></p> <ul style="list-style-type: none"> <li>Production of friction materials started</li> </ul> <p><b>1946</b></p> <ul style="list-style-type: none"> <li>Nisshin Cotton Spinning Co., Ltd. starts operating its Nishi Arai Plant as a chemicals production facility</li> </ul> <p><b>1949</b></p> <ul style="list-style-type: none"> <li>Nagano Japan Radio Co., Ltd., Ueda Japan Radio Co., Ltd., TOKYO SHIRTS CO., LTD. founded</li> </ul>	<p><b>1958</b></p> <ul style="list-style-type: none"> <li>Established Nihon Kohbunshikan Co., Ltd., begins production of plastic bobbins</li> </ul> <p><b>1959</b></p> <ul style="list-style-type: none"> <li>New Japan Radio Co., Ltd. founded</li> </ul>	<p><b>2005</b></p> <ul style="list-style-type: none"> <li>New Japan Radio Co., Ltd. becomes a consolidated subsidiary</li> </ul>	<p><b>2010</b></p> <ul style="list-style-type: none"> <li>Japan Radio Co., Ltd. and Nagano Japan Radio Co., Ltd. become consolidated subsidiaries</li> </ul> <p><b>2011</b></p> <ul style="list-style-type: none"> <li>TMD Friction Group S.A. acquired</li> </ul> <p><b>2013</b></p> <ul style="list-style-type: none"> <li>Alphatron Marine Beheer B.V. acquired</li> </ul> <p><b>2014</b></p> <ul style="list-style-type: none"> <li>CHOYA CORP. sold</li> </ul> <p><b>2015</b></p> <ul style="list-style-type: none"> <li>TOKYO SHIRTS CO., LTD. acquired</li> <li>Nanbu Plastics Co., Ltd. acquired</li> </ul> <p><b>2017</b></p> <ul style="list-style-type: none"> <li>Papers business sold</li> <li>Japan Radio Co., Ltd. becomes a wholly owned consolidated subsidiary</li> </ul> <p><b>2018</b></p> <ul style="list-style-type: none"> <li>Foundation brakes business sold</li> <li>Acquired Ricoh Electronic Devices Co., Ltd., making it a consolidated subsidiary</li> <li>ProNav AS acquired</li> <li>New Japan Radio Co., Ltd. becomes a wholly owned subsidiary</li> </ul> <p><b>2019</b></p> <ul style="list-style-type: none"> <li>Established NJ Components Co., Ltd. to operate business acquired from FKD Corporation</li> </ul>										
<b>Challenges in each era</b>				<b>Challenges in each era</b>										
<ul style="list-style-type: none"> <li>National modernization and industrialization</li> </ul>				<ul style="list-style-type: none"> <li>Transition in key industries (from textiles to automobiles)</li> <li>Global warming and other shared issues faced by mankind</li> </ul>										
<b>Nisshinbo Group's role</b>				<b>Nisshinbo Group's role</b>										
<ul style="list-style-type: none"> <li>Contributed to Japan's modernization as cotton textile maker</li> </ul>				<ul style="list-style-type: none"> <li>Supported development of automotive sector as specialist supplier of friction materials</li> <li>Helping to create super smart society as <i>Environment and Energy Company</i> group</li> </ul>										

### Strategic business domains

**Mobility**

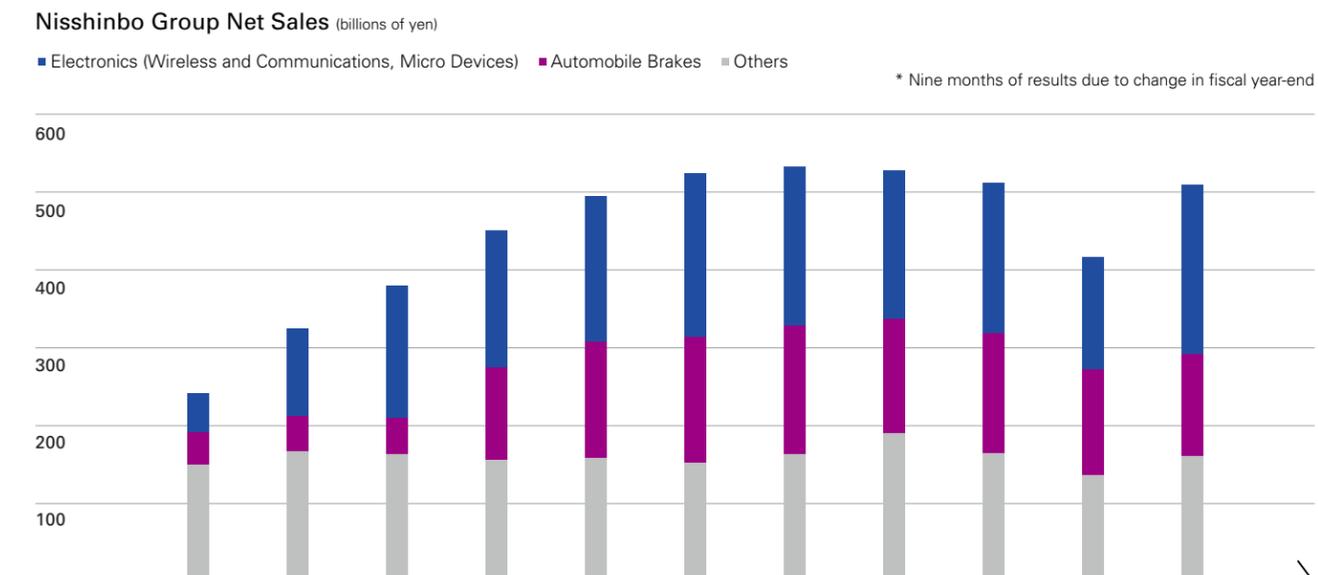
- Develop our business in fields such as industrial machinery, ships, aircraft and drones, as well as automobiles.
- Go beyond the production of parts and materials, utilizing the data our equipment gathers to develop businesses that support safe ship operation and energy efficiency.

**Infrastructure & Safety**

- Help to prevent or mitigate disasters (including through water management systems and weather radar).
- Support the creation of a hydrogen-oriented society (develop fuel cell parts and materials.)

**Life & Healthcare**

- Leverage our strengths in sensor, ultrasound, wireless and other technologies to create new businesses.



Profile  
Strategy  
ESG Special Feature  
Business Segments  
Management Framework  
Financials





**Contributing to society through our business activities  
while focusing on cash flow creation**

Note: Figures for the fiscal period ended December 2018, which was a transitional fiscal period, have been adjusted to facilitate comparison with the fiscal year ended December 2019.

## Overview of 2019

**We made good progress with our medium- and long-term strategy, but recent earnings have been weak.**

The Nisshinbo Group faced a tough business climate in 2019 amid the cyclical slowdown in the global economy and rising trade tension between the US and China. On an adjusted basis, net sales declined 1.0% year on year to ¥509.6 billion, operating income increased 35.5% to ¥6.4 billion, and net loss attributable to owners of the Company widened ¥5.2 billion year on year to ¥6.6 billion.

US-China trade issues were anticipated at the start of the fiscal year, so we took action to maintain profitability by implementing Groupwide cost reduction activities throughout the year, including cutting executive pay and reducing selling, general and administrative expenses. However, we regret to report that profits missed our targets, with the slowdown in China and the knock-on effect in Europe more severe than we expected.

The bottom-line loss reflected impairment losses booked by TMD. The company is currently rebuilding its business under the leadership of a new CEO and backed by a large number of employees seconded from Nisshinbo Brake Inc. As part of the restructuring, we are fundamentally reviewing production lines and facilities. Based on our outlook for the business, we recognized fixed asset writedowns on production lines in the OEPC business (original equipment for passenger cars) amid a sluggish recovery in profits.

Under our medium- and long-term strategy, we aim to transform Nisshinbo into an *Environment and Energy Company* group that provides solutions for some of the issues faced by society today. To realize that goal, we are forming business alliances and using M&A to overhaul the business portfolio. Also, by strengthening links between the Group's diverse businesses, we are developing new collaborative businesses to support a shift in focus from "things" to "experiences" and "services."

These activities are progressing smoothly, but results for 2019 raise some questions about strategy execution. In 2020, management policy is focused on improving cash flow, which is the source of funds needed to invest in the Group's growth. We will also continue to put priority on measures to drive growth in priority fields.

## Measures to Generate Cash Flow

**We will build a powerful product portfolio based on appropriate cost levels and product prices.**

One of the most important tasks of a business leader is to increase profits on the income statement. That means building a business capable of generating strong cash flow, rather than simply increasing profits in accounting terms. In 2020, we will review every business segment in minute detail to ensure they generate operating cash flow.

In addition to typical approaches such as sustained cost reduction, inventory control and efforts to ensure rapid recovery of receivables, we are running checks of all

Group businesses and products to assess whether costs are being managed carefully and whether product prices have been set appropriately to reflect added value.

Businesses and products with no prospects for profits will be discontinued. In the past, boosting volumes was an accepted way of absorbing fixed costs, but with companies now under more pressure than ever to lift profit levels, that crude approach is no longer tenable. We will build a powerful product portfolio through rigorous cost planning and by increasing the sales weighting of cost-competitive products.

## Expanding New Businesses

**We are rolling out a range of new measures in the xEV and healthcare fields.**

In Mobility, we stepped up efforts in the area of electric vehicles (EV) in 2019. Subsidiary Nagano Japan Radio Co., Ltd. manufactures coil devices used in EVs and hybrid vehicles, but a lack of production capacity means it has struggled to keep up with a recent steep rise in demand. We were faced with a choice – invest to expand the business or withdraw altogether. In the end, Nagano Japan Radio acquired the coil business of FKD Corporation and established it as subsidiary NJ Components Co., Ltd. The new company offers more than just production capacity. It has extensive know-how in manufacturing and product development, giving us the base to start building an EV-related coil business with sales of ¥10 billion.

We are also pushing ahead with research and development in the fuel cell vehicle (FCV) market. Our fuel cell catalysts, which replace expensive platinum catalysts, have already been adopted for portable fuel cell applications, and we are now working on versions for fuel cells used in forklifts and cars. Carbon bipolar plates are another promising Nisshinbo product. They already have a dominant

share of the market for residential polymer electrolyte fuel cells (PEFCs) and we are now developing them further for automotive applications. This is a long-term research theme, with FCVs only expected to gain momentum in the auto market from 2030, but we continue to conduct development and testing to ensure our products are ready when the market takes off.

In the Life & Healthcare field, new businesses that bring together our expertise in wireless and communications, micro devices and precision instruments are developing a stream of collaborative products, including a wireless echo device that doctors can use to rapidly check patients during ward rounds, and an allergy testing device that can detect 41 allergies from a single drop of blood.

However, going forward, we will need to work collaboratively with other companies outside the Group to develop new products and services. Amid the shift from “things” to “experiences” and “services,” Nisshinbo will have to acquire new application technologies and gain access to new sales channels. We plan to step up collaboration with external partners in 2020.

### Nisshinbo Group Corporate Philosophy

## Challenge and Change! For the creation of future of Earth and People.

Adapting to the changing demands of modern life and society and shifting focus to the environment and energy fields  
Targeting three strategic business fields

#### Business Policies

**Realize super smart societies as  
an Environment and Energy Company group**

Aiming to increase corporate value  
through business policies closely linked to our  
Corporate Philosophy

Long-term Goal:  
ROE 12% (by 2025)

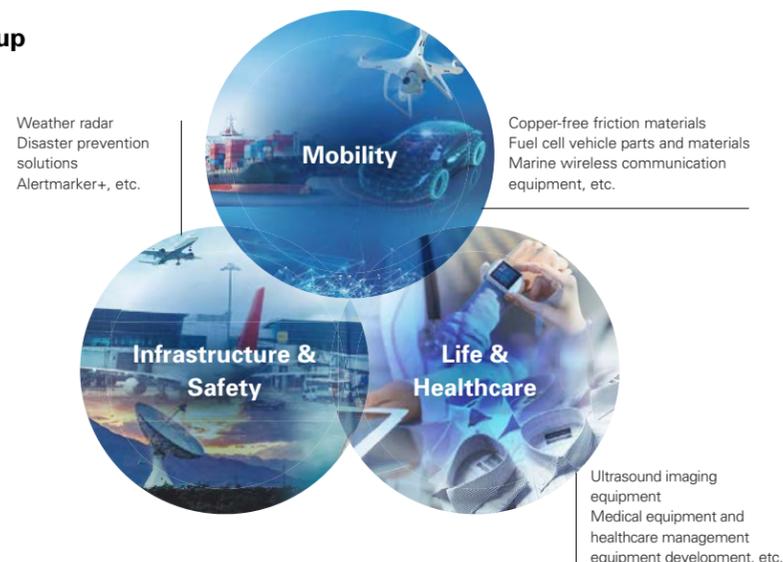


2020 Nisshinbo Group Slogan  
**Generate operating cash flow**

(See Financial Strategy on page 76 for more details)

#### Strategic Business Domains

(See ESG Special Feature on page 17 for more details)



## Developing Digital Businesses

**We set up a new Digital Business Department to accelerate business development.**

In 2019, earnings in the wireless and communications business were stronger than in other businesses, reflecting its stable customer base in Japan’s public sector. The strong performance was also down to frontline staff in the business, who achieved their targets in what is a highly competitive market segment. However, while the public sector customer base is stable, growth prospects are lacking. We are therefore rapidly switching our focus from public to private customers, from domestic to overseas markets, and from “things” to “experiences” and “services.” We are already seeing progress in areas such as the marine data service business, centered on our J-Marine Cloud system, and in disaster prevention solutions

in Southeast Asia, but we have to implement the change in direction even faster.

In particular, in the Mobility field, there are numerous new business opportunities related to autonomous land, sea and air transport for technologies in the wireless and communication business. In addition to marine communications, the two core companies in the business – Japan Radio Co., Ltd. and JRC Mobility Inc. – are leading the industry in developing a diverse range of communication sensors and devices for exciting new applications, such as collision avoidance technologies\* for large drones, which are popularizing the concept of flying cars, and for roadside infrastructure to support advanced driver assistance systems (ADAS).

In today’s world, where speed is often the key to success, we recognize that new businesses could fail to



take off if we continue to channel management resources into businesses that are busy with existing work. We therefore decided to set up a new Digital Business Department on April 1, 2020 as part of the Corporate Strategy Center at Nisshinbo Holdings Inc. The office will bring together all the Group's digital technologies and related personnel to develop plans and create marketing and customer proposals with the aim of launching new digital services businesses that help to solve issues faced by society. The office will actively work with external companies in the IT and AI fields to complement the Group's internal resources. Initially, the office will have a team of around 10 people, but we plan to increase that to 20 or 30 while flexibly adjusting the team's composition.

\* As drones become larger, they will need to be certified for collision avoidance to prevent accidents with air ambulances and other aircraft

## ESG Is Integral to the Nisshinbo Group

### We aim to make an even greater contribution to society through our business activities.

The global business community is stepping up efforts to support the decarbonization of society. Recent examples include moves to adopt recommendations by the Task Force on Climate-Related Financial Disclosures (TCFD) in 2018 and the Green Swan Reports published by the Bank for International Settlements in early 2020. Against that backdrop, Nisshinbo's businesses are likely to attract more attention than ever before.

Public Entity has been a key element of our Corporate Philosophy since Nisshinbo was founded. The phrase expresses our commitment to contributing to society through our business activities. In today's language, it corresponds directly to the social component of environmental, social and governance (ESG) activities. So, what kind of issues does society face? The issues have changed over the years, but 2006 was a turning point. In that year, we witnessed a clear rise in concern about the destruction of our global environment. That prompted us to put priority on protecting the global environment and launch our policy of transforming Nisshinbo into an *Environment and Energy Company* group. In parallel with that approach,

we resolved to take the lead in our industry and create a highly transparent corporate governance structure to support the Group's growth (see page 62, Corporate Governance). Our hope in 2006 was that we could move on to other ways of contributing to society once the environmental issues were resolved, but unfortunately, the destruction of our planet has only become worse since then.

With the addition of Japan Radio Co., Ltd. and New Japan Radio Co., Ltd. to the Group, we are now a business group that can help prevent and mitigate disasters, support autonomous driving, and create super smart societies. As extreme weather caused by the deteriorating environment becomes more common, our disaster prevention solutions have proved to be consistently effective. As a manufacturing company, we are obviously taking steps to cut energy usage and industrial waste by making our plants and logistics facilities progressively more eco-friendly each year. However, to make a genuine contribution, we want to actively decarbonize society and protect the environment through our products and business activities. We will continue to operate businesses that prevent and mitigate the impact of disasters on lives and property, but we want to accelerate efforts to create products and

### ESG is Nisshinbo's founding spirit

-  **E** In 2006, we positioned global environmental protection as our top-priority social issue and reformed our business with a focus on the environment and energy.
-  **S** Public Entity – Our founding spirit of contributing to society through business activities
-  **G**
  - 2006 We embarked on governance reforms, including the introduction of an outside director system, before the enactment of Japan's Corporate Governance Code
  - 2015 Abolished takeover defense measures
  - 2017 Abolished internal advisor and consultant system and formulated Nisshinbo's Corporate Governance Policy

(See page 67 for more details)

### Contributing to the SDGs through our business



businesses that go one step further by actually preventing environmental destruction. Based on internal standards, we certify some Nisshinbo products as "products that contribute to the creation of a sustainable society." Our top environmental goal is to boost sales of those products to 65% of net sales by 2025.

In these and other ways, the Nisshinbo Group has been promoting ESG approaches long before they became widely known. To reflect that, and to mark the 10th anniversary of Nisshinbo's adoption of the holding company system, we added phrasing about our stance on ESG to our Corporate Philosophy principles and changed our Corporate Philosophy to "Change and Challenge! For the creation of the future of Earth and People," to make it easier to understand in other languages. On a daily basis, we are working to transform our business to realize our strategy – help to create the super smart society with safe and secure living environments as an *Environment and Energy Company* group – which also stems from our Corporate Philosophy. Our ESG initiatives correspond with the Sustainable Development Goals (SDGs) and we aim to help achieve the SDGs through our business activities.

The Nisshinbo Group supplies a wide range of products and services that help to protect the environment and

create safe and secure living environments. Many of them also align with the SDG targets. In addition to products that prevent and mitigate disasters, we supply sensors and devices crucial to autonomous driving systems and the super smart society; automotive brake friction materials that do not contain copper – a cause of marine pollution; parts and materials for fuel cells – regarded as the ultimate clean energy source; and Carbodilite, an essential functional additive used in the manufacture of eco-friendly biodegradable plastics and water-based paints. By enhancing these businesses, we aim to make an even greater contribution to society through our business activities and achieve major strides towards the SDGs by increasing sales of "products that contribute to the creation of a sustainable society," our top environmental goal.

March 2020

Masahiro Murakami  
President  
Nisshinbo Holdings Inc.



Pursuing powerful management capabilities to realize our Corporate Philosophy by focusing on cash flow generation and strengthening risk management in health and safety and other areas

**Kazunori Baba**

Director, Executive Managing Officer  
Chief of Corporate Strategy Center

**Q1. The Nisshinbo Group is focusing on six key measures in 2020. What themes did you choose and why?**

**A.** The six measures cover themes selected by the Corporate Strategy Center that we believe the Group fundamentally needs to address, based on our understanding of Nisshinbo's intrinsic role as a company. We intend to continue working on these key measures beyond 2020. Nisshinbo needs to flexibly respond to changes in the operating environment at all times, but we will retain our long-term perspective while raising awareness about achieving earnings targets and implementing related measures.

**Key Measures in 2020**

- 1 Promote activities to achieve key performance goals
- 2 Accelerate business portfolio transformation
- 3 Step up Group compliance, occupational health & safety and environmental management
- 4 Ensure Corporate Philosophy is firmly entrenched in Group
- 5 Build collaborative culture to maximize diverse personnel and business resources
- 6 Promote risk management

We will also use M&A, business disposals and other approaches to continue building a business portfolio that more closely aligns with our Corporate Philosophy, based on our business strategy of helping to create safe and secure living environments as an *Environment and Energy Company* group, which is linked to our philosophy. We aim to increase corporate value by accelerating this strategy.

Another theme we have been tackling in recent years is the need to create an even stronger Group to bring together the growing number of new subsidiaries and new manufacturing sites worldwide.

**Q2. You are focusing on risks and opportunities in each business to ensure earnings targets are achieved. How are risks and opportunities incorporated into business plans?**

**A.** I previously worked as the president of Nisshinbo Textile Inc. Even though we carefully developed business plans and followed the PDCA cycle, we sometimes fell short of our targets. The lesson I learnt was that targets were hard to achieve if the wrong targets were set in the first place.

Now, when I review business plans submitted by

each of the Group's businesses, I focus on whether they accurately reflect conditions in the operating environment. As the Chief of the Corporate Strategy Center, I have no direct say in the development or implementation of business plans, but I evaluate all plans and offer advice.

To give an example, the micro devices business is expected to benefit from the rollout of 5G technology, but my job is to ask questions, such as what are the needs of customers and what are Nisshinbo's competitive advantages? I also check if assumptions for costs and sales prices are accurately factored into business plans.

PDCA reviews during the fiscal year are based on KPIs and are conducted on a monthly basis for some benchmarks and on a one-off basis for others when needs arise. For example, in the wireless and communications business, we carefully classify all the businesses in the segment and identify which ones are growing, rather than simply measuring overall earnings performance, which can be heavily skewed by a few large orders.

However, the main role of the Corporate Strategy Center is to evaluate the possibilities and future prospects of businesses, provide information and extend other support to reinforce corporate governance. Our role is to strengthen management accountability, which ultimately means working to narrow any perception gap between shareholders and the policies and strategies of our businesses (see page 70, Managing Risks and Opportunities).

**Q3. What are your views on reducing indirect costs?**

**A.** In April 2020 we combined the Corporate Strategy Center and the Business Support Center in a single organization. The integration itself will not lead to a large reduction in indirect costs, but we aim to review all expenses and rigorously target cost savings. In addition to saving money in backoffice divisions, we hope the process will spur a greater appetite for cost reduction across the Group's frontline businesses.

In a typical cost reduction program, the aim is to cut out all wasteful expenses across the entire value chain, from orders through to shipments. In the Corporate Strategy Center, nothing is off-limits. In all frontline and backoffice divisions, we need to thoroughly assess the necessity for and the impact of all spending.

**Q4. What areas are you focusing on to improve cash flow generation in frontline businesses?**

**A.** There is still plenty of scope to increase efficiency at subsidiaries that have joined the Group. For example, we anticipate a significant improvement in profits in the automobile brake business as margins improve in TMD's OEPC business (original equipment for new passenger cars) and as conditions in the aftermarket recover. Also, in the precision instruments business, Group company Nanbu Plastics Co., Ltd., which makes plastic molded automotive parts, operates production sites in China and Indonesia, while Nisshinbo Mechatronics Inc. has plants in China and other countries in Asia. We think cost competitiveness can be improved by realigning those sites and strengthening cooperation. In addition to targeting lower production costs, we want to create a more efficient network of manufacturing sites in Japan and overseas from the perspective of access to markets and customers.

**Q5. How do you plan to accelerate business portfolio restructuring?**

**A.** The Nisshinbo Group includes a wide range of businesses, which makes it harder for investors to understand what Nisshinbo does and gives the impression of inefficiency. Companies with a diversified business structure tend to attract a conglomerate discount. To address those issues, Nisshinbo has reclassified its operations into three strategic business fields and is channeling management resources into those areas. Nisshinbo is also combining its strengths in manufacturing with communication technologies to develop new services businesses.

The first strategic business field is Mobility. We are allocating a high weighting of resources to this field, underscored by the establishment of JRC Mobility Inc. in 2018. In the second field, Infrastructure & Safety, we are leveraging the strengths of Japan Radio Co., Ltd. in disaster prevention solutions and related systems. In the third field, Life & Healthcare, we aim to develop new products based on three themes – monitoring, remote operation, and contactless – that go beyond the traditional boundaries of the medical field by combining our strengths in plastic parts molding and electronic devices

## Interview with Chief of Corporate Strategy Center

with the medical equipment business of Ueda Japan Radio Co., Ltd.

Our mission in the Corporate Strategy Center is to ensure those efforts to expand our business are tightly focused, backed by a leaner, more efficient business structure to help us achieve our 15% ROE target by 2025.

### Q6. Why are you currently focusing on occupational health and safety?

**A.** As the Nisshinbo Group expands globally, we are seeing differences in health and safety standards at manufacturing sites worldwide. For example, the definition of “major accident” differs from site to site due to the unique customs of each country and region and variations in labor law and insurance systems. Recognizing those differences, we aim to lift health and safety levels in 2020 to meet the ideal standards defined by the Nisshinbo Group. It goes without saying, but our targets for health and safety are more rigorous than those typically used by Japanese companies. That’s because we have to meet the stringent quality standards of automakers and other

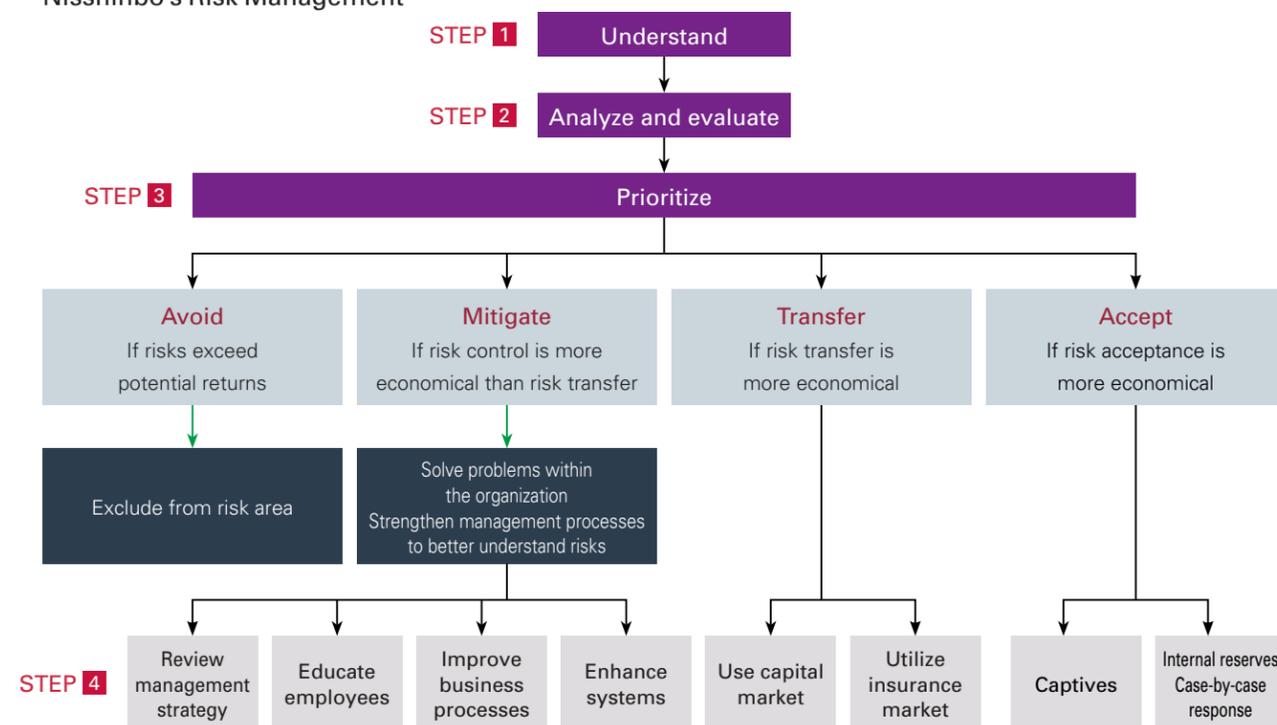
customers. Our mantra is “no quality without safety, no customers without quality.” Every year we evaluate health and safety performance. Any plant that sees a drop in performance has to implement intensive remedial measures.

### Q7. What approach are you taking with risk management?

**A.** We clearly identify, analyze and evaluate risks in each business in accordance with the Nisshinbo Group Risk Management Rules. Managing directors in each business prioritize risks and develop scenarios that assume a significant impact on operations from those risks. That information is collated and mapped by the Corporate Strategy Center and then discussed by the Board of Management and the Board of Directors.

The Nisshinbo Group classifies risks into four categories – avoid, control, transfer and accept – and develops economically rational responses.

## Nisshinbo’s Risk Management



## ESG Special Feature

Four SDGs underpin our business activities



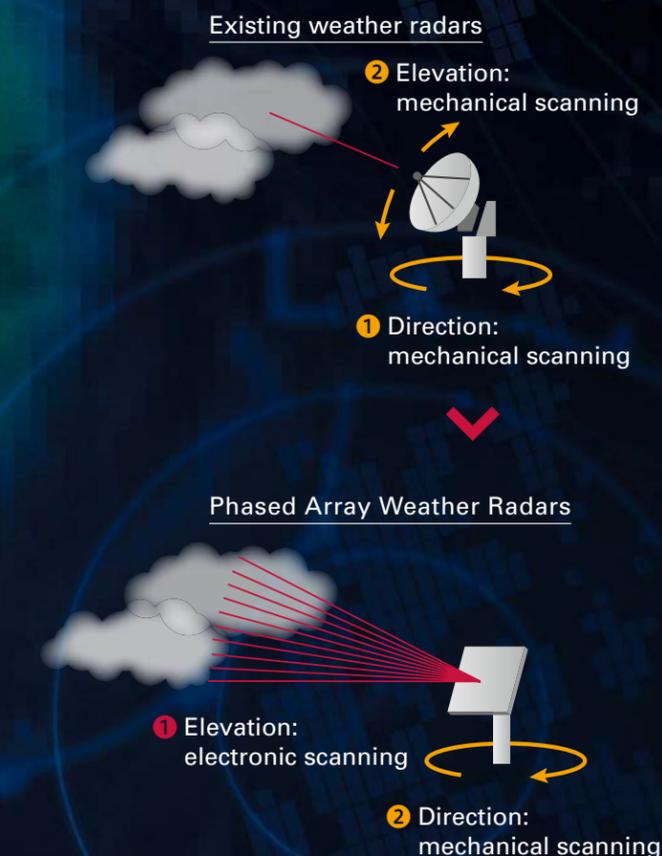
# Creating a Safe and Secure Society

Climate change is considered to be the main reason for the large number of natural disasters in recent years. We are also seeing more issues that have the potential to undermine people’s safety and security, such as relentless growth in land, sea and air mobility and healthcare issues associated with super-aging societies. Aiming to create a safer and more secure society with integrity, the Nisshinbo Group supplies disaster prevention systems such as weather radars and river level monitoring equipment and provides shipping support services for safe vessel operations. The Group is also developing new products in the medical and healthcare fields.

## Weather Radars

Weather radars supplied by Japan Radio Co., Ltd. are widely used by Japan’s Meteorological Agency, Ministry of Land, Infrastructure, Transport and Tourism and by overseas meteorological agencies to forecast weather conditions and rainfall. Cases of localized heavy rain have been increasing in Japan in recent years due to weather conditions such as thunderclouds occurring in linear precipitation zones, leading to elevated risk of natural disasters caused by flooding and extreme wind. Existing radar systems, which typically need about five minutes to complete a single observation cycle, are too slow to create stereoscopic images of fast-forming thunderclouds.

To address those issues, Japan Radio is developing a next-generation meteorological radar using a phased array system. The system uses compact radars with multiple, overlapping antenna beams that reduce blind spots in radar coverage, enabling rapid, stereoscopic observation of thunderclouds to achieve expeditious forecasting of localized rainstorms. Japan Radio continues to work on improving its system to tackle challenges such as converting weather observations to rainfall estimates and identifying the difference between rain, snow and hail, which is currently hard to do with current weather data.



## Disaster Prevention Solutions

Japan Radio provides equipment and systems designed to protect people and communities from natural disasters such as river flooding, landslides, tsunami and high tides. The company builds systems to monitor dams and other water resources. They comprise water level and rainfall gauges, telemeters for remote monitoring, alarms, sirens, cameras and other equipment, which are connected via communication networks. By combining its systems with meteorological, seismic and other data, Japan Radio also provides a broad range of solutions that go beyond the simple monitoring of rivers at risk of flooding, such as disaster prevention information relay systems that help to ensure public safety during disasters.

Japan Radio also sells its solutions overseas. The company is deploying dam and river management systems with radars for customers in the Philippines and Vietnam and a digital wireless information and warning system in Tonga in the South Pacific. In Indonesia, Japan Radio is testing a tsunami detection system that uses marine radar to detect wave heights.

In addition to damage from natural disasters, societies are exposed to the risk of serious damage from accidents caused by aging roads and other public infrastructure. Japan Radio aims to leverage its strong business links with government customers to step up the development of its public infrastructure maintenance business.

### Disaster prevention products

#### Alertmarker+

Japan Radio provides a service called Alertmarker+ that sends information such as area-specific messages, evacuation orders and disaster information to digital signs and other display equipment. The service automatically sends J-Alerts and disaster information using existing displays in municipal offices, public halls, hospitals, schools and other facilities where people gather. Alertmarker+ is easy to access with the Alertmarker BoX add-on, which connects to displays via an HDMI cable. Existing facilities require no other external connection, making the service resilient to cyberattack. The service is increasingly being adopted for event halls, subways and other facilities, spurred by growing use of digital signage.



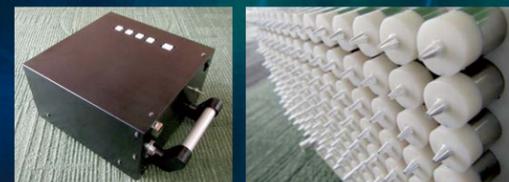
Alertmarker+ in use in Tokyo Station

### Disaster prevention products

#### Nondestructive Testing

The large number of aging concrete structures has become a major issue in Japan. Most concrete bridges are typically designed to last around 50 years, but over half of Japan's bridges are projected to exceed that age by 2030.

The Nisshinbo Group has developed a handheld ultrasound device that can generate highly precise 3D internal readings of concrete structures, simply by attaching the device to the concrete. We expect the device to play a key role in structural maintenance work.



Left: External view of ultrasound array sensor  
Right: Ultrasound probes (area attached to concrete)

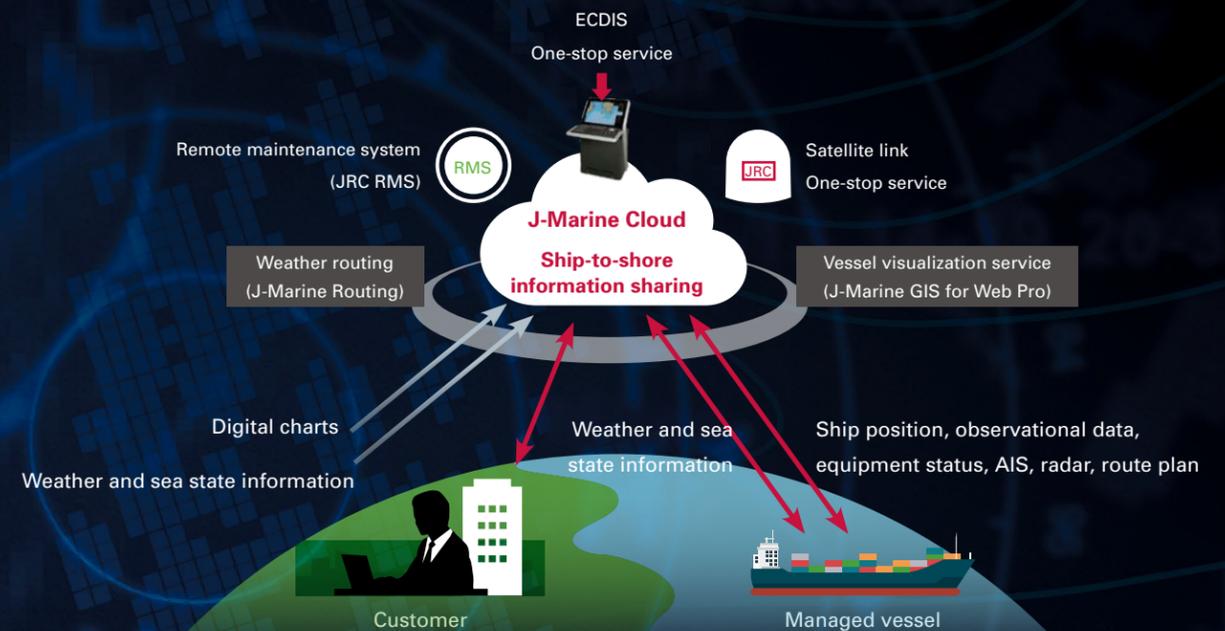
## Sea and Air Safety

Japan Radio sells wireless communication systems for marine applications (satellite communication equipment), ship navigation systems (marine radar), ship bridge systems and other products for commercial ships and fishing vessels worldwide. The company has a particularly high share in the market for navigation systems for large commercial vessels and a long track record supporting shipping around the world.

Japan Radio also builds vessel traffic service (VTS) safety systems and supplies related equipment, helping to make shipping operations safer in ports and coastal areas. VTS safety systems are installed in marine safety centers and in many communication base stations in areas where navigation is difficult, such as narrows between small islands, to provide safe shipping route information and to centrally manage all ship movements in a designated area. We sell the systems to customers overseas, as well as in Japan. One example is Indonesia, where we have supplied a radar sensor-equipped VTS safety system and installed coastal offices (base stations for the shore-based role in ship-to-shore communications) to ensure safe navigation in the Strait of Malacca between Indonesia and Singapore.

In safety systems for airports, we are conducting operational testing of a multilateration system for airport surveillance at an airport in Vietnam. Multilateration systems receive secondary surveillance radar (SSR) signals from aircraft via multiple receivers located around the airport, enabling precise detection of aircraft positions based on the difference in time between signal reception at each receiver.

Japan Radio also runs the J-Marine Cloud service, an online service providing shipping information. The service relays real-time weather routing data and VTS information to ship crew, who can superimpose various data on charts using their PCs to optimally analyze the latest maritime conditions. Onshore offices can use the system to provide high-level support by accessing and sharing real-time ship positioning data, official maritime information and data from ship engines, including surveillance images. With J-Marine Cloud, anybody in the shipping sector can now access the same level of information and achieve the same standard of operational control as major shipping companies. The service is also available to individuals through a smartphone app, helping to significantly enhance maritime safety for pleasure boat users.



Safety Products

**J-Marine NeCST**

The J-Marine Navigational electronic Conning Station Table (NeCST), developed by Japan Radio, is a revolutionary vessel navigation support system that allows users to make hand-written annotations to digital charts on screen. Linking J-Marine NeCST to J-Marine Cloud significantly improves the efficiency of planning and optimizing navigation routes.



J-Marine NeCST

Safety Products

**Unmanned Aircraft Collision Avoidance**

Small and mid-size unmanned drones have the potential to play a key role during disasters by transporting necessary equipment and searching for missing people. However, there is an urgent need to develop collision avoidance technologies to prevent accidents with air ambulances and other manned aircraft.

With the support of Fukushima Prefecture and Soma City, Japan Radio teamed up with NEDO and four companies to run the world's first test of an unmanned aircraft equipped with a collision avoidance system. Japan Radio provided a compact, lightweight radar for the unmanned drone. During the test, the unmanned drone travelling at 40km/h autonomously avoided a manned helicopter travelling at 60km/h.



Advancing manned helicopter

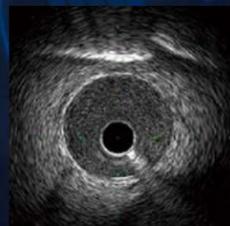
Mid-size unmanned aircraft with collision avoidance system

**Life & Healthcare**

Through Ueda Japan Radio Co., Ltd., the Nisshinbo Group manufactures ultrasound diagnostic equipment and image processing equipment, as well as mechatronics devices for X-ray equipment and other medical applications. Nanbu Plastics Co., Ltd. manufactures test kits and plastic components for medical applications, while optical semiconductor devices made by New Japan Radio Co., Ltd. are used as key sensor components in wearable health devices.

Leveraging the extensive portfolio of technologies and customer networks of Group companies, the Nisshinbo Group is currently working on the development of new medical equipment and health management devices. One example is a maternity belt that predicts the onset of labor pains. To develop the product, we are drawing on the sensor development

capabilities, data interface and analysis technologies and the textile planning and procurement skills of Group companies. The belt collects and analyzes information on the unborn baby's vital signs (heat rhythm, heart rate, pulse etc.) and relays the information to smartphones or devices in hospitals and clinics.



Intravascular ultrasound image



Ultrasound diagnostic equipment

# Creating a Sustainable Society

As an *Environment and Energy Company* group, the Nisshinbo Group strives to provide its customers with eco-friendly products and services. This is one of the values that underpin our Corporate Philosophy – “Change and Challenge! For the creation of the future of Earth and People.” We are focusing on developing and promoting the uptake of products and services that help to realize a sustainable society.

**Fuel Cell Products**

The Nisshinbo Group is working to drive uptake of fuel cells, which use hydrogen as the energy source. Hydrogen fuel cells are the ultimate clean source of energy, emitting no CO<sub>2</sub> emissions during use. In Japan, fixed fuel cells are used widely for houses, commercial facilities and other sites, but are yet to take off in mobility applications.

A number of issues currently stand in the way of fuel cell vehicle (FCV) uptake, such as a lack of

hydrogen refueling stations and other infrastructure, but FCVs offer a number of potential advantages, including short refueling times and high energy density. Hydrogen fuel cells are already in use for commercial vehicles such as buses, trucks and forklifts, which can be refueled relatively easily, and there is rising interest in potential applications such as trains and large drones.



Bipolar Plates for Fuel Cells

Hydrogen Products

**Bipolar Plates for Fuel Cells**

Carbon bipolar plates manufactured by the Nisshinbo Group have a high market share in fixed PEFCs\*<sup>1</sup> for residential and commercial use, such as the Ene-Farm system. Our carbon bipolar plates are not only lighter than metal versions, they are also easier to mold into the required flow channel shapes and are more resistant to corrosion, helping to improve the performance and durability of fuel cells.

Nisshinbo has also invested in Canadian fuel cell maker Ballard Power Systems Inc. and is working with the firm on joint research projects. Our carbon bipolar plates have already been adopted for a Ballard fuel stack used in forklifts\*<sup>2</sup>. We are now working to rapidly ramp up production amid recent growth in demand for fuel cells used in prototype FCV buses and trucks.

\*1 Polymer electrolyte fuel cells: Significantly lower operating temperatures than solid oxide fuel cells (SOFCs) mean PEFCs are likely to become the main type of fuel cell.

\*2 Fuel cell forklifts are gaining ground, especially in North America, as their small areas of operation make it easy to install refueling infrastructure.

Hydrogen Products

**Platinum Catalyst Substitutes for Fuel Cells**

Nisshinbo is taking a completely new approach to catalysts for fuel cells with the development of carbon alloy catalysts. Existing catalysts use platinum, a scarce resource. By switching to carbon-based catalysts, we can significantly reduce costs and ensure stable supplies. Our carbon alloy catalysts were adopted by Ballard in 2017 for its portable fuel cell, marking the first-ever use of a non-platinum catalyst. Ballard's portable fuel cell is attracting interest for outdoor and emergency backup supply applications.

In 2019, we succeeded in developing a fuel cell that uses 33% less platinum. By creating fuel cells that use a platinum and carbon alloy catalyst mix, we aim to create compact models that are 10-15% cheaper to install than pure platinum models. Our hybrid catalyst is currently undergoing performance testing by automakers for use in FCVs.



Ballard portable-use fuel cell stack with carbon alloy catalyst



Carbon alloy catalyst



MoLeTELLR®  
Portable gas leak detector

Hydrogen Products

**Ultrasonic Gas Sensors**

Ultrasonic gas sensors measure differences in the specific gravity of hydrogen, helium and other atmospheric gases. The sensors have been developed by combining technologies from across the Nisshinbo Group – ultrasound technologies developed by Ueda Japan Radio for the medical field, and signal processing technologies created by Japan Radio for radar and wireless communication products. Unlike existing products, our sensors do not require heaters or rare metal catalysts, helping to extend their usable lives. Response time is also fast and they can detect gas over a wide area. Compared with large, heavy and expensive existing products, our new sensors are small, light and battery powered, meaning they can be used easily whenever and wherever they are needed.

We started trial sales of a portable helium gas leak sensor in 2019. Going forward, we aim to contribute to the realization of a hydrogen society by developing a portable hydrogen gas leak sensor for use in FCVs.

Environmental Products

**Carbodilite**

Carbodilite is a high-performance polycarbodiimide-based plastic material developed by the Nisshinbo Group. We supply Carbodilite in water-based, oil-based and powder forms, and as an additive in adhesive agents. Due to its unique highly reactive, low-toxic profile, Carbodilite is blended with coatings, inks and various plastics (polyester-based plastic, biodegradable plastic, polyurethane elastomer and others) to improve the durability, adhesiveness and other properties of secondary products.

In the automotive, heavy-duty anti-corrosion coating, construction coating and ink industries, tighter regulations governing volatile organic compounds (VOC) and efforts to reduce environmental impact are spurring demand for Carbodilite, which is a highly safe, water-based additive that can reduce required temperatures in drying processes. Also, in Europe and other markets where rules on the use of non-degradable plastics are being tightened, demand for biodegradable alternatives is growing strongly.

Environmental Products

**Copper-reduced and Copper-free Friction Materials**

The automobile brake business, one of the Group's core businesses, manufactures brake pads, brake linings and other friction materials. Subsidiary Nisshinbo Brake Inc. produces NAO friction materials, which are used mainly in Japan and the US.

US environmental regulations, effective from 2021, will prohibit the sale of new friction materials or vehicles fitted with friction materials that have a copper content of more than 5%. From 2025, stricter rules will come into force that further reduce the limit on copper content to 0.5%.

Nisshinbo Brake was one of the first in the industry to respond to the new rules by developing copper-reduced and copper-free friction materials, which have attracted firm support from automakers. We forecast strong annual growth in shipments of the new friction materials, helping to further increase our share of the friction materials market.



Brake pads



Brake linings

Carbodilite is spurring wider adoption of biodegradable plastics, as it improves durability without affecting biodegradability.

It is already used in a growing range of applications, including multi-use film for agricultural applications, industrial materials, food packaging and printed circuit board adhesives.



# Implementing Environmental Management

The Nisshinbo Group is aiming to increase corporate value as a more united corporate group by realizing its Corporate Philosophy — “Change and Challenge! For the creation of the future of Earth and People.” As an *Environment and Energy Company* group, we will continue to offer new products and systems that help protect the environment, save energy and create alternative sources of energy, while also providing solutions that address some of the greatest issues faced by humanity today, such as environmental destruction and natural disasters caused by climate change, to make life safer and more secure for people everywhere.

## Long-term Environmental Targets (fiscal year ending December 2025)

### Primary targets

- 1** | Increase ratio of products that contribute to sustainable society to **65%** or more of total sales
- 2** | Reduce greenhouse gas emissions per unit of sales by **15%** or more compared with fiscal year ended March 2015
- 3** | Improve recycling ratio to **95%** or more

## Medium-term Environmental Targets (end-2021) and Results

Key activities	Step up activities to maintain biodiversity	Water usage per unit of sales	Promote Life Cycle Assessments (LCAs)*1	Increase sales ratio for products that contribute to sustainable society
<b>Targets for end-2021</b>	Implement activities at more than five sites overseas	Reduction of 3% or more compared with fiscal year ended March 2018	Ratio of total sales: 50% or more	Ratio of total sales: 55% or more
Results as of end-2019	Currently being implemented at two business sites	Reduction of 16% compared with fiscal year ended March 2018	Ratio of total sales: 33%	Ratio of total sales: 50%

\*1 Life cycle assessment (LCA): Understanding of environmental load during product life cycle, from raw materials, to production, use, and final disposal  
 \*2 PRTR substances: Substances subject to Pollutant Release and Transfer Register (PRTR) system pursuant to Act on the Confirmation, etc. of Release Amounts of Specific Chemical Substances in the Environment and Promotion of Improvements to the Management Thereof. Reports of their amounts of release and transfer must be filed.

## SDGs with Close Links to the Nisshinbo Group's Businesses

**6. Clean water and sanitation**  
Ensure availability and sustainable management of water and sanitation for all

**9. Industry, innovation and infrastructure**  
Build resilient infrastructure, promote inclusive and sustainable industrialization, and foster innovation

**12. Responsible consumption and production**  
Ensure sustainable consumption and production patterns

**13. Climate action**  
Take urgent action to combat climate change and its impacts

## The Nisshinbo Group's Environmental Issues and Related SDGs

<b>Biodiversity</b>  Core targets: 14.2 15.5	<b>Water resources</b>  Core target: 6.4	<b>LCA</b>  Core target: 12.4	<b>Energy efficiency</b>  Core target: 12.2	<b>Climate change countermeasures</b>  Core targets: 9.4 13.3	<b>Transport volume</b>  Core target: 12.2	<b>Chemical substance management</b>  Core targets: 6.3 12.4	<b>Resource conservation</b>  Core target: 12.5	<b>Environmental contribution activities</b>  Core target: 17.17
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For more details, please visit the Nisshinbo Group's Sustainability website.  
<https://www.nisshinbo.co.jp/english/csr/index.html>

## Activities to Maintain Biodiversity



The Nisshinbo Group is promoting activities to protect biodiversity, with a particular focus on SDGs 14.2 and 15.5. The Group is implementing activities such as protecting natural habitats, important ecosystems and threatened species at business sites in Japan and overseas in accordance with the Aichi Targets\*.

\* Targets to be met by 2020, set at the 2010 meeting of the Conference of the Parties to the Convention on Biological Diversity

## Activities to Protect the Environment at Overseas Business Sites

Company / site	Related Aichi target	Activity	Wildlife being protected
Shenzhen NJRC Technology Co., Ltd. (China)	Target 12: Protection of endangered species	Protection activities within business site	Cyathea spinulosa Davidia involucrata (Assigned top protection level in China)
PT. Nikawa Textile Industry (Indonesia)	Target 12: Protection of endangered species	Protection activities within business site	Cycas Javana (Indonesian endangered species EN)

# Mobilizing the Power of Individuals

Based on the belief that people are vital to the success of companies, the Nisshinbo Group puts considerable effort into training personnel. Through diversity and work practice reforms, the Group is also striving to cultivate a corporate culture where employees with diverse values and capabilities can maximize their potential while taking on new challenges.

## Human Resources Training

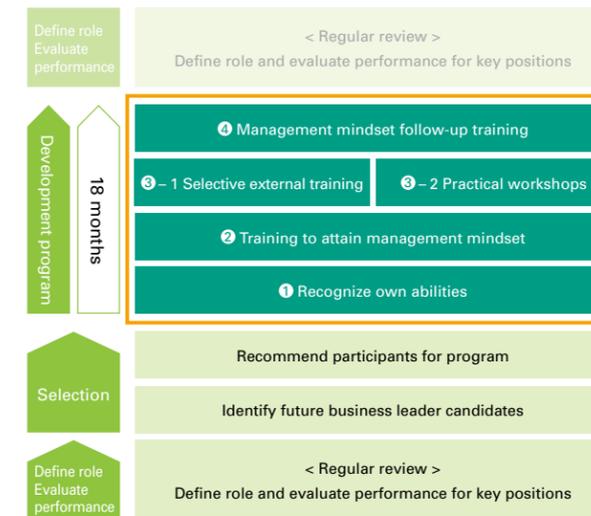
The Nisshinbo Group has built a systemized training framework with a number of components. The framework includes courses designed for different groups, such as new recruits and people newly appointed to mid-level manager, section head and division head positions, courses to acquire specific skills, general study courses covering topics such as career training, safety, human resources and the environment, and specialist courses on technologies, accounting, intellectual property and other topics related to specific businesses and functions. We also run a special program for employees earmarked to become senior managers. The program is designed to foster approaches, knowledge and behavior for their future senior manager roles before they are promoted. In addition, as part of efforts to cultivate future leaders, we run workshops for young managers on how to improve businesses.

Another area we are focusing on is cultivating human resources that can handle the demands of international business. The courses shown on the right are designed with that aim in mind.

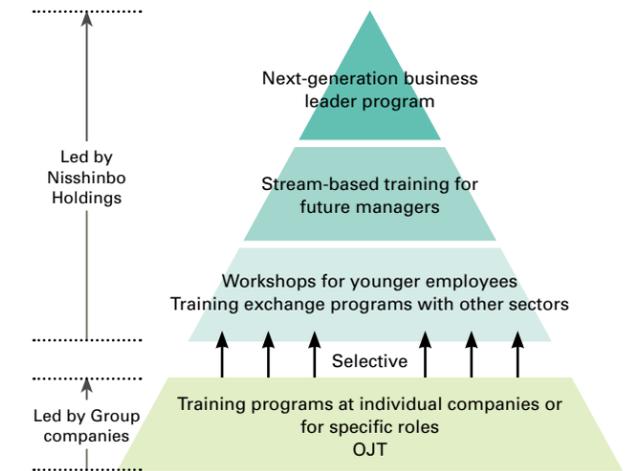
For new employees	<ul style="list-style-type: none"> <li>Cultural awareness training</li> <li>Talks by employees who have worked overseas</li> </ul>
For employees assigned to overseas posts	<ul style="list-style-type: none"> <li>Cross-cultural communication</li> <li>Training to increase understanding of compliance and risk management</li> <li>Training at language schools to improve linguistic ability</li> </ul>
For young employees	<ul style="list-style-type: none"> <li>Language study for 2-6 months in the US and China</li> <li>English and business Japanese courses held jointly with Group companies</li> </ul>
For employees up to 35 years old	<ul style="list-style-type: none"> <li>Measures to promote overseas experience</li> <li>Support for online English conversation classes and web-based language study tools</li> </ul>

Going forward, we will focus on training employees to give them the skills they need for today's digital business environment. In 2020, as a first step, we launched a new digital skills course for newly hired employees.

## Systematic Process for Cultivating the Next Generation of Business Leaders — Overview



## Systematic Process for Cultivating the Next Generation of Business Leaders — Training Framework



## Diversity Strategy



The Nisshinbo Group aims to achieve performance targets and drive the Group's sustained growth by harnessing the diversity of its people and organizations as the source of its competitiveness. To foster

diversity, we need to implement reforms across our entire organization, targeting corporate culture, systems, work practices, employee skills development and employee mindset.

## Work Style Reforms

On April 1, 2018, the Nisshinbo Group published a Work Style Reform Action Plan. The goal of the plan is to create a company where people with diverse backgrounds take pride in their work and remain highly motivated. We are implementing a range of activities in line with the plan.

Nisshinbo Holdings, Inc. and Japan Radio Co., Ltd. have set up satellite offices to create a more efficient working environment by reducing travel time between Group company locations. Also, as part of a remote working trial, we participated in the Telework Days 2019 initiative run by the Ministry of Internal Affairs and Communications and other bodies. Using that experience, we implemented a work-at-home policy for all Group companies from April 2020 as part of measures to prevent the spread of COVID-19.

Nisshinbo Holdings has formulated a general business operator action plan based on the Act on Advancement of Measures to Support Raising Next-Generation Children\*. Under the plan, we aim to create a workplace where employees can fulfill their potential and maintain their careers while balancing work and life commitments. To achieve that goal, the plan includes a number of

targets for paternity leave for male employees and diverse work practices. Similar measures are being implemented by 12 Group companies in Japan.

\* A law enacted on April 1, 2005 to create healthy and supportive environments for having and raising children.

### Work Style Reform Action Plan

(April 1, 2018 to December 31, 2020)

- Rectify long working hours**  
Reduce the number of employees working under the so-called "36 agreement" with special clauses by 20% compared with fiscal 2017
- Encourage use of annual paid leave**  
Achieve an annual paid leave utilization rate of 70% or more
- Promote flexible work styles**
  - Introduce systems that allow for diverse work patterns
  - Increase the ratio of male employees using either childcare leave or the accumulated paid leave system for the purpose of childcare to 15% or more

### Empowering Women

Since December 2014, when the Nisshinbo Group announced a voluntary action plan to promote women to executive and management positions, we have conducted a range of training courses and lectures for every level of employee across the Group to change thinking about empowering women, which we have positioned as a priority issue. We also hold joint training sessions for line managers and their female staff. In 2016, we created a general business operator action plan based on the Act on Promotion of Women's Participation and Advancement in the Workplace and set concrete targets for the number of female managers and the ratio of female recruits. We also hold annual meetings for personnel tasked with promoting diversity at each Group company. The meetings are used to report on steps being taken and share views on initiatives such as female recruitment and participation in external seminars.

#### Measures to empower women in the workplace

- 2014 • Released voluntary action plan to promote women to executive and management positions
- 2015 • Held lectures for senior managers
- 2016 • Started training program for management-level employees (held 14 times for total of 394 managers)  
This training for all employees at the managerial level is designed to help participants understand the fundamental significance of promoting the advancement of women and help them recognize and overcome their own biases.
- Started training program for female employees (held nine times for total of 228 participants)  
This training for female employees aims to help participants understand the fundamental significance of promoting the advancement of women and help them overcome their own biases to encourage them to engage in the type of work they want.
- Submitted general business operator action plan based on Act on Promotion of Women's Participation and Advancement in the Workplace  
Set concrete targets for number of female managers and ratio of female recruits
- 2017 • Started joint training sessions for line managers and female staff (held nine times for total of 115 groups)  
Managers and their female staff participate in pairs, engaging in group discussions and meeting one on one to create medium-to long-term career plans.

Action Plan	
Appoint a female board member	Targets for 2020 (accomplished in 2015)
Number of female managers	Triple number compared with December 2014
Female graduate recruit ratios	Office position stream 40%, specialist position stream 20%

### Promoting Understanding of SOGI

The Nisshinbo Group has been conducting awareness-raising activities to promote understanding about sexual minorities since 2016. Examples include training courses for senior management and information provided to employees through the company magazine and other channels. We have also revised the Nisshinbo Group Business Conduct Guidelines to prohibit discrimination of any kind. The guidelines state, "We respect the character and individuality of each and every person and never allow discrimination and violation of human rights."

In recent years, the acronym SOGI\* is used to encompass and represent all sexual orientations and gender diversity, instead of LGBT, which only identifies certain sexual minorities. While upholding respect for diversity as an important keyword, we aim to continue raising awareness about sexual and gender diversity in order to create a workplace where people from diverse backgrounds can work actively without discrimination.

\* Sexual orientation and gender identity

### Harnessing the Potential of Employees with Disabilities

Nisshinbo Holdings, Inc. employs people with mental disabilities to work in the plant factories at its Fujieda business site. Managers qualified as Vocational Life Consultants for People with Disabilities work with each employee individually to fill out self-diagnosis check sheets on a daily basis. Data from the sheets is used to understand and harness the potential of the employees while ensuring reasonable care is taken to maintain their mental health.

As of end-December 2019, TOKYO SHIRTS CO., LTD. employed 15 people with disabilities (2.28% of its workforce). They work in various settings – two people in retail stores, three at head office, and 10 in sewing. Also, we provide workplace training for people with disabilities in conjunction with the Kashiwa School for Special Needs Education operated by Chiba Prefecture. In 2019, two students from the school each spent two weeks receiving training in sewing and ironing. One of the students joined TOKYO SHIRTS in April 2020.

# Creating Safe and Healthy Working Environments

The Nisshinbo Group Business Conduct Guidelines state, "Safety Is the Basis for Everything – We hold safety as the top priority for all of our activities to bring high-quality products to our customers." Based on that, we strive to improve health and safety management by ensuring all our employees understand that safety takes priority over everything.

## Health and Safety Activities



To eliminate all serious accidents, the Nisshinbo Group has implemented the following four key policies at Group companies: (1) continuous and rigorous risk assessments of work, equipment and chemical substances; (2) safety education and KYT\* activities; (3) reviews of work standards and rules; and (4) improvements to health and safety levels by learning from activities at workplaces with no accidents.

Each business site enhances every employee's safety awareness by conducting small group activities (e.g., training when work details change, skills-improvement

education, horizontal deployment of lessons learned from occupational accidents within the Group, danger awareness training and near-miss reporting), in addition to training new hires and adjusting work content. Nisshinbo also conducts routine risk assessments of equipment, work and chemical substances in line with an annual plan that prioritizes risks to be addressed, and implements preventive safety measures.

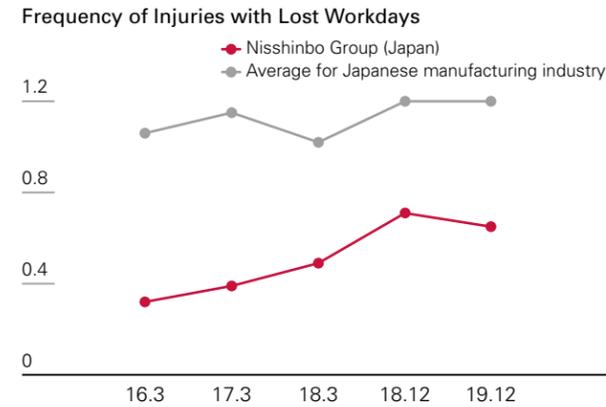
\* Danger awareness training



## Occupational Injuries

In 2019, there were no instances of major workplace accidents (accidents with level 7 or higher injuries). The frequency of injuries with lost workdays\* at the Group's domestic business sites was 0.65, which is lower than the average for the Japanese manufacturing sector and an improvement from the 0.76 level in the previous fiscal year. At business sites with a particularly high number of injuries, we are providing ongoing targeted guidance as part of efforts to raise safety management standards across the Group.

\* Frequency of injuries with lost workdays = number of employees injured with lost work ÷ aggregate number of working hours x 1 million



## Activities at Business Sites in Other Countries

As operations have become increasingly global, Nisshinbo Group's business sites in other countries have grown to outnumber those in Japan. We are deploying danger awareness training and danger experience education carried out at business sites in Japan to business sites in other countries, in order to raise every employee's safety awareness and instill the attitude that safety takes priority in all cases. We

also pass on information about occupational injuries that have occurred at business sites in Japan to business sites in other countries to prevent recurrence worldwide. Additionally, we continue fostering an awareness of the dangers of chemical substances, promote thorough use of protective equipment and work to prevent health problems.

## Health and Safety Audits

The Nisshinbo Group conducts regular occupational health and safety audits of its manufacturing sites. A monitoring team composed of the Health & Safety Group from Nisshinbo Holdings Inc., labor unions, safety and health management staff representing each business, and health and safety officers from other business sites, checks the state of health and safety management at the targeted business sites. In 2019, we conducted audits at 35 manufacturing sites in

Japan and one manufacturing site overseas. We also verified health and safety conditions and carried out safety checks at four overseas manufacturing sites.

At the end of each fiscal year, the results of all audits and checks are compiled in a comprehensive audit report, which is used to analyze potential risks and communicate good practices to the whole Group as part of workplace health and safety activities in the following fiscal year.

## Nisshinbo Brake – Risk Engineering Survey

Nisshinbo Brake Inc. conducted a risk engineering survey at its Tatebayashi Plant in July 2019. The survey was carried out by a highly experienced risk engineer, who verified and analyzed the company's disaster prevention and mitigation measures, identified risks (related to fire, explosions, natural disasters, etc.) and developed risk impact predictions, and provided advice on how to prevent and mitigate those risks.

During the site visit, the engineer checked manufacturing equipment, as well as a wide range of other equipment and facilities, including a special high-voltage electricity substation, wastewater treatment facilities, the plant's boiler room, and storage facilities for hazardous substances. The engineer also held meetings with staff to understand disaster prevention and mitigation measures in each area of the plant and verified implementation status.

The risk engineering survey gave Nisshinbo Brake's Tatebayashi Plant high marks for disaster prevention and mitigation measures from both an infrastructure standpoint and an operational standpoint, with the plant's reliable implementation of the PDCA cycle earning particularly strong praise. The survey also commended the high level of risk awareness among the plant's management team and the water discharge drills conducted by the self-defense fire brigade.

The survey report is based on international criteria, which means it is recognized as a third-party report in the global insurance market.



Electric motor and engine mechanism to drive fire hydrant pump

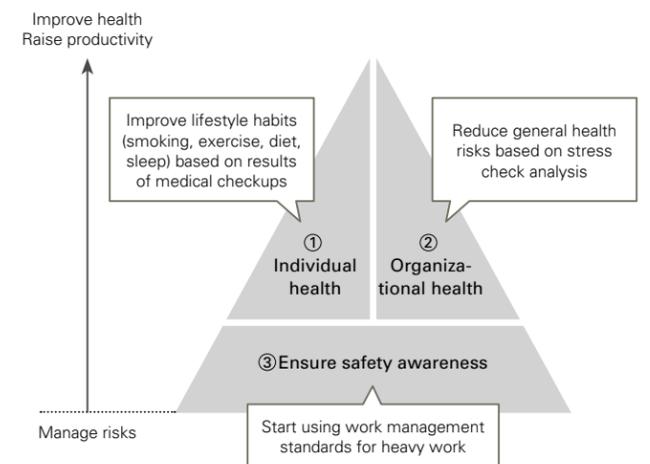


Water discharge drills conducted by the self-defense fire brigade

## Health Management

The Nisshinbo Group's Health Management Policy states that the "Nisshinbo Group, through the establishment of an environment where each individual member can play an active role by promoting employee health and sound workplace, aims to be a corporate group which is indispensable, at any time, for our society." To promote health management efforts across the Group, Nisshinbo established the Group Health Management Department Meeting, which is attended by health management department leaders from each Group company and is tasked with coordinating the Group's activities. Specifically, the meeting focuses on activities in three key areas: personal health, organizational health and safety awareness to ensure all employees are fully aware of their safety obligations.

### Framework for Health Management Initiatives



# The Nisshinbo Group's Value Chain

The Nisshinbo Group has formulated a set of Business Conduct Guidelines. The guidelines comprise nine points and are anchored by the Group's Corporate Philosophy. In all processes across the value chain, every Group employee is required to adhere to the guidelines and support efforts to advance management's materiality goals in the environmental **E**, social **S** and governance **G** spheres, which will also contribute to the attainment of the Sustainable Development Goals (SDGs).



<p><b>Contributing to Society</b></p>	<ul style="list-style-type: none"> <li>Nisshinbo has drawn up a Corruption Prevention Guidebook to ensure employees are mindful of complying with all corruption regulations overseas. The guidebook is provided to all Group companies including overseas subsidiaries. It covers all international treaties and regulations related to preventing corruption. Nisshinbo updates the guidebook as necessary and uses it as part of its corruption prevention measures in the Group.</li> <li>Nisshinbo has formulated the Nisshinbo Group CSR Procurement Basic Policy, which sets out its stance on CSR initiatives across the entire supply chain. Based on the policy, all Group companies are required to formulate their own specific CSR Procurement Guidelines tailored to the characteristics of their operations and conduct CSR surveys of suppliers to raise awareness of CSR procurement. The results of the surveys are used to provide feedback to suppliers to help them improve their activities.</li> </ul>	<ul style="list-style-type: none"> <li>Individual employees have a vital role to play in ensuring companies contribute sustainably to our diverse global society. We aim to create a more worker-friendly environment for employees by respecting their individual personalities and qualities and by placing the right people in the right jobs. To that end, we respect diversity in all forms, including in human rights and recruitment, and promote a healthy work-life balance. Additionally, we carry out safety and occupational health activities with the aim of eliminating all workplace accidents.</li> <li>We established the Group Health Management Department Meeting in 2018 to drive health management efforts across the Group. The meeting is attended by health management department leaders from each Group company and is tasked with coordinating the Group's activities.</li> <li>Nisshinbo Group employees actively participate in environmental contribution and enhancement activities in line with SDG 17.17.</li> </ul>	<ul style="list-style-type: none"> <li>Nisshinbo Automotive Manufacturing Inc. (NAMI) in the US has taken the lead in coordinating with three local suppliers to integrate transportation fleets across its supply chain. Previously, separate vehicles moved between NAMI and its three suppliers, but a single fleet of vehicles now picks up and transports materials between all three companies.</li> </ul>	<ul style="list-style-type: none"> <li>The Nisshinbo Group will contribute to the achievement of the SDGs through activities that improve quality and customer satisfaction. Key performance indicators (KPIs) are managed and systematically implemented to achieve the Group's medium-term CSR goal of continuously promoting measures that improve customer satisfaction.</li> <li>The Nisshinbo Group has established a Corporate Ethics Reporting System to be used by a broad range of stakeholders, not only people inside the Group, to facilitate the early detection and rectification of legal violations and prevent their recurrence.</li> </ul>
<p><b>Contributing to the Environment</b></p>	<ul style="list-style-type: none"> <li>The Nisshinbo Group promotes life-cycle assessment (LCA) activities with SDG 12.4 as the core target.             <ol style="list-style-type: none"> <li>Enhancing user convenience by concluding unlimited end-user licenses for LCA software</li> <li>Developing and increasing the number of operators by holding LCA software utilization seminars</li> <li>Reducing chemical substances and waste emissions based on product LCA results</li> <li>Introducing LCA from the product development stage and using it to develop eco-friendly products</li> </ol> </li> <li>The Nisshinbo Group implements chemical substance management activities with SDG 6.3 and 12.4 as the core targets.             <ol style="list-style-type: none"> <li>Conducting appropriate control and leak prevention measures for hazardous materials through ISO 14001 activities in accordance with the laws and regulations of each country</li> <li>Reducing the use of PRTR substances and the emission and transfer of PRTR substances at manufacturing sites</li> <li>Switching to non-PRTR cleaning agents used in cleaning processes in the precision instruments business</li> </ol> </li> </ul>	<ul style="list-style-type: none"> <li>We are working to achieve zero emissions (recycling ratio of 99% or more) across the entire Nisshinbo Group. Of Group business sites that generate annual waste of 10 tons or more, 32 locations have achieved zero emissions.</li> <li>The Nisshinbo Group is engaging in initiatives to reduce the amount of waste generated by each business, aiming to achieve a 95% recycling rate by 2025.</li> <li>Using the AQUEDUCT Water Risk Atlas published by the World Resources Institute (WRI), we conduct water risk assessments at Group business sites and key parts of the Group's supply chain. The Group monitors sites and areas of the supply chain that are rated "high risk." We also conduct surveys of water consumption in the supply chain and manage the results of the surveys.</li> </ul>	<ul style="list-style-type: none"> <li>The Nisshinbo Group is working to reduce transportation volumes with SDG 12.2 as the core target. Specifically, we are reducing transportation volumes to promote the efficient use of resources, such as fuel used in transportation.</li> </ul>	<ul style="list-style-type: none"> <li>As part of efforts to reduce waste and encourage the reuse of packaging, TOKYO SHIRTS CO., LTD. has introduced flatpaks to minimize packaging as much as possible.</li> <li>In November 2019, TOKYO SHIRTS also started supporting the BRING™ brand developed by JEPLAN, INC. and began collecting unneeded shirts at 10 stores. JEPLAN collects and recycles old clothing and uses the recycled materials to manufacture new clothing. TOKYO SHIRTS plans to roll out the system to more than 100 stores nationwide during 2020. By promoting BRING™ to its customers, it aims to help reduce waste emissions, including in the supply chain.</li> </ul>

## Reinforcing Corporate Governance — Outside Director Message



**Backed by more than a century of corporate history, Nisshinbo draws on superior technology and diverse human resources to contribute to society through its business activities, guided by its key principle of Public Entity.**

**Keiji Taga**  
Outside Director

### Working in policy financing has given me a broader perspective

I joined the Development Bank of Japan (DBJ) in 1973. Unlike ordinary commercial banks, the DBJ is a policy financing institution that provides financial support to projects that align with national policy. Because of that, decisions to invest are not solely based on prospects for the success of each project. The DBJ has to take a broader macroeconomic perspective, allowing for a wide range of considerations that arise in negotiations with public agencies and business groups involved in policy development, community studies into economic and industrial impact, dialogue with academic experts, and public relations activities related to policy implementation. On a daily basis, the bank deals with business leaders from many industries and key people in national and local government and business groups. That environment gave me some very valuable experience.

In 2009 I was invited to join the management team at Tokyo Ryutsu Center Inc. and I became the company's president in 2013, staying in the role for four years. After that I worked for one year as chairman of DBJ Asset Management Co., Ltd., a DBJ subsidiary, helping to set up frameworks to support business growth.

### Nisshinbo's integrity as a company has immense value

I was appointed as an outside director at Nisshinbo in 2019. My role is to bring attention to things that the board might not notice, based on a completely different background and viewpoint to inside directors responsible for business execution. Of course, as a director appointed by Nisshinbo's shareholders, my duty is to protect their interests and increase the Nisshinbo Group's corporate value.

My mission is to assess whether business implementation is economically rational and efficient and to monitor the transparency of business execution on behalf of shareholders.

When I was approached about becoming an outside director, I had no previous direct contact with Nisshinbo, so I didn't have a clear image of the Company. Delving into the detailed information on the website, I was surprised to see how Nisshinbo is making a transformative shift away from its founding business of textiles to become an *Environment and Energy Company* group focused on Mobility, Infrastructure & Safety, and Life & Healthcare. The website also sets out the Corporate Philosophy in refreshingly direct terms. I learned that Nisshinbo, in its relationship with society, has been

committed to consistent integrity as a public entity since it was established, rather than simply focusing on the pursuit of profit and increasing dividends. That approach really resonated with me as somebody with a long track record in policy financing.

In my first year as outside director I took part in three plant visits. I had the same impression each time – Nisshinbo employees are very talented and sincere. Even with my lack of professional experience in engineering, their explanations were patient and easy to understand. It became clear to me that over many years Nisshinbo has built up a strong foundation of technologies, which has helped the Group work quietly behind the scenes to create a range of superior products that play a key role in people's lives every day. Those insights opened my eyes to Nisshinbo's considerable potential.

### Nisshinbo needs to create a more close-knit organization

Nisshinbo has acquired many firms over the last decade or so, resulting in a much more diverse business portfolio and workforce. That is one of the Group's major strengths today.

However, to display its true power, Nisshinbo needs to rapidly weave together all the strands of those M&A deals to create a stronger, more close-knit organization. Of course, the chairman and president are well aware of that challenge, supporting efforts to encourage technology and personnel exchanges between different business fields in the Group. To step up those efforts, the Company established a Digital Business Department in April 2020. The office, which will be staffed by a team of people from all Nisshinbo's business fields, is tasked with developing new digital service businesses using resources from inside and outside the Group. The office is set to be a key test of Nisshinbo's efforts to create a more close-knit organization.

### A highly effective Board of Directors

Nisshinbo chairman Masaya Kawata and president Masahiro Murakami have both said they want board meetings to be frank and open so that everybody is comfortable about actively sharing their opinions and raising any concerns. In my experience, that is indeed the case, with meetings allowing plenty of time for in-depth discussions.

My lasting memory of meetings in the past year is a video conference call with local senior managers responsible for restructuring TMD's operations. They provided a clear and honest update about the situation at TMD, including details about the issues so far, giving the Board of Directors the insights and information they needed for an intense discussion about business restructuring. That emphasis on transparency and governance is a very positive part of Nisshinbo's corporate style and is also likely to anchor the Group's future development.

I also sit on the Nomination Committee and the Remuneration Committee. Guided by a set formula for senior management compensation, we ensure pay levels stand up to scrutiny by carefully analyzing earnings performance and the situation at other companies. As Nisshinbo works to create a more close-knit organization, I expect to see a new generation of employees with experience in all areas of the Group. Drawing on that experience, they will intuitively harness the Group's diversity to drive innovation and deliver results.

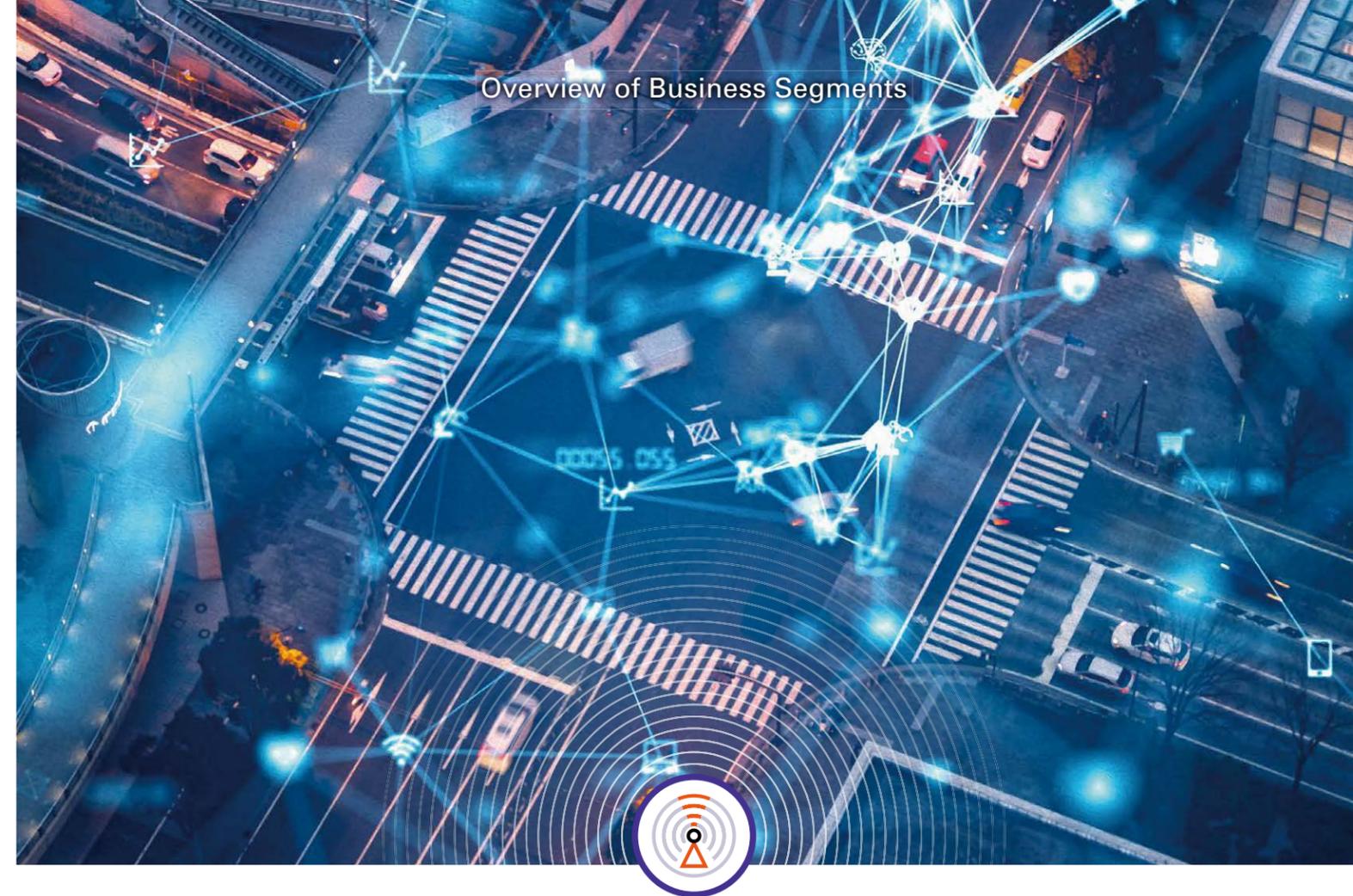
I believe Nisshinbo has significant future potential thanks to its strong technological capabilities and its diverse, talented people. In my role as outside director, I hope to use my own experience to help Nisshinbo increase its corporate value going forward.

## Overview of Business Segments — At a Glance

The Nisshinbo Group is made up of seven distinct businesses — wireless and communications, micro devices, automobile brakes, precision instruments, chemicals, textiles and real estate. Nisshinbo supplies high-value-added products that meet customer needs, driven by innovation born out of business collaboration and portfolio reorganization that has kept the Group aligned with changing needs.

### Main business areas

	<p><b>Wireless and Communications</b> P.37</p> <p>Supplies solutions such as disaster prevention systems and weather radars, as well as marine systems and communications equipment.</p>	<p><b>Marine systems</b> ▶ Marine radar and communications equipment <b>Communications equipment</b> ▶ GPS receivers, ITS equipment for vehicles <b>Solutions and specialized equipment</b> ▶ Disaster prevention systems and weather radars <b>ICT and mechatronics</b> ▶ Power supplies, Large-format copiers <b>Medical equipment</b> ▶ Probes for ultrasound diagnostic equipment, oscillators for catheters</p>
	<p><b>Micro Devices</b> P.41</p> <p>Working to expand sales of analog semiconductors and other electronic devices, supported by microelectronics technologies.</p>	<p><b>New Japan Radio</b> ▶ Semiconductor devices and SAW filters <b>Ricoh Electronic Devices</b> ▶ Power management ICs, etc.</p>
	<p><b>Automobile Brakes</b> P.45</p> <p>The Nisshinbo Group is the world's leading maker of brake friction materials by market share; now expanding its presence as a true global supplier using its network covering key markets worldwide.</p>	<p><b>Friction materials</b> ▶ Disc pads and brake linings</p>
	<p><b>Precision Instruments</b> P.50</p> <p>Manufactures molding products for home appliance and automotive applications and supplies processed precision automotive parts and customized production equipment for customers worldwide, primarily in Asia.</p>	<p><b>Molding products</b> <b>Precision parts processing</b> including parts for electronic brake systems (EBS) <b>Customized production equipment</b></p>
	<p><b>Chemicals</b> P.54</p> <p>Manufactures a range of highly promising products in the environmental and energy fields, such as Carbodilite, a modifier for biodegradable plastics and waterborne resins, and bipolar plates for fuel cells.</p>	<p><b>Carbodilite high-performance chemical additive</b> <b>Thermal insulation products</b> <b>Bipolar plates for fuel cells</b> <b>Fine carbon products</b></p>
	<p><b>Textiles</b> P.58</p> <p>Mainstay business is products made from natural cotton; supplies high-quality "Made by Nisshinbo" dress shirts, uniforms and other products to markets worldwide.</p>	<p><b>Shirts</b> ▶ Dress shirts, casual shirts and fabric <b>Textiles</b> ▶ Uniform fabric and casual fabric</p>
	<p><b>Real Estate</b> P.60</p> <p>Procures funds to support the Nisshinbo Group's growth strategy by effectively utilizing idle plant sites and other real estate assets arising from business restructuring.</p>	<p><b>Sales</b> ▶ Housing lots <b>Leasing</b> ▶ ARIO Nishi Arai and other properties</p>



## Overview of Business Segments

# Wireless and Communications

## Japan Radio Co., Ltd. / JRC Mobility Inc.

The wireless and communications business supplies communication and navigation equipment with world-leading reliability to users in the shipping sector. It also provides various disaster prevention systems, such as dam and river management systems and weather forecasting systems. In addition, JRC Mobility Inc., which was established in 2018 to develop the Group's business in the mobility field, is pushing ahead with new products that will help realize autonomous driving, drawing on ITS\* products and other existing automotive products transferred from Japan Radio Co., Ltd.

\* Intelligent Transport Systems: Systems that use data processing technology to solve traffic issues such as accidents and congestion

### Related SDGs



P.38 Business Results and Strategy

P.40 Message from the President of JRC Mobility

## Business Results and Strategy

Note: Figures for the fiscal period ended December 2018, which was a nine-month transitional fiscal period, have been adjusted to facilitate comparison with the fiscal year ended December 2019.

growth in the aftermarket, but demand for equipment for new-build vessels was strong and ProNav AS reported higher sales of equipment for small and mid-size fishing vessels in Northern Europe. Those factors lifted sales overall, contributing to narrower losses in marine systems.

In communications equipment, sales of amplifier products declined amid slowing shipments of smartphone optical transmission systems. However, sales and profits rose year on year, reflecting strong demand for automotive ITS, PHS devices and commercial wireless equipment.

In ICT and mechatronics (formerly mechatronics and power supplies), sales and profits increased year on year, supported by firm demand for card payment terminals and wireless equipment for gas meters in ICT and power supplies, and sales from NJ Component Co., Ltd., which became a consolidated subsidiary in July 2019.

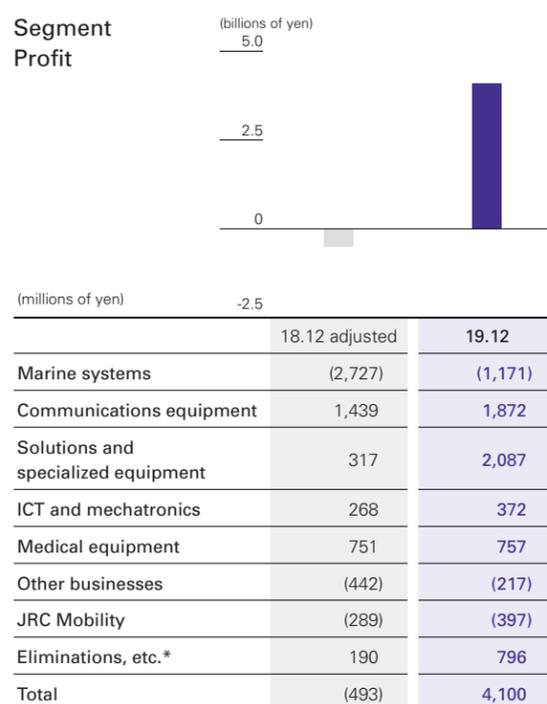
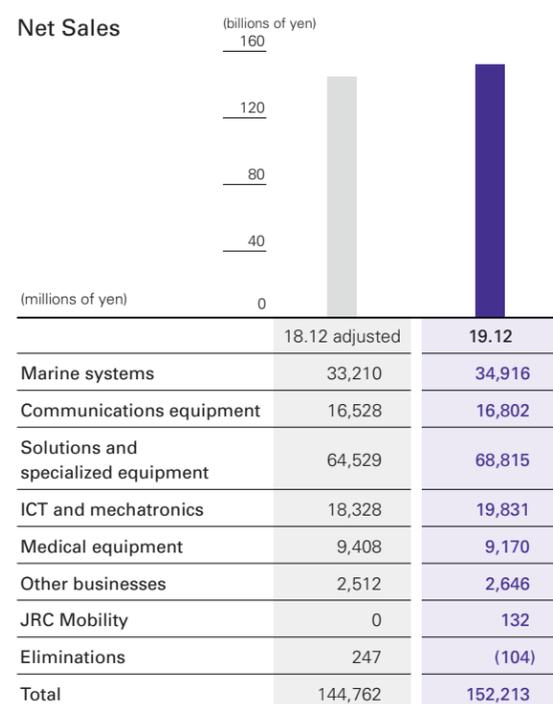
Starting in 2019, the communications equipment business of Japan Radio is gradually being transferred to JRC Mobility.

### Summary of Financial Results for 2019

In 2019, the wireless and communications business reported net sales of ¥152,213 million, up 5.1% year on year on an adjusted basis, and segment profit of ¥4,100 million, an improvement of ¥4,594 million on an adjusted basis.

In solutions and specialized equipment, sales of road information systems declined, but sales and profits rose overall, supported by an increase in large projects in Japan and overseas, including water and river information systems, municipal disaster prevention systems, and aerospace and meteorological systems.

In marine systems, sales of equipment for merchant vessel retrofit projects declined year on year amid weak



\* Includes revisions to retirement benefits and differences arising from adjustments to figures for the previous fiscal period.

while also maintaining and growing existing businesses. In business targeting the public sector in Japan, we aim to continue generating sales and profits from existing fields, such as disaster prevention systems, dam and river management systems, and aerospace and meteorological systems, while also moving into public infrastructure maintenance, including road infrastructure. As part of moves to build our services business, Japan Radio signed a comprehensive partnership agreement with Japan's largest infrastructure maintenance company in 2019. Our aim is to capture business opportunities from major maintenance and upgrade work on Japan's ageing public infrastructure, using Japan Radio's wireless communication technologies to propose services such as advanced monitoring systems for Japan's road networks. In the private sector, we continue to develop systems based on private LTE (4G) networks, but in order to drive advances in IoT solutions, we will also develop systems for 5G architecture and reinforce our Alertmarker+ and SOLOGIS information services. Overseas, our business continues to expand each year. We now sell flood warning systems, equipment for ports and airports, shortwave marine radar, and airspace monitoring radar for windfarm operators.

In marine systems, we continue to expand our LCM\*1 business in the aftermarket. In small and medium-size vessels, we aim to increase our market share in the North European fishing vessel market, led by ProNav, and in the broader European market for small and medium-size vessels through Alpatron Marine Beheer B.V. We will also steadily expand our menu of shipping support services for safe vessel

operations through ship-to-shore networks, centered on our J-Marine NeCST system, which was launched in 2018. In March 2020 we launched J-Marine Watcher II, an anti-collision smartphone app for small vessels that are not fitted with radars or AIS\*2.

In communications equipment, we continue to work on a range of development projects in the mobility field, including ADAS\*3. We are also working to expand sales of ETC and mobile locators, which are currently enjoying strong demand. In addition, we have developed a next-generation safety protection system for railway maintenance workers on bullet train lines. We plan to expand sales to JR companies when they upgrade their safety systems. In smartphone optical transmission systems, which can be adapted to all types of mobile phones, we are developing new products to address market needs. We also see prospects for increased sales from our new multiband wireless device for automotive applications, launched in 2019 for the North America market.

In ICT and mechatronics, our strategy is to win new customers and develop new products. Specifically, in the ICT business, we aim to capture market share by moving rapidly into the IoT field; in the automotive parts business, we will leverage synergies with NJ Components; and in the mechatronics business, we plan to extend our reach in the industrial equipment and commercial printer business fields.

\*1 Life Cycle Management: Support services for the entire life cycle of vessels, from delivery to decommissioning

\*2 Automatic Identification System

\*3 Advanced Driver Assistance Systems

### Main Locations

Key Companies	Main Locations and Key Subsidiaries	Location	Main Products and Services
Japan Radio Co., Ltd.	Nagano Plant	Nagano, Nagano Prefecture	Disaster prevention systems, mobile communications equipment
	Nagano Japan Radio Co., Ltd.	Nagano, Nagano Prefecture	Disaster prevention systems, mechatronics
	Ueda Japan Radio Co., Ltd.	Ueda, Nagano Prefecture	Wireless communication equipment, medical equipment
	Alpatron Marine Beheer B.V.	The Netherlands	Navigation equipment, Wireless communication equipment
	ProNav AS	Norway	Navigation equipment, Wireless communication equipment

JRC Mobility Inc. was established in 2018 to enable rapid decision-making and create a dynamic business structure in the mobility field. Over the last two years, our efforts to develop new products, enhance relationships with customers and build business structures have progressed according to plan.

Kinji Kato  
President  
JRC Mobility Inc.



### JRC Mobility Sets Sail

JRC Mobility is tasked with creating and developing communication devices and solutions for all areas of the mobility field. In 2020, Japan Radio will transfer onboard ETC devices and mobile locators from its communication equipment business and its entire ITS business, which includes GNSS\* receivers, to JRC Mobility. Remaining operations, including commercial wireless devices in Japan Radio's communications equipment business, are scheduled for transfer in 2021. JRC Mobility is finally ready to set sail on its voyage as a specialist mobility company.

### Expanding the Automotive Business

JRC Mobility has a high share of the onboard ETC device market for imported vehicles in Japan. The market for the devices is also growing worldwide as other countries adopt road toll payment systems similar to ETC. Against that backdrop, we have signed a contract with a distributor to supply ETC devices for the US, China and South Korea markets. The deal will lead to a dramatic increase in our ETC device production and shipments over the next decade, so we are working rapidly to establish an automated production system. We also acquired two German companies with development engineering, assembly and logistics capabilities in April 2020. Both companies have pre-existing business relationships with the Nisshinbo Group. These new development locations in Germany will allow us to dramatically expand our onboard device business with automakers in Europe and drive the strategic development of our business worldwide.

In mobile locators, which use accelerometers and gyro-sensors to estimate position, we have incorporated high-precision GNSS receiver chips into the devices. Combined with communication capabilities, the locators

will enable users to gather highly accurate big data on positioning. Mobile locators are set to be a vital component in autonomous vehicles. We are targeting applications in agricultural machinery, construction machinery and drones, as well as passenger cars.

### Launching Our Sensor Business

JRC Mobility is developing a high-performance ultrasound sensor. The new sensor has a much wider field of view than existing products, allowing it to detect objects in close proximity and far away. We see potential applications in next-generation self-parking and parallel parking assist systems. New Japan Radio Co., Ltd. is responsible for developing the ASIC chip for the sensor. The sensor covers all the blind spots of a vehicle and warns users of objects, helping to significantly improve safety around construction machinery and forklifts.

JRC Mobility is also harnessing Nisshinbo's strengths in millimeter wave radar technology to develop speedometers. Wireless technology means the device does not require a hard connection to the vehicle, so it can be installed as an aftermarket add-on for detecting speed. The sensor provides accurate speed readings that are not affected by environmental conditions, helping to make vehicles safer.

The automotive sector is developing innovative technologies based on the theme of CASE (connected, autonomous, shared, electrified). As a company with a long pedigree in the field of advanced ICT, JRC Mobility aims to tap into that trend and drive further growth in the Nisshinbo Group's mobility businesses.

\* Global Navigation Satellite System: High-precision satellite positioning system using quasi-zenith satellites.



## Micro Devices

### New Japan Radio Co., Ltd. / Ricoh Electronic Devices Co., Ltd.

In the micro devices business, Nisshinbo has created new value in audio equipment, automotive and industrial devices, ICT and other fields, drawing on its competitive advantages in analog semiconductors and microwave technologies. Centered on New Japan Radio Co., Ltd. and Ricoh Electronic Devices Co., Ltd., we are stepping up cooperation across the Group to create a stream of new products and businesses in the areas of automotive CASE, industrial equipment and healthcare.

#### Related SDGs



P.42	Business Results and Strategy
P.43	Key Products
P.44	Message from the Chairman of New Japan Radio

## Business Results and Strategy



### Summary of Financial Results for 2019

In 2019, the micro devices business reported net sales of ¥65,286 million, down 2.2% year on year on an adjusted basis, and segment profit of ¥256 million, down 88.5% on an adjusted basis.

In mainstay electronics devices, sales of communication-related products declined, reflecting sluggish sales of smartphones, particularly at key manufacturers in the US, South Korea and China, and a rapid deterioration in market conditions caused by US-China trade tensions. Sales of industrial equipment-related products also fell amid weak capex-led demand for smartphone facilities and slow economic growth in China and Europe. Demand for automotive-related products was relatively firm, but sales declined year on year on an adjusted basis.

In microwave products, sales declined due to weak sales of satellite communication products in the US. However, profits rose on fixed-cost reduction.

Meanwhile, New Japan Radio continued to actively implement work style reforms. Those efforts were recognized

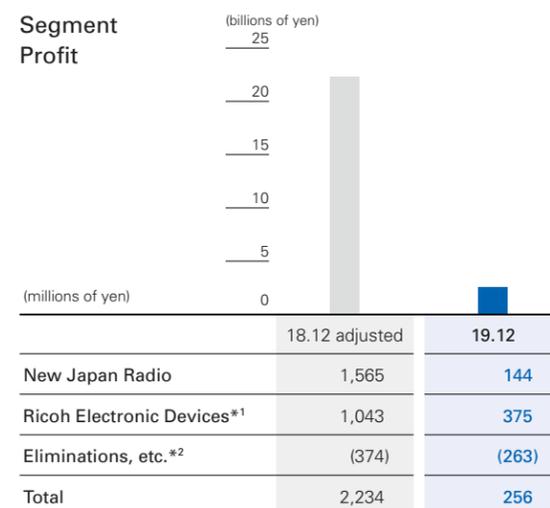
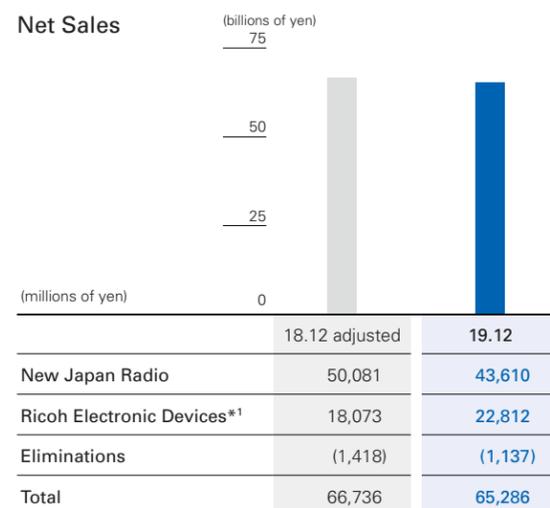
Note: Figures for the fiscal period ended December 2018, which was a transitional fiscal period, have been adjusted to facilitate comparison with the fiscal year ended December 2019. Adjusted figures for 2018 do not include earnings for Ricoh Electronic Devices for the period before it became a consolidated subsidiary (Jan-Mar 2018).

by the Ministry of Economy, Trade and Industry (METI), which certified New Japan Radio as a White 500 company with outstanding health management for the fourth consecutive year. The company is also working to improve diversity, including holding plant tours for female university students.

### Business Strategies for 2020

The micro devices business has positioned automotive, industrial equipment and IoT applications as growth fields and is strengthening its business to tap into that growth. In particular, we aim to build a high-growth, stable business model that is resilient to fluctuations in the semiconductor market by increasing the weighting of automotive products in our business. We plan to achieve that by developing new products for next-generation electric vehicles and advanced driver assistance systems (ADAS). We will also pursue Group synergies by building a cooperative framework for New Japan Radio and Ricoh Electronic Devices covering procurement through to production. The economic environment remains challenging in 2020, but we are upgrading production facilities and product development in preparation for when demand does recover.

New Japan Radio is working to commercialize a number of new devices and developing next-generation products such as MEMS sensors for microphone modules used in smart speakers and AI-powered speakers, and optical sensors for wearable devices and health device applications. The company is also developing high-precision analog front-end ICs with a view to starting volume production. In microwave products, we are developing and manufacturing products for a wide range of fields, including satellite communication systems, sensors and high-output electron tubes.



\*1 Adjusted figures for 2018 cover results for Apr-Dec 2018.

\*2 Includes goodwill amortization and revisions to retirement benefits

Power management ICs are the main product at Ricoh Electronic Devices, which is developing compact, low-power ICs that are highly efficient, precise and reliable using CMOS analog technology. In devices for automotive applications, the company is working on the development of high-quality ICs for high voltages and currents needed in next-generation powertrain components, as well as ICs with improved low-noise and noise regulation performance to increase the accuracy of sensors for ADAS equipment.

The microwave product business has a stable market for components used in radars, while demand for components used in satellite communications is also expanding steadily. We see the potential for continued growth going forward as the information society becomes more diverse. Key to that growth is demand for satellite communication components. Demand is currently being driven by Asia, where there are a large number of emerging markets for satellite communication. The business is currently developing new products to address recent market trends, such as increasing communication speeds and capacities, and the need for ultra-compact, high-performance transceivers with low-power consumption.

Sensors incorporating microwave technology are becoming a new growth field, driven by a steep rise in demand in the last few years. Sensors that can accurately detect human movement are being adopted for a wider range of fields, including crime prevention and other security tasks, household and automotive applications, and even healthcare applications. In addition to standalone sensors, we are supplying modular products that integrate sensors and peripheral components, helping us win business from new customers.

The micro devices business is reinforcing quality management at its plants. By establishing target KPIs and PDCA cycles and creating a management review and emergency response mechanism, we aim to visualize the cost of quality and manage risk related to quality issues. We will also use the “Five Whys” technique to analyze the causes of any issue and rapidly improve quality. Additionally, we plan to increase the accuracy of production and sales systems to eliminate lost sales opportunities. At the same time, we will reduce lead times to improve inventory control, enabling inventory management on a weekly unit basis. Another goal is to achieve zero industrial accidents by reinforcing health and safety activities.

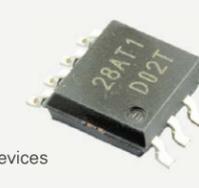
### Main Locations

Key Companies	Main Locations and Key Subsidiaries	Location	Main Products and Services
New Japan Radio Co., Ltd.	Kawagoe Works	Fujimino, Saitama Prefecture	Electronic devices, microwave products
	Saga Electronics Co., Ltd.	Kanzaki, Saga Prefecture	Electronic devices, microwave products
	NJR Fukuoka Co., Ltd.	Fukuoka, Fukuoka Prefecture	Electronic devices, microwave products
	THAI NJR CO., LTD.	Thailand	Electronic devices, microwave products
Ricoh Electronic Devices Co., Ltd.	Yashiro Plant	Kato, Hyogo Prefecture	Electronic devices

### Key Products



Electronic devices



Microwave products

#### Automotive products

The number of ICs per vehicle continues to increase amid the shift to vehicle electrification and advances in autonomous driving technology. ICs are now needed for a growing array of applications, from car audio to power control units, which support basic vehicle functions, electric power-assisted steering and battery management systems, as well as sensors that are integral to parking assist systems, collision avoidance and prevention systems and autonomous driving.

#### Industrial equipment products

Nisshinbo has a diverse lineup of products to meet customers' needs – operational amplifiers that play a key role in improving the sensing precision of encoders, which support movement in industrial robots, PMICs that support stable, low-noise operation of various industrial equipment, and analog front-end ICs that optimally integrate industrial equipment functions.

#### Satellite communication system components

VSAT\* are satellite ground stations that play a crucial role in satellite-based internet connectivity, data transmission and telephony. New Japan Radio is Japan's only supplier of key components for VSAT and one of only a handful of specialist suppliers worldwide. It has the top share in the global market.

\* Very Small Aperture Terminal

We face a tough operating environment due to China's economic slowdown and the COVID-19 outbreak, but we continue to develop new products and invest in our business in preparation for the rebound in the economy.

Ryo Ogura  
Chairman  
New Japan Radio Co., Ltd.



### Our Operating Environment

The Nisshinbo Group's micro devices are used in automotive and industrial equipment and communication products such as smartphones. However, all of those fields were hit by the slowdown in China in 2019 that spread to other parts of the global economy.

We had expected our business to return to 2018 levels this year, but the COVID-19 outbreak means the tough business climate is set to continue. Despite that outlook, we are putting systems in place to prepare for a rapid rebound in orders once the economy recovers.

A key theme for the electronics components sector is the expected increase in demand related to 5G, CASE and IoT. We are preparing for the possibility of a steep rise in demand across the board if the various problems the world currently faces are resolved swiftly. Automotive devices in particular are likely to see sustained growth in shipments over the long term, so we are adjusting output and inventories while keeping a close eye on market conditions.

### Stable Business Expansion

The micro devices segment is well-placed for growth in shipments over the medium and long term. In the automotive field, we anticipate new orders from Tier 1 auto components suppliers in Japan and Europe for ADAS devices and other parts related to the CASE trend. While EVs are becoming increasingly common, gasoline vehicles are likely to be around for some time yet, so we forecast continued demand for engine sensors, gas sensors and other ICE-related devices. We are preparing to launch a number of new automotive products from 2021, which should lead to greater earnings stability as the weighting of automotive sales rises. In the industrial equipment

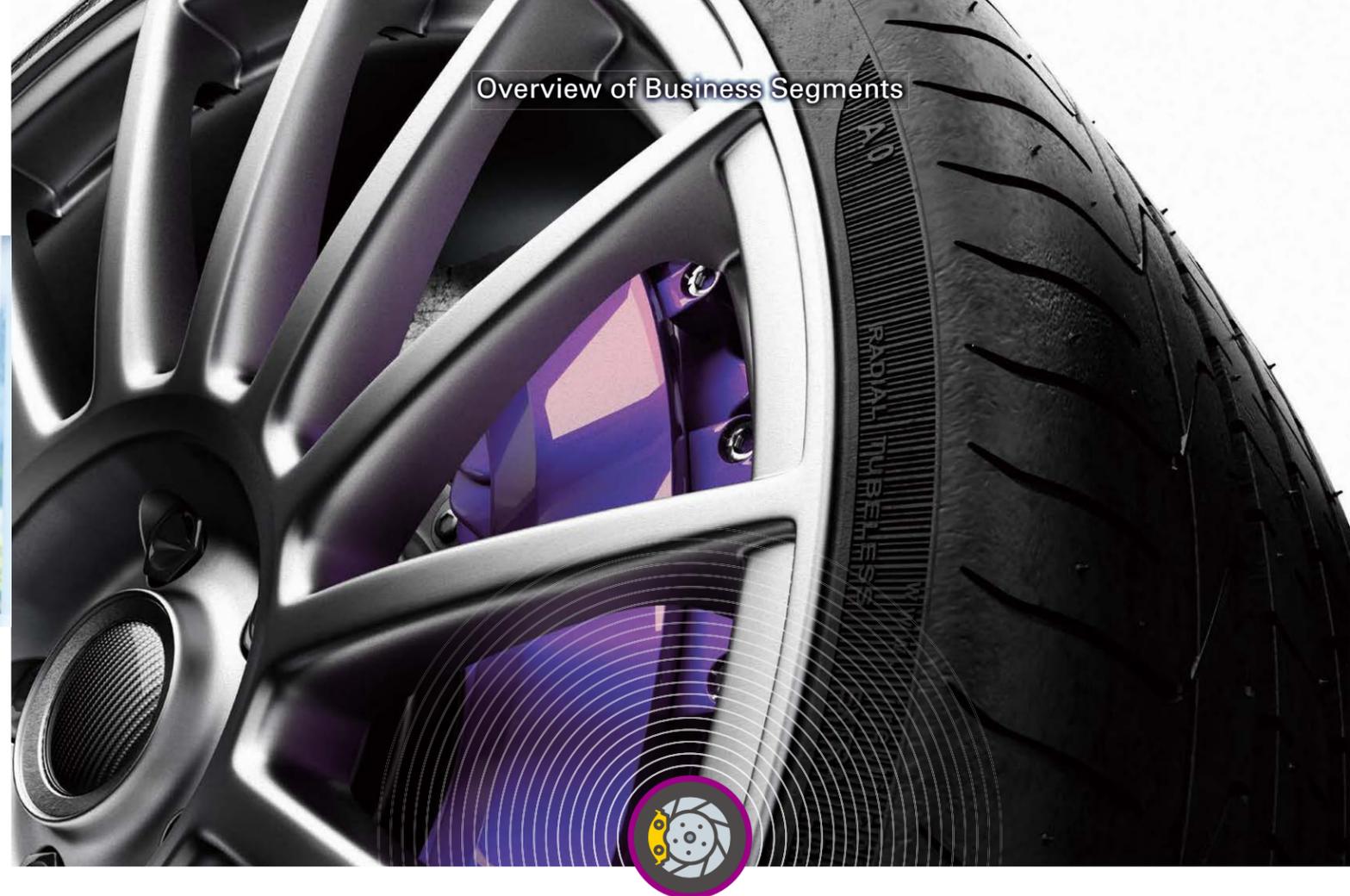
field, business enquiries are rising at a steady rate, with potential customers particularly interested in our ICs for optical rotary encoders. The ICs help to increase the speed and precision of robot arms, which are playing a key role in the shift to factory automation. In the ICT field, the global smartphone sector, which ships roughly 1.4 billion devices annually, is now transitioning to 5G smartphones. That trend is likely to support firm demand for semiconductors.

Our semiconductor technology is also vital to various joint projects with other businesses in the Nisshinbo Group. New Japan Radio is playing an increasingly important role in the Group by supporting the development of new medical equipment and other products. A leading example is the automotive ultrasound sensor we developed with JRC Mobility Inc.

### Ongoing Capital Investment

Against that backdrop, we have continued to invest in design and development and manufacturing facilities in order to increase added value through device modularization and to respond to rising orders.

New Japan Radio's subsidiary Saga Electronics Co., Ltd. has completed the expansion of its automotive device assembly line, while Ricoh Electronic Devices, plans to increase 8-inch wafer output at its Yashiro plant from the current 6,500 wafers per month to 10,000 by 2025. The company is also rapidly introducing 0.18um process technology, which will further increase the competitiveness of the micro devices business. The new technology will shrink chip area by 40%, reducing costs by increasing the number of chips per wafer, while the more complex chip architecture will improve performance and a higher operating voltage will boost power output.



## Automobile Brakes

### Nisshinbo Brake Inc. / TMD Friction Group S.A.

Nisshinbo is a global supplier with world-class development capabilities in the field of friction materials, which are key components in automobile brake systems. Our strategy in the automobile brakes business is to address the specific requirements of each market and customer with three businesses — Nisshinbo Brake, TMD Friction Group and Saeron Group — aiming to meet global automaker needs for optimum parts procurement as the world's leading friction materials company.

#### Related SDGs



P.46	Business Results and Strategy
P.48	Developing Our Business Worldwide

## Business Results and Strategy

Note: Figures for the fiscal period ended December 2018, which was a nine-month transitional fiscal period, have been adjusted to facilitate comparison with the fiscal year ended December 2019.

higher personnel expenses and other factors outweighing firm sales. In yen terms, sales and profits both fell year on year. In Thailand, sales and profits declined following the sale of the foundation brake business.

Sales at TMD were stable year on year. On a local currency basis, sales rose but losses widened, mainly due to costs related to business restructuring. However, in yen terms, sales declined and the loss was wider due to the strong yen. In the OEPC business (original equipment for passenger cars), TMD booked a writedown on fixed assets of ¥14 billion, which was recorded under extraordinary losses.

### Summary of Financial Results for 2019

In 2019, the automobile brakes business reported net sales of ¥131,338 million, down 6.3% year on year on an adjusted basis, and a segment loss of ¥3,340 million, a deterioration of ¥2,423 million on an adjusted basis.

In domestic operations, orders increased following the launch of new copper-reduced and copper-free\*<sup>1</sup> products, but sales and profits declined year on year, mainly due to the sale of the foundation brake business.

In the overseas operations of Nisshinbo Brake Inc., sales and profits declined in China, reflecting weaker car sales and costs associated with the startup of new business sites. Car sales also declined in the US, but the launch of new products lifted sales and profits year on year. In South Korea, sales rose and profits declined on a local currency basis, with

### Business Strategies for 2020

Global auto production has seen sustained growth in recent years led by rising demand in China, but output declined year on year in both 2018 and 2019. Market conditions are also likely to remain challenging in 2020 amid the COVID-19 outbreak. At Nisshinbo Brake, new orders for copper-reduced and copper-free friction materials are firm, in line with our expectations. The company is investing in the necessary facilities in Japan and the US to ensure production and deliveries ramp up smoothly.

The main goal of the automobile brakes business in 2020 is to return TMD to profit. In TMD's aftermarket business, we

are rebuilding relationships with Europe's largest distributors to expand sales. The aftermarket business is in the midst of realignment, with many competitors and distributors merging, so we need to respond dynamically to the changing business environment. In the OEPC business, we are working to improve the situation at the Essen plant. Our aim is to achieve a rapid recovery in margins by reducing the defective product ratio to lift productivity.

Meanwhile, automakers have started planning and exploring specifications for the next generation of brakes. They are working on new themes such as CASE (connected, autonomous, shared, electrified) and MaaS (mobility as a service), and pushing ahead with research into brakes for EVs. EVs require less friction material due to the use of regenerative braking systems, which is likely to depress demand for replacement parts over the longer term. However, we see potential for even higher demand for friction materials if car sharing services become more widespread, spurring growth in vehicle utilization rates. Growth in autonomous driving is also likely to accelerate that trend.

Changes in the way we use cars will also lead to changes in specifications for brakes and friction materials. In response, the automobile brakes business is already developing products that are ideally suited to electronically controlled brake systems and other developments in our field. One way we are doing

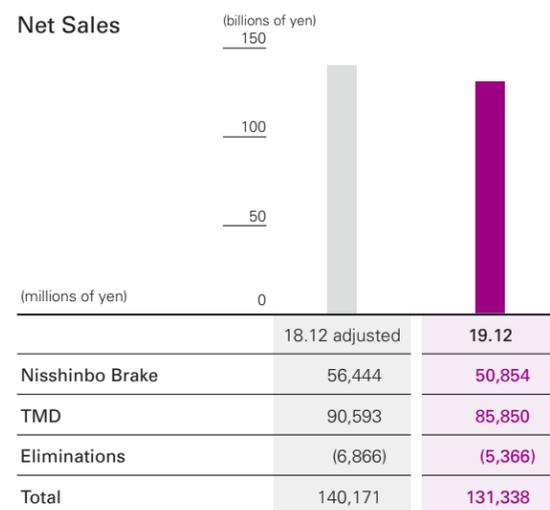
that is by developing friction materials with better NVH\*<sup>2</sup> performance for EVs, plug-in hybrids and fuel cell vehicles (FCVs), which are quieter than conventional cars. We have also started studies, research and development into the next phase of copper friction material regulations, which will further limit microparticle emissions caused by wear and tear in brake systems.

More than ever, as a manufacturer of friction materials, we have to accurately ascertain developments at customers and reflect those trends in our business strategy. By showing the value we can offer as a Group, we aim to win even greater trust from automakers.

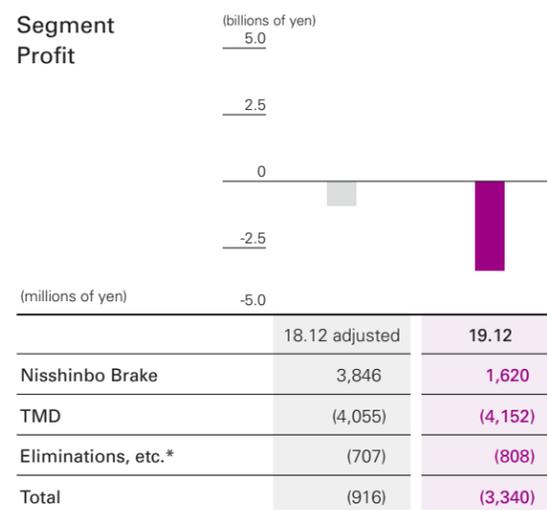
\*1 Demand for these products, which are compatible with US regulations on copper content, is projected to increase worldwide. US environmental regulations, effective from 2021, prohibit the sale of new friction materials or vehicles fitted with friction materials that have a copper content of more than 5%. From 2025, the limit on copper content will be reduced to 0.5%.

\*2 Noise, Vibration, Harshness: A term describing the noise and vibration characteristics of vehicles.

### Net Sales



### Segment Profit



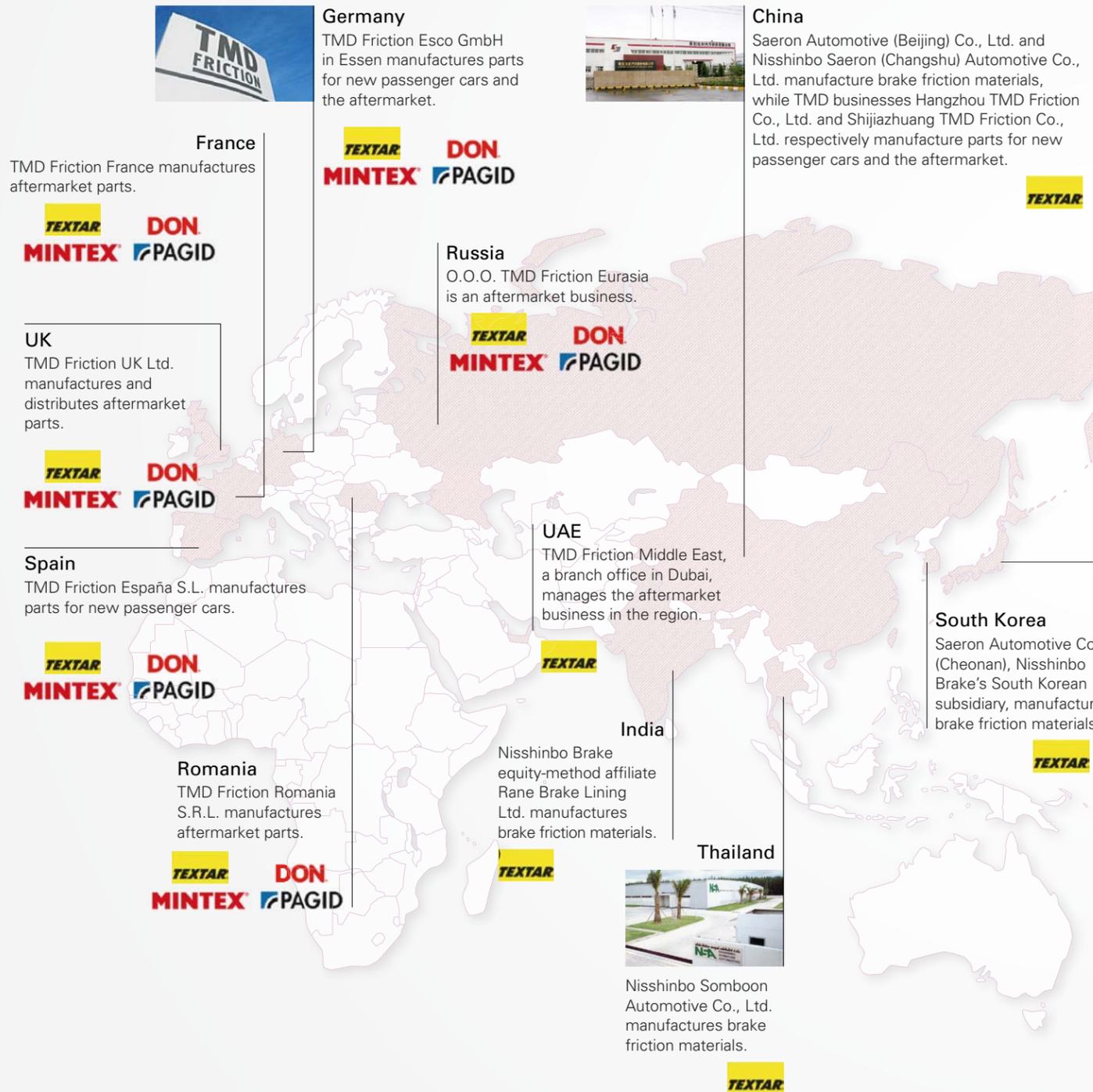
\* Including amortization of intangible fixed assets at TMD

### Main Locations

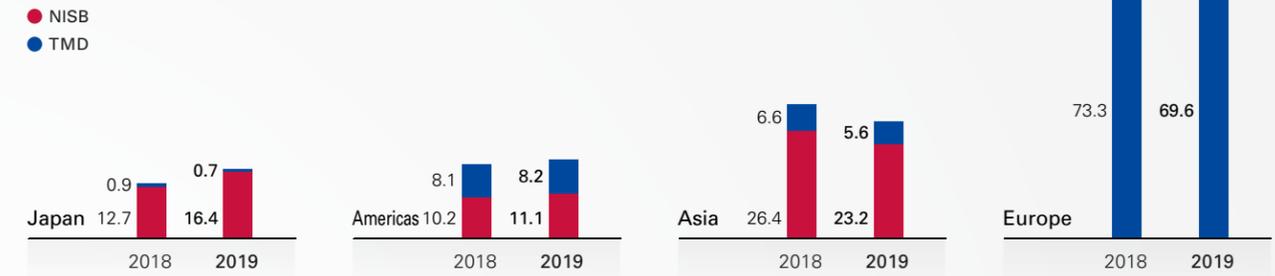
Key Companies	Main Locations and Key Subsidiaries	Location	Main Products and Services
Nisshinbo Brake Inc.	Tatebayashi Plant	Ora, Gunma Prefecture	Automobile brake friction materials
	Nisshinbo Automotive Manufacturing Inc.	USA	Automobile brake friction materials
	Saeron Automotive Corporation	South Korea	Automobile brake friction materials
	Nisshinbo Somboon Automotive Co., Ltd.	Thailand	Automobile brake friction materials
	Saeron Automotive Beijing Corporation	China	Automobile brake friction materials
	Nisshinbo Saeron Changshu Automotive Co., Ltd.	China	Automobile brake friction materials
TMD Friction Group	TMD Friction GmbH	Germany, etc.	Automobile brake friction materials

## Developing Our Business Worldwide

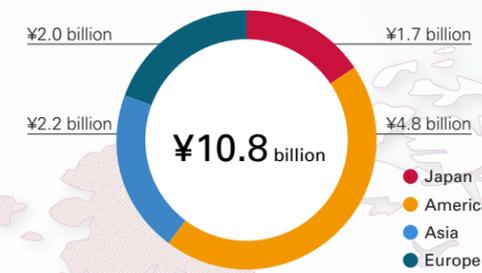
Nisshinbo Brake Inc., a world-leader in brake friction materials development, started moving into overseas markets from the late 1990s to meet the needs of global automakers. The company's area of operations increased dramatically in 2012 with the acquisition of the TMD Friction Group. As the world's top maker of friction materials by market share, Nisshinbo Brake's strategy is to supply products worldwide by addressing the unique needs of each market and customer.



Sales by Region (billions of yen)



Capital Investment Plan for 2020 (initial plan)



Major planned investments:

- Expansion at US brake friction materials plant
- Capacity increase at TMD's Essen plant making parts for new passenger cars
- Capacity increase at plant in China making brake friction materials
- Construction of IoT system on production lines at Tatebayashi Plant in Japan



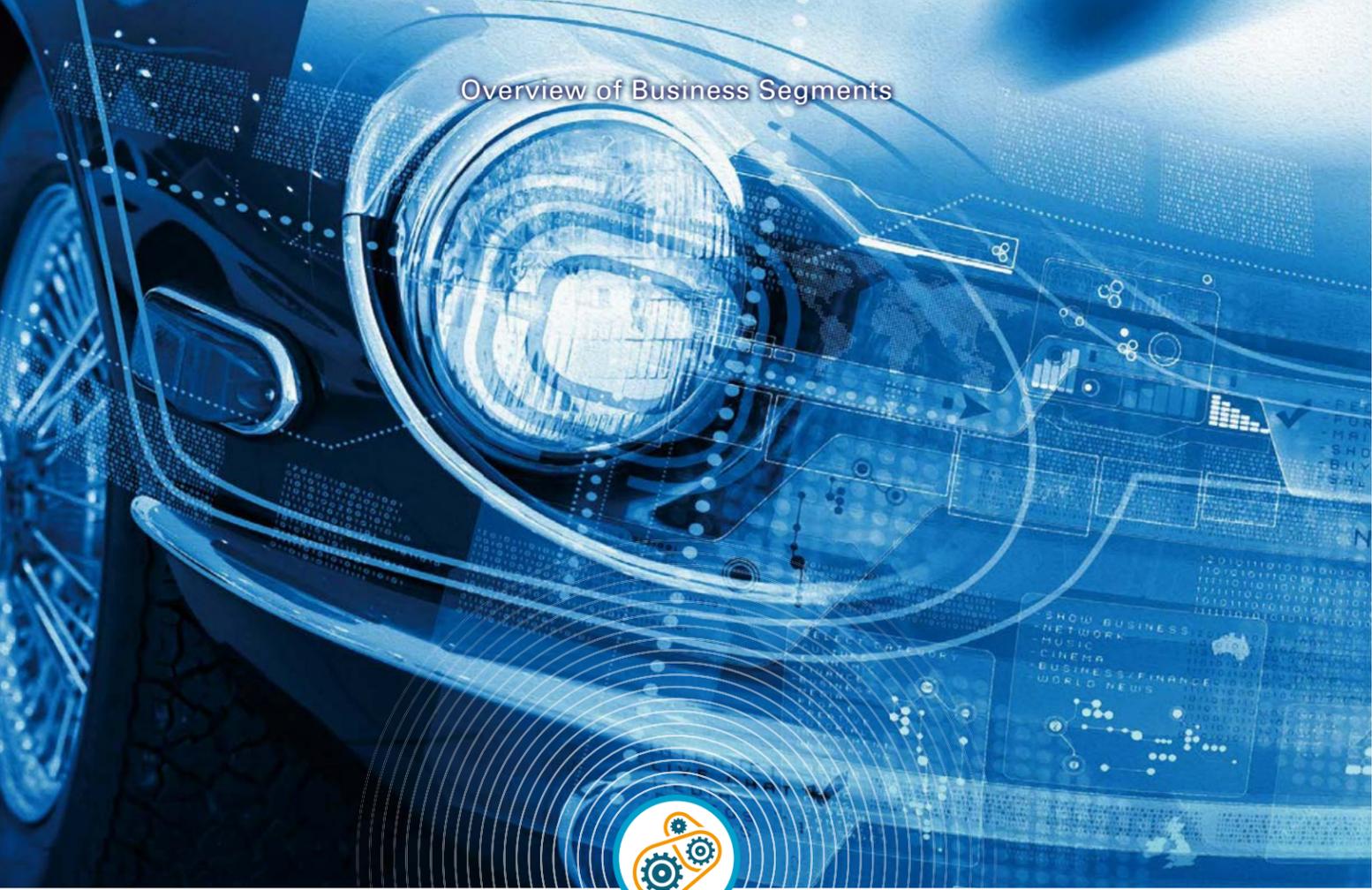
**Japan**  
Nisshinbo Brake's Tatebayashi Plant in Gunma Prefecture is the "mother plant" in the automobile brake business, using IoT and other technologies on friction material production lines and conducting R&D.



**US**  
Nisshinbo Automotive Manufacturing Inc. manufactures brake friction materials. TMD Friction, Inc. manufactures parts for the aftermarket.

**Mexico**  
TMD Friction México, S.A. De C.V. manufactures parts for new passenger cars and the aftermarket.

**Brazil**  
TMD Friction Do Brasil manufactures parts for new passenger cars and the aftermarket.



# Precision Instruments

## Nisshinbo Mechatronics Inc.

Utilizing various areas of expertise accumulated over more than 70 years, this segment is focused on precision metal parts processing for the automotive sector and parts molding and processing for the automotive and home appliance sectors. The segment also makes customized production equipment to meet the specific needs of customers. We work closely with subsidiary Nanbu Plastics Co., Ltd. to develop these businesses globally, centered on Asia.

Related SDGs



- P.51** Key Products
- P.52** Business Results and Strategy

## Key Products

### EBS Valve Blocks

Nisshinbo Mechatronics Inc. manufactures EBS valve blocks for electronic stability control (ESC) systems at a plant in China operated by subsidiary Nisshinbo-Continental Precision Machining (Yangzhou) Co., Ltd. ESC systems use information on driving conditions gathered from sensors to control vehicle stability and braking. Nisshinbo draws on its long track record of expertise to meet client needs for valve blocks, which require advanced machining technology and must meet high standards for quality and cost.



Automotive EBS valve block

### Automotive Molding Products

Using its molding technology for rotating parts, Nisshinbo Mechatronics has supplied automotive fans for car air conditioners and radiators for many years. However, with the acquisition of Nanbu Plastics Co., Ltd. in 2015, Nisshinbo Mechatronics is using the subsidiary's strengths in automotive wire harness connectors and molding products for headlights to expand its reach in the automotive field. Nisshinbo Mechatronics and Nanbu Plastics are now developing their business worldwide by combining their respective technologies to generate synergies, while also leveraging their ability to offer integrated support to clients, from product planning and development through to assembly.



Automotive headlight components

### High Value-added Molding Products

Nisshinbo Mechatronics manufactures Eco Cross fans used in residential air conditioners. The patent-protected fans are lighter and more energy-efficient than existing equivalent fans. By combining its proven expertise in rotational technologies with state-of-the-art molding technologies, Nisshinbo Mechatronics has created a cost-competitive fan that also saves energy and resources. Eco Cross is highly regarded by Japanese air conditioner makers, which are expanding their operations worldwide. We are currently increasing production to address projected growth in demand, mainly in China and Southeast Asia.



Fans for residential and commercial air conditioners

## Business Results and Strategy

Note: Figures for the fiscal period ended December 2018, which was a nine-month transitional fiscal period, have been adjusted to facilitate comparison with the fiscal year ended December 2019.

In the molding products business, sales and profits declined due to weak demand for air-conditioner parts made at Group sites in Japan, Shanghai and Thailand, and as a result of higher depreciation costs. In Thailand, we started full-scale shipments of vehicle ornaments and badging parts. The parts are made by Nanbu Plastics using proprietary technology that removes the need for metal components. Demand for the non-metallic parts is likely to expand, as they do not interfere with millimeter wave radar used in autonomous driving systems. However, Nanbu Plastics reported lower sales and profits from automotive parts, partly reflecting weaker car sales in China. The company decided to close its Hiroshima plant as part of a business reorganization, but it will continue to explore options for establishing a broader manufacturing framework.

### Summary of Financial Results for 2019

In 2019, the precision instruments business reported net sales of ¥65,429 million, down 0.7% year on year on an adjusted basis, and segment profit of ¥879 million, down 46.0% on an adjusted basis.

In precision parts for the automotive sector, sales and profits declined year on year. Orders for valve blocks used in electronic brake systems (EBS) increased, driven by higher sales at customers, but due to a decline in average unit price, the business was unable to fully offset higher depreciation costs. Nisshinbo Precision Instrument & Machinery Hiroshima Corp. saw an increase in shipments of exhaust valves and started volume production of air intake parts for engines.

### Business Strategies for 2020

In the precision instruments business, the operating environment is likely to be challenging in the near term, as precision parts for the automotive sector, air-conditioner parts, and automotive headlamp assemblies are all highly exposed to economic conditions in China and other markets in Asia. However, demand for automotive parts is likely to rise going forward, so we plan to upgrade production facilities at all our

plants and reorganize our network of manufacturing sites.

In precision parts, Nisshinbo-Continental Precision Machining (Yangzhou) Co., Ltd. continues to add production capacity for valve blocks, while Nisshinbo Precision Instrument & Machinery Hiroshima is focusing on the development of new prototype products in order to win more orders for automotive parts.

In molding products, Nisshinbo Mechatronics (Thailand) Ltd. continues to strengthen its lineup of air-conditioner parts, but it is also aiming to secure orders for other types of products, starting with vehicle ornaments and badging parts. In India, we plan to actively expand our facilities to capture rising local demand for air-conditioners. Nisshinbo Mechatronics (Shanghai) Co., Ltd. will boost output of air-conditioner parts, production of which was transferred from Japan. The company also plans to increase production of automotive headlamp assemblies, which were transferred from Nanbu Plastics.

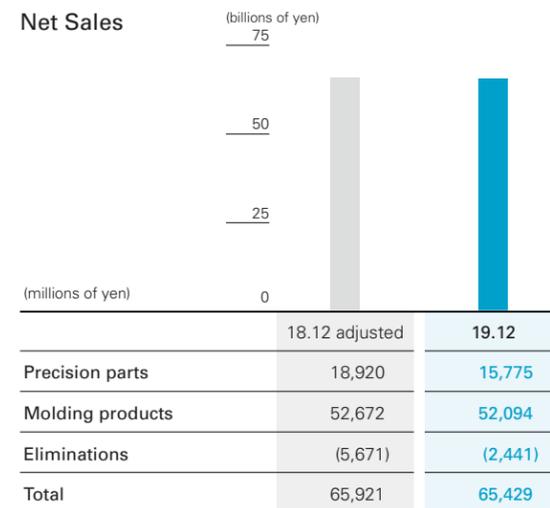
Nanbu Plastics operates manufacturing sites in Japan and other parts of Asia (China, the Philippines and Indonesia). To capture global demand, we will reconfigure those sites as part of a broader move to optimize all plants in the precision instruments business.

Medical applications are another promising growth field for the precision instruments business. Nanbu Plastics already

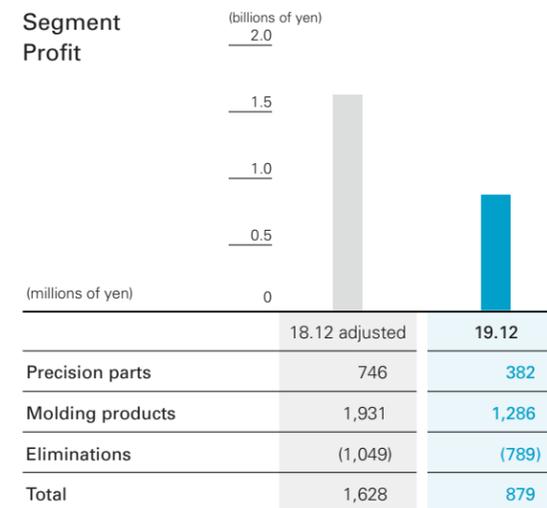
manufactures feces sampling containers, but it has also received orders for allergy testing kits, a promising area of synergy with Ueda Japan Radio Co., Ltd. Shipments of the kits started in February 2020. As a result, Nanbu Plastics' medical business (Yoshida site) will be relocated to the Nisshinbo Group's Fujieda site with the aim of significantly increasing output and productivity. The relocation is scheduled to take place in 2021.

The customized production equipment business plays a key role supporting the Nisshinbo Group's manufacturing sites. It provides molding equipment for carbon bipolar plates in the chemicals business and manufacturing equipment for xEV parts made by Nagano Japan Radio Co., Ltd. in the wireless and communications business.

### Net Sales



### Segment Profit



### Main Locations

Key Companies	Main Locations and Key Subsidiaries	Location	Main Products and Services
Nisshinbo Mechatronics Inc.	Miai Machinery Plant	Okazaki, Aichi Prefecture	Molding products, automotive precision parts
	Hamakita Plant	Hamamatsu, Shizuoka Prefecture	Automotive precision parts
	Nisshinbo Precision Instrument & Machinery Hiroshima Corp.	Higashihiroshima, Hiroshima Prefecture	Automotive precision parts
	Nisshinbo-Continental Precision Machining (Yangzhou) Co., Ltd.	China	Automotive precision parts
	Nisshinbo Mechatronics (Shanghai) Co., Ltd.	China	Molding products
	Nisshinbo Mechatronics (Thailand) Ltd.	Thailand	Molding products
Nanbu Plastics Co., Ltd.	Nisshinbo Mechatronics India Private Limited	India	Molding products
		Shizuoka Prefecture, etc.	Molding products



# Chemicals

## Nisshinbo Chemical Inc.

Drawing on a broad base of expertise and intellectual property in the chemical field, this segment is working to develop products that help protect the environment and make life more comfortable. Our environment- and energy-related products include bipolar plates for fuel cells and Carbodilite, a high-performance plastic material that increases the durability and chemical resistance of biodegradable plastics and water-based resins, which have minimal environmental impact. We are investing management resources in these promising growth areas as a matter of priority.

Related SDGs



P.55	Business Results and Strategy
P.56	Key Products
P.57	Message from the President of Nisshinbo Chemical

## Business Results and Strategy

Note: Figures for the fiscal period ended December 2018, which was a nine-month transitional fiscal period, have been adjusted to facilitate comparison with the fiscal year ended December 2019.

### Summary of Financial Results for 2019

In 2019, the chemicals business reported net sales of ¥9,391 million, down 18.8% year on year on an adjusted basis, and segment profit of ¥1,650 million, down 30.7% on an adjusted basis.

In thermal insulation productions, demand for urethane base solution was firm overall, but sales and profits declined year on year due to the completion of a large project supplying rigid processed insulation products (refrigeration materials for LNG carriers) and weaker sales of bio-carriers for wastewater treatment.

In functional materials, Carbodilite registered lower sales and profits year on year, reflecting slower economic growth in China and Europe caused by US-China trade tensions, as well as declining car sales and inventory adjustments at major customers.

In fuel cell bipolar plates, higher sales for household-use fuel cells in Japan and for fixed fuel cells overseas supported growth in sales and profits. The business also saw an increase in orders for prototype products for use in buses, trucks and other commercial vehicles overseas.

In glass-like carbon products, sales and profits declined amid a slowdown in the semiconductor and OLED markets, but as a new application, the business started selling parts for semiconductor manufacturing equipment used to make low-power memory chips.

### Business Strategies for 2020

In thermal insulation products, we continue to see an accelerating shift in demand to foaming agents with low global warming potential\*<sup>1</sup>. In response, we are rapidly developing

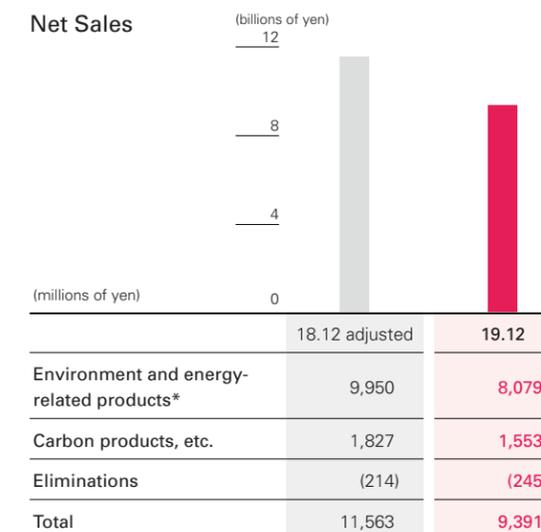
and working to launch non-fluorocarbon products\*<sup>2</sup> and flame-resistant and non-flammable products. A new spray foam base solution currently under development has been certified as non-flammable and we intend to launch it as soon as possible. We are also marketing our civil engineering insulation base solution with the aim of winning more business for aqueduct tunnels, and targeting an increase in orders for our newly developed railroad ballast materials. In bio-carriers for wastewater treatment, we aim to expand our business overseas, including setting up a local production system in China.

In the Carbodilite business, we plan to launch new products with lower environmental impact and develop new applications to drive strong growth. Examples include hydrolysis-resistant agents for biodegradable plastic and waterborne cross-linking agents for use in paint, coatings and adhesives that help reduce atmospheric pollution and other types of environmental pollution. To meet projected growth in demand, we plan to improve the efficiency of existing plants and open new production sites to boost output.

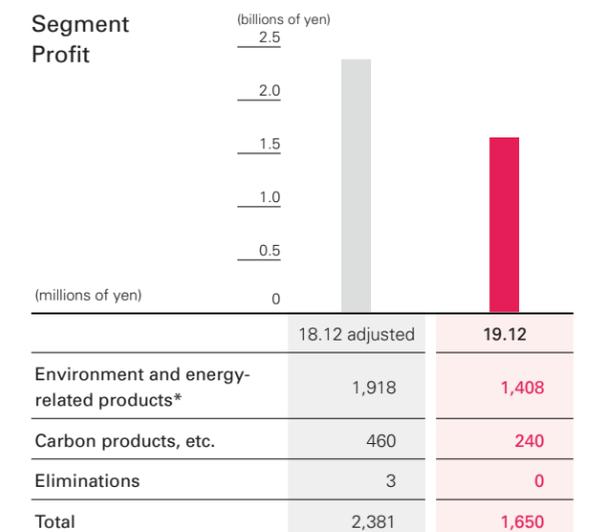
In fuel cell bipolar plates, we are receiving a growing number of enquiries about fixed fuel cell applications from potential customers in the global market. We aim to tap into that interest to push for the adoption of our bipolar plates in more fuel cells. In automotive applications, automakers worldwide are working on the development of fuel cells for cars, buses and trucks, and we aim to capture some of the strong demand for bipolar plates needed in their prototype products. We aim to secure IATF 16949 certification, the international standard for automotive quality management systems required for automotive parts factories, by December 2021.

In glass-like carbon products, we forecast long-term

### Net Sales



### Segment Profit



\* Fuel cell bipolar plates, Carbodilite, insulation materials

growth in the key market of semiconductor production equipment, spurred by uptake of the next-generation mobile communication standard (5G) and an increase in data center construction. We will also continue to drive growth in the market for automotive products that exploit the highly pure

and durable characteristics of glass-like carbon and develop products with improved resistance to oxidation.

\*1 A measure of how much heat a greenhouse gas traps in the atmosphere relative to carbon dioxide, expressed as a numerical value

\*2 Urethane foam that uses hydrofluoroolefins (HFOs) or water as the blowing agent

Main Locations

Key Companies	Main Locations and Key Subsidiaries	Location	Main Products and Services
Nisshinbo Chemical Inc.	Toke Plant	Chiba, Chiba Prefecture	R&D Center (Carbodilite)
	Asahi Plant	Asahi, Chiba Prefecture	Urethane products, fine carbon products
	Tokushima Plant	Tokushima, Tokushima Prefecture	Carbodilite
	Chiba Plant	Chiba, Chiba Prefecture	Carbon bipolar plates for fuel cells

Key Products



Bipolar plates for fuel cells

Bipolar Plates for Fuel Cells

Carbon bipolar plates have a high market share in fixed fuel cells for residential and commercial use, such as the Ene-Farm system. Nisshinbo's carbon bipolar plates are not only lighter than metal versions, they are also easier to mold into the required flow channel shapes and are more resistant to corrosion. Our plates have already been adopted for a fuel stack used in forklifts and we are currently developing new models for use in future fuel cell vehicles (FCVs).



Carbodilite

Carbodilite

Carbodilite is the collective name for a range of polymer and polycarbodiimide-based products developed in-house by Nisshinbo Chemical Inc. Carbodilite is a highly effective modifier and cross-linking agent blended with base materials for paints, plastics and other products. Countries worldwide are tightening rules governing volatile organic compounds (VOC) and other regulations to reduce CO<sub>2</sub> emissions and restrict use of certain chemical substances. Due to its highly safe characteristics, that trend is spurring demand for Carbodilite in Japan and overseas as an alternative to existing highly toxic cross-linking agents, and as a key modifier for water-based paints and coatings with lower drying temperatures. Meanwhile, amid growing concern worldwide about single-use plastic products, Carbodilite is increasingly being adopted as a modifier for biodegradable plastic, which is seen as a solution to plastic pollution issues.



Bio-carriers: APG

Bio-carriers for Wastewater Treatment

AQUAPOROUSGEL (APG) is a bio-carrier for microorganisms that improves the effectiveness of microorganisms in systems used to treat wastewater from factories and other facilities. APG is a high-performance bio-carrier that settles rapidly into wastewater, while its sponge-form provides a large surface area for bacteria to attach to and colonize. APG is highly regarded in Japan, where it is used by leading water purification companies. It is also helping to improve water quality at public sewage treatment facilities in China and countries in Southeast Asia.

The chemicals business comprehensively supports the Nisshinbo Group's activities in its strategic business fields of Mobility, Infrastructure & Safety and Life & Healthcare by providing core technologies. The business portfolio also includes a large number of products with the potential for strong growth in the near future.

Akihiro Kamei  
President  
Nisshinbo Chemical Inc.



Bipolar Plates for Fuel Cells

Nisshinbo Chemical manufactures bipolar plates for polymer electrolyte fuel cells (PEFCs). The plates have a high share in the market for fixed fuel cells such as the Ene-Farm system, and they are increasingly being used in fixed fuel cell emergency power backup systems. Automotive applications are another promising growth field, with Japan, Europe, China and other countries increasingly focusing on fuel cell vehicles (FCVs) as a technology to reduce CO<sub>2</sub> emissions. Nisshinbo's carbon bipolar plates are already used in some FCVs and have earned a strong reputation for reliability and high power output. Since 2019, we have received a large number of requests to supply our bipolar plates for prototype fuel cells, raising expectations for sales growth and providing the opportunity to build up an operational track record. Our Chiba business site is currently working to secure IATF 16949 certification, the international standard for automotive quality management systems, ahead of wider adoption in commercially available vehicles.

Carbodilite

Carbodilite continues to see steady growth as a high-performance chemical product that improves the durability and other characteristics of biodegradable and water-based plastics, spurred by growing use of those plastics. Biodegradable plastic is gradually being adopted for more applications, such as packaging film and industrial materials, as well as for supermarket shopping bags. Agricultural film is another promising new application. After use, the film can be ploughed back into farmland, where it biodegrades, eliminating the considerable time and effort needed to recover the film. Demand for biodegradable agricultural film is projected to grow strongly in China and other overseas markets. In water-based plastics, Carbodilite is used as a safe and reliable cross-linking agent for paints, ink, adhesives and other products, helping to reduce emissions of volatile organic compounds (VOC) and CO<sub>2</sub>, reduce environmental

pollution and significantly improve working environments. Carbodilite has the potential to support almost limitless applications, as specifications differ at each chemical manufacturer and for each product. Going forward, we will continue to develop new products that address customer needs and step up marketing activities in a range of application fields to drive strong growth.

Thermal Insulation Products (Bio-carriers for Wastewater Treatment)

Nisshinbo Chemical's urethane products are used in a broad range of products, from insulation materials for housing and non-housing applications, to urethane base solution for cushioning materials used in railroads and office chairs and rigid urethane foam for LNG carriers. We are seeing growth in demand for urethane in infrastructure maintenance projects as repair materials for roads, railways and agricultural tunnels and as ballast materials for railways. We are also working on the development of environmentally friendly products to support growth in the future. In China, we are expanding sales of bio-carriers for wastewater treatment. Interest in our bio-carriers is rising, backed not just by the product's capabilities but also by our efforts to provide added value by showing potential customers the best ways to use them.

Glass-like Carbon

Glass-like carbon is mainly used for parts and materials in semiconductor production equipment. We anticipate increased demand for our products, supported by growth in the semiconductor industry as 5G devices and equipment becomes more widespread. In new applications, glass-like carbon can be used by the automotive industry to make curved glass screens, and we aim to spur wider use in areas that take advantage of its processing accuracy and durability. As glass-like carbon is adopted for more applications, we will put in place the necessary framework to support stable growth.



# Textiles

## Nisshinbo Textile Inc.

Since its founding in 1907 as Nisshin Cotton Spinning Co., Ltd., Nisshinbo has led the Japanese textile industry with its state-of-the-art technologies and high quality. Nisshinbo subsequently expanded its business globally in the fields of spinning, weaving, processing and sewing, and today possesses some of the world's most advanced technologies in product development and production. Nisshinbo is currently working to increase global sales of the APOLLOCOT brand by mobilizing its sophisticated textile processing technologies.

Note: Figures for the fiscal period ended December 2018, which was a nine-month transitional fiscal period, have been adjusted to facilitate comparison with the fiscal year ended December 2019.

### Related SDGs



### Summary of Financial Results for 2019

In 2019, the textiles business reported net sales of ¥49,505 million, down 7.7% year on year on an adjusted basis, and segment profit of ¥1,037 million, down 20.6% on an adjusted basis.

In the domestic market, sales and profits declined. Sales of wrinkle-free shirt fabric and uniform fabric were firm, but that was outweighed by disappointing sales of non-woven fabric for cosmetics goods, business shirts at TOKYO SHIRTS CO., LTD. and apparel at Nisshin Toa Iwao, Inc. TOKYO SHIRTS continued to see firm sales of products incorporating Nisshinbo technology, such as SUPIMA cotton wrinkle-free shirts and non-see-through shirts. Meanwhile, as part of moves to rebuild the business portfolio, we made the decision to exit the denim fabric business due to limited prospects for an upturn in earnings.

Overseas, sales at Indonesian subsidiaries were flat year on year, reflecting weak growth in supplies to third countries and regions. However, a companywide improvement program called T-KAIZEN led to lower costs, helping to lift profits. On a local currency basis, our Brazilian subsidiary reported higher

sales and profits year on year. However, in yen terms, sales declined due to the strong yen, but profits increased.

### Business Strategies for 2020

In the domestic market, we see the risk of a short-term decline in demand for apparel due to the COVID-19 outbreak. We also forecast a contraction in demand over the longer term as Japan becomes a super-aging society. Overseas, we anticipate prolonged trade tension between the US and China and a slowdown in the Chinese economy. As with Japan, the COVID-19 outbreak is also likely to weigh on growth overseas. However, rising interest in ESG investing worldwide means there are major business opportunities for low-carbon technologies and products that align with the SDGs. We also forecast continued expansion in the global textile market, spurred by sustained population growth and economic growth in developing countries.

Against that backdrop, we aim to increase operating cash flow in the textiles business by accelerating the development and launch of new products for the super smart society and

environmental energy society, and by rapidly building digital businesses and SDG-focused manufacturing businesses.

In shirt products, we aim to create new markets and increase market share by developing next-generation products with even better performance, particularly APOLLOCOT non-iron fabric, which can help cut electricity consumption through reduced need for ironing. In materials development, we aim to expand sales of OIKOS cosmetics products and MOBILON inner wear and develop new applications.

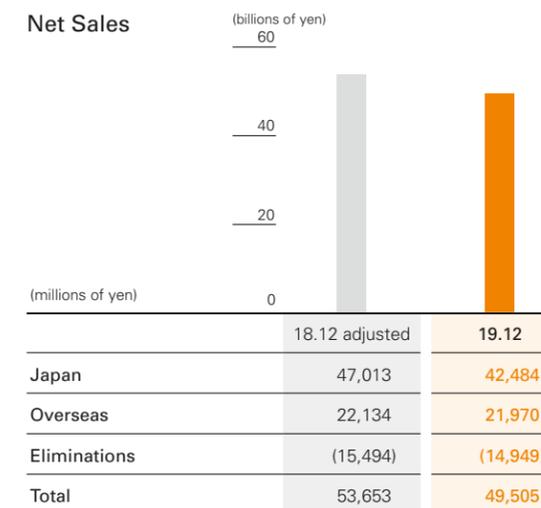
TOKYO SHIRTS will focus on low-environmental impact, using its pure cotton wrinkle-free shirts and support for polyester shirt recycling as a selling point. The company will also combine its IT and brand strategies, reinforce merchandising in physical stores, integrate physical sales and online sales with a CRM system, and launch new products.

In Indonesia, we will continue to pursue our goal of global cost-competitiveness and global quality, while also developing new products that align with the SDGs and moving to eco-friendly factories that comply with local environmental regulations in order to expand supplies to third countries and regions.

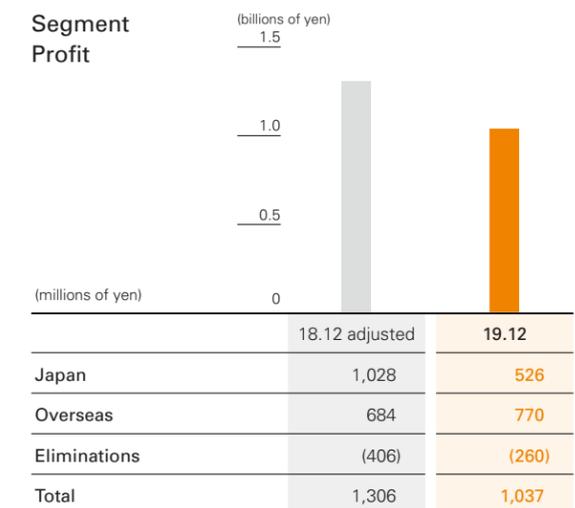
The textiles business is also pushing ahead with the development of smart textiles. We are working on products that integrate microphones and sensors into the fabric, targeting several potential applications – health monitoring and protection, workplace environment improvements, and worker safety management. One example is a maternity belt fitted with high-performance microphones to monitor the health of unborn babies and predict the onset of labor pains. To make comfort one of the key standout features, we have incorporated sensors that mean the belt does not have to be worn next to the skin. The sensors are supplied by New Japan Radio Co., Ltd., which has a strong portfolio of micro-electromechanical systems technology. The belt is currently undergoing trials and we hope to launch it before the end of 2020.

We are also using technologies from the textiles business to respond to the COVID-19 outbreak, including boosting production of MOBILON tape for medical face masks and manufacturing gauze fabric for masks and the masks themselves.

### Net Sales



### Segment Profit



### Main Locations

Key Companies	Main Locations and Key Subsidiaries	Location	Main Products and Services
Nisshinbo Textile Inc.	Fujieda Plant	Fujieda, Shizuoka Prefecture	Developed materials
	Tokushima Plant, Yoshinogawa Plant	Tokushima Prefecture	Developed materials
	PT. Nikawa Textile Industry	Indonesia	Textile spinning and weaving
	PT. Nisshinbo Indonesia	Indonesia	Textile weaving and dyeing
	Nisshinbo Do Brasil Industria Textil Ltda.	Brazil	Textile spinning
	Nisshinbo (Shanghai) Co., Ltd.	China	Textile products
	TOKYO SHIRTS CO., LTD., Naigai Shirts Co., Ltd.	Tokyo, etc.	Dress shirts



# Real Estate

## Nisshinbo Holdings Inc.

Nisshinbo's real estate business redevelops properties that have become vacant as a result of business changes at Group companies. Income from those activities is used to fund the Group's growth strategy, such as launching new businesses and expanding global operations. Income is generated from two main sources — property leasing and the sale of housing lots. Nisshinbo has actively developed the housing lot sales business since 2009, when the Group moved to a holding and operating company structure. The Group's domestic real estate portfolio includes many land and property sites with excellent locations, generating strong earnings for the real estate business.

Related SDGs



Note: Figures for the fiscal period ended December 2018, which was a nine-month transitional fiscal period, have been adjusted to facilitate comparison with the fiscal year ended December 2019.

### Summary of Financial Results for 2019

In 2019, the real estate business reported net sales of ¥11,655 million, up 62.3% year on year on an adjusted basis, and segment profit of ¥8,163 million, up 101.9% on an adjusted basis.

In the housing lot sales business, sales and profits both rose sharply, supported by the start of housing lot sales at the former Miai Plant site (Aichi) and the sale of a building for use as a large commercial facility (Aichi). In the property leasing business, leasing operations were firm for land, office buildings, commercial facilities and other properties. In 2019, a condominium with 44 rental units was constructed on the former head office site of TOKYO SHIRTS CO., LTD. (Tokyo). Leasing of the units started in August 2019.

### Business Strategies for 2020

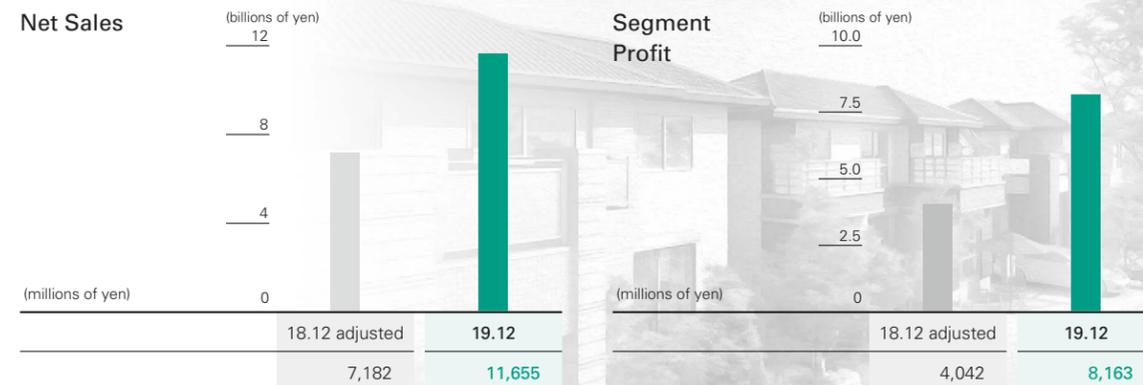
The real estate business will continue to fulfill its role as a source of funds to help Nisshinbo attain its management

targets by effectively utilizing the real estate assets of the whole Group. We plan to continue generating stable earnings by focusing on the following projects.

The Group is redeveloping the north section of the former Japan Radio Co., Ltd. site in Mitaka (Tokyo). We plan to sell around 680 condominium units in 2020 and 2021. Marketing activities began in 2018 and demand is firm for units to be handed over in 2020.

With the redevelopment of the former Miai Plant site (Aichi), we plan to sell 357 detached homes and land for commercial, medical and welfare facilities between 2019 and 2024. We forecast higher sales and profits in 2020, as sales at the site are set to gear up during the year.

New projects include the redevelopment of employee housing in Nishi Arai (Tokyo) as rental condominiums. Rebuilding work started in December 2019. We expect to begin sales of Phase 1 (50 units) in September 2021 and Phase 2 (149 units) in April 2024.



# Management Framework

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Directors and Audit Supervisory Board Members of Nisshinbo Holdings, Inc. Please see pages 68-69 for more details.

# Corporate Governance

Nisshinbo is aiming to increase corporate value over the medium and long term as an *Environment and Energy Company* group by operating its various businesses based on global business management and cash flow management. To achieve this, we are improving the quality of corporate governance and other aspects of our organizational culture. In parallel, we are striving to deliver quantitative growth in earnings and shareholder value, focusing on ROE to improve profitability and placing importance on the share price in management decisions.

By making rapid and bold decisions based on risk-taking in line with our management principles, we are working to enhance management efficiency while ensuring transparency, as well as improve accountability, act ethically and build a stronger corporate governance structure founded on our Corporate Philosophy.

## Corporate Governance Policy

We have formulated the Nisshinbo Corporate Governance Policy, which clearly states our basic thinking on corporate governance and related initiatives. By steadily implementing the principles of the policy and revising and improving its content as needed, we aim to improve the effectiveness of governance and create a framework for rapid and bold decision-making that contributes to sustained growth and increased corporate value over the medium and long term.

## Corporate Governance Structure

Nisshinbo has separated decision-making and oversight from business execution and adopted a managing officer system to

reinforce those functions. By transferring responsibility for business execution to managing officers and strengthening oversight by the Board of Directors, we are improving management efficiency and transparency and creating an effective governance structure that will support the Group's sustained growth and enhance corporate value over the medium and long term.

Nisshinbo has established an Audit & Supervisory Board. The members of the Audit & Supervisory Board monitor the execution of duties by directors in accordance with audit policy and plans determined by the board.

The Board of Directors authorizes the senior management team to make judgements and decisions on important matters related to business execution, except items that require

resolutions of the Board of Directors. Following discussions by the Board of Management, which comprises directors, managing officers and other senior officers, the president finalizes the details of delegated business execution matters and resolutions to be discussed by the Board of Directors. The Board of Management also discusses important matters related to Group business execution, responses to business risks and other key items.

In addition, the Company appoints a number of outside directors and outside members of the Audit & Supervisory Board. The corporate governance structure also includes a Nomination Committee and a Remuneration Committee, which advise the Board of Directors. Committee members comprise the chairman, president and several outside directors.

We have adopted this structure as we believe it ensures operations are conducted in an appropriate manner. Under this structure, outside directors draw on their depth of experience and expertise to monitor business management from an objective and independent standpoint, while outside members and internally appointed standing members of the Audit & Supervisory Board work closely with the Internal Audit Office.

## Responsibilities of the Board

Directors and the Board of Directors recognize that they have a fiduciary duty to shareholders and thus strive to appropriately reflect shareholders' intentions within the board. By overseeing the preparation and management of internal control and risk management systems, directors and the board help to monitor business execution and decision-making. At the same time, the Company fearlessly confronts risk and works to achieve governance that is focused on quick and bold decision-making. In this manner, the Company aims to achieve greater accountability to stakeholders, increased profitability, and higher returns for shareholders.

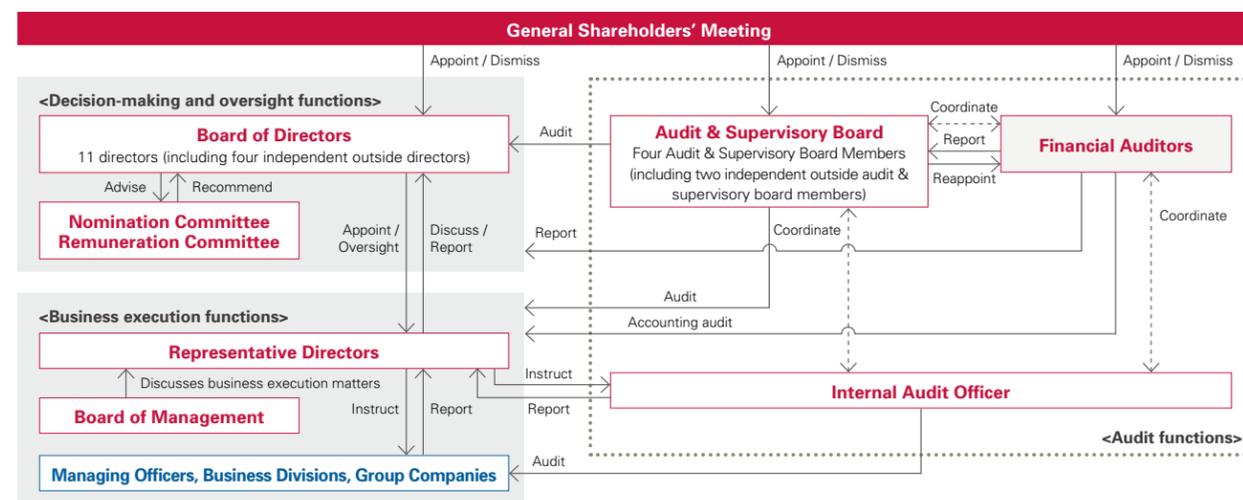
In light of the above, the Board of Directors deliberates and decides on important management matters at board meetings, such as the formulation of management strategies and plans, changes to the business portfolio group structure, and the implementation of M&As. These management matters are determined based on the criteria for agenda items stipulated under the Companies Act of Japan, other statutory and regulatory requirements, and various internal rules that govern the Board of Directors and the delegation of authority. Further, in its deliberations and decisions, the board keeps the following matters in mind.

- Alignment with corporate philosophy and management policy
- Compliance with laws and regulations and corporate ethics
- Increasing medium- to long-term corporate value
- Securing the trust of various stakeholders including shareholders, customers, employees, business partners, and local communities

To promote the globalization of each Nisshinbo company along the lines of environment and energy, the Board of Directors selects management talent as candidates for directors who possess outstanding management experience, have the necessary firm commitment and ability to realize the Company's Corporate Philosophy and increase corporate value, and who enhance the composition of the board through greater diversity in areas such as gender and nationality. As of March 27, 2020, the Board of Directors was composed of 11 directors, of which four are independent outside directors (including one woman). The maximum number of directors is set at 14 in the Company's Articles of Incorporation.

With respect to independent outside directors, the Board of Directors shall obtain the consent of the person in question and appoint them after carefully determining their eligibility as an independent director, taking into consideration the external requirements set forth in the Companies Act and the independence standards set by securities exchanges. To ensure that outside directors and outside Audit & Supervisory Board members are able to properly fulfill their roles and responsibilities, when nominating a candidate, the Company shall understand the status of officers who concurrently serve in other listed companies or companies and organizations that correspond to such, and verify that it will not interfere in their attendance of the Company's Board of Directors meetings, Audit & Supervisory Board meetings, or their work.

## Corporate Governance Structure



### Representative Directors

Representative directors are appointed by resolutions of the Board of Directors. As of March 27, 2020, the chairman and president were the Company's two representative directors.

### Directors

As of March 27, 2020, the Company had 11 directors, including four outside directors. The Board of Directors is responsible for making decisions on important management matters and for monitoring the execution of duties by directors. Directors are appointed for one-year terms in order to clarify management responsibility each fiscal year.

### Managing Officers

Nisshinbo has adopted a managing officer system to speed up decision-making for business execution and clarify operational responsibilities. As of March 27, 2020, the Company had 14 managing officers, including the president and five with dual roles as directors. Managing officers are also appointed for one-year terms.

## Independent Outside Directors at Nisshinbo Holdings Inc.

Name	Reasons for appointment	Profile	Significant concurrent appointments	Committees
<b>Keiji Taga</b>	Mr. Taga has a long track record in corporate management as the director of a government-affiliated financial institution and the president of a business corporation. Drawing on his extensive management experience and achievements and his high level of expertise, Mr. Taga provides oversight of management activities at the Nisshinbo Group.	1973 Joined Japan Development Bank (currently Development Bank of Japan Inc.) 1999 General Manager of Urban Development Department of Development Bank of Japan Inc. 2002 General Manager of General Affairs Department of Development Bank of Japan Inc. 2004 Executive Director of Development Bank of Japan Inc. 2008 Director and Executive Managing Officer of Development Bank of Japan Inc. 2009 Vice President and Representative Director of Tokyo Ryutsu Center Inc. President and Representative Director of TRC Service Co., Ltd. 2013 President and Representative Director of Tokyo Ryutsu Center Inc. Director of TRC Service Co., Ltd. 2017 Chairman and Director of DBJ Asset Management Co., Ltd. 2018 Adviser of DBJ Asset Management Co., Ltd. 2019 Outside Director of the Company (to the present)	Outside Director of SEIKO PMC CORPORATION	Nomination Remuneration
<b>Shinobu Fujino</b>	Ms. Fujino has specialist knowledge and experience, mainly in the field of personnel development, in her role as a career counselor. Drawing on her extensive expertise and experience and her perspective as a woman, Ms. Fujino provides oversight of management activities at the Nisshinbo Group and contributes to the promotion of diversity management.	1987 Joined Ryoka Systems Inc. 2003 Opened a counseling business office (to the present) 2015 Outside Director of the Company (to the present)		Nomination Remuneration
<b>Hiroaki Yagi</b>	Mr. Yagi draws on his specialist legal expertise and his long track record and insights in the legal field to provide oversight of management activities at the Nisshinbo Group.	1981 Appointed as Public Prosecutor 2007 Special Investigation Director of Tokyo District Court Public Prosecutors Office 2015 Chief Prosecutor of Tokyo District Court Public Prosecutors Office 2016 Deputy Prosecutor-General of Supreme Public Prosecutors Office 2018 Superintending Prosecutor of Tokyo High Public Prosecutors Office 2019 Registered as attorney-at-law (to the present) 2019 President of Japan International Training Cooperation Organization (JITCO) (to the present) 2020 Outside Director of the Company (to the present)	President of Japan International Training Cooperation Organization (JITCO)	Nomination Remuneration
<b>Hiroyuki Chuma</b>	Mr. Chuma draws on his specialist expertise in industrial organization theory and technology management and his extensive knowledge and insights related to corporate innovation to provide oversight of management activities at the Nisshinbo Group.	1984 Assistant Professor of Department of Economics, Southern Illinois University Carbondale 1985 Associate Professor of Faculty of Economics, Tokyo Metropolitan University 1992 Associate Professor of Graduate School of Economics/Faculty of Economics, Hitotsubashi University 1993 Professor of Graduate School of Economics/Faculty of Economics, Hitotsubashi University 1999 Professor of Institute of Innovation Research, Hitotsubashi University 2000 Visiting Professor of Department of Economics, Yale University 2000 Faculty Fellow, Research Institute of Economy, Trade and Industry (RIETI) 2004 Director of Research, National Institute of Science and Technology Policy (NISTEP) 2012 Professor of Graduate School of Commerce & Management/ Faculty of Commerce & Management, and Institute of Innovation Research, Hitotsubashi University 2014 Professor of Faculty of Social Innovation/Graduate School of Innovation and Social Studies, Seijo University (to the present) 2015 Professor Emeritus of Hitotsubashi University 2015 Faculty Fellow, RIETI 2020 Outside Director of the Company (to the present)		Nomination Remuneration

## Selection and Dismissal of Directors and Senior Managers

To increase transparency and objectivity in processes for selecting and dismissing directors, Nisshinbo has established a Nomination

Committee as an advisory body for the Board of Directors. As of March 27, 2020, the committee comprised the chairman, the president and four outside directors.

## Role of Nomination Committee

	Appoint	Dismiss
<b>Top management positions</b>	The Board of Directors selects directors for top management positions from candidates proposed by the committee, which puts forward individuals with the necessary outstanding attributes, aptitude and achievements to fulfill the role.	In cases where directors, including top managers, are deemed no longer qualified for their role due to reasons such as the lack of necessary qualities and aptitude for management, the committee recommends dismissal of the director to the Board of Directors, supported by reasons for the recommendation. Based on the committee's recommendation, the Board of Directors decides whether to dismiss the director or submits a proposal seeking approval for the dismissal of the director to the General Shareholders' Meeting.
<b>Directors</b>	The Board of Directors selects directors from candidates proposed by the committee, which puts forward individuals with a strong track record in corporate management and the necessary commitment and ability to realize Nisshinbo's Corporate Philosophy and increase corporate value.	
<b>Managing officers</b>	The Board of Directors selects managing officers from candidates proposed by the committee, which identifies and proposes outstanding individuals from among the Group's business subsidiary leaders and management grade-employees who have the necessary specialist skills and management capabilities, backed by a firm commitment and resolve.	In cases where managing officers are deemed no longer qualified for their role due to reasons such as the lack of necessary qualities and aptitude for management, the committee recommends dismissal of the managing officer to the Board of Directors, supported by reasons for the recommendation. Based on the committee's recommendation, the Board of Directors decides whether to dismiss the managing officer.
<b>Succession planning</b>	The president develops succession plans for top managers and other directors (excluding outside directors) and managing officers and cultivates candidates to take over their roles. Details of those plans and progress with succession planning are shared with and discussed by the Nomination Committee, which includes outside directors, and adjusted and improved as necessary. The Board of Directors monitors progress with succession planning based on necessary reports received from the committee.	

## Remuneration for Directors and Senior Managers

To increase transparency and objectivity in processes for determining remuneration, Nisshinbo has established a Remuneration Committee as an advisory body for the Board of Directors. As of March 27, 2020, the committee comprised the chairman, the president and four outside directors. The committee chairman is selected by members of the committee.

To attract outstanding management talent and ensure appropriate conditions for directors and senior managers, the Remuneration Committee develops a remuneration table for directors and verifies and makes appropriate adjustments to the table referencing criteria such as remuneration levels and

composition at peer companies and the Company's relative position in the sector and subsectors.

Remuneration for directors comprises basic remuneration (monthly payment), bonuses and stock-based remuneration (restricted stock compensation plan), which are set within the maximum limits approved by the General Shareholders' Meeting. Stock-based remuneration for each role is set within separate maximum limits for amounts and shares determined by resolutions of the General Shareholders' Meeting. However, outside directors receive only basic remuneration (monthly payment) and retirement benefits are not paid to directors. Remuneration for managing officers is based on the same policies and procedures.

## Remuneration for Directors and Auditors (Fiscal period ended December 2019)

Classification	Total remuneration (Millions of yen)	Remuneration breakdown (Millions of yen)				Total number of payees
		Basic remuneration (Fixed)	Bonus (Performance-linked)	Restricted stock compensation plan	Stock options	
Directors (Excluding outside directors)	228	170	36	19	2	8
Audit and Supervisory Board members (Excluding outside audit and supervisory board members)	34	34	—	—	—	3
Outside directors and outside Audit and Supervisory Board members	52	52	—	—	—	9

Notes: 1. Total maximum remuneration for directors: No greater than ¥400 million per year (Employee salaries of individuals simultaneously appointed as employee and director are not included in payments to directors. Directors are also eligible to receive compensation through a restricted stock compensation plan, up to a maximum value of ¥40 million per year).  
2. Total maximum remuneration for members of the Audit & Supervisory Board: No greater than ¥70 million per year  
3. The Company had 11 directors (including four outside directors) and four Audit & Supervisory Board members (including two outside members of the Audit & Supervisory Board) as of March 27, 2020.

**Basic remuneration:** Amounts paid are derived from basic remuneration tables for each role determined through discussions by the Remuneration Committee.

**Bonuses:** Paid to directors, except outside directors, as an incentive linked to fiscal year earnings performance. Based on basic remuneration tables for each role determined through discussions by the Remuneration Committee, bonuses are paid to each individual commensurate with their role, in line with the performance of the Group and businesses in their respective areas of responsibility against targets for net sales, pre-tax profits, operating cash flow and other indicators.

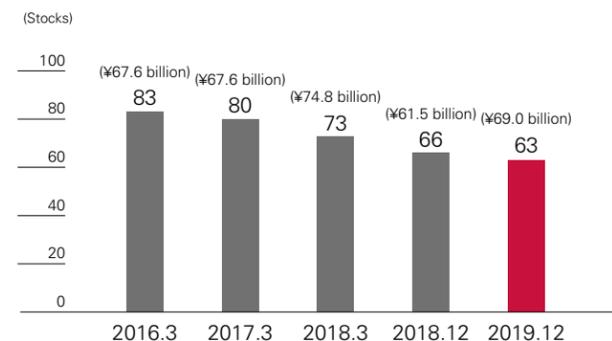
**Stock-based remuneration:** Paid to directors, except outside directors, in the form of restricted stock allocations to provide greater incentive to directors to increase the Company's share price and corporate value by aligning their interests more closely with shareholders with respect to the risk and reward of share price fluctuations. Stock-based remuneration for each role is set within maximum limits for amounts and shares determined by the General Shareholders' Meeting.

### Protecting the Rights and Ensuring the Equal Treatment of Shareholders

The Company shall ensure that the exercise of minority shareholder rights is not impeded and will take appropriate measures to fully protect shareholder rights. The Company will implement various measures related to communication with shareholders and investors and ensure the appropriate operation of the General Shareholders' Meeting.

The Company has set out a policy for cross-shareholdings. In line with that policy, it regularly assesses the purpose and economic rationale for cross-shareholdings based on capital costs and other indicators. The results of the assessments are reported to the Board of Directors, which discusses the merits of continuing to hold the shares or selling them. If the Company receives approaches from companies about selling its holdings of their shares, it will respect their wishes and not hinder the sale of shares, while also putting forward its views.

### Changes in Cross-Shareholdings



The Company regularly assesses its holdings of shares in business partners to ascertain the size and scope of the holdings and to evaluate the economic rationale for holding the shares. Shares with diminished strategic value are sold incrementally and systematically. In addition, the exercise of voting rights related to cross-shareholdings shall be performed after deciding in each individual case the purpose of the holdings from the standpoint of increasing the corporate value of the Company and the relevant business partner. In the event of resolutions with the potential for a large impact on corporate value, such as the appointment or dismissal of directors or the introduction or extension of takeover defense measures, the Company will conduct a particularly rigorous assessment of the rationale and necessity for holding the shares.

Nisshinbo has not adopted takeover defense measures. In the event that the Company decides to implement a capital policy that could harm the interests of shareholders, the Company will provide a clear explanation to shareholders about the necessity and rationale for the policy and follow the necessary procedures.

### Dialogue with Shareholders

The IR Director, who oversees policies and measures related to communication with shareholders and investors, accurately and fairly disseminates information outside the Company and proactively conducts IR activities. The IR Director also strives to enhance the General Shareholders' Meeting, where senior management can interact directly with shareholders, and the results briefings and briefings to overseas investors. In addition, the Company plans and conducts individual meetings with domestic and overseas investors throughout the year.

If deemed necessary, the IR Director and other directors and managing officers take part in responding to applications for interviews from shareholders and investors.

The status of IR activities including measures and policies about communication with shareholders and investors is routinely reported to the Board of Directors where it is reviewed.

### Stakeholder Engagement

Nisshinbo recognizes that continuous dialogue with stakeholders is key to supporting sustained growth in corporate value. In line with the aims of our VALUE commitment, we work hard to resolve any issues by emphasizing dialogue with customers, shareholders, employees and all other stakeholders connected to the Nisshinbo Group.

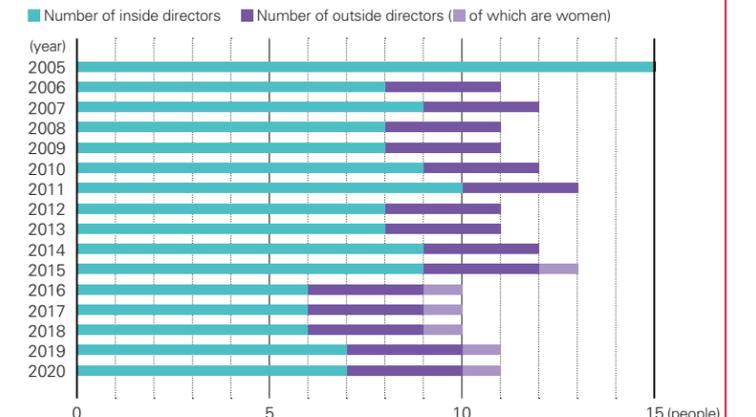
### Stakeholder Engagement Initiatives

Stakeholder	Examples of engagement	Key department/site
Customers	Exhibitions	Marketing/engineering
	Product design and technology seminars	
Suppliers	Disclose and raise awareness of Green Procurement Guidelines	Procurement
	Briefings for suppliers	
	Water consumption volume and hazardous substance product inspections	CSR
	CSR procurement surveys	
Shareholders/investors	General Meeting of Shareholders	IR
	Briefings and small meetings for institutional investors	
	Online information and publications for investors	
Employees	Publication of internal newsletters	PR
	Employee surveys	Diversity
	Internal whistleblower system	CSR
Local communities	Participation in local events	Business sites
	Factory tours, workshops	Factories, engineering departments
NGOs, NPOs, government agencies	Participation in projects to protect biodiversity	Business sites
	Participation in neighborhood cleaning activities	Business sites
	Research with academic partners	R&D

### Corporate Governance Reforms

- 2006** Introduced outside director system and managing officer system, reduced term of office for directors from two years to one
- 2015** Increased number of outside directors from three to four  
Abolished takeover defense measures
- 2016** Reduced number of board members from 13 to 10 (including four outside directors)  
Corporate Governance Policy formulated  
Established Remuneration Committee and Nomination Committee (both discretionary bodies), started evaluating effectiveness of Board of Directors
- 2017** Abolished internal advisor and consultant system
- 2018** Introduced restricted stock compensation system

### Composition of the Board of Directors



### Survey of Directors and Audit & Supervisory Board Members

Each year, the Company surveys all directors and all audit & supervisory board members about the effectiveness of the Board of Directors (this year's survey was conducted in January). Responses to the survey are collated and reported to the board. The survey is used to assess the effectiveness of the Board of Directors and to discuss improvements by helping the board understand the current situation, identify and analyze any issues and compare responses with those in the previous year's survey.

The results of the survey indicate that the 11 directors, including four outside directors, conduct dynamic discussions during board meetings, drawing on their extensive management experience and track record and their specialist knowledge. Responses also indicate that the Board of Directors needs to

enhance its ability and functions as the board of a holding company with diverse businesses, and that sound decision-making is important to raise the quality of discussion. Based on those insights, the board confirmed and shared the following two priority measures to be implemented in 2020.

- Provide explanations and information to improve the quality and efficiency of board discussions.
- Provide opportunities to discuss specific issues that affect the overall strategic direction of the Group, such as management strategy and other matters related to increasing corporate value and material risks that could impact corporate value.

# Board of Directors, Audit & Supervisory Board Members and Managing Officers

As of March 27, 2020

## Board of Directors



Director,\*1  
Chairman

**Masaya Kawata**



Director,\*1  
President

**Masahiro Murakami**



Director,  
Senior Executive Managing Officer

**Kenji Ara**

Chairman, Japan Radio Co., Ltd.



Director,  
Executive Managing Officer

**Ryo Ogura**

Chairman, New Japan Radio Co., Ltd.



Director,  
Executive Managing Officer

**Kazunori Baba**

Chief of Corporate Strategy Center



Director,  
Managing Officer

**Yasuji Ishii**

President, Nisshinbo Brake Inc.



Director,  
Managing Officer

**Shuji Tsukatani**

Senior Manager of Finance,  
Accounting and IT Service Department  
Corporate Strategy Center



Director\*2

**Keiji Taga**



Director\*2

**Shinobu Fujino**

Career Counselor



Director\*2

**Hiroaki Yagi**

Lawyer



Director\*2

**Hiroyuki Chuma**

Professor of Faculty of Social Innovation/  
Graduate School of Innovation and Social  
Studies, Seijo University  
Professor Emeritus of Hitotsubashi University

\*1 Representative director

\*2 Outside director

## Audit & Supervisory Board Members



**Toshihiro Kijima**



**Takumi Ohmoto**



**Atsushi Yamashita\***

Lawyer



**Mitsunori Watanabe\***

Director and Managing  
Executive Officer,  
Shikoku Chemicals Corporation

\* Outside Audit & Supervisory Board member

## Managing Officers

President

**Masahiro Murakami\***

Senior Executive  
Managing Officer

**Kenji Ara\***

Executive Managing Officers

**Ryo Ogura\***

**Kazunori Baba\***

Managing Officers

**Yasuji Ishii\***

**Shuji Tsukatani\***

\* Concurrent board member



Executive Managing Officer

**Akihiro Ishizaka**

Senior Manager of  
Corporate Strategy  
Department and  
Corporate Governance  
Department



Executive Managing Officer

**Makoto Sugiyama**

Senior Manager of CSR  
Department, Diversity  
Development Department and  
Human Resources and  
Administration Service  
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Managing Officer

**Toshihiro Masuda**

President,  
Nisshinbo Mechatronics Inc.



Managing Officer

**Akihiro Kamei**

President,  
Nisshinbo Chemical Inc.



Managing Officer

**Yasuo Imashiro**

General Manager,  
Business Development  
Division



Managing Officer

**Kazuo Saito**

Managing Director,  
Nisshinbo Singapore Pte. Ltd.



Managing Officer

**Kaoru Murata**

President,  
Nisshinbo Textile Inc.



Managing Officer

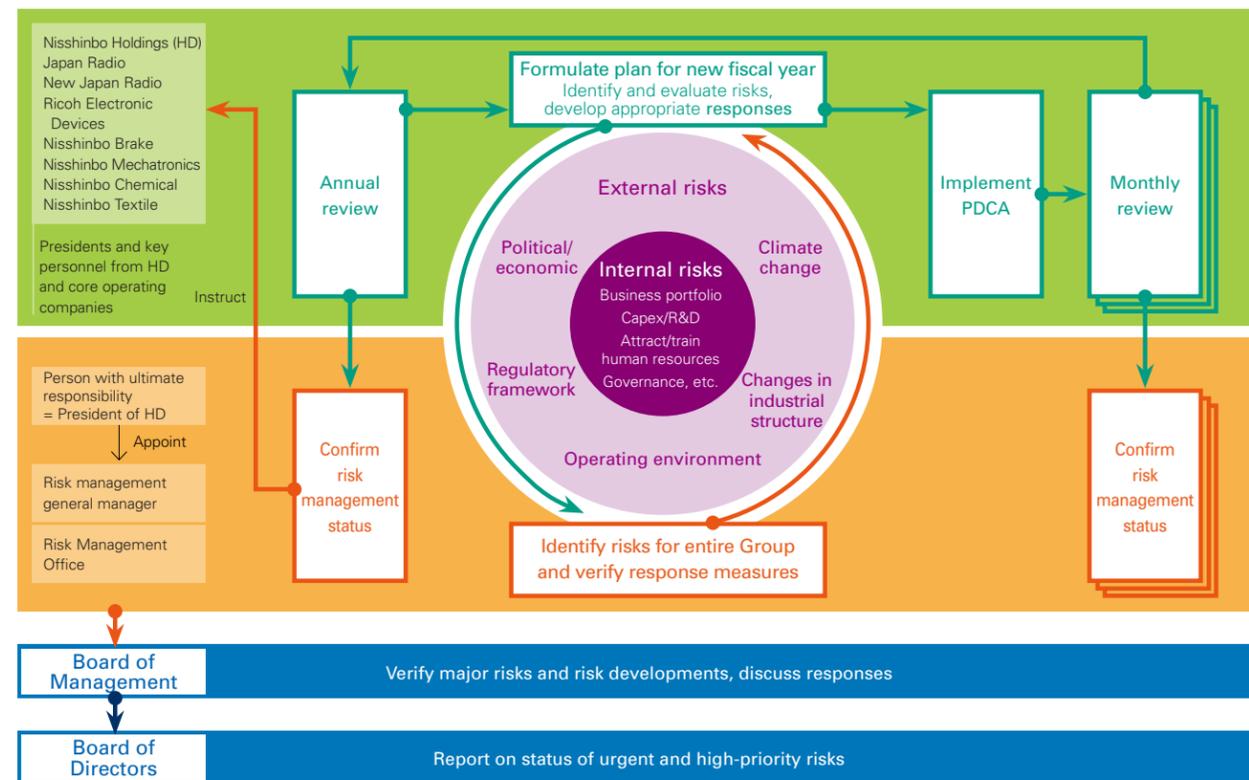
**Yuzo Matsui**

Senior Manager of Property  
Management Department

# Managing Risks and Opportunities

The Nisshinbo Group has established a risk management system, shown in the diagram below, to appropriately address business risks and minimize any losses associated with those risks. Additionally, in order to turn business risks into opportunities that support sustained growth, the Nisshinbo Group routinely works to identify and analyze any changes in the operating environment, aiming to create new growth opportunities by contributing to society as an *Environment and Energy Company* group – a business strategy that aligns with the Group’s Corporate Philosophy.

## The Nisshinbo Group’s Risk Management System



Note: HD means Nisshinbo Holdings Inc.

## Key Risks and Opportunities

	Details	Response
● Risks	<b>Climate Change</b> <ul style="list-style-type: none"> <li>Impact on supply chains from major natural disasters caused by extreme weather</li> <li>CO<sub>2</sub> emission costs due to introduction of carbon tax</li> <li>Costs to reduce CO<sub>2</sub> emissions</li> <li>Costs to respond to tighter rules on SO<sub>x</sub>/NO<sub>x</sub> emissions worldwide</li> <li>Impact on business activities from tighter rules on greenhouse gas emissions</li> </ul>	<ul style="list-style-type: none"> <li>Develop business continuity plan (BCP) based on assumption of major natural disasters, conduct training to improve Group’s response to risk of business disruption</li> <li>Take steps to reduce CO<sub>2</sub> emissions</li> <li>Introduce SO<sub>x</sub>/NO<sub>x</sub> removal equipment</li> <li>Increase sales ratio for “products that contribute to the creation of a sustainable society” to 65% by 2025 (more details on P.12, To Our Shareholders and Investors)</li> </ul>
	<ul style="list-style-type: none"> <li>Greater demand for fuel cell vehicles as hydrogen society gains momentum</li> <li>Growth in number of new ships built amid rising demand for biomass fuel transportation</li> </ul>	<ul style="list-style-type: none"> <li>Improve technological capabilities for developing fuel cell parts and materials</li> <li>Increase production capacity for marine wireless communication equipment to address rising demand for new biomass fuel transportation vessels</li> <li>Sell water/river management systems, weather radars and other disaster prevention/mitigation solutions developed in Japan to customers overseas</li> </ul>
● Opportunities	<ul style="list-style-type: none"> <li>Expansion in businesses providing disaster prevention/mitigation solutions to address rising wind and flood damage</li> </ul>	

	Details	Response
● Risks	<b>Geopolitical Risk</b> <ul style="list-style-type: none"> <li>Impact on operations from geopolitical developments</li> </ul>	<ul style="list-style-type: none"> <li>Consider country risks, etc., when determining appropriate investment levels for each country/region</li> </ul>
● Risks	<b>Fluctuations in Product Markets, Exchange Rates and Raw Material Prices</b> <ul style="list-style-type: none"> <li>Changes in supply-demand balance in product markets due to fluctuations in economy</li> <li>Impact on earnings from significant volatility in raw material prices</li> <li>Impact on earnings from fluctuations in exchange rates</li> <li>Impact from changes in rules or regulatory frameworks governing products and services in each market</li> </ul>	<ul style="list-style-type: none"> <li>Use diversified business strategy to mitigate impact on earnings from sudden changes in operating environment</li> <li>Build reliable relationships with multiple suppliers</li> <li>Use forward exchange contracts, etc., to minimize exchange rate risk</li> <li>Gather risk information from business sites in each country/region and feed back to management</li> </ul>
● Risks	<b>Communicable Diseases</b> <ul style="list-style-type: none"> <li>Impact on earnings from pandemics of previously unknown diseases such as COVID-19</li> </ul>	<ul style="list-style-type: none"> <li>Provide appropriate support to management by forming emergency response teams and aggregating and communicating information</li> </ul>
● Opportunities	<ul style="list-style-type: none"> <li>Create new value by contributing to society through medical-related businesses</li> </ul>	
● Risks	<b>Group Management</b> <ul style="list-style-type: none"> <li>Management issues due to greater business diversity</li> <li>Large number of duplicate functions among Group businesses</li> </ul>	<ul style="list-style-type: none"> <li>Reform business portfolio to align with changes in issues faced by society, improve cash flow (more details on P.8, To Our Shareholders and Investors)</li> <li>Improve efficiency by overhauling Groupwide organizations and using outsourcing</li> <li>Maintain Group integration by consolidating oversight of Group company management at HD and establishing financial discipline</li> </ul>
● Opportunities	<ul style="list-style-type: none"> <li>Harness Group’s diverse strengths by integrating businesses/organizations to drive innovation and increase resilience to changes in operating environment</li> </ul>	
● Risks	<b>M&amp;A/Major Investments</b> <ul style="list-style-type: none"> <li>Mistakes with M&amp;A deals and major investment plans</li> </ul>	<ul style="list-style-type: none"> <li>Form project teams for each M&amp;A deal to strengthen PMI activities; Board of Directors to verify investment effectiveness while building up internal expertise</li> <li>Separate capex budget approval and implementation approval functions, hedge risks by adjusting capex in response to changes in operating environment</li> </ul>
● Opportunities	<ul style="list-style-type: none"> <li>Use new business resources to capture opportunities that support sustained growth</li> </ul>	
● Risks	<b>Human Resources</b> <ul style="list-style-type: none"> <li>Difficulties hiring and retaining talented people</li> </ul>	<ul style="list-style-type: none"> <li>Use RPA, IoT and other tools to increase automation and realize labor savings</li> <li>Implement strategic PR activities to improve corporate visibility and image</li> <li>Provide human resources and financial support to joint research projects with academia</li> <li>Use targeted local recruitment activities</li> </ul>
● Opportunities	<ul style="list-style-type: none"> <li>Overlap between Corporate Philosophy and growing interest in ESG among younger people, leading to more hiring opportunities</li> </ul>	
● Risks	<b>Rapid Technological Innovation</b> <ul style="list-style-type: none"> <li>Dramatic changes in existing markets due to technological innovation</li> <li>Decrease in competitiveness due to delays in technology development and product development plans</li> </ul>	<ul style="list-style-type: none"> <li>Management decides to continue/cancel R&amp;D projects based on regular assessments</li> </ul>
● Opportunities	<ul style="list-style-type: none"> <li>Opportunities to develop groundbreaking technologies and tap into growth by combining resources from diverse businesses</li> </ul>	<ul style="list-style-type: none"> <li>Form teams by flexibly assigning personnel from various Group businesses</li> </ul>
● Risks	<b>Human Rights Issues</b> <ul style="list-style-type: none"> <li>Widespread sexual and power harassment that undermines the working environment</li> </ul>	<ul style="list-style-type: none"> <li>Establish human rights team at HD to maintain and raise awareness across the Group</li> </ul>

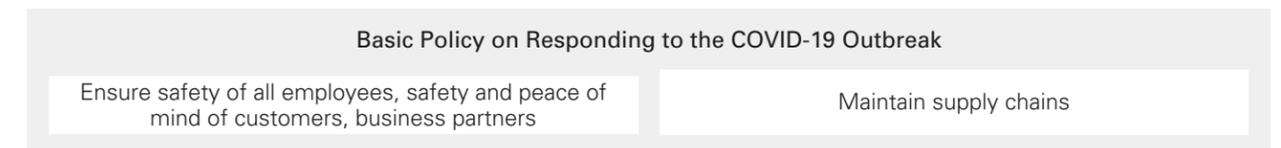
# Nisshinbo's Response to the COVID-19 Outbreak

Risks	Opportunities	Details	Response
<b>Business Management</b>			
●	●	<ul style="list-style-type: none"> <li>Increasing complacency in governance</li> <li>Take risks based on balance between proactive and defensive governance</li> </ul>	<ul style="list-style-type: none"> <li>Building on pioneering steps such as introduction of outside director system in 2006, adoption of HD system in 2009 and termination of advisor/consultant system in 2017, establish advanced governance system that balances management transparency with bold risk-taking (more details on P.62, Corporate Governance)</li> </ul>
<b>Quality Issues</b>			
●		<ul style="list-style-type: none"> <li>Loss of trust, claims for damages or product recalls due to quality issues or defects with products or services</li> </ul>	<ul style="list-style-type: none"> <li>Use risk management system to minimize risk probability and potential impact</li> <li>Establish quality assurance team at HD to oversee quality assurance and product safety activities at Group companies</li> </ul>
<b>Information Security</b>			
●		<ul style="list-style-type: none"> <li>Unauthorized disclosure of personal information, customer information or trade secrets</li> <li>Information leaks or data corruption caused by computer viruses</li> </ul>	<ul style="list-style-type: none"> <li>Continuous training and annual internal audits to assess information security</li> <li>Use risk management system to minimize risk probability and potential impact</li> </ul>
<b>Compliance</b>			
●		<ul style="list-style-type: none"> <li>Loss of trust and damage to corporate value caused by legal violations such as corruption or anti-competitive practices, or by corporate behavior that diverges from social norms</li> </ul>	<ul style="list-style-type: none"> <li>Messaging from president of HD to underscore importance of fair business practices</li> <li>Continuous implementation of compliance training</li> <li>Severe penalties for misconduct</li> <li>Appoint outside directors with legal background</li> </ul>
<b>Fraud/Illegal conduct</b>			
●		<ul style="list-style-type: none"> <li>Financial window-dressing, accounting irregularities, etc.</li> </ul>	<ul style="list-style-type: none"> <li>Use internal control system and corporate ethics reporting system to prevent misconduct</li> </ul>
<b>Workplace Accidents</b>			
●		<ul style="list-style-type: none"> <li>Impact on business of failure to ensure employee health and safety worldwide</li> </ul>	<ul style="list-style-type: none"> <li>HD and Group companies work together to roll out high-level health and safety approaches from Japan to sites worldwide</li> </ul>
<b>Business Reputation</b>			
●		<ul style="list-style-type: none"> <li>Impact on business from misreporting in media, spread of rumors or online rumors</li> <li>Labelled as target for divestment by investors</li> </ul>	<ul style="list-style-type: none"> <li>Routinely monitor situation as part of risk management</li> <li>Continuously share information with major ESG investors and ESG index research firms to identify trends</li> </ul>
<b>Cross-shareholdings/Idle Real Estate</b>			
●		<ul style="list-style-type: none"> <li>Fluctuations in market value</li> </ul>	<ul style="list-style-type: none"> <li>Steadily reduce exposure to cross-shareholdings in line with Corporate Governance Policy (more details on P.66, Corporate Governance)</li> <li>Increase value by redeveloping real estate</li> </ul>

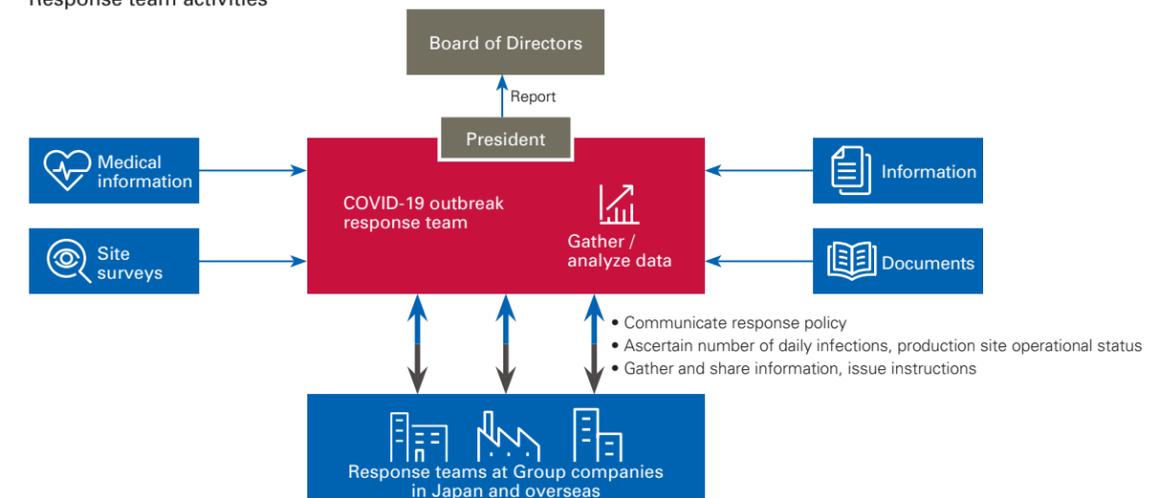


BCM training exercise (August 30, 2019)

On January 9, 2020, Chinese media reported that a new type of coronavirus had been detected. In mid-January, this development prompted the Nisshinbo Group, led by the Corporate Strategy Center, to start discussing its response to the outbreak in accordance with a predetermined BCP program. A response team was established on January 27, and since then, the team has been coordinating all aspects of the Group's response to COVID-19 in line with its basic policy on infection countermeasures, such as updating the latest situation at Group companies and providing information about preventing the spread of infection.



## Response team activities



The Group continues to implement the above approach and is taking the following steps to address risks related to the Three Cs (closed spaces, crowded places, and close-contact settings).

- Encouraging employees to work from home:** Nisshinbo seeks to limit the number of employees coming to work while maintaining a certain level of office attendance; work space has also been expanded to increase distancing between employees.
- Using video conferencing:** Nisshinbo is providing more opportunities to use contactless information sharing.
- Expanding staggered work attendance system:** Nisshinbo aims to mitigate the risk of infection during peak rush hour by staggering work arrival times.
- Ensuring safe working environments:** At manufacturing sites, Nisshinbo is maintaining social distancing across the workplace, including the shop floor, shared areas and canteens; all areas are thoroughly disinfected and ventilated on a regular basis.
- Providing masks and sanitizer, encouraging social distancing**
- Sharing information about how to reduce the risk of infection**
- Improving work environments based on feedback from employees**



Brazil: Enforcing hand washing



Brazil: Social distancing



Tokyo (head office): Expanding work spaces



China (Shanghai): Checking temperature of employees on arrival at work

# Compliance

Based on Public Entity and Consistent Integrity – the fundamental spirit of Nisshinbo’s Corporate Philosophy, – the Group’s mission is to act with fairness and integrity to contribute to society through its business activities. To achieve our mission, we have formulated Business Conduct Guidelines in order to win trust from the public through fair and honest business activities.

## Corporate Ethics Committee and Corporate Ethics Reporting System

Nisshinbo has established a Corporate Ethics Committee to handle all compliance matters across the Group.

Nisshinbo has also established a Corporate Ethics Reporting System to rapidly identify and prevent any reoccurrence of suspected or actual legal violations. Group employees and external parties can submit reports to the system. Group employees can report their concerns internally to the Corporate Ethics Committee or directly to an outside corporate attorney. All information provided by whistleblowers is treated in the strictest of confidence and every effort is made to protect whistleblowers from unfair treatment. The Corporate Ethics Committee takes appropriate steps to deal with issues raised by reports.

## Compliance Education

In order to ensure fair and honest business practices, the Nisshinbo Group conducts compliance training for different employee levels and work sites and provides training to employees prior to overseas assignments.

From the fiscal year ended March 2017, we added annual compliance training for manager-grade employees in the Group to our list of KPIs in order to raise awareness about compliance. We also created a compliance training manual for managers in both Japanese and English to be used in training sessions across the Group.

In addition, compliance training is provided at each subsidiary in accordance with conditions in each country, region and industry.

## Initiatives to Prevent Corruption

In recent years, countries worldwide have been reinforcing regulatory systems and stepping up efforts to prevent and expose bribery and corruption. Nisshinbo has created a Corruption Prevention Guidebook, which includes information about responding to related regulations overseas. The guidebook is distributed to all subsidiaries, including overseas Group companies. In addition to information

about Article 18 of Japan’s Unfair Competition Prevention Act (prohibition of provision of illicit profit, etc., to foreign public officials, etc.), the guidebook provides information about international treaties and laws designed to prevent corruption, such as the United Nations Convention Against Corruption (UNCAC), OECD treaties on preventing corruption of overseas public officials in international transactions, the US Foreign Corrupt Practices Act (FCPA) and its related guidelines, and the UK Bribery Act. Nisshinbo updates the guidebook as necessary and uses it as part of its corruption prevention measures in the Group.

## Ensuring Business Confidentiality

Nisshinbo signs non-disclosure agreements with suppliers to prevent any leak of confidential information such as intellectual property, technologies and expertise disclosed during the product design and development stage and across all points of the supply chain.

We also conduct annual internal audits to check whether the Group’s trade secrets are being managed appropriately.

## CSR Procurement Basic Policy

Nisshinbo has formulated the Nisshinbo Group CSR Procurement Basic Policy, clarifying its stance on seven specific areas: legal compliance, fair trade, information security, environmental protection, human rights, health and safety, and quality assurance.

1. To strictly observe all legal obligations and social norms
2. To always pursue business in a sound and fair manner
3. To properly manage all information
4. To give due consideration to protection of the environment
5. To respect all basic human rights
6. To strive for a secure and healthy living and working environment
7. To aim to ensure the quality and safety of all products and services

We are working to extend our CSR initiatives across the entire supply chain by asking suppliers to adhere to our principles in those seven areas.

# Financials

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The COVID-19 outbreak will have a major impact on earnings in the near term, but we are introducing ROIC as a KPI to spur growth in cash flow and scale back assets, aiming to build a robust financial base that supports self-sustaining growth.

**Shuji Tsukatani**  
 Director, Managing Officer  
 Senior Manager of  
 Finance, Accounting & IT Service Dept.  
 Corporate Strategy Center

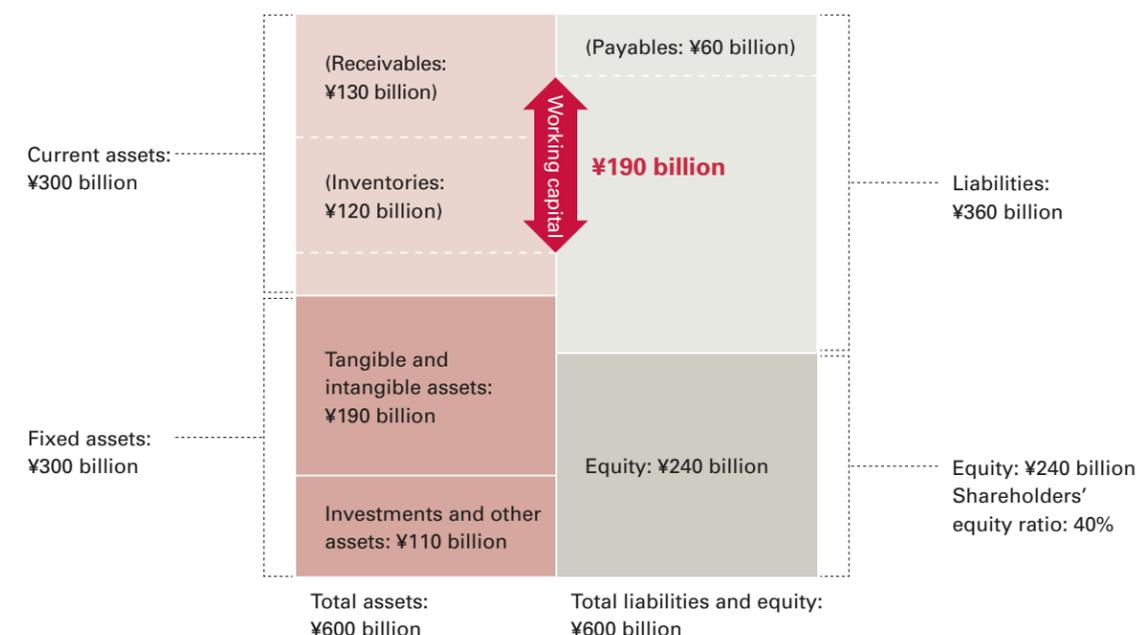
Many Group businesses are in the industrial processing field, so they have limited scope to streamline assets. However, sticking only to manufacturing limits room for improvement in investment efficiency. Nisshinbo's switch in focus from "things" to "experiences" and "services," which the president talked about earlier (see page 9, To Our Shareholders and Investors), will also improve the Group's business structure from the perspective of investment efficiency.

We could improve ROIC in several ways, such as boosting investment efficiency (reducing working capital) and liquidating non-operating assets, such as land (fixed

asset) and investment securities. The shareholders' equity ratio currently stands at 40%, indicating an appropriate balance between debt and shareholders' equity. If we can pare back assets, we should be able to reduce interest-bearing debt and equity (pay more dividends and buy back more shares) in a balanced manner. Needless to say, profitability has a key role to play. Our target for average ROIC is 8% on a consolidated basis, but new businesses could conceivably generate in excess of 10% and existing businesses urgently need to lift ROIC.

Note: For more details about reducing cross-shareholdings, see the graph on page 66.

ROE Target and B/S, P/L Assumptions for 2025



**Generating Operating Cash Flow**

The COVID-19 outbreak is having a serious impact on businesses. Nisshinbo is no exception. The temporary halt to production and sales activities across the Group is set to have a significant impact on earnings. However, Nisshinbo is fortunate to have sufficient financial resources to weather the storm.

At times like these, cash holdings and cash flow are extremely important. "Generating operating cash flow," our policy for 2020, is all about returning to the basics of business management. However, with the Group in the process of overhauling its business portfolio, operating cash flow is a weak point that has to be tackled.

That policy will not change, even as societies face the new reality of coexisting with COVID-19. We have to stay focused on our goal of achieving self-sustaining growth by maximizing operating cash flow to secure funds for reinvesting in our business (investing cash flow). A temporary increase in debt exposure (financing cash flow) is a prescription for dealing with the crisis, but we aim to restore balance to the funding structure over the medium and long term. That's why operating cash flow will be key.

**Nisshinbo's Earnings Structure**

In our dialogue with capital markets, we emphasize return on equity (ROE) as a key performance indicator (KPI) for the Nisshinbo Group. We have taken steps to enhance control over key elements affecting ROE, such as sales, operating income (operating margin) and return on assets (ROA). However, we have also been looking into using return on invested capital (ROIC) as a better performance benchmark for a diversified corporate group like Nisshinbo from the standpoint of driving change in the earnings structure and managing more dynamic businesses. Over the last year, corporate departments have been using ROIC to change the mindset of senior managers and establish it as a benchmark in frontline operations. In 2020, we are using an ROIC tree visualization to improve understanding and introducing ROIC in conjunction with operational improvement programs at manufacturing sites to firmly entrench the benchmark in frontline businesses.

We currently assume a weighted average cost of capital (WACC) of 6% and a long-term ROE target of 12%, so ROIC of around 8% looks appropriate. We have no plans to apply that level uniformly across the Group, but we need to find the right level for each business in order to achieve an average ROIC of 8% on a consolidated basis (see next page for more details).

ROE: 12% (2025) and P/L assumptions		Comment
Net sales	¥540 billion	Current sales level, assumes continued business portfolio realignment
Operating income	¥43 billion	Target operating margin = 8%
NOPAT	¥30 billion	Assumed effective tax rate = 30%
ROE	12%	NOPAT ÷ equity = 12.5%
ROIC	8%	NOPAT ÷ (tangible and intangible assets + working capital) = 7.9% • Reduce working capital • Liquidate fixed assets (land, investment securities)

# Eleven-Year Summary

(millions of yen)

	2010.03	2011.03	2012.03	2013.03	2014.03	2015.03	2016.03	2017.03	2018.03	2018.12	2019.12
<b>Operating Results</b>											
Net Sales	¥242,409	¥325,555	¥379,340	¥450,693	¥494,350	¥523,758	¥533,989	¥527,274	¥512,048	¥416,221	¥509,661
Electronics	51,699	112,820	169,907	175,308	187,743	209,116	205,368	190,852	193,621	—	—
Wireless and Communications	—	—	—	—	—	—	—	—	—	90,427	152,213
Micro Devices	—	—	—	—	—	—	—	—	—	53,777	65,286
Automobile Brakes	41,046	46,119	47,450	118,849	148,699	161,887	165,037	146,062	154,205	135,008	131,338
Precision Instruments	24,908	32,020	25,191	24,520	28,655	28,608	29,525	60,687	64,918	62,219	65,429
Chemicals	6,309	7,284	8,258	8,150	8,810	8,138	8,285	9,483	11,285	8,173	9,391
Textiles	53,222	57,400	60,964	54,736	54,630	51,073	60,127	55,842	54,640	43,660	49,505
Papers	31,536	30,326	30,220	30,524	31,686	31,280	32,585	32,648	—	—	—
Real Estate	6,298	12,437	9,082	15,367	10,567	9,246	8,358	8,084	8,406	4,237	11,655
Other Businesses	27,391	27,149	28,268	23,239	23,560	24,410	24,704	23,616	24,973	18,720	24,844
Operating Income (Loss)	3,570	19,843	4,170	13,394	13,175	13,744	12,617	4,890	15,086	(2,506)	6,482
Net Income (Loss) Attributable to Owners of the Company	1,896	11,185	9,416	6,418	9,012	13,694	10,776	3,575	26,352	(7,183)	(6,604)
<b>Financial Position</b>											
Equity	¥193,639	¥211,557	¥213,751	¥242,623	¥276,865	¥306,938	¥284,472	¥275,753	¥290,434	¥264,849	¥252,536
Total Assets	358,110	479,852	534,584	551,933	611,311	678,486	651,793	646,288	651,959	622,381	617,528
Capital Expenditures	13,027	12,800	15,705	20,123	19,896	36,909	22,862	30,505	30,103	27,199	32,387
Depreciation and Amortization	12,960	13,158	14,550	18,969	21,486	23,111	22,571	22,264	22,183	19,816	24,955
<b>Cash Flows</b>											
Net Cash Provided by Operating Activities	¥27,538	¥16,529	¥12,974	¥34,095	¥26,075	¥37,120	¥39,566	¥26,768	¥32,415	¥15,495	¥26,249
Net Cash Provided by (Used in) Investing Activities	(9,949)	11,591	(57,861)	(10,973)	(19,862)	(21,271)	(22,793)	(31,429)	(1,798)	(20,723)	(21,759)
Net Cash Provided by (Used in) Financing Activities	(30,347)	703	16,835	(24,073)	(2,321)	(6,238)	(9,044)	3,595	(34,785)	11,936	(10,065)
											(yen)
<b>Per Share</b>											
Net Income (Loss) Attributable to Owners of the Company	¥10.38	¥63.32	¥53.83	¥36.74	¥51.60	¥80.33	¥67.93	¥22.52	¥160.59	¥(43.26)	¥(39.45)
Shareholders' Equity	1,034.04	1,036.80	1,063.19	1,198.67	1,369.78	1,634.07	1,472.26	1,444.94	1,659.29	1,457.26	1,431.35
Cash Dividends	15.00	15.00	15.00	15.00	15.00	15.00	30.00	30.00	30.00	30.00	30.00
											(%)
<b>Key Ratios</b>											
Shareholders' Equity Ratio	51.1	38.0	34.7	37.9	39.1	38.2	35.9	35.5	41.2	40.1	38.6
Return on Assets (ROA)	0.5	2.7	1.9	1.2	1.5	2.1	1.6	0.6	4.1	(1.1)	(1.4)
Return on Equity (ROE)	1.0	6.1	5.1	3.2	4.0	5.5	4.4	1.5	10.6	(2.8)	(2.7)
Payout Ratio	144.5	23.7	27.9	40.8	29.1	18.7	44.2	133.2	18.7	—	—
<b>ESG Indicators</b>											
Number of Employees	12,488	18,292	22,304	22,083	22,052	21,387	23,055	23,256	23,104	22,850	22,889
Number of Patents Approved	—	1,986	1,986	2,293	2,448	2,424	2,441	2,402	2,400	2,682	2,910
Greenhouse Gas Emissions per Unit of Sales (t-CO <sub>2</sub> /million yen)	—	—	—	—	1.372	1.330	1.267	1.311	1.279	1.320	1.259

Notes: 1. In the fiscal year ended March 2017, Iwao & Co., Ltd. was merged with Nisshin Toa Inc., both of which are consolidated subsidiaries. The apparel textile operations of Iwao & Co., Ltd. included in the other businesses segment were reclassified under the textiles business segment as a result. Figures from the fiscal year ended March 2013 have been adjusted to reflect this change.  
2. The Group's elastomer operations were transferred from the chemicals business to the textiles business in the fiscal year ended March 2016. Figures from the fiscal year ended March 2015 have been adjusted to reflect this change.  
3. The Company changed its fiscal year-end from March 31 to December 31, effective from the fiscal period ended December 31, 2018.  
4. The electronics business segment was separated into wireless and communications and micro devices as part of adjustments to earnings management classifications in the fiscal period ended December 2019.

# Management's Discussion and Analysis

## Highlights

- Net sales rose in wireless and communications and real estate, but Group sales fell due to the impact of the slowdown in China on automobile brakes and other businesses.
- TMD reported a net loss after booking impairment losses on fixed assets.
- A new syndicated loan and a renewed committed credit line ensured continued funding liquidity.

## Operating Results

The Company changed its fiscal year-end from March 31 to December 31, effective from the fiscal period ended December 31, 2018. Due to the change in fiscal year-end, the previous fiscal period was a transitional period covering nine months of results (April 1, 2018 to December 31, 2018) for the Company and consolidated subsidiaries that had March fiscal year-ends, 10 months of results (March 1, 2018 to December 31, 2018) for consolidated subsidiaries that had February fiscal year-ends, and 12 months of results (January 1, 2018 to December 31, 2018) for consolidated subsidiaries with December fiscal year-ends. For reference purposes, figures for the previous fiscal period have been adjusted to facilitate comparison with figures for the fiscal year under review (referred to as "adjusted basis").

The Company has adjusted its earnings management classifications. Effective from the fiscal year ended December 31, 2019, the electronics business segment has been separated into wireless and communications and

micro devices. Together with the existing segments of automobile brakes, precision instruments, chemicals, textiles and real estate, the Company now has a total of seven reportable business segments.

In 2019, the Nisshinbo Group reported net sales of ¥509,661 million (US\$4,633 million), down ¥5,272 million (1.0%) year on year on an adjusted basis. Net sales increased in the wireless and communications business, supported by higher sales of aerospace and meteorological systems in the solutions and specialized equipment business of Japan Radio Co., Ltd. The real estate business also reported higher net sales, buoyed by the sale of a building for use as a large commercial facility. However, those positives were outweighed by a drop in sales in the automobile brake business, which was affected by factors such as the sale of the foundation brake business and the impact of the slowdown in the Chinese market.

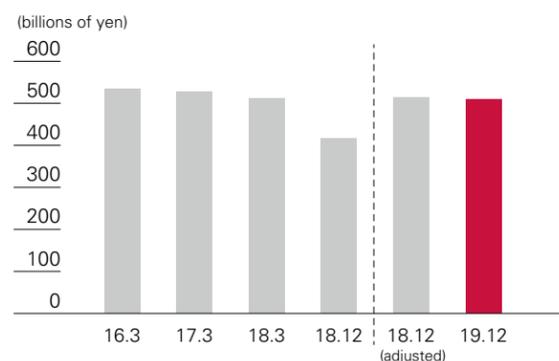
The Group reported operating income of ¥6,482 million

## Adjusted Earnings: YoY Comparison

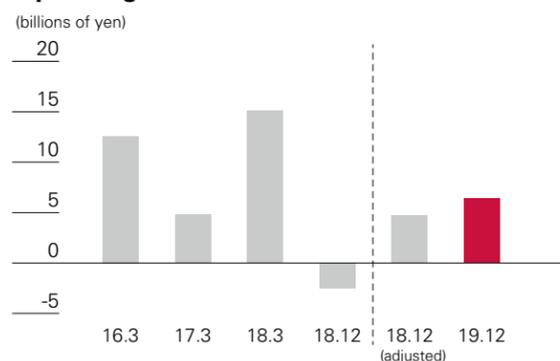
(millions of yen)

	Net Sales	Operating Income	Net Loss Attributable to Owners of the Company
Fiscal year ended December 2019	509,661	6,482	(6,604)
Previous fiscal year	514,933	4,784	(1,366)
Change (million ¥)	(5,272)	1,697	(5,237)
Change (%)	(1.0%)	35.5%	—

### Net Sales



### Operating Income / Loss



(US\$59 million), up ¥1,697 million (35.5%) year on year on an adjusted basis, mainly supported by higher sales in the wireless and communications business and the real estate business. Although operating income increased, the Group reported net loss attributable to owners of the Company of

## Dividend

The full-year dividend for the fiscal year ended December 2019 is ¥30 (US\$0.27) per share, the same amount as for the previous fiscal year.

By focusing on ROE, Nisshinbo is aiming to deliver sustained increases in shareholder value through the distribution of profits and other means. We also intend to accelerate investment in areas that drive growth, such as R&D, capital expenditures and M&A, aiming to secure even greater support and trust from the public, markets and stakeholders as an *Environment and Energy Company* group.

In principle, we intend to pay an interim dividend and a year-end dividend, targeting stable and consistent dividends based on a consolidated payout ratio target of around 30%.

Also, when the Group holds sufficient internal reserves to fund growth strategies, we plan to actively return profits to shareholders through share buybacks and other means

## Financial Position

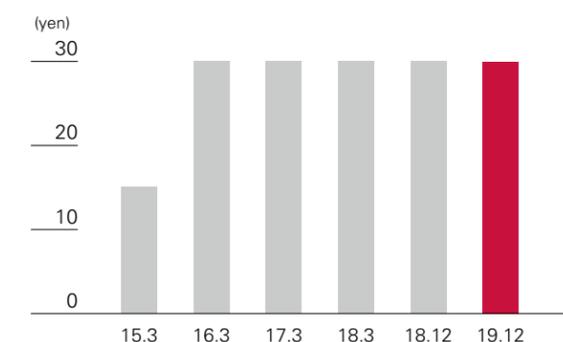
Total assets as of December 31, 2019 stood at ¥617,528 million (US\$5,614 million), a decline of ¥4,853 million from the end of the previous fiscal period. That mainly reflected decreases of ¥5,166 million for cash and cash equivalents, ¥9,825 million for property, plant and equipment and ¥2,567 million for investments in and advances to unconsolidated subsidiaries and affiliates, outweighing increases of ¥5,208 million for receivables and ¥7,526 million for investment securities.

Total liabilities as of December 31, 2019 were ¥364,992 million (US\$3,318 million), an increase of ¥7,460 million from the end of the previous fiscal period. The main changes in

¥6,604 million (US\$60 million), a deterioration of ¥5,237 million year on year on an adjusted basis, largely due to the booking of an impairment loss on fixed assets in TMD's OEPC business (original equipment for new passenger cars).

after considering factors such as financial stability. In principle, Nisshinbo retires treasury stock, but the stock may be used in share swaps as part of M&A deals aimed at significantly increasing shareholder value.

### Cash Dividends

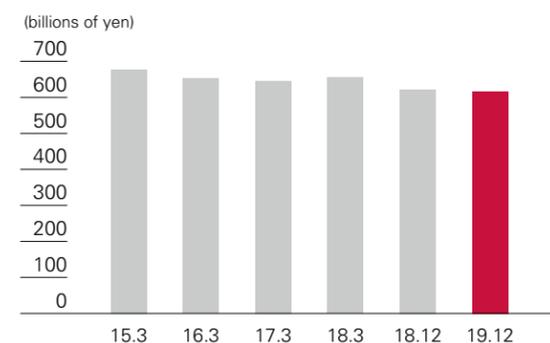


liabilities were increases of ¥20,704 million for long-term debt (including the current portion), ¥2,050 million for deferred tax liabilities and ¥2,018 million for other long-term liabilities, outweighing a decrease of ¥18,842 million for short-term bank loans.

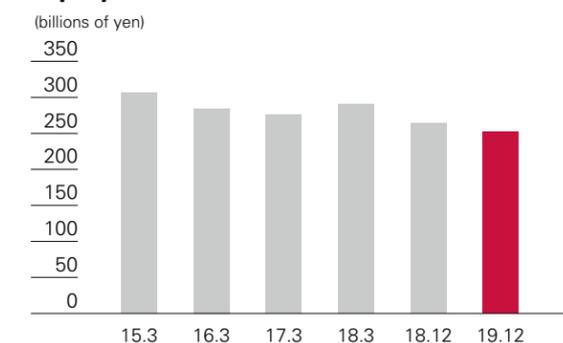
Equity as of December 31, 2019 totaled ¥252,536 million (US\$2,296 million), a decline of ¥12,313 million from the end of the previous fiscal period. The main reason for the decline was a decrease of ¥11,996 million for retained earnings.

As a result of the above, the consolidated shareholders' equity ratio declined 1.5 percentage points to 38.6%.

### Total Assets



### Equity



## Fund Procurement

In July 2019, the Company secured a long-term syndicated loan of ¥30,000 million, replacing part of an existing short-term bank loan to ensure stable funding at a low interest rate. Also, in September 2019, the Company renewed a

## Cash Flows

### Cash Flows from Operating Activities

Cash provided by operating activities totaled ¥26,249 million (US\$239 million), mainly reflecting cash provided of ¥24,955 million from depreciation and amortization, ¥16,181 million from loss on impairment of long-lived assets and ¥5,466 million from decrease in inventories, against cash used of ¥3,520 million for income taxes–paid, ¥3,655 million for equity in earnings of unconsolidated subsidiaries and affiliates, ¥3,343 million for gain on sale of investment securities and investments in and advances to unconsolidated subsidiaries and affiliates, net, ¥5,909 million for increase in receivables and ¥4,060 million for decrease in payables.

### Cash Flows from Investing Activities

Cash used in investing activities totaled ¥21,759 million (US\$198 million), mainly reflecting cash used of ¥25,436 million for the purchase of property, plant and equipment, and cash provided of ¥3,989 million from proceeds from sales of investment securities and investments in and advances to unconsolidated subsidiaries and affiliates.

## Capital Expenditures

The Nisshinbo Group channels its capital expenditures into priority product fields that offer the potential for long-term growth and into upgrading manufacturing equipment to raise product quality. It also invests in environmental initiatives such as the reduction of greenhouse gases and in manufacturing facilities to address rising demand in China, Southeast Asia and other emerging markets. As a result, in the fiscal year ended December 31, 2019, capital expenditures totaled ¥32,387 million (US\$294 million).

In the wireless and communications business, ¥5,153 million was invested in Japan Radio, mainly for logistics warehouse facilities and backbone IT systems. In the micro devices business, ¥4,345 million was invested in New Japan Radio Co., Ltd., primarily for electronic device manufacturing and research and development facilities, and ¥3,645 million was invested in Ricoh Electronic Devices Co., Ltd., mainly for research and development facilities and backbone IT systems. In the automobile brake business, ¥4,429 million was invested in the TMD Group, mainly for friction

material manufacturing facilities, ¥3,862 million was invested in Nisshinbo Automotive Manufacturing Inc., primarily for manufacturing facilities for friction materials that are compatible with regulations on copper content, and ¥1,987 million was invested in Nisshinbo Brake Inc., also mainly for manufacturing facilities for friction materials that are compatible with regulations on copper content.

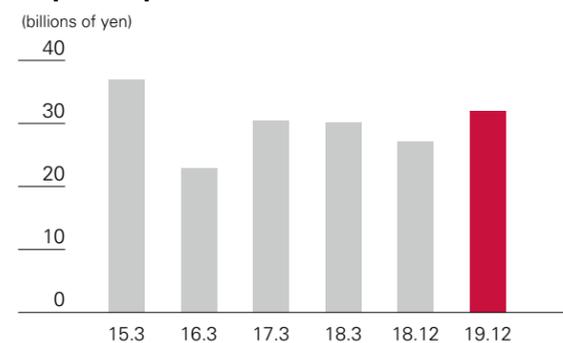
### Cash Flows from Financing Activities

Cash used in financing activities totaled ¥10,065 million (US\$92 million), mainly reflecting cash used of ¥10,653 million for repayment of long-term debt, ¥18,277 million for decrease in short-term bank loans–net, ¥5,065 million for cash dividends paid and ¥4,924 million for purchase of treasury stock, against cash provided of ¥32,369 million from proceeds from long-term debt.

As a result of the above, cash and cash equivalents at the end of the fiscal year totaled ¥37,268 million (US\$339 million), a decrease of ¥5,166 million from the end of the previous fiscal period.

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### Capital Expenditures



## Medium-term Management Strategy

As the Group becomes more diversified, Nisshinbo is aiming to enhance Group management and global management and increase corporate value by uniting its various businesses under its Corporate Philosophy, “Change and Challenge! For the creation of the future of Earth and People.”

Based on the view that the quality of a company is the sum of its people, not the business itself, the Group will also continue to adapt its business to the changing demands of modern life and society, while also increasing its focus on “experiences” and “services,” backed by its strengths in manufacturing “things.”

The Nisshinbo Group has been shifting its strategic focus to the environmental and energy fields, guided by the themes of protecting the global environment and creating a sustainable society. As an *Environment and Energy Company* group, we will continue to propose new products and systems that help protect the environment, save energy and create alternative sources of energy, while also providing solutions that address some of the biggest issues faced by humanity today, such as environmental destruction and natural disasters caused by climate change, help create super smart societies.

Based on that thinking, we will enhance and expand our presence in the mainstay Mobility field and supply products and services in the Infrastructure & Safety field and the Life & Healthcare field to contribute to the creation of future societies.

In the Mobility field, we are expanding our business by promoting Groupwide collaboration that combines our wireless communication technologies with technologies in electronic devices, mechatronics and chemicals.

In automotive products, we are establishing our position in the global market by pioneering the development and sale of copper-free friction materials and pushing ahead

## Selection of Accounting Standards

The Nisshinbo Group currently uses Japanese accounting standards. However, given that the Company’s basic management policy is to develop its business globally, overseas operations are likely to account for a growing share of consolidated earnings. From that perspective, we are

with the development of components and materials for fuel cell vehicles, such as carbon bipolar plates and alternatives to platinum catalysts. The Group is also supplying devices and stepping up the development of sensors for autonomous vehicles and working to develop communications networks that link vehicles and traffic infrastructure.

In addition, we are developing radar, sensors and other devices needed for autonomous ship operation, satellite communication, and aircraft and drone control systems, as well as using the data gathered from the products developed by the Group to support safe and energy-efficient operations.

The Nisshinbo Group is targeting ROE of 12% in 2025.

While the Group faces a number of uncertainties caused by the COVID-19 outbreak and other developments, we will continue to execute our growth strategy in 2020 by channeling management resources into the key Mobility field.

In the wireless and communications business, the solutions and specialized equipment business, which is focused on public sector projects, continues to perform well, but the marine systems business is still in the process of recovery. The micro devices business faced a rapid deterioration in market conditions caused by trade friction between the US and China, but the environment is now improving. In the automobile brake business, we have invested heavily in production facilities for copper-reduced and copper-free friction materials, orders for which are growing strongly amid rising global demand for more eco-friendly products, but depreciation costs related to that investment have weighed on profits. However, business restructuring of TMD is almost complete and we expect the automobile brake business to return to profit in 2020.

considering voluntarily adopting International Financial Reporting Standards (IFRS), a common set of global accounting standards. However, no final decision has been made on timing and other factors related to voluntary adoption of IFRS at this stage.

# Consolidated Balance Sheet

December 31, 2019

ASSETS	Millions of Yen		Thousands of U.S. Dollars (Note)
	2019	2018	2019
<b>CURRENT ASSETS:</b>			
Cash and cash equivalents	¥37,268	¥42,434	\$338,800
Time deposits	282	1	2,564
Receivables:			
Trade notes	20,809	21,084	189,173
Trade accounts	106,294	99,673	966,309
Unconsolidated subsidiaries and affiliates	1,127	1,225	10,245
Other	4,495	5,364	40,863
Allowance for doubtful receivables	(588)	(417)	(5,345)
Inventories	121,848	118,991	1,107,709
Other current assets	8,395	9,732	76,318
Total current assets	299,930	298,087	2,726,636
<b>PROPERTY, PLANT AND EQUIPMENT:</b>			
Land	35,158	36,891	319,618
Buildings and structures	157,800	169,882	1,434,546
Machinery, equipment and tools	348,790	341,540	3,170,818
Construction in progress	8,254	9,909	75,036
Other	10,655	2,405	96,864
Total	560,657	560,627	5,096,882
Accumulated depreciation	(385,793)	(375,938)	(3,507,209)
Net property, plant and equipment	174,864	184,689	1,589,673
<b>INVESTMENTS AND OTHER ASSETS:</b>			
Investment securities	78,876	71,350	717,055
Investments in and advances to unconsolidated subsidiaries and affiliates	32,695	35,262	297,227
Deferred tax assets	5,250	6,160	47,727
Goodwill	5,101	7,131	46,373
Other	20,812	19,702	189,200
Total investments and other assets	142,734	139,605	1,297,582
<b>TOTAL</b>	<b>¥617,528</b>	<b>¥622,381</b>	<b>\$5,613,891</b>

Note: 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 at December 31, 2019.

LIABILITIES AND EQUITY	Millions of Yen		Thousands of U.S. Dollars (Note)
	2019	2018	2019
<b>CURRENT LIABILITIES:</b>			
Short-term bank loans	¥46,549	¥65,391	\$423,173
Commercial paper	30,000	30,000	272,727
Current portion of long-term debt	39,818	8,057	361,982
Payables:			
Trade notes	23,483	24,129	213,482
Trade accounts	37,873	40,145	344,300
Unconsolidated subsidiaries and affiliates	106	273	964
Other	14,240	12,751	129,454
Accrued expenses	14,836	14,877	134,873
Accrued income taxes	4,092	3,088	37,200
Other current liabilities	20,026	19,378	182,054
Total current liabilities	231,023	218,089	2,100,209
<b>LONG-TERM LIABILITIES:</b>			
Long-term debt	47,686	58,743	433,509
Liability for retirement benefits	51,807	50,292	470,973
Deferred tax liabilities	18,875	16,825	171,591
Other long-term liabilities	15,601	13,583	141,827
Total long-term liabilities	133,969	139,443	1,217,900
Total liabilities	364,992	357,532	3,318,109
<b>EQUITY:</b>			
<b>Shareholders' equity:</b>			
Common stock—authorized, 371,755,000 shares; issued, 178,894,764 shares in 2019 and 178,834,769 shares in 2018	27,640	27,610	251,273
Capital surplus	20,421	20,396	185,645
Retained earnings	165,549	177,545	1,504,991
Treasury stock—at cost, 12,545,648 shares in 2019 and 7,542,144 shares in 2018	(15,947)	(11,035)	(144,973)
Total shareholders' equity	197,663	214,516	1,796,936
Accumulated other comprehensive income:			
Net unrealized gain (loss) on available-for-sale securities	39,571	33,992	359,736
Deferred gain (loss) on derivatives under hedge accounting	(24)	(98)	(218)
Foreign currency translation adjustments	3,810	5,274	34,637
Postretirement liability adjustments	(2,915)	(4,067)	(26,500)
Total	40,442	35,101	367,655
Stock acquisition rights	168	161	1,527
Noncontrolling interests	14,263	15,071	129,664
Total equity	252,536	264,849	2,295,782
<b>TOTAL</b>	<b>¥617,528</b>	<b>¥622,381</b>	<b>\$5,613,891</b>

## Consolidated Statement of Profit or Loss

Year Ended December 31, 2019

	Millions of Yen		Thousands of U.S. Dollars (Note)
	2019	2018	2019
<b>NET SALES</b>	<b>¥509,661</b>	¥416,221	<b>\$4,633,282</b>
<b>COST OF SALES</b>	<b>409,014</b>	335,044	<b>3,718,309</b>
Gross profit	100,647	81,177	914,973
<b>SELLING, GENERAL, AND ADMINISTRATIVE EXPENSES</b>	<b>94,165</b>	83,683	<b>856,046</b>
Operating income (loss)	6,482	(2,506)	58,927
<b>OTHER (EXPENSES) INCOME:</b>			
Interest and dividend income	2,590	2,515	23,546
Interest expense	(1,133)	(889)	(10,300)
Gain on sales of property, plant and equipment	607	228	5,518
Equity in earnings of unconsolidated subsidiaries and affiliates	3,655	3,943	33,227
Loss on impairment of long-lived assets	(16,181)	(2,407)	(147,100)
Gain on sales of securities	3,421	1,713	31,100
Business structure improvement expenses	(1,929)	(2,071)	(17,536)
Other—net	230	(4,007)	2,091
Other (expenses) income—net	(8,740)	(975)	(79,454)
<b>LOSS BEFORE INCOME TAXES</b>	<b>(2,258)</b>	(3,481)	<b>(20,527)</b>
<b>INCOME TAXES:</b>			
Current	5,438	4,299	49,436
Deferred	(826)	(2,224)	(7,509)
Total income taxes	4,612	2,075	41,927
<b>NET LOSS</b>	<b>(6,870)</b>	(5,556)	<b>(62,454)</b>
<b>NET (LOSS) INCOME ATTRIBUTABLE TO NONCONTROLLING INTERESTS</b>	<b>(266)</b>	1,627	<b>(2,418)</b>
<b>NET LOSS ATTRIBUTABLE TO OWNERS OF THE COMPANY</b>	<b>¥(6,604)</b>	¥(7,183)	<b>\$ (60,036)</b>
<b>PER SHARE OF COMMON STOCK:</b>			
Net loss	¥(39.45)	¥(43.26)	\$ (0.36)
Cash dividends	30	30	0.27

## Consolidated Statement of Comprehensive Income (Loss)

Year Ended December 31, 2019

	Millions of Yen		Thousands of U.S. Dollars (Note)
	2019	2018	2019
<b>NET LOSS</b>	<b>¥(6,870)</b>	¥(5,556)	<b>\$ (62,454)</b>
<b>OTHER COMPREHENSIVE INCOME (LOSS):</b>			
Net unrealized gain (loss) on available-for-sale securities	5,583	(8,968)	50,754
Deferred gain (loss) on derivatives under hedge accounting	74	(79)	673
Foreign currency translation adjustments	(1,549)	(4,926)	(14,082)
Postretirement liability adjustments	1,177	(582)	10,700
Equity in earnings of unconsolidated subsidiaries and affiliates	(304)	(910)	(2,764)
Total other comprehensive income (loss)	4,981	(15,465)	45,281
<b>COMPREHENSIVE LOSS</b>	<b>¥(1,889)</b>	¥(21,021)	<b>\$ (17,173)</b>
<b>TOTAL COMPREHENSIVE (LOSS) INCOME ATTRIBUTABLE TO:</b>			
Owners of the Company	¥(1,263)	¥(21,971)	\$ (11,482)
Noncontrolling interests	(626)	950	(5,691)

## Consolidated Statement of Changes in Equity

Year Ended December 31, 2019

Millions of Yen

	Common Stock	Capital Surplus	Retained Earnings	Treasury Stock	Total Shareholders' Equity	Accumulated Other Comprehensive Income						Total Equity
						Net Unrealized Gain (Loss) on Available-for-Sale Securities	Deferred Gain (Loss) on Derivatives under Hedge Accounting	Foreign Currency Translation Adjustments	Post-retirement Liability Adjustments	Stock Acquisition Rights	Noncontrolling Interests	
BALANCE, APRIL 1, 2018	¥27,588	¥26,719	¥189,186	¥(24,610)	¥218,883	¥42,964	¥(19)	¥10,361	¥(3,418)	¥152	¥21,511	¥290,434
Cumulative effects of changes in accounting policies	—	—	365	—	365	—	—	—	—	—	—	365
BALANCE, APRIL 1, 2018 (as restated)	¥27,588	¥26,719	¥189,551	¥(24,610)	¥219,248	¥42,964	¥(19)	¥10,361	¥(3,418)	¥152	¥21,511	¥290,799
Cash dividends, ¥30 per share	—	—	(4,999)	—	(4,999)	—	—	—	—	—	—	(4,999)
Net loss attributable to owners of the Company	—	—	(7,183)	—	(7,183)	—	—	—	—	—	—	(7,183)
Purchase of treasury stock	—	—	—	(5)	(5)	—	—	—	—	—	—	(5)
Disposal of treasury stock	—	(11)	—	40	29	—	—	—	—	—	—	29
Changes by share exchanges	—	(6,334)	—	13,540	7,206	—	—	—	—	—	—	7,206
Issuance of new shares	22	22	—	—	44	—	—	—	—	—	—	44
Change in scope of equity method	—	—	176	—	176	—	—	—	—	—	—	176
Net change in the nine-month period	—	—	—	—	—	(8,972)	(79)	(5,087)	(649)	9	(6,440)	(21,218)
BALANCE, DECEMBER 31, 2018 (JANUARY 1, 2019, as previously reported)	¥27,610	¥20,396	¥177,545	¥(11,035)	¥214,516	¥33,992	¥(98)	¥5,274	¥(4,067)	¥161	¥15,071	¥264,849
Cumulative effects of changes in accounting policies	—	—	(63)	—	(63)	—	—	—	—	—	(16)	(79)
BALANCE, JANUARY 1, 2019 (as restated)	¥27,610	¥20,396	¥177,482	¥(11,035)	¥214,453	¥33,992	¥(98)	¥5,274	¥(4,067)	¥161	¥15,055	¥264,770
Cash dividends, ¥30 per share	—	—	(5,065)	—	(5,065)	—	—	—	—	—	—	(5,065)
Net loss attributable to owners of the Company	—	—	(6,604)	—	(6,604)	—	—	—	—	—	—	(6,604)
Purchase of treasury stock	—	—	—	(4,924)	(4,924)	—	—	—	—	—	—	(4,924)
Disposal of treasury stock	—	(5)	—	12	7	—	—	—	—	—	—	7
Issuance of new shares	30	30	—	—	60	—	—	—	—	—	—	60
Change in scope of consolidation	—	—	(264)	—	(264)	—	—	—	—	—	—	(264)
Net change in the year	—	—	—	—	—	5,579	74	(1,464)	1,152	7	(792)	4,556
<b>BALANCE, DECEMBER 31, 2019</b>	<b>¥27,640</b>	<b>¥20,421</b>	<b>¥165,549</b>	<b>¥(15,947)</b>	<b>¥197,663</b>	<b>¥39,571</b>	<b>¥(24)</b>	<b>¥3,810</b>	<b>¥(2,915)</b>	<b>¥168</b>	<b>¥14,263</b>	<b>¥252,536</b>

Thousands of U.S. Dollars (Note)

	Common Stock	Capital Surplus	Retained Earnings	Treasury Stock	Total Shareholders' Equity	Accumulated Other Comprehensive Income						Total Equity
						Net Unrealized Gain (Loss) on Available-for-Sale Securities	Deferred Gain (Loss) on Derivatives under Hedge Accounting	Foreign Currency Translation Adjustments	Post-retirement Liability Adjustments	Stock Acquisition Rights	Noncontrolling Interests	
BALANCE, DECEMBER 31, 2018 (JANUARY 1, 2019, as previously reported)	\$251,000	\$185,418	\$1,614,045	\$(100,318)	\$1,950,145	\$309,018	\$(891)	\$47,946	\$(36,973)	\$1,464	\$137,009	\$2,407,718
Cumulative effects of changes in accounting policies	—	—	(573)	—	(573)	—	—	—	—	—	(145)	(718)
BALANCE, JANUARY 1, 2019 (as restated)	\$251,000	\$185,418	\$1,613,472	\$(100,318)	\$1,949,572	\$309,018	\$(891)	\$47,946	\$(36,973)	\$1,464	\$136,864	\$2,407,000
Cash dividends, \$0.27 per share	—	—	(46,045)	—	(46,045)	—	—	—	—	—	—	(46,045)
Net loss attributable to owners of the Company	—	—	(60,036)	—	(60,036)	—	—	—	—	—	—	(60,036)
Purchase of treasury stock	—	—	—	(44,764)	(44,764)	—	—	—	—	—	—	(44,764)
Disposal of treasury stock	—	(46)	—	109	63	—	—	—	—	—	—	63
Issuance of new shares	273	273	—	—	546	—	—	—	—	—	—	546
Change in scope of consolidation	—	—	(2,400)	—	(2,400)	—	—	—	—	—	—	(2,400)
Net change in the year	—	—	—	—	—	50,718	673	(13,309)	10,473	63	(7,200)	41,418
<b>BALANCE, DECEMBER 31, 2019</b>	<b>\$251,273</b>	<b>\$185,645</b>	<b>\$1,504,991</b>	<b>\$(144,973)</b>	<b>\$1,796,936</b>	<b>\$359,736</b>	<b>\$(218)</b>	<b>\$34,637</b>	<b>\$(26,500)</b>	<b>\$1,527</b>	<b>\$129,664</b>	<b>\$2,295,782</b>

## Consolidated Statement of Cash Flows

Year Ended December 31, 2019

Millions of Yen  
Thousands of U.S. Dollars (Note)

	2019	2018	2019
<b>OPERATING ACTIVITIES:</b>			
Loss before income taxes	¥(2,258)	¥(3,481)	\$(20,527)
Adjustments to reconcile net loss to net cash provided by (used in) operating activities:			
Income taxes—paid	(3,520)	(8,983)	(32,000)
Depreciation and amortization	24,955	19,816	226,864
Amortization of goodwill	1,986	1,889	18,054
Equity in loss (earnings) of unconsolidated subsidiaries and affiliates	(3,655)	(4,006)	(33,227)
Provision for (reversal of) doubtful receivables	561	(665)	5,100
Interest and dividends income	1,345	2,535	12,227
Provision for business structure improvement	1,156	647	10,509
Increase (decrease) in liabilities for retirement benefits	73	266	664
Loss (gain) on sale of property, plant and equipment, net	(344)	287	(3,127)
Loss on impairment of long-lived assets	16,181	2,407	147,100
Loss (gain) on sale of investment securities and investments in and advances to unconsolidated subsidiaries and affiliates, net	(3,343)	(1,615)	(30,391)
Loss on write-down of investment securities and investments in and advances to unconsolidated subsidiaries and affiliates	11	562	100
Changes in operating assets and liabilities:			
Decrease (increase) in receivables	(5,909)	26,421	(53,718)
Decrease (increase) in inventories	5,466	(15,466)	49,691
Increase (decrease) in payables	(4,060)	(7,992)	(36,909)
Other—net	(2,396)	2,873	(21,783)
Total adjustments	28,507	18,976	259,154
Net cash provided by (used in) operating activities	26,249	15,495	238,627
<b>INVESTING ACTIVITIES:</b>			
Proceeds from sale of property, plant and equipment	1,156	830	10,509
Proceeds from sale of investment securities and investments in and advances to unconsolidated subsidiaries and affiliates	3,989	2,553	36,264
Purchase of property, plant and equipment	(25,436)	(26,992)	(231,236)
Purchase of investment securities and investments in and advances to unconsolidated subsidiaries and affiliates	(79)	(35)	(718)
Decrease (increase) in time deposits—net	(282)	6,273	(2,564)
Purchase of investments in subsidiaries with changes in consolidation scope	—	(261)	—
Proceeds from acquisition of shares of newly consolidated subsidiaries	868	—	7,891
Proceeds from sales of investments in subsidiaries with changes in consolidation scope	—	1,544	—
Purchase of investments in capital of subsidiaries	—	(1,742)	—
Other—net	(1,975)	(2,893)	(17,955)
Net cash provided by (used in) investing activities	(21,759)	(20,723)	(197,809)
<b>FINANCING ACTIVITIES:</b>			
Proceeds from long-term debt	32,369	3,249	294,264
Repayment of long-term debt	(10,653)	(5,998)	(96,845)
Increase (decrease) in short-term bank loans—net	(18,277)	20,159	(166,155)
Cash dividends paid	(5,065)	(4,999)	(46,045)
Purchase of treasury stock	(4,924)	(5)	(44,764)
Increase (decrease) in other long-term liabilities	(1,277)	(381)	(11,609)
Other—net	(2,238)	(89)	(20,346)
Net cash provided by (used in) financing activities	(10,065)	11,936	(91,500)
<b>EFFECT OF EXCHANGE RATE CHANGES ON CASH AND CASH EQUIVALENTS</b>	<b>(73)</b>	<b>(752)</b>	<b>(663)</b>
<b>NET INCREASE (DECREASE) IN CASH AND CASH EQUIVALENTS</b>	<b>(5,648)</b>	<b>5,956</b>	<b>(51,345)</b>
<b>CASH AND CASH EQUIVALENTS, BEGINNING OF YEAR</b>	<b>42,434</b>	<b>36,478</b>	<b>385,763</b>
<b>INCREASE IN CASH AND CASH EQUIVALENTS RESULTING FROM INCLUSION OF SUBSIDIARIES IN CONSOLIDATION</b>	<b>482</b>	<b>—</b>	<b>4,382</b>
<b>CASH AND CASH EQUIVALENTS, END OF YEAR</b>	<b>¥37,268</b>	<b>¥42,434</b>	<b>\$338,800</b>

## Segment Information

Year Ended December 31, 2019

Millions of Yen

	2019									
	Wireless and Communications	Microdevices	Automobile Brakes	Precision Instruments	Chemicals	Textiles	Real Estate	Other Businesses	Eliminations/Corporate	Consolidated
Sales:										
Sales to external customers	¥152,213	¥65,286	¥131,338	¥65,429	¥9,391	¥49,505	¥11,655	¥24,844	¥—	¥509,661
Intersegment sales or transfers	83	811	12	325	173	17	1,484	2,978	(5,883)	—
Total	¥152,296	¥66,097	¥131,350	¥65,754	¥9,564	¥49,522	¥13,139	¥27,822	¥(5,883)	¥509,661
Segment profit (loss)	¥4,100	¥256	¥(3,340)	¥879	¥1,650	¥1,037	¥8,163	¥(188)	¥(6,075)	¥6,482
Segment assets	¥164,234	¥76,231	¥133,654	¥74,802	¥9,395	¥51,339	¥49,017	¥37,904	¥20,952	¥617,528
Other:										
Depreciation and amortization	¥3,656	¥3,761	¥9,799	¥4,279	¥222	¥1,483	¥1,248	¥220	¥287	¥24,955
Increase in property, plant and equipment and intangible assets	¥5,237	¥7,990	¥13,006	¥2,928	¥166	¥1,109	¥1,141	¥100	¥710	¥32,387

Millions of Yen

	2018									
	Wireless and Communications	Microdevices	Automobile Brakes	Precision Instruments	Chemicals	Textiles	Real Estate	Other Businesses	Eliminations/Corporate	Consolidated
Sales:										
Sales to external customers	¥90,427	¥53,777	¥135,008	¥62,219	¥8,173	¥43,660	¥4,237	¥18,720	¥—	¥416,221
Intersegment sales or transfers	25	820	7	142	111	15	1,126	1,643	(3,889)	—
Total	¥90,452	¥54,597	¥135,015	¥62,361	¥8,284	¥43,675	¥5,363	¥20,363	¥(3,889)	¥416,221
Segment profit (loss)	¥(6,510)	¥1,605	¥(814)	¥1,691	¥1,665	¥1,250	¥2,681	¥(32)	¥(4,042)	¥(2,506)
Segment assets	¥155,160	¥74,102	¥152,529	¥76,605	¥9,057	¥55,139	¥49,790	¥38,149	¥11,850	¥622,381
Other:										
Depreciation and amortization	¥2,259	¥2,429	¥8,743	¥3,712	¥163	¥1,282	¥929	¥157	¥142	¥19,816
Increase in property, plant and equipment and intangible assets	¥2,349	¥4,012	¥10,768	¥8,197	¥176	¥1,399	¥296	¥127	¥(125)	¥27,199

Thousands of U.S. Dollars (Note)

	2019									
	Wireless and Communications	Microdevices	Automobile Brakes	Precision Instruments	Chemicals	Textiles	Real Estate	Other Businesses	Eliminations/Corporate	Consolidated
Sales:										
Sales to external customers	\$1,383,755	\$593,509	\$1,193,982	\$594,809	\$85,373	\$450,045	\$105,955	\$225,854	\$—	\$4,633,282
Intersegment sales or transfers	754	7,373	109	2,955	1,572	155	13,491	27,073	(53,482)	—
Total	\$1,384,509	\$600,882	\$1,194,091	\$597,764	\$86,945	\$450,200	\$119,446	\$252,927	\$(53,482)	\$4,633,282
Segment profit (loss)	\$37,273	\$2,327	\$(30,364)	\$7,991	\$15,000	\$9,427	\$74,209	\$(1,709)	\$(55,227)	\$58,927
Segment assets	\$1,493,037	\$693,009	\$1,215,036	\$680,018	\$85,409	\$466,718	\$445,609	\$344,582	\$190,473	\$5,613,891
Other:										
Depreciation and amortization	\$33,236	\$34,191	\$89,082	\$38,900	\$2,018	\$13,482	\$11,346	\$2,000	\$2,609	\$226,864
Increase in property, plant and equipment and intangible assets	\$47,609	\$72,636	\$118,236	\$26,618	\$1,509	\$10,082	\$10,373	\$909	\$6,455	\$294,427

## History

- 1907** Established Nisshin Cotton Spinning Co., Ltd.
- 1958** Established Nippon Kohbunshikan Co., Ltd. (name changed to Nippon Kohbunshi Co., Ltd. in 1986) (acquired by Nisshinbo Mechatronics Inc. in 2010)
- 1972** Established Nisshinbo Do Brasil Industria Textil LTDA. (Brazil)
- 1989** Established Kohbunshi (Thailand) Ltd. (Thailand) (name changed to Nisshinbo Mechatronics (Thailand) Ltd. in 2011)
- 1993** Established Pudong Kohbunshi (Shanghai) Co., Ltd. (China) (name changed to Nisshinbo Mechatronics (Shanghai) Co., Ltd. in 2010)
- 1995** Established Nisshinbo Urban Development Co., Ltd.
- 1996** Established Nisshinbo Somboon Automotive Co., Ltd. (Thailand)
- 1997** Established Nisshinbo Automotive Manufacturing Inc. (USA)
- 1998** Established P.T. Gistex Nisshinbo Indonesia (Indonesia) (name changed to P.T. Nisshinbo Indonesia in 2010)
- 1999** Established Saeron Automotive Corporation (South Korea)
- 2000** Purchased additional shares of P.T. Nikawa Textile Industry (Indonesia)  
Established Continental Teves Co., Ltd. through merger with Continental Teves AG & Co. oHG (name changed to Continental Automotive Co., Ltd. in 2007)
- 2002** Established Nisshinbo (Shanghai) Co., Ltd. (China)  
Acquired all shares of Iwao & Co., Ltd.
- 2003** Established Saeron Automotive Beijing Corporation (China)
- 2004** Established Continental Automotive Corporation (Lian Yun Gang) Co., Ltd. (China)
- 2005** Acquired additional shares of New Japan Radio Co., Ltd.
- 2006** Acquired additional shares of Japan Radio Co., Ltd. and Nagano Japan Radio Co., Ltd.
- 2009** Spun off five businesses — Textiles, Automobile Brakes, Papers, Precision Instruments, and Chemicals — and converted to holding company; corporate name changed to Nisshinbo Holdings Inc.
- 2010** Established Nisshinbo-Yawei Precision Instruments & Machinery (Jiangsu) Co., Ltd. (China) (formerly Jiangsu Yawei Nisshinbo Precision Instruments & Machinery Co., Ltd.)  
Acquired additional shares of Japan Radio Co., Ltd., making it a consolidated subsidiary  
Nagano Japan Radio Co., Ltd. also became a consolidated subsidiary as a result
- 2011** Established Nisshinbo Saeron (Changshu) Automotive Co., Ltd. (China)  
Established Nisshinbo Singapore Pte. Ltd. (Singapore)  
Acquired all shares of TMD Friction Group S.A. (Luxembourg)
- 2012** Established Nisshinbo Business Management (Shanghai) Co., Ltd. (China)
- 2014** Established Nisshinbo-Continental Precision Machining (Yangzhou) Co., Ltd. (China)
- 2015** Acquired all outstanding shares of TOKYO SHIRTS CO., LTD.  
Changed Company's sector classification on stock markets from textile products to electrical equipment  
Acquired all outstanding shares of Nanbu Plastics Co., Ltd.
- 2016** Nagano Japan Radio Co., Ltd. and Ueda Japan Radio Co., Ltd. became wholly consolidated subsidiaries of Japan Radio Co., Ltd.
- 2017** Sold the papers business  
Japan Radio Co., Ltd. became a wholly owned consolidated subsidiary
- 2018** Acquired Ricoh Electronic Devices Co., Ltd., making it a consolidated subsidiary  
Sold the foundation brakes business  
Established JRC Mobility Inc.  
New Japan Radio Co., Ltd. became a wholly owned consolidated subsidiary
- 2019** Acquired all shares of NJ Components Co., Ltd.

## Key Companies in the Nisshinbo Group

Company	Location	Main Products and Services
<b>Wireless and Communications</b>		
Japan Radio Co., Ltd.	Japan	Disaster prevention systems, mobile communications equipment
JRC Mobility Inc.	Japan	Automotive radars, ultrasound sensors
<b>Micro Devices</b>		
New Japan Radio Co., Ltd.	Japan	Electronic devices, microwave products
Ricoh Electronic Devices Co., Ltd.	Japan	Electronic devices
<b>Automobile Brakes</b>		
Nisshinbo Brake Inc.	Japan	Automobile brake friction materials
TMD Friction Group S.A.	Europe	Automobile brake friction materials
Saeron Automotive Corporation	South Korea	Automobile brake friction materials
Nisshinbo Automotive Manufacturing Inc.	USA	Automobile brake friction materials
Nisshinbo Somboon Automotive Co., Ltd.	Thailand	Automobile brake friction materials
Nisshinbo Saeron Changshu Automotive Co., Ltd.	China	Automobile brake friction materials
<b>Precision Instruments</b>		
Nisshinbo Mechatronics Inc.	Japan	Molding products, automotive precision parts
Nanbu Plastics Co., Ltd.	Japan	Molding products
Nisshinbo Precision Instrument & Machinery Hiroshima Corporation	Japan	Automotive precision parts
Nisshinbo-Continental Precision Machining (Yangzhou) Co., Ltd.	China	Automotive precision parts
Nisshinbo Mechatronics (Thailand) Ltd.	Thailand	Molding products
Continental Automotive Corporation	Japan	Automotive precision parts
<b>Chemicals</b>		
Nisshinbo Chemical Inc.	Japan	Urethane products, high-performance chemical products
<b>Textiles</b>		
Nisshinbo Textile Inc.	Japan	Shirt fabric, developed materials
NISSHINTOA IWAO INC.	Japan	Textile products
TOKYO SHIRTS CO., LTD.	Japan	Shirts
Nisshinbo Do Brasil Industria Textil Ltda.	Brazil	Textile spinning
PT. Nikawa Textile Industry	Indonesia	Textile spinning and weaving
PT. Nisshinbo Indonesia	Indonesia	Textile weaving and dyeing
<b>Real Estate</b>		
Nisshinbo Urban Development Co., Ltd.	Japan	Real estate operations
<b>Other</b>		
Nisshinbo Singapore Pte. Ltd.	Singapore	Group company support
Nisshinbo Business Management (Shanghai) Co., Ltd.	China	Group company support

## Corporate Data

(As of December 31, 2019)

### Founded

February 5, 1907

### Common Stock

¥27,639 million (US\$251 million)

### Employees

Parent Company	240
Subsidiaries	22,649
Total	22,889

### Head Office

2-31-11, Ningyo-cho, Nihonbashi, Chuo-ku, Tokyo 103-8650, Japan

### Shareholders

27,723

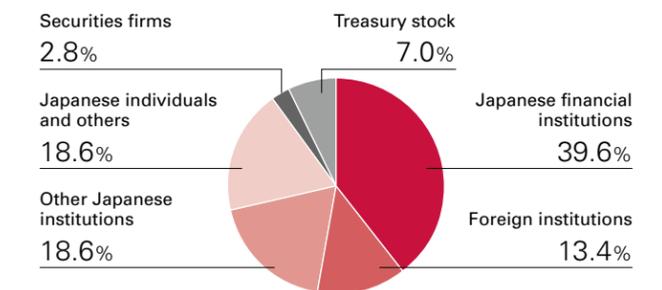
### Basic Stock Information

Sector	Electrical equipment
Stock code	3105
Number of shares per trading unit	100 shares
Business year	January 1 to December 31
Shareholder record date for dividends	December 31 (June 30 for interim dividend)
Total shares authorized	371,755,000 shares
Total shares issued	178,894,764 shares (As of December 31, 2019)
Treasury stock	12,545,648 shares (As of December 31, 2019)
Transfer agent	Mitsubishi UFJ Trust and Banking Corporation 1-4-5, Marunouchi, Chiyoda-ku, Tokyo 100-8212, Japan

### Stock Price and Trading Volume



### Composition of Shareholders



### Major Shareholders

(As of December 31, 2019)

Shareholder name	Number of shares held (thousand shares)	Shareholding ratio (%)
The Master Trust Bank of Japan, Ltd. (Trust Account)	24,962	15.01
Japan Trustee Services Bank, Ltd. (Trust Account)	11,712	7.04
Teijin Ltd.	10,528	6.33
Fukoku Mutual Life Insurance Company	9,000	5.41
Japan Trustee Services Bank, Ltd. (Trust Account 9)	5,743	3.45
DFA INTL SMALL CAP VALUE PORTFOLIO	2,780	1.67
Japan Trustee Services Bank, Ltd. (Trust Account 5)	2,694	1.62
Shikoku Chemicals Corporation	2,600	1.56
Trust & Custody Services Bank, Ltd. (Securities Investment Trust)	2,598	1.56
Japan Wool Textile Co., Ltd.	2,282	1.37