

Integrated Report 2020



Nissan Chemical
CORPORATION

To Our Stakeholder



KINOSHITA Kojiro
President & CEO

Where it all begins

The global spread of COVID-19 is greatly changing society and the economy. At the same time, various social issues, such as health issues, climate change, and food issues are on the increase, threatening the sustainability of society.

Our company was founded as Japan's first chemical fertilizer manufacturer to solve food issues which Japan faced in 1887 under the founding spirit "to dedicate ourselves to prosperity of the nation by agricultural fertility." The pioneering spirit has been still very much alive at Nissan Chemical as we have continued putting effort into innovative technologies and projects that promote social progress, greatly transforming our business operations.

We currently provide products and services on a global scale in four business domains (Chemicals, Performance Materials, Agricultural Chemicals, and Pharmaceuticals) for realizing our corporate vision of the new era based on ESG (Environment, Social and Governance) and SDGs (Sustainable Development Goals) established by the United Nations.

As a Future-Creating Enterprise that Responds to Social Needs with Unique, Innovative Technologies, we will continue to aim for synergistic development with society.

Mission Statement (Our Values)

"Contribute to society with excellent technologies and products."

"Promote prosperity and welfare through concerted efforts to constantly develop new areas."

"Respect people who exhibit a sense of responsibility, originality and motivation."

Corporate Philosophy (Corporate Purpose)

We contribute to society in harmony with the environment, based on our excellent technologies, products and services.

Corporate Vision

A corporate group that contributes to human survival and development.

Business Model

Future-Creating Enterprise that Responds to Social Needs with Unique, Innovative Technologies.

Basic CSR Policy

- (1) Conduct sensible business activities as a member of the international community in compliance with laws and regulations.
- (2) Enhance corporate value by providing safe and useful products and services.
- (3) Strive to achieve no-accidents & no-disasters and protect the global environment.
- (4) Disclose information appropriately with a focus on communication with stakeholders.
- (5) Create a cheerful and pleasant workplace by respecting the individuality and personalities, and promoting health of employees.
- (6) Conduct ourselves as good corporate citizens and decent members of society.

Editorial Policy

In 1992, we introduced responsible care activities, and have disclosed the details of these activities via Environment and Safety Report from 1999. The Report transformed into CSR Report in 2013 and Annual report in which business overview and financial section were included since 2016. Since 2018, we have included the materiality, process of value creation, and detailed financial information in addition to the business overview, E (Environment), S (Social), and G (Governance) information to make this integrated report easier to understand creating mid- to long-term value of Nissan Chemical Group to all stakeholders, including shareholders and investors.

We aim to make this report as a valuable communication tool by deepening our business activities and enhancing the content of the report.

Reporting period

FY2019 (April 2019 to March 2020)

* The occupational accidents data (P50) is from January to December 2019.

Issued

Issued: November 2020

(The previous edition was issued in December 2019, and the next edition is planned to be issued in November 2021)

Frequency of issuance

Annually

Guidelines used as reference

- International Integrated Reporting Council (IIRC) “International <IR> Framework”
- GRI Sustainability Reporting Guidelines Standard
- ISO26000
- Ministry of the Environment “Environmental Reporting Guidelines”

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Scope of reporting

The initiatives are described mainly in the financial and ESG information of the activities of Nissan Chemical Group.

Consolidated subsidiaries:

Nissei Corporation, Nissan Butsuryu Co., Ltd., Nissan Green & Landscape Co., Ltd., Nissan Engineering, Ltd., Nihon Hiryo Co., Ltd., Nissan Chemical America Corporation (NCA), Nissan Chemical Europe S.A.S. (NCE), NCK Co., Ltd. (NCK)

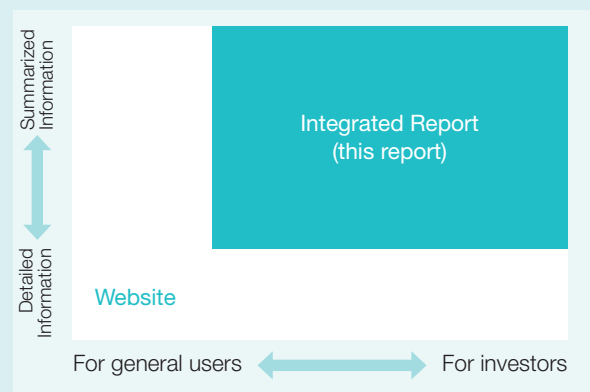
Entities accounted for using equity method:

Sun Agro Co., Ltd., Clariant Catalysts (Japan) K.K.

Group companies:

In addition to the above consolidated subsidiaries and entities accounted for using equity method, NC Agro Hakodate Corporation, Environmental Technical Laboratory, Ltd., Nissan Chemical Taiwan Co., Ltd. (NCT), Nissan Chemical Product (Shanghai) Co., Ltd. (NCS), Nissan Chemical Agro Korea Ltd. (NAK), Nissan Chemical Do Brasil (NCB), Nissan Agro Tech India PVT. LTD. (NAI), Nissan Chemical Materials Research (Suzhou) Co., Ltd. (NSU), Nissan Bharat Rasayan PVT. LTD. (NBR)

Information disclosure system



* For more detailed information, please visit our website. <https://www.nissanchem.co.jp/eng/>


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Third-party Evaluation Nissan Chemical's initiatives are highly regarded by external analytics and research organizations.



Message from the President



KINOSHITA Kojiro

President & CEO

Looking Back at FY2019

Despite difficult business environments, including the impact of the global spread of COVID-19, we achieved record high profits.

In FY2019, Japan's domestic economy continued to show a moderate recovery trend against a background of improving employment and income conditions. However, in addition to sluggish exports due to slowdowns of overseas economies, the impact of COVID-19 toward the latter half of the fiscal year has led to a stagnation of the global economy, having a significant negative impact on the Japanese economy.

Under these difficult circumstances, the results for the current fiscal year are as follows: Sales: 206.8 billion yen, Operating income: 38.6 billion yen, Ordinary income: 40 billion yen, Net income: 30.8 billion yen. Operating income and ordinary income reached record highs for six consecutive years with net income reaching a record high for seven consecutive years.

While the impact of COVID-19 was clearly visible in the fourth quarter of FY2019, I thought that the Company fared well, given the circumstances and again recognized the importance of building a business portfolio that is not easily affected by changes in the external environment. In particular, new agrochemicals and performance materials, our niche-top

products, have contributed significantly to our business results. This made me recognize that products that meet customer needs can be sold in any environment. At the same time, I also keenly feel the importance of early planning and implementation of measures for changes in the business environment.

Looking back at each segment in FY2019: As for the Chemicals Division, high-purity sulfuric acid and AdBlue® created increased revenue due to favorable customer operations. However, profit of ammonia-based products, our main products declined due to a large amount of China-made melamine (such as adhesive materials for plywood), which became surplus because of a slowdown in the Chinese economy, flowing into the market, and the impact of price competition.

As for sales of display materials from the Performance Materials Division, revenue greatly increased due to an increase in demand for photo-alignment material for IPS liquid crystal (IPS) corresponding high-resolution of display, not only for smartphones, but also notebook PCs and in-vehicle devices. Since IPS is relatively low costs compared to an



Creating a new corporate image to respond to rapidly changing business environments

expensive OLED, I predict that more photo-alignment material for IPS will be used in LCD smartphone. In addition, I expect demand for use of IPS in other devices, such as tablets and in-vehicle devices. As for sales of semiconductor materials, sales for memory devices recovered from the third quarter and sales for logic devices remained strong, leading to higher revenue. In regard to inorganic materials, sales of oilfield materials stagnated due to a slump in oil prices which reduced the willingness of users to invest, leading to continued cost control.

As for the Agricultural Chemicals Division, sales of Fluralaner, an active ingredient for veterinary pharmaceuticals, decreased due to customer inventory adjustment. In contrast, our insecticide GRACIA[®], which was launched in May 2019, has shown good results expanding sales. Our acquisition of the fungicide Quintec[®] in third quarter also contributed to sales, significantly increasing overall sales.

In the Pharmaceuticals Division, sales of the active ingredient of the leading product LIVALO[®], an anti-cholesterol agent, increased due to completion of an inventory adjustment in Japan. Although sales also increased for US and Europe bound exports, sales in South Korea decreased due to price stagnation.

During latter half of FY2019, business environments surrounding our company have changed greatly. Causative factors include fear of economic stagnation at a level not

witnessed since the Great Depression due to the spread of COVID-19.

Under these circumstances, the Nissan Chemical Group has taken measures to prevent COVID-19 infection, including maximizing the amount of home-based work performed by our employees. Such efforts are taken so that we can continue to provide products and services to customers based on our BCP (Business Continuity Plan). We will further strengthen our BCP based on the view that new type of viruses will appear after COVID-19 as endemic disease particular to East Asia in the future.

It is important to be aware that even if the spread of COVID-19 comes to an end, nothing will return to how it once was, including work styles. Mankind and society always evolves after major crises. How we overcome this unprecedented crisis and create a “New Normal” for Nissan Chemical shall be the key to controlling the future growth of the Group.

We are quickly working to make changes to our company culture, including the promotion of telework, elimination of overtime work at night and promotion of early morning work for actively working during morning hours. For that purpose, we will promote various systems, such as rotation work, core work day, staggered work, and develop a digital work environment.

About Our Mid-term and Long-term Business Plans

While striving to achieve the targets of the “Vista2021” mid-term business plan, we will start to implement rolling forecasts for the “Progress2030” long-term business plan.

Based on the current changes in the business environment, we are working on various long-term and short- to mid-term issues. In April 2016, we initiated the “Progress2030” long-term business plan, which focuses on our business efforts to 2030, and the “Vista2021” six-year mid-term business plan.

During the establishment of “Progress2030”, we held many discussions addressing where we must head as a company, what we can do and contribute to as a company with a global perspective on social and economic changes leading up to 2030. The plan aims to make Nissan Chemical “A corporate group that creates better future for people and the environment by helping to solve social issues” taking into account social issues such as ESG (Environment, Social and Governance) and SDGs (Sustainable Development Goals). For 2030, we set numerical targets of 300 billion yen in sales and 50 billion yen in operating income. Based on our five core technologies we have cultivated, “Fine Organic Synthesis”, “Functional Polymer Design”, “Ultrafine Particle Control”, “Biological Evaluation”, and “Optical Control”, we will contribute to solving global issues in the four fields of “Information & Communication”, “Life Sciences”, “Environment & Energy”, and “Chemicals & Affiliates”, and will strive to improve company value along with the development of society.

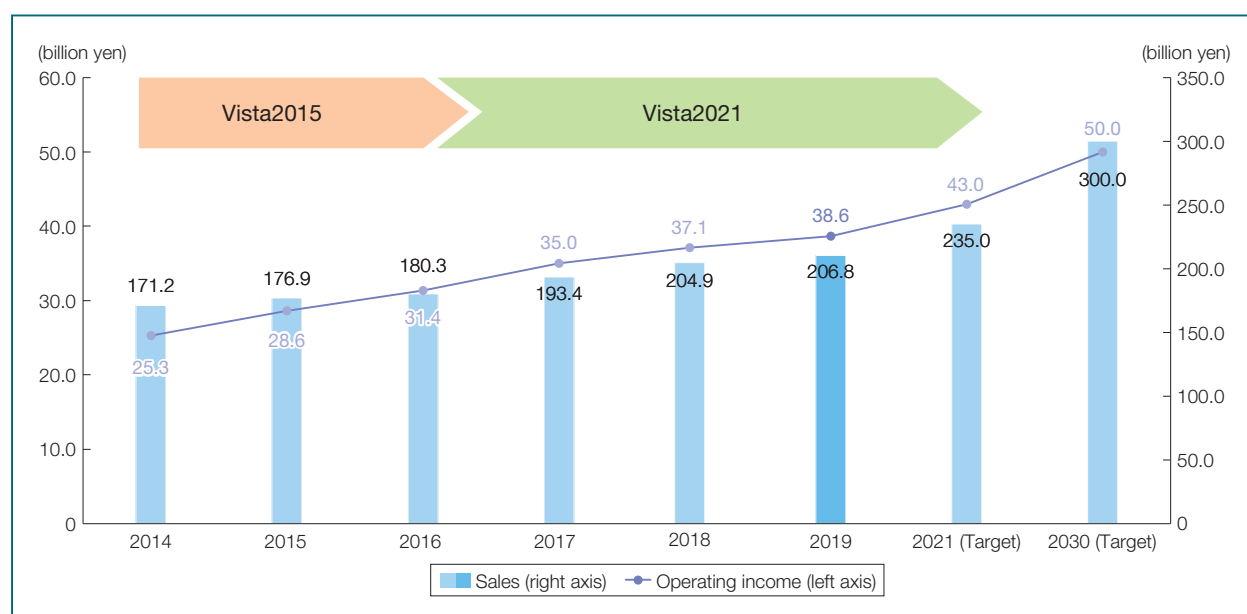
Four-year has passed since “Progress2030” was established, over the next year we will implement rolling

forecasts and work on the establishment of the next mid-term business plan, “Vista2027.” The new long-term business plan will cover a time period to 2050. With a 2050 perspective, I expect that there will be more diversity of creating hypotheses which will improve our strategic capabilities.

In 2050, the world population will reach 10 billion and quantum computers will be put into practical use. The world will most likely experience major changes and paradigm shifts, such as technological singularity (the timing at which artificial intelligence (AI) exceeds human intelligence) which is predicted to occur shortly before in 2045. It is possible that India and Sub-Saharan Africa (south of the Sahara Desert) will benefit from demographic dividend and may be developing exponentially.

It is necessary to proceed the discussions on the new long-term business plan with doubting established theories and common sense without being caught up in these assumptions by normalcy bias (thinking based on past experience). For this aim, we will form a team of young employees and proceed with the planning process for about one year.

Under the currently implemented “Vista2021” mid-term business plan, we aim to achieve the established numerical targets (sales of 235 billion yen, operating income of 43 billion yen, ordinary income of 44 billion yen, net income of 33 billion yen, and operating margin



of 18.3%) by overcoming the negative impact on business caused by COVID-19. For this, we will focus on further expanding products that drive profits and creating new products designed for the future.

On April 1st of this year, the Planning and Development Division was established for the purpose

of accelerating the development of new materials in the three areas of “Information & Communication,” “Life Sciences,” and “Environment & Energy.” By 2030, which serves as the final year of the current long-term business plan, I believe it will be our greatest mission to create multiple business units from this division.

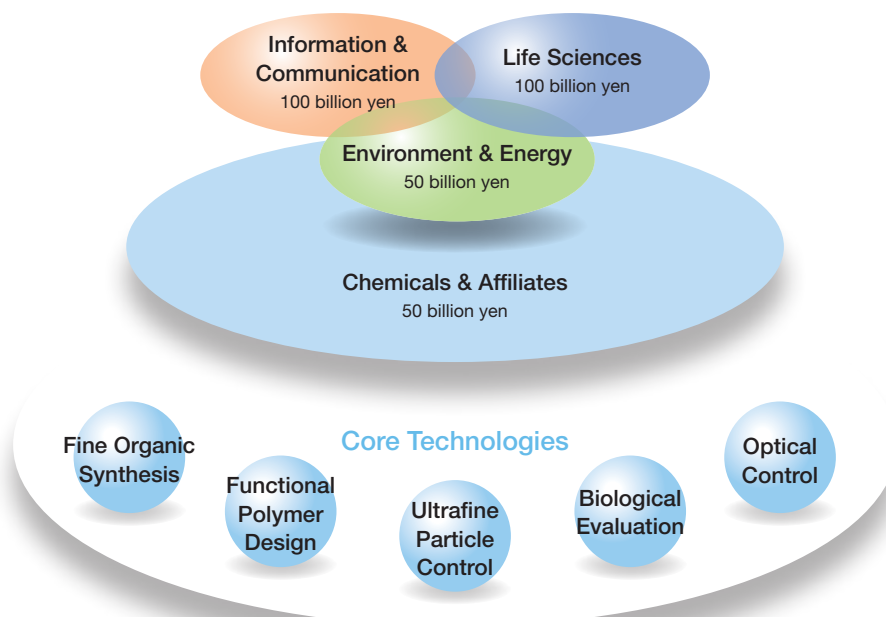
Corporate Vision in 2030

“A corporate group which provides new values for helping to enrich people’s lives by integrating internal and external knowledge with facing globally-changing society”

“A group of first-class pioneers who blaze a way to the future with enthusiasm by trusts they have built and skills they have cultivated”



Sales Target in 2030 and Our Core Technologies



Toward the Realization of a Corporate Image for a New Era

We will build a business portfolio that is resilient to changes in business environments and review the state of our business units.

One of our long-term challenges moving forward is building a stronger business portfolio. In particular, due to COVID-19, building a business portfolio that is not easily affected by business environmental changes is a very important management issue, a matter that has attracted our attention. Our biggest challenge is to create new businesses and new products, especially products designed to be competitive niche-top products. In that sense, I am looking forward to the incubation function of the newly established Planning and Development Division.

At the same time, reviewing existing businesses is also an issue, especially for improving the profitability of our ammonia-based chemicals business and rebuilding

our pharmaceutical business. Further effort for smart agriculture, etc. is also a terrific theme. Among them, agrochemicals, which are our main products, are business-to-consumer products which are the closest to the market in our product group. In order to gain a better understanding for the actual conditions of the market as well as the conditions that farmers face, we are considering having primarily young employees stay in agricultural communities to conduct agricultural surveys.

As another long-term challenge, we are reviewing reorganization of our current business units which are categorized by product to by market.

We will proactively promote CSR management and work to solve social issues as well as contribute to local communities while taking ESG and SDGs into consideration.

Another long-term challenge is the active promotion of CSR (corporate social responsibility) management. Contributing to the resolution of social issues based on ESG and SDGs established by the United Nations, it is very important to clearly establish the important issues to tackle in order to realize the corporate vision in 2030 or future corporate vision in 2050. Continuous improvement of Responsible Care (RC) activities is one of those issues in which we work to reduce greenhouse gas (GHG) emissions as a measure for climate change mitigation. The most significant result achieved from

our efforts was the conversion of raw material and fuel from naphtha to natural gas for ammonia production at the Toyama Plant, which resulted in a large improvement in our energy consumption rate. We will continue to promote the reduction of GHG emissions by improving processes while making necessary investments in other plants as well.

In addition, as an initiative aimed at biodiversity, we are participating in Japan Business and Biodiversity Partnership and proactive in related activities. We have been operating a biotope at the Toyama Plant which is opened to the community. In the future, we aim to develop environmental conservation activities, such as biotope operation, in all areas where our plants and research institutes are located.



Nissan Bio-Park Nishi-hongo (Toyama)



While working to maximize profits and cash flow, we will build a BCP system to prepare for all risks.

The biggest challenges in mid- and short-term are maximizing both profits and cash flow. We will concentrate management resources on products that are the source of growth and new products development. At the same time, in the area of research and development (R&D), we will revise/abolish research themes based on market needs and review the allocation of research personnel. During this time, it is also important to reduce assets through means such as business unit cost reduction, close inventory examination, and optimization.

Furthermore, as measures against risks, we will build

a flawless BCP system by taking measures against a wide range of risks that threaten business continuity, including natural disasters such as earthquakes which could occur directly under the Tokyo metropolitan area, and endemics such as COVID-19, climate change, etc. Regarding risk assumptions, I think we are now being questioned for our ability to use our imagination to make various hypotheses. Since last year, when I visited plants and research laboratories, I repeatedly told employees “Be prepared”, before the current spread of COVID-19. Now I think it is the time for each employee to be thoroughly prepared themselves.

We will strive to improve productivity by incorporating cutting-edge digital technology and develop human resources capable of responding to matters.

Another important challenge in the mid- and short-term is productivity improvement. We will actively promote digital transformations that utilize digital technology to respond to drastic changes in the business environments and establish a competitive advantage. How to realize labor savings in preparation for the future decrease in the labor force as well as the stable and safe operation of the plants through the latest digital technology are very important issues. Moreover, in the area of R&D, by accelerating development particularly in materials area and conserving labor from routine office work, we aim to

transform into a corporate group that demonstrates high productivity. For this, I would like to see Nissan Chemical become a company that can utilize not only high-performance computers (supercomputers) as the latest technology but also quantum computers in the future. In addition, the development of human resources who handle such cutting-edge technologies is also a very important challenge. Through verification of telework conducted in order to reduce the risk of COVID-19 infection, we will strive to create and provide an environment in which employees can maximize their potential and improve productivity.

Closing

It is expected that the COVID-19 crisis will not end in just a year's time. This means that we will conduct business in a more unpredictable economic environment more than ever before. Our Group will ensure the grasp of change in any situation and strive to establish a strong business foundation by grasping and steadily implementing measures to tackle various issues, promote environmental awareness and social contribution activities, and will work to become a corporate group that is trusted by all stakeholders. I hope we can rely on your understanding and support in the future.



Message from the CFO

We will actively return profits to our shareholders while focusing on investment to research and development.



MIYAZAKI Junichi

Director, Senior Executive Vice President, CFO

About Our Financial and Capital Strategies

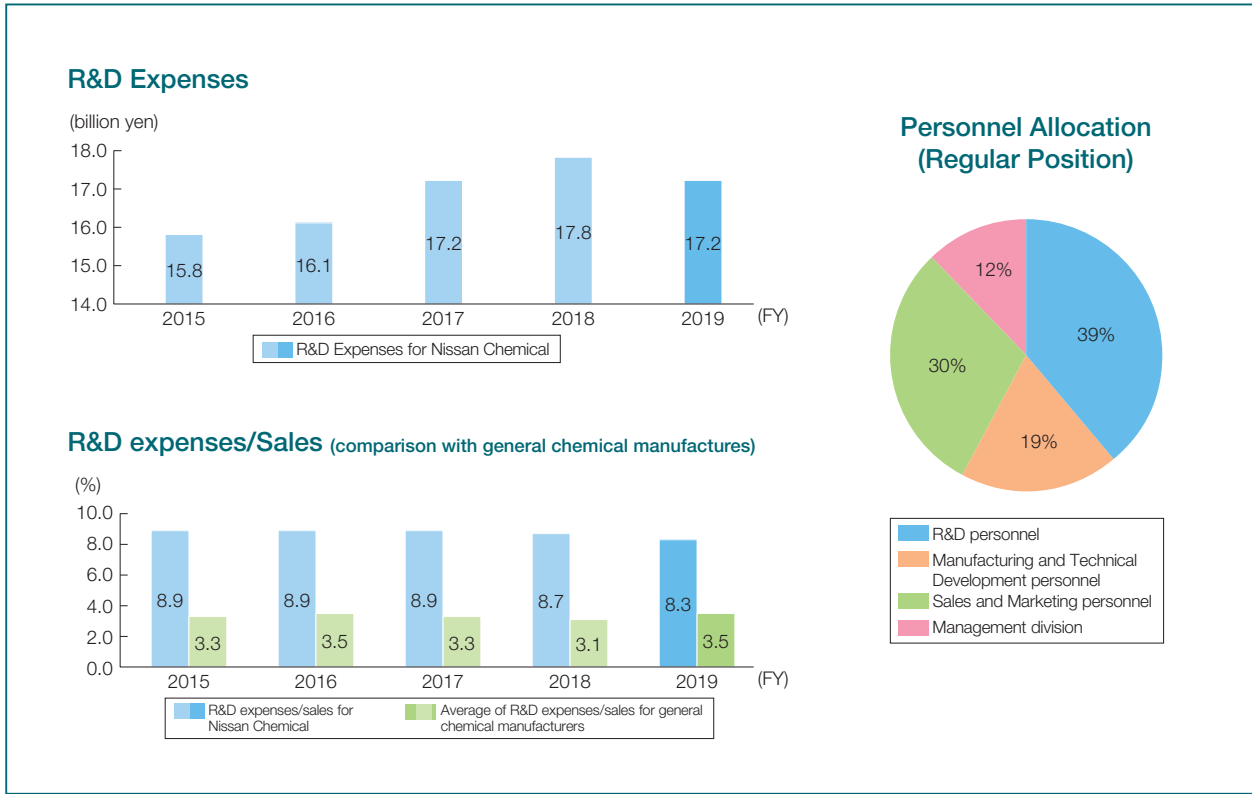
Continuing to maintain an ROE of 16% or higher by placing the highest priority on it as a management index.

The basis of our financial strategy is to place the highest priority on ROE (return on equity) as a management index. We have maintained this policy since the middle of 2000s, and aim for an ROE of 16% or more in the “Vista2021” mid-term business plan (2019-2021). In FY2019, we achieved an ROE of 16.9% and maintained it at a high level, which is more than double an ROE of 8% that is generally regarded as acceptable.

The reason why we place great importance on ROE is rooted in our corporate philosophy “We contribute to society in harmony with the environment, based on our excellent technologies, products and services”. To achieve this, instead of following the idea of producing mass volumes of cheaper products like many other general chemical companies do, our strategy is to create high value-added products and provide them to niche markets.

As a management index which reflects this business strategy, we decided to place importance on an ROE that matches the business concept of producing high value-added products using limited resources called “equity” (shareholders’ equity) to make profits. Our ROE has continued to rise since being recorded at 9.5% in FY2011.

The financial impact caused by the global spread of COVID-19, which began in the latter half of FY2019, is relatively small at the moment. Among our business domains, Agricultural Chemicals and Pharmaceuticals are not easily affected by economic trends, and demand for Performance Materials, such as materials for semiconductor and display, is currently strong. However, since there is no prospect of eradicating COVID-19, I think it is necessary to pay attention to future trends.



About Our Investment Plan

We will continue to develop our own innovative technologies and meet the demands of society.

We aim to change society for the better by constantly creating innovative technologies and reflecting those technologies in our products. For this, we are actively investing in research & development (R&D). While the average of sales-to-R&D expenses ratio (R&D expenses/sales) in the chemical industry is 3% to 4%, our sales-to-R&D expenses ratio for FY2019 is 8.3% (annual investment of about 17 billion yen). It has maintained a high level (8% to 9%) for around the past 10 years. The majority of the breakdown is investment in Performance Materials and Agricultural Chemicals.

In terms of human resources, about 40% of employees of regular position are allocated as R&D personnel (non-consolidated basis). In this way, I can say that we are at a level where we can fully implement various fiscal policies while giving top priority to R&D investment.

Looking at past figures, our operating margin has maintained levels of 10% or more for 17 consecutive years from FY2003 to FY2019. This is a record that only one other company in the chemical industry can

claim to have. That is why the chemical industry is an industry where business performance is susceptible to changes in the economy and other business environments.

Our company, however, has secured profits without being affected by the external environments by creating new growth engines one after another, such as active ingredients for pharmaceuticals and veterinary pharmaceuticals, agrochemicals, and materials for liquid crystal display. Now that they are all fully matured, the major issue is that next new engines that will support our growth have not yet developed.

Although we have positioned regenerative medical materials and materials for displays and sensors as the next growth engines, they are still in the budding stage.

If these new lines of business are launched in the future, some level of capital investment will be required. All of the current growth engines are also created from steady R&D, and, in that sense, we will continue to firmly secure about 9% of the sales for investment in R&D.

Capital Efficiency and Shareholder Returns

We have achieved a total shareholder payout ratio of 75%, including dividends and share repurchase.

We place great importance on returning profits to our shareholders. The dividend payout ratio (dividend net/income per share) was around 30% until FY2015, but has been gradually increased since FY2016 to 42.8% in FY2019.

In regard to capital efficiency, as I have already mentioned, ROE is given importance and the amount of shareholders' equity is controlled. We have been aggressively pursuing share repurchase to improve our ROE. Although the amount reached 10 billion yen in FY2019, the repurchased shares were basically canceled in the same year. This makes it possible to actively return profits to our shareholders, including dividends and share repurchase.

As a result, the total shareholder payout ratio ((total dividend + share repurchase)/net income) has been over the 70% range since FY2015 and was 75.1% in FY2019. Considering that the average total shareholder

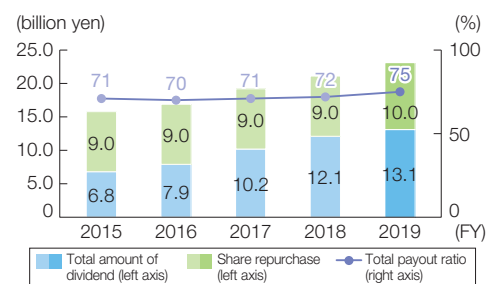
payout ratio of Japanese companies is about 45%, it can be said that ours is at a fairly high level. The total payout ratio target for 2020 and 2021 as provided in "Vista2021" is 75% (dividends of 45%, share repurchase of 30%).

Furthermore, the equity ratio is currently over 70%, and since financial stability is sufficiently secured, I believe that it is not necessary to accumulate a larger amount of capital. Both cash and deposits are at a sufficient level, and we are in a very favorable state in terms of cash flow. I am able to say that we can continue to utilize this cash for investment and shareholder returns as needed.

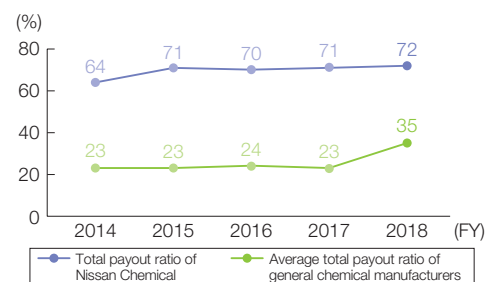
While proclaiming the importance of shareholder returns, some companies are reluctant to commit to investors in terms of total payout ratio, etc. As promised, we will continue to stick to our policy of being committed to investors without change.



Total amount of dividend/ Share repurchase/Total payout ratio



Total payout ratio (comparison with general chemical manufactures)



Number of Dialogue with Stakeholders Held in FY2019

With Institutional Investors	306
With Individual Investors	2
With Analysts	49
ESG Related Dialogues	2



Financial results briefing

Dialogues with Stakeholders

We will make management decisions by referring to the opinions received via dialogues.

We make opportunities for dialogues with stakeholders such as institutional investors and analysts as much as possible, and actively explain and exchange opinions on mid- to long-term growth strategies and efforts to solve social issues through our business.

At briefings for individual investors, etc., since our business portfolio covers various domains such as Chemicals, Performance Materials, Agricultural Chemicals, and Pharmaceuticals, we want investors to fully understand the content of these business areas. As a result, we take time to explain to them about each business field in detail. Due to the characteristics of each business field, performance varies greatly depending on the season. Therefore, a special characteristic of our briefing sessions is that we disclose detailed quarterly performance information unlike other companies that provide performance information for the first half and latter half of a fiscal year. In addition, at the financial results briefings, we disclose financial strategies, capital policies, policies

related to shareholder returns and R&D in a summarized format so that they can be understood.

In regard to dialogues with investors, I personally conducted dialogues with 290 companies (180 companies in Japan and 110 companies overseas) in FY2019. This number together with the number of dialogues conducted by other personnel makes the overall number of dialogues held quite large.

Furthermore, we strive to be fair when providing information to domestic and overseas investors. Many companies provide an English summary of their financial results briefing materials a few days after publishing them on their website. In contrast, we disclose materials with a volume of about 90 pages in both Japanese and English at the same time. Fair disclosure - providing the same information in this way is extremely important to us and is highly regarded by overseas investors.

We will continue to provide more opportunities for dialogue with our stakeholders and strive to further enhance dissemination of information.

In the Spotlight

Initiatives for Discovering a Bee-Friendly Insecticide

A new insecticide that contributes to global agriculture and the environment

GRACIA®

GRACIA® is an insecticide that is effective against a wide range of pests yet safe, and also has limited impact on honeybees. We interviewed MIYAKE Toshio, Head of Biological Research Laboratories, about the product's special features and development process.



— At first, please tell us about the special features of GRACIA®.

GRACIA® is a high-performance insecticide for vegetables and tea that contains active ingredient fluxametamide consisted of isoxazoline-structure developed by our company. This product has three main features. Firstly, GRACIA® acts fast against a wide range of pests. Generally speaking, insecticides produced in recent years have high selectivity and are effective only against a specific group of insects to ensure their safety to humans and low impact on the environment. In contrast, GRACIA® is an excellent insecticide that acts on a wide variety of pests and is highly safe for humans and non-pest organisms. The second feature is its new chemical structure and mode of action, so it can effectively control pests such as diamondback moths and thrips, which are resistant to conventional insecticides. The third feature is that it has limited impact on honeybees or bumblebees, which play important roles in the pollination of crops. As the mass deaths of European honeybees continue in Europe and the United States and regulations on neonicotinoid pesticides become more stringent, GRACIA® is attracting attention as a “bee-friendly insecticide”.

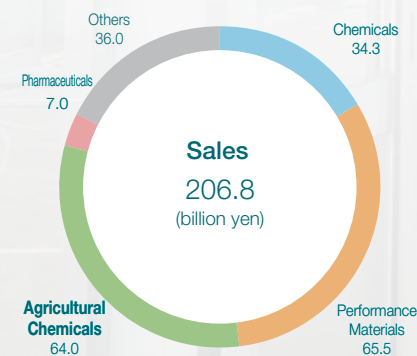
MIYAKE Toshio

Managing Executive Officer

Head of Biological Research Laboratories



Agricultural Chemicals Business Positioning (FY2019)



Changes in Organic Synthetic Agrochemical Regulations

1939	Discovery of DDT's* insecticidal action	
1940s/1950s	Quality Control Standards Agricultural Chemicals Regulation Act (1948)	Manufacture
1960s/1970s	Major Revision to the Agricultural Chemicals Regulation Act focusing on human safety and environmental persistence (1971)	Mammalian Toxicity
1980s/1990s	Standards for proper implementation of agricultural chemical toxicity testing Good Laboratory Practice (GLP) for Agricultural Chemicals (1984)	Experimental Facilities
2000s/2010s	High level of safety environmental fate for the environment/ Environmental biological effects	Environment

* Dichlorodiphenyltrichloroethane



– What prompted the development of GRACIA®? Could you please also explain about its commercialization background?

Since long ago, as one of our pesticide creation policies, we had the idea of creating a versatile insecticide that could be used for a wide range of crops. From the end of 2003, we started a research on isoxazoline compounds. By creating completely new compounds and combining partial structures of known active compounds of insecticides, we were able to obtain compounds with insecticidal activity close to those of our current GRACIA® as early as 2005. However, at this point, the only positive attribute was the effect, and it was completely useless in terms of safety to mammals and environmental organisms, soil persistence, etc. The synthesis cost was high as well, so it was far away from practical use. From that time until around 2010, it took about five years to solve each issue, including safety, and we were the first in Japan to verify its effects on honeybees. Eventually, as a result of various experiments and verifications at internal and external evaluation facilities, we succeeded in commercializing GRACIA® and started selling the product in South Korea (2018) and in Japan (2019).

– Why is GRACIA® a safe insecticide that has little impact on honeybees?

To be precise, there are some parts that are still unknown about it, but this is my idea: Insecticides are absorbed through the mouth and skin of insects and affect on the target site in the body, causing pests to die. This is also true for bees, but GRACIA® (fluxametamide) showed different result. We speculate that honeybees have the ability to metabolize (decompose) GRACIA® in the body from the results of our research. I also imagine that the reason why it does not work on bumblebees, which are used for pollination of tomatoes, is the same as for honeybees.

– What are the benefits of using GRACIA® for farmers? Also, in what way does it contribute to society?

For the farmers who are using it, it is effective against pests associated with a wide range of crops. It is also gentle on honeybees and there is no issues regarding resistance to it, so I think that it is a very easy-to-use insecticide for pest management. After GRACIA® was put on the market, I hear that it is very popular and there are few complaints from farmers. Also, this is a common tendency among pesticides in recent years, but since it works even in low concentration, so GRACIA® contributes to society by reduction of amount of chemical and burden on environment. Sales are also strong and it is a product that greatly contributes to our business.

– Please tell us about future development policies at Biological Research Laboratories.

While having an awareness of the top share of the domestic market in Japan, we will closely examine the situation of overseas markets, especially the Asian market, consider the needs of the region, and move ahead with the development of agrochemicals that are suitable for the environment while coordinating with our Agricultural Chemicals Division.

In addition, research is being carried out globally for “biopesticides” that utilize the action of microorganisms, insects, etc. as agrochemicals that are friendlier to the environment than conventional agrochemicals. Our laboratories would also like to contribute to the development of agriculture in the world by working on the research and development of “biopesticides” while making use of the experience and technology cultivated in conventional agrochemical development.

Unraveling the Mysterious Power of Living Things Through Experiments

We interviewed two researchers of Biological Research Laboratories who struggled on the mode of action analysis of fluxametamide and the elucidation of the factors of selectivity in order to elucidate the safety for honeybees, which is an important feature of GRACIA®.

— Please give us an overview of the mode of action analysis and elucidation of the factors of selectivity that you were involved in.

ASAHI In regard to the mode of action analysis work that I was involved in, at the stage of observing the biological activity of fluxametamide, it became known that pests die in a very unusual excitatory symptom, which is different from how they die using conventional insecticides.

INADA There are several types of excitatory symptom, such as leg cramps and violent shaking, but in the case of fluxametamide, it was different from the previous patterns in that pests started shaking their heads firstly. The phenomenon that the intense excitatory symptom sustained for a long duration was also unique.

ASAHI So, in order to visualize symptoms that haven't been felt to this extent before, we made charts of contraction pattern of the insect body surface using a device called a transducer.

Looking at this chart, I noticed that it resembles the pattern of existing agents that act on GABA (gamma-aminobutyric acid) receptors. Fortunately, we had a relationship with a university professor who is studying GABA receptors in insects, so we requested to conduct joint research. From that, we were able to clarify that fluxametamide acts on GABA receptors as expected and binds different position compared to

existing GABA inhibitors. As next step, we investigated whether fluxametamide acts same or differently on GABA receptor of different species using artificially expressing GABA receptors in frogs oocytes.

— As the next step in the mode of action analysis, you moved on to elucidating the factors of selectivity as to how it affects honeybees, right?

ASAHI Yes. As we proceeded with development, somehow we found out the effect on honeybees was minimal. It means that fluxametamide is actually bee-friendly. When developing it as a new insecticide, we thought the explanation why the mechanism of the insecticide has limited impact on honeybees would be selling point, so I proceeded with research to clarify related factors.

INADA Before commercialization, we also had the responsibility to explain properly to consumers the reason why it has minimal impact on honeybees.

ASAHI At first, I thought that fluxametamide would not act on the GABA receptors of honeybees. When I tested it, however, I found that it acts as strongly on them as on other pests. So this time I decided to use honeybees and common cutworms to investigate how fluxametamide was actually taken into the body and how it was metabolized (decomposed).



INADA At first, it was confirmed that treatment with a metabolism inhibitor added to fluxametamide increased the insecticidal effect on honeybees but did not change it with common cutworms. Therefore, I thought that metabolism may have an effect on this difference. When we analyzed the metabolites in the insect body, we found that honeybees often metabolized fluxametamide whereas common cutworms did not.

ASAHI As a specific experimental method, we prepared insects treated with agents and froze them after 1 hour, 2 hours, and 24 hours. After each insect was homogenized, an extract was obtained and component analysis was performed to analyze what kind of metabolite was contained in the extract. From the analysis pattern, we speculated how fluxametamide is metabolized in the insects' bodies.

INADA From those results, we came to the conclusion that, unlike pests, honeybees metabolize fluxametamide in the body. This means that fluxametamide does not reach GABA receptors in honeybee and hence they are less likely to be affected.

— What were the really difficult points in regard to conducting research and development?

ASAHI There were many difficult points. It took much time to clarify mode of action. In particular, it took a considerable amount of time to assemble a test system using insect GABA receptors.

The series of tests to evaluate agents that act on the nerves of insects was a test that I had no experience with, so I went to an external research institute to learn the method and set up the equipment. It took time at the stage.

As to insect metabolite analysis, since compounds obtained from one small insect, such as honeybee or

common cutworms was very small, so it was very difficult to determine the analysis conditions. In addition, in the analysis of honeybees, there are many impurities such as honey, so it took time to examine the conditions for pretreatment of the sample until only the target fluxametamide and its metabolites could be analyzed.

— Please tell us if you have any products that you would like to develop in the future, work dreams, etc. as you continue your R&D work.

ASAHI Although GRACIA® is a bee-friendly insecticide, I am concerned that it acts on their GABA receptors. Therefore, I would like to find a compound that can create appeal for complete selectivity at the mode of action level.

INADA In recent years, technological advances have made it possible to design compounds with AI (artificial intelligence). In addition, next-generation sequencers have made it easier to obtain genetic information, and I hope to utilize these latest technologies for efficient research.

ASAHI Me too. I also want to make full use of these technologies to aim for agrochemical development that is more versatile, safe, and secure. The development of GRACIA® took more than 15 years. By the time I joined, the compound itself had been discovered and some research had been done. I am very grateful that I was able to take part in such project while feeling the thoughts of many people who had been involved in its development until then. I hope this experience will be used as an important source of future research.



INADA Makoto

Agricultural
Chemicals
Research &
Development
Department
Biological Research
Laboratories

The History of Nissan Chemical

1887-

Founded under the founding spirit "to dedicate ourselves to prosperity of the nation by agricultural fertility" aiming to solve food issues.

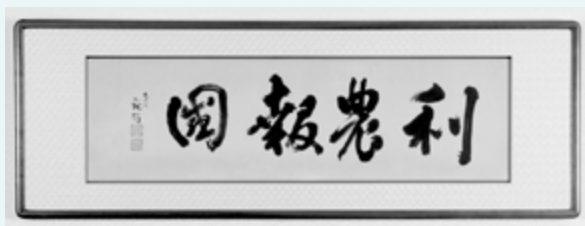
Dr. TAKAMINE Jokichi is referred to as the "Father of Biotechnology." Tokyo Jinzo Hiryo, Nissan Chemical's predecessor organization, was started in 1885 when the young TAKAMINE Jokichi brought phosphoric ore from the US back to Japan.

Takamine, who strongly felt the need for improve the fertilizer used in Japanese agriculture to help make Japan a modern nation, approached SHIBUSAWA Eiichi, known as the "Father of Japanese Capitalism," the following year with the idea of the commercialization of fertilizer. SHIBUSAWA Eiichi, who was from a wealthy farming family, deeply agreed with Takamine's proposal, and as a result established Japan's first chemical fertilizer company in 1887 becoming chairman (president) himself.

With the Company policy "to dedicate ourselves to prosperity of the nation by agricultural fertility," Japan's food production skyrocketed due to the enthusiasm and effort of the pioneers who led the Company in its early days.



1891 Jinzo Hiryo advertisement from an agricultural magazine



Calligraphy by MASUDA Takashi (first president of Mitsui & Co., Ltd) who served as an executive for Jinzo Hiryo, a position that his eldest son Taro would also hold.



SHIBUSAWA Eiichi (second from left) visiting Oji Plant just after the completion of the three-company merger. Seen on the left is TANAKA Eiichiro who served as company president from 1923 to 1941.



The land in Ojima 1-chome, Koto-ku, Tokyo, now known as Kamayabori, had been selected for its convenience in transporting raw materials and products. In 1888, the production of superphosphate (fertilizer) started.

(million yen)



■ Sales (left axis) — Operating margin (right axis)

Worsening pollution issues

Post-war recovery

Food shortages in Japan

- The graph below shows changes in sales and operating margins for the Nissan Chemical on a non-consolidated basis from 1950 to 1976 and for the Nissan Chemical Group on a consolidated basis from 1977 to 2019.
- The figures for November and the following May or October and the following April are totaled so that the figures for the year are close to the March results.

1965-

Acquisition of new technological ideas through entry into the petrochemical business

In the 1950s, as domestic imports of petrochemical products expanded and the momentum for domestic production increased, we established Nissan Petrochemicals in 1965 and entered the petrochemical business, starting with the production of higher alcohol. However, the petrochemical industry experienced a structural slump due to the impact of the two oil crises of the 1970s. The Company worked to rebuild its business, but it was unable to improve its profitability and began rationalization. The company exited the petrochemical business in 1988. Although entry into the petrochemical business resulted in a large deficit, the development of this business brought the penetration of technological ideas to the Company, which led to the development of new technologies and businesses such as fine chemicals.

1989-

Becoming a future-creating enterprise that responds to social needs

In 1989, we launched our Five-Year mid-term business plan oriented with two pillars: high-tech fields such as agrochemicals and pharmaceuticals, and traditional technology fields such as functional products and chemicals. The results of continued R&D investment in this difficult situation emerged. By the early 1990s, we released a large number of agrochemicals on the market, and in the late 1990s, while our liquid crystal alignment material grew significantly, we entered the semiconductor field. In the 2000s, sales of Pitavastatin calcium, the active ingredient of LIVALO®, an anti-cholesterol agent, increased significantly and we acquired exclusive marketing rights in Japan to ROUNDUP®, the world's largest herbicide. Since then, new agrochemicals have been introduced, and in 2013, we began the shipment of fluralaner, an active ingredient for veterinary pharmaceutical, which is one of the main products at present. In 2018, the Company had already been transcending the framework of industry in the development of its business and will accelerate this effort toward the future. In order to clarify this stance, we changed our name to Nissan Chemical Corporation.



Nissan Petrochemicals Chiba Plant (1968)



Toyama Plant



GRACIA®



Worsening of global environmental issues

Diversification of values and lifestyles





Development and spread of information technology

Population aging

High economic growth → Stable growth

Worsening of food issues mainly in developing nations

Main Products

	Before 2000	After 2000			
Chemicals	<p>1964 Melamine This is widely used as an adhesive agent for plywood, laminated sheets, molded products, resin finish for fabric and paper, and paint. It is highly aesthetic and offers a substantial level of quality. As a pioneer of its own high-pressure process, Nissan Chemical supplies products both domestically and internationally.</p>	<p>1965 HI-LITE® Chlorinated isocyanurate is the main ingredient in this product, which is used for sterilization and disinfection of swimming pools and water purification tanks, and thus contributing to public hygiene.</p>	<p>1978 TEPIC® TEPIC® is an epoxy compound which possesses excellent heat resistance, weather resistance, and transparency. It is widely used in semiconductors, LEDs, and substrate-related electronic materials as well as in powder coating curing agents.</p>		
	<p>1951 SNOWTEX® SNOWTEX® is a colloidal solution in which ultrafine particles of silicic acid anhydride are dispersed in water using water as a dispersion medium. Utilizing various functions, it is used for a wide range of products such as batteries, coating materials for optical films, electronic substrate materials, and abrasives for manufacturing electronic recording media.</p>	<p>1989 SUNEVER® SUNEVER® is a polyimide-based liquid crystal alignment material. It is used to coat the surface of the outer glass panels, to align liquid crystal molecules in a certain direction.</p>	<p>1998 ARC®*1 ARC® is an anti-reflective coating developed for semiconductor lithography. It is used to coat the part under the photoresist, to resolve a number of issues with lithographic exposure such as reflection from varying substrate levels. This makes it possible to significantly reduce the device failure rate.</p>		
Agricultural Chemicals	<p>1989 SIRIUS® To meet the needs of farmers, we develop and sell a large number of one-shot herbicides for paddy rice. The main component of these herbicides is SIRIUS®, our proprietary active ingredient.</p>	<p>1991 SANMITE® This insecticide / acaricide is effective against spider mites and rust mites in fruit trees, as well as spider mites and whiteflies in vegetables. We also market this product in about 30 overseas countries.</p>	<p>1994 PERMIT® We market PERMIT®, our proprietary active ingredient which is particularly effective against cyperaceous weeds, in Japan under the trade names of HICUT®, which is a herbicide for paddy rice in the mid to late term that is highly effective against the pesky weed Eleocharis kuroguwai, and INPOOL® for lawns.</p>	<p>2002 ROUNDUP® We acquired business rights in Japan for ROUNDUP®, an herbicide used all over the world which has low toxicity to humans and animals and does not remain in the soil or in the environment.</p>	
	<p>1994 LANDEL® LANDEL® is a calcium antagonist which has shown to have a positive effect on hypertension and angina pectoris.</p>			<p>1994 LANDEL® LANDEL® is a calcium antagonist which has shown to have a positive effect on hypertension and angina pectoris.</p>	

FY2019

2005 AdBlue®²

AdBlue® is a high-grade urea solution used in “urea SCR system”, a technology for purifying emissions. When sprayed onto emissions from diesel vehicles, it breaks down nitrogen oxide (NO_x) into harmless nitrogen and water, which helps to reduce environmental impact.



2008 LEIMAY®
LEIMAY® is a fungicide that works in a specific way on diseases caused by oomycetes and myxomycetes used as an atomizing agent for potatoes, grapes, and vegetables.

2013 ALTAIR®
ALTAIR® is a wide-spectrum herbicide that is highly effective in eliminating bulrush and cyperaceous perennial weeds. It is also effective for weeds that are resistant to conventional sulfonylureabased herbicides. We market this product in Japan, South Korea, and China.



2013 Fluralaner
Fluralaner is a compound invented by Nissan Chemical Corporation used as an active ingredient in the veterinary pharmaceutical “BRAVECTO®³” developed by MSD Animal Health (MAH). It is manufactured by Nissan Chemical Corporation, and supplied to MAH as a veterinary pharmaceutical substance. Fluralaner has remarkable characteristics: it acts rapidly against major species of fleas and ticks and has a longer insecticidal effect than existing products as its effects remains even when highly diluted.

2018 GRACIA®
GRACIA® is a pesticide that was developed in-house that is fast-acting on a wide range of crop pests and has little impact on honeybees which are useful insects. Released in South Korea in 2018 and went on sale in Japan in 2019.

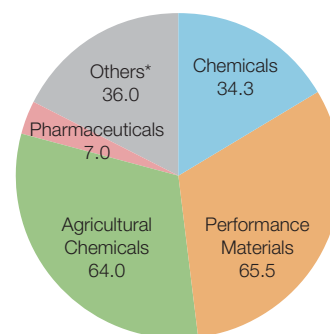


2003 LIVALO®

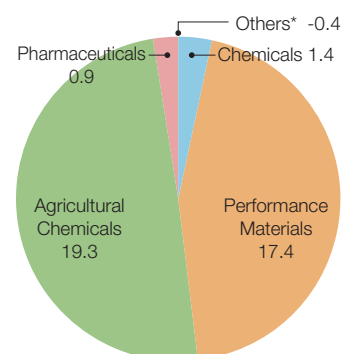
This is a statin agent that greatly reduces LDL cholesterol and causes fewer drug-interactions, offering the advantage of safety.



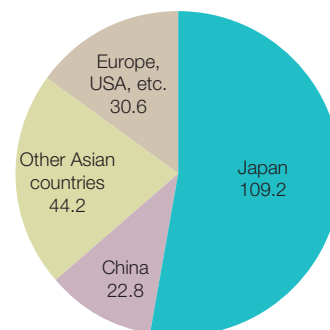
Sales according to segment (billion yen)



Operating income according to segment (billion yen)



Sales according to region (billion yen)



* Others: trading, others and adjustment

¹ ARC® is a registered trademark of Brewer Science, Inc.

² AdBlue® is a registered trademark of the Verband der Automobilindustrie.

³ BRAVECTO® is a registered trademark of Intervet International B.V. and Intervet Inc.

Process of Value Creation

Nissan Chemical Group is developing its business activities in four business domains based on the five core technologies those have been cultivated over the years.

We aim to achieve sustainable growth together with society by making effort at the materiality identified by recognizing various social issues and changes.



Social Issues and Changes

- Advanced climate change
- Global crisis
- Worsening health issues
- Increase of requests for CSR considerations in the Supply Chain
- Exacerbation of the food issues
- Labor shortage

Business Domains [P31 to 44] Outputs

Information & Communication

- Display Materials
- Semiconductor Materials
- Optical Interconnect Materials
- Sensor Materials

Life Sciences

- Agrochemicals
- Pharmaceuticals
- Veterinary Pharmaceuticals
- Biomedical Materials

Environment & Energy

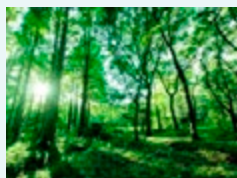
- Oilfield Materials
- Secondary Battery Materials

Chemicals & Affiliates

- Basic Chemicals
- Fine Chemicals

Outcomes [P29 to 30]

Resolution of Social Issues



Improvement of Company Value



Corporate Vision in 2030 [P5 to 10]

“A corporate group which provides new values for helping to enrich people's lives by integrating internal and external knowledge with facing globally-changing society”

“A group of first-class pioneers who blaze a way to the future with enthusiasm by trusts they have built and skills they have cultivated”

- Diversification of risk factors
- Intensification of inter-corporate competitions
- Changes in lifestyle
- Increase of requests for consideration of health and safety in the work environment
- Advent of a smart society
- Increase of interest in corporate governance reform
- Increase of requests for information disclosure

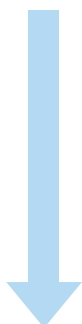
Materiality

Our group has identified the materiality needed to realize the corporate vision in 2030 as “A corporate group which provides new values for helping to enrich people’s lives by integrating internal and

external knowledge with facing globally-changing society”, and “A group of first-class pioneers who blaze a way to the future with enthusiasm by trusts they have built and skills they have cultivated”.

Materiality Identification Process

Gain Understanding About Social Issues and Social Changes



Social Issues and Changes

- Advanced climate change
- Global crisis
- Worsening health issues
- Diversification of risk factors
- Intensification of inter-corporate competitions
- Changes in lifestyle
- Increase of requests for CSR considerations in the Supply Chain
- Increase of requests for consideration of health and safety in the work environment
- Advent of a smart society
- Exacerbation of the food issues
- Labor shortage
- Increase of interest in corporate governance reform
- Increase of requests for information disclosure

Based on our group’s long- and mid-term business plans, we clarified more than 500 keywords for social issues and social changes, referring to SDGs and ESG-related metrics and guidelines.

Keyword Collection



Keywords related to social issues and social change were classified by theme and collected to form 29 materiality factors.

Management of Impact on Our Group



In regards to the 29 materiality factors, we clarified the social issues and changes that are expected from now to 2030 and then made arrangements to manage the impact on the Group.

Importance Evaluation



We conducted an evaluation regarding the importance of materiality factors from two perspectives, that of our company and that of our stakeholders, based on the Group impact.

Opinion Exchange with Experts



We exchanged opinions about materiality factors with experts that possess a high degree of knowledge in various fields and also took the opinions of stakeholders into account.

Opinions from experts are found on our website. ▶ https://www.nissanchem.co.jp/eng/csr_info/management/materiality.html

Materiality Matrix Formulation



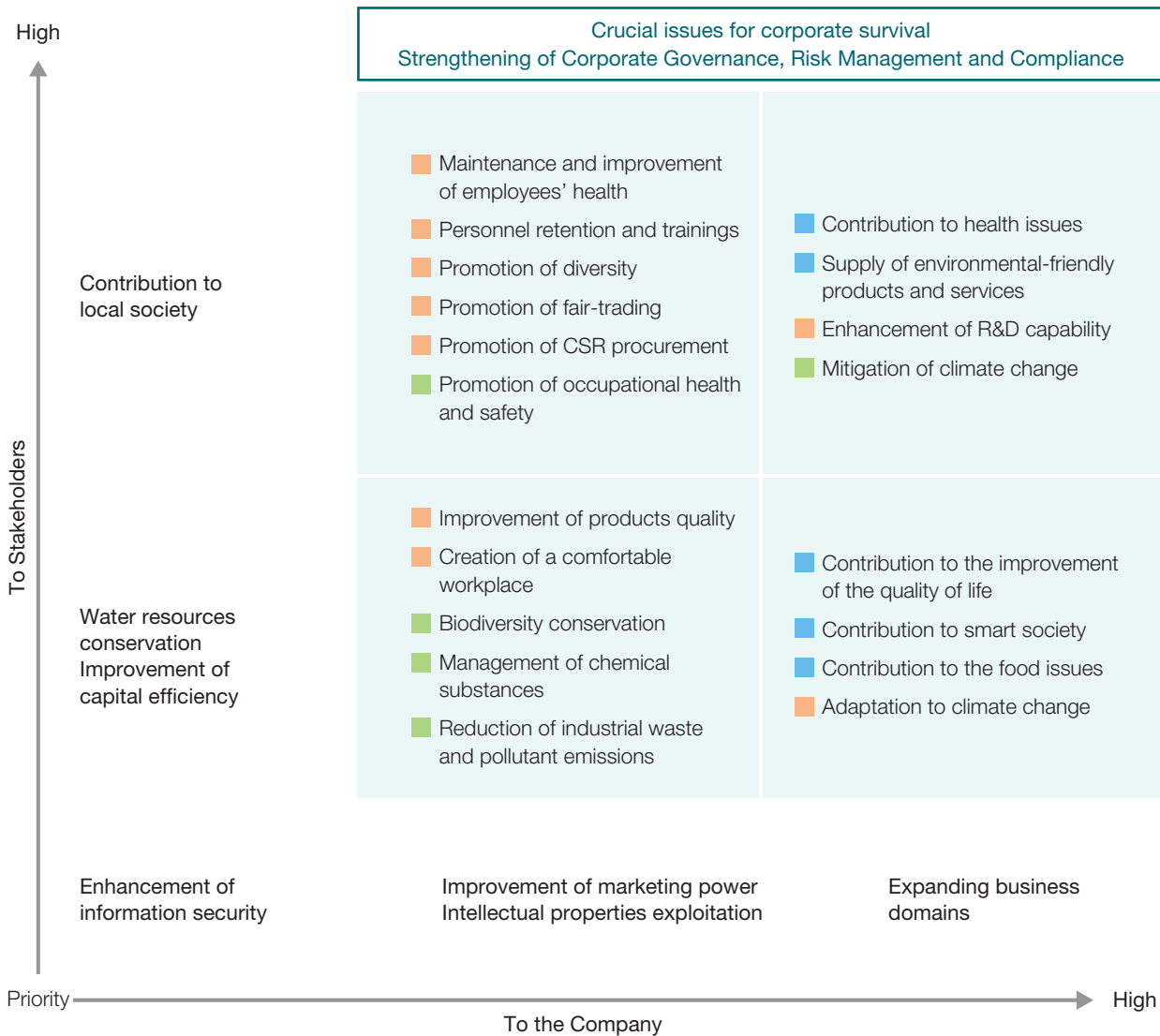
After numerous in-house discussions, we formulated a materiality matrix based on the opinions of stakeholders.

Materiality Identification (through resolution by the Board of Directors)

Total of 19 materialities was identified after discussions held by the CSR Committee based on the materiality matrix. The results of the meeting were then resolved by the Board of Directors.

Materiality Matrix









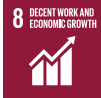







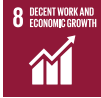




<ul style="list-style-type: none"> Provision of new value for helping to enrich people's lives 	<p>We aim to provide new value for helping to enrich people's lives through four businesses based on five core technologies.</p>
<ul style="list-style-type: none"> Strengthening of Nissan Group's business base 	<p>We aim to strengthen our business base to improve our ability to respond to increasingly diverse and sophisticated marketing needs.</p>
<ul style="list-style-type: none"> Continuous improvement of responsible care activities 	<p>We aim to enhance the maintenance of environment, health, and safety through the operation of the Nissan Chemical Responsible Care Management System.</p>



Materiality

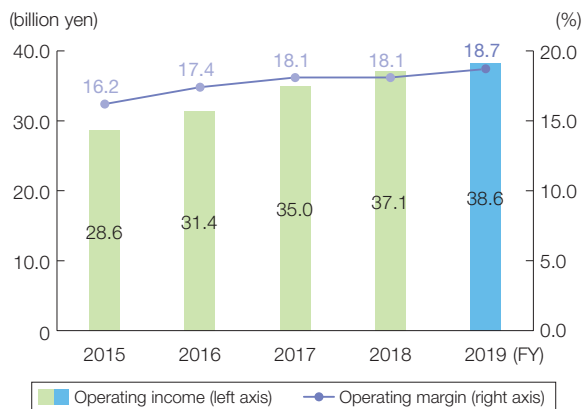
Materiality and KPI

Materiality	Factor	Our Initiative
<p>■ Provision of new value for helping to enrich people's lives</p> 	Contribution to health issues	Creation of pharmaceuticals that meet medical needs and biomedical materials that contribute to advanced medical care
	Supply of environmental-friendly products and services	Sale of high-grade urea solution for exhaust gas purification of diesel vehicles Development of energy harvesting materials that contribute to the utilization of unused energy
	Contribution to the improvement of the quality of life	Research and supply of veterinary pharmaceuticals for companion animals and sales of disinfectants for drinking-water
	Contribution to smart society	Development of sensor materials required for IoT and wiring materials that contribute to higher capacities and speeds of data communications
	Contribution to the food issues	Supply of agrochemicals to increase crop yields and conserve agricultural labor, and the expansion of veterinary pharmaceuticals to livestock
<p>■ Strengthening of Nissan Group's business base</p> 	Enhancement of R&D capability	Deepening core technologies, promotion of open innovation, and introduction of new technologies such as AI
	Improvement of products quality	Continuous improvement of management systems and operations based on quality policy
	Maintenance and improvement of employees' health	Review of health promotion measures by the health promotion committee and mental health checkups
	Creation of a comfortable workplace	Promotion of work-life balance, measures against harassment, and support for childcare and family care
	Personnel retention and trainings	Provision of educations and capability trainings, and introduction of overseas study program
	Promotion of diversity	Promotion of active participation of women, hiring foreign students and people with disabilities
	Promotion of fair-trading	Implementation of internal training on the "Act against Delay in Payment of Subcontract Proceeds, etc. to Subcontractors" and the insider trading regulations
	Promotion of CSR procurement	Conduct of assessment and audits of suppliers on CSR
Adaptation to climate change	Formulation of BCPs to prepare for the plants' inability to operate due to natural disasters	
<p>■ Continuous improvement of responsible care activities</p> 	Mitigation of climate change	Energy saving through equipment improvement and fuel conversion that leads to GHG emissions reduction
	Promotion of occupational health and safety	Establishment of an occupational safety management system and execution of capital investment in safety
	Biodiversity conservation	Operation of Bio-Park and support for the NPO "Kurohama-numa Shuhen no Shizen wo Taisetsu ni Suru Kai"
	Management of chemical substances	Minimization of negative impacts on human health and the environment throughout the life cycle of chemical products
	Reduction of industrial waste and pollutant emissions	Reduction of the amount of waste for final disposal volume by reusing and recycling waste and changing intermediate process methods

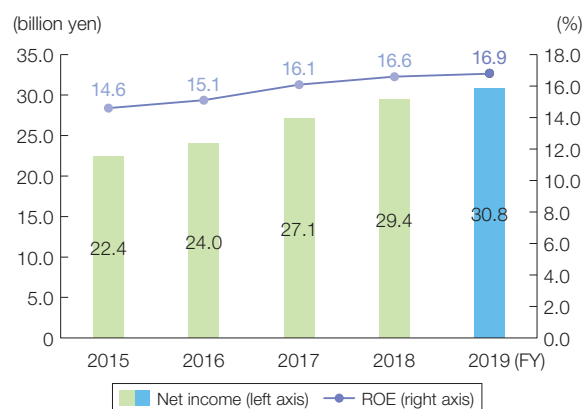
FY2021 Targets (KPI)	FY2019 Result	Relation with SDGs
License out candidates of drug agents	Started investigator-initiated clinical trial of anti-arrhythmic agent Researches underway to create new development candidates of active pharmaceutical agents	
Launch of new medical materials	Completed prototype of automatic culture device for FcEM®Cellhesion® Started shipments of prevelex® coated containers for testing and research use	 
Launch of new environmental-friendly products	—	 
Number of people positively impacted by the sales of disinfectants for drinking water: 2.5 million per year	900,000 per year (Shipping stagnation in FY2019)	 
Expanded adoption of sensors and semiconductor packaging materials/Adoption and launch of materials for optical communications	Full-scale sale of CMOS sensor materials and semiconductor packaging materials are expected to occur from 2022, and development of optical interconnect materials is in progress.	
Achieving 10% higher sales than in FY2018 by the Agricultural Chemicals Division	2.1% higher than FY2018 (FY2019 sales: 64,039 million yen)	
Reaching 1,350 patent applications in three years by FY2021	426 (FY2018: 454 patent applications)	 
Achieving 80% outsourcer audit rate in three years by FY2021	46%	 
Consecutively acquiring White 500 certification	Acquired White 500 certification for four consecutive years from 2016	 
Achieving ratio of taking annual leave of 80% or higher	73.2%	 
Achieving 10% more job training time per employee than in FY2017	10 hours (11 hours in FY2017)	 
Achieving proportion of females among employees in the regular position of 10%	9.6%	
Holding consultation meetings with Legal Office throughout the Group by FY2021	5% (Held zero consultation meetings in FY2019)	
Achieving CSR questionnaire survey coverage of 90% (in terms of monetary amount)	69%	
Formulating BCP where products account for 50% of ordinary income	Formulated BCP where products account for 38% of ordinary income	
GHG emission rate: Improving 20% from FY2013 level Energy consumption rate: Improving 20% from FY2013 level	GHG emission rate: Improved by 29% from FY2013 level Energy consumption rate: Improved by 21% from FY2013 level	 
Achieving zero accident requiring staff time off from work	Two accidents occurred requiring staff time off from work	 
Achieving 100% initiative for prefectures in which our Head Office, plants, and laboratories are located	83%	
Creating safety summaries of chemical substances of products that account for 90% of our total production	74%	
99.5% or more recycling rate Achieving 75% reduction of exhaust gas (SOx + NOx) emissions compared to FY2013	Recycling rate: 97.0% Exhaust gas (SOx+NOx) emissions: Reduced by 50% from FY2013 level	

Financial and Non-Financial Highlights

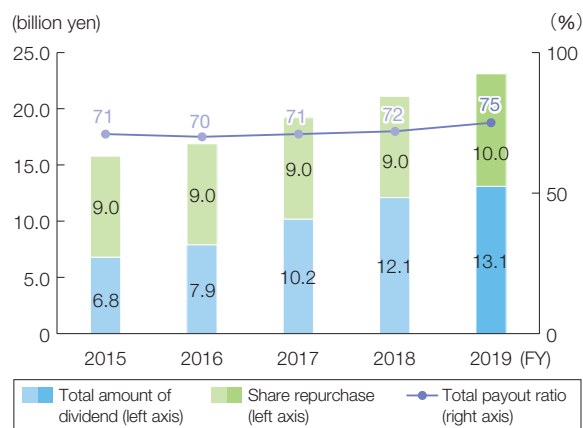
Operating income/Operating margin



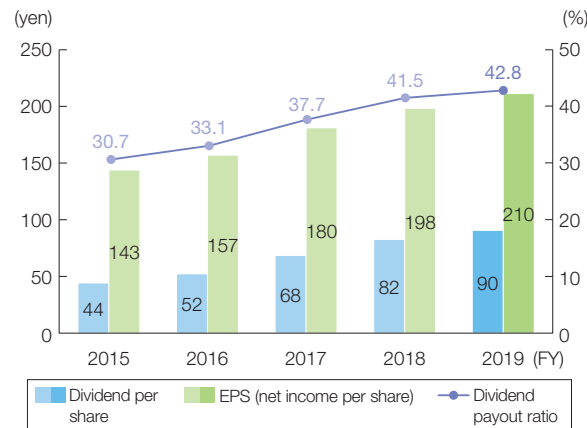
Net income attributable to owners of parent/ROE



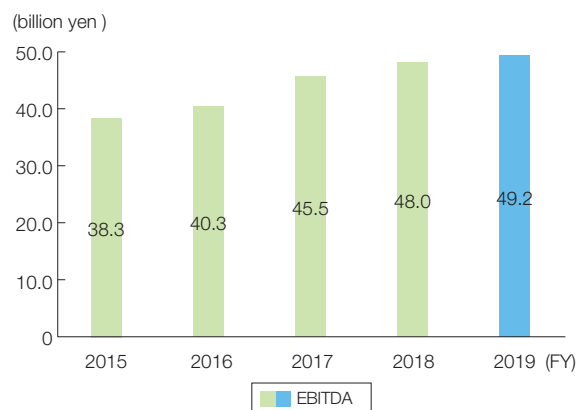
Total amount of dividend/Share repurchase/ Total payout ratio



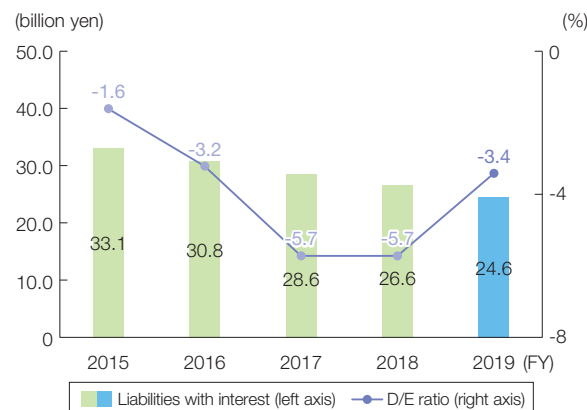
EPS (earnings per share)/Dividends/ Dividend payout ratio



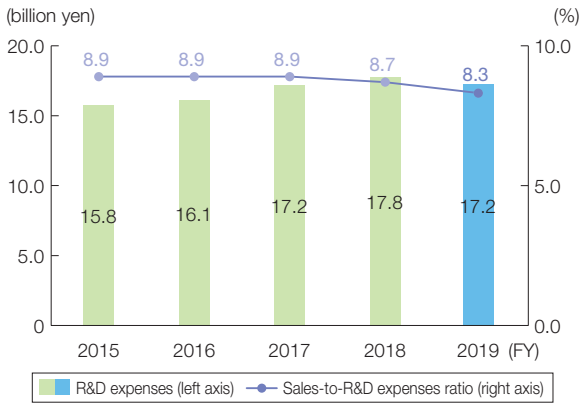
EBITDA



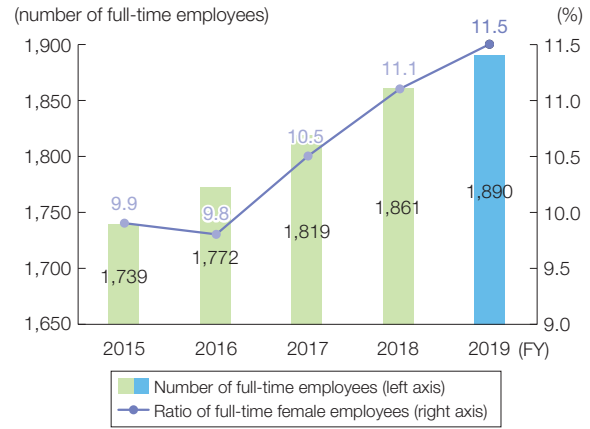
Liabilities with interest/ D/E ratio



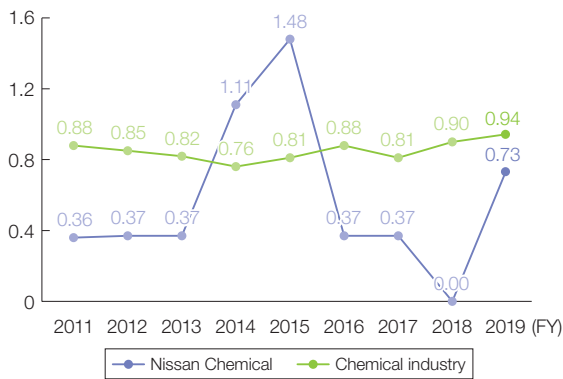
R&D expenses/Sales-to-R&D expenses ratio



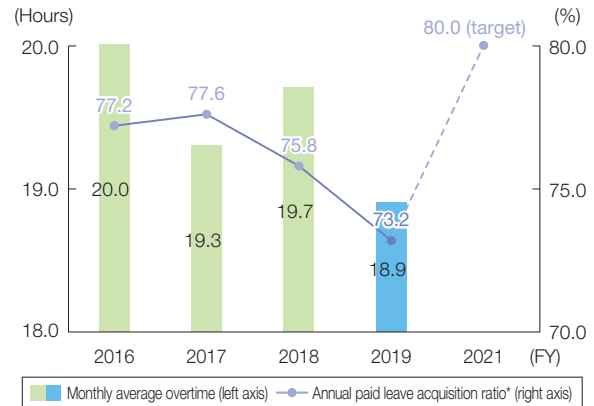
Number of full-time employees/Ratio of females among full-time employees



Lost-time injury frequency rate

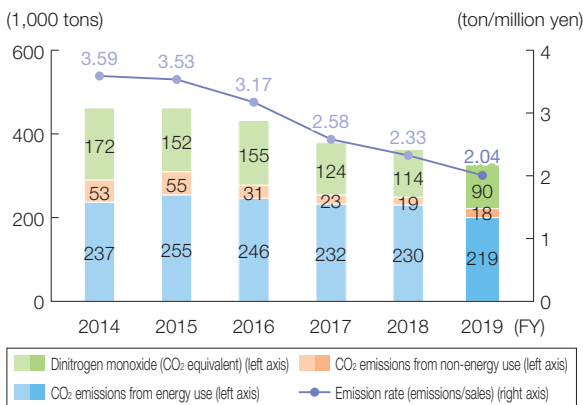


Monthly average overtime/Annual paid leave acquisition ratio

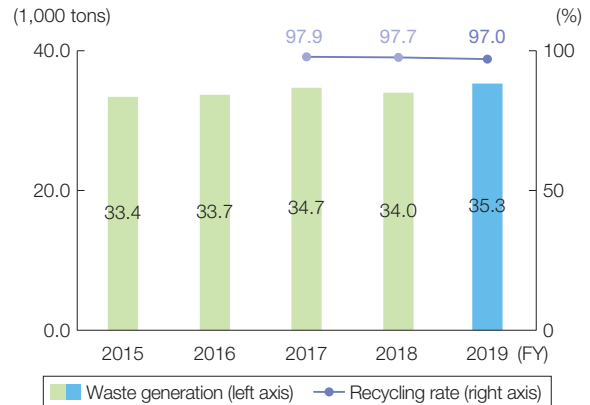


* Figures from FY2019 also include annual paid leave acquisition by managers

GHG emissions/GHG emission rate (emissions/sales)



Waste generation/Recycling rate



Business Strategies

Chemicals

Most of the products of this division are comprised of industrial chemicals, such as ammonia and sulfuric acid, and derivative products/high-purity products that have been developed downstream with added value. These products are supporting people's lives in a wide range of fields. By building an efficient production system, we strive to provide excellent products and technologies while reducing the environmental burden.

YOSHIDA Hajime
Executive Officer
Head of Chemicals
Division



Social Issues and Needs

With the advent of a smart society and worsening of global environmental issues, various types of needs in several fields are increasing globally. In addition to general industrial use, we currently provide excellent products and technologies in a wide range of fields to contribute to solving social issues. Efforts include providing high purity chemicals for electronic component manufacturing applications, a high-grade urea solution for removing air pollutants, and use of proprietary cyanuric acid derivatives for improving water quality.

In addition, we established a manufacturing and supply system for our high-grade urea solution AdBlue[®] that decomposes nitrogen oxide contained in exhaust gas from diesel vehicles, which is considered to be the cause of air pollution, into nitrogen and water, thereby reducing environmental impact.

* AdBlue[®] is a registered trademark of the Verband der Automobilindustrie.

Business Vision

Our Chemicals business started with the manufacture of sulfuric acid and ammonia, which are basic raw materials for fertilizer. We contribute to the realization of a prosperous, safe, and continuously developing society by providing materials used in a wide range of fields, from basic chemicals to high purity chemicals and cyanuric acid based high-performance products.

Fine Chemicals

Main products in this department consist of environmental chemicals, such as HI-LITE[®], used for sterilization and disinfection of swimming pools and water purification tanks, and Venus[®] Oilclean, a microorganism formulation that decomposes oils and fats in wastewater from food factories, as well as the high-performance chemicals TEPIC[®], derived from cyanuric acid that contains triazine ring, and melamine cyanurate. In addition to being used as a curative agent for coating powders, TEPIC[®] is seeing an increase in demand for use as an electronic material, for solder resist ink, sealants for LED, etc. Melamine cyanurate, which is also derived from cyanuric acid contains triazine ring, is used as a non-halogen flame retardant or an auxiliary flame retardant for various engineering plastics.

We are promoting research and development of proprietary cyanuric acid derivatives so that they can be used in a wider range of fields.

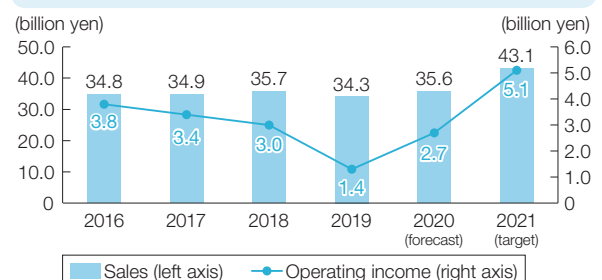
Business Overview

Basic Chemicals

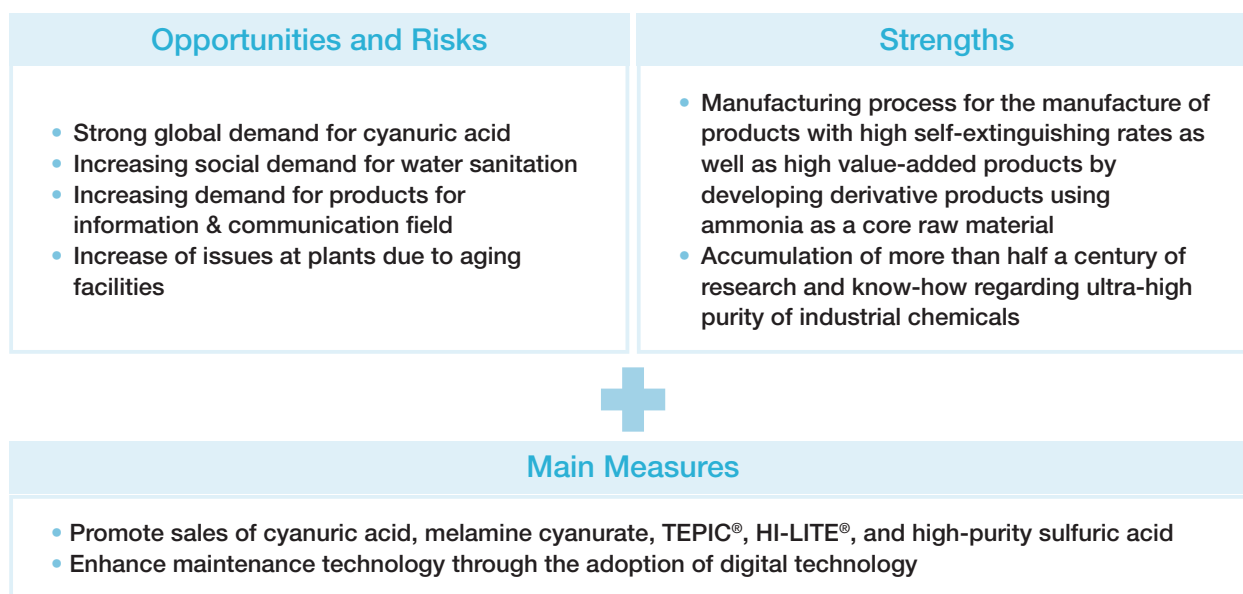
We provide industrial chemicals such as melamine, sulfuric acid, nitric acid, ammonia as well as our higher alcohol product FINEOXOCOL[®] to various industries. We are proud of its top-class production efficiency for melamine globally. Just as with our industrial chemicals, we are further improving the efficiency of our production system in order to create a stronger business structure against external factors such as a rise in fuel prices.

We are also manufacturing and supplying products to support cutting-edge fields, and providing products to the market such as high-purity sulfuric acid, nitric acid, aqueous ammonia and liquid ammonia from which impurities are removed to utmost level.

Business Results and Outlook



Stage II Business Strategies



Sources of Growth and Progress in FY2019

Cyanuric acid

Cyanuric acid is a material used in **TEPIC®**, **HI-LITE®**, and melamine cyanurate, which is used as a flame retardant. In order to provide **TEPIC®** and **HI-LITE®**, which are sources of growth of this division, to the market without delay, we are proceeding with the expansion of cyanuric acid production facilities in preparation of sales increases. Construction is scheduled to be completed in December 2020.

TEPIC®

The high-performance chemical **TEPIC®**, which has a distinctive triazine ring, is used in a wide range of applications. For electronic material applications, we expect that demand for **TEPIC®** will continue to grow in various fields, including the information & communication field (5G base stations for solder resist ink applications, substrates for autonomous driving, etc.). In FY2019, although we have been affected in this area by price competition from inexpensive Chinese products at the general-purpose grade level, we will promote a sales strategy that is well suited for the high-quality grade level.

HI-LITE®

“Clean Water and Sanitation,” one of the SDGs, is an important global issue. We have started exporting some grades of **HI-LITE®** since they have been certified as materials for disinfectants for drinking water in areas where hygiene management is insufficient, such as in developing countries. We have established the goal for FY2021 of contributing to the improvement of drinking water quality for 2.5 million people a year globally. Preparations are being made so that we will be able to respond to expanding demand.

High-Purity Sulfuric Acid

Demand for high-purity sulfuric acid is expected to grow in the information & communications field, a business field which will continue to grow. We also grasped the flow of maintenance investment plans of major semiconductor manufacturers to increase sales in FY2019 as well. We will continue to maintain high quality and high availability.

Business Strategies

Efforts Started After Stage II Initiation

The Chemicals business is susceptible to the effects of fuel prices, supply demand balance, and market environment. Therefore, we will continue to strive to secure stable earnings while flexibly reviewing business strategies in response to environmental changes.

We are focusing on the development and deployment of new products, mainly cyanuric acid derivatives, as a source of sustainable business growth. We started the full-fledged commercialization of STARFINE[®] (zinc cyanurate), from which effects as an additive for paints and adhesives can be expected. Together with the new grades of TEPIC[®], it has already been evaluated by many users for various purposes.



Dry film resist made with TEPIC[®]-VL (new grade TEPIC[®])

Provision of Products for Helping to Enrich People's Lives

High-grade Urea Solution (AdBlue[®])

AdBlue[®] is used in Selective Catalytic Reduction (SCR) which is a system for purifying nitrogen oxide contained in exhaust gas from diesel engines. When sprayed into exhaust gas, AdBlue[®] converts nitrogen oxide into harmless nitrogen and water, which helps to reduce environmental impact. Urea, the main component of AdBlue[®], is a substance which is so safe that it is used in cosmetic products as a moisturizing agent, pharmaceuticals, fertilizers, and so forth.

* AdBlue[®] is registered trademark of the Verband der Automobilindustrie.



AdBlue[®]

Venus[®] Oilclean

Venus[®] Oilclean is a microorganism formulation that decomposes oils and fats in wastewater from food factories and other facilities. Compared to the pressurized floating facility, which is a typical oils and fats in wastewater treatment system, the facility using Venus[®] Oilclean significantly reduces odors and workload as well as waste with simple equipment. Some major food factories have reduced the amount of waste derived from oils and fats to almost zero by introducing this product.

Performance Materials

We will contribute to the realization of a smart society by promoting profitability of display, semiconductor, and inorganic materials, the three pillars of this business, and further expanding business size through new product development.

ISHIKAWA Motoaki
 Managing Executive Officer
 Head of Performance
 Materials Division



Social Issues and Needs

With the expansion of IoT and 5G as well as the evolution of AI and autonomous driving technology, our current society is transforming into a smart society where diverse systems interact to provide advanced services to everyone. The semiconductors, sensors, and displays that bring these technologies to life are also required to evolve. It is also expected to provide products that help protect the global environment and solve energy issues.

Business Vision

In this rapidly evolving business, it is necessary to quickly and accurately grasp the needs and technological trends of the market and customers. For this, sales, research, and production, including overseas bases, are integrated, and we emphasize activities that are closely related to customers. In addition, we aim to contribute to the development of society by providing products and services that are useful to the world based on the high technological capabilities that we have cultivated.

Business Overview

Display Materials

SUNEVER[®], a coating material to align liquid crystal molecules in a certain direction, serves as our primary display material. This product was made available for sale in 1989, and we have expanded our market share by increasing the functionality of alignment materials, even when the liquid crystal type used is changed from TN to STN or TFT. In addition, we started the sale of Rayalign[®], a photo-alignment material for IPS liquid crystal, in 2014. This product is currently used in many smartphones that offer high screen resolutions. It is expected that product demand for Rayalign[®] will further increase in the future as tablet and monitor resolutions increase.

Semiconductor Materials

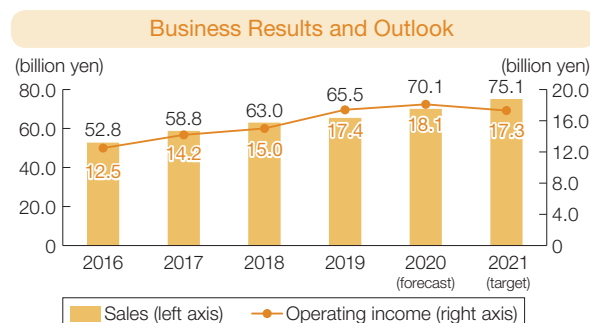
We started the manufacture and sale of ARC[®] *1 in 1998 based on a licensing agreement with US company, Brewer Science Inc. ARC[®] is a coating material designed to prevent issues such as irregular reflection and interference of light, and coating failure during micro-fabrication of the photoresist through lithography process. We launched OptiStack[®] *2 (multi-layer process materials) in 2007 which greatly expanded our business.

Currently, in preparation for the expected demand for EUV exposure technology (wavelength; 13.5 nm, semiconductor circuit width; 7 to 3 nm), we are developing EUV materials and also focusing on three-dimensional (3D) packaging technology preparing for the limits of optical shrink.

*1, *2 ARC[®] and OptiStack[®] are registered trademarks of Brewer Science, Inc.

Inorganic Materials

SNOWTEX[®], a nano silica water dispersion serving as a fiber processing agent, went on sale in 1951. Now we also offer organosilicasol serving as an organic solvent dispersion, and monomer sol, a product that can be used without solvent. These products are indispensable materials used in coating materials for optical films and in abrasives for electronic recording devices and for other purposes. We are aiming to further expand product applications, including use as an agent to increase oil and gas extraction efficiency.



Business Strategies

Stage II Business Strategies

Opportunities and Risks

- Increasing demand due to the development of the information & communication field
- Change in demand for shale oil due to fluctuations in crude oil prices
- Advent of innovative technology
- Intensification of inter-corporate competitions

Strengths

- A sales and research system closely linked to customers in China, Taiwan, and South Korea
- Optical Control Technology
- Functional Polymer Design Technology
- Ultrafine Particle Control Technology



Main Measures

- Develop and launch new products
- Improve existing products and expand their application
- Strengthen evaluation technology
- Improve and maintain facilities

Sources of Growth and Progress in FY2019

Liquid Crystal Alignment Materials for TVs

Currently, our major materials for displays are alignment materials for smartphones and tablets, and especially the photo-alignment material for liquid crystal IPS. In the future, we will also use them for TVs. Although demand for LCD TVs is predicted to decrease somewhat, we predict that demand for alignment materials will continue to increase based on screen sizes. Also, since we believe that screen resolutions will continue to improve, we recognize that it is an important theme to accurately respond to technical requests from customers and expand the market share of our products. In FY2019, we were able to increase sales of alignment material for VA liquid crystal in line with the increasing demand for TVs.

Agents to Increase Oil and Gas Extraction Efficiency

Crude oil development is concentrated in specific areas with excellent oil and gas wells and the production in those areas is increasing. However, it is said that extraction efficiency has reduced due to the phenomenon that oil recovery amounts have generally decreased due to crowded conditions in areas where wells are in close proximity. Based on this issue, we aim to improve extraction efficiency by developing applications for use of our inorganic materials. Sales were sluggish in FY2019 due to the fall in crude oil prices, falling below both FY2018 sales and planned targets. Under these circumstances, we will actively conduct field tests and strive to increase sales in order to focus on developing new applications for existing wells that are not easily affected by crude oil prices, including those outside the United States.



Shale oil drilling site

Efforts Started After Stage II Initiation

OLED Materials

OLEDs are thinner and lighter than liquid crystals, offer high-speed response, and possess excellent design characteristics, such as flexibility. They are being used more often in smartphones, high-resolution, large screen TVs and other products. Recently, sales of foldable smartphones with screens of OLED have begun. We are developing proprietary materials, including hard coat materials for surface protection, materials that enhance light extraction efficiency, anti-reflective coating alignment materials, and release layer materials, which contribute to improving the characteristics of smartphones. In addition, our company is also accelerating market development for ELsource[®], a soluble hole injection material, NPAR[®], a liquid-repellent bank layer material, and other materials which can contribute to reducing the cost of large TVs, production efficiency, and characteristics enhancement. We are also developing materials for next-generation self-luminous displays which will be the future display technology following OLEDs.



Smartphones with foldable displays

Semiconductor Packaging Materials

Technologies related to high-speed, large-capacity information and communication such as IoT, 5G, and sensors, are making rapid progress. For this reason, further miniaturization and higher integration in the formation of electronic circuits are occurring. However, we are coming close to physical theoretical limits for shrinkage of interconnect and integration, so it is expected that issues will be overcome through further evolution of semiconductor packaging technology. In addition to circuit miniaturization, we have focused early on technology for 3D packaging with thinned semiconductor wafers. In 2013, we acquired all shares of German company, Thin Materials AG and incorporated their advanced processes and material development technology necessary for semiconductor packaging, making them our own technologies. We are also actively working on other next-generation semiconductor packaging technologies and development of markets related to sensors.

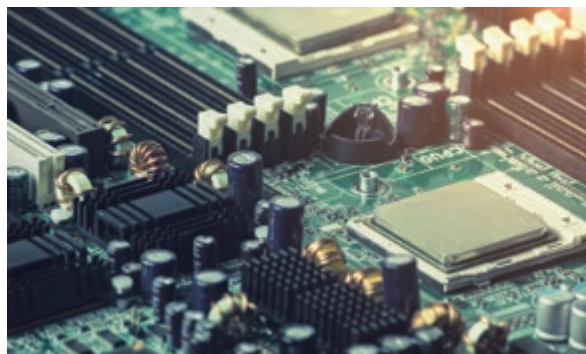


Image of integrated circuits board with 3D package

Provision of Products for Helping to Enrich People's Lives

SNOWTEX[®], Aluminasol, Organosilicasol, and NanoUse[®]

Our inorganic materials on base of our ultrafine particle control technology can be used for a wide range of applications since it can be dispersed in various types of solvents. By using them for transformers and motors, it is possible to improve insulation performance and reduce energy loss. They also function as a catalyst binder and base material reinforcing material in the process of removing exhaust gas from factories and automobiles. By making the equipment more energy efficient and longer-life, these materials contribute to reducing environmental impact.



Image of exhaust gas removal

Business Strategies

Agricultural Chemicals

We contribute to a stable food supply through consistent business activities from the research for new agricultural chemicals to their development, manufacture, and sales, and expansion of a broad product lineup through the acquisition of ingredients from other companies and joint development of products.

HONDA Takashi
Director, Managing
Executive Officer
Head of Agricultural
Chemicals Division



Social Issues and Needs

In addition to the conventional agricultural issue of efficiently preventing damage caused by pests and weeds during crop production, there is an increasing consumer needs to reduce pesticide residues on crops and reduce environmental impact.

We also recognize the importance of agricultural sustainability by small family-owned farmers, especially in Japan.

As a company that provides agrochemicals, we are making various efforts to solve social issues.

with competitors. However, since the launch of LEIMAY[®] (fungicide) in 2008, we have returned to introducing products developed in-house and started sale of GRACIA[®] (general purpose pesticide) in 2018. Additionally, we are actively pursuing the acquisition of other agrochemicals. For example, in 2002 we acquired Monsanto's herbicide business in Japan and began selling ROUNDUP[®] as one of our main products. In 2011, we launched ROUNDUP[®] MAXLOAD AL, a shower-type herbicide for households and later started sale of ROUNDUP[®] MAXLOAD AL II followed by ROUNDUP[®] MAXLOAD AL III, improved product versions, striving to provide products to address customer needs.

Business Vision

In Stage II of Vista 2021, we aim for our entry into new agriculture related fields while focusing on our current business of providing distinctive chemically synthesized agrochemicals to farmers. For smart agriculture, which is expected to contribute to the maintenance and development of domestic agriculture, we started to provide a service this year to diagnose pests and weeds using a smartphone application and provide information on effective pesticides to farmers. Also, we are developing and examining so-called biopesticides that do not leave a residue on crops.

Veterinary Pharmaceuticals

Through our development of agricultural pesticides, we have discovered compounds that are not only effective for use on agricultural crop pests, but also on fleas and ticks that are parasitic in dogs and cats, and have continued to examine these compounds as veterinary pharmaceuticals. In 2008, we entered a licensing agreement with Intervet Inc. Development of veterinary pharmaceuticals using Fluralaner, a compound invented by us, as an active ingredient has advanced.

Since launched in Europe and the United States under the brand name BRAVECTO[®] * in 2014, veterinary pharmaceuticals containing Fluralaner as an active ingredient are now used in more than 100 countries and are leading the growth of Agricultural Chemicals Division.

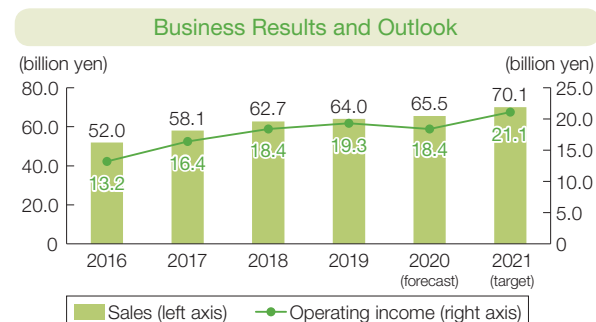
* BRAVECTO[®] is a registered trademark of Intervet International B.V. and Intervet Inc.

Business Overview

Agrochemicals

Our agrochemical business started in the 1910s when our predecessors Nippon Seimi Seizo and Kanto Soda began manufacturing and selling insecticides and fungicides. Starting with TARGA[®] (herbicide for grassy weeds) launched in 1984, we have continued to manufacture and sell products developed in-house such as SIRIUS[®] (herbicide for paddy rice), SANMITE[®] (insecticide/acaricide) and PERMIT[®] (herbicide for paddy rice and corn), which have steadily improved profitability.

Afterwards, we experienced hard times as a result of in-house development delays and intensifying competition



Stage II Business Strategies

Opportunities and Risks	Strengths
<ul style="list-style-type: none"> • Continuous expansion of the overseas agrochemicals market • Labor shortage due to the population decline in Japan • Intensification of inter-corporate competitions • Supply shortages of active ingredients • Growth of the companion animal market 	<ul style="list-style-type: none"> • Ability to create distinctive, new agrochemicals from the core technologies of fine organic synthesis and biological evaluation • Experiences and track records spanning many years from research for new agricultural chemicals to manufacturing and sales • High level of motivation cultivated through maintaining high profit margins and continuous growth



Main Measures
<ul style="list-style-type: none"> • Rapidly popularize and promote sale of GRACIA® • Strengthen initiatives aimed at large-scale farmers, corporations, and general consumers • Steady development of new agrochemicals and pipeline creation



Sources of Growth and Progress in FY2019

GRACIA®

GRACIA®, a pesticide developed in-house, is fast-acting on a wide range of crop pests and has little impact on honeybees which are useful insects. It was released in South Korea in 2018 and went on sale in Japan in 2019. Sales of GRACIA® have been very strong, and it has already grown to become a major product with sales that have already exceeded the final year sales target provided in Vista2021.



GRACIA®

ROUNDUP®

ROUND NOZZLE® ULV5, a product that allows for dispersion of ROUNDUP® MAXLOAD in a way that reduces farmer workload, is gaining popularity. Sales of the product have grown since FY2018, the year when the effects of natural disasters and other occurrences were substantial.



ROUND NOZZLE®
ULV5



ROUNDUP®
MAXLOAD (200 L)

Fluralaner

Veterinary pharmaceuticals for companion animals and livestock containing Fluralaner as an active ingredient are available in more than 100 countries. In 2019, we launched a chewable tablet for dogs in China and obtained US approval for a spot-on compound for cats. Then in 2020, a chewable tablet for dogs (one-month chews for a puppy) was also approved in the United States. Along with the declining birthrate and aging population, the idea that companion animals are like a family to their owners is growing in popularity. We expect that the demand for veterinary pharmaceuticals will increase in the future as people become more aware about companion animal health.



BRAVECTO® tablets for cats

Business Strategies

Efforts Started After Stage II Initiation

In order to enhance our overseas product portfolio, we have acquired Quintec[®] (active ingredient: quinoxyfen) from Corteva Inc. This product is a fungicide that is effective in prevention of powdery mildew and is currently used mainly in vineyards in the US.

In addition, as in-house developed products, following the development of a fungicide (development code NC-241) and a herbicide for paddy rice flooding treatment (development code NC-653), we also started to develop a herbicide for application on stems and leaves of paddy rice (development code NC-656). Moreover, we have established a joint venture (Nissan Bharat Rasayan Private Limited) in India for the purpose of manufacturing the active ingredients in agrochemicals. From Stage II, by having this joint venture's manufacturing plant together with the Onoda Plant, we can respond to growing demand for our agrochemicals. We expect it will contribute to the growth of our agrochemicals business by a robust active production and supply system that is cost-competitive.



Provision of Products for Helping to Enrich People's Lives

Exzolt^{®*}

As for products that use Fluralaner, our original active ingredient for veterinary pharmaceuticals, in addition to BRAVECTO[®], which is designed for external parasites found on companion animals, Exzolt[®], a veterinary pharmaceutical effective on chicken mites, was approved for marketing in Europe in 2017. This is a revolutionary product that can be administered in water supply systems for chickens, unlike the conventional method of exterminating chicken mites which has been inefficient and inadequate. Chicken mites not only reduce the spawning efficiency of chickens but are also problematic to poultry farmers since they are also parasitic on them. Exzolt[®] is able to very effectively eliminate these mites. Marketing approval of the product in Japan is expected to be obtained by the end of this year. We believe that it will help improve the lives of poultry farmers around the world.

* Exzolt[®] is a registered trademark of Intervet International B.V. and Intervet Inc., a subsidiary of Merck & Co., Inc.



Pharmaceuticals

By focusing on drug discovery and manufacture of active pharmaceutical ingredients, we are striving to develop better pharmaceuticals through a unique business model that does not have a sales department, licensing products which we have developed to pharmaceutical companies.

OHRAI Kazuhiko
Executive Officer
Head of Pharmaceuticals
Division



Social Issues and Needs

In Japan, a country with a declining birthrate and aging population, medical services and pharmaceuticals are becoming more important than ever. Lifestyle-related diseases are increasing due to changes in lifestyles. So awareness for increasing expectancies for healthy life is growing. As a solution, safer and more effective medicines, such as personalized medicine and preventive medicine, are desired.

Business Vision

We entered the pharmaceutical business in 1982 and launched EPATEC[®], an external preparation with ketoprofen as its main ingredient, as our first pharmaceutical product. Since mastering the pharmaceutical business from manufacturing to sale, we have continued challenges in the R&D of innovative new drugs by making full use of our strategically developed chemical compound library, our cutting-edge evaluation functions, and our fine organic synthesis technologies.

Business Overview

In-house Drug Discovery

The development of the anti-hypertension agent efonidipine hydrochloride marked our start in the drug discovery business. At the time of its development, drug development by major Japanese pharmaceutical companies was focused on antibiotics. We focused on drugs for hypertension and hyperlipidemia, paving the way for success. It was launched as LANDEL[®] in 1994 in Japan. LANDEL[®] is distributed by Zeria Pharmaceutical and Shionogi in Japan, and FINTE[®] is distributed by Green Cross in South Korea.

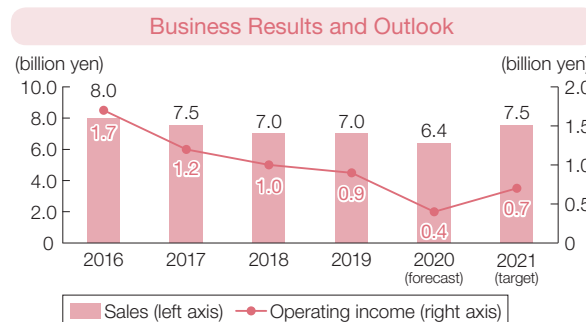
In 2003, LIVALO[®], anti-cholesterol agent with pitavastatin calcium we developed as another one of our focus point, was launched by Kowa Pharmaceutical (current Kowa Company). Currently LIVALO[®] is sold in 28 countries around the world where it has been

approved. After its substance patent for Japan expired in August 2013, due to the decline in market share by generic drugs and the impact of drug price revisions, the domestic conditions continue to be harsh. The creation of new drugs is an urgent issue for us.

We are developing a therapeutic agent for thrombocytopenia and an anti-arrhythmic agent, aiming to quickly advance to the next stages of development.

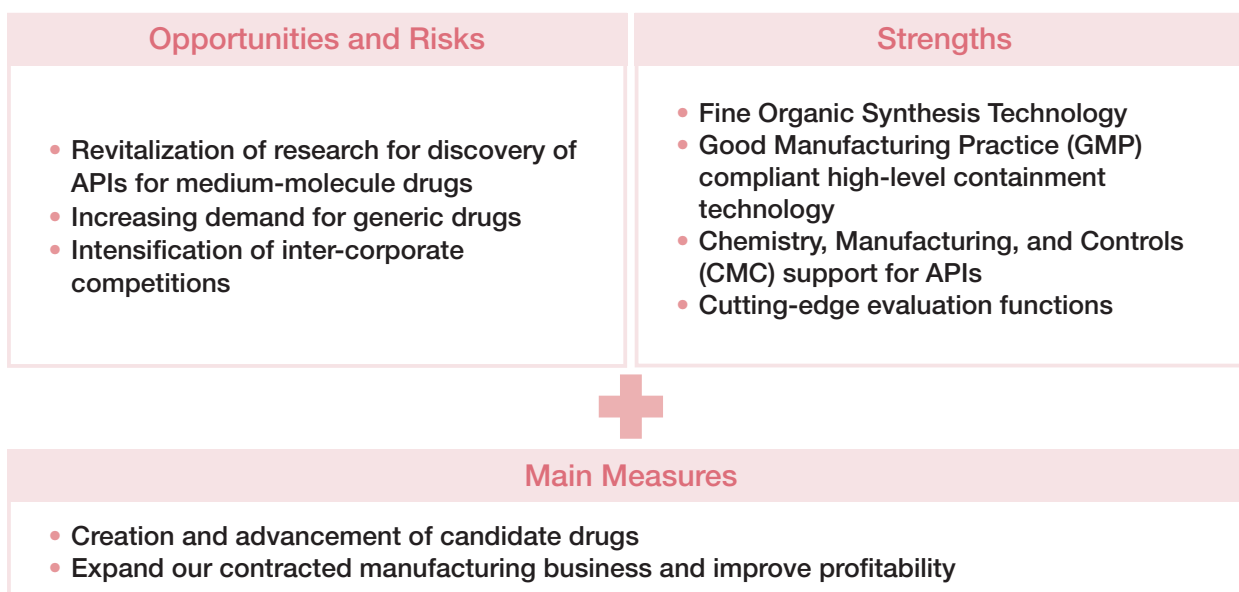
Finetech[®]

We are developing contracting business that provides total technological support to customers for their development of active pharmaceutical ingredients (API). We engage in the contracted development of manufacturing process in the stages from pre-clinical to commercial production, as well as manufacture of API and intermediates in compliance with good manufacturing practice (GMP). Furthermore, we provide related services including quality designs, stability testing, impurity and metabolite sample synthesis, and creation of materials regarding drug master file application. Recently, we are expanding supply business of APIs of generic drugs that responds to the need for highly active drug substances that require fine organic synthesis and containment. In addition to our wide variety of asymmetric synthesis technologies, oxidation reaction technology using organic molecular catalysts, and prostaglandin derivative synthesis through a proprietary two-component coupling method, we also have an abundant amount of experience manufacturing in-house drugs and agrochemicals, and our strengths include multi-step synthesis and heterocyclic compound synthesis.



Business Strategies

Stage II Business Strategies



Sources of Growth and Progress in FY2019

Strengthening Initiatives for Creating Nucleic Acid Technology and Nucleic Acid Drug Discovery

Nucleic acid drugs are attracting attention as a new chemical modality in pharmaceuticals. In 2018, we began joint research with Luxana Biotech for nucleic acid drug discovery, investing in the company in February 2020. In July 2019, we started joint research with Veritas In Silico on new small molecule drug discovery targeting nucleic acids.

Concentration of Resource by Narrowing Down Diseases in Small Molecule Drug Discovery and Contracted Peptide Manufacture

Small molecule drug discovery is concentrated in the cardiovascular disease and neurological disease fields based on ion channel evaluation capabilities. Peptide drugs have the advantages of antibody and small molecule and are expected to be new drugs that can be manufactured at low cost. We invested 900 million yen in 2018 in a third-party allocation of shares of PeptiStar, which is aiming to establish a stable supply system for APIs of constrained peptides. We will continue our research of new manufacturing technologies with the aim of dramatically reducing costs.

Continuous Launch of Highly Bioactive Generic Drugs

The demand for eldecalcitol, a drug for treatment of osteoporosis, is growing because the number of patients with osteoporosis is expected to increase due to population aging. Based on the production results of maxacalcitol, a highly active vitamin D3 drug, we are moving ahead with the development of eldecalcitol, which requires high-quality control because of the susceptibility to decomposition and impurities caused by oxygen, moisture, and heat in the air. We have established a stable supply system for the product launch in Japan in 2020 to develop it as a source of business growth.

We have set the foundation for actively working on each pharmaceutical modality (small molecule, peptides, and nucleic acids). Based on that, we aim to create innovative pharmaceutical products and expand our APIs and intermediates manufacturing business.

Efforts Started After Stage II Initiation

In addition to developing a therapeutic agent for thrombocytopenia (NIP-022) and an anti-arrhythmic agent (NTC-801), we aim to license out at least two chemical compounds in Stage II among several drug candidate agents which are at the late stage of drug discovery. Also, drug discovery researches in early stages are focused on neurological diseases. To raise the probability of success, we will also concentrate research resources to collaborative drug discovery research with Shionogi and other pharmaceutical companies, and nucleic acid drug discovery research with Luxna Biotech.

Pitavastatin calcium, the API of LIVALO[®], will serve as an important source for profits during Stage II as usual. As pressure to control prices increases, we aim to maximize value with stable production results and high-quality APIs.

It will take time to acquire results in in-house drug discovery business. Until then, our Finetech business will support our pharmaceutical business. In addition to our business of maxacalcitol, which contributed to Stage I profits, we will get our business up to speed in anticipation of the launch of the eldecalcitol as new generic drug in FY2020. Furthermore, we will start a contracted peptide manufacture in collaboration with PeptiStar, a company in which we have invested, using our overwhelming technological advantages, including liquid phase synthesis. During the final year of Stage II, we will proceed with a full-scale plan to transform Finetech[®] into a highly profitable business.

Our pharmaceutical business will continue to boldly challenge in-house drug discovery while supporting the backbone by our highly profitable Finetech business.

Provision of Products and Services for Helping to Enrich People's Lives

APIs Manufacturing (In-house drug discovery business and Finetech[®])

We manufacture APIs at the Onoda Plant, which is located in Sanyo-Onoda City, Yamaguchi Prefecture. In addition to being GMP compliant, it is regularly inspected by domestic and foreign regulators and customers whose APIs are supplied, and its level of quality is highly evaluated.



Contracted Peptide Manufacture (Liquid phase method technology)

At Chemical Research Laboratories located in Funabashi City, Chiba Prefecture, we are moving forward with preparations for our contracted peptide manufacturing business in which we utilize liquid phase method technology. Due to their nature, biological activity of peptides is demonstrated at microscopic levels. Therefore, we are conducting research and development in a special experimental environment in which peptides are physically contained.

Nucleic Acid Drug Technology Platform

We are preparing to provide a technology platform based on basic drug discovery research using a unique nucleic acid chemical structure developed by Nissan Chemical and nucleic acid chemical element technology developed by Luxna Biotech. Furthermore, we are also engaged in research and development of highly safe and more effective nucleic acid drugs.



Business Strategies

Planning and Development Division

By combining our core technologies with new materials and technologies, we are striving to create new products and businesses with high added value that meet the needs of society. The Planning and Development Division was newly established in FY2020 to further accelerate development.

SUZUKI Hitoshi
 Director, Managing
 Executive Officer
 Head of Planning and
 Development Division



Social Issues and Needs

Economic development and technological innovation have enriched people's lives and made them more convenient materially. However, there are various challenges for a sustainable society, such as the declining birthrate, population aging, and progressing climate change issues. We are making various efforts to create new businesses in order to contribute to a society which boasts health and longevity, an advanced information society, and an environmentally sustainable society.

Business Vision

As a future-creating enterprise, we aim to realize a sustainable society by taking on the challenge of exploring the limitless possibilities of chemistry and creating high value-added products in response to customer "trust."

Business Overview

Life Sciences Materials

We are developing life sciences related materials in anticipation of entering the cosmetics market and the expansion of the regenerative medicine market.

In the cosmetics field, we have started sale of NANOFIBERGEL[®], which is being used in a skin care item of a major cosmetics manufacturers. We are aiming to expand its demand as an additive for functional cosmetics to enhance penetration of its active ingredients.

In the field of regenerative medicine, in addition to FCeM[®] FP and FCeM[®]Cellhesion[®], which are cell culture substrates, we are promoting the development of prevelex[®], a product that controls protein and cell adhesion.

In the development of the FCeM[®] series, we are developing researching mass production methods for making them mainstream of cell culture substrates for mass production of undifferentiated iPS cells. Furthermore, in the field of mesenchymal stem cell manufacturing, we are developing Cellhesion[®] as a scaffold to manufacture inexpensively undifferentiated cells with high migration performance and enable autologous transplantation. In addition, prevelex[®] AP-1 has been confirmed to be more effective for preventing adhesion of proteins, peptides, etc. than competing products, and has been adopted for test and research applications.

Information & Communication Materials

We are working on the development of new materials that support cutting-edge devices required to realize Society 5.0.

We will promote market development for materials including μ LED-related materials attracting attention as next-generation displays with high brightness and high reliability, wafer-level package-related materials, and power semiconductor-related materials that are next-generation semiconductor technologies which break down the barriers associated with miniaturization, and optical interconnect materials that support high-speed, large-capacity data communications.

Environmental-Friendly Materials

We are committed to the development of products that help expand renewable energy and lead to the popularization of bioplastics.

For lithium-ion batteries (LIB), we have developed FairCurrent[®], an undercoat material that enables quick charging and long product life, and are aiming for its early commercialization.

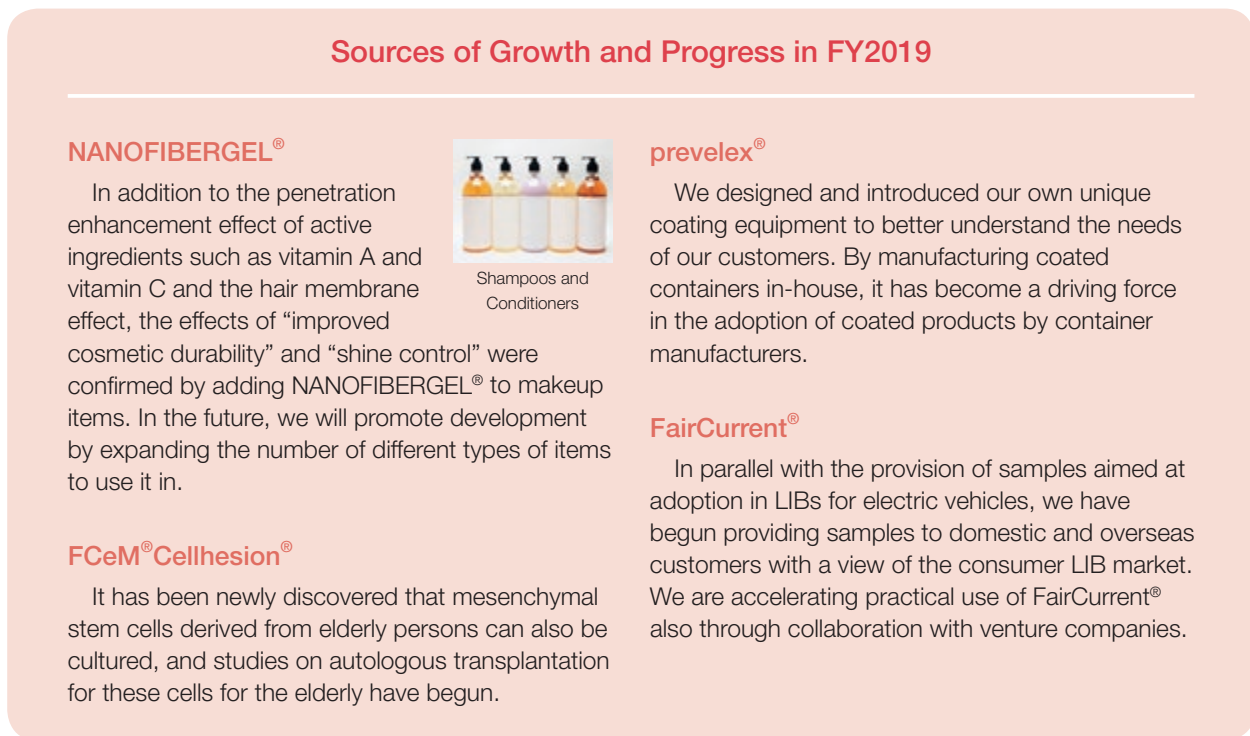
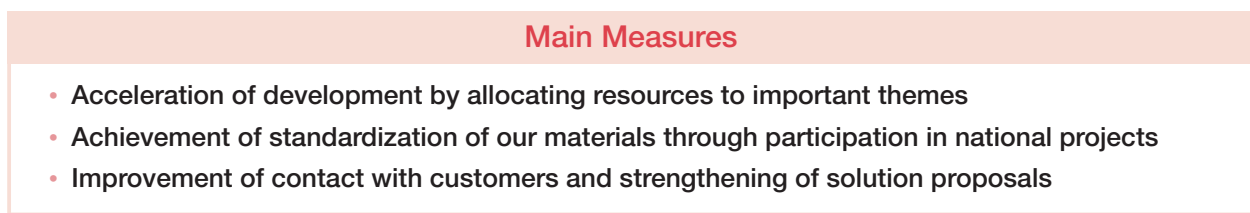
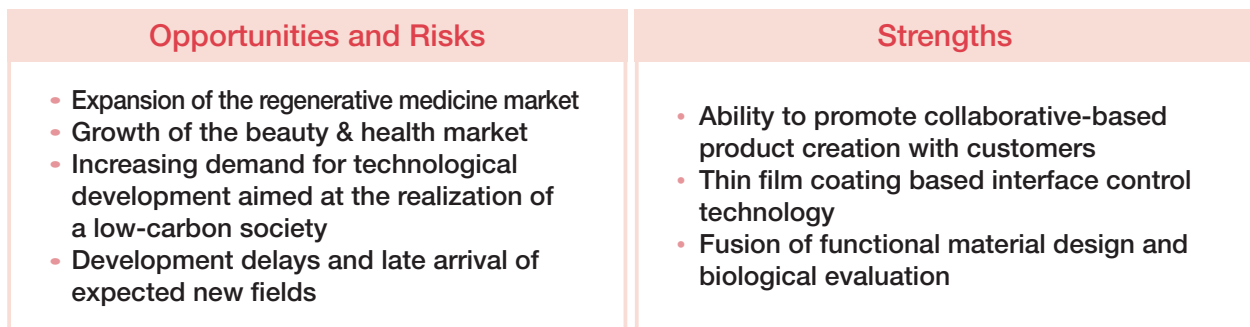
We are proceeding with the development of ECOPROMOTE[®], a resin additive for increasing the crystallization rate in the molding process and improving the molding cycle and heat resistance in order to solve issues related to polylactic acid (PLA), which is expected to be widely used as a bioplastic.

For New Material Planning and Research Management

Through venture capital based investment, we are working to discover high-quality start-up companies and new development themes. We are working at the revitalization of development themes by introducing new materials in each field and accelerating commercialization by making licensing agreements with start-up companies, investing in them, and through mergers and acquisitions.

In addition, we are working to strengthen our research and development capabilities by promoting optimization of resources through the education and appropriate allocation of researchers, and by promoting determination and creation of new themes by the Theme Council in a timely manner.

Stage II Business Strategies



Provision of Products for Helping to Enrich People’s Lives

FCeM[®]Cellhesion[®]

Cellhesion[®], one of the products in our FCeM[®] lineup, is a scaffold for mesenchymal stem cell culture. Clinical trial using mesenchymal stem cells are undergoing for medical issues for which there was no treatment, including brain/myocardial infarction as well as spinal cord injury. However, since the cost of a single treatment is 10 million yen or more, its high

price is a hurdle interfering with its spread. In 3D cultures using FCeM[®]Cellhesion[®], high-quality cells can be produced in large quantities and at low cost at one time, which is expected to greatly contribute to cost reduction during transplantation.



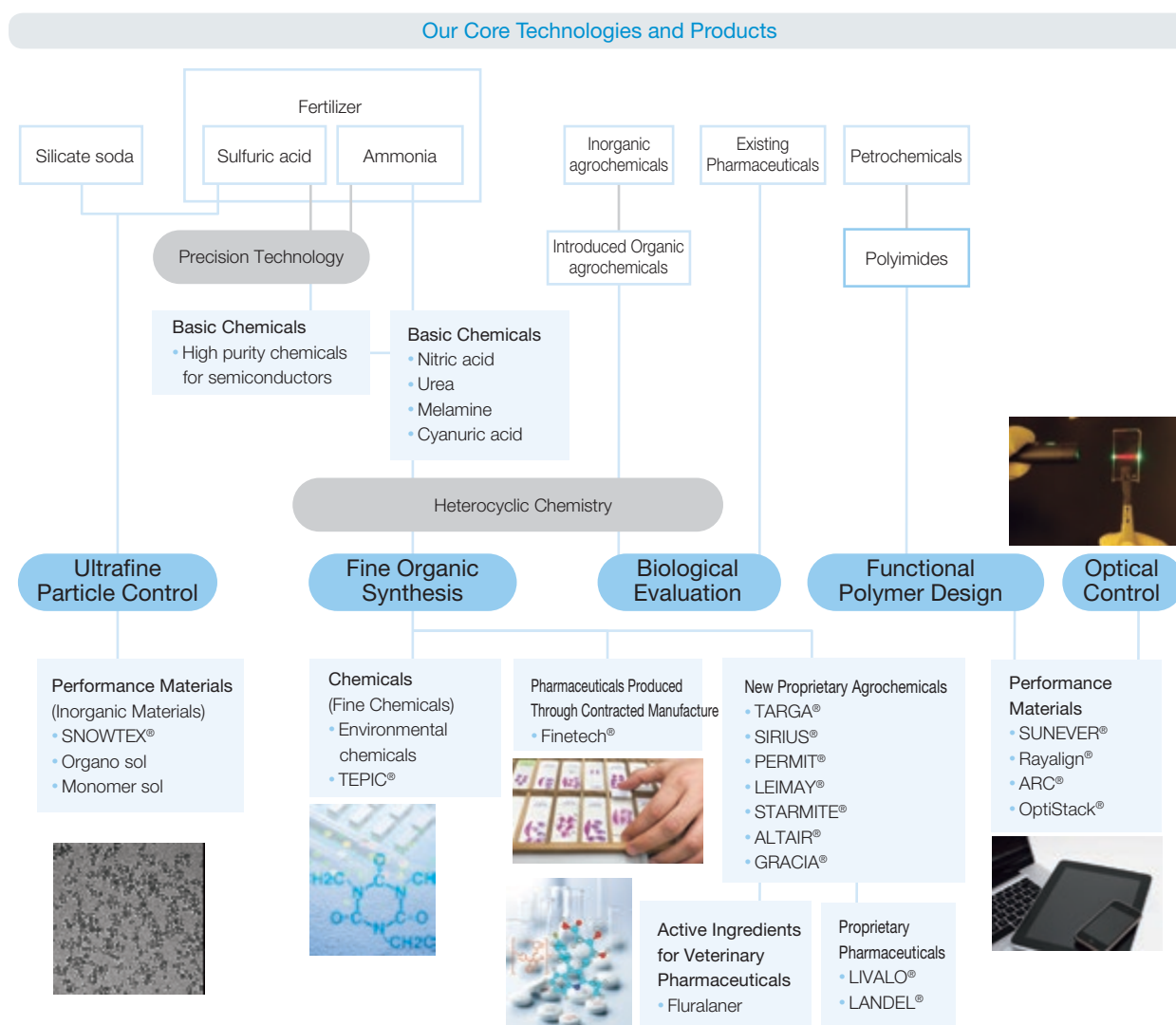
Research and Development

With “Fine Organic Synthesis”, “Functional Polymer Design”, “Ultrafine Particle Control”, “Biological Evaluation”, and “Optical Control” serving as our core technologies, we aim to become “A future-creating enterprise that responds to social needs with unique, innovative technologies” committed to continue creating new technologies and products.

Our Core Technologies

Originally started as a fertilizer company, over our long history we have grown with “Fine Organic Synthesis”, “Functional Polymer Design”, “Ultrafine Particle Control”, “Biological Evaluation”, and “Optical Control” serving our core technologies.

In addition to further refining these technologies, we are working to develop new products and technologies and create new businesses by fusing these technologies while working closely with each other between research laboratories and related departments. We are also promoting the introduction of new technologies through joint research with universities and other companies.



Chemical Research Laboratories

Chemical Research Laboratories is Nissan Chemical's core R&D site, and is responsible for our corporate research. In addition to R&D of agricultural chemicals and pharmaceuticals that utilize the fine organic synthesis technology, Chemical Research Laboratories performs research on companywide processes, material analysis research, etc.

- Analysis Research Department
- Synthesis Research Department
- Agricultural Chemicals Research Department
- Pharmaceutical Research Department



Funabashi, Chiba

Materials Research Laboratories

Materials Research Laboratories creates highly unique new materials, allowing us to respond quickly to increasingly sophisticated and diverse market needs. At the same time, the Laboratories focuses their efforts on researching next-generation materials in an effort to create new markets.

- Display Materials Research Department
- Semiconductor Materials Research Department
- Inorganic Materials Research Department
- Advanced Materials Research Department
- Frontier Materials Research Department



Funabashi, Chiba



Toyama, Toyama



Sodegaura, Chiba

Biological Research Laboratories

Biological Research Laboratories serves as a place for life science research, such as evaluation research related to the usefulness and safety of agricultural chemicals, pharmaceuticals and medical materials.

- Agricultural Chemicals Research & Development Department
- Toxicology & Environmental Science Department
- Pharmaceutical Research Department
- Medical Materials Group

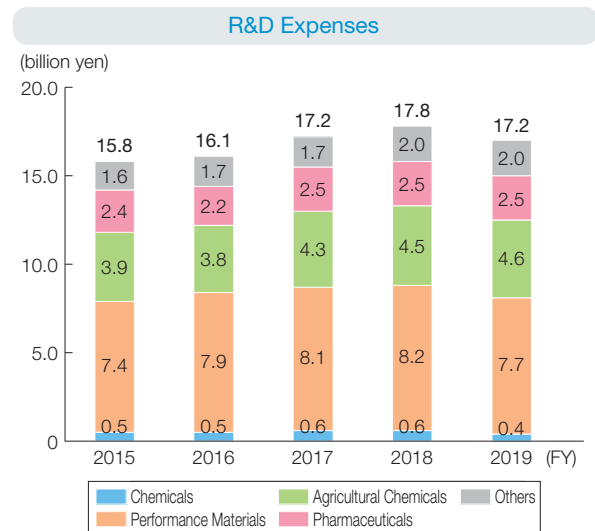


Shiraoka, Saitama

R&D Expenses

We consider R&D is the source of growth, and have intensively invested our management resources in R&D.

Over the last five years, R&D expenses have totaled 84.1 billion yen. The R&D expenses in Performance Materials and Life Sciences (Agricultural Chemicals and Pharmaceuticals) account for 45% and 41% respectively. In addition, 39% of employees of regular position are allocated as R&D personnel.



Strengthening of Nissan Group's Business Base

We are working to secure and develop diverse human resources in order to improve our R&D capabilities and product quality. We also aim to strengthen our business foundation by creating a workplace where each employee can work comfortably, and to enhance our ability to respond to the various demands of societies.

Securing and Developing Human Resources

We believe the essence for human resource development is that each employee will continue to educate themselves voluntarily in their efforts to develop themselves. Therefore, we have established various human resource development programs by employment tier, including self-start training, for our employees who aspire to learn new things and develop themselves. In addition, we started a new human resources development program in FY2019 based on the Ideal Human Resources Portfolio, a guideline for human resources development.

Intrapreneurship Program (started in FY2019)

We have started an intrapreneur (in-house entrepreneur) training program with the goal of developing the abilities of entrepreneurs and fostering them. With the support of active entrepreneurs, participants practiced behavioral skills in mixed team selected from multiple departments and acquired the ability as innovators through trial and error.



Intrapreneurship program

Manager Training (started in FY2019)

We have started training for section chiefs with the aim of developing managers who "provide direction, guiding organizations and people".

Through repeated sharing and introspection of real events in organizational management and raising awareness of challenges, there is a movement among members to aim for organizational innovation voluntarily.

Self-start Training

For the purpose of laying a foundation for self-starting human resources who "think and do what they should do," technical employees focus on training which involves "creating original plans and executing them" for a period of two years after entering the company and office employees focusing on the same for three years after entering the company. The ideas proposed by young employees during this training are often adopted and used in subsequent work.



Self-start training

Overseas Language Study Program

In order to work in a diversified workplace, we believe that it is important to understand each other's cultural backgrounds and ideas to understand each other, not only language.

Therefore, we have introduced an overseas language study program with the aim of having employees learn by experiencing and following different cultures. In FY2019, we extended the existing program length by one month to improve it further.

Lump Sum Payment for COVID-19 Support

As a measure against the spread of COVID-19, we started working from home in March. At the same time, we have taken measures to prevent the spread of infection, such as promoting staggered work. While all employees made an effort to prevent infection, we were able to achieve the highest profit in the fiscal year ended March 2020. It is the result of efforts to respond to changes even during unusual times and complete work while formulating clever plans. With the desire to respond to this result and the meaning of expecting further inspiration in the future, we provided all employees with a lump sum payment for COVID-19 support at the end of June.

Promotion of Diversity

At Nissan Chemical, a diverse range of individuals have been actively contributing to the Group in a wide range of fields irrespective of the age, gender, nationality, or other factors. From here on, we will further promote diversity in order to improve our corporate value by taking advantage of diversity that is not represented by attributes, such as values, abilities, and experience.

Promoting Active Participation of Women in the Workplace

With regard to creating a work environment where women employees can play an active role, we have been working on efforts in order to provide them with a good work-life balance.

In addition, with regard to the promotion of women, we have set our target to increase the ratio of females among employees in regular position to 10% by the end of FY2020. We are working so that 30% or more of new graduates hired for regular positions are females.

We are also working to expand the career areas of women in each department within the company.

Employees with Foreign Nationalities

In regards to our employees with foreign nationalities, we have a track record of hiring employees with work experience, new graduates, etc. However, we believe that further promotion of excellent foreigners is essential for further overseas expansion. Since 2017, we have been strengthening recruitment of international students with five foreign employees joining the company since that time. Moving forward, we will continue to promote diversification of human resources through means including providing information continuously to international students.

Creation of a Comfortable Workplace

With recognition of growing concern for labor shortage due to the declining birthrate and population aging as well as diverse working styles, our Group promotes initiatives that enable employees to work in a highly productive manner and achieve a good work-life balance.

Introduction of Systems for Promoting a Good Work-Life Balance

We have introduced systems and made improvements for promoting a good work-life balance. These include the introduction of a flextime system, hourly leave system, improvement of annual leave rate (at least 70% of available annual leave time taken), and introduction of a system which allows expired paid leave to be used for nursing/caregiving. In 2018, we were granted the Next Generation Accreditation Mark



(Kurumin) by the Ministry of Health, Labour, and Welfare for our efforts as a company to support childcare.

Promotion of Appropriate Work Hours

We are making various efforts to provide appropriate work hours.

For example, we are promoting the introduction of a new work management system for grasping and visualizing working hours and the number of days left for annual leave in a timely manner based on our own strict standards that exceed legal standards. We have also provided training for managers for managing working hours.

Health Management

Basic Health Policy

The President of Nissan Chemical unveiled the company's Basic Health Policy in July 2018.

Basic Health Policy

Mental and physical health is a foundation that supports sound corporate growth from the viewpoint of the happiness of employees and their families, as well as the trust of the corporate and the smooth operation of the business. We and our employees will work together to promote initiatives aimed at maintaining and promoting health in a multifaceted manner and aim to be a dynamic company.

1. Employees' health is based on their own management and we will provide support.
2. We will implement effective and flexible measures through smooth internal and external cooperation.
3. We will ensure the proper use and management of personal information and comply with laws and regulations.

The policy's three main areas of focus are lifestyle-related diseases measures, mental health care, and quitting smoking. Working together with the Health Insurance Association, we are implementing measures for each. We also established the Health Promotion Office in August 2020.

Certified Health and Productivity Management Organization (White 500)

We have been recognized for the results of our health management initiatives under the "Certified Health and Productivity Management Organization Recognition Program (White 500)" for four consecutive years by the Ministry of Economy, Trade and Industry and Nippon Kenko Kaigi.

Continuous Improvement of Responsible Care Activities

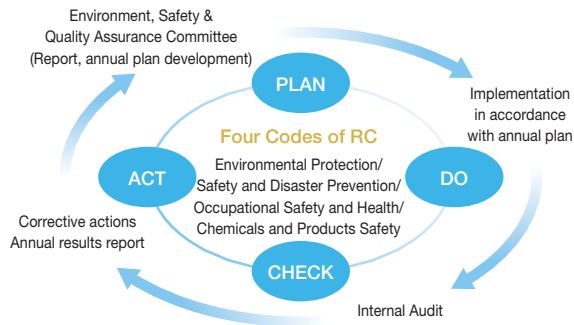
We are putting effort into Responsible Care (RC) activities designed to secure environment, health and safety (EHS) performance on voluntary basis throughout the entire process, from the development of chemical substances to manufacture, distribution, use, final consumption and disposal/recycling, and provide communication with society through the announcement of their results.

RC Management

System

To achieve our RC mid-term plan (2016-2021), we have established RC management system based on ISO14001*, and we carry out targets management and continuous improvements based on PDCA (Plan, Do, Check, Act).

* International standard for environmental management system. All of our plants have acquired ISO 14001 third party certification.



RC Audits

RC audits are activities for checking RC activities at each plant, laboratory and affiliate. They are carried out by Environment, Safety & Quality Assurance Department in accordance with the RC audit guidelines. In these audits, the auditors check whether RC activities, as well as internal audits and patrols, are carried out appropriately and the PDCA cycle is implemented steadily, and compliance about EHS at each location. Environment, Safety & Quality Assurance Department clarifies visible or potential problems related to EHS and promotes improvements in response after clarifying the problems, if any.

In FY2019, total of 44 RC audits were conducted for our plants, research laboratories and affiliates.

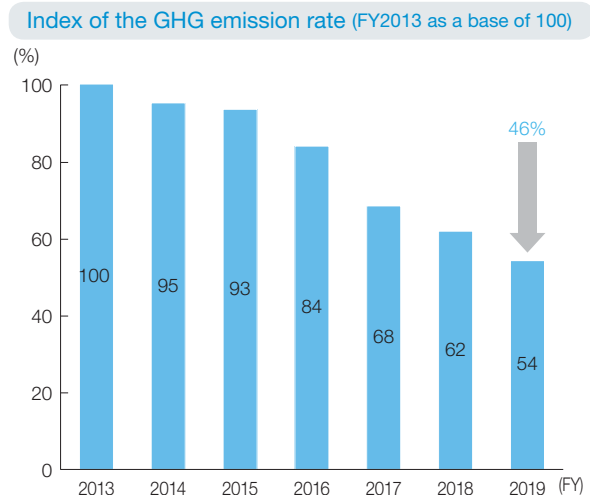
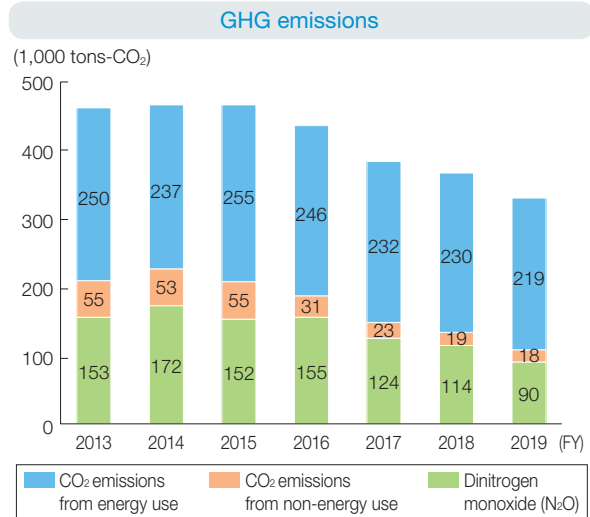


Environmental Protection and Countermeasures to Address Climate Change

Efforts for Reducing Greenhouse Gas (GHG) Emissions

Our Group actively works to reduce GHG in business activities and contribute to realization of a low-carbon society through the provision of eco-friendly products and services.

In FY2019, the volume of reduction of GHG emissions was 37,000 tons (CO₂ equivalent) compared to the level in FY2018 (emissions reduced by 29% from the FY2013 level). The GHG emission rate calculated as a ratio of emissions and sales (emissions/sales) was 54% of the FY2013 level.



Safety and Disaster Prevention

We carry out risk assessment, process risk predictions, and facility risk predictions by prior assessment for manufacture with the aim of ensuring safety, achieving stable operations, and improving our process safety capability.

As a result, in FY2019 there was no accident such as explosion and leakage. However, a fire broke out which is thought to be caused by sparks from flames used during construction work at our Nagoya Plant warehouse. The fire was extinguished through independent firefighting and did not turn into a major incident. However, in order to prevent recurrence, we carried out a comprehensive inspection and review of all locations where flames are used in work. Our plants, laboratories, and affiliates carry out various drills and training sessions, and are designed to make us ready to respond to emergencies or accidents in a reliable manner.



New Year firefighters' event (Toyama Plant)

Occupational Health and Safety

Through our RC management system, we prevent occupational accidents, promote the good health of staff, and build a comfortable workplace environment in our efforts to improve the level of safety and health at each business location. In addition, we carry out various drills and training sessions annually with the aim of ensuring safety, achieving stable operations, and improving our process safety capability to make us ready to respond to emergencies or accidents in a reliable manner.

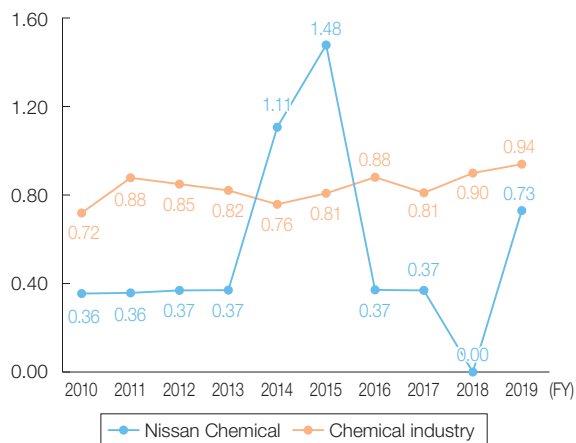
In FY2019, there were two cases of accidents requiring staff time off from work and three cases of accidents not requiring staff time off from work. We will continue aiming to achieve zero accident by promoting risk assessment, prior-work risk predictions, risk predictions training, HHK¹, 5S², and appropriate

wearing of protective equipment and by raising awareness of safety through the safety meeting and the occupational safety newspapers.

*1 HHK stands for Hiyari-Hatto (near miss incident) and Kigahari (alarming). It means the discovery of near-miss incidents that are not linked directly to serious injuries or accidents but could have resulted in such injuries or accidents.

*2 5S stands for Seiri, Seiton, Seisou, Seiketsu, Shitsuke. These words mean "Sort" "Set" "Shine" "Standardize" "Sustain" respectively.

Lost-time injury frequency rate*



* Number of deaths and injuries due to occupational accidents per million actual working hours

Chemicals and Products Safety

Risk Assessment in Products Lifecycle

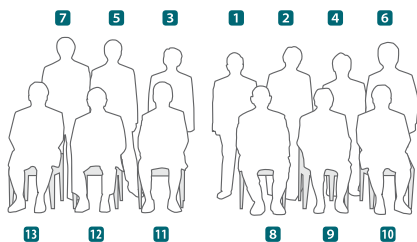
We perform a risk assessment (prior assessment) of each step in handling chemical products, such as the R&D, manufacture and sales. The assessment of risks to human health and the environment is based on data obtained by the Biological Research Laboratories, either on its own or by outsourcing, raw material SDS (safety data sheets), safety test data obtained from literature and external databases, physicochemical properties, and work environment conditions. These results are reported to all the relevant people in the Company. The results are also made known to people in the value chain by means such as technology transfer documents.

In addition, we also participate in Long-Range Research Initiative, an international initiative promoted by Japan Chemical Industry Association (JCIA) that seeks to provide long-term support for research on the impact of chemicals on human health and the environment. The activities we engage in aim to advance research on the assessment of risks to human health and the environment.

Corporate Governance



We think of corporate governance as a mechanism that ensures sound, efficient management to provide stakeholders with sustainable, mid- to long-term profits. Based on this policy, we strive to ensure management decisions are made promptly, and work to clarify the management responsibility and responsibility for executing operations. At the same time, we take initiatives for strengthening the management's monitoring function, compliance, risk management, and internal control system under our Board of Directors and Audit & Supervisory Board, whose members include highly independent outside officers.



1 KINOSHITA Kojiro (Representative Director, President & CEO)

1977 Joined the Company
2002 Director, Head of Corporate Planning Department
2006 Managing Director
2008 Representative Director, President & CEO (to the present)

2 MIYAZAKI Junichi (Director, Senior Executive Vice President)

1974 Joined the Industrial Bank of Japan, Limited (current Mizuho Bank, Ltd.)
2000 General Manager of International Department of The Industrial Bank of Japan, Limited (current Mizuho Bank, Ltd.)
2003 Corporate Auditor of Mizuho Corporate Bank, Ltd. (current Mizuho Bank, Ltd.)
2005 Managing Executive Officer of Kowa Real Estate Co., Ltd. (current Nippon Steel Kowa Real Estate Co., Ltd.) Managing Director of Kowa Real Estate Co., Ltd. (current Nippon Steel Kowa Real Estate Co., Ltd.)
2006 Joined the Company, Advisor
2007 Director, Head of Corporate Administration Department
2008 Managing Director
2011 Senior Managing Director
2013 Director, Senior Executive Vice President (to the present)

3 YAGI Shinsuke (Director, Senior Managing Executive Officer) New

1985 Joined the Company
2013 Deputy Plant Manager of Onoda Plant
2016 Executive Officer, Plant Manager of Sodegaura Plant
2018 Managing Executive Officer, Head of Production Technology Department
2020 Senior Managing Executive Officer, Head of Production Technology Department Director, Senior Managing Executive Officer, Head of Production Technology Department (to the present)

4 MIYAJI Katsuaki (Director, Managing Executive Officer)

1985 Joined the Company
2010 Director, Head of Chemical Research Laboratories
2011 Director, Head of Advanced Materials & Planning Department
2014 Executive Officer, Head of Electronic Materials Research Laboratories
Executive Officer, Head of Materials Research Laboratories
2016 Managing Executive Officer, Head of Corporate Planning Department
Director, Managing Executive Officer, Head of Corporate Planning Department (to the present)

5 HONDA Takashi (Director, Managing Executive Officer)

1981 Joined the Company
2012 General Manager of Planning & Development Department, Agricultural Chemicals Division
2014 Executive Officer, Deputy Head of Agricultural Chemicals Division, General Manager of Planning & Development Department
2017 Managing Executive Officer, Head of Agricultural Chemicals Division
Director, Managing Executive Officer, Head of Agricultural Chemicals Division (to the present)

6 SUZUKI Hitoshi (Director, Managing Executive Officer)

1985 Joined the Company
2007 General Manager of Semiconductor Materials Department, Electronic Materials Division
2010 General Manager of Semiconductor Materials Research Department, Electronic Materials Research Laboratories
2012 General Manager of Semiconductor Materials Department, Performance Materials Division
2013 Deputy Head of Performance Materials Division Director, Deputy Head of Performance Materials Division
2014 Executive Officer, Deputy Head of Performance Materials Division
2016 Executive Officer, Head of Materials Research Laboratories
2018 Managing Executive Officer, Head of Performance Materials Division
Director, Managing Executive Officer, Head of Performance Materials Division
2020 Director, Managing Executive Officer, Head of Planning and Development Division (to the present)



7 ONITSUKA Hiroshi (Audit & Supervisory Board Member)

- 1981 Joined the Company
- 2001 General Manager of Toxicology & Environmental Science Department, Biological Research Laboratories
- 2007 General Manager of Analysis Research Department, Chemical Research Laboratories
- 2011 Head of Biological Research Laboratories
- 2013 Director, Head of Biological Research Laboratories
- 2014 Director, Executive Officer, Head of Research Planning Department Executive Officer, Head of Research Planning Department
- 2016 Executive Officer, Head of Chemical Research Laboratories
- 2019 Audit & Supervisory Board Member (to the present)

8 OHE Tadashi (Outside Director) Outside

- 1969 Qualified for attorney-at-law
- 1989 Instructor for the Legal Training and Research Institute of Japan (court representation in civil proceedings)
- 1994 Outside Corporate Auditor of Canon Inc.
- 2004 Outside Corporate Auditor of Marui Group Co., Ltd.
- 2006 Outside Corporate Auditor of Kao Corporation
- 2011 Outside Director, JECO Co., Ltd. (to the present)
- 2015 Outside Director of the Company (to the present)

9 OBAYASHI Hidehito (Outside Director) Outside

- 1969 Joined Hitachi, Ltd.
- 2001 Director of Hitachi High-Technologies Corporation (current Hitachi High-Tech Corporation)
- 2003 Vice President and Executive Officer of Hitachi High-Technologies Corporation
- 2006 Representative Executive Officer, Senior Vice President and Executive Officer of Hitachi High-Technologies Corporation
- 2007 Director, Representative Executive Officer, President and Chief Executive Officer of Hitachi High-Technologies Corporation
- 2011 Chairman of the Board of Hitachi High-Technologies Corporation
- 2013 Consultant of Hitachi High-Technologies Corporation
- 2015 Honorary Consultant of Hitachi High-Technologies Corporation (to the present)
- 2019 Outside Director of the Company (to the present)

10 KATAOKA Kazunori (Outside Director) New Outside

- 1979 Assistant Professor of Institute of Biomedical Engineering at Tokyo Women's Medical University
- 1988 Associate Professor of Institute of Biomedical Engineering at Tokyo Women's Medical University
- 1994 Professor of Faculty of Industrial Science and Technology at Tokyo University of Science
- 1998 Professor of Graduate School of Engineering at The University of Tokyo
- 2004 Professor of Graduate School of Medicine at The University of Tokyo
- 2015 Director General of Innovation Center of NanoMedicine, Kawasaki Institute of Industrial Promotion (to the present)
- 2016 Professor Emeritus and Project Professor at The University of Tokyo (to the present) Deputy Chairman of Kawasaki Institute of Industrial Promotion (to the present)
- 2020 Outside Director of the Company (to the present) Outside Director of NanoCarrier Co., Ltd. (to the present)

11 SUZUKI Norihiro (Outside Audit & Supervisory Board Member) Outside

- 1983 Joined the Norinchukin Bank
- 2003 General Manager of Naha Branch
- 2008 General Manager of Cooperative Finance & Administration (Kanto Area) Div.
- 2010 Seconded to Eiraku Co., Ltd. as President (current Norinchukin Facilities Co., Ltd.)
- 2012 Managing Director of The Norinchukin Bank
- 2014 Director of Nochu Business Support Co., Ltd., and Director of Nochu Information System Co., Ltd.
- 2016 Outside Audit & Supervisory Board Member of the Company (to the present)

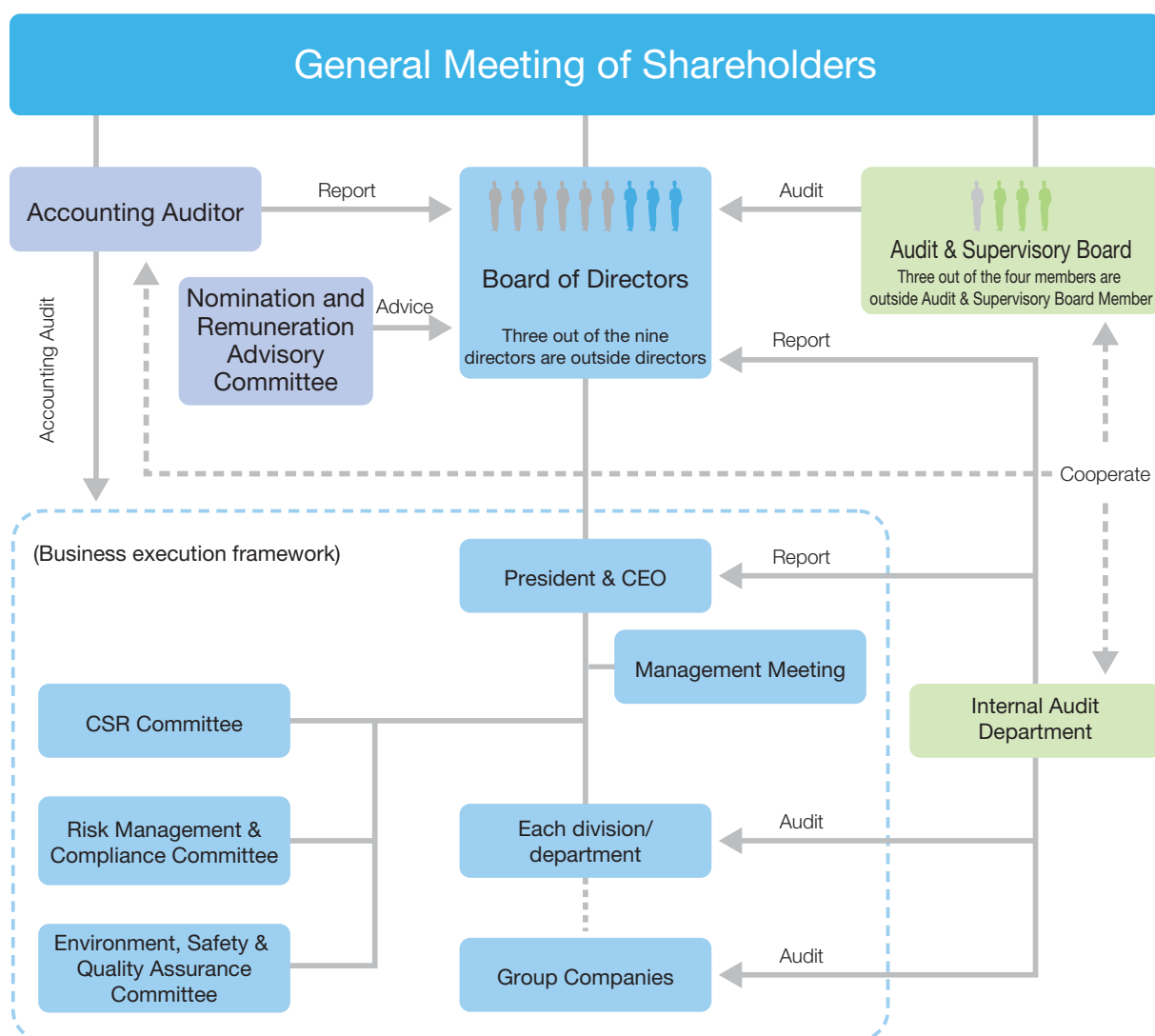
12 TAKEMOTO Shuichi (Outside Audit & Supervisory Board Member) Outside

- 1982 Joined the Fuji Bank, Limited (current Mizuho Bank, Ltd.)
- 2002 Deputy General Manager, IT & Systems Control Department of Mizuho Bank, Ltd.
- 2004 General Manager, Human Resources Division of Mizuho Information & Research Institute, Inc.
- 2008 General Manager, Fukuoka Branch of Mizuho Bank, Ltd.
- 2009 General Manager, IT & Systems Planning Department of Mizuho Trust & Banking Co., Ltd.
- 2010 Executive Officer, IT & Systems Planning Department of Mizuho Trust & Banking Co., Ltd.
- 2011 Managing Executive Officer of Mizuho Trust & Banking Co., Ltd.
- 2013 Managing Executive Officer of Mizuho Trust & Banking Co., Ltd., and Managing Executive Officer of Mizuho Financial Group, Inc.
- 2014 Deputy President of Mizuho Private Wealth Management Co., Ltd.
- 2017 Advisor of Mizuho Trust & Banking Co., Ltd. Outside Audit & Supervisory Board Member of the Company (to the present)

13 KATAYAMA Noriyuki (Outside Audit & Supervisory Board Member) Outside

- 1990 Qualified for attorney-at-law, Joined Nagashima & Ohno (current Nagashima Ohno & Tsunematsu)
- 1996 Qualified for attorney-at-law in New York State, USA Joined Tokyo City Law & Tax Partners
- 2003 Joined City-Yuwa Partners (to the present)
- 2004 Statutory Auditor of Deutsche Asset Management (Japan) Limited (to the present)
- 2005 Statutory Auditor (part-time) of Deutsche Securities Junbi K.K. (current Deutsche Securities Inc.)
- 2006 Outside Director of Accordia Golf co., Ltd.
- 2009 Visiting Professor of Toyo University Law School
- 2013 Supervisory Director of SIA REIT, Inc. (current One REIT, Inc.)
- 2014 Examiner for the preliminary bar examination Outside Audit & Supervisory Board Member of the Company (to the present)
- 2017 Supervisory Director of HEIWA REAL ESTATE REIT, Inc. (to the present)
- 2018 Outside Director of Nippon Denka, Ltd. (to the present)
- 2019 Outside Corporate Auditor of Livesense Inc. (to the present)

Corporate Governance System



Execution and Supervision of Operations

By introducing a system with executive officers, we clarify the management's function of prompt decision-making and supervision and the function of executing operations, thereby strengthening both. We also strive to improve management's capabilities to develop and execute our management strategies. In addition, we have set a one-year term for each director and executive officer, thereby clarifying the management responsibility and the responsibility for executing operations.

Board of Directors

Our Board of Directors members meet monthly in principle, to resolve important management matters. It

also supervises the execution of operations by directors and executive officers. We ensure that important management matters are determined through careful deliberations at the Board of Directors meetings or management meetings in our efforts to eliminate or reduce business risks. In addition, the details of decisions made at the management meetings and the results of business executions based on decisions made at the Board of Directors meetings, etc. are reported to the Board of Directors to enhance the supervising function of the Board of Directors meeting. We further strive to ensure and improve effectiveness in execution of roles and responsibilities of the Board of Directors by conducting the effectiveness evaluation on the overall Board of Directors every year.

Audit & Supervisory Board

We have established the Audit & Supervisory Board. In accordance with auditing plans formulated by the Audit & Supervisory Board with a majority that consists of independent outside members, the Audit & Supervisory Board members audit the execution of directors' operation by participating in the Board of Directors meetings and other important meetings, and by regularly visiting each division/department of the Head Office and plant/laboratory to exchange opinions.

Nomination and Remuneration Advisory Committee

We established under the Board of Directors a Nomination and Remuneration Advisory Committee mostly consisting of independent outside directors for the purpose of strengthening the Board of Directors' independence, objectivity, and accountability in relation to matters such as the nomination and remuneration of directors and further strengthening corporate governance. The Nomination and Remuneration Advisory Committee was held in April, June, November, and December of 2019 and in January of 2020 (total of five times in FY2019). It deliberated matters, such as appointment of candidates as directors and Audit & Supervisory Board members and management executives, succession plans for management executives, and remuneration for directors in response to consultation from the Board of Directors, and reported the content of their deliberations to the Board of Directors.

Governance Structure*

Indicator	Scope of reporting	Unit	FY2016	FY2017	FY2018	FY2019
Directors	Inside directors	People	7	7	6	6
	Outside directors (Independent)	People	2 (2)	2 (2)	2 (2)	3 (3)
	Total	People	9	9	8	9
Ratio of independent outside directors (Actual)		%	22	22	25	33
Ratio of independent outside directors (Target)		%	—	—	33	33
Ratio of female directors		%	0	0	0	0
Number of Executive Directors		People	7	7	6	6
Average terms of positions held		Years	6.2	5.1	6.5	6.7
Board of Directors meetings		Times	12	12	12	12
Attendance of directors at Board of Directors meetings		%	100	99.1	100	99.0
Attendance of Audit & Supervisory Board members at Board of Directors meetings		%	100	100	97.9	100

* Data is as of after the General Meeting of Shareholders held in June of each year.

Accounting Audit

We have appointed the Yaesu Audit Company as our accounting auditor. They audit at the end of each fiscal year, and during the fiscal year as necessary.

Internal Audit

We have the Internal Audit Department, which conducts fair and independent internal audits of our Group. The results of internal audits are reported to the Representative Director, President & CEO, managing executive officers, and the Board of Directors. In addition, the department shares information with the accounting auditors and Audit & Supervisory Board, and collaborates with them by mainly exchanging opinions.

Support for Outside Directors and Outside Audit & Supervisory Board Members

The Corporate Planning Department supports outside directors by providing them with explanations of the contents of the agenda and other matters to be discussed at the Board of Directors meetings in advance and also provides management information necessary for growth strategies, enhancement of governance, etc. For outside Audit & Supervisory Board members, we have appointed audit assistants from our employees to respond to the requests from them. To enable Audit & Supervisory Board to fulfill their duties efficiently and smoothly, the audit assistants serve as coordinators for holding hearings pertaining to divisions, etc., Audit & Supervisory Board meetings and other meetings, help conduct audits, and collect information.

Policy and Procedures in the Nomination of Officer Candidates

Decisions regarding the nomination of candidates for directors and Audit & Supervisory Board members are made at the Board of Directors meetings attended by outside directors and proposed at the General Meeting of Shareholders.

In addition, nominations of Audit & Supervisory Board members candidates are approved by the Audit & Supervisory Board in advance.

Nominate Policy

	Policy	Number stipulated in the Articles of Incorporation	Current number	Number of outside officers included in the figure on the left
Directors	We operate business activities globally in diverse fields, including chemicals, performance materials, agricultural chemicals, and pharmaceuticals. In nominating candidates for our directors, we consider the balance between knowledge, experience, capabilities, and other elements of the overall board of directors and its diversity to ensure that our directors can make decisions regarding the business activities in diverse fields, including chemicals, performance materials, agricultural chemicals, and pharmaceuticals, and supervise the execution of operations in an appropriate and flexible manner. The candidates to be nominated shall also be physically and mentally healthy, have excellent personalities and aspirations, and have a high level of insight and ethics. <Inside Directors> Human resources who have expertise, knowledge and other capacities in each business field such as corporate planning, personnel, finance & accounting, research and development, production technology, environment, safety & quality assurance and others. <Outside Directors> Human resources who are capable of giving opinions proactively, raising questions and giving advice on growth strategies, the enhancement of governance and other issues from the viewpoints of various stakeholders and society.	12	9	3 (3)
Audit & Supervisory Board Members	Human resources with experience and knowledge in a wide range of fields including finance, accounting, and law who are capable of giving opinions and advice to the management from a fair and neutral standing-point, in addition to auditing the execution of operations.	5	4	3 (2)

*1 The figure in () indicates the number of directors/Audit & Supervisory Board members designated as independent officers.

Appointment of Outside Officer

	Name	Reason for appointment
Outside Directors	OHE Tadashi Appointed in June 2015	We believe that Mr. Ohe has reflected his extensive experience, including his experience of outside director at several companies and expertise as attorney-at-law in our corporate management from an objective and neutral standing-point, and will continue to fulfill the duties appropriately.
	OBAYASHI Hidehito Appointed in June 2019	After having served as Chairman of the Board of Hitachi High-Tech Corporation, Mr. Obayashi serves as Honorary Consultant for the same company. As an executive of a corporate group that develops a variety of businesses globally, we believe that his extensive experience and broad insight can be reflected in our corporate management from an external perspective from an objective and neutral standing-point.
	KATAOKA Kazunori Appointed in June 2020	Mr. Kataoka has been engaged in research involving the application of nanotechnologies in the fields of biomedical engineering and biomaterial engineering for many years and is currently serving as the Director General of Innovation Center of NanoMedicine, Kawasaki Institute of Industrial Promotion. We believe that his expertise as doctor of engineering, abundant experience, and wide-ranging knowledge can be reflected in our corporate management from an external perspective from an objective and neutral standing-point.
Outside Audit & Supervisory Board Members	SUZUKI Norihiro Appointed in June 2016	Mr. Suzuki has a wide range of knowledge, including extensive experience and finance expertise cultivated through many years of business at financial institutions. We believe that he has reflected that knowledge in our corporate audit with objective and neutral standing-point, and will continue to fulfill the duties appropriately.
	TAKEMOTO Shuichi Appointed in June 2017	Mr. Takemoto has a wide range of knowledge, including extensive experience and finance expertise cultivated through many years of business at financial institutions. We believe that he has reflected that knowledge in our corporate audit with objective and neutral standing-point, and will continue to fulfill the duties appropriately.
	KATAYAMA Noriyuki Appointed in June 2014	Mr. Katayama has an extensive experience including the experience of outside director/auditor at several companies and expertise as attorney-at-law. We believe that he has reflected his knowledge in our corporate audit and will continue to fulfill the duties appropriately.

Officers' Remuneration

The fundamental principle in directors' remuneration is to maintain its system that is in line with management policy by ensuring that directors contribute to increasing operating performance on a continual basis over the mid- to long-term and toward increasing the overall value of the Group, thereby meeting shareholder expectations. At the same time, the basic policy (Policies on determining remuneration of Directors) is to set remuneration at an appropriate level, taking into account such factors as the management environment, operating performance and consistency with the treatment of employees.

The remuneration system for directors consists of monetary remuneration and performance-linked stock compensation, of which monetary remuneration is divided into base remuneration and performance remuneration that is determined taking into account the fluctuation of employee bonuses, etc. Outside directors are not eligible for performance-linked stock compensation and their monetary remuneration consists only of base remuneration for perspective of their roles and independence.

Regarding performance-linked stock compensation, we have adopted in FY2019, with the aim of increasing awareness about improving earning over the mid- to long-term and contributing to enhancing corporate value by clarifying the link between the Company's performance and its stock price, and by having directors share with the shareholders not only the benefits of increases in the stock price, but also the risk of decreases in the stock price.

Excluding performance-linked stock compensation, the remunerations of individual directors are determined at the Board of Directors meeting after deliberations of the Nomination and Remuneration Advisory Committee mostly consisting of independent outside directors as well as within the total amount determined by resolution of the General Meeting of Shareholders. The remunerations of individual Audit & Supervisory Board members are determined through discussions among Audit & Supervisory Board members.

Overview of Performance-Linked Stock Compensation Plan

The Company grants its directors points based on its net income attributable to owners of the parent (year-on-year rate of change and average rate of change over the last three years), EBITDA (year-on-year rate of change), ROE (actual results for the current fiscal year), and comparison of rates of year-on-year volatility with respect to the Company's stock price and TOPIX. Each fiscal year, the Company determines whether the points are to be granted or not and the number of points to be granted. Upon their retirement, directors are to be paid performance-linked stock compensation (part in monetary form) equivalent to their accumulated points. (For details on how to calculate performance-linked stock compensation plan amounts, etc., please refer to P42 "Compensation, Etc. for Officers" of the 150th Securities Report.)

Performance Evaluation Coefficient

(Short-term net income coefficient attributable to owners of the parent ×10%) + (Mid-to-long term net income coefficient attributable to owners of the parent ×20%) + (EBITDA coefficient ×30%) +(ROE coefficient ×30%) +(the Company stock price and TOPIX year-on-year volatility comparison coefficient ×10%)

In addition, if a director subject to performance-linked remuneration is dismissed through the General Meeting of Shareholders or Board of Directors meeting during the period until retirement (excluding dismissal when the director concerned is appointed as an Audit & Supervisory Board member), commits any illegal act during tenure and retires, commits any inappropriate act that causes damage to the Company during tenure, or if the director is found to have violated laws, regulations, articles of incorporation, or internal rules, etc., the director will be unable to acquire the right to receive performance-linked stock compensation.

Main Activities of the Nomination and Remuneration Advisory Committee (FY2019)

Items related to officers designation	<ul style="list-style-type: none"> • Evaluation of representative director and executive director based on dismissal criteria, business performance, etc. • Deliberation on succession plans (human resources requirements, etc.) for representative director and executive director; deliberation on proposals for the General Meeting of Shareholders regarding the selection and dismissal of directors and Audit & Supervisory Board members
Items related to officers remuneration	<ul style="list-style-type: none"> • Deliberation on remuneration system for directors • Deliberation on remunerations for individual directors • Deliberation on proposals for the General Meeting of Shareholders regarding directors and Audit & Supervisory Board members remuneration

Monetary Remuneration Decided Through Resolution During the General Meeting of Shareholders

Officer	Number of officers	Remuneration
Directors	9	329 million yen
Audit & Supervisory Board members	5	89 million yen
Total	14	419 million yen
(includes outside officers)	6	88 million yen

The above number of officers and remuneration include remuneration for one Audit & Supervisory Board member who retired at the close of the 149th General Meeting of Shareholders held on June 26, 2019.

In addition, the remuneration information above includes the amount of 11 million yen recorded as expenses for the current fiscal year related to stock compensation for six directors, excluding outside directors.

Effectiveness Evaluation of Boards

Nissan Chemical believes that the primary roles and responsibilities of the Company's Board of Directors are defined as: (1) establishing a strategy for achieving sustainable growth and increase in corporate value over the mid- to long-term, and facilitating the execution of the foregoing; (2) establishing an environment that supports risk-taking by the management, including the internal control system and the risk management system; (3) strengthening the swift management decision-making and oversight function and the execution function through clarification of both functions; and (4) further enhancing management transparency, soundness and objectivity through, among other efforts, appointment of outside officers who monitor and oversee the management from external viewpoints, and the Company performs analysis and evaluation (the "Effectiveness Evaluation") every year to see if the Board of Directors has fulfilled these roles and responsibilities. The Company has conducted the Effectiveness Evaluation every year since FY2015, and carried out a third-party evaluation every several years using an external organization that holds no relationships of interest with the Company in order to ensure neutrality and objectivity. The third-party evaluation was carried out recently in FY2017, and the Effectiveness Evaluation in FY2019 was conducted in the form of a self-evaluation by the Company's Board of Directors.

Evaluation Procedure

The evaluation procedure is in the form of a questionnaire answered by all directors and Audit & Supervisory Board members, that grasps the current status and identifies issues from two perspectives, quantitative evaluation and qualitative evaluation, through a combination of five-grade evaluation and free writing. An external organization is contracted to collect the responses and collate the data in order to ensure anonymity, which enhances the self-evaluation.

Based on the results of the questionnaire responses, an opinion-exchange meeting was held in March 2020 (with all independent Officers (3 outside directors and 2 outside Audit & Supervisory Board members (including 1 full-time Audit & Supervisory Board member)), the President & CEO, the Senior Executive Vice Presidents, and the Director and Head of Corporate Planning Department) to discuss issues and responses and conduct analysis and evaluation. The results of the analysis and the evaluation were discussed and confirmed at the Board of Directors meeting held in May 2020.

Issues Identified in the Effectiveness Evaluation for FY2018

- 1) Examining the following while making use of the Nomination and Remuneration Advisory Committee:
 - i) Creating systems to appropriately reflect the Company's business performance in the nomination and remuneration of directors.
 - ii) Taking a leading role in formulating and

implementing succession plans for senior management and appropriately supervising the development of successor candidates, along with providing opportunities for explaining and discussing successor development plans, including for other directors and executive officers.

- 2) Examining the creation of a system that allows each director and Audit & Supervisory Board member sufficient time for discussion by further innovating methods for prior provision and sharing of information to directors and Audit & Supervisory Board members in order to deepen their deliberation on matters for resolution within a limited time.
- 3) Examining the creation of a system for regularly verifying the investment impact of investment projects approved by the Board of Directors and reporting the verification result to the Board of Directors.

Effectiveness Evaluation Result for FY2019

As a result of the Effectiveness Evaluation for FY2019, it was concluded that the Company's Board of Directors was generally operating appropriately overall from the perspective of carrying out its principle roles and responsibilities, and that the effectiveness of the Board of Directors was ensured as improvement measures were taken with regard to issues identified in the Effectiveness Evaluation for FY2018.

Points of Future Improvement

Through the discussion that was conducted this time, the following issues were identified from a perspective of further enhancing the effectiveness of the Board of Directors, and the Company confirmed that measures are to be taken to improve them.

- 1) Enhancing information sharing with the Board of Directors on deliberations at the Nomination and Remuneration Advisory Committee to boost the Board of Directors' oversight function with regard to the remuneration and nomination of directors and succession plans.
- 2) Deepening discussions among all directors in the Board of Directors with regard to diversity of members of the Board of Directors (particularly viewpoint of gender).
- 3) Ensuring the effectiveness of the decision-making process by getting more creative as to quality, volume and understandability of information (regarding matters to be resolved by the Board of Directors) to be shared with directors (particularly outside directors) and Audit & Supervisory Board members.

By enabling deeper discussion in the Board of Directors based on the recent evaluation result and continuing to implement measures to improve the effectiveness of the Board of Directors, the Company will ascertain the status of improvement on a regular basis through the Effectiveness Evaluation and further enhance the effectiveness of the Board of Directors in an effort to achieve sustainable growth and increase in corporate value.

Messages from Outside Officers



OHE Tadashi
Outside Director

Appropriate risk-taking and the role of an outside director

As a lawyer, I have been mainly involved in the management of corporate legals and have been asked for advice on corporate governance and company management. In addition to further expanding the four existing businesses of the Chemicals, Performance Materials, Agricultural Chemicals, and Pharmaceuticals, Nissan Chemical is facing the challenge to enter new business areas. In order for any business to be successful, risk-taking cannot be avoided. As an outside director who is required to take the position of a third party, I pay attention to "whether information about the matter is given to the Board of Directors regardless of advantages or disadvantages when making management decisions," and pay sufficient attention to the risks involved in the matter. After that, I try to make a judgment. I provide support for appropriate risk-taking. Nissan Chemical is a well-developed research, sales and management company. I expect many results from the company in the future. Furthermore, I would like to contribute to the realization of those future results from the perspective of protecting the interests of our stakeholders.



OBAYASHI Hidehito
Outside Director

Advancement in our management of technology system and rapid realization of future creation

Nissan Chemical regards corporate governance as "a mechanism that ensures sound, efficient management," implements various related measures, and expects outside directors to play a certain role in achieving this goal. When I was appointed as a director last year, my first impressions were: 1. The company possesses technological strength and the vitality of young employees is wonderful., 2. The company analyzes the movements of society, markets, customers, etc. well and carries out relevant detailed management. Although these are great competitive advantages, I also feel that they are not fully utilized in the field of management.

Based on the slogan of "Where it all begins", I hope that the company-wide system that connects technological results to business will be further enhanced. There is also room for improvement in terms of speed, from decision making to execution and obtaining results. I hope that Nissan Chemical will change from a "reactive" company that only keeps up with changes in society to a "proactive" company that leads changes.



KATAYAMA Noriyuki
Outside Audit & Supervisory Board Member

Evolving corporate governance and the role of corporate auditors

As SDGs are the "goals" of various corporate activities, the concept of "ESG" focuses on the "process" of corporate activities. By conducting daily corporate activities with ESG in mind, we can improve the sustainability of the company and contribute to the achievement of SDGs in the future. Under these circumstances, the number of discussions on corporate governance, such as the establishment and review of the Corporate Governance Code for listed companies, has been increasing in recent years.

Outside corporate auditors not only play an important role in governance, checking the legality of business execution by directors under the trust of shareholders, but also take into account the interests of shareholders and other stakeholders from an independent standpoint. In addition, it is necessary for them to contribute to the improvement of corporate value. I expect Nissan Chemical to respond to the evolution of corporate governance through the creation and operation of a stronger internal control system.

Compliance

Since our Group regards compliance with laws and social norms as a condition for the survival and development of the company, our Basic CSR Policy stipulates that we need to conduct “sensible business activities” and conduct ourselves as “good corporate citizens and decent members of society”. In response, we recognize that compliance means complying with laws and social norms, formulate compliance rules, and established a compliance basic policy.

Compliance Basic Policy

1. We consider compliance to be an important management issue and ensure thorough compliance in every aspect of its business activities, thereby establishing corporate ethics.
2. All officers and employees of Nissan Chemical Group shall be sufficiently aware of compliance and prevent the occurrence of a compliance violation.
3. In the event that a compliance violation has occurred or is likely to occur, we take a prompt and appropriate response.

System

In our Group, the Risk Management & Compliance Committee, which is held twice a year, has been established as an organization to enhance the effectiveness of risk management, and to maintain and promote compliance. The committee is chaired by the Chief Risk Management Officer (CRO), who is appointed at the Board of Directors meeting, and is composed of the Risk & Compliance Managers, who are heads of each division/department, plant/laboratory, and domestic consolidated subsidiary. The Risk & Compliance Managers are designated by the CRO. The important matters related to compliance of each division/department, plant/laboratory, and domestic consolidated subsidiary and countermeasure plans, etc. are approved by the Board of Directors after discussion by the committee.

The Risk Management & Compliance Office under the Corporate Planning Department has been established as a specialized organization to promote continuous improvement in all of our Group's compliance activities. In addition to providing education and guidance on risk management and compliance, the Risk Management & Compliance Office receives reports on the status of compliance with laws and regulations and the status of education and training in each department on a regular basis from Risk & Compliance Managers, and when necessary, supports improvement, and shares information within our Group.

Furthermore, we have established the Consultation Hotline to serve as an internal reporting system to prevent compliance violation or resolve the problem early on.

Number of Compliance Violations

Indicator	Scope of reporting	Unit	2016	2017	2018	2019
Consultation Hotline Reports	Consolidated*	Cases	0	0	3	2
Legal actions received for anti-monopoly/anticompetitive practices (under investigation)	Consolidated*	Cases	0 (0)	0 (0)	0 (0)	0 (0)
Fines charged and settlement fees for anti-monopoly/anticompetitive practices	Consolidated*	1,000 yen	0	0	0	0
Confirmed corruption incident (under investigation)	Consolidated*	Cases	0 (0)	0 (0)	0 (0)	0 (0)
Fines charged and settlement fees for corruption	Consolidated*	1,000 yen	0	0	0	0
Other incidents related to compliance (excluding environmental)	Consolidated*	Cases	0	0	0	0
Fines charged and settlement fees for other compliance related incidents (excluding environmental)	Consolidated*	1,000 yen	0	0	0	0

* Includes domestic unconsolidated group companies

Consultation Hotline

We have Consultation Hotline to prevent compliance violation or resolve the problem early on. When an employee discovers a compliance violation or potential compliance violation, he or she shall address the problem in normal operation in principle, through measures that include reporting the matter to their superior. However, if he or she thinks it is difficult to address the problem promptly and effectively, they can use the Consultation Hotline. The contact point for reporting shall be the Risk Management & Compliance Office, outside attorneys, or outside Audit & Supervisory Board members, and the means for reporting may be selected by e-mail, mail, or telephone. Upon receipt of a report, the contents are reported to the Audit & Supervisory Board members. While accepting anonymous consultations, we have established a system that allows us to provide peace of mind by clearly defining in our rules the prohibition of interference with investigations, finding informants, and harassment.

Compliance Training

We hold training sessions on corporate ethics for officers and employees, including new employee training, working to ensure that each and every one of us looks at compliance and actively promotes it.

In addition, regarding various laws and regulations, we regularly hold training on important business themes such as the “Act against Delay in Payment of Subcontract Proceeds, Etc. to Subcontractors”, insider trading regulations, and regulations on the “Combating

Bribery of Foreign Public Officials”. We also conduct training with an emphasis on practicality, such as systematically holding in-house seminars themed on familiar legal matters, lectured by internal instructors.

Various trainings are provided to officers and employees of our company as well as those of affiliated companies as efforts to improve the knowledge of the entire Group.



Compliance Training

Compliance Manual

The Compliance Manual sets forth rules so that executives and employees, etc. (regular employees, contract employees, part-time workers, temporary workers and dispatched workers) of the Nissan Chemical Group comply with laws and regulations, company rules, social norms, and ensure compliance. In addition, by including information about the Consultation Hotline system and details about its features in the Compliance Manual, we are raising awareness about our internal reporting system.

Measures for Promoting Compliance (FY2019)

General Compliance	Director and management level compliance training, new employee training
Anti-monopoly Act and Act against Delay in Payment of Subcontract Proceeds, Etc. to Subcontractors	Training related to the Anti-monopoly Act and Act against Delay in Payment of Subcontract Proceeds, Etc. to Subcontractors; Internal audit related to the Act against Delay in Payment of Subcontract Proceeds, Etc. to Subcontractors
Information Management	Information management training; Internal audit related to information management and My Number Act related management
Insider Trading Regulation	Training for insider trading prevention
Anti-bribery	Training for the prevention of corruption and Combating Bribery of Foreign Public Officials
Security Export Control	Foreign Exchange Law related training
Consultation Hotline	Continuous dissemination of related information via the in-house newsletter and posters
Others	Training for newly-appointed board members, training for board members, contract related training (Head Office and plants), and training related to legal and civil code revisions

Human Rights/Anti-Corruption Initiatives

We joined the United Nations Global Compact (UNGC) in April 2018. In order to clarify our stance which supports the 10 principles advocated by UNGC in four fields in human rights, labor, the environment and anti-corruption, we formulated human rights policy and anti-corruption policy in 2019 to continue to make efforts aimed at all our stakeholders, including our employees.

Human Rights Due Diligence Initiatives

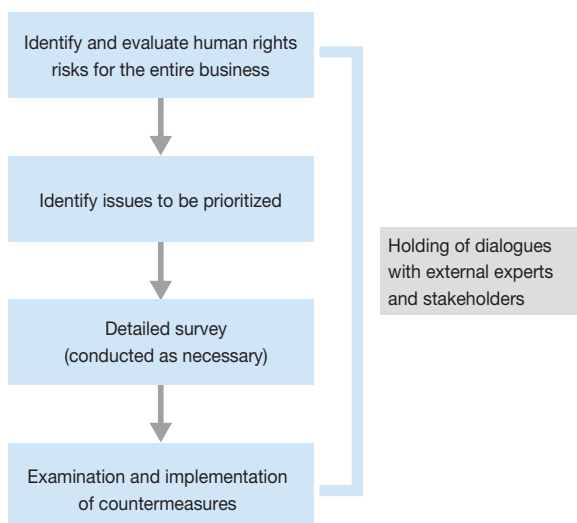
As it conducts business activities, a company may affect the human rights of various people who are its stakeholders. Therefore, the Guiding Principles on Business and Human Rights established by the United Nations indicates that companies have a responsibility to respect human rights. In addition, in order to realize respect for human rights, companies are asked to make a commitment to respecting human rights through policies and to implement human rights due diligence.

Human rights due diligence is a continuous effort to identify and evaluate the negative impact of corporate activities on human rights (equivalent to human rights risks) and take measures to prevent or mitigate it.

As part of our human rights due diligence efforts, we have begun to identify and evaluate risks that may have a negative impact on human rights through our business activities, targeting major businesses and their value chains.

In FY2020, we will identify human rights issues that we should place front and center, and consider how to deal with them.

Human Rights Due Diligence Initiatives



Nissan Chemical Group Human Rights Policy (Excerpt)

- 1 Respect for Human Rights
- 2 No Infringement of Human Rights
- 3 Employment and Labor
Prohibition of Forced Labor and Child Labor, Good Labor-Management Relations, Fair and Equitable Remuneration, and Elimination of Discrimination
- 4 Remediation

In the event that the Nissan Chemical Group causes or contributes to an adverse impact on human rights in the course of its business activities, it shall make efforts to remedy and correct such impact through appropriate means.

Nissan Chemical Group Anti-Corruption Policy (Excerpt)

- 1 Definitions
“Corruption” means the abuse of entrusted official authority for personal or company gain, including bribery.
“Bribery” means that, when company conducts its businesses,
 - any of its officers or employees provides improper benefits to a third party for the purpose of inducing a third party to conduct fraudulent or illegal acts, or upon request from a third party, or
 - any of its officers or employees demands or receives improper benefits from a third party.
- 2 Commitment to Anti-Corruption
- 3 Compliance with respect to Anti-Corruption
“Unfair Competition Prevention Act”, the “U.S. Foreign Corrupt Practices Act” and the “Anti-Unfair Competition Law of the People's Republic of China”
- 4 Remediation

In the event that the Nissan Chemical Group violates this Policy in the course of its business activities, it shall make efforts to remedy and correct the said violation through appropriate means and fully cooperate with investigations by the relevant authorities.

Risk Management

We are promoting risk management in accordance with the following action guidelines, with the aim of recognizing the various risks involved in the Nissan Chemical Group, preventing the occurrence of loss risk and minimizing the impact of their occurrence.

Risk Management Basic Policy

1. We place top priority on the safety of the lives of officers and employees of the Nissan Chemical Group.
2. We consider risk management as an important management issue, and engage in the activities from a company-wide perspective.
3. All officers and employees of the Group shall be sufficiently aware of risk management, strive to improve their abilities, and endeavor to prevent the occurrence of loss risk.
4. We promptly share the information on risk throughout the Group.
5. We make efforts to respond promptly and accurately to the occurrence of loss risk and to minimize losses.

System

The Risk Management & Compliance Office under the Corporate Planning Department has been established as a specialized organization to promote continuous improvement in all of our risk management activities.

In addition, the Risk Management & Compliance Committee, which is held twice a year, has been established as an organization to enhance the effectiveness of risk management, and to maintain and promote compliance.

The committee is chaired by the Chief Risk Management Officer (CRO), who is appointed by the Board of Directors, and is composed of the Risk & Compliance Managers, who are heads of each division/department, plant/laboratory, and domestic consolidated subsidiary. The Risk & Compliance Managers are designated by the CRO.

The Risk & Compliance Managers periodically conduct risk identification and assessment, formulate countermeasure plans, conduct self-assessment for

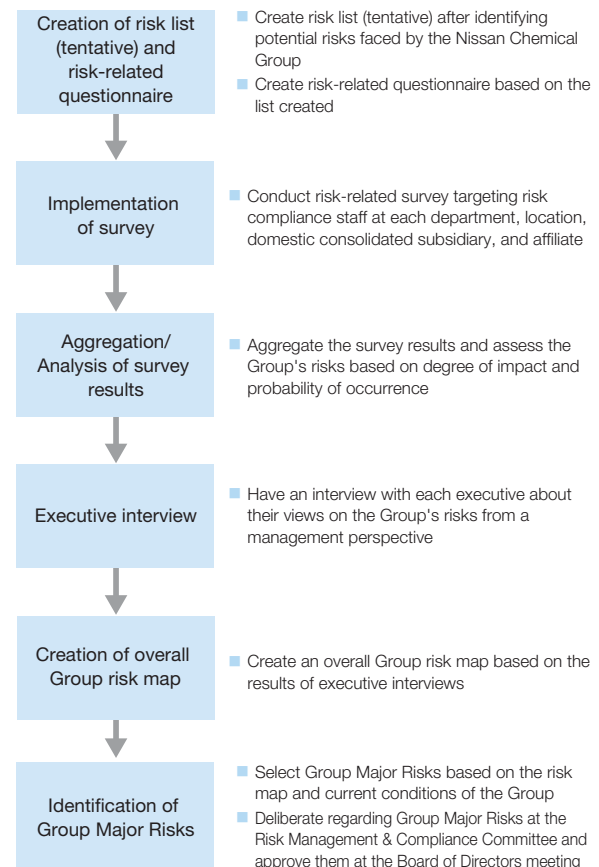
status of implementation of the countermeasure plan and subject, formulate improvement plan, and regularly perform education and training at each division/department, plant/laboratory and domestic consolidated subsidiary.

The important matters related to risk management and countermeasure plans, etc. are approved at the Board of Directors meeting after discussion by the committee.

Process for Identifying Group Major Risks

We clarified risks taking into account the business characteristics of each division and the surrounding businesses, including global political, economic and social conditions. Subsequently, risk assessment was conducted from the viewpoint of probability and impact on the business. By following the assessment, a risk map was created and Group Major Risks were identified. The contents of major risks were deliberated by the Risk Management & Compliance committee and approved at the Board of Directors meeting.

Risk Assessment Implementation (risk identification and evaluation) Overview



Group Major Risks and Countermeasures Overview

Group Major Risk	Summary of Risk	Countermeasures against risk
Delay or Discontinuance of Product and Technology Development	Risk of the failure of payback of invested capital to R&D due to being unable to launch the product under development	Manage go/stop about research targets based on periodic evaluation
Advent of Innovative Technology	Risk of the losing competitive power due to advent of innovative technology with low cost	Set research targets based on the latest technology information
Failure of the Business Portfolio Strategy	Risk of decline in business performance due to the failure of the business portfolio strategy	Minimize risk by improving risk assumptions when formulating strategies
Difficulty in Procurement of Specific Raw Material	Risk of being unable to supply the product to customer due to the discontinuance of specific raw material	Confirm procurement situation, discover issues and implement countermeasure for stable procurement
Revision or Strengthening of Law or Regulation	Risk of unwilling discontinuance of sales of product, or unwilling change in business or capital investment plan due to revision/strengthening of law or regulation	Enumerate related laws and regulations and establish an infrastructure for obtaining law revision information
Typhoon/Torrential Rain	Risk of increasing expenses to plant restoration and decreasing production volume due to direct onslaught on main plant by large-scale typhoon	Revise/improve the countermeasures that make early recovery and business continuity possible
Earthquake/Tsunami	Risk of suspension of business activities and the death or injury of many employees due to catastrophic earthquake occurring at the location of business site	
Fire/Explosion	Risk of suspension of business activities and the death or injury of many employees, and being sued by neighborhood resident for the damage by fire/explosion at plant	Revise "No Fires, Explosions, or Chemical spills" measure
Quality Defect/Recall	Risk of reimbursement for large expenses by customer and discontinuance of transactions when a product liability related accident occurs involving a product containing materials provided by our company	Continue to implement "no recalls and no falsification cases" measure
Infringing or Being Infringed of Intellectual Property Rights	Risk of being subjected to a large amount of damages and product injunction claims from other company due to infringement on other company's patent	Create an IP verification process to reduce the risk of infringing of other company's patent
Cyber Attack	Risk of shut-down of operations for a long period of time, and losing credibility of customer and society because of leak of customer's or the Company's confidential information by cyber attack	Examine and implement countermeasures from the perspectives of prevention, damage minimization, and education
Delay in Human Resource Development	Risk of personnel shortage which occurs in each division due to delay in the human resource development	Establish an ideal model of manager as well as a training system
Insufficient Governance of Overseas Subsidiary and Office	Risk of losing credibility due to detection of fraud at overseas subsidiary and office caused by inadequate control	Formulate Group policy on company regulations and share Group philosophy and policies

Group Major Risks and Countermeasures Overview ▶ https://www.nissanchem.co.jp/eng/csr_info/risk_management/policy.html

Adaptation to Climate Change Risk

As climate change becomes more serious, investors and other stakeholders are becoming more interested in the impact of climate change on business activities. Following the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD) established by the Financial Stability Board, we conducted scenario analysis based on 2°C and 4°C scenarios.

Scenario Analysis Results (climate change risks/opportunities)

As a result of scenario analysis, we identified the introduction of carbon pricing as a significant risk in the 2°C scenario. So we plan to introduce internal carbon pricing to further promote investment that takes into account the reduction of greenhouse gas emissions (low-carbon investment). In addition, in response to market change due to increasing demand

for environmental consideration, we assume that we are able to expand business opportunities in the Environment & Energy field, which is one of the main business domains of the long-term business plan Progress2030 launched in 2016.

We believe more benefit from increasing demand for initiatives to address climate change from investors and other stakeholders because our low-carbon investment and product characteristics have made us more carbon-efficient compared to whole chemical industry.

Meanwhile, we will respond to the risks of impacts on plant operations and supply chains due to increase in abnormal weather, which was identified in the 4°C scenario, by formulating and revising BCP (Business Continuity Plan) for our main products and by multiple sourcing of several key raw materials, etc. In regards to market changes caused by rising temperature and abnormal weather, we see opportunities in such as agrochemicals and disinfectants for drinking water due to water shortages and infection diseases.

Scenario Analysis Results (climate change risks/opportunities)

Scenario	Factors	Social Change	Relevant Division*		Impact on business	Degree of Impact
2°C Scenario	● Strengthening Regulations on GHG Emissions	● Introduction of carbon pricing	All	Risk	● Increase in operating costs due to introduction of carbon pricing, such as carbon taxes. (If the same conditions meet worldwide, maintaining competitiveness is possible.)	(Large)
	● Changes in energy policy ● Changes in energy demand and supply	● Price change in fuel and feedstock ● Change in transportation costs	All	Risk	● Increase in costs due to higher fuel and feedstock prices ● Increase in transportation costs	(Moderate)
	● Market changes due to increasing demand for environmental consideration	● Increased need for low-carbon products	Planning	Opportunity	● Increase in demands for products related to electric energy such as battery materials and photoelectric conversion materials due to changes in energy policies.	(Moderate)
	● Increased demand from investors for addressing climate change	● Expansion of ESG investment	All	Risk Opportunity	● Deterioration of ESG evaluation and reputation due to increasing criticism of bulk use of fossil fuels ● Improvement of ESG evaluation and reputation through advanced initiatives and information disclosure	(Moderate)
4°C Scenario	● Increase in abnormal weather	● Increase in frequency and enhanced intensity of heavy rain/flooding	All	Risk	● Increase in risk of impacts on plant operations and supply chains due to escalation of natural disasters	(Moderate)
		● Enhancement of intensity and frequency of typhoons				(Moderate)
		● Heavy snowfall				(Moderate)
	● Market changes caused by rising temperature and abnormal weather	● Decline in the available water (freshwater) resources	Chem	Opportunity	● Increase in sales of disinfectants due to increase in global demand for drinking water	(Moderate)
		● Reduction of planted area	Agri	Risk	● Reduction of planted area due to increase in frequency and enhanced intensity of heavy rain/flooding ● Reduction of planted area due to difficulties in securing irrigation water	(Moderate)
		● Increase in pests, weeds, and pathogens		Opportunity	● Increase in opportunity to develop new agrochemicals ● Influence on sales of existing agrochemicals due to resistance expression	(Moderate)
		● Increase in mass infection and diseases	Planning	Opportunity	● Increase in demand for related products and services due to growing medical needs for tropical infections and diseases	(Moderate)

*All: All divisions (Chemicals, Performance Materials, Agricultural Chemicals, Pharmaceuticals, and Planning and Development Division)
Planning: Planning and Development Division Chem: Chemicals Division Agri: Agricultural Chemicals Division

Financial Review

Long Term Financial Performance Trend

(From FY2009 to FY2019)

	2009	2010	2011	2012	2013
Sales	149.0	154.2	148.6	153.8	163.7
Operating Profit	19.2	19.8	15.5	19.5	22.2
Ordinary Income	19.2	19.4	15.9	20.5	23.7
Net Income	12.8	13.0	11.0	13.9	16.7
EBITDA	30.1	30.2	25.9	29.0	30.8
Operating Margin	12.8%	12.9%	10.4%	12.7%	13.6%
ROE	12.6%	11.9%	9.5%	11.4%	12.7%
EPS (¥/share)	74.00	75.94	64.52	83.74	102.11
Dividend (¥/share)	24	24	24	26	30
Dividend Payout Ratio	32.4%	31.6%	37.2%	31.0%	29.4%
Share Repurchase	–	2.8	–	5.0	5.0
Total Assets	181.4	183.4	190.1	199.2	208.0
Net Assets	107.7	112.4	119.6	126.7	137.8
Cash	14.8	21.1	27.9	31.9	30.8
Liabilities with Interest	42.1	39.9	38.9	38.1	36.1
Equity Ratio	58.7%	60.7%	62.4%	63.0%	65.7%
Capex	10.1	9.6	8.3	8.1	8.8
Depreciation	11.0	10.4	10.5	9.5	8.5
R&D Expenses	13.1	12.6	13.6	13.7	14.2
R&D Expenses/Sales	8.8%	8.2%	9.2%	8.9%	8.7%



(Billions of yen)

2014	2015	2016	2017	2018	2019
171.2	176.9	180.3	193.4	204.9	206.8
25.3	28.6	31.4	35.0	37.1	38.6
26.4	29.5	31.7	36.2	39.1	40.0
18.2	22.4	24.0	27.1	29.4	30.8
33.8	38.3	40.3	45.5	48.0	49.2
14.8%	16.2%	17.4%	18.1%	18.1%	18.7%
12.7%	14.6%	15.1%	16.1%	16.6%	16.9%
113.99	143.37	156.97	180.30	197.67	210.09
36	44	52	68	82	90
31.6%	30.7%	33.1%	37.7%	41.5%	42.8%
6.0	9.0	9.0	9.0	9.0	10.0
223.9	228.2	231.7	246.0	247.0	249.5
151.3	156.9	163.7	176.4	182.1	185.5
31.3	35.3	35.7	37.7	36.2	30.6
35.1	33.1	30.8	28.6	26.6	24.6
66.9%	68.1%	69.9%	71.0%	73.0%	73.7%
9.8	10.2	14.3	13.7	9.9	15.7
8.5	9.7	8.9	10.5	10.9	10.5
15.0	15.8	16.1	17.2	17.8	17.2
8.7%	8.9%	8.9%	8.9%	8.7%	8.3%

Financial Review of the Year Ended March 31, 2020

Overview

The domestic economy continued to recover moderately in the current fiscal year (April 1, 2019 to March 31, 2020) against the backdrop of an improvement in the employment and income environment. However, in addition to the sluggish exports caused by the slowdown in the overseas economy, economic activity worldwide stagnated in the second half of the fiscal year due to the impacts of COVID-19. Under these circumstance, sales of Basic Chemicals decreased in the Chemicals Division. In the Performance Materials Division, Display Materials and Semiconductor Materials performed well. The Agricultural Chemicals Division sales strongly increased. In the Pharmaceuticals Division, although sales of contracting business increased, sales of in-house drug discovery decreased.

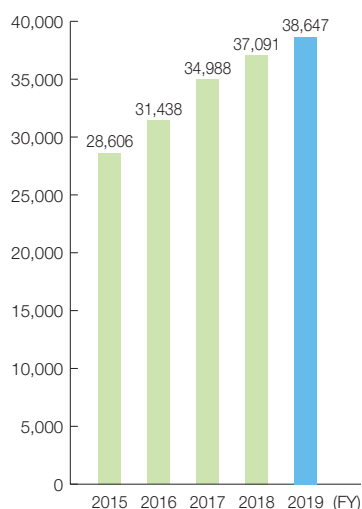
Operating Results

As a result, the Company's results for the current fiscal year were net sales 206,837 million yen (an increase of 1,941 million yen), operating income 38,647 million yen (an increase of 1,556 million yen) and ordinary income 40,003 million yen (an increase of 905 million yen), and net income attributable to owners of parent 30,779 million yen (an increase of 1,407 million yen). Operating and ordinary income achieved record highs for the sixth consecutive year and net income attributable to owners of parent for the seventh consecutive year, exceeding the earnings outlook announced in November.

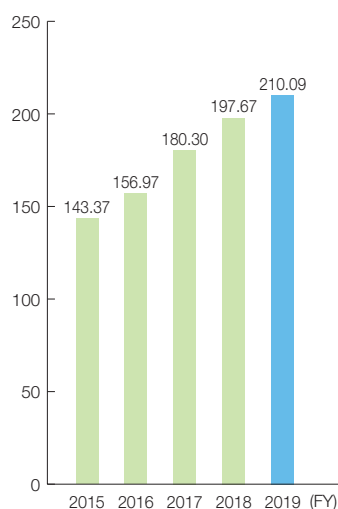
ROE was 16.9% and we have achieved Vista2021 Stage II target (maintain above 16%) in the current fiscal year.

Dividend was 90 yen and dividend payout ratio became 42.8%. We have repurchased share of 10.0 billion yen and total payout ratio was 75.1%.

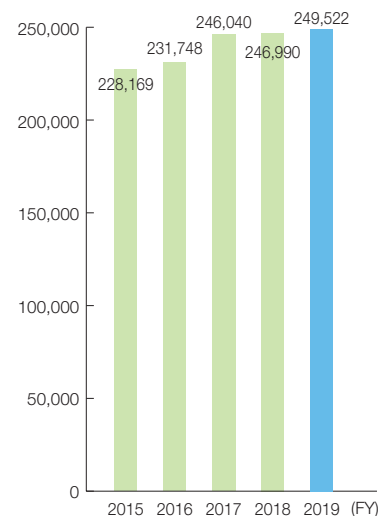
Operating Income (Millions of Yen)



Net Income per Share (Yen)



Total Assets (Millions of Yen)



Financial Position

Total assets as of March 31, 2020 were 249,522 million yen (an increase of 2,531 million yen from the previous year). It is mainly due to the increase of notes and accounts receivable-trade, merchandise and finished goods, and intangible assets.

Total liabilities as of March 31, 2020 were 63,993 million yen (a decrease of 922 million yen). It is mainly due to the decrease of loans payable.

Net assets as of March 31, 2020 were 185,528 million yen (an increase of 3,454 million yen).

As a result of these factors, equity ratio was 73.7% (an increase of 0.7% from March 31, 2019).

Position of Cash Flow

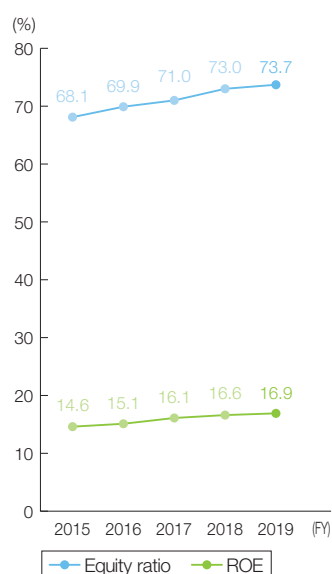
Deducting income taxes paid from income before income taxes and non-controlling interests, depreciation and gain and loss in working capital, net cash provided by operating activities for the consolidated fiscal year ended March 31, 2020 was 35,550 million yen (32,070 million yen for the previous year).

Due to investment on plant and equipment, net cash used in investing activities for the consolidated fiscal year ended March 31, 2020 was 15,624 million yen (10,884 million yen for the previous year).

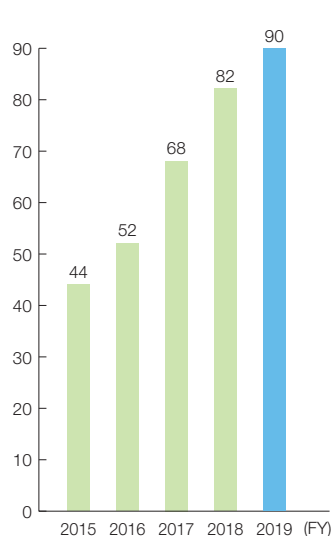
Due to share repurchase, payment for dividends and of long-term loans payable, net cash used in financing activities for the consolidated fiscal year ended March 31, 2020 was 25,186 million yen (22,563 million yen for the previous year).

As a result of these factors, cash and cash equivalents for the consolidated fiscal year ended March 31, 2020 were 30,639 million yen (36,183 million yen for the previous year), reflecting exchange of 283 million yen. It decreased by 5,544 million yen compared to the previous year.

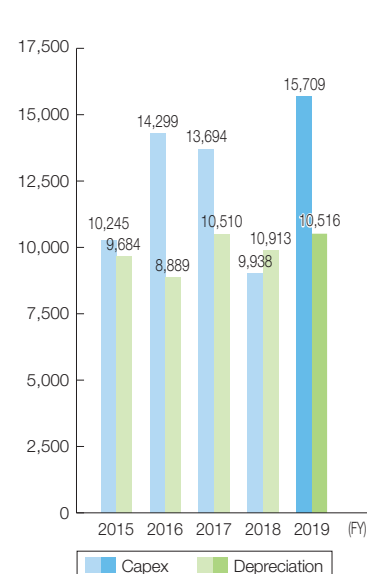
Equity Ratio and ROE



Dividend per Share (Yen)



Capex and Depreciation (Millions of yen)



Overview by Segments

The Chemicals Division

In Basic Chemicals, although sales of high purity sulfuric acid (agent used for cleaning semiconductor) increased, sales of melamine (adhesives agent for particle board) declined due to market conditions. In the Fine Chemicals, sales of TEPIC® for electronic materials (solder resist inks, LED-sealing materials, etc.) decreased, while sales for general use (powder coating agent for paint) increased.

As a result, sales of this division were 34,336 million yen (a decrease of 1,314 million yen) and operating income was 1,372 million yen (a decrease 1,674 million yen). Compared to the outlook, net sales were below 3.0 billion yen and operating income was below 2.0 billion yen.

As outlook of business result for the next term, we assume net sales will be 35.6 billion yen and operating income will be 2.7 billion yen.

The Performance Materials Division

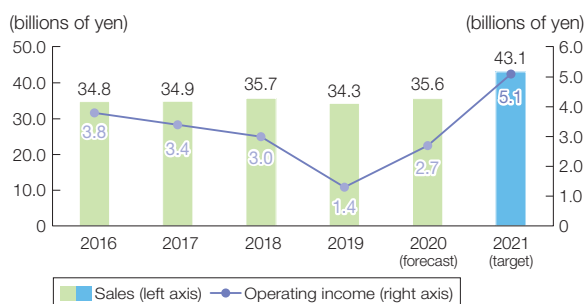
In the Display Materials, sales of SUNEVER® (alignment material for liquid crystal display) for both small-and medium-sized products such as smartphones and large-scale products such as TVs performed well. In the Semiconductor Materials, sales of anti-reflective coating for semiconductors (ARC®*) increased, reflecting favorable operation by customers. In the Inorganic Materials, sales of SNOWTEX® for polishing electronic materials decreased. Sales of Organo / Monomer sol (various kinds of coating materials, resin additive) and Oilfield materials (for enhancing oil recovery) also decreased.

As a result, sales of this division were 65,460 million yen (an increase of 2,428 million yen) and operating income was 17,353 million yen (an increase of 2,386 million yen). Compared to the outlook, net sales were above 2.0 billion yen and operating income was above 2.3 billion yen.

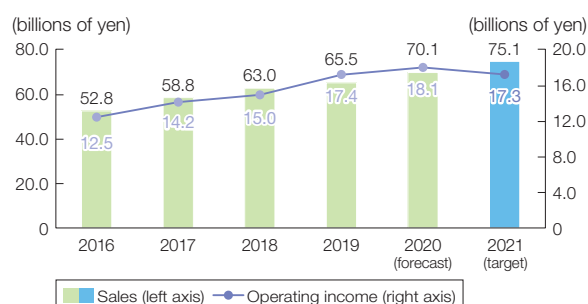
As outlook of business result for the next term, we assume net sales will be 70.1 billion yen and operating income will be 18.1 billion yen.

* ARC® is a registered trademark of Brewer Science, Inc.

Business Results and Outlook



Business Results and Outlook



Trading

Sales of this segment were 67,907 million yen (an increase of 27 million yen), and operating income was 2,113 million yen (an increase of 75 million yen). Compared to the outlook, net sales were above 0.8

billion yen and operating income was the same.

As outlook of business result for the next term, we assume net sales will be 68.2 billion yen and operating income will be 2.0 billion yen.

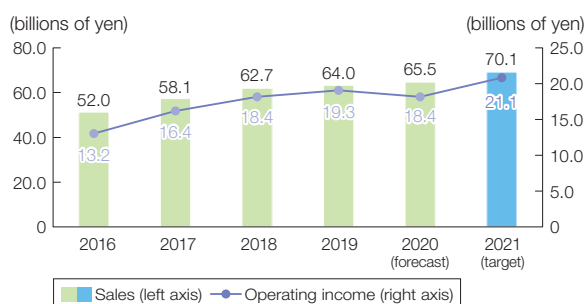
The Agricultural Chemicals Division

Sales of Fluralaner (active ingredients for veterinary pharmaceuticals) decreased due to the impact of inventories of customers. In domestic agrochemicals market, sales of GRACIA® (insecticide) launched in May in Japan were strong. ROUNDUP® (non-selective leaf treatment herbicide) revenues increased from the previous year due to natural disasters in the first half of the previous fiscal year, and remained steady in the second half of this fiscal year. In overseas agrochemicals market, sales of TARGA® (herbicide) decreased, but sales of GRACIA® for the Korean market and Quintec® (fungicide) acquired in the third quarter contributed to sales.

As a result, sales of this division were 64,038 million yen (an increase of 1,313 million yen) and operating income was 19,303 million yen (an increase of 952 million yen). Compared to the outlook, net sales were below 0.3 billion yen and operating income was below 0.3 billion yen.

As outlook of business result for the next term, we assume net sales will be 65.5 billion yen and operating income will be 18.4 billion yen.

Business Results and Outlook



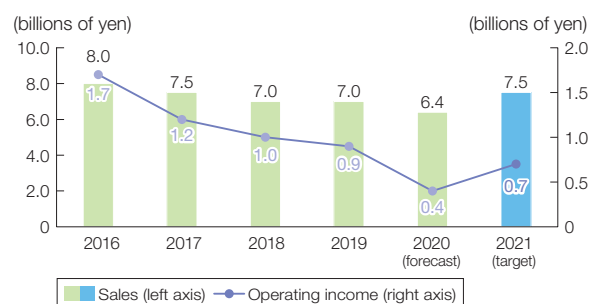
The Pharmaceuticals Division

Sales of API of LIVALO® (anti-cholesterol drug) decreased, as selling prices fell due to an increase in sales of generic drugs outside Japan, despite an increase in shipments in Japan. In contracting business, sales of generic-APIs increased steadily.

As a result, sales of this division were 6,962 million yen (a decrease of 46 million yen) and operating income was 939 million yen (a decrease of 60 million yen). Compared to the outlook, net sales were the same and operating income was below 0.2 billion yen.

As outlook of business result for the next term, we assume net sales will be 6.4 billion yen and operating income will be 0.4 billion yen.

Business Results and Outlook



Others

Sales of this segment were 22,394 million yen (a decrease of 2,215 million yen) and operating income was 693 million yen (a decrease of 229 million yen).

As outlook of business result for the next term, we assume net sales will be 25.0 billion yen and operating income will be 0.7 billion yen.

Consolidated Balance Sheets

(For FY2019 and FY2018)

Assets	(Millions of Yen)		(Thousands of U.S. dollars)
	FY2019	FY2018	FY2019
Current assets			
Cash and deposits	¥30,639	¥36,183	\$281,531
Notes and accounts receivable - trade	72,509	69,193	666,259
Merchandise and finished goods	33,131	32,215	304,429
Work in process	153	41	1,406
Raw materials and supplies	10,590	9,742	97,308
Accounts receivable - other	2,765	2,207	25,407
Short-term loans receivable	2,045	512	18,791
Other	2,387	2,427	21,933
Allowance for doubtful accounts	(26)	(32)	(239)
Total current assets	154,196	152,490	1,416,852
Non-current assets			
Property, plant and equipment			
Buildings and structures	67,110	65,942	616,650
Accumulated depreciation and impairment loss	(42,260)	(40,690)	(388,312)
Buildings and structures, net	24,850	25,251	228,338
Machinery, equipment and vehicles	135,476	130,490	1,244,841
Accumulated depreciation and impairment loss	(123,035)	(117,523)	(1,130,525)
Machinery, equipment and vehicles, net	12,440	12,966	114,307
Tools, furniture and fixtures	39,625	38,458	364,100
Accumulated depreciation and impairment loss	(35,829)	(34,385)	(329,220)
Tools, furniture and fixtures, net	3,796	4,073	34,880
Land	8,995	9,059	82,652
Construction in progress	1,499	1,378	13,774
Total property, plant and equipment	51,581	52,729	473,959
Intangible assets			
Software	566	721	5,201
Other	6,812	796	62,593
Total intangible assets	7,379	1,517	67,803
Investments and other assets			
Investment securities	30,873	35,229	283,681
Deferred tax assets	721	110	6,625
Net defined benefit asset	1,609	2,089	14,785
Other	3,244	2,917	29,808
Allowance for doubtful accounts	(84)	(92)	(772)
Total investments and other assets	36,364	40,253	334,136
Total non-current assets	95,325	94,500	875,907
Total assets	¥249,522	¥246,990	\$2,292,769

Liabilities	(Millions of Yen)		(Thousands of U.S. dollars)
	FY2019	FY2018	FY2019
Current liabilities			
Notes and accounts payable - trade	¥16,876	¥17,809	\$155,068
Short-term loans payable	22,898	23,605	210,402
Current portion of long-term loans payable	640	1,860	5,881
Income taxes payable	6,167	4,330	56,666
Provision for bonuses	2,151	2,137	19,765
Provision for directors' bonuses	26	25	239
Other	11,254	10,430	103,409
Total current liabilities	60,015	60,198	551,456
Non-current liabilities			
Long-term loans payable	1,076	1,116	9,887
Deferred tax liabilities	76	823	698
Provision for business structure improvement	284	370	2,610
Provision for loss on business of subsidiaries and affiliates	309	309	2,839
Provision for share-based remuneration for directors (and other officers)	46	-	423
Net defined benefit liability	208	152	1,911
Other	1,976	1,945	18,157
Total non-current liabilities	3,978	4,717	36,552
Total liabilities	¥63,993	¥64,916	\$588,009
Net assets			
Shareholders' equity			
Capital stock	¥18,942	¥18,942	\$174,051
Capital surplus	13,613	13,613	125,085
Retained earnings	146,997	143,200	1,350,703
Treasury shares	(2,470)	(6,291)	(22,696)
Total shareholders' equity	177,082	169,464	1,627,143
Accumulated other comprehensive income			
Valuation difference on available-for-sale securities	7,782	10,634	71,506
Foreign currency translation adjustment	(896)	(11)	(8,233)
Remeasurements of defined benefit plans	(51)	258	(469)
Total accumulated other comprehensive income	6,834	10,880	62,795
Non-controlling interests	1,610	1,728	14,794
Total net assets	185,528	182,074	1,704,751
Total liabilities and net assets	¥249,522	¥246,990	\$2,292,769

Consolidated Statements of Income

(For FY2019 and FY2018)

	(Millions of Yen)		(Thousands of U.S. dollars)
	FY2019	FY2018	FY2019
Net sales	¥206,837	¥204,896	\$1,900,551
Cost of sales	122,379	119,911	1,124,497
Gross profit	84,458	84,985	776,054
Selling, general and administrative expenses	45,810	47,893	420,932
Operating income	38,647	37,091	355,113
Non-operating income			
Interest income	26	31	239
Dividend income	785	981	7,213
Equity in earnings of affiliates	945	970	8,683
Other	852	1,142	7,829
Total non-operating income	2,609	3,126	23,973
Non-operating expenses			
Interest expenses	123	110	1,130
Loss on disposal of non-current assets	443	630	4,071
Plant stop losses	298	249	2,738
Foreign exchange losses	235	24	2,159
Other	151	104	1,387
Total non-operating expenses	1,252	1,119	11,504
Ordinary income	40,003	39,098	367,573
Extraordinary income			
Gain on sales of investment securities	1,834	-	16,852
Total extraordinary income	1,834	-	16,852
Extraordinary losses			
Licensing arrangement fee	834	-	7,663
Total extraordinary losses	834	-	7,663
Income before income taxes and non-controlling interests	41,003	39,098	376,762
Income taxes - current	10,102	8,690	92,824
Income taxes - deferred	36	893	331
Total income taxes	10,138	9,583	93,154
Net income	30,864	29,514	283,598
Net income attributable to non-controlling interests	84	141	772
Net income attributable to owners of parent	¥30,779	¥29,372	\$282,817

Consolidated Statements of Comprehensive Income

(For FY2019 and FY2018)

	(Millions of Yen)		(Thousands of U.S. dollars)
	FY2019	FY2018	FY2019
Net income	¥30,864	¥29,514	\$283,598
Other comprehensive income			
Valuation difference on available-for-sale securities	(2,851)	(3,018)	(26,197)
Foreign currency translation adjustment	(976)	(159)	(8,968)
Remeasurements of defined benefit plans, net of tax	(309)	(132)	(2,839)
Share of other comprehensive income of entities accounted for using equity method	(0)	(0)	(0)
Total other comprehensive income	(4,137)	(3,311)	(38,013)
Comprehensive income	26,726	26,203	245,576
(Comprehensive income attributable to)			
Owners of parent	26,733	26,083	245,640
Non-controlling interests	(¥6)	¥119	(\$55)

Consolidated Statements of Changes in Net Assets

(For FY2019)

(Millions of Yen)

	Total shareholders' equity				Total shareholders' equity
	Capital stock	Capital surplus	Retained earnings	Treasury shares	
Balance at beginning of current period	¥18,942	¥13,613	¥143,200	(¥6,291)	¥169,464
Changes of items during period					
Dividends of surplus			(12,360)		(12,360)
Net income attributable to owners of parent			30,779		30,779
Share repurchase				(10,801)	(10,801)
Disposal of treasury shares			(0)	0	0
Cancellation of treasury shares			(14,622)	14,622	–
Net changes of items other than shareholders' equity					–
Total changes of items during period	–	–	3,797	3,821	7,618
Balance at end of current period	¥18,942	¥13,613	¥146,997	(¥2,470)	¥177,082

	Accumulated other comprehensive income					Total net assets
	Valuation difference on available-for-sale securities	Foreign currency translation adjustment	Remeasurements of defined benefit plans	Total accumulated other comprehensive income	Non-controlling interests	
Balance at beginning of current period	¥10,634	(¥11)	¥258	¥10,880	¥1,728	¥182,074
Changes of items during period						
Dividends of surplus						(12,360)
Net income attributable to owners of parent						30,779
Share repurchase						(10,801)
Disposal of treasury shares						0
Cancellation of treasury shares						–
Net changes of items other than shareholders' equity	(2,851)	(884)	(309)	(4,046)	(117)	(4,164)
Total changes of items during period	(2,851)	(884)	(309)	(4,046)	(117)	3,454
Balance at end of current period	¥7,782	(¥896)	(¥51)	¥6,834	¥1,610	¥185,528

Consolidated Statements of Changes in Net Assets

(For FY2018)

(Millions of yen)

	Total shareholders' equity				
	Capital stock	Capital surplus	Retained earnings	Treasury shares	Total shareholders' equity
Balance at beginning of current period	¥18,942	¥13,613	¥133,822	(¥5,962)	¥160,416
Changes of items during period					
Dividends of surplus			(11,320)		(11,320)
Net income attributable to owners of parent			29,372		29,372
Share repurchase				(9,004)	(9,004)
Cancellation of treasury shares			(8,674)	8,674	–
Net changes of items other than shareholders' equity					–
Total changes of items during period	–	–	9,377	(329)	9,048
Balance at end of current period	¥18,942	¥13,613	¥143,200	(¥6,291)	¥169,464

Accumulated other comprehensive income

(Millions of yen)

	Accumulated other comprehensive income					Total net assets
	Valuation difference on available-for-sale securities	Foreign currency translation adjustment	Remeasurements of defined benefit plans	Total accumulated other comprehensive income	Non-controlling interests	
Balance at beginning of current period	¥13,653	¥125	¥390	¥14,170	¥1,778	¥176,364
Changes of items during period						
Dividends of surplus						(11,320)
Net income attributable to owners of parent						29,372
Share repurchase						(9,004)
Cancellation of treasury shares						–
Net changes of items other than shareholders' equity	(3,019)	(137)	(132)	(3,289)	(49)	(3,338)
Total changes of items during period	(3,019)	(137)	(132)	(3,289)	(49)	5,709
Balance at end of current period	¥10,634	(¥11)	¥258	¥10,880	¥1,728	¥182,074

Consolidated Statements of Changes in Net Assets

(For FY2019)

(Thousands of U.S. dollars)

	Total shareholders' equity				
	Capital stock	Capital surplus	Retained earnings	Treasury shares	Total shareholders' equity
Balance at beginning of current period	\$174,051	\$125,085	\$1,315,814	(\$57,806)	\$1,557,144
Changes of items during period					
Dividends of surplus			(113,572)		(113,572)
Net income attributable to owners of parent			282,817		282,817
Share repurchase				(99,247)	(99,247)
Disposal of treasury shares			(0)	0	0
Cancellation of treasury shares			(134,356)	134,356	–
Net changes of items other than shareholders' equity					–
Total changes of items during period	–	–	34,889	35,110	69,999
Balance at end of current period	\$174,051	\$125,085	\$1,350,703	(\$22,696)	\$1,627,143

Accumulated other comprehensive income

(Thousands of U.S. dollars)

	Valuation difference on available-for-sale securities	Foreign currency translation adjustment	Remeasurements of defined benefit plans	Total accumulated other comprehensive income	Non-controlling interests	Total net assets
	Balance at beginning of current period	\$97,712	(\$101)	\$2,371	\$99,972	\$15,878
Changes of items during period						
Dividends of surplus						(113,572)
Net income attributable to owners of parent						282,817
Share repurchase						(99,247)
Disposal of treasury shares						0
Cancellation of treasury shares						–
Net changes of items other than shareholders' equity	(26,197)	(8,123)	(2,839)	(37,177)	(1,075)	(38,262)
Total changes of items during period	(26,197)	(8,123)	(2,839)	(37,177)	(1,075)	31,738
Balance at end of current period	\$71,506	(\$8,233)	(\$469)	\$62,795	\$14,794	\$1,704,751

Consolidated Statements of Changes in Net Assets

(For FY2018)

(Thousands of U.S. dollars)

	Total shareholders' equity				
	Capital stock	Capital surplus	Retained earnings	Treasury shares	Total shareholders' equity
Balance at beginning of current period	\$170,633	\$122,629	\$1,205,495	(\$53,707)	\$1,445,059
Changes of items during period					
Dividends of surplus			(101,973)		(101,973)
Net income attributable to owners of parent			264,589		264,589
Share repurchase				(81,110)	(81,110)
Cancellation of treasury shares			(78,137)	78,137	–
Net changes of items other than shareholders' equity					–
Total changes of items during period	–	–	84,470	(2,964)	81,506
Balance at end of current period	\$170,633	\$122,629	\$1,289,974	(\$56,671)	\$1,526,565

(Thousands of U.S. dollars)

	Accumulated other comprehensive income					
	Valuation difference on available-for-sale securities	Foreign currency translation adjustment	Remeasurements of defined benefit plans	Total accumulated other comprehensive income	Non-controlling interests	Total net assets
Balance at beginning of current period	\$122,989	\$1,126	\$3,513	\$127,646	\$16,017	\$1,588,722
Changes of items during period						
Dividends of surplus						(101,973)
Net income attributable to owners of parent						264,589
Share repurchase						(81,110)
Cancellation of treasury shares						–
Net changes of items other than shareholders' equity	(27,196)	(1,234)	(1,189)	(29,628)	(441)	(30,069)
Total changes of items during period	(27,196)	(1,234)	(1,189)	(29,628)	(441)	51,428
Balance at end of current period	\$95,793	(\$99)	\$2,324	\$98,009	\$15,566	\$1,640,159

Consolidated Statements of Cash Flows

(For FY2019 and FY2018)

	(Millions of Yen)		(Thousands of U.S. dollars)
	FY2019	FY2018	FY2019
Cash flows from operating activities			
Income before income taxes and non-controlling interests	¥41,003	¥39,098	\$376,762
Depreciation and amortization	10,516	10,915	96,628
Amortization of goodwill	28	-	257
Interest and dividend income	(811)	(1,013)	(7,452)
Loss (gain) on sales of investment securities	(1,834)	(296)	(16,852)
Interest expenses	123	110	1,130
Loss (gain) on disposal of non-current assets	443	630	4,071
Decrease (increase) in notes and accounts receivable - trade	(3,656)	(3,877)	(33,594)
Decrease (increase) in inventories	(2,352)	(4,304)	(21,612)
Increase (decrease) in notes and accounts payable - trade	(715)	(671)	(6,570)
Other	(263)	(617)	(2,417)
Subtotal	42,481	39,974	390,343
Interest and dividend income received	1,565	1,633	14,380
Interest expenses paid	(123)	(111)	(1,130)
Income taxes paid	(8,373)	(9,426)	(76,937)
Net cash provided by (used in) operating activities	35,550	32,070	326,656
Cash flows from investing activities			
Purchase of investment securities	(657)	(910)	(6,037)
Proceeds from sales of investment securities	3,206	450	29,459
Purchase of property, plant and equipment	(8,904)	(9,747)	(81,816)
Payments for retirement of property, plant and equipment	(391)	(525)	(3,593)
Purchase of intangible assets	(285)	(192)	(2,619)
Payments for transfer of business	(6,335)	-	(58,210)
Net decrease (increase) in short-term loans receivable	(1,538)	(2)	(14,132)
Purchase of long-term prepaid expenses	(645)	(46)	(5,927)
Other	(73)	90	(671)
Net cash provided by (used in) investing activities	(15,624)	(10,884)	(143,563)
Cash flows from financing activities			
Net increase (decrease) in short-term loans payable	(653)	(46)	(6,000)
Proceeds from long-term loans payable	600	530	5,513
Repayments of long-term loans payable	(1,860)	(2,554)	(17,091)
Cash dividends paid	(12,360)	(11,320)	(113,572)
Dividends paid to non-controlling interests	(111)	(167)	(1,020)
Share repurchase	(10,801)	(9,004)	(99,247)
Other	0	(0)	0
Net cash provided by (used in) financing activities	(25,186)	(22,563)	(231,425)
Effect of exchange rate change on cash and cash equivalents	(283)	(141)	(2,600)
Net increase (decrease) in cash and cash equivalents	(5,544)	(1,518)	(50,942)
Cash and cash equivalents at beginning of period	36,183	37,702	332,473
Cash and cash equivalents at end of period	¥30,639	¥36,183	\$281,531

(Note 1) The consolidated financial statements are a translation of the Japanese annual securities report's consolidated financial statements.

(Note 2) The consolidated financial statements are expressed in Japanese yen as of and for the year ended March 31, 2020 after being converted from the currency of the country in which the Company operates. The translation of Japanese yen amounts to United States dollar amounts is included solely for the convenience of the readers outside Japan, and has been made at the rate of ¥108.83 to US \$1, which is the approximate closing exchange rate reported by the Tokyo Foreign Exchange Market on March 31, 2020. This translation should not be construed to indicate that the Japanese yen amounts shown can be converted to United States dollars at the above rate.

Corporate Information

Domestic Bases

Nagoya Plant

This plant faces the Port of Nagoya. Here we manufacture sulfuric acid and high-quality urea aqueous solution, among other products.



Toyama Plant

This plant is located in the center of Toyama Plain. Here we manufacture various groups of products, such as basic chemicals, environmental chemicals, and performance materials.



Onoda Plant

This plant is located in Sanyo-Onoda City, Yamaguchi. It is our base for the production of fine organic synthetic compounds, such as agrochemicals and pharmaceuticals.



Saitama Plant

This plant is located in northern Saitama. Here we manufacture agricultural formulations.



Sodegaura Plant

These plants are located in the industrial area in Sodegaura and Ichihara City, Chiba. These are our bases for the production of performance materials.



List of Offices, Plants and Laboratories

Offices

Head Office

5-1, Nihonbashi 2-Chome, Chuo-ku, Tokyo 103-6119
Tel: +81-3-4463-8111

Sendai Sales Office

Greenwood Sendai Ichibancho Building 2-7-12, Ichibancho, Aoba-ku,
Sendai 980-0811
Tel: +81-22-266-4311

Osaka Sales Office

Kintetsu Dojima Building 2-2-2, Dojima, Kita-ku, Osaka 530-0003
Tel: +81-6-6346-7200

Hiroshima Office

Dai-ichi Uenoya Building, 8-8 Kamihatchobori, Naka-ku, Hiroshima 730-0012

Sapporo Sales Office

Maruito Sapporo Building 1-1, Kita-Nijyo-Nishi, Chuo-ku,
Sapporo 060-0002
Tel: +81-11-251-0264

Nagoya Sales Office

Nagoya KS Building 3-1-18, Taiko, Nakamura-ku,
Nagoya 453-0801
Tel: +81-52-452-8623

Fukuoka Sales Office

JPR Hakata Building 1-4-4, Hakata Ekimae, Hakata-ku,
Fukuoka 812-0011
Tel: +81-92-432-3421

Plants

Sodegaura Plant

11-1, Kitasode, Sodegaura, Chiba 299-0266
Tel: +81-438-63-2341

Saitama Plant

235-1, Aza Nishidai, Oaza Jimbohara-machi, Kamisato-machi,
Kodama-gun, Saitama 369-0305
Tel: +81-495-34-2810

Nagoya Plant

7, Tsukiji-cho, Minato-ku, Nagoya 455-0045
Tel: +81-52-661-1676

Sodegaura Plant Goi Works

12-17, Goiminamikaigan, Ichihara, Chiba 290-0045
Tel: +81-436-22-2110

Toyama Plant

635, Sasakura, Fuchu-machi, Toyama 939-2792
Tel: +81-76-433-9602

Onoda Plant

6903-1, Oaza Onoda, Sanyo-Onoda, Yamaguchi 756-0093
Tel: +81-836-83-2800

Laboratories

Chemical Research Laboratories

10-1, Tsuboi-Nishi 2-chome, Funabashi, Chiba 274-8507
Tel: +81-47-465-1112

Biological Research Laboratories

1470, Shiraoka, Shiraoka, Saitama 349-0294
Tel: +81-480-92-2513

Materials Research Laboratories

488-6, Suzumi-cho, Funabashi, Chiba 274-0052
Tel: +81-47-419-3810

11-1, Kitasode, Sodegaura, Chiba 299-0266
Tel: +81-438-64-2881

635, Sasakura, Fuchu-machi, Toyama 939-2792
Tel: +81-76-465-7133

Group Companies

Japan

Nissei Corporation

1-10-5, Nihonbashihon-cho, Chuo-ku, Tokyo 103-0023
Tel: +81-3-3241-2548

■ Sales of chemical products and insurance, and real estate business

Nissan Green & Landscape Co., Ltd.

3-16-9, Uchikanda, Chiyoda-ku, Tokyo 101-0047
Tel: +81-3-3256-4031

■ Landscaping and civil engineering

Nihon Hiryo Co., Ltd.

559-3, Tozaki, Okanogo, Fujioka, Gumma 375-0011
Tel: +81-274-42-1247

■ Production and sales of fertilizers and agrochemicals

Sun Agro Co., Ltd.

1-10-5, Nihonbashihon-cho, Chuo-ku, Tokyo 103-0023
Tel: +81-3-3510-3601

■ Production and sales of fertilizers and agrochemicals

NC Agro Hakodate Corporation

9-23, Kitahama-cho, Hakodate, Hokkaido, 040-0078
Tel: +81-138-41-1251

■ Production of agrochemicals

Nissan Butsuryu Co., Ltd.

1-10-5, Nihonbashihon-cho, Chuo-ku, Tokyo 103-0023
Tel: +81-3-5255-6901

■ Transportation

Nissan Engineering, Ltd.

634-1, Sasakura, Fuchu-machi, Toyama 939-2753
Tel: +81-76-465-5711

■ Plant engineering services

Environmental Technical Laboratories, Ltd.

2-11-17, Kohoku, Adachi-ku, Tokyo 123-0872
Tel: +81-3-3898-6643

■ Consultation of environmental conservation and
environmental analysis services

Clariant Catalysts (Japan) K.K.

2-28-8, Honkomagome, Bunkyo-ku, Tokyo 113-0021
Tel: +81-3-5977-7300

■ Production and sales of catalysts for petrochemical
and petroleum products

Overseas Bases

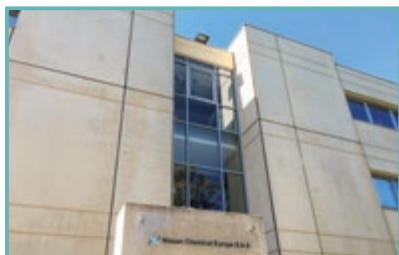
(As of March 31, 2020)

France

Nissan Chemical Europe S.A.S.

Parc d'Affaires de Crécy -
10A rue de la Voie Lactée
69370 Saint Didier au Mont d'Or, France
Tel: +33-4-37-64-40-20

■ Sales of agrochemicals



America

Nissan Chemical America Corporation

10333 Richmond Avenue, Suite 1100, Houston,
Texas 77042, U.S.A.
Tel: +1-713-532-4745

■ Production and sales of inorganic materials



India

Nissan Agro Tech India PVT. LTD.

502-504, 5th Floor, Tower B, Spazedge
Commercial Complex, Sector-47, Sohna Road,
Gurgaon-122002, Haryana, India
Tel: +91-124-4214446/47

■ Sales support and promotional services for agrochemicals

Nissan Bharat Rasayan PVT. LTD.

502-504, 5th Floor, Tower B, Spazedge
Commercial Complex, Sector-47, Sohna Road,
Gurgaon-122002, Haryana, India
Tel: +91-124-4214446

■ Manufacture and export of active ingredients of agrochemicals

China

Nissan Chemical Product (Shanghai) Co., Ltd.

Rm.3210 Office Tower 1, Raffles City Changning, No.1133
Changning Road, Changning District, Shanghai
200051 PRC
Tel: +86-21-6236-8300

■ Sales support and promotional services for agrochemicals

Nissan Chemical Materials Research (Suzhou) Co., Ltd.

Room101, NW-10, Nanopolis Suzhou 99 Jinji Lake Avenue,
Suzhou Industrial Park, China
Tel: +86-512-62732080

■ R&D, sales support and promotional services for
performance materials

Taiwan

Nissan Chemical Taiwan Co., Ltd.

5F., No.67, Luke 2nd Rd., Luzhu Dist., Kaohsiung City 821,
Taiwan (R.O.C.)
Tel: +886-7-695-5252

■ R&D and sales support for display and semiconductor materials

Brazil

Nissan Chemical Do Brasil

Avenida Gisele Constantino, 1850,
Salas 1518 a 1520, Parque Bela Vista,
Votorantim, SP, 18110-650, Brasil
Tel: +55-15-3019-8772

■ Sales support and promotional services for agrochemicals



Korea

NCK Co., Ltd.

127, Chupalsandan-ro, Paengseong-eup,
Pyeongtaek-si,
Gyeonggi-do, 17998, KOREA
Tel: +82-31-691-7044

■ Production and sales of display and
semiconductor materials

Nissan Chemical Agro Korea Ltd.

Room 2001, 74, Sejong-daero, Jung-gu, Seoul
04526, Korea
Tel: +82-2-774-6470

■ Sales of agrochemicals

Corporate Profile

(As of March 31, 2020)

Corporate Name	Nissan Chemical Corporation
Head Office	5-1, Nihonbashi 2-Chome, Chuo-ku, Tokyo 103-6119, Japan TEL: +81-3-4463-8111
Founded	1887
Capital Stock	18,942 million yen
Number of Employees	Consolidated: 2,640
Stock Listing	Tokyo Stock Exchange
Transfer Agent	Sumitomo Mitsui Trust Bank, Limited 4-1, Marunouchi 1-chome, Chiyoda-ku, Tokyo 100-8233, Japan

Share Information

(As of March 31, 2020)

Total Number of Authorized Shares	360,000,000
Shares of Common Share Issued	146,000,000*
Shareholders	11,493

* Includes 356,378 treasury shares

Major shareholders (Top ten companies)	Number of shares held (1,000 shares)	Investment (%)
The Master Trust Bank of Japan, Ltd. (Trust Account)	26,563	18.2
Japan Trustee Services Bank, Ltd. (Trust Account)	12,288	8.4
Trust & Custody Services Bank, Ltd. as trustee for the Mizuho Trust & Banking Co., Ltd. Retirement Benefit Trust	7,276	5.0
The Norinchukin Bank	4,800	3.3
Nissan Chemical Customer Shareholders Association	3,901	2.7
Trust & Custody Services Bank, Ltd. (Securities Investment Trust Account)	2,679	1.8
JP Morgan Chase Bank	2,356	1.6
Japan Trustee Services Bank, Ltd. (Trust Account 5)	2,215	1.5
Ono Pharmaceutical Co., Ltd.	1,983	1.4
Nissan Chemical Corporation Employees Association	1,868	1.3

(Note) Investment percentages are calculated excluding treasury shares.

	Financial institutions	Securities companies	Other domestic companies	Overseas investors	Individuals / Others	Treasury shares
Percentage of share held (%)	51.3	2.7	10.7	24.0	11.1	0.2

