Nissan Chemical Corporation Integrated Report 2023

Nissan Chemical
CORPORATION

Integrated Report 2023

WHERE IT ALL BEGINS

Issued: October 2023

Nissan Chemical
CORPORATION
https://www.nissanchem.co.jp/eng/

Corporate Slogan

WHERE IT ALL BEGINS

Nothing is going to change the world to be better without beginning.
The slogan means Nissan Chemical creates such “beginning” to realize the hope of human by exploring the future.

Brand Statement

Our goal is to fill the world with hope and happiness.
Our value is to produce a whole new excitement utilizing our imagination and creativity.
Our pride is our team of specialists believing in the infinite possibilities of chemistry and striving to achieve the impossible.
We are Nissan Chemical, an ever evolving company the world can’t do without.

Corporate Ethos Structure

Based on changes in the business environment, social issues, and management challenges, we recognized the importance of the corporate philosophy once again. To determine our direction for the future and clarify the raison d'etre of the Group, we redefined our corporate philosophy in 2022.

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
(Raison d'etre / Corporate Purpose)

Contribute to the protection of the global environment and the existence/development of humanity, offering the value sought by society.

Course of Action

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 personality of employees, and promoting their health.

6 Conduct ourselves as good corporate citizens and decent members of society.

Integrated Report 2023

"WHERE IT ALL BEGINS"

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Third-party Evaluation

Nissan Chemical's initiatives are highly regarded by external analytics and research organizations.

FTSE Blossom Japan

FTSE4Good

FTSE Blossom Japan Sector Relative Index

2023 Sompo Sustainability Index

S&P/JPX Carbon Efficient Index

Member of Dow Jones Sustainability Indices Powered by the S&P Global CSA

2023 CONSTITUENT MSCI JAPAN EMPOWERING WOMEN INDEX (WIN)

* FTSE Russell confirms that Nissan Chemical Corporation has been independently assessed according to the index criteria, and has satisfied the requirements to become a constituent of the FTSE Blossom Japan Sector Relative Index.
The FTSE Blossom Japan Sector Relative Index is used by a wide variety of market participants to create and assess responsible investment funds and other products.

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 comprehensively summarized the materiality, value creation process, business strategies, and detailed financial information in addition to the business overview and E (Environment), S (Social), and G (Governance) information as an integrated report to make this report easier to understand mid-to long-term value creation 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

FY2022 (April 2022 to March 2023)
The occupational accidents data (P12 and P75) is from January to December 2022.

Issued

October 2023
(The previous edition was issued in October 2022, and the next edition is planned to be issued in October 2024.)

Frequency of Issuance

Annually

Contact for Inquiries About This Report

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Sustainability Promotion & IR Department
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E-mail: sus_pro@nissanchem.co.jp

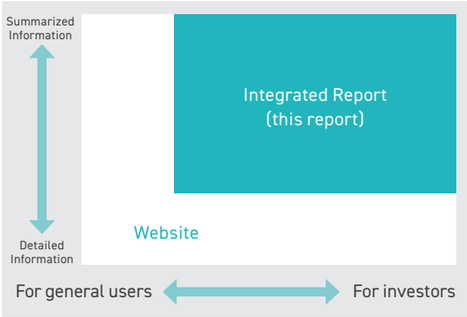
Scope of Reporting

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

Guidelines Used as Reference

- International Financial Reporting Standards (IFRS) Foundation "IFRS Sustainability Disclosure Standards"
- Ministry of Economy, Trade and Industry "Guidance for Collaborative Value Creation"
- GRI "Sustainability Reporting Guidelines Standard"
- Ministry of the Environment "Environmental Reporting Guidelines"
- Task Force on Climate-related Financial Disclosures (TCFD)

Information Disclosure System



Consolidated subsidiaries:
Nissei Corporation, Nissan Butsuryu Co., Ltd.,
Nissan Green & Landscape Co., Ltd.,
Nissan Engineering, Ltd., Nihon Hiryo Co., Ltd.,
NC Tokyo Bay Corporation,
Nissan Chemical America Corporation (NCA),
Nissan Chemical Europe S.A.S. (NCE),
NCK Co., Ltd. (NCK),
Nissan Bharat Rasayan PVT. LTD. (NBR)

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 Laboratories, 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)

To Our Stakeholders

Our company was founded as Japan's first chemical fertilizer manufacturer in 1887 to solve food issues which Japan faced 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.

To realize corporate vision in a new era, we currently provide products and services on a global scale in four business domains, such as Chemicals, Performance Materials, Agricultural Chemicals, and Healthcare on the basis of ESG (Environment, Social and Governance) and SDGs (Sustainable Development Goals) established by the United Nations.

The social and economic environment surrounding us continues to change dramatically, including climate change, aggravated food and health issues, a decline in the labor force due to low birthrate and aging population and widening economic divides threatening the sustainability of society. From the time of our founding to the present, we have been working to solve social issues.

By thoroughly pursuing our corporate philosophy "Contribute to the protection of the global environment and the existence/development of humanity, offering the value sought by society", and continuing to take on the challenge of creating unprecedented possibilities and value, we will strive for sustainable development of society and our group in the future.

KINOSHITA Kojiro
Representative Director, Chairman & CEO

The History of Nissan Chemical

Japan's first chemical fertilizer manufacturer founded 136 years ago by TAKAMINE Jokichi, who was called "Father of Biotechnology".
His pioneering spirit has been passed down and continues to this very day.

Core Technologies for Sustainable Growth

[Existing Technologies]

Fine Organic Synthesis | Functional Polymer Design | Ultrafine Particle Control | Biological Evaluation | Optical Control

[New Technologies]

Microbial Control | Information Science

1887

At the time of founding

Tokyo Jinzo Hiryo, the Nissan Chemical's predecessor organization, started in 1885 when TAKAMINE Jokichi, who was called the "Father of Biotechnology", 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. He established Japan's first chemical fertilizer manufacturer in 1887 becoming chairman (president) himself.

With the Company policy "to dedicate ourselves to prosperity of the nation by agricultural fertility", the company contributed to the increase of domestic food production.

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.

Founder TAKAMINE Jokichi (left)
Jinzo Hiryo advertisement from an agricultural magazine in 1891 (right)

1923

Establishment of company foundation for business diversification

In the first half of the twentieth century, amid a variety of M&A activities by domestic corporates, the three companies were joined in 1923. The Company then promoted business diversification and entered under the umbrella of Nissan zaibatsu (Nissan Concern Company Group) in 1937, which was the 50th anniversary of its founding, renamed Nissan Chemical Industries.

After World War II, under the separation directive based on the Corporate Reconstruction and Improvement Law, the fat and oil section was separated into Nippon Oil and Fats (current NOF) in 1949 and Nissan Chemical Industries newly started.

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

Three-company Joint

Manufacture of sulfuric acid, soda, etc.

Kanto Soda

Nippon Kagaku Hiryo
(renamed from Nippon Seimi Seizo)

+

Dainippon Jinzo Hiryo
(surviving company)

50th anniversary of its founding

Entered under the umbrella of Nissan zaibatsu and renamed

Nissan Chemical Industries

1965

Acquired new technological ideas through entry into the petrochemical business

In 1965, we established Nissan Petrochemicals and entered the petrochemical business. However, the petrochemical industry experienced a structural slump due to the impact of the oil crises. 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 resulting in a large deficit, 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.

Nissan Petrochemicals Chiba Plant (1968)

1989

Restarted as a value-creating company

In 1989, we launched our mid-term business plan declaring the comeback as a value-creating company oriented with its two pillars: high-tech fields such as agrochemicals and pharmaceuticals, and 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 entered the semiconductor field. In the 2000s, sales of the active ingredient of LIVALO®*, an anti-cholesterol drug, increased significantly and we acquired exclusive marketing rights in Japan to ROUNDUP®, the world's largest herbicide. This was followed by the creation of new agrochemicals that are the main products at present.

* LIVALO® is a registered trademark of Kowa Company, Ltd.

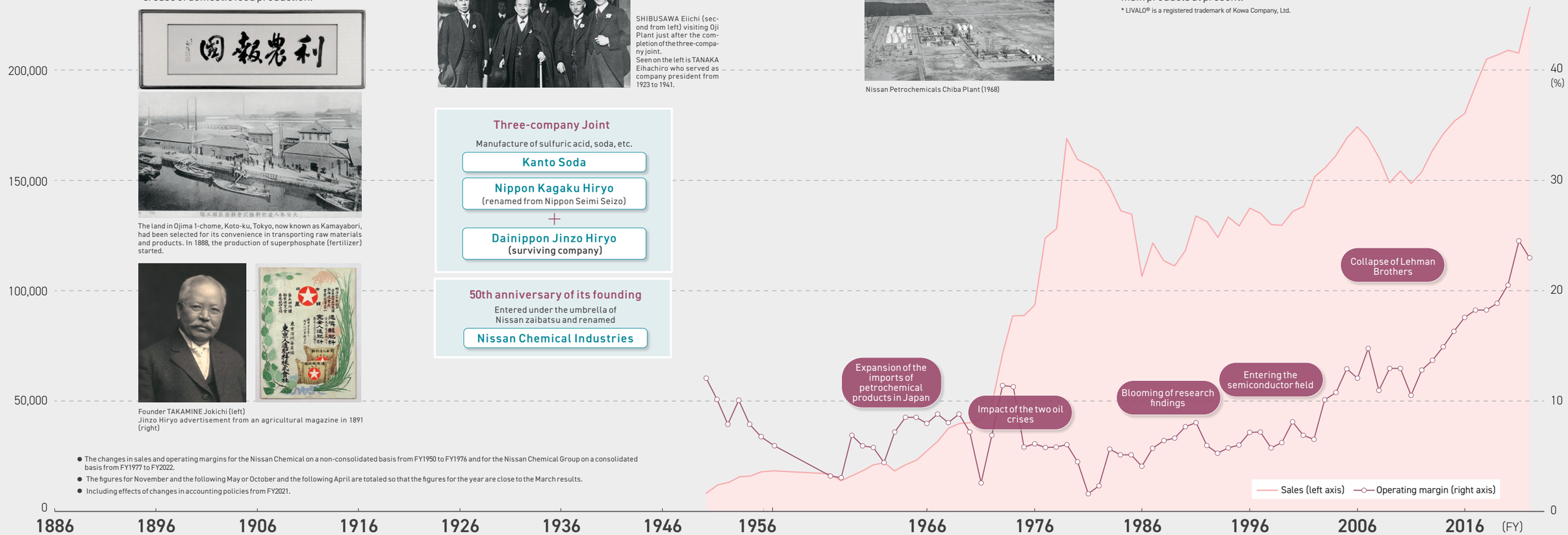
2016

To be a future-creating company with sustainable growth based on our core technologies

In 2016, the Company launched the long-term business plan "Progress2030" looking ahead to 2030, recognizing the importance of expanding its business domains for sustainable growth.

We expand our business transcending the framework of industry and accelerate this effort toward the future. In order to clarify this stance, in 2018, we changed our name to Nissan Chemical Corporation.

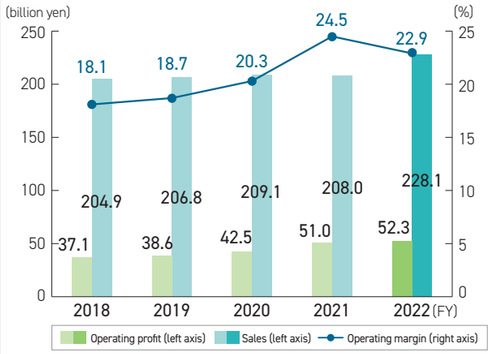
In 2022, in light of the significant changes in the business environment, which was the premise for the formulation of Progress2030, we have launched the new long-term business plan "Atelier2050", looking ahead to 2050, in order to chart a course for the Group to continue to develop and contribute to solving social issues.



- The changes in sales and operating margins for the Nissan Chemical on a non-consolidated basis from FY1950 to FY1976 and for the Nissan Chemical Group on a consolidated basis from FY1977 to FY2022.
- 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.
- Including effects of changes in accounting policies from FY2021.

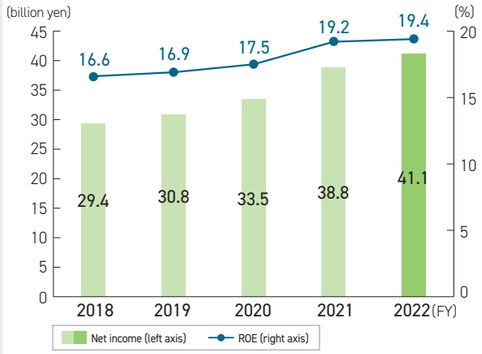
Financial and Non-Financial Highlights

Operating profit / Sales / Operating margin



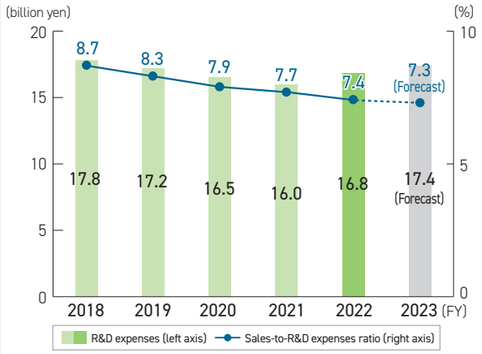
Operating profit reached record highs for nine consecutive years.
Operating margin achieved the Mid-term Business Plan (FY2022-2027) target of 20% or more.
* Including effects of changes in accounting policies from FY2021

Net income attributable to owners of parent / ROE



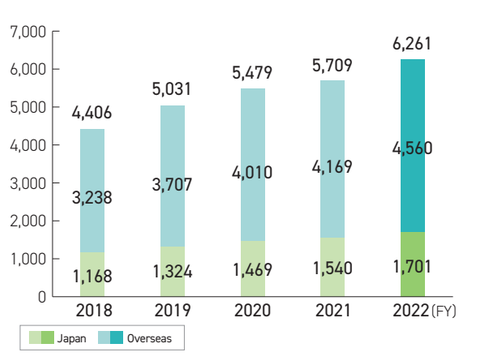
Net income reached record highs for 10 consecutive years.
ROE exceeded the previous year's result and achieved the Mid-term Business Plan (FY2022-2027) target of 18% or more.

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

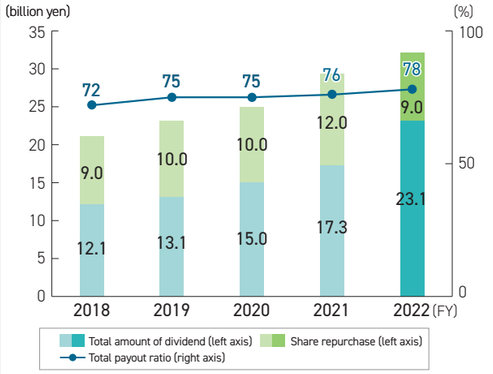


Placing importance on R&D, we have maintained a high sales-to-R&D expenses ratio of 7-9%.
R&D expenses temporarily decreased between FY2020 and FY2022 due to the COVID-19 pandemic.

Number of patent held

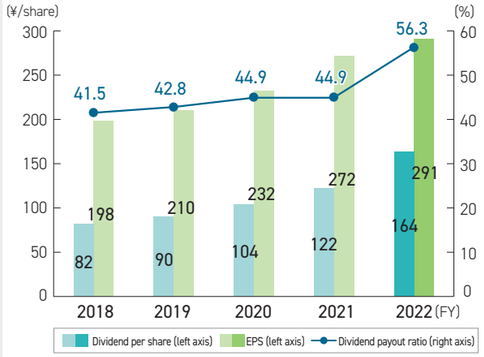


Total amount of dividend / Share repurchase / Total payout ratio



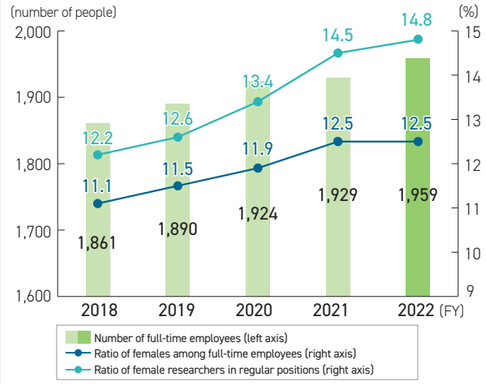
Total payout ratio achieved the Mid-term Business Plan (FY2022-2027) target of 75% maintained.

Dividends / EPS (net income per share) / Dividend payout ratio

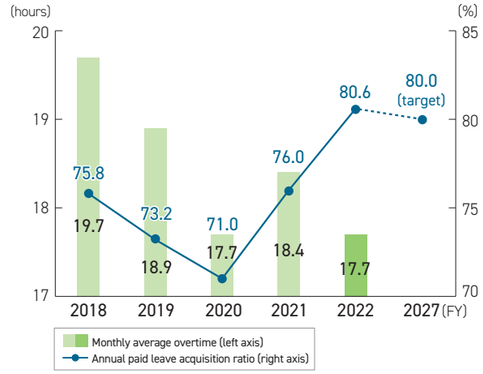


Dividends have increased for 11 consecutive years from FY2012 to FY2022.
Dividend payout ratio achieved the Mid-term Business Plan (FY2022-2027) target of 55% maintained.

Number of full-time employees / Ratio of females among full-time employees / Ratio of female researchers in regular positions

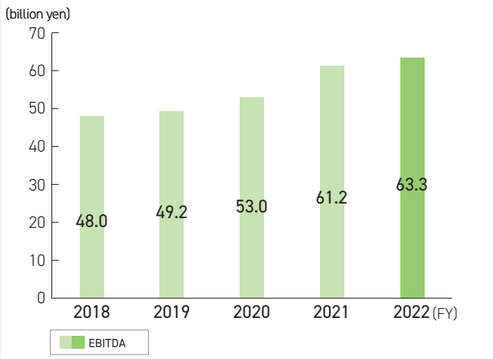


Monthly average overtime / Annual paid leave acquisition ratio*

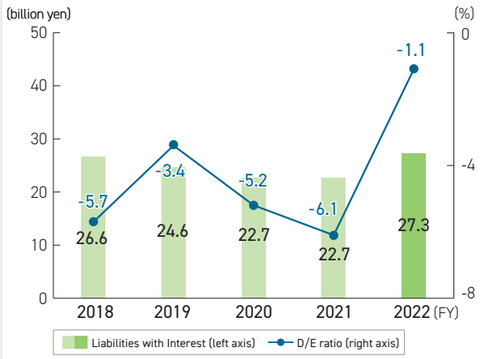


* Figures from FY2019 also include annual paid leave acquisition by managers

EBITDA (operating profit + depreciation)

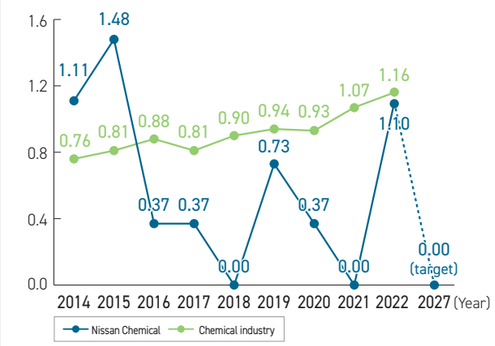


Liabilities with interest / D/E ratio*



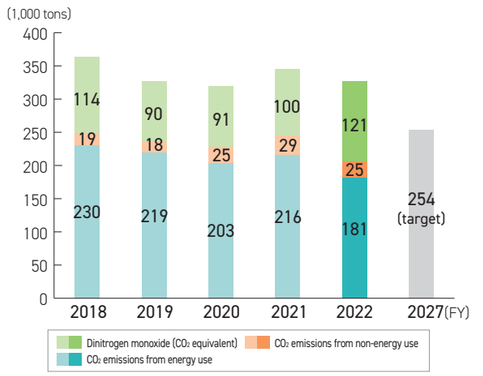
* D/E ratio = (Loans payable -Cash and deposits) / Shareholders' equity

Lost-time injury frequency rate*



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

GHG emissions



Message from the President

Become "a group of co-creators that face challenges for change with a strong passion" to continue creating irreplaceable "Must-Have" products

YAGI Shinsuke
Representative Director, President & COO

Sharing the Direction for the Future and the Corporate Philosophy with Employees
Building the Ideal State of Nissan Chemical Together with Employees

Our company was founded in 1887 as Japan's first chemical fertilizer manufacturer. We have now set up our corporate slogan "WHERE IT ALL BEGINS" and are moving forward with our business with our vision to create innovation.

Since our founding, we have transformed to respond to the occasional changes in the business environment. In an effort to determine our direction for the future and clarify the raison d'etre of the Group, we have redefined our corporate philosophy to "Contribute to the protection of the global environment and the existence/development of humanity, offering the value sought by society" in April 2022. As a new growth strategy based on the business environment and social issues, we have formulated and launched two plans, "Atelier2050" and "Vista2027". Atelier2050 is a long-term business plan with a broad perspective for 2050, and Vista2027 is a mid-term business plan that serves as a stepping-stone for Atelier2050.

I believe that our corporate philosophy and mid- to long-term direction of the Company have meaning only if they are thoroughly understood by each and every employee. For this reason, since April of last year, when we redefined our corporate philosophy and started a new business plan, I have personally visited our business sites in Japan and abroad, and given lectures to entire sites or conducted informal discussions with smaller level-specific groups. During my visits, I provide explanations while looking at the faces of the on-site employees and answer their questions on the spot. By communicating directly to employees in that way, I foster a culture where we join forces and keep challenging ourselves together. This fiscal year, as the COVID-19 pandemic gradually winds up, I plan to actively visit overseas business sites as well.

Operating Profit and Net Income at Record Highs for 9th and 10th Consecutive Year
Steady Push of Vista2027

Regarding our results for FY2022, operating profit and net income reached record highs for the 9th and 10th consecutive year, respectively. However, due to the sharp rise in price of raw materials and the deterioration of market conditions, the operating profit came short of its Vista2027 target for FY2022 by 1.2 billion yen.

I would like to explain the progress of the four basic strategies announced in Vista2027. With regard to our first strategy, "deeply exploit business areas and increase marketing ability," we established the Biological Group within our Biological Research Laboratories in April 2022, in order to accelerate the development of microbial control technology, a new core technology. In information science, another new core technology, we are also conducting verifications in materials informatics (MI). In addition, in April 2023, we newly established the Animal Care Planning Group within the Planning and Development Division, to consider developing veterinary pharmaceuticals and building a sales system.

Regarding our second basic strategy, "promote sustainable management", we newly established the Sustainability Promotion & IR Department in April 2022 and the department has since shown strong leadership in sustainability initiatives and measures. It holds business briefings and ESG briefings

● Progress of the "Vista2027" mid-term business plan

Vista2027

2022	2023	2024	2025	2026	2027
Vista2027 Stage I			Vista2027 Stage II		

Major Financial Targets for FY2027	FY2022 Result
Sales: 285.0 billion yen	Sales: 228.1 billion yen (+20.1 billion yen)
Operating profit: 67.0 billion yen	Operating profit: 52.3 billion yen (+1.3 billion yen)
ROE: above 18.0%	ROE: 19.4%
Total payout ratio: Maintain 75%	Total payout ratio: 78%

( ) shows comparison to FY2021

Major Non-financial Targets for FY2027		FY2022 Result
Rate of total sales of Nissan Chemical Sustainable Agenda* target products and services in consolidated net sales: Maintain at least 55%	Progress	Achievement of the target to maintain at least 55%
GHG emissions (Scope1+2): Reducing at least 30% Compared to FY2018	Progress	Reduced by 9.8% Compared to FY2018

*A plan to pursue "what we can do for the future of the globe and human"

Progress of the four basic strategies

1. **Deeply exploit business areas and increase marketing ability**
   - Newly establishment of the Biological Group
   - Newly establishment of the Animal Care Planning Group
   - Verifications of materials informatics (MI)
2. **Promote sustainable management**
   - Newly establishment of Sustainability Promotion & IR Department
   - Hold of business briefings and ESG briefing
   - Launch of the Nissan Chemical Sustainable Agenda
3. **Strengthen the creation and co-creation process of values**
   - Newly establishment of the Digital Transformation Department
   - Provision of a company-wide digital transformation (DX) platform
   - Adoption of a role grading system in the personnel system
4. **Expand market shares and profits of existing businesses**
   - Construction of new plant and manufacturing plants
   - Expanding the response ability of overseas business sites

both inside and outside of the Company, and actively sends out related information.

In addition, we launched the "Nissan Chemical Sustainable Agenda" in April 2022. This plan aims to pursue "what we can do for the future of the globe and human" by providing products and services that contribute to solving social issues. We define the rate of total sales of products and services covered by the Nissan Chemical Sustainable Agenda as a key performance indicator (KPI). In Vista2027, we have set a target of "maintaining at least 55%"in each fiscal year. In FY2022, the first fiscal year of the plan, we achieved this target.

As part of our third strategy, "strengthen the creation and co-creation process of values", we revised the personnel system in November 2022. We have replaced the conventional function-based personnel system with a role grading system that more efficient allocation of human resources based on potentiality and engagement of every workforce rather than seniority. Furthermore, we newly established the Digital Transformation Department in April 2022 and are making progress in developing a company-wide platform for digital transformation (DX). In preparation for the full-fledged launch of the data-driven system for Vista2027 Stage II which start from FY2025, we are currently steadily developing a platform for data utilization. We aim to utilize data to visualize greenhouse gas (GHG) emissions in real time and optimize the logistics systems.

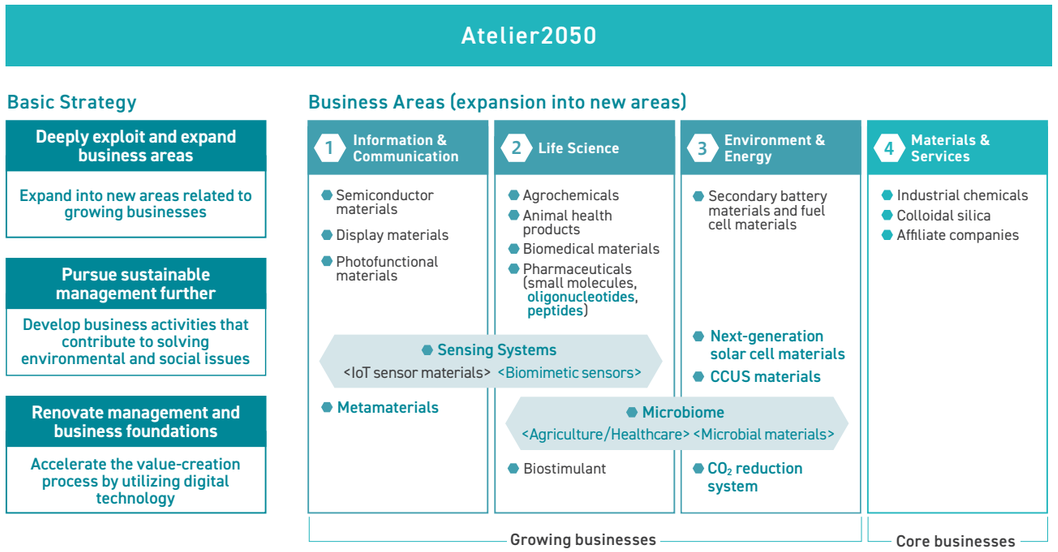
As part of our fourth strategy, "expand market shares and profits of existing businesses", we promote measures to improve profitability of ammonia-related products as a structural reform after shutting down melamine business, in the Chemicals business. Regarding Venus® Oilclean, a microorganism formulation that decomposes oils and fats, we joined a project to develop biofuels in order to reduce CO_2 emissions and have started exploring new applications outside of the treatment of wastewater's oils and fats.

When it comes to display materials in the Performance Materials business, we set out to deepen photo-alignment material for IPS liquid crystal as well as advanced the development of materials for next-generation displays such as micro LED displays. In semiconductor materials, we strengthened our development abilities of EUV materials in anticipation of future growth, while expanding development and sales operations in a bid to increase our market share in multi-layer materials and packaging materials. In addition, NCK, our South Korean affiliate, built a new plant in Dangjin to strengthen its product supply abilities. The start of operations is scheduled for FY2024. NCK also newly established a semiconductor group in its R&D center located in Pyeongtaek, so as to respond even more rapidly to customers in South Korea and China. In inorganic materials, in addition to carrying forward sales promotion of oil and gas materials, we performed evaluations of CCS materials aimed at efficiently storage CO_2 in the ground, in collaboration with Australian national research institutes and university.

In Agricultural Chemicals business, we promoted global expansion of the insecticide GRACIA®. In addition, our Indian joint venture Nissan Bharat Rasayan (NBR), whose goal is to strengthen product supply abilities, started its commercial operation in March 2023. The construction of manufacturing plants in Japan is also progressing smoothly, with operations scheduled to start in 2024.

In drug discovery in the Healthcare business, we are prioritizing human and capital investment in oligonucleotide therapeutics. In biomedical materials, a bio-venture company engaged in the realization of heart regenerative therapies through iPS cells, used our company's prevelex® when producing cell clumps to perform clinical trials.

● Basic strategies and business domains of the long-term business plan "Atelier2050"



Enhancing our Discernment Abilities to Create Irreplaceable, "Must-Have" Products

As a big theme across the Company, I tell our employees the necessity to create unique products and technologies that cannot be substituted in the market, and without which the product cannot be manufactured or functioned, in order for our Group to keep growing in the future. I explain that, for society, such products and technologies are indispensable "Must-Have" products. Whether in the semiconductor business or other businesses, the level of technology asked of us is becoming quite advanced. In this context, if we create irreplaceable products and technologies inimitable by other companies, we will greatly contribute to the growth of our businesses and to the world.

For example, when conducting research and development (R&D) on new performance materials, which are growth drivers, if we pursue products and technologies that only we can provide and other companies cannot imitate, such as the alignment materials needed for LCD production and the anti-reflective coating materials essential to semiconductor production, these will become "Must-Have" products on the markets and we have an overwhelming competitive advantage.

"Must-Have" products and technologies are not easy to create. We allocate 8% of our sales to R&D, and we pride ourselves on the fact that this level exceeds that of other companies in our industry. However, large R&D expenses are meaningless if we cannot assess whether there is demand for a particular product or technology in the market, what the potential scale of the business is, or when it is most effective to commercialize and launch the product in the market.

I think there is little value in coming up with outstanding technologies if the market will not use it. Furthermore, there are also methods to suggest and popularize a product or technology not on the market yet but which might become a "Must-Have" in the future. I regard business portfolio management as very important, in that it consists in investing limited capital such as people and money in promising businesses and maximizing corporate value.

Then, in order to develop "Must-Have" products and technologies that lead to sales and profit growth, it becomes important to have the marketing ability to judge the state of the market, ability that results from the recognition and resolution of customers' issues. I call this process "connoisseur", and we put effort into developing discerning personnel. I repeatedly mention the terms "Must-Have" and "connoisseur" and, as a result, these terms seems to have absorbed to the employees as keywords. Developing discerning personnel is not an easy endeavor. The source of our corporate value is research and approximately 70% of our annual hires in regular positions are researchers, but an exclusive devotion to research does not develop discerning abilities. We offer opportunities for researchers to transfer to marketing positions so they can understand market trends. As a company, we support employees in the enhancement of their discernment abilities.

Creating Products that Contribute to Decarbonization for the Protection of the Global Environment and the Existence/Development of Humanity

As suggested by the expression "the era of VUCA," Volatility, Uncertainty, Complexity and Ambiguity have been increasing recently and, as society undergoes drastic changes, the fu-

ture is anybody's guess. Nissan Chemical is no exception in that regard.

Despite the circumstances, our basic approach for the management of the Group is to discover all sorts of risks, apply them to situations within our assumptions and take the lead by adopting the relevant measures. Delayed countermeasures against risk are due to a lack of imagination and may prove fatal when it comes to corporate management.

One of them is climate change countermeasures. Regarding climate change countermeasures as well, "unexpected situations" are no excuse for us to continue our business. In June 2022, we established the Climate Change Committee of which I am the Chairman. In 2020, we announced our 2°C and 4°C scenario analyses for the analysis period up to 2030 in the previous long-term business plan, but in the Climate Change Committee, we have also carried out new analyses on the 1.5°C and 4°C scenarios, and we announced them in July 2023. In these new analyses, we determined the impact on our business and the possible countermeasures, including the financial risks and opportunities, based on the 1.5°C and 4°C scenarios. We also extended the analysis period until 2050.

We have a target of net zero GHG emissions by 2050, and have set the target of reducing by at least 30% from FY2018 level. We are also having discussions from a technological perspective, and are getting an understanding of which facilities we should improve. Moreover, we are conducting discussions on the best use of internal carbon pricing (ICP), as a way to build a structure for GHG reduction. For example, the Chemicals business generates a large amount of CO_2 emissions but, by incorporating ICP in our managerial accounting as a corporation, we can actively implement initiatives that lead to increased profits for each business, while promoting decarbonization of business activities to achieve both social and economic value. We view our progress toward our ESG target indicators, such as those related to climate change countermeasures, and the following results not as formalities but as urgent issues to ensure our business continuance. Last year, in order to signify our stance, we put in place a mechanism which reflects the progress toward our ESG targets in officers' remuneration.

In order to realize our corporate philosophy "Contribute to the protection of the global environment and the existence/development of humanity, offering the value sought by society," our company must continue to be chosen by stakeholders, and our products must continue to be chosen by the market. For us, overcoming various issues such as the reduction of GHG emissions and being the perpetually chosen company is our social value, and is closely connected to our social contribution.

By FY2027, the final year of Vista2027, we want to create products that contribute to decarbonization and the technologies that support them, such as environment & energy materials or CCS materials, as well as develop products that fit the slogan "where it all begins." I believe it is important to plant the seeds of technologies by the end of Stage I in FY2024. Then, after one or two sprout, I want us to work for the 20 next following years so that flowers blossom by 2050.

Securing Outstanding Personnel and Tackling the Future through Value Co-creation

In Atelier2050, we drew up our ideal state in 2050 "a future-creating company that grows through seeking to enrich people and nature" for the corporate state and "a group of co-creators that face challenges for change with a strong passion" for the organizational state. However, labor shortages and the securing of outstanding personnel are management issues in both the short term and the mid- to long-term. As initiatives in regard to these issues, we raised the salary of young employees and, in November 2022, revised our personnel system and adopted a role grading system. The aim of this system is to treat human resources appropriately according to their responsibilities and roles rather than seniority.

In FY2023, we have begun conducting career dialogue between superiors and subordinates, separately from the performance evaluation interviews conducted so far. We have created an environment where the right person can be at the right post, so that employees work in a pleasant atmosphere and the Company's businesses continue to grow. We have also launched the "10% challenge" system to encourage employees' appetite for challenge and free thinking. With this system, employees can dedicate 10% of their working hours to themes they want to work on independently, in areas outside of their day-to-day affairs or not explicitly stated in division policies. They can work as an individual unit, but also collaborate with like-minded people inside or outside of the Company to discover even newer ideas.

We started extending the retirement age in April 2023. We are gradually raising the retirement age from 60 years of age to 65 in 2032. The experience and knowledge cultivated by our veteran employees are one of our important assets. We have created an environment in which they can make full use of themselves, renew their motivation and play an active role on the front line. I have great hopes regarding the participation of professional veterans.

Human resources, often called human assets, are represent priceless capita for a company. As suggested by our ideal organizational state for 2050, "a group of co-creators that face challenges for change with a strong passion," we remain committed to building an organization that supports co-creation and taking on challenges.

Further Strengthening of the Group's Corporate Governance through Reforms toward a Board of Directors Rich in Knowledge, Skill and Diversity

Revision to the Corporate Governance Code called for the further functional enhancement of the Board of Directors and animated discussions in their meetings, outside directors included. Therefore, the Group is continuously working to strengthen governance. I think the Board of Directors must be composed of members selected from various perspectives to make decisions in an appropriate and agile manner and supervise the execution of business activities in our company's diverse fields. Those perspectives include the balance of knowledge, experience, skills, and other characteristics, and diversity, including gender, internationality, and practical experience in the totality of the board.

In June 2023, Ms. TAKEOKA Yuko became the second woman in the Company's history to be appointed outside director. Ms. TAKEOKA has many years of experience as a researcher centered on the synthesis and characterization of functional polymers, which is deeply related to our business. In addition to her expertise as a Doctor of Engineering, she has a rich experience and an extensive knowledge of the field. With the appointment of Ms. TAKEOKA, half of the four outside directors are now women. I also hope that Ms. TAKEOKA will contribute her female perspective on how to build a company where women can work easily and actively participate.

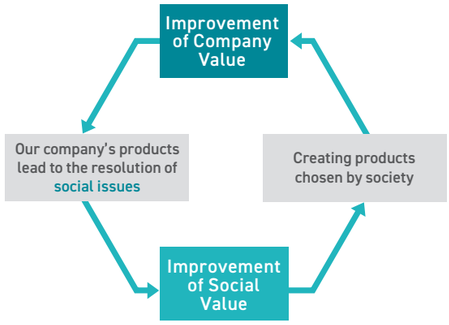
Our company has identified the expertness and skills requirements required for its directors: "corporate management," "research and development/technologies," "finance and accounting," "legal/risk management/internal control," "personnel affairs/personnel strategies," and "global experience." In the future, we will work to form a Board of Directors comprised of talent with outstanding personalities and reputations, with a high level of knowledge and a strong sense of ethics, and suitable for our board. We will emphasize this balance, as well as diversity in the formation of our board, and will continue to implement reforms to that end.

Moreover, the Nomination and Remuneration Advisory Committee, which is comprised of the Chairman, the President and outside directors, is making progress in its discussions surrounding the President CEO's succession. We plan to define the ideal image of my successor and those coming afterwards, discuss what dispositions are required, what level of human resources we must choose when it comes to talent development, and resolve these themes and others at the Board of Directors.

Our company was founded in 1887 under the spirit "to dedicate ourselves to prosperity of the nation by agricultural fertility," by the pioneers of the Meiji period Mr. TAKAMINE Jokichi, Mr. SHIBUSAWA Eiichi and Mr. MASUDA Takashi, and 136 years have since passed. When comparing the time of our founding with our current era, the handled products themselves have changed but, from the time of our founding when there was no concept of sustainability, there is no change in our fierce passion for contributing to social development by solving social issues through the power of chemistry.

We challenge ourselves to effect change not simply for our Group but for the entire value chain, and engage in initiatives toward sustainability. In this way, we continue to be chosen as a corporation by all our stakeholders.

The lasting belief of Nissan Chemical, unbroken since our founding



Our founder Mr. TAKAMINE Jokichi wished to contribute to the improvement of Japan's national power through agriculture, our company's strength, and he expressed that hope in our founding spirit, "to dedicate ourselves to prosperity of the nation by agricultural fertility."

Value Creation Process

The Nissan Chemical Group is now at an unprecedented turning point in its history, and we are determined to be a leader in creating the future. With our Corporate Philosophy as the foundation of our business activities, we aim to fill the future of people and society with hope and happiness through the provision of irreplaceable "Must-Have" products and services by leveraging the technologies we have cultivated over the years.

Social Issues (External Environment)

Global environmental conservation | Climate change | Low birthrate and aging population
Labor shortage | Food issues | Health issues

Inputs

(Fiscal year ended March 31, 2023)

Human Capital (Non-consolidated)

Number of employees: 1,959
(Number of Researchers*1: 465)

Financial Capital

Net assets: 221.5 billion yen
Total assets: 298.7 billion yen
Equity ratio: 73.1%

Intellectual Capital

Number of patents held: 6,261
R&D expenses: 16.8 billion yen
Sales-to-R&D expenses ratio: 7.4%

Manufacturing Capital

CAPEX: 20.3 billion yen
Manufacturing base
Japan: 7 sites, Overseas: 3 sites

Social Capital

Engagement with stakeholders

Natural Capital (Non-consolidated)

Raw materials: 423,024 tons
Energy input: 90.6 thousand kL*2
Water resources: 27.8 million m³ *3

Business Model

Nissan Chemical's Strengths

R&D capabilities | Marketing Ability

◎ Related Information: "Research and Development" P25-27

Concentrate on Four Business Domains

Information & Communication | Life Science
Materials & Services | Environment & Energy

Providing Nissan Chemical's unique "Must-Have" products and services (products that are irreplaceable)

Strategic Decisions by the Board of Directors

Management Foundation
(Corporate Governance / Compliance / Risk Management)

*1 approximate number
*2 crude oil equivalent
*3 water resources input minus effluent

Nissan Chemical CORPORATION

Nissan Chemical's Corporate Philosophy

Contribute to the protection of the global environment and the existence/development of humanity, offering the value sought by society.

Outputs

(Fiscal year ended March 31, 2023)

Human Capital (Non-consolidated)

- Engagement with stakeholders
  (Emphasis on dialogue with employees)
  Ratio of high engagement level employees*4: 16.3%
  (FY2021: 16.2%)
  Ratio of researchers in regular positions: 38% (FY2021: 39%)

Financial Capital

Sales: 228.1 billion yen (FY2021: 208.0 billion yen)
Net income: 41.1 billion yen (FY2021: 38.8 billion yen)
ROE: 19.4% (FY2021: 19.2%)

◎Related Information: "Financial Review" P85-92

Intellectual Capital

Number of Patent Applications: 378 (FY2021: 415)

Manufacturing Capital (Non-consolidated)

Production volume: 563,130 tons (FY2021: 736,436 tons)

Social Capital

- Engagement with stakeholders
  (Emphasis on dialogue with investors and analysts)
- Maintenance and promotion of good relationships with local communities
  (natural observations in Nissan Bio-Park, plant tours, etc.)

Natural Capital (Non-consolidated)

GHG emissions from business activities:
328 thousand tons-CO_2e
(FY2021: 345 thousand tons-CO_2e)

◎ Related Information: Human Capital, Intellectual Capital, Financial Capital, Manufacturing Capital, Social Capital, Natural Capital P21-30

*4 In an employee questionnaire survey on work enthusiasm and attitudes, 28 indicators were determined based on questions related to "spontaneous action" and "positive emotions", etc., to measure the level of engagement.

Outcomes

Vista2027
To Be An Enterprise That Faces Challenges Toward The Future Through Co-creation

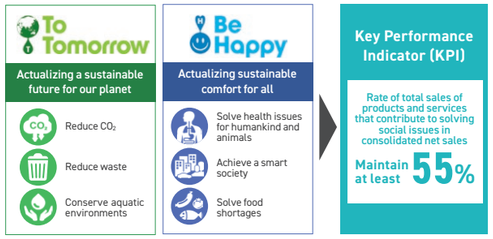
2022-2027 Numerical Targets

Financial Indicators

- Operating Margin: Above 20%
- ROE: Above 18%
- Dividend Payout Ratio: 55%
- Total Payout Ratio: 75%

Non-financial Indicators

- **Nissan Chemical Sustainable Agenda**
  (A plan to pursue "what we can do for the future of the globe and human" by providing products and services that contribute to solving social issues)



- GHG emissions:
  Reducing by at least 30% from FY2018 level
  → Aiming for carbon neutrality in 2050
- Positive response rate in survey of employee attitude on human resources development: At least 65%
- Proportion of females in the regular position: At least 13%
- Proportion of female researchers in the regular position: At least 18%

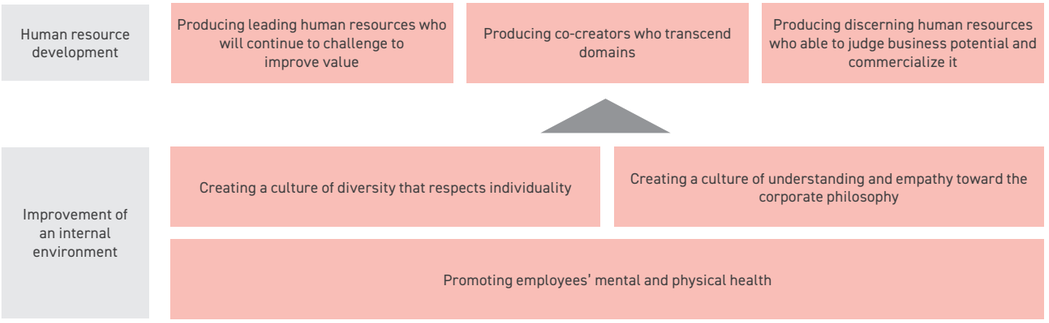
Human Capital

Based on our corporate philosophy of "contribute to the protection of the global environment and the existence/development of humanity, offering the value sought by society", we believe that enhancing human capital is one of the most important issues for our growth as a "future-creating company" to develop together with society. To strengthen our business foundation, we are promoting initiatives aimed at developing human resources and creating comfortable workplaces.

Promoting Human Capital Management

Under the long-term business plan "Atelier2050", we have set out the ideal state of our organization for 2050 as "a group of co-creators that face challenges for change with a strong passion". We have also defined a basic stance for our employees around the three ideas of, "valuing the integrity as the strength", "taking a step forward with the vision", and "transcending collaboration to co-creation". As such, various initiatives are being taken to develop human resources and improve the workplace environment in order to realize an organization in which diverse human resources can take on challenges toward their own goals and they aspire toward personal growth, while upholding Nissan Chemical's strength and identity of "integrity". We have set targets for each initiative to human capital management for FY2024, the final year of the mid-term business plan "Vista2027 Stage I", as a key milestone, and promote initiatives.

Key factors for realizing the organization's vision



◎Related Information: "Ideal State in FY2050" P45

Key factor 1: Producing leading human resources who will continue to challenge to improve value

For Nissan Chemical to continue to grow in the future, our challenge is to produce human resources who can drive the business forward by thinking independently and challenging themselves, based on "vision (self-motivation)", to make improvements and proposals that will lead to improve value. Therefore, we have set the "positive response rate in survey of employee attitude on willingness to take on challenges" as an indicator of this factor. We aim to improve this figure through initiatives such as hypothesis verification-based training, the Ai Campaign, and the 10% Challenge starting in FY2023.

Indicator	Result (FY2022)	Target (FY2024)
Positive response rate in survey of employee attitude on willingness to take on challenges	67.0%	70.0%

● Hypothesis Verification-based Training (updated from FY2020)

In the training before promotion to C3 class (equivalent to subsection manager), participants formulate a vision for the future and initial hypotheses (questions and answers) and then spend several months examining and revising the vision and hypothesis to refine the action plan for the purpose of "acquiring future-creating leadership skills".

In training before promotion to managerial position (equivalent to section manager), with the aim of "acquiring leadership that unleashes the future creativity of people and organizations", participants train their ability to interpret information by accessing the knowledge of the world, and collect and analyze valuable information, while demonstrating leadership and promoting transformation. Based on this, they conceive ideas for new businesses, products and services, and go through the process of hypothesis verification that leads to the commercialization of products and services for the Company.

● 10% Challenge (starting FY2023)

In FY2023, we newly introduced a system that allows employees to devote 10% of their annual working hours to challenges in areas outside of their normal work or in areas not specified in department policies, based on self-motivation. With this 10% Challenge, we hope to foster a culture of enjoying the challenge, regardless of success or failure, and to broaden employees' own possibilities through the experience of taking on new challenges.

● Ai Campaign

This activity unique to Nissan Chemical attempts to make improvement proposal from small group activities at each plant. It started in 1978 with almost all operators from each plant taking part every year. We aim to improve our stance to continue to make improvements that lead to improve value from on-site perspective, and to improve our ability to make proposals without being bound by precedent.

Key factor 2: Producing co-creators who transcend domains

To continuously produce new products, services, and seeds of technology that contribute to solving social issues, our challenge is to produce human resources who can "co-create" new value by collaborating across borders rather than closing in solely on their own areas (technologies or departments). Therefore, we have set the "number of co-creation themes" in our hypothesis verification-based training, the 10% Challenge, and the Ai Campaign, as an indicator, and making efforts to increase this number. In addition, we aim to create a state that outside parties can be involved and co-created in order to newly acquire, improve the value of, and develop, our own technologies. We will promote cross-border collaboration, not fixed solely to one area, such as joint research and joint patent applications with other companies, as well as the loan, transfer, and dispatch of human resources outside the Company.

Indicator	Result (FY2022)	Target (FY2024)
Number of co-creation themes	134 cases*	160 cases

* The number of initiatives for the 10% Challenge introduced from FY2023 is not included in FY2022 results.

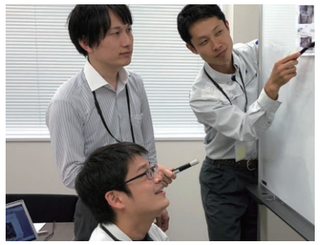
Key factor 3: Producing discerning human resources who able to judge business potential and commercialize it

To develop new products and services that will be the source of growth for the next generation, our challenge is to produce discerning human resources who can identify the product needs that is irreplaceable "Must-Have" while taking into account market needs, and judge the growth potential of the value chain. To produce such discerning human resources, we are implementing an intrapreneurship program aimed at developing the abilities of entrepreneurs and fostering in-house entrepreneurs.

And by actively rotating staff across job categories, such as research, manufacturing, and sales, we will provide opportunities for researchers and engineers to directly discuss with customers as much as possible, and foster the ability to identify business opportunities not only from a perspective of technological point, but also from the perspective of the customer, market, and social issues.

● Intrapreneurship Program (started in FY2019)

We have started an intrapreneur (in-house entrepreneur) training program in FY2019 with the goal of developing the abilities of entrepreneurs and fostering them. With the support and coaching of active entrepreneurs, participants practice behavioral skills through actual project in mixed teams selected from multiple departments. By repeatedly gathering information from potential customers in Japan and overseas and verifying hypothesis in a short cycle, they will promote the brushing up of promising themes and learn how to act as innovators.



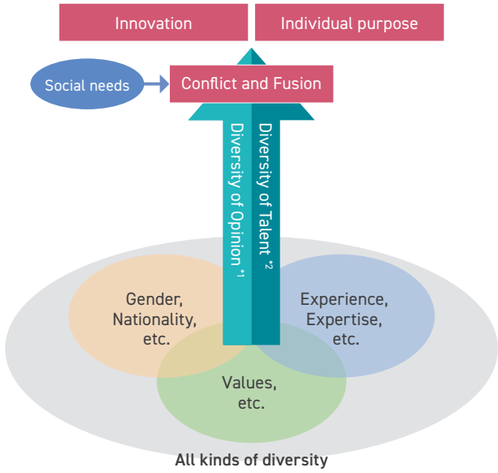
Key factor 4: Creating a culture of diversity that respects individuality

To develop human resources who will continue to challenge to improve value, our challenge is to create a corporate culture that respects and accepts diversity of all people who work together, and at the same time, allows the exchange of ideas (different opinions) held by such diverse individuals. Therefore, we have set the "positive response rate in survey of employee attitude on diversity and career planning" as an indicator to assess this factor. We aim to improve this figure by setting opportunities for direct dialogue between employees and the officer in charge of human resources, career dialogue to develop individual career plans, and introducing various systems to promote work styles that match the lifestyles of each employee.

Indicator	Result (FY2022)	Target (FY2024)
Positive response rate in survey of employee attitude on diversity and career planning	65.5%	70.0%

Promotion of Diversity

Nissan Chemical has a diverse workforce, regardless of age, gender, or nationality, working in a wide range of fields. In the future, we will further promote diversity in order to enhance corporate value by taking advantage of diversity in terms of values, abilities, and experience, which cannot be expressed in terms of attributes.



*1 Diversity of Opinion (fusion of diverse opinions): A state in which diverse opinions are expressed and fused in a free and open atmosphere

*2 Diversity of Talent (demonstration of diverse talents): A state in which individual strengths are recognized and demonstrated, and high performance is achieved by the organization as a whole

Career Dialogue (starting in FY2023)

In FY2023, we began holding dialogues between employees and their superiors once a year to develop their career plans, separately from the performance evaluation interviews, in order to make the most of each person's individuality and foster job satisfaction.

Going forward, content of the dialogues will focus not only on their "work", but also on the "people" themselves, so that employees can see their careers not only in terms of "career = work experience at a company, and transfer" but also as "career = life experience based on one's own values and way of being".

Introduction of Systems for Promoting a Good Work-Life Balance

We are working to improve the rate of employees taking annual leave (target rate of at least 80% of available annual paid leave) by introducing a flextime system, an hourly annual leave system, and a system that allows expired paid leave to be used for nursing/caregiving. Since FY2022, the telecommuting system has been made a permanent system. Also, in 2023, 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. This is the second time we have received such accreditation following 2018.

2023年認定 くるみん 子育てサポートしています

Web

Promotion of Diversity
https://www.nissanchem.co.jp/eng/csr_info/communication/employee/respect.html

Creation of a Comfortable Workplace
https://www.nissanchem.co.jp/eng/csr_info/communication/employee/dialogue.html

Key factor 5: Creating a culture of understanding and empathy toward the corporate philosophy

For Nissan Chemical to contribute to solving social issues and grow together with society, our challenge is for each and every employee to align the corporate philosophy with their own individual purpose to increase their sense of understanding toward the corporate philosophy, which is the basis of our business activities. Therefore, in order to foster a corporate culture in which each employee can work with the feeling that they are contributing to the realization of our corporate philosophy and vision, we are promoting efforts such as holding sustainability and IR in-house briefings and having the president visit each site every year to provide opportunities to speak with employees and engage in direct dialogue. Through these efforts, we aim to improve the "positive response rate in survey of employee attitude on the degree of understanding and empathy toward our corporate philosophy.

Indicator	Result (FY2022)	Target (FY2024)
Positive response rate in survey of employee attitude on the degree of understanding and empathy toward our corporate philosophy	64.4%	70.0%

Key factor 6: Promoting employees' mental and physical health

We are implementing various measures based on the belief that employees' health is a "foundation that supports sound corporate growth" with the goal of maintaining and improving the physical and mental health of employees. Specifically, we are promoting regular health checkups, conducting stress checks, and holding seminars on improving the ability to manage health for all employees, with the aim of reducing the ratio of employees with high stress and increasing the ratio of employees with optimal weight (body mass index (BMI) of between 18.5 and 25.0).

And through our responsible care management system, we are working to prevent occupational accidents, promote the good health of staff, and create a comfortable workplace environment in our efforts to improve the level of health and safety at each business site.

As a result of these and other efforts, we aim to reduce productivity loss by presenteeism and continue to acquire comprehensive and objective certifications related to health management, such as the White 500.

Indicator	Result (FY2022)	Target (FY2024)
Ratio of employees with high stress	8.1%	7.0% or less

Mental Health Care

We introduced a stress check in 2015. Each year, organizational analysis of the results is conducted and the reporting session is held at each business site. More than 200 people, including heads of plants and laboratories, management level employees, and union officers, etc., participate in the reporting session to formulate workplace environment improvement plans.

For management level employees, Line-Care Training is provided on a regular basis. For employees, we have introduced e-learning for Self-Care and counseling services available to employees and their families.

Certified Health and Productivity Management Organization (White 500)

In cooperation with the Health Insurance Association, we are implementing measures to promote the health of our employees, focusing on lifestyle-related diseases and mental health care, etc. which are key items in our Basic Health Policy. As a result of these efforts, we have been certified by the Ministry of Economy, Trade and Industry and the Nippon Kenko Kaigi as a "White 500 Health and Productivity Management Outstanding Organization" for seven consecutive years.

2023 健康経営優良法人 Health and productivity ホワイト500

Maintenance and Improvement of Employees' Health
Web https://www.nissanchem.co.jp/eng/csr_info/communication/employee/workplace.html

I have been Head of the Planning and Development Division since 2022 and was freshly appointed to the role of CTO. The appointment of a CTO is a first in our company's history. My role is to elaborate a strategy from a technical perspective and to lead to achievement of the vision and targets set in the long-term business plan "Atelier2050" which defines our targets for 2050, and in the mid-term business plan "Vista2027" which was formulated as a stepping-stone to attain the long-term business plan.

To that end, I have designed a roadmap to steadily build up businesses toward 2027, and to achieve our targets and vision for 2050.

Expanding business domains by linking promising themes to our core technologies

The Planning and Development Division, which I oversee, is involved in the three growing businesses of Information & Communication, Life Science, and Environment & Energy, those we have focused on to achieve the targets of Atelier2050. We are responsible for building high value-added new products and businesses that fit social needs by combining new materials and technologies with our core technologies.

Rather than allocating management resources to all business domains, we are focusing on short-term and mid-term priority themes to promote the early launch of businesses likely to succeed in the future. Among them, we are sometimes taking on the challenge of fields that we have never addressed before, which is considered promising in the future.

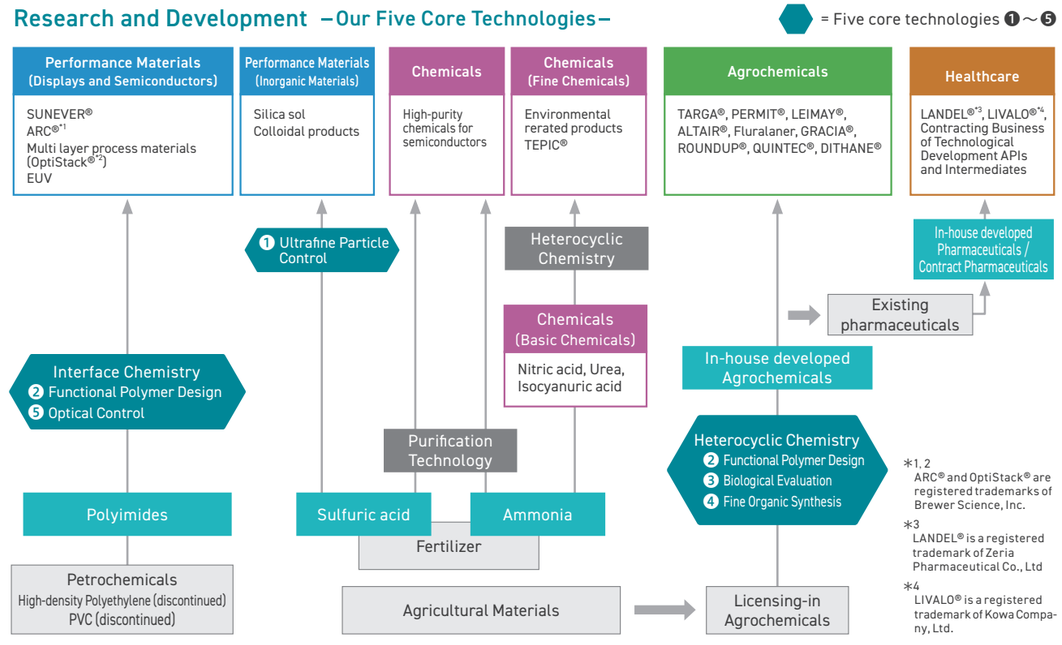
It is not an easy task for even talented the researchers to continue research and development in a field unrelated to business domains. It is important that we do not let these "enclaves" that we have never addressed remain untouched, and that we link really promising themes and technologies to our core technologies and apply them to our customers' needs and key technologies.

Development investment and capital investment for equipment introduction required from our research laboratories are approved at the management meeting and the Board of Directors after confirmation by the Planning and Development Division and the business divisions. If we are unable to overcome technological issues and reach target criteria and standards, we will decide to interrupt and withdraw through an evaluation meetings on research theme. We then engage in thorough selection and concentration while continuously establishing new themes.

Brushing up technologies and products together with customers

The sources of our R&D capability is that we consistently maintain the highest level R&D expenses among chemical manufacturers to create the seeds of new technologies and nurture them into businesses. We have transformed the business operations from the time of our founding. We have continued to take on the challenge of creating new technologies and businesses by nurturing the five core technologies of "Fine Organic Synthesis", "Functional Polymer Design", "Ultrafine Particle Control", "Biological Evaluation", and "Optical Control", and fusing them across fields.

In order to improve these technologies, we are accompanied our researchers to visit our customers. After I joined Nissan



Chemical in 1990, I was assigned to the Polymer Materials Research Department, the Central Laboratory (currently the Chemical Research Laboratories and the Materials Research Laboratories). Since then, I have been involved in R&D for liquid crystal alignment materials, one of our mainstay businesses, and have been in charge of fundamental research and technical sales. By having the technical discussions with the customer's engineers, we can grow as researchers, and improve our knowledge and insight into problem solving. I accompanied customers as well, grasped their needs and accumulated experience in brushing up the development of products and technologies that the market required from us.

In hiring for researchers, we dedicate the most of interview time to technology and research aspect. Our approach is so unique that we are told by applicants that the process was a technological discussion rather than an interview. I believe that one of the strengths of our R&D is that we are able to hire human resources who have expressed strong thought on research during their interviews.

Developing discerning human resources who can deeply exploit R&D

In Atelier2050, we are challenging to create completely new technologies and products related to three growing businesses, Information & Communication, Life Science, and"Environment & Energy", by adding "Microbial Control" and "Information Science" to our existing core technologies.

Until now, we have contributed to food production through chemical fertilizers and agrochemicals. Our policy of contributing to the resolution of food issues through the Agricultural Chemicals business remains unchanged, but the changes in the external environment are leading to a worldwide reduction in the use of agrochemicals. We have also started R&D in microbial agrochemicals and established the Biological Group in the Biological Research Laboratories. Microbial control is a very important technology that can also use in the Healthcare business.

In addition, the progress of digital transformation (DX) is remarkable, and "Information Science" is indispensable as a fundamental technology. We will establish technologies that will become the source of value creation for all business domains, by driving new value creation through simulation and data science, and promoting company-wide DX as well as materials informatics (MI) in research departments.

At Nissan Chemical, we call the human resources "connoisseur" who able to deeply exploit R&D by checking for overlooked technologies in our business domains and applying them to technologies demanded by customers and the market. In R&D, all themes do not always become successes with a path toward commercialization. Therefore, it is necessary to develop human resources who can judge whether a technology or a theme can grow into a business in the future. We provide the opportunities for young employees to discuss directly with customers, participate in academic conferences, and receive external technical training in order to acquire the basic knowledge necessary for a researchers. Developing discerning human resources is also one of the roles of CTO.

I am committed to playing my part in management, considering which technologies are necessary to achieve our targets from a long-term perspective, and deciding on our direction that we aim for and our policies on technology.

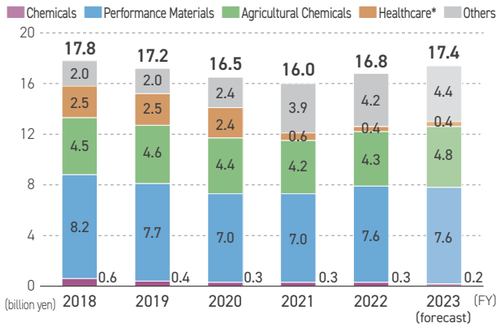
Research and Development

R&D Expenses

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

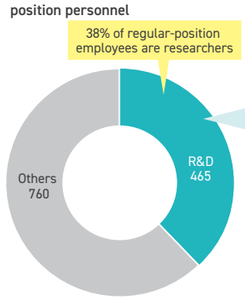
Over the last five years, R&D expenses have totaled 84.3 billion yen. The R&D expenses in Performance Materials and Life Science that combined with Agricultural Chemicals and Healthcare account for about 40% each. In addition, about 40% of employees of regular position are allocated as researchers.

R&D expenses



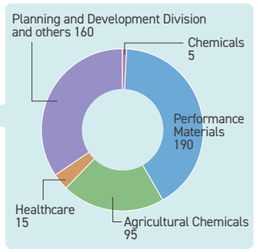
*The figures of FY2018-2020 are the former Pharmaceuticals Division.

Composition of regular position personnel



(As of September 2022, non-consolidated)

Composition of researchers by segment



(As of September 2022, non-consolidated)

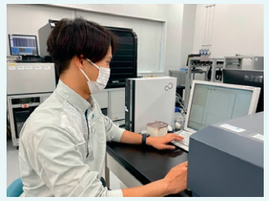
Voices of Researchers

Possibility of MI for efficient theme creation

TERATANI Kohei
Materials Research Laboratories
Advanced Materials Research Department

Our team makes full use of materials informatics (MI) to carry forward predictions on the level of roughness of inkjet printing layers in soluble materials for OLED. With collaborations with outside consultants and the Research Management Dept., Planning and Development Div., we aim to build more precise prediction models. If our efforts bear fruit, an experiment that takes one month could be reproduced in a few days. Research optimization which applies computational science, including sophisticated predictions like these, is a priority for us. By introducing analysis that uses programming languages such as Python in daily research, we are promoting the creation of an environment where research result can be obtained efficiently.

My goal is making it possible to handle many themes with a small number of people by maximizing the benefits of MI. As a research and development department with the mission of creating new products, our direction that we aim is clear. We aim to create new themes that becomes next business pillar by using MI to verify many themes more efficiently and to derive innovative discoveries.



Driving value creation by combining Biological Evaluation and Information Science!

FURUHASHI Takamasa
Biological Research Laboratories
Agricultural Chemicals Research & Development Department

Our department has record of utilizing bioinformatics such as plant metabolomics in agricultural chemicals research. With the rapid progress of information science technology in recent years, new doors have been open in applying information science such as image analysis and prediction models using AI to biological evaluation, which is our existing core technology. In imaging for instance, the types and quality of images that can be used for analysis are changing, with aerial photography of farmlands and test fields by drone as one example. In addition, we accumulate data by setting up sensors in test fields all over Japan and monitoring information on weather conditions in real time. We are now engaging in efficacy evaluation based on image data of crops and weeds, and building of AI models to predict crop growth, and are promoting activities to "build a digital technology foundation" as set in Vista2027. Our goal is to contribute to product development by strengthening the value creation and co-creation process, in the process of making Information Science our new core technology.

Intellectual Property

Our Group regards research and Development (R&D) and the intellectual property it results in as "the foundation of business" and "the source of growth."

KAGESHIMA Satoshi
Executive Officer
Head of Intellectual Property Department

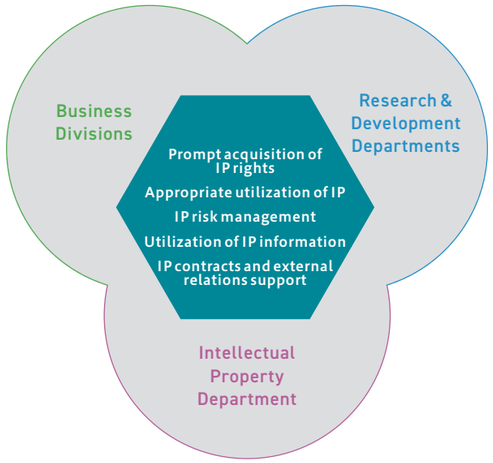
Basic Policy and Features

Nissan Chemical carries out its intellectual property activities based on the "Management Policy of Industrial Property" formulated in 1997, with the three following pillars: "prompt acquisition of intellectual property rights," "appropriate utilization of intellectual property," and "intellectual property risk management." In addition, "utilization of intellectual property information" and "intellectual property contracts and external relations support" have grown into important activities these recent years and the Intellectual Property Department is spearheading initiatives in this realm as a "navigator of R&D benefits."

The biggest feature of our intellectual property activities is that "R&D departments, business divisions, and Intellectual Property Department unite seamlessly". This feature has been achieved through our emphasis on R&D, with 70% of new employees and 40% of regular positions being researchers. Outside of the Intellectual Property Department, business divisions and planning departments at the Head Office also include many employees with experience in research, and a large number of personnel familiar with both R&D and intellectual property leads to lively discussions on patents and measures regarding other companies' rights. Moreover, intellectual property liaisons are established in each division to engage in intellectual property activities in collaboration with the Intellectual Property Department. In addition, "Intellectual property conference" held in the business divisions and planning departments of the Head Office and in all laboratories and plants are another our characteristic activity. These conferences lead to the sharing of internal and outside issues related to intellectual property and promote the cultivation and elevation of a company-wide intellectual property mindset.

In this way, we implement three-pronged intellectual property activities through business divisions, research and development departments and the Intellectual Property Department, and possesses a high level of intellectual property literacy as a whole.

Seamless intellectual property activities



Seamless Intellectual Property Activities

One concrete example is "patent conference" attended by core members of R&D and business. At Nissan Chemical, these patent conferences are opportunities to comprehensively discuss each strategy of intellectual property, research and business, which is reflected in each policy and generates speed and competitiveness.

With respect to photo-alignment materials used in IPS-type LCD panels, we built patent networks ahead of other companies, consequently reached a 99% market share and successively established a monopoly.

In addition, our intellectual property strategy in the agricultural and pharmaceutical field includes the intellectual property that is "global" and "can win in the case of litigations." We have experienced disputes in many countries and, if necessary, will directly eliminate other companies by litigating.

Aggressive Acquisition of Property Rights

As shown in the number of patents held (P12), we aggressively acquire patent rights. We have compared the number of patents held by our company and by major domestic chemical manufacturers using commercial databases and, as evidenced in the table below, we are ranked first in the ratio of global patents (the number of patents held abroad divided by the number of patents held in Japan) and second in the net sales ratio. We rank fifth out of 30 companies in the R&D expenses ratio but, excluding the agricultural and pharmaceutical field where the number of patents held compared to R&D expenses is fewer and focusing on the materials field, we have approximately twice as many patents as the average of the major domestic chemical manufacturers with respect to the R&D expenses ratio as well.

In this manner, we guarantee the business superiority of Nissan Chemical though this extremely powerful patent networks.

Comparison of the number of patents held using commercial databases*

(As of June 2023)

	Nissan Chemical	Nissan Chemical (materials field)
Ratio of global patents	208 (1)	206
Number of patents held/ Net sales	253 (2)	345
Number of patents held/ R&D expenses	129 (5)	212

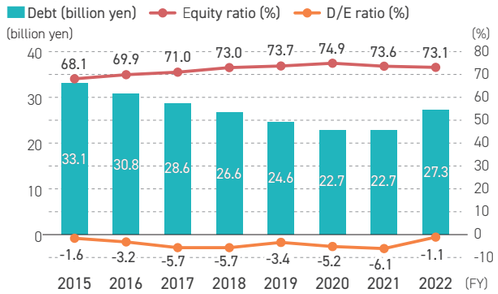
*For all figures, the average of major domestic chemical manufacturers is set at 100. The rank is given by the parenthesized figure.

Financial Capital

Financial Standing

Financial capital is essential for conducting business activities. Nissan Chemical has built up a robust financial base, having given careful consideration to a balance between shareholders' equity and debt. Our equity ratio continues to climb, while our debt is falling. As a result, the D/E ratio, one of the key indicators of financial soundness, remains at a low level (the lower the ratio the sounder a company's financial position). We are in a very favorable state in terms of cash flow and can continue to utilize this cash for investment and shareholder returns as needed.

Debt: Equity ratio: D/E ratio

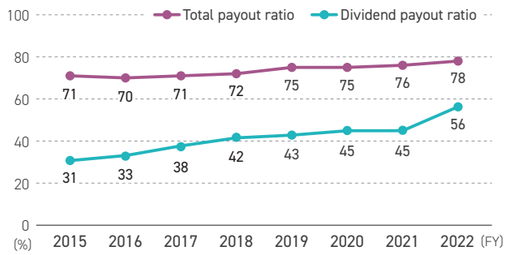


◎Related Information: Message from the CFO P49-52, Financial Review P85-92

Shareholder Returns

Nissan Chemical emphasizes ROE, an indicator of earnings power, while aiming to take full advantage of shareholders' equity. Since ROE recorded at 9.5% in FY2011, it has continued to rise, and the result for FY2022 was 19.4%. The dividend payout ratio has been gradually increasing from 30.7% in FY2015, and the result for FY2022 was 56.3%. The total shareholder payout ratio has also been at a high level, hovering around 70% since FY2015. Our proactive approach to returning profits to shareholders, which combines dividends and share repurchase, has attracted long-term capital investment and contributed to the enhancement of shareholders' equity.

Total payout ratio / Dividend payout ratio



Manufacturing Capital

Our plants are located in five prefectures in Japan, and while the stone-built facilities, which have been designated as a chemical heritage, still remain, state-of-the-art equipment and facilities are being steadily introduced. With a history of over 130 years, we are still moving forward focused on the stable manufacture of products.

◎Related Information: Corporate Information P93-96

The Sodegaura Plant (Chiba Prefecture)
Located in the petroleum complex in Chiba Prefecture, the Sodegaura Plant is a core plant of our Specialty Chemicals business. It engages in production of inorganic materials and electronic materials used in a wide range of industrial fields, including the cutting-edge information and electronics industries.
The plant is a development-oriented plant that works closely with research laboratories.

The Saitama Plant (Saitama Prefecture)
Located in the rich natural environment of northwestern Saitama Prefecture, the Saitama Plant produces herbicides for paddy rice, insecticides and fungicides, and contributes to agriculture in Japan and around the world.

The Toyama Plant (Toyama Prefecture)
Located in the central part of Toyama Prefecture, the Toyama Plant has developed into one of Japan's leading integrated ammonia chemical plants, backed by abundant water and electricity. The plant is still manufacturing many derivatives. In recent years, the plant has also made inroads into the field of electronic materials, contributing greatly to the advancement of the global semiconductor industry and IT technology. The plant has research laboratory, which enables us to respond quickly to next-generation needs.

The Nagoya Plant (Aichi Prefecture)
Facing the Port of Nagoya, the Nagoya Plant has developed mainly through the production of sulfuric acid, and has developed products ranging from industrial use to high-grade products for semiconductor cleaning in response to the needs of the times. The plant currently produces refined sulfuric acid, high purity sulfuric acid, sodium bisulfite, and AdBlue®, a high-grade urea solution for purifying emissions from diesel vehicles.

The Onoda Plant (Yamaguchi Prefecture)
Located in the southwestern part of Yamaguchi Prefecture, the Onoda Plant has a history of more than 130 years, having produced Japan's first agrochemicals in 1910. It currently produces veterinary drugs and agrochemicals such as insecticides, acaricides, and herbicides, as well as pharmaceuticals such as hyperlipidemia treatments, and organic fine chemical products.

Social Capital

The relationships of trust that we have cultivated over a long period of time with a variety of stakeholders, including investors, local communities and NPO/NGOs, form the basis for supporting our business activities. With the Nissan Chemical Group's sites as the foundation for social contribution, we are engaged in a variety of social contribution activities as a corporate citizen, focusing on the four areas: promotion of education, science, and culture; contribution to local communities; conservation of the global environment; and promotion of health and welfare and promotion of sports.

Interaction with Local Residents

We hold plant tours and explanatory meetings on regular basis for local residents and schools. In particular, during these meetings we explain our initiatives for disaster prevention and environmental protection in an effort to show that the plants are safe and secure. In addition, we also participate in local beautification activities such as cleaning of public roads and nearby stations around the plants, and planting flowers together with local residents. In FY2022, we started activities such as cleaning and the preservation of nectar source plants for insects, at a park in Chuo-ku, Tokyo, where our head office is located.

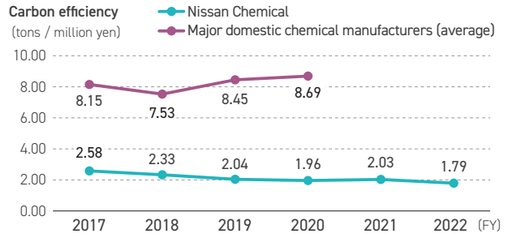
Scene of conservation activities (Chuo-ku, Tokyo)

Web
Contribution to Communities and Society
https://www.nissanchem.co.jp/eng/csr_info/communication/community.html
Biodiversity Conservation
https://www.nissanchem.co.jp/eng/csr_info/responsible_care/conservation.html

Natural Capital

In manufacturing products, it is difficult to avoid placing burdens on the environment, such as the use of energy, water and raw materials as well as greenhouse gas (GHG) emissions. We identified "Continuous improvement of responsible care activities" as one of our materialities. We have identified the mitigation of climate change and reduction of industrial waste and pollutant emissions as key materiality factors, and are striving to reduce our environmental impact through responsible care activities that consider the environment, health, and safety.

◎Related Information: Responsible Care P73-75



Initiatives to Reduce GHG Emissions

At the Toyama Plant and the Onoda Plant, we have significantly reduced CO_2 emissions by converting naphtha that is raw material and fuel for ammonia, and heavy oil that is fuel for boilers into natural gas. The Company's carbon efficiency (GHG emission rate) is relatively good in the chemical industry due to the low-carbon investments it has made to date and the characteristics of its products.

Initiatives to Reduce Energy Consumption (Logistics)

As a cargo owner, we are working together with Nissan Butsuryu Co., Ltd., a group company that handles our logistics operations, to promote the rational use of energy for transportation.

We have received the Eco Rail Mark certification in 2018, and will continue striving to improve our energy consumption rate by promoting modal shifts, replacing vehicles with energy-saving, and practicing eco-driving.

Web
Responsible Care Management
https://www.nissanchem.co.jp/eng/csr_info/responsible_care/management.html
Mitigation of Climate Change
https://www.nissanchem.co.jp/eng/csr_info/responsible_care/environment/reduction.html
Reduction of Industrial Waste and Pollutant Emissions
https://www.nissanchem.co.jp/eng/csr_info/responsible_care/environment/management.html
Management of Chemical Substances
https://www.nissanchem.co.jp/eng/csr_info/responsible_care/chemical.html
Water Resources Conservation
https://www.nissanchem.co.jp/eng/csr_info/responsible_care/environment/effective.html
Biodiversity Conservation
https://www.nissanchem.co.jp/eng/csr_info/responsible_care/conservation.html

Materiality

In order to realize our ideal state in 2050 as set out in our long-term business plan "Atelier2050", to be "a future-creating company that grows through seeking to enrich people and nature", and "a group of co-creators that face challenges for change with a strong passion", in FY2022, we reviewed the materiality that we need to address. With the aim of achieving sustainable development for society and the Nissan Chemical Group, we are managing our progress on an annual basis by using the KPIs up to FY2027 set in our mid-term business plan for "Vista2027" as indicators for sustainable management.

Three Materiality of Nissan Chemical Group

Provision of new value for helping to enrich people's lives

We aim to provide new value for helping to enrich people's lives through four businesses based on core technologies.

Strengthening of Nissan Chemical's business base

We aim to strengthen our business base to improve our ability to respond to increasingly diverse and sophisticated marketing needs.

Continuous improvement of responsible care activities

We aim to enhance the maintenance of environment, health, and safety through the operation of the Nissan Chemical Responsible Care Management System.

Materiality Identification Process

Gain Understanding About Social Issues and Social Changes

Social issues and social changes looking ahead to 2050 and issues to be addressed by Nissan Chemical were discussed across the Company in the "Business Planning Project" led by the President and the Vice President, and it was confirmed that there have been no major changes in social issues and social changes since the previous formulation.

Social Issues and Social Changes

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

Review of Materiality and Materiality Factors

We reviewed materiality and materiality factors with reference to the SDGs, evaluation items of ESG-related evaluation organizations such as DJSI and FTSE, and sustainability information disclosure guidelines such as SASB, and determined that the materiality identified in the previous mid-term business plan "Vista2021" remains a priority issue for Nissan Chemical. On the other hand, in light of the priority of Nissan Chemical's business base and the results of our activities under Vista2021, we have added "safety and disaster prevention" as a new materiality factor, and summarized into 30 materiality factors.

Management of Impact on Our Group

In regards to the 30 materiality factors, we considered and analyzed the social issues and social changes, and then made arrangements to manage the impact on the Group.

Exchange of Opinions with Directors and Audit & Supervisory Board Members, including Outside Officers

From the perspective of incorporating outside opinions, we exchanged opinions in intensive discussions with directors and audit & supervisory board members, including outside officers, regarding the materiality and materiality factors that had been reviewed in the Business Planning Project.

Identification of Materiality and Materiality Factors (through resolution at the Board of Directors)

The Board of Directors confirmed and resolved the appropriateness of the materiality, materiality factors, and key performance indicators (KPIs) for each materiality factor, which were identified based on the discussions in the Business Planning Project and the opinions of the officers.

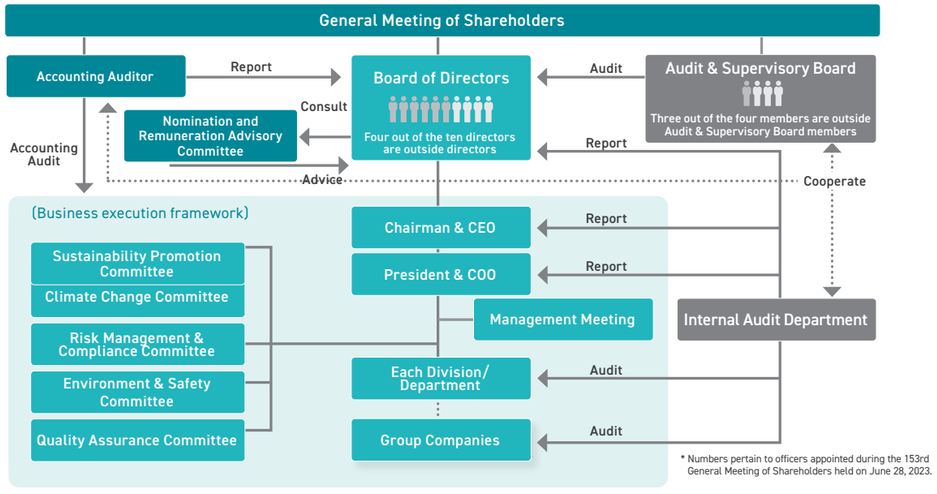
Materiality Initiatives and KPI

Materiality	Materiality factor	Vista2027 Major Initiatives	FY2027 Target	FY2022 Result	Relation with SDGs
Provision of new value for helping to enrich people's lives	Supply of environmental-friendly products and services	● Development of materials that contribute to the expansion of renewable energy ● Development of materials that contribute to the achievement of a circular economy ● Reduction of the application amount of agrochemicals ● Introduction of recyclable packaging materials ● Supply of exhaust gas removal materials ● Supply of disinfectants and water treatment for septic tanks ● Supply of materials that enable reduction of oil and fat waste	● Net sales: +10% compared to FY2021	● Net sales: +16% compared to FY2021	2, 3, 6, 7, 9, 11, 12, 13, 14, 15
	Contribution to smart society	● Supply of materials that contribute to higher capacity/speed of data communication and sensing	● Net sales: +55% compared to FY2021	● Net sales: +6% compared to FY2021	
	Contribution to the food issues	● Supply of agrochemicals to increase crop yields and conserve agricultural labor in food production ● Contribution to the maintenance of health of livestock	● Net sales: +15% compared to FY2021	● Net sales: +22% compared to FY2021	
	Contribution to the improvement of the quality of life	● Supply of disinfectants for drinking water ● Contribution to maintaining the health of companion animals	● Net sales: +15% compared to FY2021	● Net sales: +34% compared to FY2021	
	Contribution to health issues	● Supply of generic drugs ● Offer of contracted manufacturing and service for pharmaceuticals ● Development of materials for regenerative medicine market ● Development of drugs for intractable diseases	● Net sales: +5% compared to FY2021	● Net sales: +4% compared to FY2021	
	Nissan Chemical Sustainable Agenda	● Provision of products and services that contribute to solving social issues	● Maintaining at least 55% in consolidated net sales	● Above 55%	
Strengthening of Nissan Chemical's business base	Enhancement of R&D capability	● Acceleration of R&D through the use of AI ● Expansion of core technologies ● Further use of open innovation	● Total number of patent applications (FY2022 to 2027): 2,500	● Number of patent applications: 378	
	Improvement of products quality	● Prevention of serious complaints ● Prevention of quality fraud and data tampering	● Number of serious complaints: Zero ● Attendance rate of quality training: At least 90%	● Number of serious complaints: 1 ● Attendance rate of quality training: 85%	
	Maintenance and improvement of employees' health	● Promotion of measures against lifestyle-related diseases ● Implementation of mental health measures ● Awareness activities for employees on maintaining their health ● Promotion of female's health	● Rate of employees within appropriate weight*: At least 70% *BMI (body mass index): 18.5 to 25.0	● 68%	5, 8, 9, 10, 11, 12, 13, 16, 17
	Creation of a comfortable workplace	● Promotion of work-life balance ● Implementation of measures against harassment ● Support for childcare and nursing care, encouraging male employees to take parental leaves	● Utilization rate for annual paid leaves: At least 80%	● 81%	
	Personnel retention and trainings	● Introduction of a new personnel system (role grading system) ● Strengthening of career development ● Enhancement of self-development support programs	● Positive response rate in survey of employee attitude on human resources development: At least 65%	● 60.5%	
	Promotion of diversity	● Promotion of active participation of females ● Recruitment of international students ● Promotion of employment of persons with disabilities	● Proportion of females in the regular position: At least 13% ● Proportion of female researchers in the regular position: At least 18%	● Proportion of females in the regular position: 11.0% ● Proportion of female researchers in the regular position: 14.8%	
	Promotion of fair-trading	● Holding in-house training sessions, and conduction of other educational and awareness activities ● Conduction of educational and awareness activities for compliance	● Zero violations of antitrust laws ● Zero bribery of foreign public officials	● Number of violations of antitrust laws: 0 ● Number of bribery of foreign public officials: 0	
	Promotion of sustainable procurement	● Provision of feedbacks on results of sustainable procurement survey ● Provision of supports in improvement for suppliers that do not meet the Company's standards	● Provision rate of supports in improvement for suppliers that do not meet the Company's standards: At least 90%	● Provided feedback to suppliers who responded to the previous mid-term business plan and those who responded in the first half of FY2022	
	Adaptation to climate change	● Maintaining and improving the resilience of business activities in the event of natural disasters	● Update and maintenance of Business Continuity Plans (BCPs) for products that account for 50% of ordinary income	● Updated or maintained BCPs for products that account for 41% of ordinary income	
Continuous improvement of responsible care activities	Mitigation of climate change	● GHG emissions reduction	● GHG emissions: Reducing by at least 30% from FY2018 level	● GHG emissions: Reduced by 9.8% from FY2018 level	8, 12, 13, 14, 15
	Promotion of occupational health and safety	● Strengthening of occupational safety management	● Zero accidents requiring staff time off from work ● Number of occupational accidents: Reducing by half compared to FY2020	● Number of accidents requiring staff time off from work: 2 ● Number of occupational accidents: 7 (FY2020: 8) ● Held e-learning course on occupational safety (at Nissan Chemical and 2 Group companies)	
	Biodiversity conservation	● Promotion of biodiversity conservation activities	● Establishment and operation of Bio-Parks at Nissan Chemical's plants	● Established the Saitama Plant Bio-Garden	
	Management of chemical substances	● Compliance with laws and regulations regarding the use of chemical substances	● Continuation of zero serious violations of laws and regulations	● Number of serious violations of laws and regulations: 0 (maintained)	
	Reduction of industrial waste and pollutant emissions	● Reduction of industrial waste and pollutant emissions for final disposal	● Reduction in final disposal ratio at Nissan Chemical's plants (compared to FY2020)	● 22.6% (FY2020: 14.3%)	
	Safety and disaster prevention	● Strengthening of the management of safety and disaster prevention	● Zero fires, explosions and chemical spills ● Zero safety accidents	● Number of fire: 1, Number of explosions: 0, Number of chemical spills: 0 ● Number of safety accidents: 1	

Materiality and SDGs Web https://www.nissanchem.co.jp/eng/csr_info/management/materiality.html

Corporate Governance

Based on our culture of "integrity" and "transparency", we have strengthened our governance system in line with the changing times. We have implemented various initiatives, such as increasing the number of female directors and deliberating on the formulation of succession plans for the President and CEO at the Nomination and Remuneration Advisory Committee. We will continue to strengthen our governance in the future as well.



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 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 are reported to the Board of Directors to enhance the supervising function of the Board of Directors. We 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 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 a Nomination and Remuneration Advisory Committee mostly consisting of independent outside directors under the Board of 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 convened 10 times in FY2022. 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.

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 established an Internal Audit Department to pursue the achievement of the Group's management objectives effectively. With the object of ensuring the proper duties under the internal control system, the Internal Audit Department conducts internal audits for the Group. The department submits its internal audit activity plan and reports the outcomes to the Chairman & CEO, the President & COO, the directors in charge, and the Board of Directors. It also shares information with our accounting auditor and the Audit & Supervisory Board members to cooperate with them.

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 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 and other meetings, help conduct audits, and collect information.

Indicator	Scope	Unit	FY2019	FY2020	FY2021	FY2022	FY2023
Directors*1	Inside directors	People	6	6	6	6	6
	Outside directors (Independent)	People	3 (3)	3 (3)	4 (4)	4 (4)	4 (4)
	Total	People	9	9	10	10	10
Ratio of Independent Outside Directors*1		%	33	33	40	40	40
Ratio of female directors*1		%	0	0	10	10	20
Number of executive directors*1		People	6	6	6	6	6
Average terms of positions held*1		Years	6.7	5.2	5.1	4.0	4.2
Meetings of the Board of Directors*2		Times	12	11	12	12	-
Attendance of directors at meetings of the Board of Directors*2		%	99	96	99	98	-
Attendance of Audit & Supervisory Board members at meetings of the Board of Directors*2		%	100	100	100	100	-

*1 Data is as of after the General Meeting of Shareholders held in June of each fiscal year. *2 Data from April to March of each fiscal year

View on the Appropriate Balance between Knowledge, Experience and Skills of the Board, and on Diversity

The Company considers the board to be formed by members selected from various viewpoints to make decisions appropriately and expeditiously and oversee the execution of business activities in diverse fields (including chemicals, performance materials, agricultural chemicals, and healthcare). Those points include the balance of knowledge, experience, skills, and other capacity and diversity, including gender, internationality, and practical experience in totality of the board.

To ensure a well-balanced and diverse board composition, based on the company philosophy and management strategy, the Company has identified the expertness and experience required for its directors (skills requirements): "corporate management", "research and development/technologies", "finance and accounting", "legal/risk management/internal control", "personnel affairs/personnel strategies", and "global experience". And the Company makes the board consist of appropriate persons as its directors, who have met the above-skills requirements appropriately, and who are healthy, physically and mentally, and trusted and respected for their excellent characters, a high level of insight, and a sense of ethics.

We will review the above skills requirements as necessary based on the management strategy and relevant policies.

Director		The expertness and experience required for the Company's directors					
		Corporate Management	R&D/ Technologies*	Finance & Accounting	Legal/Risk Management/ Internal Control	Personnel Affairs/ Personnel Strategies	Global Experience
Representative Director, Chairman	KINOSHITA Kojiro	◎		◎	◎	◎	
Representative Director, President	YAGI Shinsuke	◎	◎		◎	◎	
Director, Senior Executive Vice President	HONDA Takashi	◎	◎		◎		◎
Director, Senior Managing Executive Officer	ISHIKAWA Motoaki	◎	◎		◎		◎
Director, Senior Managing Executive Officer	DAIMON Hideki	◎		◎	◎		◎
Director, Managing Executive Officer	MATSUOKA Takeshi	◎		◎	◎	◎	◎
Outside Director	OBAYASHI Hidehito	◎	◎				◎
Outside Director	KATAOKA Kazunori	◎	◎				◎
Outside Director	NAKAGAWA Miyuki				◎		
Outside Director	TAKEOKA Yuko		◎				

* "R&D/Technologies" include the expertness and practical experience in the fields of IT, DX (Digital Transformation), environmental safety, and quality assurance.

Policy and Procedures in the Nomination of Officer Candidates

Proposal of nomination of director and Audit & Supervisory Board member candidates are explained in advance to independent outside directors. After receiving proper guidance from them, the proposal is finalized by the Board of Directors through deliberation/reporting by the Nomination and Remuneration Advisory Committee and submit to the General Meeting of Shareholders. In addition, nominations of Audit & Supervisory Board member candidates are approved by the Audit & Supervisory Board in advance.

	Policy
Directors	**<Inside Directors>** People 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>** People 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. Each outside director may serve up to six terms of one year in total; provided, however, that shall not prevent the director from serving up to eight terms of one year in total under a special circumstance. In addition, each outside director may concurrently serve as a director or Audit & Supervisory Board member of five listed companies, including the Company, at a maximum in principle.
Audit & Supervisory Board Members	People 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 standpoint, in addition to auditing the execution of operations. Each Audit & Supervisory Board member may serve up to two terms of four years in total; provided however, that shall not prevent the member from serving up to three terms of four years in total under a special circumstance. In addition, each Audit & Supervisory Board member may concurrently serve as a director or Audit & Supervisory Board member of five listed companies, including the Company, at a maximum in principle.

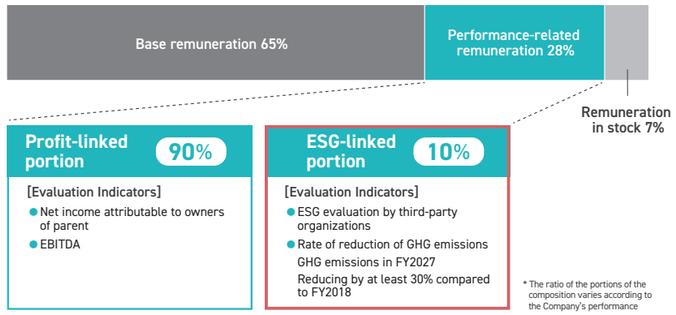
Officers' Remuneration

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 details of remuneration, etc. for individual 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 (base remuneration and performance-related remuneration) and performance-linked stock compensation. However, the outside directors' remuneration package shall consist of only the base remuneration as a monetary payment. In the light of their roles and independence from the Company, their remuneration package does not contain the performance-related remuneration as monetary payment nor the performance-linked stock compensation.

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.

● Composition of Officers' Remuneration*



Excluding performance-linked stock compensation, the remunerations of individual directors are determined at the Board of Directors 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-related remuneration

We establish the base amount for each title and determine the annual amount according to the fluctuation of performance indicators. Those indicators consist of the profit indicators for the previous fiscal year (the net income attributable to owners of parent, EBITDA, and the like) and ESG indicators (the third-party evaluation result, the reduction of GHG emissions, and the like).

ESG initiatives are an important management issue that is indispensable for the sustainable growth of the Company. In order to further improve the effectiveness of sustainable management, we have decided to link it with remuneration.

Overview of Performance-linked Stock Compensation Plan

The Company grants its directors points based on its net income attributable to owners of parent (average rate of change over the last three years), EBITDA (average rate of change over the last three years), ROE (actual result 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 equivalent to their accumulated points. (For details on how to calculate performance- linked stock compensation plan amounts, etc., please refer to P50 "Compensation, etc. for Officers" of the 153rd Securities Report.)

Performance Evaluation Coefficient

If a director subject to performance-linked stock compensation is dismissed through the General Meeting of Shareholders or the Board of Directors 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.

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

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 from FY2015, the Company performs analysis and evaluation (the "Effectiveness Evaluation") every year to see if the Board of Directors has fulfilled these roles and responsibilities. In addition, we carry out a third-party evaluation every three years using an external organization that holds no relationships of interest with us in order to ensure neutrality and objectivity. The latest third-party evaluation was conducted in FY2020. The Effectiveness Evaluation in FY2022 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 to grasp the current status and identify 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.

During the self-evaluation conducted in FY2022, based on the results of the questionnaire responses, an opinion-exchange meeting was held in April 2023 (with independent Officers (3 outside directors and 3 outside Audit & Supervisory Board members <including 2 full-time Audit & Supervisory Board members>), the Chairman and the President) 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 held in May 2023.

Issues Identified in the Effectiveness Evaluation for FY2021

1) To consider how to share the status of deliberations at the Nomination and Remuneration Advisory Committee with the Board of Directors.
2) To consider how to set and sort out appropriate agenda and streamline the process to administer the Board of Directors to enable its members to focus on the matters requiring resolution and spend enough time deliberating them.

Effectiveness Evaluation Result for FY2022

As a result of the Effectiveness Evaluation for FY2022, it was concluded that our Board of Directors was generally operating appropriately overall from the perspective of carrying out its primary 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 FY2021.

Points of Future Improvement

Through the discussion that was conducted this time, we recognized the following issues to address for further enhancing the effectiveness of the Board of Directors and determined to work on improvements.

1) To provide a forum for "free discussion" at the Board of Directors to deepen the debate on the roles and responsibilities to be fulfilled by it.
2) To consider at the Nomination and Remuneration Advisory Committee the measures to sufficiently share the status of its deliberations with the Board of Directors.

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.

Directors and Audit & Supervisory Board Members

Officers appointed during the 153rd General Meeting of Shareholders held on June 28, 2023.

KINOSHITA Kojiro

(Representative Director, Chairman & CEO)

1977 Joined the Company
2002 Director, Head of Corporate Planning Department
2006 Managing Director, Head of Corporate Planning Department
2008 Representative Director, President & CEO
2021 Representative Director, Chairman & CEO (to the present)

Attendance at meetings of the Board of Directors 12/12

Reason for appointment

Mr. KINOSHITA served as General Manager of the Business Strategy Department, Chemicals General Headquarters and also as Head of the Corporate Planning Department. In addition, as President & CEO of the Company since June 2008, and as Chairman & CEO since April 2021, he has been promoting strategies to enhance the corporate value of the Company group. Considering his wide-ranging experience, achievements, and insights, the Company judges that Mr. KINOSHITA is qualified to be a director that performs decision- making on business operations and oversees the execution of duties by directors.

YAGI Shinsuke

(Representative Director, President & COO)

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
2021 Representative Director, President & COO (to the present)

Attendance at meetings of the Board of Directors 12/12

Reason for appointment

Mr. YAGI has been engaged in production technology for many years, and served as the Deputy Plant Manager of the Onoda Plant and the Plant Manager of the Sodegaura Plant. He has been contributing to the improvement of production systems for the Company group's products and to their stable supply. In addition, as President & COO of the Company since April 2021, he has been promoting strategies to enhance the corporate value of the Company group. Considering his wide-ranging experience, achievements, and insights, the Company judges that Mr. YAGI is qualified to be a director that performs decision- making on business operations and oversees the execution of duties by directors.

HONDA Takashi

(Director, Senior Executive Vice President)

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, Agricultural Chemicals Division
2017 Managing Executive Officer, Head of Agricultural Chemicals Division
Director, Managing Executive Officer, Head of Agricultural Chemicals Division
2021 Director, Senior Managing Executive Officer, Head of Agricultural Chemicals Division
2022 Director, Senior Executive Vice President (to the present)

Attendance at meetings of the Board of Directors 12/12

Reason for appointment

Mr. HONDA has been engaged in the agricultural chemicals business focused on agricultural chemicals development and business development for many years. He served as General Manager of the Planning & Development Department and as a Division Head, and since April 2022, he has not only been leading the agricultural chemicals business but also managing all of the Company's life science business and research. Considering his wide-ranging experience, achievements, and insights, the Company judges that Mr. HONDA is qualified to be a director that performs decision-making on business operations and oversees the execution of duties by directors.

ISHIKAWA Motoaki

(Director, Senior Managing Executive Officer)

1986 Joined the Company
2009 General Manager of Display Materials Department, Electronic Materials Division
2012 General Manager of Display Materials Research Department, Electronic Materials Research Laboratories
2015 General Manager of Business Strategy Department, Performance Materials Division
2016 Executive Officer, Deputy Head of Performance Materials Division, General Manager of Business Strategy Department, Performance Materials Division
2020 Managing Executive Officer, Head of Performance Materials Division
2022 Senior Managing Executive Officer, Head of Performance Materials Division
Director, Senior Managing Executive Officer, Head of Performance Materials Division
(present post)

Attendance at meetings of the Board of Directors 10/10

Reason for appointment

Mr. ISHIKAWA has been engaged in the performance materials business focused on display materials for many years. He has served as General Manager of the Business Strategy Department, a Division Head, and as head of the Company's overseas business locations, and since April 2022, he has been managing all of the Company's performance materials business and research, which is a driver of the Company group's growth. The Company judges that Mr. ISHIKAWA is qualified to be a director that performs decision-making on business operations and oversees the execution of duties by directors.

DAIMON Hideki

(Director, Senior Managing Executive Officer)

1988 Joined the Industrial Bank of Japan, Ltd.
(current Mizuho Bank, Ltd.)
2014 General Manager of Trust Business Department IV of Mizuho Trust & Banking Co., Ltd.
2016 Executive Officer, General Manager of Corporate & Institutional Coordination Department of Mizuho Trust & Banking Co., Ltd.
2018 Managing Executive Officer in charge of Trust & Banking of Mizuho Trust & Banking Co., Ltd.
2020 Executive Officer, Head of Finance & Accounting Department of the Company
2022 Managing Executive Officer, Head of Sustainability Promotion & IR Department
Director, Managing Executive Officer, Head of Sustainability Promotion & IR Department
2023 Director, Senior Managing Executive Officer, Head of Sustainability Promotion & IR Department
(to the present)

Attendance at meetings of the Board of Directors 10/10

Reason for appointment

Mr. DAIMON has leveraged his abundant experience and wide-ranging insight cultivated at financial institutions in Japan and overseas to formulate financial strategy and actively lead IR activities since joining the Company as the Head of the Finance & Accounting Department in April 2020. Since April 2022, he has made a significant contribution to enhancing the Company's corporate value as the Head of the Sustainability Promotion & IR Department. The Company judges that Mr. DAIMON is qualified to be a director that performs decision-making on business operations and oversees the execution of duties by directors.

MATSUOKA Takeshi

(Director, Managing Executive Officer)

1996 Joined the Company
2017 General Manager of CSR & Public Relations Office, Corporate Planning Department
2019 Executive Officer, Head of Internal Audit Department
2021 Executive Officer, Head of Chemicals Division
2022 Managing Executive Officer, Head of Corporate Planning Department
Director, Managing Executive Officer, Head of Corporate Planning Department (to the present)

Attendance at meetings of the Board of Directors 10/10

Reason for appointment

Mr. MATSUOKA joined the Company with wide-ranging business and planning experience in the chemicals industry. He has been involved in formulating major strategies not only in the Chemicals Division, but also in operational divisions including the Corporate Planning Department, CSR & Public Relations Office, and Internal Audit Department. Since April 2022, he has been focusing on assessing the status of operations across the entire Company and achieving group-wide targets as Head of the Corporate Planning Department. The Company judges that Mr. MATSUOKA is qualified to be a director that performs decision-making on business operations and oversees the execution of duties by directors.

OBAYASHI Hidehito Outside

(Director)

Attendance at meetings of the Board of Directors 12/12

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)

Reason for appointment

As an experienced manager of a corporate group active in diverse sectors of global business, Mr. OBAYASHI has reflected his abundant experience and wide-ranging insight in the management of the Company from an outside perspective and from an objective standpoint. The Company judges that Mr. OBAYASHI will appropriately perform his duties as outside director. In addition, he has contributed to the selection of candidates for the Company's directors and the determination of director compensation, etc., from an independent standpoint as a member of the Nomination and Remuneration Advisory Committee.

KATAOKA Kazunori Outside

(Director)

Attendance at meetings of the Board of Directors 12/12

1979 Research Associate 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 Project Professor at The University of Tokyo
Professor Emeritus 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. (current NANO MRNA Co., Ltd.) (to the present)

Reason for appointment

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. As a doctor of engineering, Mr. KATAOKA has reflected his expertise, abundant experience, and wide-ranging knowledge in the management of the Company from an outside perspective and from an objective standpoint. The Company judges that Mr. KATAOKA will appropriately perform his duties as outside director. In addition, he has contributed to the selection of candidates for the Company's directors and the determination of director compensation, etc., from an independent standpoint as a member of the Nomination and Remuneration Advisory Committee.

NAKAGAWA Miyuki Outside

(Director)

Attendance at meetings of the Board of Directors 12/12

1990 Prosecutor, Tokyo District Public Prosecutors Office
2008 Counsellor, Judicial System Department, Minister's Secretariat, Ministry of Justice
2011 Counsellor, Cabinet Secretariat, Assistant Chief Cabinet Secretary Office
2013 Prosecutor, Tokyo High Public Prosecutors Office
General Manager of General Administration Department, Saitama District Public Prosecutors Office
2015 Specially Appointed Professor and Public Prosecutor, Chuo Law School, Chuo University
2019 Retired as Prosecutor
Qualified for attorney-at-law Professor, Chuo Law School, Chuo University (to the present)
Outside Director of NITTO KOGYO CORPORATION (to the present)
2021 Outside Director of the Company (to the present)
Outside Audit & Supervisory Board Member of FANCL CORPORATION (to the present)
2022 Outside Audit & Supervisory Board Member of Shinsei Bank, Limited (current SBI Shinsei Bank, Limited) (to the present)
Outside Audit & Supervisory Board Member of ASKUL Corporation (to the present)

Reason for appointment

Ms. NAKAGAWA worked for many years as a prosecutor in the Tokyo District Public Prosecutors Office and the Tokyo High Public Prosecutors Office and she has abundant practical experience in legal circles. She has reflected her legal expertise, abundant experience, and wide-ranging insight in the management of the Company from an outside perspective and from an objective standpoint. The Company judges that Ms. NAKAGAWA will appropriately perform her duties as outside director. In addition, she has contributed to the selection of candidates for the Company's directors and the determination of director compensation, etc., from an independent standpoint as a member of the Nomination and Remuneration Advisory Committee.

TAKEOKA Yuko Outside New

(Director)

2001 Assistant Professor of Department of Chemistry, Faculty of Science and Technology, Sophia University
2002 PRESTO Researcher of Japan Science and Technology Agency
2006 Lecturer of Department of Chemistry, Faculty of Science and Technology, Sophia University
2010 Associate Professor of Department of Materials and Life Sciences, Faculty of Science and Technology, Sophia University
2018 Professor of Department of Materials and Life Sciences, Faculty of Science and Technology, Sophia University (to the present)
2023 Director of Center for Research Promotion & Support, Sophia University (to the present)
Outside Director of the Company (to the present)

Reason for appointment

Ms. TAKEOKA has been engaged in research centered on the synthesis and characterization of functional polymers for many years, and is currently serving as a Professor of Department of Materials and Life Sciences, Faculty of Science and Technology, Sophia University. As a doctor of engineering, Ms. TAKEOKA has reflected her expertise, abundant experience, and wide-ranging knowledge in the management of the Company from an outside perspective and from an objective standpoint. The Company judges that Ms. TAKEOKA will appropriately perform her duties as outside director. In addition, she has contributed to the selection of candidates for the Company's directors and the determination of director compensation, etc., from an independent standpoint as a member of the Nomination and Remuneration Advisory Committee.

SUZUKI Norihiro Outside

(Audit & Supervisory Board Member)

Attendance at meetings of the Board of Directors 12/12
Attendance at meetings of the Audit & Supervisory Board 12/12

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.
Director of Nochu Information System Co., Ltd.
2016 Outside Audit & Supervisory Board Member of the Company (to the present)

Reason for appointment

Mr. SUZUKI has a wide range of knowledge, including extensive experience and finance expertise those are cultivated through many years of business at financial institutions. We believe that he has reflected his knowledge in our corporate audit with objective and neutral standpoint, and will continue to fulfill the duties appropriately.

TAKEMOTO Shuichi Outside

(Audit & Supervisory Board Member)

Attendance at meetings of the Board of Directors 12/12
Attendance at meetings of the Audit & Supervisory Board 12/12

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. (current Mizuho Research & Technologies, Ltd.)
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)

Reason for appointment

Mr. TAKEMOTO has a wide range of knowledge, including extensive experience and finance expertise those are cultivated through many years of business at financial institutions. We believe that he has reflected his knowledge in our corporate audit with objective and neutral standpoint, and will continue to fulfill the duties appropriately.

OHRAI Kazuhiko

(Audit & Supervisory Board Member)

Attendance at meetings of the Board of Directors 10/10
Attendance at meetings of the Audit & Supervisory Board 10/10

1987 Joined the Company
2007 General Manager of Pharmaceutical Research Department, Chemical Research Laboratories
2016 Executive Officer, Head of Pharmaceuticals Division
2021 Executive Officer, Head of Internal Audit Department
2022 Audit & Supervisory Board Member (to the present)

Reason for appointment

Mr. OHRAI has extensive expertise in the Company group's business based on many years of involvement in research and development, particularly of pharmaceuticals, and experience serving as the General Manager of the Pharmaceutical Research Department, Head of the Pharmaceuticals Division, and Head of the Internal Audit Department. Considering his abundant work experience and specialized knowledge, the Company judges that Mr. OHRAI is qualified to be an Audit & Supervisory Board member with responsibility for ensuring the appropriateness of Directors' execution of duties.

KATAYAMA Noriyuki Outside

(Audit & Supervisory Board Member)

Attendance at meetings of the Board of Directors 12/12
Attendance at meetings of the Audit & Supervisory Board 12/12

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)
2014 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 Denkai, Ltd. (to the present)
2019 Outside Corporate Auditor of Livesense Inc. (to the present)
2021 External Statutory Auditor of AIDA ENGINEERING, LTD. (to the present)
2022 Outside Director of create restaurants holdings Inc. (to the present)

Reason for appointment

Mr. KATAYAMA has reflected his extensive experience and expertise as an attorney in Nissan Chemical's audits and has been involved in the management of several companies as an outside officer. We believe that he will fulfill the duties appropriately.

Messages from Outside Officers

Further strengthening the foundation to achieve sustainable growth

Nissan Chemical is a development-oriented company that focuses resources on research and development in order to achieve sustainable growth. Until now, we have expanded and grown the business operation by developing new businesses and products in response to changes in society. In order to fulfill our social responsibilities into the future, we must further enhance governance from all angles in our business. To that end, I will provide supervision and advice on measures on executive side from a broad social perspective.

Outside Director
OBAYASHI Hidehito

I also believe that sharing the knowledge I have gained from my many years of experience in R&D, as well as factory management and corporate management, with the management of Nissan Chemical, will lead to sustainable growth and at the same time strengthen our corporate structure. My activities are centered on the Board of Directors and the Nomination and Remuneration Advisory Committee, but I will actualize those through on-site visits and various internal meetings.

Nissan Chemical's financial strategy is extremely sophisticated, and quick decisions are made on business structural reforms, research and development strategies, and changes in the social environment to enable sustainable growth. I would like to actively disclose my experience in this regard. I will continue to focus on strengthening measures as we face challenges in implementing Group-wide strategies that form our business foundation, for example, with consolidated management, capital investment, and safety and health.

As the social environment changes on a global scale, prompt management decision-making and execution are crucial to fulfill the social responsibilities expected of us. Hence, I will do whatever I can to establish "right and wrong over profit and loss" and "business basics and ethics" as Nissan Chemical's values, and to make Nissan Chemical a company with integrity where each and every employee can work vigorously.

Flexible research and development unconstrained by frameworks

Nissan Chemical's distinctive feature lies in its flexible and comprehensive capabilities in which the four business divisions of Chemicals, Performance Materials, Agricultural Chemicals, and Healthcare function in a mutually complementary way, like the wheels of a four-wheel drive car, in response to changes in the economic and social environment. The Group's strength further rests in the fact that the Planning and Development Division and laboratories have established a system to strongly promote the creation and development of new materials and technologies by exchanging skills and human resource beyond these four business divisions. And based on my own many years of experience in R&D, I feel that the high reliability of the Materials Analysis Research Department and the Toxicology & Environmental Science Department plays an extremely important role in quality assurance of developed products. The Internal Audit Department and outside directors also actively exchange opinions on a regular basis, and I am convinced that the mindset of fostering unwavering trust in quality throughout the Company is growing.

Outside Director
KATAOKA Kazunori

The speed and depth of future technological development, such as introduction of AI and promotion of digital transformation, continues to accelerate at an increasing rate. While introducing innovative products based on our R&D capabilities with a broad perspective that clearly understands the ideals of a future world, Nissan Chemical's long-term business plan, Atelier2050, requires flexibility to accurately respond to the paradigm shift in technology by promptly incorporating an awareness from a different perspective into R&D. To that end, it is necessary to take measures that appropriately nurture and engage highly specialized human resources who can play an active role globally under a system that transcends conventional frameworks. I will offer advice and guidance so that a diverse range of human resources full of individuality and vitality can flourish to generate highly agile research and development that quickly produces products with new social value.

Contributing to the maintenance and development of the next generation humanity and the global environment

Nissan Chemical works in a wide range of business fields, including Chemicals, Performance Materials, Agricultural Chemicals, and Healthcare. As an outside director, I am expected to provide opinions and suggestions so that the Company's corporate management is conducted from the perspective of whether the provision of products and services in each field meets customer needs, and whether they contribute to the existence and development of humanity and the protection of the global environment. With my many years of experience as a public prosecutor squaring up to injustices in society, I believe that I have been able to bring a certain viewpoint on whether decisions are being made at the Board of Directors with a long-term perspective and multifaceted approach.

Outside Director
NAKAGAWA Miyuki

In such a chaotic and uncertain world, I intend to discuss how we can develop and improve our superior technical capabilities and R&D capabilities for the next generation.

So that the perspective of a third party, so often overlooked, is not lost, I will contribute to ensuring the effectiveness of the Company's corporate governance with a Board of Directors that respects diverse opinions in an open and natural atmosphere.

In addition, the Company outlined its Diversity Statement in April 2021, to promote initiatives for a healthy work-life balance. Last year, I had a lunch meeting with female employees at the head office, and I was able to see that female employees raising children are capable of balancing their work life with childcare. Going forward, I would like to continue to make various proposals with the aim of creating a workplace environment where women can work more easily.

Aiming for more effective governance: As a bridge between the workplace and management

While the Board of Directors is responsible for making decisions on important management matters and supervising the execution of duties by directors and executive officers, the Audit & Supervisory Board is responsible for auditing the execution of duties by these directors. I believe that Outside Audit & Supervisory Board Members should conduct audits from an independent standpoint of the Company by leveraging their strengths of not working for the Company, and from a more objective and professional standpoint based on their work experience outside the Company. Although I have no actual experience working in Nissan Chemical, I am able to understand present actual work conditions, difficulties, concerns, and issues at each site through annual on-site inspections of each plant, laboratory, sales office, and head office department. In addition, I am making use of my experience in sales, planning, human resource, and systems in my previous jobs to provide in-depth communication and advice during my on-site inspections.

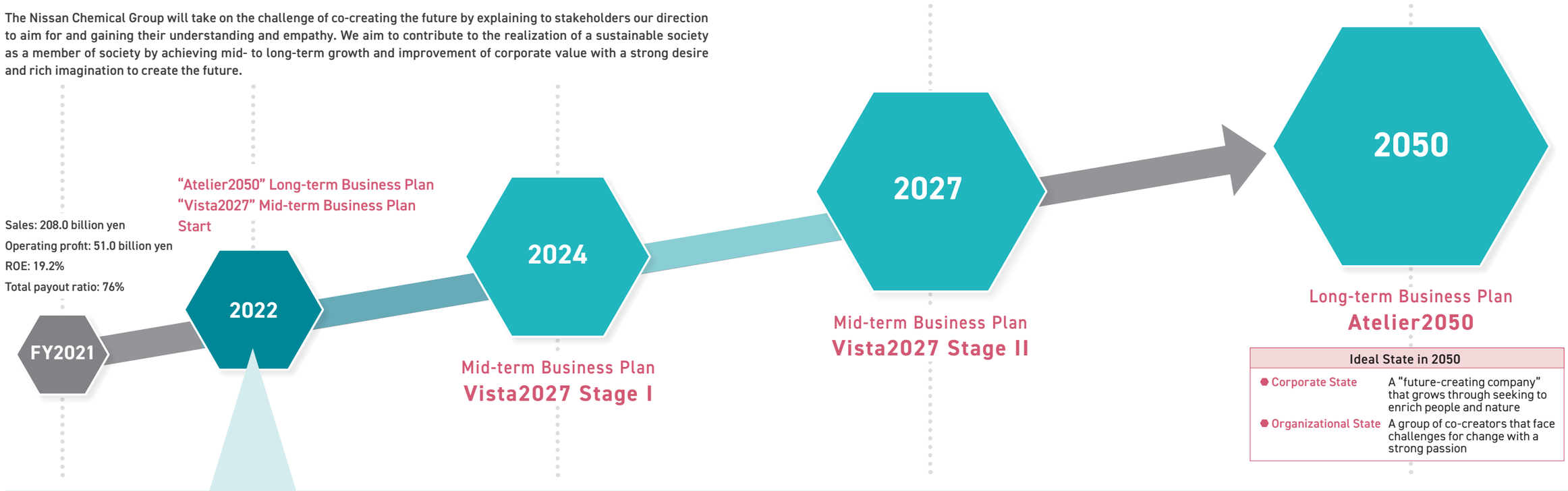
Outside Audit & Supervisory Board Member
TAKEMOTO Shuichi

At the Board of Directors, I ask various questions to check whether sufficient consideration has been given, especially in deliberations on management policies and large investment projects. By doing so, I hope to facilitate discussions so that everyone at the Board of Directors can make decisions based on a true understanding of the matters in hand. Moreover, I feel that more effective decision-making can be achieved by providing opinions and suggestions where necessary based on my perspective from on-site inspections and individual work experience.

In addition to the Board of Directors, I actively attend various committees such as the management meeting and the Sustainability Promotion Committee where I strive for better decision-making by asking questions and giving my opinion. And in terms of my on-site inspections, I also examine from various perspectives and through open dialogue whether management's decision-making has permeated to the workplace, and whether management is making decisions based on present workplace conditions.

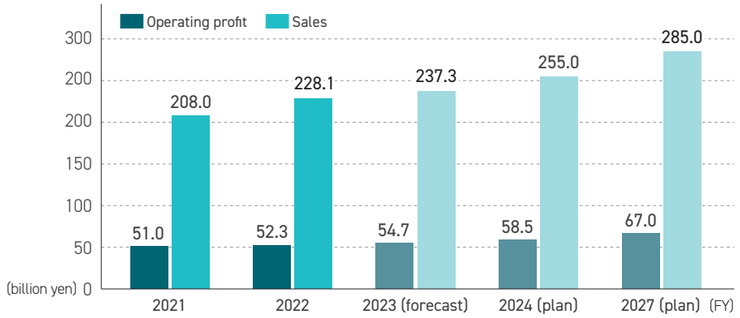
Long-term and Mid-term Business Plans Overview and Progress

The Nissan Chemical Group will take on the challenge of co-creating the future by explaining to stakeholders our direction to aim for and gaining their understanding and empathy. We aim to contribute to the realization of a sustainable society as a member of society by achieving mid- to long-term growth and improvement of corporate value with a strong desire and rich imagination to create the future.



Progress of FY2022

Financial Indicators



(billion yen)

	2021	2022	2023 (forecast)	2024 (plan)	2027 (plan)
Sales	208.0	228.1	237.3	255.0	285.0
Operating profit	51.0	52.3	54.7	58.5	67.0
Ordinary income	53.7	55.8	55.5	59.5	68.0
Net income	38.8	41.1	41.5	44.0	50.0

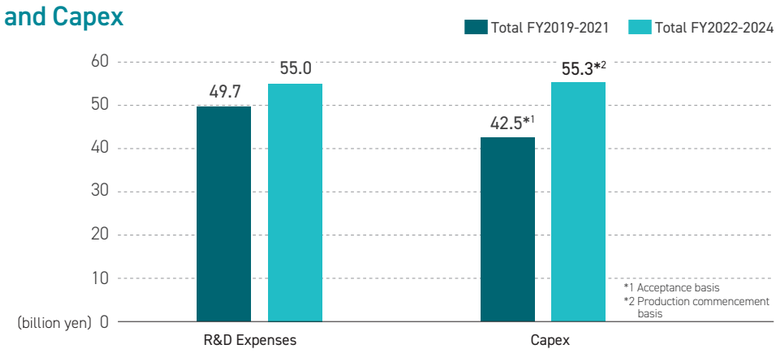
Operating profit and ordinary income reached the record high for 9 consecutive years, and net income reached the record high for 10 consecutive years

	2021	2022	2023 (forecast)	2024-2027 (plan)
Operating margin	24.5%	22.9%	23.1%	Above 20%
ROE	19.2%	19.4%	18.6%	Above 18%
Dividend payout ratio	44.9%	56.3%	55.1%	55%
Total payout ratio	76%	78%	75% (target)	75%

Non-financial Indicators

	FY2022	FY2027 Target
Rate of total sales of Nissan Chemical Sustainable Agenda target products and services in consolidated net sales	Above 55%	Maintain at least 55%
GHG emissions (Scope1+2)	327,663 tons-CO_2e (9.8% reduction compared to FY2018)	254,377 tons-CO_2e (Reduce by at least 30% compared to FY2018)
Positive response rate in survey of employee attitude on human resource development	60.5%	At least 65%
Proportion of female researchers	14.8%	At least 18%

R&D Expenses and Capex



“Atelier2050” Long-term Business Plan

Considering that the business environment has changed significantly since the previous long-term business plan was formulated, we once again discussed the social issues and social changes with a view to 2050. As a result of these discussions, we have formulated a long-term business plan “Atelier2050”, by backcasting from the necessary initiatives and issues that need to be resolved. This plan sets out the path for the Group to contribute to solving social issues and keep growing for the future, with the ideal corporate state in 2050 of “a future-creating company that grows through seeking to enrich people and nature” and the ideal organizational state in 2050 of “a group of co-creators that face challenges for change with a strong passion”.

Ideal State in 2050

Corporate State

A “future-creating company” that grows through seeking to enrich people and nature

Organizational State

A group of co-creators that face challenges for change with a strong passion

Business Areas

- Growth is achieved with Information & Communication, Life Science, and Environment & Energy as growing business areas, and Materials & Services as a core business area.
- Life Science business is expanding with the microbial control technology as the core, and Information & Communication business is growing with sensing materials and other products. Environment & Energy business is full-fledged and contributes greatly to the global environment.

Social Involvement

- Expanding businesses and products that contribute to solving social issues
- Advancing the Group’s business management that prioritizes less effect on the global environment
- Becoming a corporate group that is trusted and valued by the local community and whole society

Employees State

[Basic Stance]

- **Valuing the integrity as the strength**
  We trust and respect people. We achieve things with responsibility. We make efforts for someone else and work together as well. Integrity is the advantage and identity of the Group.
- **Taking a step forward with the vision**
  We explore individual ideals. To realize that, we transcend the traditional framework, go through repeated trial and error and face challenges for change.
- **Transcending collaboration to co-creation**
  We evolve collaboration into co-creation, having the courage to go through clashes of diverse ideas and enthusiasm.

Business Areas

Solving Social Issues

Protect the global environment
Solve food issues
Mitigate climate changes
Achieve a smart society
Address health issues
Improve quality of life

Business (Expansion into new areas)

1 Information & Communication
- Semiconductor materials
- Display materials
- Photofunctional materials
- Metamaterials

2 Life Science
- Agrochemicals
- Animal health products
- Biomedical materials
- Pharmaceuticals (small molecules, oligonucleotides, peptides)
- Sensing Systems <IoT sensor materials> <Biomimetic sensors>
- Microbiome <Agriculture/Healthcare> <Microbial materials>
- Biostimulant

3 Environment & Energy
- Secondary battery materials and fuel cell materials
- Next-generation solar cell materials
- CCUS materials
- CO_2 reduction system

4 Materials & Services
- Industrial chemicals
- Colloidal silica
- Affiliate companies

Growing businesses | Core businesses

Core Technology

[Existing technology] Fine Organic Synthesis, Functional Polymer Design, Ultrafine Particle Control, Biological Evaluation, Optical Control

[New technology] Microbial Control, Information Science

Basic Strategy

1 Deeply exploit and expand business areas

Expand into new areas related to growing businesses

- Information & Communication
  - Develop materials for the next-generation display and join that market, and provide materials that are compatible with the evolving semiconductor technologies
  - Enter into new businesses, such as the sensing area and photofunctional material market
- Life Science
  - Expand into microbial agrochemicals, and advance into healthcare and environment-related areas with microbial control technology
- Environment & Energy
  - Develop materials related to batteries/cells that contribute to solving environmental issues, renewable energy materials, and CCUS materials

2 Pursue sustainable management further

Develop business activities that contribute to solving environmental and social issues

- Attain the “Nissan Chemical Sustainable Agenda” and expand product/service lines specified in the Agenda
- Achieve carbon neutrality (Scope 1+2)
- Cultivate a corporate culture where the future is co-created

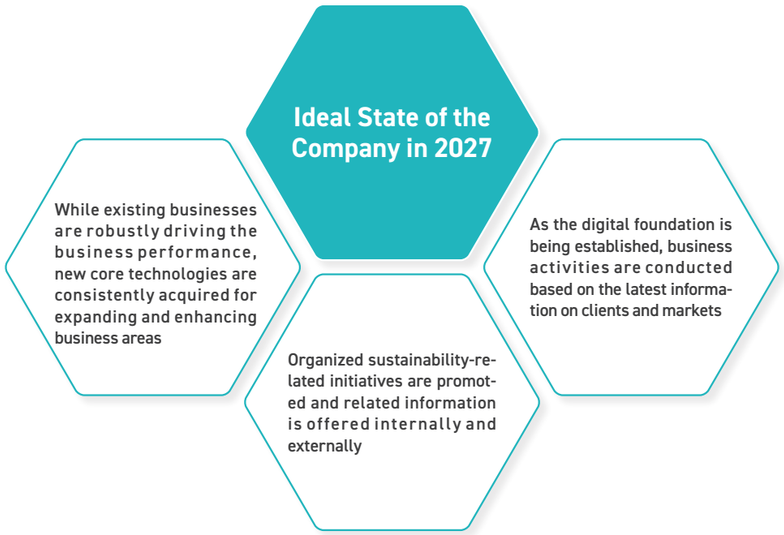
3 Renovate management and business foundations

Accelerate the value-creation process by utilizing digital technology

- Fuse virtual and physical space and strengthen AI analysis
- Utilize digitalization, automatization, and robotization to focus on creative work

"Vista2027" Mid-term Business Plan

Mid-term business plan "Vista2027" is a six-year business plan, starting in FY2022, formulated as a stepping-stone on the way to the ideal state set forth in our long-term business plan "Atelier2050". We aim to achieve sustainable growth with this plan which set the first three years (2022-2024) as Stage I, and the second three years (2025-2027) as Stage II.



Basic Strategies

① Deeply exploit business areas and increase marketing ability

We strive to enhance our R&D capability and improve our planning ability, towards the realization of the ideal state in FY2050

- Refine existing core technologies and deeply exploit and expand development areas
- Incubate new core technologies (microbial control and information science)
- Enhance marketing power and planning ability

② Promote sustainable management

We foster our efforts and propel measures for sustainability and facilitate offering sustainability-related information internally and externally

- Strengthen corporate governance
- Set up "Sustainability Promotion & IR Department" and propel related measures in an organized approach
- Enhance committee activities (intensifying company-wide cross-sectional efforts by setting up the Sustainability Promotion Committee and section meetings)

③ Strengthen the creation and co-creation process of values

We propel building our business foundations and environment that help mutual communication and improvement in efficiency and facilitate the creation and co-creation of new values

- Revise the existing personnel system and human resource development for attaining business strategies
- Set up "Digital Transformation Department" and facilitate digital transformation (DX) and business foundation renovation

④ Expand market shares and profits of existing businesses

To extend the sales of existing products, that are the sources of growth and develop new products consistently, we will implement measures such as infrastructure development and cost reductions for existing products.

◎ Related Information:
Business Segments P53-54
Main Products and Services P55-56
Business Strategies P57-66
Research and Development P25-27
Intellectual Property P28

Long-term and Mid-term Business Plans Topics

1 Nissan Chemical Sustainable Agenda

In FY2022, we started the Nissan Chemical Sustainable Agenda, a plan to pursue "what we can do for the future of the globe and human" by providing products and services that contribute to solving social issues. We have set "Actualizing a sustainable future for our planet (To Tomorrow)" and "Actualizing sustainable comfort for all (Be Happy)" as areas of contribution.

We define the rate of total sales of products and services that contribute to solving social issues in relevant areas in consolidated net sales as a key performance indicator (KPI), setting a target of "maintaining at least 55%" in the mid-term business plan Vista2027. Looking ahead to 2050, we would like to further expand our target products and services by fostering core technologies, and realize sustainable development for society and the Group.

Areas of Contribution through Sustainable Agenda Target Products and Service

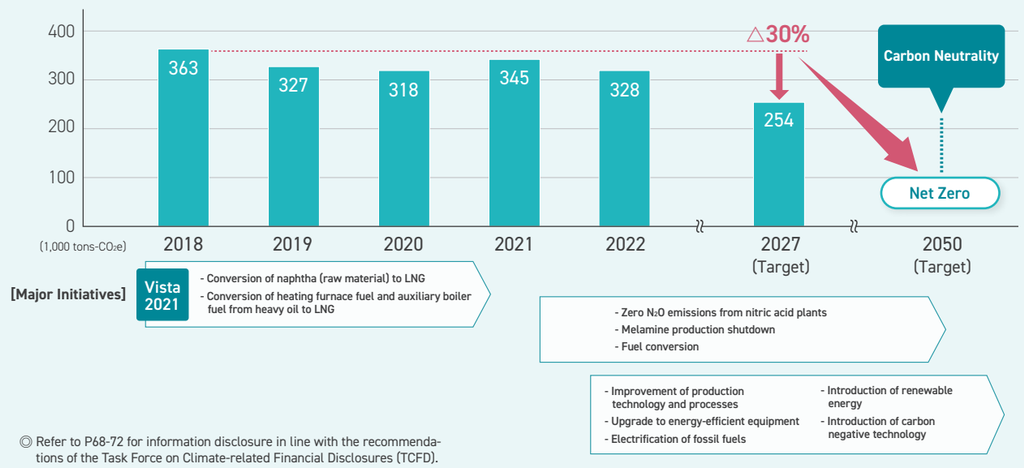
◎ Related Information: Materiality P31-32

2 Achievement of Carbon Neutrality by 2050

In order to achieve carbon neutrality by 2050, we are working on converting fuel and feedstock, promoting energy saving, adopting renewable energy, and examining zero emissions of N_2O from nitric acid production facilities.

In FY2022, GHG emissions decreased due to the melamine production shutdown, and the conversion of boiler fuel at the Onoda Plant.

Trend of GHG Emissions (SCOPE1+2)



◎ Refer to P68-72 for information disclosure in line with the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD).

We will steadily implement the Vista2027 plan and actively deepen dialogue with our stakeholders

DAIMON Hideki
Director,
Senior Managing Executive Officer,
CFO
Head of Sustainability
Promotion & IR Department

Execute Unwavering Financial and Non-financial Strategies to Improve Mid- to Long-term Value

With the mission to constantly meet the expectations of the market and society, it is our responsibility to increase the mid- to long-term value of the Company as a going concern, by viewing its economic and social value as two wheels. As CFO, I consider it an important mission to achieve our return on equity (ROE) target, which is our most important management indicator, to improve our economic value. At the same time, it is extremely important to increase our social value and levels of contribution by promoting sustainable management so that we can continue to achieve sustainable growth while contributing to solving social issues.

Investors are increasingly interested not only in financial aspects but also in non-financial aspects, such as ESG (Environment, Social, and Governance). Which is why, in the current mid-term plan "Vista2027", we have decided to specify and disclose equally both financial and non-financial aspects as the management indicators that Nissan Chemical should aim for. The Sustainability Promotion & IR Department, which was newly established in April 2022, is actively engaging in dialogue with stakeholders from both a financial and non-financial perspective, and will continue to do so going forward.

Since the mid-2000s, Nissan Chemical has placed ROE as its most important financial indicator, and this will remain the case in the future. ROE, an indicator of capital efficiency, is the financial indicator that best matches our business strategy of efficiently investing limited management resources to continue producing essential products in highly profitable business fields, and is widely supported by investors as an easy-to-understand single indicator.

Since the early 2010s, our ROE has steadily increased. And although we aimed to maintain above 16% in our previous mid-term business plan "Vista2021 Stage II" (2019-2021), this target was further raised to maintain above 18% in Vista2027 (2022-2027), achieving an ROE of 19.4% in FY2022. This is approximately twice the average of chemical manufacturers in the same industry.

We have achieved proactive shareholder returns over the long term, and we will continue this policy. The total payout ratio, including share dividends and share repurchases, is targeted at 75% of net income after taxes in Vista2027. Our total payout ratio for FY2022 was 78%. Furthermore, while taking into consideration feedback from our investors, we have increased the dividend payout ratio from 45% to 55%, increasing dividends for 11 consecutive years. In terms of shareholder returns, dividend on equity (DOE) is often discussed, but since DOE = ROE x dividend payout ratio, there is no need to make it a direct target for us as we maintain a high ROE.

In addition, our capital policy is to actively invest in research and development (R&D) expenses that are necessary and sufficient for our business and still return ample cash to shareholders. Our target is to invest 7-9% of sales each year in R&D expenses to ensure continued growth in the future. Since the average in the chemical industry is 3-4% of sales, this shows how Nissan Chemical is continually investing its management resources in producing high value-added products. In terms of human resources, about 40% of employees in regular positions are assigned as R&D personnel (on non-consolidated basis).

I believe that a major factor in our operating margin of 23% in FY2022, which has remained above 10% for 20 consecutive years since FY2003, is our unwavering strategy based on such a long-term perspective.

Achieved Record High Profits for 10 Consecutive Years and Received External Recognition in FY2022

In FY2022, we achieved increased sales and profits with operating profit and ordinary income reaching record highs for the 9 consecutive years, and net income reaching a record high for the 10 consecutive years. While more than half of other companies in the same industry reported drop in profit, we offset a decline in profits in Performance Materials which was affected by the market slowdown, with a significant increase in profits in Agricultural Chemicals, which continued to be strong. We believe that the strength of our resilient and well-balanced business portfolio was fully demonstrated.

Our ROE also peaked at 19.4%, exceeding the mid-term target of above 18%. In addition, we have been selected as a constituent stock of the JPX Prime 150 Index in June 2023, and we were rated as having an excellent equity spread, or difference between ROE and cost of equity.

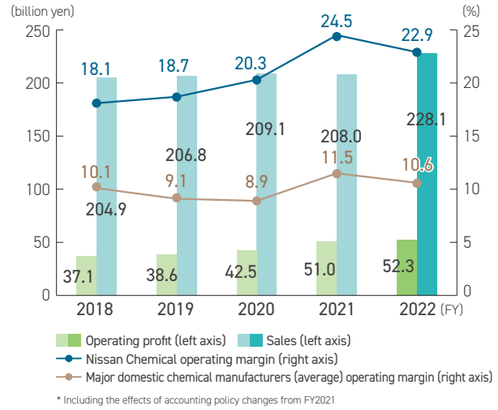
While achieving these results, we are also steadily making much needed growth investments. In addition to the construction of an agrochemicals manufacturing facility in India, Nissan Bharat Rasayan, and the construction of a new semiconductor plant in South Korea, NCK, we have been actively investing in key areas, including DX-related investments and increased R&D expenses on plants and Company-wide bases, to ensure sustainable growth for the future.

High standards have also been maintained in terms of external evaluations. In April 2023, we were selected as a Most Honored Company in the Chemicals sector by Institutional Investor, a prominent U.S. financial magazine, for the 5 consecutive years. And the Company was ranked first in "Best IR Teams" and second in "ESG Rankings".

I would also like to add that the message issued by the Tokyo Stock Exchange to listed companies in March 2023 has become something of a talking point. More specifically, this concerns the situation in which approximately half of all com-

Sales / Operating profit / Operating margin

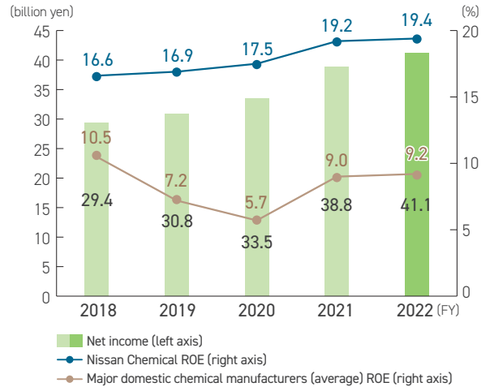
Operating profit in FY2022 was 52.3 billion yen, marking a record high for the 9 consecutive years



* Including the effects of accounting policy changes from FY2021

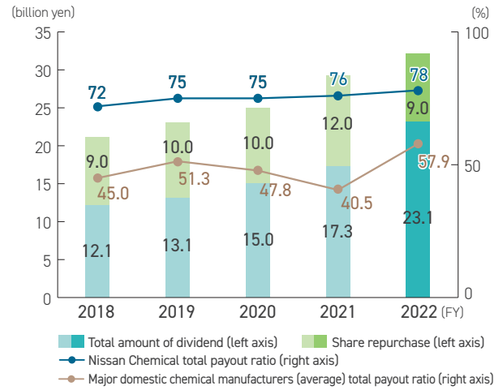
Net income attributable to owners of parent / ROE

ROE in FY2022 was 19.4%. Maintained high ROE by focusing on creating high value-added products



Total amount of dividend / Share repurchase / Total payout ratio

Total payout ratio achieved the Mid-term Business Plan (FY2022-2027) target of maintaining 75%



panies listed on the Prime Market, where we are also listed, have an ROE of less than 8% and a price-to-book ratio (PBR) of less than 1.0. The Company has for many years consistently given returns to shareholders with the aim of increasing ROE. Our PBR is about four times as high, so we can say that we have clearly differentiated ourselves from other companies in terms of market evaluation of our corporate value.

Promoting a Sustainable Management towards Carbon Neutrality

One of the basic strategies of our new long-term business plan "Atelier2050", is to pursue sustainable management further, and as such, we aim to achieve carbon neutrality by 2050. To put this into practice, we established the Climate Change Committee in June 2022. The committee is chaired by the President, Mr. Yagi, and is comprised of the heads of divisions and departments related to climate change issues at Nissan Chemical. Focusing its efforts on the increasingly serious issue of climate change, the committee is responsible for analyzing and evaluating risks and opportunities, formulating strategies and mid- to long-term plans for addressing them, as well as annual activities and targets, and promptly reflecting its results in our business strategies.

Task Force on Climate-related Financial Disclosures (TCFD) recommendations which we have support, call for a scenario analysis to understand how the risks and opportunities caused by climate change give impact on a company's finances. We published a qualitative 2°C and 4°C scenario analysis up to 2030 in FY2020. Although, in FY2022, we have reviewed the risks and opportunities related to climate change, including the financial impact, using 1.5°C and 4°C scenarios by the Climate Change Committee over a period of more than half a year, resulting in an extended analysis up to 2050. Furthermore, we have revised our internal carbon pricing (ICP) and fully implementing it from this fiscal year. Going

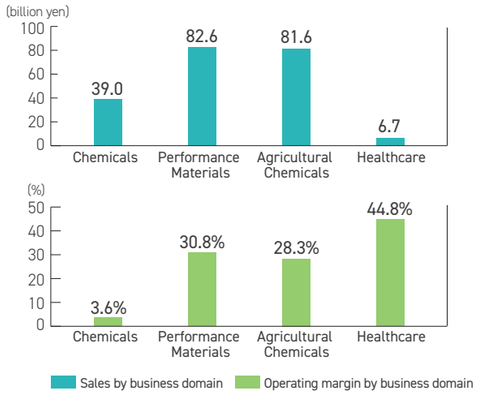
forward, we will continue to respond to changes in the external environment through the Climate Change Committee, such as updating disclosure in line with TCFD recommendations and reviewing our ICP.

Under Vista2027, the products and services identified in our materiality of "provision of new value for helping to enrich people's lives" are included in the Nissan Chemical Sustainable Agenda with a target of maintaining a ratio of at least 55% of all sales. Fortunately, we were able to achieve this goal in FY2022. Looking ahead to 2050, in addition to our existing core technologies, we will foster new core technologies such as microbial control and information science to further expand our target products and services in the four business areas of information & communication, life sciences, environment & energy, and materials & services.

Meanwhile, with the aim of clarifying on individual roles

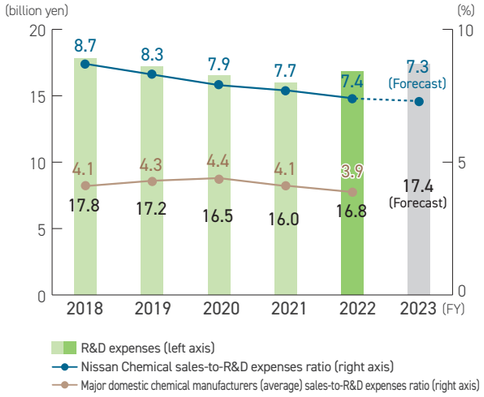
Sales and operating margin in FY2022 by business domain

Further strengthen the current business portfolio although considering it to be in good balance



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

Sales-to-R&D expenses ratio is maintained at around 7-9%, with a target of 7-9% annually in the future as well



Identified materiality (priority issues) to be addressed in order to realize the ideal state of the Company in 2027
Aiming for sustainable growth together with society by promoting initiatives

and the introduction of behavioral evaluation, and making the most of each employee's unique abilities, we revised our personnel system in November 2022. The system was changed from a membership-type system based on an employee's job-qualification system in the Company, to a job-type system where the right employee is placed in the right job. While respecting diverse values and career aspirations, we have also started a so-called career dialogue with employees and their superiors from FY2023 in order to support employees' career design. Besides, we started extending the retirement age in stages, and are considering training for older people so that they can play a more active role.

We have added a new section titled Approach and Initiatives on Sustainability to our annual securities report released in June 2023, where in addition to our sustainability promotion system and efforts for climate change, we have started to include information on human capital disclosure as a third topic. Further details are available in the report, but we have set indicators for major items related to our human resource development policy and internal environment improvement policy with targets set for FY2024.

Number of dialogue with investors in FY2022

Dialogue with institutional investors	Dialogue with individual investors	Dialogue with analysts	ESG related dialogues	Business / ESG briefings
306	2	54	5	3

Continuing to Deepen Dialogue with Investors

We regularly hold financial results briefings for institutional investors, analysts, and the media as well as for individual investors to provide an overview of our business, and also proactively share information on our mid- to long-term growth strategies and sustainability activities.

In FY2022, we held business briefings (June 2022: Performance Materials R&D Briefing, September 2022: Agricultural Chemicals Business Briefing, and March 2023: ESG Briefing) to help investors and others to better understand the content of our mid-term business plan announced in May. The business division briefing sessions were attended by the heads and other personnel of divisions and research laboratories, providing explanations of mid- to long-term R&D strategies. Since the ESG Briefing was held for the first time, a wide range of explanations was given, from corporate philosophy and long- and mid-term business plans, to materiality, Nissan Chemical Sustainable Agenda products, intellectual property strategy, and human capital, with all briefings generally well received.

We will continue to properly disclose information regarding our non-financial initiatives which are of great interest to investors, such as our mid- to long-term strategies and climate change issue.

Business Segments

In the Mid-term Business Plan "Vista2027", we have set "expand market shares and profits of existing businesses" as one of the basic strategies. While keeping a close eye on changes in the environment surrounding our customers and markets, we will promote the expansion of existing products, which are the source of growth, and the steady development of new products.

* Organizational restructuring was implemented in April 2022. Figures for FY2019-2020 are for the former organizational classification; figures for FY2021 and thereafter are after changing the organizational classification.

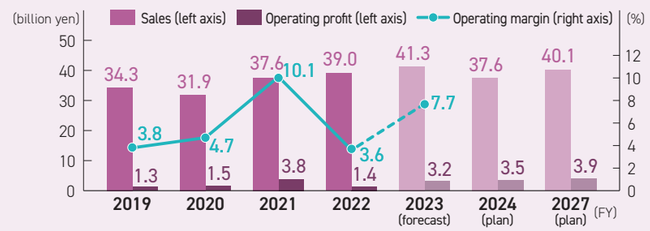
Our Chemicals business started with the manufacture of sulfuric acid and ammonia, which are basic raw materials for fertilizer. In addition to general industrial use, we provide our customers with products and technologies that are used in a wide range of fields, including high-purity chemicals for electronic material applications, high-grade urea solution for removing air pollutants, and isocyanuric acid derivatives for use in water quality improvement applications.

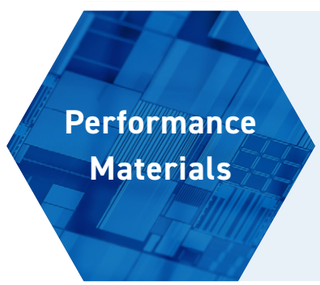
Social Issues and Needs

- Advent of a smart society
- Escalation of global environmental issues
- Emergence of new needs in various fields reflecting social issues

Business Vision

- Product development focused on advanced user requirements
- Provision of products and technologies that contribute to solving social issues





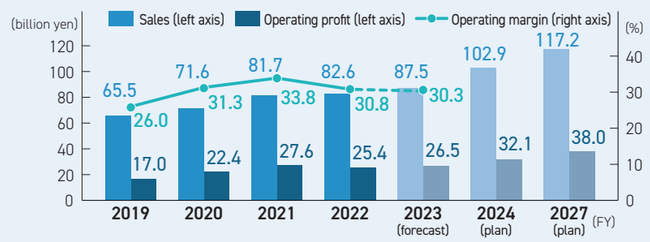
Advancements in semiconductors, sensors, and displays are required to realize a smart society. Performance Materials Division contributes to the realization of a smart society through the expansion of applications for existing products and the development of new products in the three pillars of displays, semiconductors, and inorganic materials.

Social Issues and Needs

- Expansion of IoT and 5G communications, evolution of AI and autonomous driving technology
- Response to carbon neutrality

Business Vision

- Development and provision of key materials that contribute to the realization of a smart society
- Development of new environmental-friendly materials



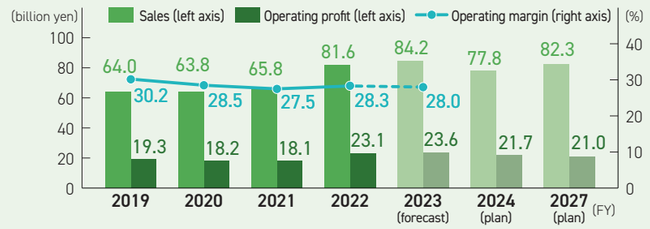
Agricultural Chemicals Division provides customers with agrochemicals, agents for green space management, and veterinary pharmaceuticals based on the idea of a stable food supply for people around the world and agrochemicals that are also friendly to the global environment. As a company that provides products which contribute to a stable food supply, we are promoting various efforts to solve social issues.

Social Issues and Needs

- Stable food supply
- Growing need for low-risk pesticides that reduce residual agrochemicals in harvested crops and reduce environmental burden
- Agricultural sustainability, transition to smart-agriculture

Business Vision

- Provision of chemically synthesized agrochemicals with distinctive features
- Development of biological agrochemicals
- Provision of services for smart agriculture



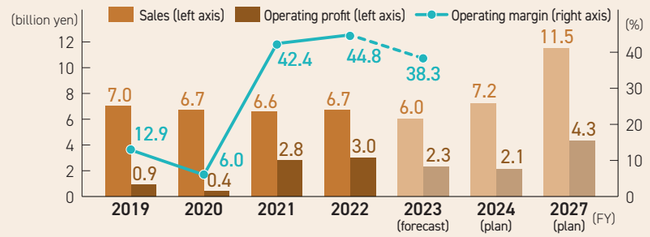
Since entering the pharmaceutical business in 1982, Nissan Chemical has developed and launched various products. With the technology we have cultivated so far, Healthcare Division will provide superior pharmaceuticals and medical materials for the sake of irreplaceable lives and smiles around the world.

Social Issues and Needs

- Growing importance of medical services and pharmaceuticals due to low birthrate and aging population
- Growing awareness of extending healthy life expectancy
- Safer and more effective pharmaceuticals in addition to personalized medicine and preventive medicine

Business Vision

- In addition to the manufacturing of conventional pharmaceuticals, the manufacturing of new products in the broader healthcare area, including medical materials
- Contribution to solving health issues by addressing unmet medical needs



The mission of the Planning and Development Division is to create new materials and new businesses that will become future pillars in the fields of Information & Communication, Environment & Energy, and Life Science. As a future- creating company, we will challenge the unlimited possibilities of chemistry and strive to create high value-added products that meet the "trust" of our customers.

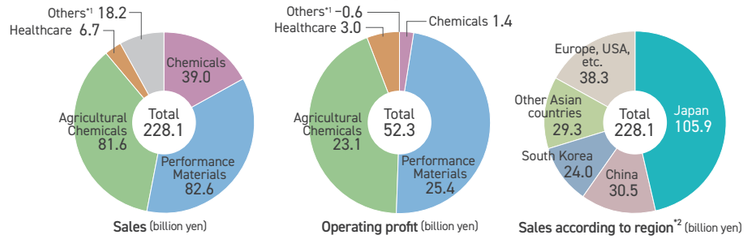
Social Issues and Needs

- Solving social issues that arise toward a sustainable society, such as climate change issues, global environmental conservation, low birthrate and aging population , and transformation to a smart society, etc.

Business Vision

- Building new businesses that contribute to solving social issues
- Co-creation of new materials that meet market and customer needs and promotion of real demand for them by deepening core technologies, introducing new technologies, and integrating them

FY2022 Segment results and sales according to region



*1 Others: trading, others, and adjustment
*2 Since figures are rounded off to the nearest unit, discrepancies may exist between total and sum of itemized amounts.

Main Products and Services

In response to the ever-changing needs of society, we will advance R&D on "Must-Have" products and services so that we can hear our customers' voice, such as "it doesn't work without this product" and "this product is irreplaceable".

Chemicals

Basic Chemicals

High-purity chemicals

Agents used for semiconductors/LED require extremely high purity. We provide sulfuric acid, nitric acid and ammonia to this industry, receiving high acclaim in the process.

AdBlue®*1

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 (NOx) into harmless nitrogen and water, which helps to reduce environmental impact.

Fine Chemicals

HI-LITE®

Chlorinated isocyanulate is the main ingredient in this product. It is used for sterilization and disinfection of swimming pools and water purification tanks, and thus contributes to public hygiene.

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.

*1 AdBlue® is a registered trademark of the Verband der Automobilindustrie (VDA).

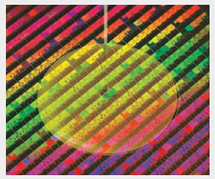
Performance Materials

Display Materials

SUNEVER®, Rayalign®

These are polyimide-based liquid crystal alignment materials used to coat the surface of the outer glass panels to align liquid crystal molecules in a certain direction.

Semiconductor Materials



ARC®*2

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.

Inorganic Materials

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 coating materials for optical films and abrasives for electronic substrate materials.

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

Agricultural Chemicals

Agrochemicals

ROUNDUP®

ROUNDUP® is a 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. In 2002, we acquired exclusive marketing rights in Japan from Monsanto.

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 sulfonylurea-based herbicides. We market this product in Japan, South Korea, China and other Asian countries.

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. Released in South Korea in 2018 and went on sale in Japan in 2019.

Veterinary Pharmaceuticals

Fluralaner

Fluralaner is a compound invented by Nissan Chemical used as an active ingredient in the veterinary pharmaceutical "BRAVECTO®*3" developed by MSD Animal Health (MAH). We manufacture and supply it to MAH as an API of veterinary pharmaceuticals. Fluralaner has remarkable features: it is highly safe and 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.

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

Healthcare

Healthcare

LIVALO®*4(API)

Featured by its potent LDL cholesterol-lowering effect and few drug-drug interactions, LIVALO® is used in the treatment of hyperlipidemia.

LANDEL®*5 (API)

LANDEL® is a long-acting calcium antagonist featured by its renoprotective effect and used in the treatment of hypertension and angina pectoris.

Custom Chemicals

The Onoda Plant manufactures active pharmaceutical ingredients (APIs) and their intermediates. In addition to GMP compliance, it is regularly inspected by domestic and foreign regulatory authorities as well as by customers to whom it delivers APIs, and its level of quality is highly evaluated.

Maxacalcitol

Maxacalcitol is used in the treatment of psoriasis vulgaris and secondary hyperparathyroidism.

Eldecalcitol

Eldecalcitol increases bone mass and is used in the treatment of osteoporosis.

*4 LIVALO® is a registered trademark of Kowa Company, Ltd. *5 LANDEL® is a registered trademark of Zeria Pharmaceutical Co., Ltd.

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.

OKIKAWA Toshiaki
Executive Officer,
Head of Chemicals Division

Basic Chemicals

We sell industrial chemicals such as sulfuric acid, nitric acid, ammonia, and urea, and their derivative products to a wide variety of industries. The Company is further improving the efficiency of our production system in order to create a stronger business foundation to minimize the impact on our earnings due to external factors, such as changes in economic trends in Japan or oversea and fluctuating 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.

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 (VAD).

Fine Chemicals

We offer 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 other chemicals such as FINEOXOCOL®, higher alcohol used in products including cosmetics.

In addition, TEPIC®, a high-performance chemical derived from isocyanuric acid, a derivative of urea, and melamine cyanurate are positioned as key products for earnings growth. In addition to being used as a curative agent for coating powders, TEPIC® is seeing an increase in demand for use in electronic materials such as solder resist ink and sealants for LED. Melamine cyanurate is used as a non-halogen flame retardant or an auxiliary flame retardant for various engineering plastics. In addition to focusing on the expansion of applications for these existing products, we are promoting R&D of our own isocyanuric acid derivatives.

Progress in FY2022

1 Isocyanuric Acid

Isocyanuric acid is a material used in TEPIC®, HI-LITE®, and melamine cyanurate, which is used as a flame retardant. In order to facilitate the stable provision of TEPIC® and HI-LITE®, which are sources of growth of this division, to the market, we expanded our isocyanuric acid production facilities in December 2020, which contributed to an increase in sales.

2 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 FY2022, we fell short of our plans notably due to the lockdowns in China, but in FY2023, we forecast an increase in sales along with the recovery from COVID-19 pandemic. For general-purpose grades, we revised the sales prices in response to soaring international market prices due to rising raw fuel and materials costs and logistics costs. We will pursue a well-balanced sales strategy by expanding sales of high-quality grades while avoiding low-price competition in general-purpose grades.

3 HI-LITE®

"Clean Water and Sanitation", one of the SDGs, is an important global issue. We have exported 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 will respond to the global demand for disinfection, as well as the demand for disinfectant applications for drinking water.

4 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. In FY2022, we fell short of our plans due to production adjustments at customer's semiconductor facilities, but we are forecasting that production adjustments will be complete and shipments will increase in the second half of FY2023. We will continue to maintain high quality and high availability.

Vista2027 Business Strategies

Opportunities and Risks

- Rising prices of raw materials and fuels
- Expansion of semiconductor market
- Increasing demand for environmental-friendly products
- Introduction of carbon pricing

Strengths

- Manufacturing process for products with high self-extinguishing rates as well as high value-added products by developing derivative products using ammonia as a core raw material
- Accumulation of more than half a century of research and know-how regarding ultra-high purity of industrial chemicals

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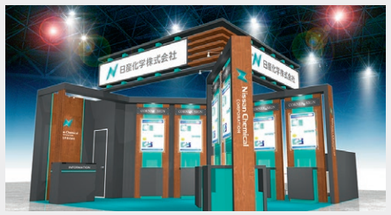
Main Measures

1. Improve profitability of ammonia-related business after the withdrawal from the melamine business
2. Expand sales of high purity sulfuric acid
3. Expand sales and improve profitability of isocyanuric acid and HI-LITE®
4. Develop the business of Venus® Oilclean (a microorganism formulation)

Efforts to achieve Vista2027

In June 2022, the first year of Vista2027, we discontinued the production of melamine, which had been a core product in our ammonia-related products for more than half a century. Meanwhile, for sulfuric acid products, we will make capital investments and upgrade facilities in response to increasing demand. 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.

As a source of sustainable growth for the business, we will focus on the development and deployment of new products, mainly isocyanuric acid derivatives, while strengthening sales of products for the electronic materials field. 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. We will also contribute to waste reduction with Venus® Oilclean, a microorganism formulation.



Exhibited STARFINE® at Converting Technology Exhibition 2023 (STARFINE®)

Performance Materials

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

ISHIKAWA Motoaki
Director, Senior Managing Executive Officer,
Head of Performance Materials Division

Display Materials

We are working on alignment materials for aligning liquid crystal molecules in a certain direction. SUNEVER® 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, in 2014, we started the sale of Rayalign®, a photo-alignment material for IPS liquid crystal, and this has become our main product. This product has been used in many smartphones, tablets and laptops. In the future, it is expected that product demand for Rayalign® will further increase as resolutions in monitor and automotive applications 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. We launched OptiStack®*2 (multi-layer process material) in 2007 which greatly expanded our business.

With the mass adoption of EUV exposure technology (wavelength: 13.5 nm, semiconductor circuit width: 7 nm and under) in 2018, we are promoting high-quality improvements in the mass production and next-generation development of 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 substrate materials and for other purposes. In the future, we will work on the development of CCS/CCUS-related materials and expand their applications to new eco-friendly products.

Progress in FY2022

1 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 IPS liquid crystal. 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 FY2022, we were able to expand our share of alignment materials for VA liquid crystal because some customers switched from the competing product.

2 Strengthening Development Capabilities and Establishment of a Structure to Increase Production for Semiconductor Materials

We strengthened the development capabilities in EUV materials for cutting-edge applications. We also focused our efforts on increasing the quality of current EUV materials and developing the next-generation versions. Moreover, in order to increase the speed of development for South Korea market, we established the Semiconductors Division of R&D center at NCK on April 1, 2023. We are also preparing to operate the 3rd NCK BARC plant in Dangjin, South Korea, in order to respond to the future growth in demand (Construction completed on May 15, 2023).

3 Oil and Gas Applications and CCS, CCUS Applications

We expanded sales of inorganic materials for use in improving oil and gas recovery rate. The sharp rise on oil prices led to our acquisition of new customers and sales increased year on year in FY2022. We also engaged in initiatives related to CCS and CCUS applications, as a way to develop applications toward carbon neutrality. In FY2022, we were able to obtain useful data for demonstration test.

Vista2027 Business Strategies

Opportunities and Risks

- Expansion of applications of photo-alignment materials for IPS liquid crystal and growth of the OLED market
- Expansion of the semiconductor market and progress in 3D packaging technology
- Development of a smart society
- 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

1. Improve existing products and expand their applications
2. Reinforce and increase manufacturing facilities and other facilities
3. Develop and launch new products
4. Start the commercial operation of the new NCK plant
5. Improve profitability of the inorganic material (inorganic colloid) business

Strategies of Vista2027

Efforts to achieve Vista2027

Next-Generation Display Materials

OLEDs are thinner and lighter than liquid crystals, offer high-speed response, and provide added value such as foldability. They are being used more often in smartphones, premium TVs and other products. Recently, following OLED, next-generation self-luminous displays incorporating technologies of quantum dot (QD) and LED, which promise higher image quality, have been actively developed. We will aim to commercialize new products by developing proprietary materials, such as materials that enhance light extraction efficiency, release layer materials, and QD-related materials.

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. As we have been working on the development of materials for the process of 3D packaging with thinned semiconductor wafers, we plan to expand sales the materials in the growing market.

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.

SATO Yuji
Managing Executive Officer,
Head of Agricultural Chemicals Division

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 with competitors. However, since the launch of LEIMAY® (fungicide) in 2008, we have returned to introducing products developed in-house, and started sale of STARMITE® (acaricides) in 2009, ALTAIR® (paddy rice herbicide) in 2012, and GRACIA® (general purpose pesticide) in 2018. In addition, we are actively pursuing the acquisition of other companies' agents and have enhanced our agricultural chemical product portfolio by taking over the global product Quintec® (fungicide) in 2019 and Japanese and Korean operations for the versatile DITHANE® (fungicide) in 2020.

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. In addition to our products for dogs and cats, "EXZOLT®"* for chickens, cattle, and sheep is also obtaining a marketing authorization in an increasing number of countries.

*BRAVECTO® and EXZOLT® are registered trademarks of Intervet International B.V. and Intervet Inc.

Progress in FY2022

1 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 May 2019. The product was launched in Indonesia in 2021, in India in 2022, and will be launched progressively in various Asian countries from 2023 onward.

2 ROUNDUP®

ROUND NOZZLE® ULV5, a product that allows for dispersion of ROUNDUP® MAXLOAD in a way that reduces farmer workload, is gaining popularity. We are working to increase sales of ROUNDUP® MAXLOAD by utilizing the boom sprayer nozzle for large-scale farmers released in FY2021. Sales of ROUNDUP® MAXLOAD AL for general consumers are expected to increase due to continued acquisition of new users and expansion of retail distribution.

3 Fluralaner

Veterinary pharmaceuticals for companion animals and livestocks containing Fluralaner as an active ingredient are available in more than 100 countries. In FY2022, sales of animal health products containing Fluralaner as an active pharmaceutical ingredient continued to increase year on year, mainly for companion animals. Along with the low 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.

Vista2027 Business Strategies

Opportunities and Risks

- Labor shortage due to the population decline in Japan
- Growing need for measures to increase food production due to the increase in global population
- Growth of bio-based agrochemicals and materials
- Expansion of market for companion animals

Strengths

- 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

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Main Measures

1. Popularize and expand sales of main products such as GRACIA®, and continue to enhance our respective marketing efforts for large-scale farmers and agricultural corporations, and general consumers
2. Conduct steady development of NC-653 (novel herbicide), NC-656 (novel herbicide) and NC-520 (novel nursery-box insecticide for paddy rice), and create new pipelines
3. Establish a biological research team

Strategies of Vista2027

Efforts to achieve Vista2027

In order to enhance our product portfolio, we will continue to introduce and jointly develop products from other companies, including biological agrochemicals.

In addition, as in-house developed products, following the development of 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) and a nursery-box insecticide for paddy rice (development code NC-520). Moreover, we have established a joint venture (Nissan Bharat Rasayan PVT. LTD.) in India for the purpose of manufacturing the active ingredients in agrochemicals. It started commercial operation in March 2023. 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 establishing a robust active production and supply system that is cost-competitive.

Healthcare

In order to appropriately respond to changes in the business environment and achieve mid- to long-term growth, we are accelerating the selection and concentration of business areas. In addition, we contribute to the resolution of health issues by developing and launching new pharmaceuticals, generic drugs and medical materials based on our unique technologies.

ISHIWATA Norihisa
Executive Officer,
Head of Healthcare Division

Healthcare

In the 1970s, a number of companies from other industries entered the pharmaceutical business. We focused our research and development on lifestyle-related diseases and launched efonidipine hydrochloride, an antihypertensive drug, in 1994. It is distributed in Japan by Zeria Pharmaceutical and Shionogi as LANDEL®*1, and in South Korea by GC Biopharma as FINTE®tab.

In 2003, Kowa Company launched the anti-cholesterol drug pitavastatin calcium hydrate as LIVALO®*2, which is currently sold in over 30 countries around the world. After domestic substance patent have expired in 2013, the decline in market shares due to generic drugs and the impact of drug price revisions have resulted in a continuing difficult situation in Japan. The creation of new drugs is an urgent issue for us.

With the organizational restructuring in April 2022, the drug discovery research function was transferred to the Planning and Development Division, where it is handled by the Healthcare Business Development Department. The Healthcare Division is taking charge from the out-licensing stage, developing the business from a comprehensive perspective of broader healthcare together with medical materials.

Custom Chemicals

We operate a "solution proposal" contract business and a joint development business that provide total support for the development of active pharmaceutical ingredients (APIs) in response to customer needs. We accept contracts for the development of manufacturing processes at each stage from preclinical to commercial production, as well as for the manufacture of APIs and intermediates under GMP-compliant conditions. Accompanying this, we also handle services such as quality design, stability testing, impurity/metabolite sample synthesis, and preparation of application materials for the drug master file.

Recently, we have expanded our business of supplying APIs for generic drugs, and are not only handling highly active APIs that require containment, but also efficiently manufacturing highly active vitamin D3 APIs in addition to prostaglandin derivatives using our proprietary two-component coupling method based on our diverse fine organic synthesis technologies.
In addition, we have developed our proprietary liquid-phase synthesis technology "SYNCSOL®" for innovative contract peptide production.

*1 LANDEL® is a registered trademark of Zeria Pharmaceutical Co., Ltd.
*2 LIVALO® is a registered trademark of Kowa Company, Ltd.

Progress in FY2022

1 Construction of Basic Technologies to Accelerate Oligonucleotide Drug Discovery and Promotion of Joint Drug Discovery with Pharmaceutical Companies

Oligonucleotide therapeutics are attracting attention in their main roles as next-generation pharmaceuticals. In addition to accelerating our research by strengthening our unique technologies in oligonucleotide drug discovery, we have been jointly working with multiple pharmaceutical companies to create development compounds since 2019 and expanding these partnerships.

2 Advancement of Strategic Alliance with Modulus Discovery, Inc. to Accelerate Small Molecule Drug Discovery

With recent advances in supercomputers, it is becoming possible to design small molecule drug candidates for target molecules with high precision. Since 2021, we have engaged in a strategic drug discovery collaboration agreement with Modulus Discovery, Inc., which leverages its basic technologies such as cutting-edge computational technology. In this agreement, Nissan Chemical share the development of drug candidates and jointly out-license them to pharmaceutical companies with Modulus Discovery, Inc.

3 Establishment of an Efficient Peptide Manufacturing Technology

In 2018, we invested in PeptiStar, which is aiming to establish a stable supply system for APIs of constrained peptides. Meanwhile, we have developed a novel liquid phase peptide synthesis technology (SYNCSOL®) that enables dramatic cost reduction. In the future, we intend to develop this technology for not only APIs but also peripheral medical materials.

4 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 API, in FY2020 we started the sale of eldecalcitol, which requires high-quality control because of the susceptibility to decomposition and impurities caused by oxygen, moisture, and heat in the air. In the future, with an eye to expanding into overseas markets in addition to new development, we will establish a stable supply system and nurture it as a source of growth.

Vista2027 Business Strategies

Opportunities and Risks

- Increasing demand for generic drugs
- Expanded efforts in middle molecule drug development
- Aging population and diversification of healthcare
- Intensification of inter-corporate competitions

Strengths

- Fine organic synthesis technology
- GMP compliant high-level containment technology
- Chemistry, Manufacturing, and Controls (CMC) support for APIs
- Cutting-edge evaluation functions

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Main Measures

1. Healthcare: Concentrate investment in the oligonucleotide drug discovery and commercialize and expand sales of medical materials (biointerface control materials, cosmetic materials, etc.)
2. Custom Chemicals: Strengthen highly profitable business models, expand into overseas markets, and aim for joint development (peptides, etc.)

Strategies of Vista2027

Efforts to achieve Vista2027

We will focus on oligonucleotide therapeutics utilizing our proprietary basic technology for oligonucleotide drug discovery and steadily promote joint drug discovery platform with pharmaceutical companies. In the area of small molecule drugs, we will work on the use of AI as a shift from existing drug discovery method. The API of LIVALO® will be developed by taking advantage of economies of scale. As for medical materials, we will promote commercialization and sales expansion of new products, including biointerface control materials and cosmetic materials. In addition to the generic drug maxacalcitol, which was launched in FY2015, eldecalcitol, which was launched in FY2020, has achieved significant growth as a pillar of our business. In the future, we will accelerate the development of new generic drug APIs which leverage our strength, and be fully engaged in business not only in Japan but also in overseas markets. Furthermore, leveraging the overwhelming technological superiority of our proprietary liquid-phase synthesis technology "SYNCSOL®", we will develop the peptide contracted business and the joint-development business. Through these measures, we will further develop Custom Chemicals into a highly profitable business.

It will take time to obtain results for new pharmaceuticals and medical materials. Until then, we will continue to boldly take on the challenge of developing new pharmaceuticals and medical materials while supporting the backbone with our highly profitable Custom Chemicals business.

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. To further accelerate development, the Planning and Development Division was established in FY2020. In FY2022, we established the Healthcare Business Development Department by integrating functions of drug discovery and medical materials, and in FY2023 we newly established the Animal Care Planning Group.

ENDO Hideyuki
Managing Executive Officer, CTO,
Head of Planning and Development Division

Healthcare

We carry out drug discovery, mainly oligonucleotide therapeutics, and development for commercialization of materials for regenerative medicine and raw materials for cosmetics.

In the drug discovery, we are focusing on oligonucleotide therapeutics. In order to contribute to improving patients' quality of life through the creation of innovative new drugs, we are strengthening our platform through collaboration with academia and our partner companies and building our robust R&D portfolio through alliances with pharmaceutical companies.

In the field of regenerative medicine, as well as starting investigator-initiated clinical research using Cellhesion®, a scaffold that enables 3D mass culture of undifferentiated mesenchymal stem cells said to be highly safe, we started paid shipments of Advance-CR, a material for non-frozen transportation and storage of cell clumps (spheroids). In addition, prevelex®, an agent to prevent adhesion of proteins and cells, etc. to containers has contributed significantly to the start of clinical trials at partner companies. We will continue to aim for applications in the containers for test and research, fields of gene medicines and antibody pharmaceuticals.

In the cosmetics field, in addition to the increased use of NFG® (NANOFIBERGEL®) in skin care products provided by cosmetics manufacturers, it gained adoption in hair care products. We are working to further expand its use.

Information & Communication

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

We are promoting market development for materials including μLED-related materials attracting attention as next-generation displays with high brightness and high reliability, wafer-level package-related materials that enable miniaturization and thinness, SUNCONNECT®, an optical interconnect material that support high-speed, large-capacity data communications, and liquid metal-based thermal interface material developed by Arieca Inc.

Environment & Energy

We are committed to product development that contributes to the realization of a sustainable society through Green Transformation (GX).

As for lithium-ion batteries (LIB), we are developing slurry additives with the aim of improving input/output characteristics, extending service life, and reducing process costs, for their early commercialization. We are developing materials for catalyst layers in polymer electrolyte fuel cells and ammonia electrolyte synthesis catalysts for utilizing hydrogen energy, as well as charge transport materials that contribute to improve the efficiency of lightweight flexible solar cells.

With the aim of realizing a recycling-oriented society, we are promoting the development of a gas separation membrane technology expected to reduce costs for CO_2 separation and recovery, and the early commercialization of ECOPROMOTE®, a resin additive, that contributes to cost reduction in the molding process and improving a heat-resisting property of polylactic acid which is rapidly spreading as a biodegradable bioplastic.

Animal Care

We are working on planning and development for commercialization in the field of veterinary pharmaceuticals. We are planning and developing new veterinary drugs using the R&D technology of small molecule drugs cultivated by Nissan Chemical over many years, and formulating strategies for establishing a sales and distribution system for veterinary drugs in Japan.

New Material Planning and Research Management

Through venture capital based investment and other means, 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 and technologies in each field and accelerate commercialization by strategically investing in startup companies.

Also, through the training of researchers and the support of R&D themes, we are working for enhancement of R&D capabilities by creating a mechanism that leads to the evolution of existing technologies and the creation of new technologies.

Progress in FY2022

1 Cellhesion®-MS

As a result of our joint research with Incorporated Medical Institute Saiseikai SOBAJIMA Clinic, we commenced the clinical research on knee osteoarthritis (OA) using adipose-derived mesenchymal stem cells cultured with Cellhesion®-MS. Compared with plane-cultured mesenchymal stem cells in conventional culture vessels, they show improvements in the potency of accumulation in involved and injured sites, the anti-inflammatory effect, and the angiogenesis potency and other aspects. Therefore, it is expected to exert a higher efficacy on the OA treatment.

2 prevelex®

prevelex® series developed by Nissan Chemical are anti-adhesion coatings for biological substances that are applicable from test and research to clinical applications. Heartseed announced that they had successfully dosed the first patient in a phase I/II clinical trial, an investigational cell therapy for heart failure. prevelex® CC1 was used for the production of iPSC-derived cardiomyocyte spheroids for the clinical trial.

3 SUNCONNECT®

SUNCONNECT®, an optical interconnect material with high heat resistance and low optical loss, has been evaluated by customer companies as a material for polymer optical waveguides, and its paid sales have already started. For opto-electronic hybrid technology, which is expected to see further development in the future, we will widely deploy this material, mainly to semiconductor package substrate manufacturers in Japan and overseas.

4 Charge Transport Materials for Solar Cells

Regarding organic photovoltaics (OPV), lightweight and flexible solar cells that practical application preceded, efficiency improvement by adopting next-generation active layers, has become one of the most important issues, and our charge transport materials are being evaluated by customers. Currently, we are utilizing this knowledge to develop materials for perovskite solar cells.

Vista2027 Business Strategies

Strategies of Vista2027

Opportunities and Risks

- Expansion of regenerative medicine market, growth of beauty and health market
- Development of digital society and expansion of ICT market
- Increasing demand for technological development aimed at the realization of a low-carbon society
- Development delays and late arrival of expected new fields

Strengths

- Fusion of fine organic synthesis, functional material design and biological evaluation
- Thin film coating based interface control technology
- Extensive network with external research institutes

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Main Measures

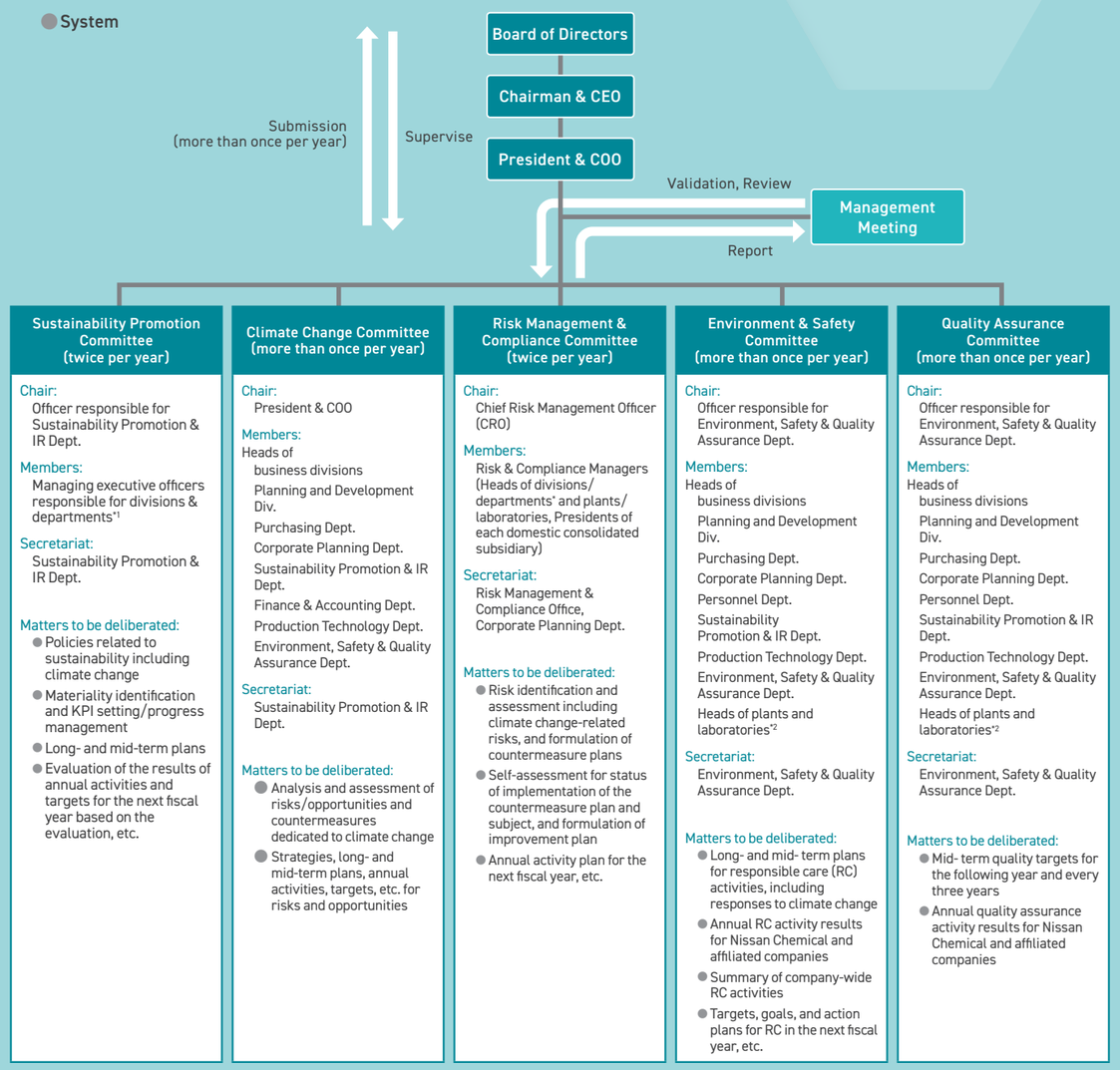
1. Accelerate development by allocating resources to important themes
2. Incorporate new technologies and materials from inside and outside the Company into in-house technology
3. Improve contact with customers and strengthen solution proposals capability

Sustainability Promotion Structure

Amid unpredictable and volatile world, Nissan Chemical Group has made its corporate philosophy of "Contribute to the protection of the global environment and the existence/development of humanity, offering the value sought by society" the basis of its business activities. We have established the Sustainability Promotion Group within the Sustainability Promotion & IR Department to enhance our sustainability activities with the mission "to draw up sustainability strategies in response to social trends, to raise awareness of sustainability internally, and to send relevant information".

We have also established the Sustainability Promotion Committee, the Climate Change Committee, the Risk Management & Compliance Committee, the Environment & Safety Committee, and the Quality Assurance Committee in order to promote sustainability activities. The Board of Directors supervise these initiatives by discussing and resolving the content of deliberation at each committee.

● System



* [Divisions & Departments] Internal Audit Dept., business divisions, Planning and Development Div., Intellectual Property Dept., Purchasing Dept., Corporate Planning Dept., Personnel Dept., Sustainability Promotion & IR Dept., Finance & Accounting Dept., Digital Transformation Dept., Production Technology Dept., Environment, Safety & Quality Assurance Dept.

Information Disclosure in line with TCFD Recommendations

Nissan Chemical announced our support for recommendations of Task Force on Climate-related Financial Disclosures (TCFD) in August 2020. We will strive to increase our corporate value by not only continuing to promote our initiatives to address climate change such as measures for reducing GHG emissions but also improving our information disclosure step-by-step.

TCFD TASK FORCE ON CLIMATE-RELATED FINANCIAL DISCLOSURES

Governance

Our initiatives to address climate change are considered and deliberated by the Sustainability Promotion Committee, the Climate Change Committee, the Risk Management & Compliance Committee, and the Environment & Safety Committee. The Board of Directors then supervise these initiatives by discussing and resolving the content of deliberation at each committee.

As we have identified "mitigation of climate change" as one of our materiality factors, we newly established the Climate Change Committee in June 2022 where issues focused on climate change are specifically discussed and examined.

● Sustainability Promotion Committee (twice per year)

This Committee considers and deliberates on material issues in order to more strategically tackle global social issues, including climate change. The committee is chaired by the officer responsible for the Sustainability Promotion & IR Department (Director, Senior Managing Executive Officer). Policies, targets, and plans, etc. related to sustainability, including climate change, are deliberated, and after approval at the management meeting, the following matters are submitted to the Board of Directors.

Resolving matters at the Board of Directors:
- Policy planning related to sustainability
- Long- and mid-term plans and annual plan for sustainability

● Climate Change Committee (more than once per year)

This Committee was established to accurately grasp the risks and opportunities that the Company faces due to the increasingly serious climate change problem, and connect them more strongly with our management strategies to strengthen our comprehensive climate change measures. The committee is chaired by the president (COO).

Analysis of risks and opportunities related to climate change, as well as policies, targets, plans, etc., are deliberated, and after approval at the management meeting, the following matters are submitted to the Board of Directors.

Resolving matters at the Board of Directors:
- Scenario analysis and countermeasures for identified risks and opportunities
- Long- and mid-term plans and annual plan focused on measures against climate change

◎ Related Information: Sustainability Promotion Structure P67

● Risk Management & Compliance Committee (twice per year)

This committee was established to enhance the effectiveness of risk management, and to maintain and promote compliance. The committee is chaired by the Chief Risk Management Officer (CRO/ Director, Managing Executive Officer) appointed by the Board of Directors.

The Risk & Compliance Managers (heads of divisions/departments and plants/laboratories, presidents of domestic consolidated subsidiaries) who are members of this committee, periodically identify, assess, and formulate countermeasure plans for risks including climate change-related risks, conduct self-assessments for the issues and status of implementation of the risk countermeasure plan, and formulate improvement plan. In addition to this, they regularly provide education and training at each division/department, plant/laboratory and domestic consolidated subsidiary.

The above risk management activities and activity plans for the next fiscal year are deliberated, and their appropriateness is validated and reviewed at least once a year at the management meeting. After approval at the management meeting, the following matters will be submitted to the Board of Directors.

Resolving matters at the Board of Directors:
- Identification of group major risks and their countermeasures
- Mid-term plan and annual plan for risk and compliance

● Environment & Safety Committee (more than once per year)

This committee oversees and promotes responsible care (RC) activities within Nissan Chemical and affiliated companies. The committee is chaired by the officer responsible for the Environment, Safety & Quality Assurance Department (Director, Senior Managing Executive Officer).

At this Committee, while sharing information with the Sustainability Promotion Committee, long- and mid-term plans including the response to climate change, annual activities in each plant/laboratory, summary of company-wide activities, and the targets, goals, and action plans for RC in the next fiscal year, etc. are deliberated.

The contents of deliberations are validated and reviewed at least once a year at the management meeting. After approval at the management meeting, the following matters are submitted to the Board of Directors.

Resolving matters at the Board of Directors:
- Policy planning related to RC
- Long- and mid-term plans and annual plan for RC

Risk Management

In the framework of the Risk Compliance Committee, we clarify risks including climate-change related risk taking into account the business characteristics of each division and the surrounding businesses, including global political, economic and social conditions. For each risk identified, a risk assessment is conducted from the viewpoint of probability and impact on business, and a risk map is subsequently created based on the results of the risk assessment to identify the Group Major Risks. The Group Major Risks are deliberated at the Risk Management & Compliance Committee, approved at the management meeting, and then resolved by the Board of Directors.

Management Process of Group Major Risks

The department in charge and the risk owner are decided for each selected Group Major Risk, the Group Major Risks countermeasure plan is formulated mainly by the Risk & Compliance Manager of the department in charge, and after deliberation at the Risk Management & Compliance Committee, countermeasure plan is resolved at the Board of Directors. Implementation status of countermeasures are deliberated at the Risk Management & Compliance Committee, and the results of the deliberation are reported to the Board of Directors.

Regarding typhoon and torrential rain, which are one of the Group Major Risks, we set the KPI of "Update and maintain BCPs (business continuity plans) for products that account for 50% of ordinary income by FY2027" at each plant as a response to the risk of increasing equipment restoration costs and reducing production at major plants. As of the end of FY2022, we completed updating and maintaining our BCPs for products that account for 41% of ordinary income.

Identification of risks and assessment of the impact on the business and the probability are conducted on a regular basis to periodically review the Group Major Risks.

Please see the following web page for process for identifying Group Major Risks, risk map, Group Major risks, and countermeasures against risks.
https://www.nissanchem.co.jp/eng/csr_info/risk_management/policy.html

Strategy

The TCFD recommendations require a scenario analysis* to understand how the risks and opportunities caused by climate change impact a company's finances.

In 2020, reffering both 2° C scenarios in which transition to decarbonized society realizes (mainly transition risk and opportunity) and 4° C scenarios in which climate change progresses (mainly physical risk and opportunity), we identified business risk and opportunity, examined their importance, and summarized impact on the Company and our strategies. However, in response to the agreement that was reached to pursue efforts to limit the increase in average temperature to 1.5° C at the Conference of the Parties to the United Nations Framework Convention on Climate Change (COP26) held in 2021, we revised our scenario analysis in July 2023.

*Scenario analysis is a method for anticipating the effects of global warming and climate change and changes in the business environment caused by long-term policy trends related to climate change, and for examining the impact that such changes may have on the company's business and management.

Referenced Scenarios

1.5°C Scenario*1	● IEA-WEO*3, ETP*4, Net Zero Scenario (NZE) ● IPCC SSP*5 1-1.9、1-2.6
4°C Scenario*2	● IEA-WEO Stated Policies Scenario (STEPS) ● IPCC SSP5-8.5

*1 Scenarios when necessary measures will be implemented to keep global average temperature rise below 1.5°C compared to pre-industrial levels
*2 Scenarios in which the global average temperature will rise by 4°C at the end of the 21st century compared to pre-industrial levels
*3 International Energy Agency "World Energy Outlook" (2022)
*4 International Energy Agency "Energy Technology Perspectives" (2023)
*5 The UN Intergovernmental Panel on Climate Change (IPCC) "Shared Socio-economic Pathways"

Scope of analysis: Chemicals, Performance Materials, Agricultural Chemicals, Healthcare, Planning and Development Divisions

Analysis period: 2030 and 2050

Process of Risks and Opportunities Identification

Step1 ● Clarify the value chain and stakeholders, and sort out the factors that affect our business

Step2 ● Identify risks and opportunities based on the above scenarios and other external data

Step3 ● Identify particularly important risks and opportunities from those of Step2, considering the probability and the impact on our business (human loss, financial impact, etc.)

Scenario Analysis Results (climate change risks/opportunities)

As a result of scenario analysis and quantifying the financial impact using the 1.5° C scenario, we identified important risks, such as increased operating costs with the introduction of carbon pricing and decreased sales from an inability to provide low-carbon products. In response to the introduction of carbon pricing and decrease in demand for products with high life-cycle carbon emissions, we will work to reduce the risks by not only further promoting the use of renewable energy and conversion of fuel and feedstock at our plants, something which we have been working on thus far, but also by further promoting decarbonization investments that take into account reducing GHG emissions through the use of internal carbon pricing.

And in response to market changes due to increasing demand for environmental considerations, we assume that demand for environmentally friendly biological agrochemicals and low-carbon products, such as materials for secondary battery, will increase. In terms of biological agrochemicals, we established the Biological Group within Agricultural Chemicals Research & Development Department, Biological Research Laboratories in April 2022 and conduct R&D toward commercialization. Additionally, in the Environment & Energy field, we aim to commercialize the secondary battery materials, the energy harvesting materials, and CCS/CCUS materials, by accelerating the development of them.

Meanwhile, regarding the risk of flood damage, which we recognize as a risk in the 4°C scenario, we have identified the possibility of flooding at our major production and distribution bases as a material risk. To address this risk, we will continue to formulate and revise the BCPs for our plants and major products from time to time, raise the floors and foundations of our plant equipment, secure product inventory, and purchase multiple sourcing of key raw materials.

And in response to market changes owing to rising temperatures and abnormal weather, we assume that demand for agricultural chemicals and disinfectants for drinking water will increase due to the increase in pests and weeds, as well as water shortages and spread of infectious diseases. Based on the prospect of market growth, we aim to expand our opportunities. Furthermore, by building a business portfolio that is less susceptible to the effects of climate change, we will increase the resilience of our business activities and strive to minimize risks and maximize opportunities.

Risks/Opportunities and Countermeasures identified in the 1.5°C Scenario

All: All businesses and Planning and Development Division
Agri: Agricultural Chemicals Business
Chem: Chemicals Business

Scenario	Factors		Impact on Business	Relevant Business	Measures
1.5°C Scenario	● Regulations on GHG emissions	Risk	● Increase in raw material procurement costs due to introduction of carbon pricing such as carbon taxes, and compliance with regulations and decarbonization investment, by suppliers	All	● Pass on the price to the product ● Multiple sourcing of key raw materials
			● Increase in operating costs due to introduction of carbon pricing such as carbon taxes, and compliance with regulations and decarbonization investments		● Fuel and feedstock conversion at plants ● Update to energy-saving equipment, etc. ● Further use of renewable energy ● Zero N_2O emissions from nitric acid production capacity (planned investment: 500 million yen) ● Optimization of manufacturing processes ● Promotion of decarbonization investment with the introduction of internal carbon pricing
		Opportunity	● Avoidance of carbon pricing impact by reducing GHG emissions		
	● Changes in energy policy ● Changes in energy demand and supply	Risk	● Increase in our raw material procurement costs due to renewable energy procurement at suppliers	All	● Pass on the price to the product ● Multiple sourcing of key raw materials
			● Increase in operating costs due to in-house renewable energy procurement		● Update to energy-saving equipment, etc. ● Optimization of manufacturing processes
			● Increase in logistics costs		● Optimization of logistics routes, systems, etc.
		Opportunity	● Reduction of operating costs from high energy efficiency and energy saving ● Acquisition of funding opportunities (grants and subsidies, etc.)		● Update to energy-saving equipment, etc. ● Optimization of manufacturing processes ● Advanced GHG emission reduction efforts and appropriate information disclosure
	● Market changes due to increasing demand for environmental consideration	Risk	● Decrease in sales of agricultural chemicals business due to introduction of regulations on the use of agrochemicals	Agri	● Development of environmentally friendly agrochemicals ● Development of biological agrochemicals ● Acquisition of biostimulant technology ● Increase in the number of registered countries
			● Decrease in sales due to inability to provide low-carbon products ● Decrease in demand from customers due to retention of products and businesses with large GHG emissions	All	● Expand sales of low-carbon products ● Development of environmentally friendly products and services ● Establishment of innovative manufacturing technologies ● Review of business portfolio ● Promotion of decarbonization investment with the introduction of internal carbon pricing ● Further use of renewable energy ● Fuel and feedstock conversion at plants
		Opportunity	● Increase in demand and sales of parts and materials for low-carbon products		
			● Increase in demand for biological agrochemicals, etc.	Agri	● Development of environmentally friendly agrochemicals ● Development of biological agrochemicals ● Acquisition of biostimulant technology
	● Increased demand from investors and others for addressing climate change	Risk	● Damages of ESG evaluation and reputation, decrease in market capitalization, and difficulty in raising funds due to delay in measures to address climate change, such as heavy use of fossil fuels	All	● Efforts to further reduce GHG emissions and appropriate information disclosure
		Opportunity	● Improvement of ESG evaluation and reputation, and increase in market capitalization through advanced initiatives and information disclosure		

Risks/Opportunities and Countermeasures identified in the 4°C Scenario

4°C Scenario	Avoidance of carbon pricing impact by reducing GHG emissions	Risk	Increase in risk of impacts on plant operations, equipment, inventory, and supply chains due to flooding caused by heavy rains, floods, and sea level rises, etc.	All	Formulation of BCP for major products at each plant Implementation of higher foundations and floors according to risk
			Reduction of production capacity (such as insufficient cooling capacity, etc.) and increase in product and material management costs, due to water shortages caused by droughts and heat waves		Formulation of BCP for major products at each plant Optimization of existing cooling systems Water conservation and introduction of water recycling equipment Introduction of energy-saving air conditioning and cooling equipment
	Increase in raw our material procurement costs due to renewable energy procurement at suppliers	Risk	Reduction of planted area due to increase in frequency and enhanced intensity of heavy rain / flooding, and to difficulties in securing irrigation water Changes in crop distribution and reduction of planted area due to temperature rises	Agri	Increase in the number of registered countries Enhancement of the agrochemical portfolio
		Opportunity	Increase in sales of existing agrochemicals and increase in opportunities to develop new agrochemicals due to the increase in pests, weeds, and pathogenic bacteria and higher resistance		Development of new agrochemicals Enhancement of the agrochemical portfolio Increase in the number of registered countries
			Increase in sales of disinfectants due to less available water (freshwater) resources and higher global demand for drinking water, etc.	Chem	Expansion of sales of disinfectants for drinking water

Financial impact

Scenario		Impact on Business	Calculation Method	Financial Impact (☆2027)
1.5°C Scenario	Risk	Increase in operating costs due to introduction of carbon pricing such as carbon taxes, and compliance with regulations and decarbonization investments	Calculation of the increase in operating costs in 2030 due to the introduction of carbon pricing from estimated emissions and carbon price * Assuming the cases in which emissions reductions do not progress as compared to the base year (FY2018) results * Carbon price (2030): $140/t-CO$_2$ (Ref: IEA WEO2022 NZE)	5.9 billion yen/year
		Increase in operating costs due to in-house renewable energy procurement	Calculation of the increase in operating costs for procuring renewable energy in 2030, where all electricity used is switched to renewable energy, based on the sales plan for 2027 * Estimated renewable energy power procurement unit prices taken from non-fossil certificate prices, etc.	0.46 billion yen/year
		Decrease in sales of agricultural chemicals business due to introduction of regulations on the use of agrochemicals	Calculation of the sales decrease in 2030 due to regulations of Agrochemicals such as Farm to Fork and Green Food System Strategy	5.1 billion yen/year
		Decrease in sales due to inability to provide low-carbon products	Calculation of the sales decrease in 2030 where decarbonization in the company's chemical manufacturing process does not progress, and sales volume of existing products with high product life cycle emissions (product carbon footprint) decreases * FY2021 actual figures used for sales of existing products * Forecasted decrease in sales volume of existing products is estimated by referring to IEA Net Zero by 2050, etc.	4.2 billion yen/year
	Opportunity	Avoidance of carbon pricing impact by reducing GHG emissions	Calculation of the avoided increase in operating costs in 2030 due to the introduction of carbon pricing when the FY2027 GHG emissions reduction target (reducing by at least 30% from FY2018 level) is achieved * Carbon price (2030): $140/t-CO$_2$ (Ref: IEA WEO2022 NZE)	1.8 billion yen/year
		Increase in demand and sales of parts and materials for low-carbon products	For low-carbon products that demand is expected to increase, calculation of sales increase from FY2021 based on formulated sales plan for FY2027	☆1.2 billion yen/year
4°C Scenario	Risk	Increase in risk of impacts on plant operations, equipment, inventory, and supply chains due to flooding caused by heavy rains, floods, and sea level rises, etc.	Calculation of decreased sales and damage to equipment and inventory during the period when production sites, which have a particularly large impact, have ceased operations as the financial impact in the event that a site is flooded, based on 2030 and 2050 assumptions * Aqueduct floods used to analyze flood depth * Damage rate due to flooding is set with reference to Manual for Economic Evaluation of Flood Control Investment (Draft), etc. published by the Ministry of Land, Infrastructure, Transport and Tourism. * The amount of financial impact is calculated as the maximum risk where floods occur at a site with a large impact and no countermeasures taken, based on FY2021 site sales, equipment and inventory levels, etc.	2030: 7.6 billion yen 2050: 12.8 billion yen

Metrics and Targets

We have identified mitigation of climate change as one of our materiality factors, and believes that reducing emissions at the Company, which accounts for approximately 95% of Group-wide GHG (Scope 1 and 2) emissions, is crucial for mitigating its climate change-related risks. For this reason, we set long-term target of "achieving carbon neutrality by 2050" and mid-term target of "reducing GHG emissions by at least 30% from FY2018 level by FY2027", as target of reducing Nissan Chemical Corporation's GHG emissions (Scope1 + 2). These targets have positioned as non-financial targets in our long-term business plan Atelier2050, and mid-term business plan Vista2027, and the progress is managed. In addition, the degree of progress for these reduction targets is also reflected in the ESG-linked portion of executive officers' performance-related remuneration.

We are steadily reducing GHG emissions by converting fuel and feedstock to natural gas at the Toyama Plant, reducing the amount of dinitrogen monoxide (N_2O) emissions generated from the reactor through optimizing production capacity of nitric acid in FY2017, as well as energy saving by replacing aging facilities and improving the equipment capacities. In FY2021, GHG emissions increased from FY2020 due to increased production of ammonia-based products. Although, in FY2022, despite increased GHG emissions due to nitric acid plant trouble, etc., GHG emissions decreased from FY2021 as a result of melamine production shutdown, and boiler fuel conversion at the Onoda Plant.

The Company's GHG emissions and energy consumption have been subject to third-party verification since FY2018. Going forward, we will continue to consider reducing GHG emissions and strive to reduce our environmental impact as well as disclose highly reliable information.

Long- and Mid-term Targets

Category	Metrics		Scope	FY2027 Target	2050 Target
Reduction of GHG emissions	GHG emissions (Scope1+2)	Absolute emissions	Non-consolidated	Reducing by at least 30% from FY2018 level	Carbon Neutrality

Climate change-related data

	Scope	Unit	2018	2019	2020	2021	2022	FY2027 Target
Scope1	Non-consolidated	t-CO_2e	245,469	221,264	216,276	231,713	223,388	—
Scope2	Non-consolidated	t-CO_2e	117,926	105,390	102,182	113,623	104,275	—
Scope1+2	Non-consolidated	t-CO_2e	363,395	326,654	318,458	345,336	327,663	254,377
GHG emission rate per unit to sales*1 (Scope1+2)	Non-consolidated	t-CO_2e/ million yen	2.33	2.04	1.96	2.03	1.79	—
Scope3*2	Non-consolidated	t-CO_2e	703,562	767,799	763,007	803,461	885,046	—
Energy consumption rate*3	Non-consolidated	*4	82.8	79.4	76.2	81.5	63.3	—
Scope1	Consolidated*5	t-CO_2e	253,785	228,791	220,243	238,958	230,424	—
Scope2	Consolidated*5	t-CO_2e	128,647	116,724	116,516	124,663	115,893	—
Scope1+2*6	Consolidated*5	t-CO_2e	382,432	345,514	336,759	363,621	346,316	—
Non-consolidated / consolidated (Scope1+2)		%	95.0	94.5	94.6	95.0	94.6	—

*1 Amount of emissions (t-CO2e)/non-consolidated sales (million yen)
*2 Data of each category: https://www.nissanchem.co.jp/eng/csr_info/index/esg_data.html
*3 Energy consumption/non-consolidated sales
*4 FY2013 as a base of 100
*5 Nissan Chemical Corporation and consolidated subsidiaries with manufacturing facilities. (Nihon Hiryo Co., Ltd., Nissan Chemical America Corporation, NCK Co., Ltd.)
*6 Due to rounding, some figures for total of Scope 1+2 in the upper rows do not match.

Mitigation of Climate Change

Web https://www.nissanchem.co.jp/eng/csr_info/responsible_care/environment/reduction.html

Responsible Care

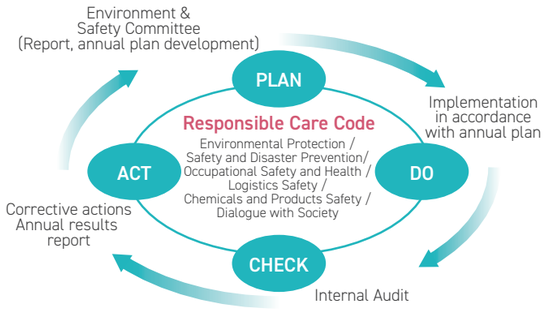
As a company that handles chemical substances, Nissan Chemical Group has a great responsibility to society. In order to fulfill this responsibility, we engage in Responsible Care (RC) activities. RC activities aim to voluntarily ensure environment, health and safety throughout the entire process from development of chemicals to manufacturing, distribution, use, final consumption, disposal and recycling. These activities also serve as a form of communication with society through the announcement of their results.

Responsible Care Management

System

We have been engaged in RC activities since 1992. To achieve our RC mid-term plan (2022-2027), established in FY2022, we manage targets and make continuous improvements through PDCA (Plan, Do, Check, Act) in our RC management system based on ISO14001* throughout the Company. In addition, we have established the Environment & Safety Committee, which is chaired by the officer responsible for the Environment, Safety & Quality Assurance Department, as the organization in charge of promoting RC activities, and hold its annual meeting. The contents of the discussion, including targets for the next fiscal year, are reported to the management meeting. After approved at the management meeting, the contents are resolved at the Board of Directors.

* 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 environment, health and safety (EHS) at each site. 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 FY2022, total of 27 RC audits were conducted for our plants, research laboratories and affiliates.

Responsible Care Management
Web https://www.nissanchem.co.jp/eng/csr_info/responsible_care/management.html

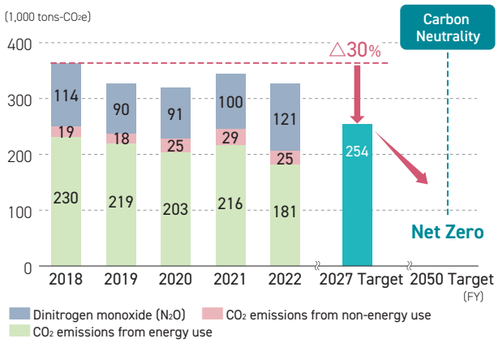
Mitigation of Climate Change and Environmental Conservation

Efforts for Reducing Greenhouse Gas (GHG) Emissions

Nissan Chemical actively works to protect the environment, including taking efforts to reduce greenhouse gas (GHG) emissions, and have been promoting initiatives to mitigate climate change which include energy savings, fuel conversion, and dinitrogen monoxide emissions reduction. With regard to reducing our GHG emissions (Scope 1 and 2), we have set a FY2027 target of "reducing GHG emissions by at least 30% from FY2018 level" aiming for achievement of carbon neutrality in 2050.

In FY2022, although GHG emissions increased due to nitric acid plant trouble, etc., GHG emissions decreased from FY2021 as a result of melamine production shutdown and boiler fuel conversion at the Onoda Plant.

Changes in GHG emissions

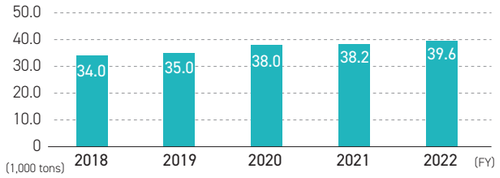


Efforts to Reduce Industrial Waste

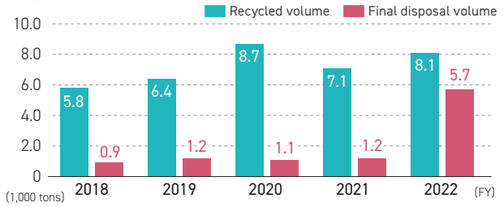
Through our RC activities, we further promote the 3Rs (Reduce, Reuse, Recycle) and strive to reduce industrial waste emissions, while at the same time thoroughly implementing control measures to ensure the proper disposal of waste. In FY2022, the volume of industrial waste generated and the recycled volume increased slightly compared to FY2021, and the final disposal volume increased significantly. This is because the waste soil generated from construction work at plants was disposed as industrial waste.

In line with the enforcement of the Act on Promotion of Resource Circulation for Plastics (enforcement date: April 1, 2022), we have started counting the amount and recycling rate of plastic waste since FY2021. In FY2022, the amount of plastic waste increased slightly compared to FY2021. However, we achieved the FY2027 recycling rate target of "50%" by promoting recycling efforts at plants and refining the data at research laboratories. Going forward, we will continue to promote initiatives such as recycling.

Volume of industrial waste generated*



Recycled volume/Final disposal volume*



* Waste soil from plants was added to calculations from FY2021

	Amount of plastic waste	Recycling rate of plastic waste
FY2021	795t	44%
FY2022	830t	55%

Biodiversity Conservation

Our corporate philosophy is "Contribute to the protection of the global environment and the existence/development of humanity, offering the value sought by society". We at the Nissan Chemical Group engage in business activities that take into account biodiversity and help protect the global environment. We have set the "establish and operate Bio-Park at Nissan Chemical's plants" as a target for FY2027, and are promoting biodiversity initiatives. In FY2022, a new Bio-Garden was completed at the Saitama Plant. It is a garden that provides a habitat for living things in a form similar to the nature of a satoyama (woodland close to the living area).

We also established the "Nissan Bio-Park Nishi-Hongo" in 2008 with the theme of returning to the lost nature, and the purpose of "creating spaces with biodiversity, mainly waterfront and community-based forests that are suitable to inhabit for plants and animals, to provide places where employees of the plant and local residents can relax". Since then, this Bio-Park has been operated by Toyama Plant and in April 2023, the "Tulip Viewing Mini Concert" was held at the Park to commemorate the 15th anniversary of its opening. Approximately 100 people, including not only our employees but also local residents, retired employees of the Nissan Chemical Toyama Plant, and their families, who cooperate with maintenance and management of the park on a daily basis, visited the venue. Local brass bands also performed and the concert was great success.

Saitama Plant Bio-Garden*
* A coined word combining biotope and garden.

Tulip Viewing Mini Concert at Nissan Bio-Park Nishi-Hongo

Web
Mitigation of Climate Change
https://www.nissanchem.co.jp/eng/csr_info/responsible_care/environment/reduction.html
Reduction of Industrial Waste and Pollutant Emissions
https://www.nissanchem.co.jp/eng/csr_info/responsible_care/environment/management.html
Water Resources Conservation
https://www.nissanchem.co.jp/eng/csr_info/responsible_care/environment/effective.html
Biodiversity Conservation
https://www.nissanchem.co.jp/eng/csr_info/responsible_care/conservation.html

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, there were no explosions or other accidents in FY2022, but a small fire broke out at the Toyama Plant. The accident occurred due to the leakage of the heating medium used in manufacturing because of a failure to close the valve. The temperature of the heating medium exceeded its ignition point because of added heat generated by the oxidation of it, resulting in a small fire. Employees immediately put out the fire, and there was no human and property damage, and no environmental and neighborhood impact. We are taking thorough measures to prevent such a small fire from happening again, and deploying measures to all plants and laboratories. Our plants, laboratories, and affiliates carry out various drills and training sessions such as earthquake fire prevention drill every year, and are designed to make us ready to respond to emergencies or accidents in a speedy and reliable manner.

Disaster drills (Toyama Plant)

Promotion of Occupational Safety and Health

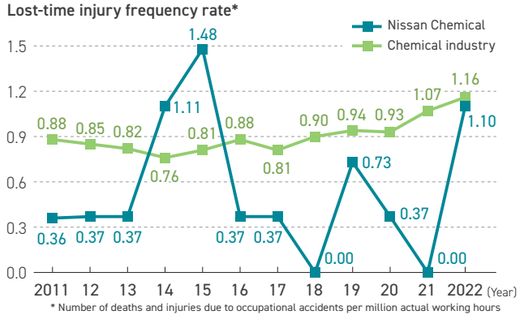
Through our RC management system, we prevent occupational accidents, promote the good health of staff, and build a comfortable workplace environment in our efforts to improve the level of safety and health at each business site. In addition, we carry out various drills and training sessions annually 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 2022, there were 3 accidents requiring staff time off from work, and 4 accidents not requiring staff time off from work were occurred. We will continue aiming to achieve zero accident by promoting risk assessment, prior-work risk predictions, risk predictions training, HHK[*1], 5S[*2], 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 Kigakari (alarming). It means the discovery of nearmiss 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

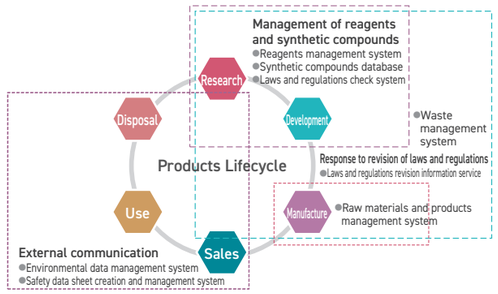
Web
Promotion of Safety and Disaster Prevention, and Occupational Safety and Health
https://www.nissanchem.co.jp/eng/csr_info/responsible_care/safety.html
Management of Chemical Substances
https://www.nissanchem.co.jp/eng/csr_info/responsible_care/chemical.html

Management of Chemical Substances and Products Safety

Risk Assessment in Products Lifecycle

We conduct a risk assessment (prior assessment) at each step in handling chemical products, such as R&D, manufacture, sales and revision. The risk assessment is performed based on legal and regulatory information, safety data evaluated by internal or external laboratories or obtained from SDS (Safety Data Sheet) for raw materials and literature, and data on physicochemical properties and work environment conditions. Based on the results of risk assessment, we take appropriate measures; i.e., legal and regulatory compliance, improving facilities to reduce worker exposure at manufacturing sites, improvement of operation procedures, clarification and documentation of the procedures, and the training, etc. Moreover, these results are reported to all the relevant people in the Company.

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.



Improvement of Products Quality

Our Quality Policy is "Providing products and services that satisfy customers", and based on this policy, we set mid-term quality targets and work on quality activities.

[Quality Targets]
- "Elimination of Quality Risks" with thorough governance
- "Logistics and Supplier Management" to maximize quality performance
- "Visualization of Quality Management and Quality Activities" that leads to enhancement of corporate value

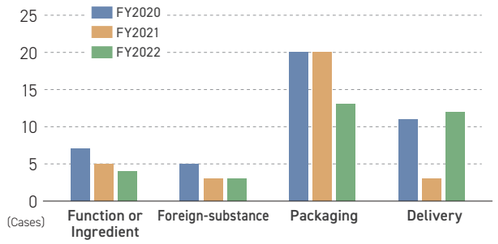
System

The quality assurance office at each plant, which is independent from the manufacturing divisions, inspect the quality of each product. In addition, the quality assurance division at the head office, which oversees the company-wide quality assurance activities, conducts quality audits at each plant and affiliated company. To promote quality assurance activities on a company-wide basis, the Quality Assurance Committee meets regularly to report the results of quality activities, the results of quality audits and the status of improvements, and complaints and status of corrective actions. The committee discusses the next year's action policy of quality assurance, etc. The reports and contents of the discussions are reported to the Board of Directors, and quality management systems are in place under management review.

Indicators

Since the number of complaints increased in FY2020, we conducted improvement activities with narrowed down priorities, resulting in a slight decrease in the number of complaints since FY2021. The percentage of complaints attributable to contract logistics suppliers, such as packaging and delivery, remains high.The number of serious complaints was in a declining trend with 3 cases in FY2020, 2 cases in FY2021, and 1 case in FY2022. We aim to achieve zero cases in FY2023.

The number of complaint cases



* Complaints with identical details are counted as one case

Activities

Internal Network of Product-quality Intelligence

We have established an internal network to promptly collect and evaluate customer feedback (complaint information) regarding our products and to take necessary corrective action. Customer feedback is promptly communicated to each division to enable response to customers and quality improvements.

Since April 2023, we have operated the new company-wide electronic quality-information system that centrally manages raw materials abnormalities, all internal quality problems and corrective & preventive actions, supplier information and quality-related documents, as well as complaint-related information.

Prevention of Quality Fraud and Data Tampering

In FY2020, we established and began implementing the guidelines aimed to prevent fraud and tampering regarding quality control. In FY2022, we confirmed the conformity of the contents of notifications from authorities such as authorization documents, customer requests, and manufacturing records. No fraud and inconsistency were found as a result.

Fostering Quality Culture

In 2021, we established the Quality Behavior Model aiming to enhance the quality of our employees' behavior, and disseminated it as our top message.

In FY2022, we conducted in-house training on "Non-conformity on Quality" for whole company, and a training on "Change control" with the aim of reducing quality risks due to change for our all business departments and plants. We will continue to develop company-wide in-house training on quality compliance.

Logistics and Supplier Management

We aim for total quality assurance, considering not only the quality of the manufactured products themselves, but also the packaging materials, transportation, attached documents, and demonstration of function at the customers, as part of our products.

Since a high percentage of our abnormal quality attributable to packaging and transportation work process, we share our improvement targets with contract logistics suppliers and strive for improvement. In addition, we have established internal guidelines for suppliers including contract manufacturers, and conduct evaluations through quality audits to maintain appropriate management.

Improvement of Products Quality
Web https://www.nissanchem.co.jp/eng/csr_info/communication/customer.html

Compliance

Since our Group regards compliance with laws and social norms as a condition for the survival and development of the company, our course of action stipulates that we need to conduct "sensible business activities" and conduct ourselves as "good corporate citizens and decent members of society". In response, we have recognized that compliance means complying with laws and social norms and established a compliance basic policy, in addition, we have been promoting compliance activities such as training sessions on corporate ethics for all employees.

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, and is composed of the Risk & Compliance Managers of each division/department, plant/laboratory, and domestic consolidated subsidiary appointed by the CRO. The important matters and countermeasure plans, etc. related to compliance are approved at the Board of Directors after discussion at 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 measures related to compliance, etc. 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 a system to prevent compliance violation or resolve the problem early on, including the Consultation Hotline as an internal reporting system based on the Whistleblower Protection Act.

Number of compliance violations

Indicator	Scope	Unit	2019	2020	2021	2022
Consultation Hotline Reports	Consolidated*	Cases	2	2	1	8
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

Activities

Top Message Transmission

Every year, top message is transmitted to all employees in order to clearly convey the Group's stance for compliance.

Compliance Status Reporting

Twice a year, the entire Group, including each division/department, plant/laboratory, and affiliate, checks the status of compliance, and in case of a risk of compliance violation or potential compliance violation, the Risk Management & Compliance Office receives reports including the response status. The content is reported to management and shared within the Group through the Risk Management & Compliance Committee to help prevent recurrence.

Consultation Hotline

We have set up a Consultation Hotline as an internal reporting helpdesk to prevent compliance violations or resolve problems early on. When an employee discovers a compliance violation or potential compliance violation, the employee shall address the problem in normal operation in principle, through measures that include reporting the matter to their superior. However, if the employee thinks it would be 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 from e-mail, mail, or telephone. Upon receipt of a report, the contents are reported to the Audit & Supervisory Board members. The Board of Directors periodically receives reports from the Risk Management & Compliance Office on the status of the operation of the internal reporting system and supervises it. 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, 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 antitrust laws, 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.

◎ Refer to the list on P79 for information on training in FY2022

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. It is regularly reviewed depending on the situation, such as the enforcement and revision of laws and regulations. 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.

Compliance Manual Rules

As a corporate citizen
- Comply with the laws/regulations of the industry
- Restrict contributions and political donations
- Terminate any relationships with antisocial forces
- Comply with antitrust laws
- Conduct fair transactions with suppliers and comply with the "Act against Delay in Payment of Subcontract Proceeds, Etc. to Subcontractors"
- Prevent unfair competition
- Comply with laws and regulations related to security trade control
- Comply with laws and regulations related to import/export
- Prohibit excessive entertainment and gifts
- Prohibit bribery of foreign officials, etc.
- Implement appropriate marketing and advertising
- Implement appropriate tax payment based on the tax systems in each country and international tax standards

As a manufacturer
- Ensure the safety of products
- Protect the environment
- Implement safety and disaster prevention measures

As a public corporation
- Disclose management information
- Conduct appropriate accounting processing

As a member of the workplace
- Comply with work regulations
- Respect human rights; prohibit discrimination
- Prohibit sexual harassment
- Protect privacy
- Ensure the health and safety of the workplace
- Prohibit political and religious activities

As a stakeholder of the Company
- Prohibit conflict of interest
- Use corporate assets appropriately
- Prohibit insider trading

As a person who handles work-related information
- Manage confidential corporate information appropriately
- Use information systems appropriately
- Manage personal information appropriately
- Protect intellectual property rights

Anti-corruption Initiatives

Our Group strives to ensure the transparency of transactions. In our compliance manuals, we have specified matters to be observed: Comply with antitrust laws, Conduct fair transactions with suppliers and comply with the "Act against Delay in Payment of Subcontract Proceeds, Etc. to Subcontractors", Prevent unfair competition, Prohibit excessive entertainment and gifts, and Prohibit bribery of foreign officials, etc. With regard to anti-corruption advocated by the 10 principles of the United Nations Global Compact (UNGC), in April 2018, we joined the UNGC, and in 2019, we formulated anti-corruption policies covering our company, affiliated companies and their subsidiaries in April 2018. Furthermore, we have established a system to prevent compliance violation or resolve the problem early on, including the Consultation Hotline as an internal reporting system based on the Whistleblower Protection Act.

Nissan Chemical Group Anti-Corruption Policy

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

The Nissan Chemical Group has zero tolerance for corruption of any kind.

It shall not engage in any form of corruption relating to public officials, governmental agencies and any other clients ("Business Partners").

It shall also continuously ask the Business Partners not to engage in any corruption.

3. Compliance with respect to Anti-Corruption

The Nissan Chemical Group shall comply with and require the Business Partners to comply with domestic and international laws and regulations concerning the prohibition of bribery and corruption, such as the Unfair Competition Prevention Act, the U.S. Foreign Corrupt Practices Act and the Anti-Unfair Competition Law of the People's Republic of China (commercial bribery rules). It shall also keep and maintain accurate financial records relating to business transactions involving itself.

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.

Web

Compliance
https://www.nissanchem.co.jp/eng/profile/compliance.html

Promotion of Fair-Trading
https://www.nissanchem.co.jp/eng/csr_info/communication/employee/acp.html

Measures for promoting compliance (FY2022)

General Compliance	Director and management level compliance training, newly-appointed managers 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, and contract-related training

Risk Management

We are promoting risk management under the supervision of the Chief Risk Management Officer (CRO) with the aim of contributing to the achievement of our management strategic goals through 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 at the Board of Directors, and is composed of the Risk & Compliance Managers of each division/department, plant/laboratory, and domestic consolidated subsidiary appointed by the CRO.

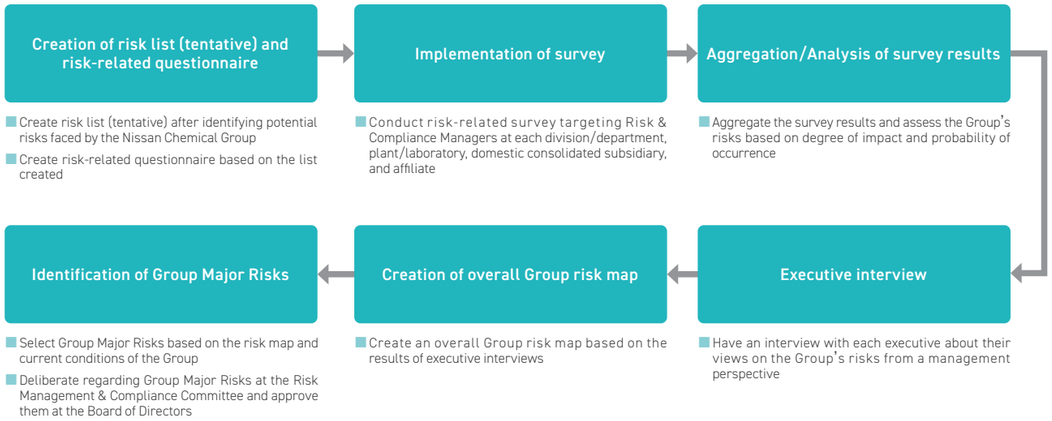
The Risk & Compliance Managers periodically conduct risk identification and assessment, formulate countermeasure plans, conduct self-assessment for status of implementation of the countermeasure plan and subject, formulate improvement plan, and regularly perform education and training at each division/department, plant/laboratory and domestic consolidated subsidiary.

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

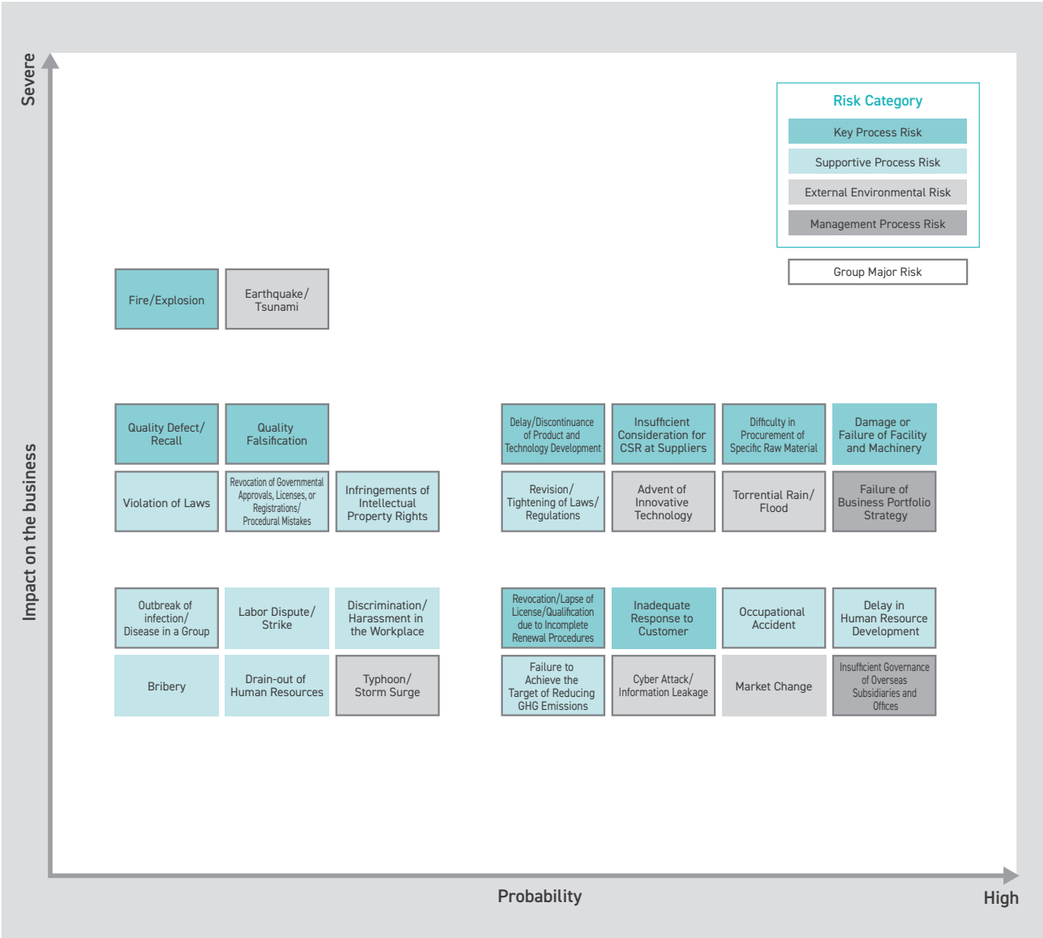
Overall Risk Assessment Process

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 at the Risk Management & Compliance committee and approved at the Board of Directors.

Overall Risk Assessment Process



Risk Map



Group Major Risks and Countermeasures

Group Major Risk	Summary of Risk	Countermeasures against Risk
Delay/Discontinuance of Product and Technology Development Advent of Innovative Technology	Risk of the failure of payback of invested capital to R&D Risk of losing competitive power of our products	Expanding/reviewing existing businesses and products evaluating periodically the degree of achievements of strategies established in the mid-term business plan for new businesses and products, and making correction
Failure of Business Portfolio Strategy	Risk of decline in business performance due to the failure of the business portfolio strategy	
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	Taking countermeasures to stabilize procurements based on the nature of the businesses
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	Establishing and operating a safety and disaster prevention management system
Quality Defect/Recall Quality Falsification	Risk of reimbursement for large expenses by customers and discontinuance of transactions when a product liability-related accident or examination data fraudulent occurs involving a product containing materials provided by our company	Preventing troubles/misconducts about quality through thorough governance
Infringements 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	Making continuous improvements of "IP verification process" to reduce the risk of infringing on other companies' patents, and promoting education with and prevailing the process
Occupational Accident	Risk of being subjected to a damage claim due to serious accidental deaths and injuries involving employees	Establishing and promoting an occupational safety management system
Violation of Laws Revision/Tightening of Laws/ Regulations Revocation of Governmental Approvals, Licenses, or Registrations/ Procedural Mistakes Revocation/Lapse of License/ Qualification due to Incomplete Renewal Procedures	Risk of administrative disposition or sanction, such as suspension of business or payment of surcharges, due to violation of laws or regulations, and, along with this, risk of unwilling discontinuance of sales of product, or unwilling change in business or capital investment plan	Optimizing the operation of managements of legal regulations and enhancing education to improve all employees' mind and knowledge
Torrential Rain/Flood Earthquake/Tsunami Typhoon/Storm Surge	Risk of damage of facilities, death or injury of many employees, and suspension of business activities due to a massive earthquake or a large typhoon	Reviewing and strengthening countermeasures to enable early recovery/business continuity
Cyber Attack/Information Leakage	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	Considering and promoting countermeasures from the prospective of "prevention", "damage minimization" and "education"
Insufficient Governance of Overseas Subsidiaries and Offices	Risk of losing credibility due to detection of fraud at overseas subsidiary and office caused by inadequate control	Establishing rules and systems to strengthen governance of the corporate group
Insufficient Consideration for CSR at Suppliers	Risk of deterioration of reputation and decline in business performance due to environmental destruction and violations of social ethics by suppliers where we procure raw materials	Making CSR evaluations of and feedbacks to suppliers and supporting their improvements
Failure to Achieve the Target of Reducing GHG Emissions	Risk of deterioration of reputation from our stakeholders due to delay in efforts to reduce GHG emissions	Establishing a company-wide organization, promoting initiatives and managing the progress
Delay in Human Resource Development (Cultivation of Diverse Human Resources)	Risk of personnel shortage which occurs in each division due to delay in the human resource development	Enhancing programs to strengthen recruiting and education for realizing the ideal organizational state/human resource image
Outbreak of infection/ Disease in a Group	Risk of being affected to the business continuity due to a large number of employees contracting the disease and their inability to work	Continuously promoting countermeasures to prevent being infected and the spread of the infection

Risk Management
Web https://www.nissanchem.co.jp/eng/csr_info/risk_management/policy.html

Respect for Human Rights

In April 2019, the Nissan Chemical Group formulated the Nissan Chemical Group Human Rights Policy with advice of outside experts and approved at the Board of Directors, in accordance with the principles on fundamental rights listed in the International Bill of Human Rights, the ILO Declaration on Fundamental Principles and Rights at Work and other international norms on human rights.

Nissan Chemical Group Human Rights Policy (Excerpt)

The Nissan Chemical Group supports international standards including the International Bill of Human Rights, the ILO Declaration on Fundamental Principles and Rights at Work, the United Nations Global Compact, the United Nations Guiding Principles on Business and Human Rights, and any other relevant standards for human rights. This Nissan Chemical Group Human Rights Policy (this "Policy") has been established to promote efforts aimed at respecting human rights of all relevant stakeholders including employees.

This policy complements the Nissan Chemical Group's position with respect to compliance and respect for human rights.

1. Scope of the application

This Policy shall apply to all officers and employees working for the Nissan Chemical Group. And the Nissan Chemical Group will also continuously encourage business partners and suppliers to support and respect this Policy.

2. Respect for Human Rights

3. No Infringement of Human Rights

4. Employment and Labor

"Prohibition of Forced Labor and Child Labor", "Good Labor-Management Relations", "Proper Working Hours", "Fair and Equitable Remuneration", "Elimination of Discrimination", "Occupational Health and Safety"

5. 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 will provide remedy and make efforts to correct such impact through appropriate means.

System

Our group has established the Sustainability Promotion Committee, whose secretariat office is Sustainability Promotion Group under Sustainability Promotion & IR Department, as an organization to promote the activities for human rights. The committee is held twice a year. The long- and mid-term plan and annual plan related to activities for human rights issues, evaluation of results of activities, and issues to be improved and examined based on the evaluation etc. are approved at the Board of Directors after discussion at the committee.

Activities

Revision of the Nissan Chemical Group Human Rights Policy

As social changes, stakeholders' awareness of human rights is becoming more diverse and complex. Therefore, based on the opinions of outside experts and ESG rating agencies, we revised this policy in January 2023 in order to clarify the Group's human rights initiatives.

Educational Activity/Awareness-raising Activity

With the aim of education and awareness-raising about human rights policy and promoting understanding for the purpose of practicing respect for human rights, we conducted awareness-raising activities. In FY2020, we conducted group-type training for the Directors and managers, and since FY2021, we have conducted e-learning for all employees.

[Human Rights Training]

For Directors and managers

- Importance of human rights due diligence (conducted in FY2020)

e-learning training

- Nissan Chemical Group Human Rights Policy
- Elementary knowledge of business and human rights

Human Rights Due Diligence Initiatives

Our group is working to establish a system of human rights due diligence to identify and mitigate negative impacts on human rights. With the cooperation of outside experts, we identified and assessed risks that could have a negative impact on human rights through our business activities in major businesses and their value chains (risk mapping). We also exchanged opinions with stakeholders on the results, reflected them in the results of the evaluation, and identified the risks which we need to prioritize for the Group.

For the priority risks identified, we survey the status of efforts to address each risk through an in-house questionnaire. We plan to continue to strengthen measures with reflecting the opinions of stakeholders, and regularly review our human rights risk assessment and priority risks.

Human Rights Due Diligence Process

Investigation of Human Rights Risk

- Based on the UNEP FI (United Nations Environment Programme Finance Initiative) Human Rights Guidance Tool and other guidances on various human rights, as well as our existing internal information such as risk assessment, we investigated human rights risks that could arise in our business activities, and identified which stages of our value chain could occur and what impact they could have on anyone.

Human Rights Risk Assessment

- We assessed the "impacts on human rights" and "relations with the Group" for each identified risk. "Impacts on human rights" was assessed based on "impact (severity)" and "probability" based on the UN Guiding Principles on Business and Human Rights (UNGP). "Relations with the Group" was evaluated based on the concept of the "Arc of Human Rights Priorities" of the Danish Institute for Human Rights.

Dialogue with Stakeholders Including Experts

- Based on the risk assessment results, we had dialogues with stakeholders including experts.
- In keeping with the opinions and advices, we conducted a reassessment of human rights risks and created the human rights risk map.

Identification of Risks to be Prioritized

- According to the human rights risk map, we identified risks which we need to prioritize. The result was discussed by the CSR Committee (current Sustainability Promotion Committee) and resolved at the Board of Directors.

Risks to be prioritized

Risks to be prioritized	Group could be affected	Major human rights risks	Status of Efforts
Access to Remedy	All Stakeholders	Lack of appropriate action when human rights violations occur	● Establishment of whistle-blowing hotline (consultation hotline) for overseas affiliates ● Raising awareness of the whistle-blowing hotline on the intranet, compliance training, posters, etc.
Employee Health and Safety	Employees of the Group	Danger, harsh working environment (related to overall occupational health and safety, including mental illness), fire and explosion	● Regular health checkups ● Stress check test ● Promotion of appropriate work hours ● Prior risk assessment for R&D, manufacturing and sales ● Prior assessment for manufacture ● Drills for comprehensive disaster prevention/earthquake disaster prevention/initial fire fighting/communication notification ● Trainings for harassment prevention/compliance/occupational safety and health/safety and disaster prevention ● Raising awareness through the safety meeting, occupational safety newspapers and others ● RC audits
Community Health and Safety	Local Communities	Damage to local communities and health due to fires, explosions, chemical leaks and pesticide spraying	● Prior risk assessment for R&D, manufacturing and sales ● Drills for comprehensive disaster prevention/earthquake disaster prevention/initial fire fighting/communication notification ● Training for compliance/occupational safety and health/safety and disaster prevention ● RC audits
Product Safety	Customers	Sales of unsafe products, including misuse	● Prior risk assessment for R&D, manufacturing and sales ● Safety test of products ● Compliance with chemical substance ● Clinical trials (healthcare products) ● Distribution of safety data sheet
Responsible Marketing	Customers	Interference with consumer choice due to lack of adequate product information, inadequate explanation of health risks, and inadequate response to unexpected product-related crises	● Prior risk assessment for R&D, manufacturing and sales ● Safety test of products ● Compliance with chemical substance ● Clinical trials (healthcare products) ● Distribution of safety data sheet ● Appropriate application description
Health and Safety in the Supply Chain	Suppliers	Danger, harsh working environment (related to overall occupational health and safety, including mental illness), fire and explosion	● Assessment by questionnaire* on Sustainability for supplier
Child Labor in the Supply Chain	Suppliers	Labor of children under legal working age/under 15 years old, placement in hazardous work, harsh working environment	● Assessment by questionnaire* on Sustainability for supplier
Conflict Minerals	Local Communities	Procurement and use of raw materials containing conflict minerals	● Responsible mineral procurement*

*Sustainability questionnaire and Responsible Mineral Procurement: https://www.nissanchem.co.jp/eng/csr_info/communication/supply.html

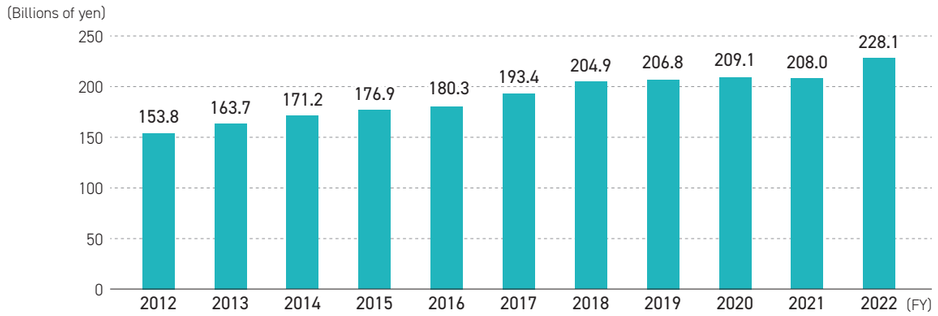
Long-term Financial Performance Trend

(Billions of yen)

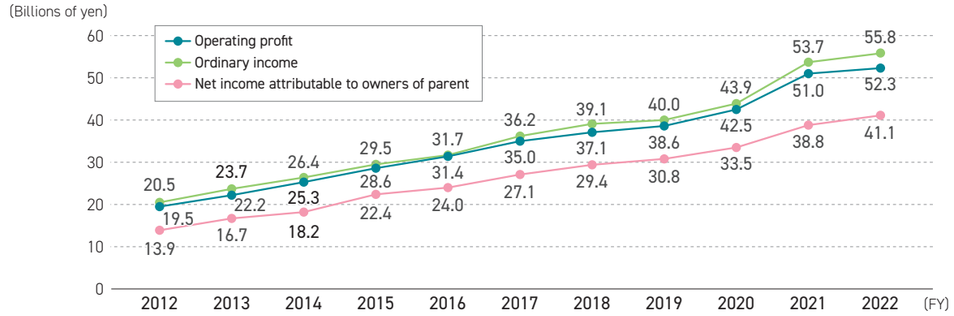
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Sales	153.8	163.7	171.2	176.9	180.3	193.4	204.9	206.8	209.1	208.0	228.1
Operating Profit	19.5	22.2	25.3	28.6	31.4	35.0	37.1	38.6	42.5	51.0	52.3
Ordinary Income	20.5	23.7	26.4	29.5	31.7	36.2	39.1	40.0	43.9	53.7	55.8
Net Income	13.9	16.7	18.2	22.4	24.0	27.1	29.4	30.8	33.5	38.8	41.1
EBITDA	29.1	30.8	33.8	38.3	40.3	45.5	48.0	49.2	53.0	61.2	63.3
Operating Margin	12.7%	13.6%	14.8%	16.2%	17.4%	18.1%	18.1%	18.7%	20.3%	24.5%	22.9%
ROE	11.4%	12.7%	12.7%	14.6%	15.1%	16.1%	16.6%	16.9%	17.5%	19.2%	19.4%
EPS(¥/share)	83.74	102.11	113.99	143.37	156.97	180.30	197.67	210.09	231.73	271.88	291.36
Dividend(¥/share)	26	30	36	44	52	68	82	90	104	122	164
Dividend Payout Ratio	31.0%	29.4%	31.6%	30.7%	33.1%	37.7%	41.5%	42.8%	44.9%	44.9%	56.3%
Share Repurchase	5.0	5.0	6.0	9.0	9.0	9.0	9.0	10.0	10.0	12.0	9.0
Total Assets	199.2	208.0	223.9	228.2	231.7	246.0	247.0	249.5	265.5	279.7	298.7
Net Assets	126.7	137.8	151.3	156.9	163.7	176.4	182.1	185.5	200.6	208.0	221.5
Cash	31.9	30.8	31.3	35.3	35.7	37.7	36.2	30.6	32.4	34.7	29.6
Liabilities with Interest	38.1	36.1	35.1	33.1	30.8	28.6	26.6	24.6	22.7	22.7	27.3
Equity Ratio	63.0%	65.7%	66.9%	68.1%	69.9%	71.0%	73.0%	73.7%	74.9%	73.6%	73.1%
Capex	7.9	8.8	9.8	10.2	14.3	13.7	9.9	15.7	15.8	11.0	20.3
Depreciation	9.5	8.5	8.5	9.7	8.9	10.5	10.9	10.5	10.4	10.2	11.0
R&D Expenses	13.7	14.2	15.0	15.8	16.1	17.2	17.8	17.2	16.5	16.0	16.8
R&D Expenses/ Sales	8.9%	8.7%	8.7%	8.9%	8.9%	8.9%	8.7%	8.3%	7.9%	7.7%	7.4%

(Accounting policy has changed since FY2021)

● Sales (over time)



● Key financial indicators (over time)



Financial Review of the Year Ended March 31, 2023

Overview

In the current fiscal year (April 1, 2022 to March 31, 2023), although consumer spending showed a recovery trend due to the relaxation of behavioral restrictions, the domestic economy did not achieve a full-fledged recovery due to soaring raw fuel material prices, inflation, as well as continued weak exports against the backdrop of sluggish overseas economies. Under these circumstances, in the Chemicals Segment, sales of both Basic Chemicals and Fine Chemicals increased. In the Performance Materials Segment, although sales of Display Materials declined, Semiconductor Materials and Inorganic Materials performed well. In the Agricultural Chemicals Segment, sales increased. In the Healthcare Segment, sales of "Custom Chemicals" (custom manufacturing and solution proposal business for pharmaceutical companies) increased.

As a result, sales, operating income and net income attributable to owners of parent fell short of the forecasts announced in February. However, compared to the same period last year, sales and each income increased. In addition, operating and ordinary income achieved record highs for the ninth consecutive year, and net income attributable to owners of parent for the tenth consecutive year exceeding the earnings outlook announced in November.

Operating Results

As a result, the Company's results for the current fiscal year were net sales 228,065 million yen (an increase of 20,093 million yen), operating income 52,283 million yen (an increase of 1,323 million yen) and ordinary income 55,793 million yen (an increase of 2,103 million yen), and net income attributable to owners of parent 41,087 million yen (an increase of 2,311 million yen).

ROE was 19.4% and we have achieved the Mid-Term Plan "Vista2027" Stage Ⅰ target (maintain above 18%) in the current fiscal year.

Dividend was 164 yen and dividend payout ratio became 56.3%. We have repurchased share of 9.0 billion yen and total payout ratio was 78.0%.

Financial Position

● Position of Assets, Liabilities and Net Assets

Total assets as of March 31, 2023 were 298,715 million yen (an increase of 19,027 million yen from the previous year). It is mainly due to the increase of merchandise and finished goods, raw materials and supplies, and construction in progress.

Total liabilities as of March 31, 2023 were 77,188 million yen (an increase of 5,510 million yen). It is mainly due to the increase of short-term loans payable.

Net assets as of March 31, 2023 were 221,526 million yen (an increase of 13,516 million yen).

As a result of these factors, equity ratio was 73.1% (a decrease of 0.5% from March 31, 2022).

● 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, 2023 was 35,226 million yen (41,949 million yen for the previous year).

Due to investment on plant and equipment, etc. net cash used in investing activities for the consolidated fiscal year ended March 31, 2023 was19,643 million yen (12,395 million yen for the previous year).

Due to share repurchase, payment for dividends and the decrease in loans payable, net cash used in financing activities for the consolidated fiscal year ended March 31, 2023 was 25,030 million yen (27,868 million yen for the previous year).

As a result of these factors, cash and cash equivalents for the consolidated fiscal year ended March 31, 2023 were 29,647 million yen (34,658 million yen for the previous year), reflecting exchange of 1,320 million yen. It decreased by 5,010 million yen compared to the previous year.

Overview by segments

The Chemicals Segment

In Basic Chemicals, sales of urea and AdBlue®* (high-grade urea solution) increased due to price revisions in response to higher raw material and fuel. Sales of melamine (adhesives agent for particle board) declined as a result of the termination of sales in the third quarter under the structural reforms announced in August 2021.

In Fine Chemicals, sales of TEPIC® (powder coating agent for paint, sealants, etc.) decreased, but environmental chemicals (sterilizing and disinfecting agents for pools and septic tanks, etc.) and FINEOXOCOL® (raw materials for cosmetics, etc.) increased.

As a result, sales of this segment were 39,034 million yen (an increase of 1,385 million yen) and operating income was 1,379 million yen (a decrease of 2,408 million yen). Compared to the outlook, sales were below 0.7 billion yen and operating income was below 0.3 billion yen.

* AdBlue® is a registered trademark of the Verband der Automobilindustrie (VDA).

The Performance Materials Segment

In Display Materials, sales of SUNEVER® (LCD alignment coating) declined. In Semiconductor Materials, sales of ARC®* (anti-reflective coating for semiconductors) increased due to strong sales through the first half of the year, however, customer utilization declined from the third quarter of the year. In Inorganic Materials, sales of SNOWTEX® for polishing electronic materials and hard coating and Oilfield materials (solvents to improve the efficiency of shale oil and gas extraction) were steady.

As a result, sales of this segment were 82,606 million yen (an increase of 941 million yen) and operating income was 25,449 million yen (a decrease of 2,171 million yen). Compared to the outlook, sales were a below 0.9 billion yen and operating income was below 0.8 billion yen.

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

The Agricultural Chemicals Segment

Sales of Fluralaner (active ingredients for veterinary pharmaceuticals) increased due to the completion of customer inventory adjustments in the previous fiscal year. In Japanese domestic market, sales of ROUNDUP® (non-selective foliar application herbicide), ALTAIR® (paddy rice herbicide) and GRACIA® (insecticide) were firm. In the overseas market, sales increased significantly due to strong sales of LEIMAY® (fungicide), GRACIA® and "TARGA" (herbicide).

As a result, sales of this segment were 81,584 million yen (an increase of 15,765 million yen) and operating income was 23,130 million yen (an increase of 5,002 million yen). Compared to the outlook, sales were above 0.2 billion yen and operating income was below 0.4 billion yen.

The Healthcare Segment

Sales of LIVALO® (anti-cholesterol drug) were at the same level as the FY2021. In "Custom Chemicals", sales increased due to steady sales of generic active pharmaceutical ingredients.

As a result, sales of this segment were 6,673 million yen (an increase of 83 million yen) and operating income was 2,990 million yen (an increase of 176 million yen). Compared to the outlook, sales were above 0.1 billion yen and operating income was above 0.1 billion yen.

Trading

Sales of this segment were 99,066 million yen (an increase of 18,629 million yen) and operating income was 3,701 million yen (an increase of 797 million yen). Compared to the outlook, sales were above 0.1 billion yen and operating income was above 0.4 billion yen.

Others

Sales of this segment were 26,384 million yen (an increase of 2,789 million yen) and operating income was 879 million yen (an increase of 187 million yen).

Consolidated Balance Sheets [1] (For FY2022 and FY2021)

◎Assets	(Millions of yen) FY2022	FY2021	(Thousands of U.S. dollars) FY2022
Current assets			
Cash and deposits	29,647	34,658	222,008
Notes and accounts receivable - trade, and contract assets	82,670	79,979	619,065
Merchandise and finished goods	46,950	37,664	351,580
Work in process	18	15	135
Raw materials and supplies	17,703	14,496	132,567
Accounts receivable - other	2,113	2,824	15,823
Short-term loans receivable	3,088	1,541	23,124
Other	7,305	4,140	54,703
Allowance for doubtful accounts	(44)	(41)	(329)
Total current assets	189,454	175,279	1,418,706
Non-current assets			
Property, plant and equipment			
Buildings and structures	72,520	69,443	543,058
Accumulated depreciation and impairment loss	(46,567)	(45,158)	(348,712)
Buildings and structures, net	25,952	24,284	194,339
Machinery, equipment and vehicles	151,653	145,129	1,135,637
Accumulated depreciation and impairment loss	(136,861)	(132,567)	(1,024,869)
Machinery, equipment and vehicles, net	14,792	12,561	110,768
Tools, furniture and fixtures	42,153	41,345	315,658
Accumulated depreciation and impairment loss	(38,379)	(37,384)	(287,397)
Tools, furniture and fixtures, net	3,774	3,960	28,261
Land	8,817	8,809	66,025
Leased assets	149	—	1,116
Accumulated depreciation and impairment loss	(10)	—	(75)
Leased assets (Net)	139	—	1,041
Construction in progress	11,176	3,561	83,690
Total property, plant and equipment	64,653	53,177	484,147
Intangible assets			
Software	1,722	1,736	12,895
Other	9,813	10,044	73,484
Total intangible assets	11,535	11,780	86,379
Investments and other assets			
Investment securities	27,322	30,217	204,598
Long-term loans receivable	0	3,323	0
Deferred tax assets	531	918	3,976
Net defined benefit asset	2,140	1,844	16,025
Other	3,186	3,256	23,858
Allowance for doubtful accounts	(110)	(110)	(824)
Total investments and other assets	33,071	39,450	247,649
Total non-current assets	109,260	104,408	818,182
Total assets	**298,715**	**279,687**	**2,236,895**

Consolidated Balance Sheets [2] (For FY2022 and FY2021)

◎Liabilities	(Millions of yen) FY2022	FY2021	(Thousands of U.S. dollars) FY2022
Current liabilities			
Notes and accounts payable - trade	19,942	19,043	149,334
Short-term loans payable	25,327	20,981	189,659
Current portion of long-term loans payable	624	552	4,673
Income taxes payable	7,879	8,710	59,001
Provision for bonuses	2,413	2,285	18,069
Provision for business structure improvement	418	—	3,130
Other	15,556	14,398	116,489
Total current liabilities	72,161	65,971	540,370
Non-current liabilities			
Long-term loans payable	1,338	1,182	10,019
Deferred tax liabilities	98	69	734
Provision for business structure improvement	—	698	—
Provision for loss on business of subsidiaries and affiliates	626	626	4,688
Provision for share awards for directors (and other officers)	256	200	1,917
Net defined benefit liability	377	290	2,823
Other	2,331	2,638	17,455
Total non-current liabilities	5,027	5,706	37,644
Total liabilities	**77,188**	**71,678**	**578,014**

◎Net assets	(Millions of yen) FY2022	FY2021	(Thousands of U.S. dollars) FY2022
Shareholders' equity			
Capital stock	18,942	18,942	141,845
Capital surplus	13,613	13,613	101,939
Retained earnings	182,400	172,393	1,365,883
Treasury shares	(6,111)	(8,261)	(45,762)
Total shareholders' equity	208,844	196,688	1,563,906
Accumulated other comprehensive income			
Valuation difference on available-for-sale securities	7,678	8,304	57,496
Foreign currency translation adjustment	1,735	898	12,992
Remeasurements of defined benefit plans	159	21	1,191
Total accumulated other comprehensive income	9,574	9,223	71,694
Non-controlling interests	3,107	2,097	23,266
Total net assets	221,526	208,009	1,658,874
Total liabilities and net assets	**298,715**	**279,687**	**2,236,895**

(Note 1) This is an English translation of the consolidated financial statements of the Japanese annual securities report.

(Note 2) The consolidated financial statements are expressed in Japanese yen as of and for the year ended March 31, 2023 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 ¥133.54 to US $1, which is the approximate closing exchange rate reported by the Tokyo Foreign Exchange Market on March 31, 2023. 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.

Consolidated Statements of Income and Consolidated Statements of Comprehensive Income (For FY2022 and FY2021)

◎Consolidated Statements of Income

	(Millions of yen)		(Thousands of U.S. dollars)
	FY2022	FY2021	FY2022
Net sales	228,065	207,972	1,707,840
Cost of sales	121,262	106,883	908,058
Gross profit	106,803	101,089	799,783
Selling, general and administrative expenses	54,519	50,129	408,260
Operating income	52,283	50,959	391,516
Non-operating income			
Interest income	203	49	1,520
Dividend income	1,323	768	9,907
Equity in earnings of affiliates	1,485	950	11,120
Foreign exchange gains	1,296	1,134	9,705
Other	694	918	5,197
Total non-operating income	5,004	3,821	37,472
Non-operating expenses			
Interest expenses	252	73	1,887
Loss on disposal of non-current assets	817	682	6,118
Loss on sales of non-current assets	5	116	37
Plant stop losses	198	108	1,483
Other	220	109	1,647
Total non-operating expenses	1,493	1,090	11,180
Ordinary income	55,793	53,690	417,800
Extraordinary income			
Gain on sales of investment securities	1,461	3,366	10,941
Total extraordinary income	1,461	3,366	10,941
Extraordinary losses			
Loss on valuation of investment securities	650	477	4,867
Business restructuring expenses	—	1,792	—
Loss on business of subsidiaries and associates	—	626	—
Total extraordinary losses	650	2,896	4,867
Income before income taxes and non-controlling interests	56,605	54,160	423,880
Income taxes - current	14,554	14,713	108,986
Income taxes - deferred	633	312	4,740
Total income taxes	15,187	15,026	113,726
Net income	41,417	39,134	310,147
Net income attributable to non-controlling interests	329	357	2,464
Net income attributable to owners of parent	41,087	38,776	307,676

◎Consolidated Statements of Comprehensive Income

	(Millions of yen)		(Thousands of U.S. dollars)
	FY2022	FY2021	FY2022
Net income	41,417	39,134	310,147
Other comprehensive income			
Valuation difference on available-for-sale securities	(625)	(3,055)	(4,680)
Foreign currency translation adjustment	760	875	5,691
Remeasurements of defined benefit plans, net of tax	138	(442)	1,033
Share of other comprehensive income of entities accounted for using equity method	0	0	0
Total other comprehensive income	273	(2,622)	2,044
Comprehensive income	41,690	36,511	312,191
(Comprehensive income attributable to)			
Owners of parent	41,270	36,095	309,046
Non-controlling interests	420	416	3,145

Consolidated Statements of Changes in Net Assets (For FY2022)

(Millions of yen)

	Shareholders' equity				
	Capital stock	Capital surplus	Retained earnings	Treasury shares	Total shareholders' equity
Balance at beginning of current period	¥18,942	¥13,613	¥172,393	(¥8,261)	¥196,688
Changes of items during period					
Dividends of surplus			(20,084)		(20,084)
Net income attributable to owners of parent			41,087		41,087
Change in scope of consolidation			101		101
Share repurchase				(9,002)	(9,002)
Disposal of treasury shares				55	55
Cancellation of treasury shares			(11,097)	11,097	—
Net changes of items other than shareholders' equity					
Total changes of items during period	—	—	10,006	2,150	12,156
Balance at end of current period	¥18,942	¥13,613	¥182,400	(¥6,111)	¥208,844

(Millions of yen)

	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	¥8,304	¥898	¥21	¥9,223	¥2,097	¥208,009
Changes of items during period						
Dividends of surplus						(20,084)
Net income attributable to owners of parent						41,087
Change in scope of consolidation						101
Share repurchase						(9,002)
Disposal of treasury shares						55
Cancellation of treasury shares						—
Net changes of items other than shareholders' equity	(625)	837	138	350	1,009	1,360
Total changes of items during period	(625)	837	138	350	1,009	13,516
Balance at end of current period	¥7,678	¥1,735	¥159	¥9,574	¥3,107	¥221,526

Consolidated Statements of Changes in Net Assets (For FY2021)

(Millions of yen)

	Shareholders' equity				
	Capital stock	Capital surplus	Retained earnings	Treasury shares	Total shareholders' equity
Balance at beginning of current period	¥18,942	¥13,613	¥161,708	(¥7,340)	¥186,923
Cumulative effects of changes in accounting policies			(1,548)		(1,548)
Restated balance	¥18,942	¥13,613	¥160,160	(¥7,340)	¥185,375
Changes of items during period					
Dividends of surplus			(15,468)		(15,468)
Net income attributable to owners of parent			38,776		38,776
Share repurchase				(12,003)	(12,003)
Disposal of treasury shares		0		8	8
Cancellation of treasury shares		(0)	(11,074)	11,074	—
Net changes of items other than shareholders' equity					
Total changes of items during period	—	—	12,233	(920)	11,313
Balance at end of current period	¥18,942	¥13,613	¥172,393	(¥8,261)	¥196,688

(Millions of yen)

	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	¥11,359	¥81	¥463	¥11,904	¥1,733	¥200,562
Cumulative effects of changes in accounting policies						(1,548)
Restated balance	¥11,359	¥81	¥463	¥11,904	¥1,733	¥199,013
Changes of items during period						
Dividends of surplus						(15,468)
Net income attributable to owners of parent						38,776
Share repurchase						(12,003)
Disposal of treasury shares						8
Cancellation of treasury shares						—
Net changes of items other than shareholders' equity	(3,055)	816	(442)	(2,680)	363	(2,317)
Total changes of items during period	(3,055)	816	(442)	(2,680)	363	8,995
Balance at end of current period	¥8,304	¥898	¥21	¥9,223	¥2,097	¥208,009

Consolidated Statements of Changes in Net Assets (For FY2022)

(Thousands of U.S. dollars)

	Shareholders' equity				
	Capital stock	Capital surplus	Retained earnings	Treasury shares	Total shareholders' equity
Balance at beginning of current period	$141,845	$101,939	$1,290,947	($61,862)	$1,472,877
Changes of items during period					
Dividends of surplus			(150,397)		(150,397)
Net income attributable to owners of parent			307,676		307,676
Change in scope of consolidation			756		756
Share repurchase				(67,411)	(67,411)
Disposal of treasury shares				412	412
Cancellation of treasury shares			(83,099)	83,099	—
Net changes of items other than shareholders' equity					
Total changes of items during period	—	—	74,929	16,100	91,029
Balance at end of current period	$141,845	$101,939	$1,365,883	($45,762)	$1,563,906

(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	$62,184	$6,725	$157	$69,065	$15,703	$1,557,653
Changes of items during period						
Dividends of surplus						(150,397)
Net income attributable to owners of parent						307,676
Change in scope of consolidation						756
Share repurchase						(67,411)
Disposal of treasury shares						412
Cancellation of treasury shares						—
Net changes of items other than shareholders' equity	(4,680)	6,268	1,033	2,621	7,556	10,184
Total changes of items during period	(4,680)	6,268	1,033	2,621	7,556	101,213
Balance at end of current period	$57,496	$12,992	$1,191	$71,694	$23,266	$1,658,874

Consolidated Statements of Changes in Net Assets (For FY2021)

(Thousands of U.S. dollars)

	Shareholders' equity				
	Capital stock	Capital surplus	Retained earnings	Treasury shares	Total shareholders' equity
Balance at beginning of current period	$154,742	$111,208	$1,321,036	($59,962)	$1,527,024
Cumulative effects of changes in accounting policies			(12,646)		(12,646)
Restated balance	$154,742	$111,208	$1,308,390	($59,962)	$1,514,378
Changes of items during period			0		0
Dividends of surplus			(126,362)		(126,362)
Net income attributable to owners of parent			316,772		316,772
Share repurchase				(98,056)	(98,056)
Disposal of treasury shares		0		65	65
Cancellation of treasury shares		(0)	(90,466)	90,466	—
Net changes of items other than shareholders' equity					
Total changes of items during period	—	—	99,935	(7,516)	92,419
Balance at end of current period	$154,742	$111,208	$1,408,324	($67,486)	$1,606,797

(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	$92,795	$662	$3,782	$97,247	$14,157	$1,638,445
Cumulative effects of changes in accounting policies						(12,646)
Restated balance	$92,795	$662	$3,782	$97,247	$14,157	$1,625,790
Changes of items during period						
Dividends of surplus						(126,362)
Net income attributable to owners of parent						316,772
Share repurchase						(98,056)
Disposal of treasury shares						65
Cancellation of treasury shares						—
Net changes of items other than shareholders' equity	(24,957)	6,666	(3,611)	(21,894)	2,965	(18,928)
Total changes of items during period	(24,957)	6,666	(3,611)	(21,894)	2,965	73,483
Balance at end of current period	$67,838	$7,336	$172	$75,345	$17,131	$1,699,281

Consolidated Statements of Cash Flows (For FY2022 and FY2021)

	(Millions of yen)		(Thousands of U.S. dollars)
	FY2022	FY2021	FY2022
Cash flows from operating activities			
Income before income taxes and non-controlling interests	56,605	54,160	423,880
Depreciation and amortization	10,878	10,119	81,459
Business restructuring expenses	—	1,792	—
Loss on business of subsidiaries and associates	—	626	—
Loss on valuation of investment securities	650	477	4,867
Amortization of goodwill	101	103	756
Interest and dividend income	(1,527)	(817)	(11,435)
Loss (gain) on sales of investment securities	(1,461)	(3,366)	(10,941)
Interest expenses	252	73	1,887
Loss (gain) on disposal of non-current assets	817	682	6,118
Decrease (increase) in notes and accounts receivable - trade	(2,360)	(5,704)	(17,673)
Decrease (increase) in inventories	(12,382)	(6,230)	(92,721)
Increase (decrease) in notes and accounts payable - trade	217	2,523	1,625
Other	(3,057)	(1,163)	(22,892)
Subtotal	48,734	53,277	364,939
Interest and dividend income received	2,153	1,913	16,123
Interest expenses paid	(251)	(73)	(1,880)
Income taxes paid	(15,408)	(13,168)	(115,381)
Net cash provided by (used in) operating activities	35,226	41,949	263,786
Cash flows from investing activities			
Purchase of investment securities	(506)	(190)	(3,789)
Proceeds from sales of investment securities	2,499	4,248	18,713
Purchase of shares of subsidiaries	(25)	(22)	(187)
Purchase of property, plant and equipment	(18,236)	(11,253)	(136,558)
Payments for retirement of property, plant and equipment	(716)	(466)	(5,362)
Purchase of intangible assets	(1,221)	(1,133)	(9,143)
Payments of long-term loans receivable	—	(3,322)	—
Net decrease (increase) in short-term loans receivable	(1,505)	(262)	(11,270)
Purchase of long-term prepaid expenses	(282)	(188)	(2,112)
Other	352	196	2,636
Net cash provided by (used in) investing activities	(19,643)	(12,395)	(147,095)
Cash flows from financing activities			
Net increase (decrease) in short-term loans payable	3,940	(345)	29,504
Proceeds from long-term loans payable	780	550	5,841
Repayments of long-term loans payable	(552)	(552)	(4,134)
Cash dividends paid	(20,084)	(15,468)	(150,397)
Dividends paid to non-controlling interests	(105)	(48)	(786)
Share repurchase	(9,002)	(12,003)	(67,411)
Other	(6)	0	(45)
Net cash provided by (used in) financing activities	(25,030)	(27,868)	(187,434)
Effect of exchange rate change on cash and cash equivalents	1,320	591	9,885
Net increase (decrease) in cash and cash equivalents	(8,126)	2,277	(60,851)
Cash and cash equivalents at beginning of period	34,658	32,380	259,533
Increase in cash and cash equivalents resulting from inclusion of subsidiaries in consolidation	3,116	—	23,334
Cash and cash equivalents at end of period	29,647	34,658	222,008

(Note 1) This is an English translation of the consolidated financial statements of the Japanese annual securities report.
(Note 2) The consolidated financial statements are expressed in Japanese yen as of and for the year ended March 31, 2023 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 ¥133.54 to US $1, which is the approximate closing exchange rate reported by the Tokyo Foreign Exchange Market on March 31, 2023. 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.

Domestic Bases

Plants

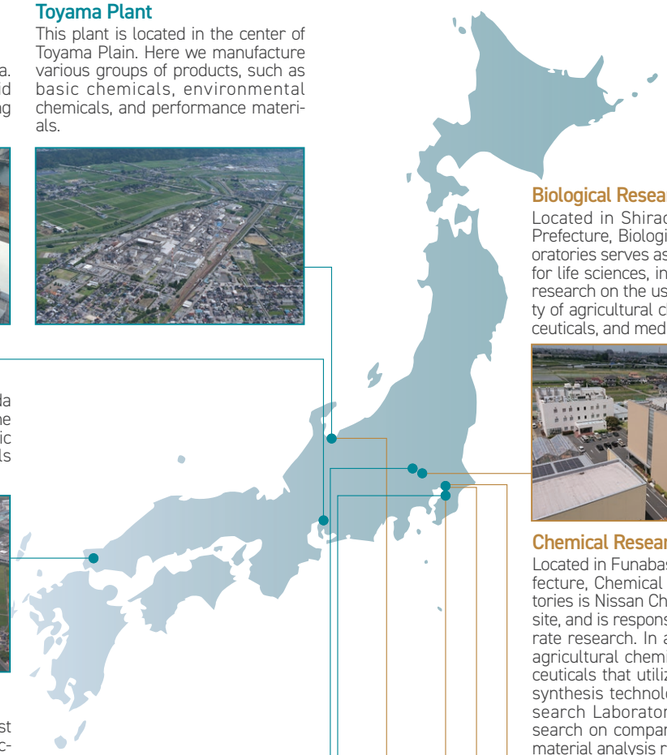
Nagoya Plant
This plant faces the Port of Nagoya. Here we manufacture sulfuric acid and high-grade urea solution, among other products.

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 the northwest area of 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.



Laboratories

Biological Research Laboratories
Located in Shiraoka City, Saitama Prefecture, Biological Research Laboratories serves as a research center for life sciences, including evaluation research on the usefulness and safety of agricultural chemicals, pharmaceuticals, and medical materials.

Chemical Research Laboratories
Located in Funabashi City, Chiba Prefecture, 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.

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.

Funabashi, Chiba

Toyama, Toyama

Sodegaura, Chiba

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
Minamimachi-dori MK Building 2-7-12, Ichibancho, Aoba-ku, Sendai, Miyagi 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

Fukuoka Sales Office
Tokyo Tatemono Hakata Building 1-4-4, Hakata Ekimae, Hakata-ku, Fukuoka 812-0011
Tel: +81-92-432-3421

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

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

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

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, Aichi 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.
PMO Ochanomizu 4-4-1, Kandasurugadai, Chiyoda-ku, Tokyo 101-0062
Tel: +81-3-3256-4031
■ Landscaping and civil engineering

NC Tokyo Bay Corporation
14, Kitasode, Sodegaura-shi, Chiba 299-0266
Tel: +81-438-62-0611
■ Manufacture of sulfuric acid

Sun Agro Co., Ltd.
Nihonbashikoami-cho Square Bldg. 17-10, Nihonbashikoami-cho, Chuo-ku, Tokyo 103-0016
TEL: +81-3-6311-4310
■ Manufacture and sales of fertilizers and agrochemicals

NC Agro Hakodate Corporation
9-23, Kitahama-cho, Hakodate, Hokkaido 040-0078
Tel: +81-138-41-1251
■ Manufacture 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

Nihon Hiryo Co., Ltd.
559-3, Tozaki, Okanogo, Fujioka, Gumma 375-0011
(Inside Nihon Hiryo Shinmachi Plant)
Tel: +81-274-42-1247
■ Manufacture and sales of fertilizers and agricultural materials

Clariant Catalysts (Japan) K.K.
2-28-8, Honkomagome, Bunkyo-ku, Tokyo 113-0021
Tel: +81-3-5977-7300
■ Manufacture and sales of catalysts for petrochemical and petroleum products

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

Overseas Bases (As of March 31, 2023)

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

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

America

Nissan Chemical America Corporation
10333 Richmond Avenue, Suite 1100,Houston, Texas 77042, U.S.A.
Tel: +1-713-532-4745
Manufacture and sales of inorganic materials

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 215123, 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 82151, Taiwan (R.O.C.)
Tel: +886-7-695-5252
■ R&D and sales support for display and semiconductor materials

South Korea

NCK Co., Ltd.
127, Chupalsandan-ro, Paengseong-eup, Pyeongtaek-si, Gyeonggi-do, 17998, Korea
Tel: +82-31-691-7044
■ Manufacture 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

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

Corporate Profile (As of March 31, 2023)

Corporate Name	Nissan Chemical Corporation
Head Office	5-1, Nihonbashi 2-Chome, Chuo-ku, Tokyo 103-6119 TEL: +81-3-4463-8111
Founded	1887
Capital Stock	18,942 million yen
Number of Employees	Consolidated: 2,965
Stock Listing	Tokyo Stock Exchange Prime Market
Transfer Agent	Sumitomo Mitsui Trust Bank, Limited 4-1 Marunouchi 1-chome, Chiyoda-ku, Tokyo 100-8233

Share Information (As of March 31, 2023)

Total Number of Authorized Shares	360,000,000
Shares of Common Share Issued	141,300,000*
Shareholders	13,817

*Includes 876,572 treasury shares

Major shareholders (Top ten companies)	Number of shares held (1,000 shares)	Investment (%)
The Master Trust Bank of Japan, Ltd. (Trust Account)	35,569	25.3
Custody Bank of Japan, Ltd. (Trust Account)	14,996	10.7
Custody Bank of Japan, Ltd. as Trustee for Mizuho Bank Retirement Benefit Trust Account Re-entrusted by Mizuho Trust and Banking Co., Ltd.	5,767	4.1
The Norinchukin Bank	4,800	3.4
Nissan Chemical Corporation Customer Shareholders Association	3,671	2.6
STATE STREET BANK WEST CLIENT-TREATY 505234	2,200	1.6
Meiji Yasuda Life Insurance Company	1,861	1.3
JP Morgan Chase Bank 385781	1,756	1.3
Sumitomo Mitsui Trust Bank, Limited	1,600	1.1
Sompo Japan Insurance, Inc.	1,547	1.1

(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 (%)	51.0	3.8	9.1	24.8	10.7	0.6

Organization
Web https://www.nissanchem.co.jp/eng/profile/soshiki.html