Mitsui Chemicals

MITSUI CHEMICALS REPORT 2020

CEO Message

Deepening **our triple bottom line management approach** based on the three axes of **economy, environment, and society**, we will embark on new reforms in anticipation of a post-COVID society.

Toward new beginnings

An opportunity to think deeply about our “ideal vision.”

Striving toward the targets set in our Long-Term Business Plan, VISION 2025, the Mitsui Chemicals Group is working to deepen our triple bottom line management approach based on the three axes of economy, environment, and society, pursuing initiatives aimed at solving the challenges faced by society as well as the transformation of our business portfolio. Formulated in 2016, VISION 2025 is now drawing close to its halfway point.

In these four years, the social environment surrounding our Group has changed enormously. Awareness of sustainability, including issues such as plastic waste and climate change, has further increased, and innovations in areas such as digital technology and biotechnology have advanced at a pace that is beyond anything we expected.

Today, the world is facing an unprecedented crisis in the form of the COVID-19 pandemic.

I assumed the position of President & CEO right in the middle of this crisis, in April 2020. Our business environment has entered a difficult phase, but I am taking a more positive view of the situation. As we approach the halfway mark of our Long-Term Business Plan, I see it as an opportunity to explore what our business and organization should look like and re-examine what we need to do to achieve sustainable growth. We will redefine ourselves as we move toward our future goal to become a sustainable corporate group with a global presence.



HASHIMOTO Osamu
Representative Director,
President & CEO

Progress in Long-Term Business Plan

Portfolio transformation steadily yielding results under our Long-Term Business Plan.

On the economy axis, we have engaged in the transformation of our business portfolio and created a stronger financial position. On the environment and society axes, although we need to incorporate new perspectives, we have produced a number of results. In fiscal 2019, our operating income was down on the previous year, due in part to the impact of the global economic downturn. Nevertheless, I believe we have made steady progress in our Long-Term Business Plan.

Based on that Plan, we have identified three target domains, namely Mobility, Health Care, and Food & Packaging, and we are making active investments in these areas.

In the **Mobility** domain, fiscal 2019 saw a global downturn in automobile production and stagnation of demand, and the severe business climate is expected to continue in fiscal 2020 due to the impact of the pandemic. However, we also project an expansion of needs such as lightweighting and electrification in the automotive sector in the medium to long term. Along with our diverse lineup of functional polymeric materials, we will use our Group-wide capabilities in proposing solutions to meet our customers' needs. Further, the decision has already been made to increase our capacity to produce performance polymers, where we have an advantage in ICT applications, so we will hasten to set up that increased production and turn it into a profit.

In the **Health Care** domain, we anticipate firm growth in ophthalmic lens materials, an area in which we boast technological prowess and a robust customer base, and we are moving toward a decision to increase capacity in this field as well. In terms of nonwovens, in addition to nonwoven fabrics for hygiene materials, we foresee increased demand in the 5G and automotive sectors, and we will also expand into industrial applications. Regarding dental materials, with the rapid acceleration of digitalization in mind, we will devote Group-wide resources to strengthening cooperation to increase our presence in Japan and Asia.

In the **Food & Packaging** domain, demand for industrial films is increasing for a number of reasons, including the growing popularity of 5G. The Group's proactive response to this increased demand includes completing construction of a new plant in Taiwan and increasing our supply capacity by 50%. We will now move to make a return on our investments. With demand for TENEBENAL™, our next generation active ingredient for insecticides, expected in diverse sectors, we are considering a further increase in production.

In the **Basic Materials** domain, where we are aiming for the stabilization of earnings, the structural reforms we have been working on have resulted in a steady reduction in volatility, which has been a challenge for us. Even so, low profitability cannot be denied, so we will engage in further structural reforms in this domain. In the belief that we can restructure this segment by further strengthening our local production for local consumption approach and downstream businesses, we will devise options from broad perspectives during fiscal 2020 and implement both immediate measures and measures that we will engage in over a longer period.

▶▶ See Strategy by Business Segment on page 36.



Review of Long-Term Business Plan

As we reach the halfway point of our Long-Term Business Plan, we will discuss anew our “ideal vision.”

As I mentioned earlier, the social environment has undergone enormous change since we first developed our current Long-Term Business Plan. With that in mind, we will take the opportunity presented by reaching the halfway point to undertake a review of the Plan.

We have re-set the Plan’s end point to around 2030 and we are now in the process of debating what our ideal vision for the future as a company should look like. Setting our sights higher initially, we will envisage what society will look like in 2050 and backcast from there to re-set our targets.

Looking back on the last four years, one regret that I have is that we have been lacking in the ability to get things done. In the Long-Term Business Plan, we formulated a strategy of active investment in new business and R&D, but there are several areas that have not proceeded to plan. Coming up with a new plan is one thing, but we have lacked the ability to put that plan into action.

The same could be said for the transformation of our business portfolio. Until now, we have focused on B-to-B business based on chemical materials, but in the Long-Term Business Plan, we aim to go one step further and expand our B-to-C business. To put it simply, we are like a sportsperson who is used to the rules of baseball now attempting to step foot on a soccer pitch. For such a massive transformation, we need strong resolve to take action. We are currently in the process of investigating the factors that are hampering action.

Our mid-ranking employees in their late thirties to their forties are playing a central role in the deliberation of our ideal vision. This is because they are the ones who will form the core of the Group around 2030, when the Plan ends, and they will be in the position to take action. Even if the picture being painted is somewhat rough with sharp edges, I believe that it is important that the actual people who will act on it be the ones to paint that picture.

Ultimately, in the development of the Plan, we will combine this kind of deductive approach with an inductive perspective that is rooted in the individual businesses. We will come up with the directions by the end of fiscal 2020, with the aim of formulating concrete measures in the first half of fiscal 2021. Re-setting the numerical targets declared in the current Long-Term Business Plan will also form part of these discussions.

Further, I want us to deepen our discussions to include the maximization of our intangible assets, including developing our corporate culture and organization to raise our employees’ ability to get things done and their motivation.

In anticipation of a Post-COVID Society

As well as establishing a stable business platform, we will swiftly capture new business opportunities.

Many aspects of the COVID-19 pandemic that we are still in the midst of, as well as the social changes that will come after it, cannot be predicted. It is difficult to reach any clear answers about what impact the pandemic will have on our business. We are adopting a severe outlook in our plans for fiscal 2020, and we are taking all possible measures to ensure cash flow in the event of further downside risks. On the other hand, there are areas of the Health Care and Food & Packaging domains in which we anticipate expansion of demand, so we will be swift to go out and capture new business opportunities in those areas.

The keyword for the post-COVID society will likely be, first and foremost, digitalization. We have expanded the use of remote work in our Group, which has had a certain degree of success. However, there are many workplaces in which remote work cannot be fully implemented, such as manufacturing sites, so we will need to undertake other reforms, such as finding new ways of working and new evaluation systems, including the promotion of digital transformation (DX).

The global pandemic has also brought challenges in supply chains to the surface. With the progress in globalization, our Group’s supply chain has become

increasingly diverse and complex. In light of the emergence of economic blocs and the growing trade friction between China and the United States, we will investigate the state of our local production for local consumption systems that we have advanced and, where necessary, consider their restructure.

Our response to COVID-19

Initiatives for risk management and business continuity
· Swift action to lower infection risk and ensure the safety of employees and business partners (such as implementation of teleworking, staggered working hours, and online training)
· Ensuring the maintenance of corporate functions and the safety and stable operations of plants
· Ensuring the solidity of the supply chain, including raw material procurement and product shipments
· Thorough management of inventory, accounts receivable, and accounts payable
· Strengthening cost management, expanding the credit line, and ensuring cash on hand

Initiatives for supporting society through our business
· Supporting healthcare providers
· Production and supply of nonwoven fabrics used as a raw material for medical gowns (isolation gowns)
· Supply of nonwoven fabrics for use in reusable 3D-printed masks
· Donation of masks, sanitizers, etc., to local medical institutions
· Running full production at all plants for TEKNOROTE™ for nose-clamps
· Supply of antibacterial and antiviral product lines (FASTAID™, YOHTOL™ DP-CD, etc.)

(based on data as of June 24, 2020)



Isolation gowns

An Enhanced Financial Position and Active Growth Investments

With our greatly strengthened financial position, our proactive stance toward growth investments and M&As will not change.

Our work on the strengthening of our financial position has continued in the Long-Term Business Plan, allowing us to build an enhanced foundation that can respond to sudden external changes. The current economic climate in the COVID-19 pandemic is often compared to the Global Financial Crisis, but our Group's earnings capacity has improved significantly compared to that time, and our net D/E and short-term liquidity are being maintained at healthy levels.

Backed by this enhanced financial position, we will continue to invest for the future. Although some investments will be cut in fiscal 2020 as an emergency financial measure through careful selection and deferrals of projects, we do not intend to change our proactive stance. We will pursue active investment in growth domains such as ICT and Health Care.

In M&As as well, we will continue to watch out for new opportunities. However, I have no intention of considering only the economy axis in our pursuit of M&As, which would aim only for an increase in size. I will always incorporate the perspectives of the environment and society axes as well and pursue M&As that will achieve sustainable growth in our corporate value, so they will be accepted by all our stakeholders.

▶▶ See CFO Message on page 16.



Transformation of Our Organizational Culture

Embarking on organizational reforms for the creation of a culture of open communication that connects people and technology organically.

The Mitsui Chemicals Group conducted a number of organizational reforms in April 2020. The aim of those changes was to strengthen our business structures in the three target domains and to accelerate next generation business.

The key to our success in the three target domains lies in the total operation of our business. To that end, we must connect our assets, namely people and technology, organically to maximize our value. As such, we established cross-organizational CoEs* in the Mobility and Food & Packaging domains. In the Health Care domain as well, we established a Medical Business Strategy Department for the development and exploration of new businesses and the pursuit of M&As.

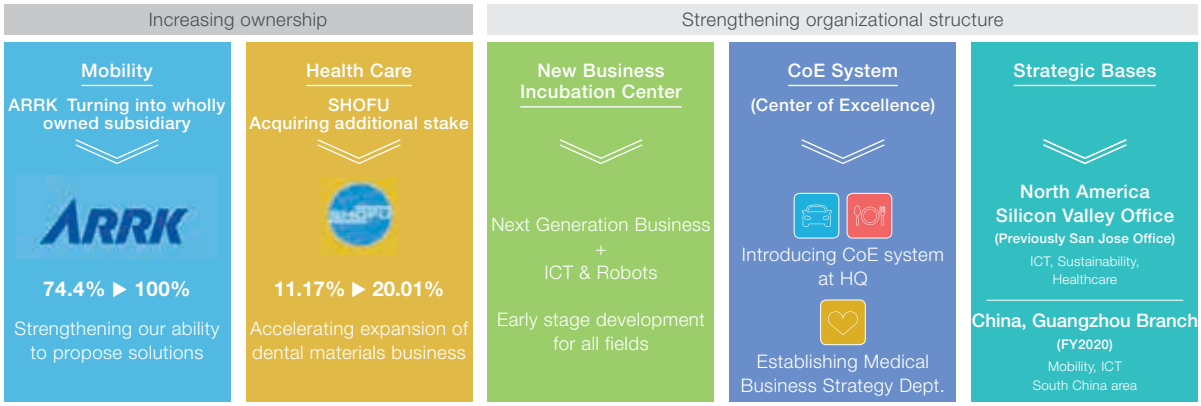
Further, we launched a New Business Incubation Center that will be responsible for the exploration and creation of next generation businesses, covering all fields from ICT to robots and energy.

The Group has adopted a business division structure for the pursuit of its business. Because of that structure, vertical lines tend to be stronger, and I sometimes feel that we are not making effective use of the Group's resources as a result. One aim of these reforms is to make our organization more open and communicative. We will devote even more effort to initiatives aimed at the transformation of our corporate and organizational culture.

*CoE: Center of Excellence

To prepare for social changes after COVID-19,

we are bolstering our marketing operations and functional relationships in a speedy manner



Sustainability Management

Sustainability initiatives with broad perspectives that encompass the entire value chain are vital.

With growing awareness of ESG concerns and the SDGs in recent years, society's values have changed significantly. Under such circumstances, companies need to be conscious of their role as public institutions in society and to pursue social and corporate sustainability. In those respects, I believe that our triple bottom line approach is truly clear. We will engage in management that places importance on the environment and society while emphasizing their balance with economic growth.

We have introduced Blue Value™ and Rose Value™ as a means of visualizing the results of our triple bottom line management and sharing and communicating those results to our stakeholders. They have also been set in the KPIs for the Long-Term Business Plan, and we will steadily expand our Blue Value™ and Rose Value™ products that help to solve environmental and social challenges. I also believe that these yardsticks are extremely effective as value standards for our employees in engaging in their work and I intend to make use of them for this purpose.

Two issues that we must address seriously as social challenges are climate change and plastic waste. Until now, we have largely focused on a linear business model involving the manufacture of products from raw materials. Going forward, however, unless we pursue those operations in tandem with businesses that create circular flows of resources, that is the recycling and reuse of products and their materials, it will be difficult to raise corporate value further. I want us to take an integrated approach to solving the problems of climate change and plastic waste as a single, inseparable challenge, from the over-arching perspective of transitioning to a circular economy.

For us, social challenges represent both risks and business opportunities. However, cooperation with others outside our own company is essential if we want to grasp those opportunities. Going forward, we will engage in initiatives with broad perspectives that incorporate the entire value chain, including collaborations with companies in other industries and cooperation that transcends national and regional borders.

▶▶ See Sustainability on page 24.

Creating an Environment for Nurturing Positive Ambition

We will work on creating an organization in which every single employee can address their work with a high degree of motivation and a sense of reward.

For any company, its people are its greatest asset. This is true of any era. To nurture our people, we have introduced a range of different schemes, including training programs for management personnel and global personnel. I also want to put more effort into the more fundamental aspects, such as reforming work styles and creating an environment for raising motivation, to support a positive mindset in our employees.

One major change in recent times has been the ongoing change in the way young people work and the way they think about the company.

For a company to achieve sustainable growth, it must be attractive to these kinds of people of the new generation. We will aim to be a corporate group that offers a sense of reward for its people of all generations in all sectors, such as manufacturing, sales, and R&D. In our current project to review the Long-Term Business Plan as well, we are discussing our ideal vision for the future including the creation of this kind of culture. We will embark on new reforms on the basis of those discussions.

▶▶ See Human Resources Strategy on page 57.

Thorough Awareness of Safety

Recognizing anew the importance of safety through the unprecedented experience of the COVID-19 pandemic.

Safety is also an extremely important mission in the management of the Mitsui Chemicals Group. To uphold safety, we must never forget the explosion and fire that occurred in the resorcinol production facility at our Iwakuni-Ohtake Works in 2012. Since then, we have united with the manufacturing sites to make cumulative improvements. However, with the continued spate of problems in recent years, we are facing the challenge of a failure to instill a thorough awareness of safety.

To solve such a grave challenge, we will pursue initiatives from renewed fundamental perspectives. In addition to reforming our systems and introducing new technologies, we will go one step further to create an environment in which the employees who are responsible for safety at our manufacturing sites can address their work positively and with enthusiasm.

The pandemic we are currently facing has, I feel, also been an invaluable opportunity to re-examine what safety in the company should look like. I have been struck anew by the importance of the kinds of safety that protect the health of our employees. As a corporate group that fulfills its social responsibilities and ventures forward together with society, we will thoroughly instill an awareness of safety once more.

▶▶ See Responsible Care on page 72.

To Our Stakeholders

We will aim to be a “company that is both strong and good” and that, bringing together the strengths of every one of its employees, has the ability to get things done to achieve its goals.

I believe that the days have passed in which the value demanded of a company is assessed on its exceptional “strength” on the economy axis alone. Having said that, if we pay attention only to the environment and society axes, it will be difficult to raise sufficient profit and we will be unable to meet the expectations of our stakeholders, such as the shareholders and employees. It is for this very reason that our triple bottom line management approach, which seeks the right balance between the economic, environmental, and social dimensions, is so important.

The world is in the midst of a storm such as it has never before experienced in the form of the COVID-19 pandemic. We could certainly say that we are now navigating those rough seas. However, the time will come when the storm has passed, and those adverse winds will subside. I believe that the duty that I have been charged with in steering the Mitsui Chemicals Group is to create the best conditions so that the company can sprint full steam ahead when that time comes. It is precisely because this is the era we are in that we will set our gaze high as we look toward the future, bring together the strengths of every one of our employees, and aim to be a “company that is both strong and good,” a company that will achieve the goals it has set for itself with certainty and achieve sustainable growth together with society.

United as One Team under a new leadership, we aim to build a new stage for the Mitsui Chemicals Group.



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From left

ISAYAMA Shigeru
Full-time Corporate Auditor

FUJITSUKA Mikio
Outside Corporate Auditor

SHIMOGORI Takayoshi
Member of the Board,
Senior Managing Executive Officer

SHINBO Katsuyoshi
Outside Corporate Auditor

BADA Hajime
Member of the Board, Outside Director

HASHIMOTO Osamu
Representative Director,
Member of the Board, President & CEO

TANNOWA Tsutomu
Representative Director,
Member of the Board, Chairman

KURODA Yukiko
Member of the Board, Outside Director

MATSUO Hideki
Representative Director,
Member of the Board,
Executive Vice President

YOSHIMARU Yukiko
Member of the Board, Outside Director

KUBO Masaharu
Full-time Corporate Auditor

TOKUDA Shozo
Outside Corporate Auditor

NAKAJIMA Hajime
Member of the Board,
Managing Executive Officer



Scope and Principles

- Period: April 1, 2019 to March 31, 2020 (FY2019). Please note some data may postdate April 2020.
- Scope: Mitsui Chemicals, Inc. and the Mitsui Chemicals Group
  (Other entities, if included, are identified in the text.)
- Accounting principles: Japanese Generally Accepted Accounting Principles (J-GAAP)

Environment Social Governance
Guidance for Collaborative Value Creation

Editorial Policy

In compiling this Mitsui Chemicals Report 2020, we sought to present a comprehensive overview of our various strategies and performance from both the financial and non-financial perspectives with the ultimate goal of creating a platform for meaningful dialogue with all stakeholders. While we have drawn on the disclosure framework for integrated reports issued by the International Integrated Reporting Council (IIRC) and the Ministry of the Economy, Trade and Industry's Guidance for Collaborative Value Creation, we have tried to avoid a rigid format. Our goal has been to provide a useful document that allows readers to gain a deeper understanding of our efforts toward the creation of value through innovation over the medium- to long-term.

Forward-Looking Statements

This report contains forward-looking statements about future plans and strategies as well as forecasts and expectations regarding the performance of the Mitsui Chemicals Group. Actual results may differ materially from those projected due to a variety of factors, and the Mitsui Chemicals Group cannot guarantee that any forward-looking statements herein are accurate or that targets will be achieved. (Planned figures are as of May 14, 2020 on an IFRS basis.)

Inclusion in ESG investment indices (as of September 2020)

FTSE4Good
FTSE Blossom Japan
2020 MSCI ESG Leaders Indexes Constituent
2020 CONSTITUENT MSCI JAPAN ESG SELECT LEADERS INDEX
2020 CONSTITUENT MSCI JAPAN EMPOWERING WOMEN INDEX (WIN)
MEMBER OF Dow Jones Sustainability Indices
In collaboration with SAM a RobecoSAM brand
2020 Sompo Sustainability Index

External Assessments
https://jp.mitsuichemicals.com/en/sustainability/evaluation/index.htm

At a Glance

Chemicals play a prominent role in supporting industrial development and enriching people's lives.

Throughout our more than 100 years of history, the Mitsui Chemicals Group has contributed to the development of society through the power of chemistry, by accumulating technology and knowledge in fields such as precision synthesis technologies and polymer science to create products that meet the needs of the times. We will continue to provide solutions through innovative technologies and products to address everything from global challenges to everyday needs.



Mobility

Subsegments

- Elastomers
- Performance compounds
- Overseas PP compounds
- Performance polymers

Main applications

Auto bumper and instrument panel materials, smartphone camera lens materials, ICT materials, and others



Health Care

Subsegments

- Vision care materials
- Nonwovens
- Personal care materials
- Dental materials

Main applications

Plastic ophthalmic lens materials, materials for disposable diapers, masks, and medical gowns, dental materials, and others



Food & Packaging

Subsegments

- Coating & engineering materials
- Performance films & sheets
- Agrochemicals

Main applications

High-performance packaging materials, packaging films, industrial films and sheets, semiconductor manufacturing process tapes, insecticides, fungicides, and others



Basic Materials

Subsegments

- Petrochemicals
- Basic chemicals
- Polyurethane raw materials

Main applications

Engineering plastics for automotive, aircraft, consumer electronics, and other applications, cushion materials, and others

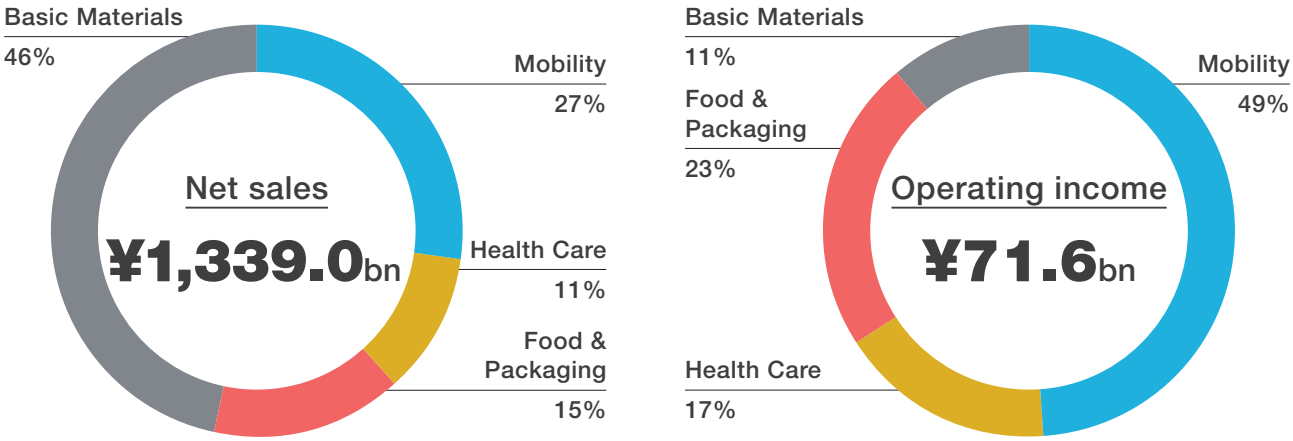


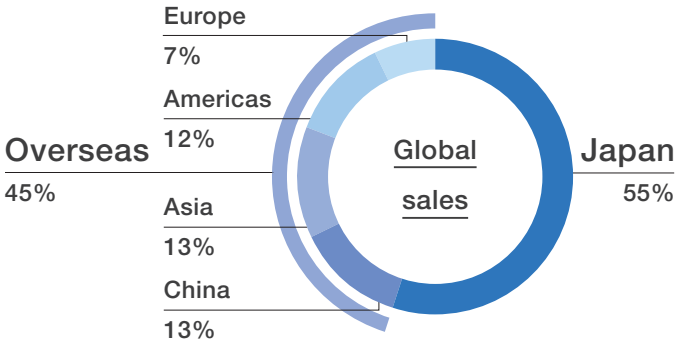
New Business

Main businesses

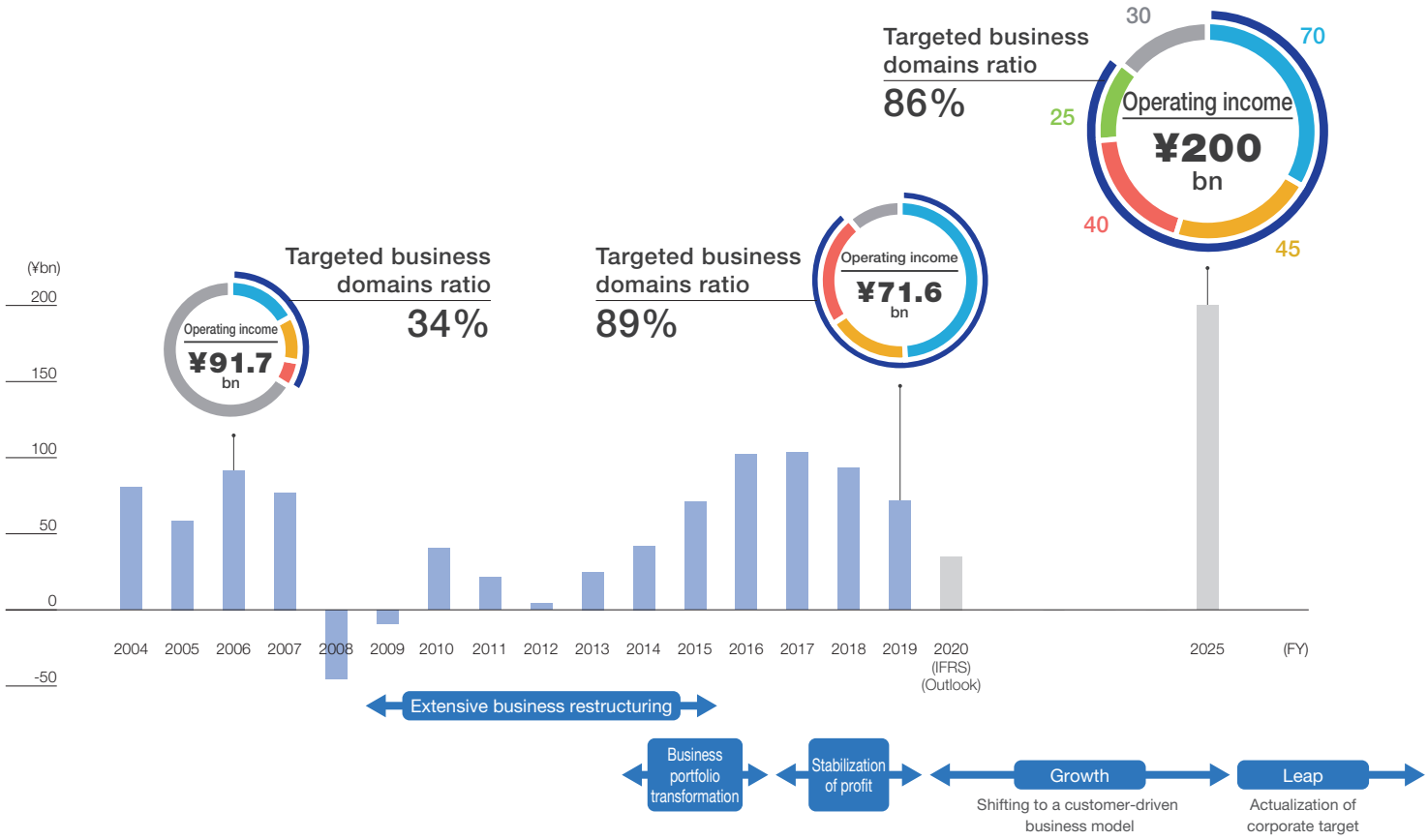
- ICT materials business
- Energy solutions
- Robot materials business
- Open innovation

Segment data





Operating income and business portfolio transformation



Value creation story

Value Creation Process

Corporate Vision

Corporate Mission

Contribute broadly to society by providing high-quality products and services to customers through innovation and the creation of materials, while keeping in harmony with the global environment.

Corporate Target

Constantly pursuing innovation and growth to become a chemical group with an undisputed global presence.

Mitsui Chemicals Group's Future Vision
https://jp.mitsuichemicals.com/en/corporate/management/

Social trends

Changes in global environment
- Climate change, natural disasters, shift away from plastics
- Stricter environmental regulations

Population increase
- Issues concerning resources, energy, water, and food

Maturation of developed nations and rise of emerging countries
- Declining birth rate and aging population (developed nations)
- Growing need for improved QOL (emerging countries)

Advancements in technology
- Increasingly information-based society (IoT, big data, AI, etc.)
- Industrial and social paradigm shifts

Emerging risks
- Infectious diseases, cyberterrorism

Input

Injection of resources

Global human resources
17,979

Capital expenditure
¥76.3bn

Percentage of overseas employees
43%

R&D expenses
¥36.4bn

Financial position

Consolidated total assets
¥1,480.1bn

Net D/E ratio
0.76

Shareholders' equity ratio
35.6%

Credit ratings
Japan Credit Rating Agency (JCR)
A+
Rating and Investment Information (R&I)
A

Four strengths P. 14 ▶▶

- 100 years of technological prowess
- Diverse range of products & services
- Global platform & diverse human resources
- Robust customer base

Creating new customer value and solving social challenges through our business activities

Triple Bottom Line Management

We believe that in order to achieve sustainable growth and development together with society, it is important to maximize the value we create and at the same time reduce risk along the three axes of economy, environment, and society. We are pursuing initiatives in each of these dimensions as shown on the right.

Economy

Maximize Value

Realizing VISION 2025
P. 20 ▶▶

Implementing R&D strategy
P. 54 ▶▶

Minimize Risk

Strengthening governance
P. 60 ▶▶

Reinforcing risk management and compliance
P. 69 ▶▶

We believe that broadly helping to solve various issues faced by society through our business activities based on our Corporate Mission is the Mitsui Chemicals Group's reason for existence. Moreover, in recognizing the importance of finding the right balance between the three dimensions (i.e., economy, environment, and society) in order to realize sustainable development of society and the Group, we will continue to propel our triple bottom line management approach. With these ideas in mind and in light of social trends and our Group strengths, we aim to realize a future cohesive society in harmony with the environment, health and well-being in an aging society, and industrial platforms in harmony with local communities. We will continue to create new customer value and help build a better future society through our business activities.



Mobility

P. 36 ▶▶



Health Care

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Food & Packaging

P. 44 ▶▶



Basic Materials

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New Business

P. 51 ▶▶

Output*

Net sales
¥1,339.0bn

Operating income
¥71.6bn

Profit attributable to owners of parent
¥37.9bn

ROE
7.0%

Total return ratio
77.2%

Dividends
¥100/share

Acquisition of treasury stock
¥10.0bn

Blue Value™ sales
¥237.6bn

Rose Value™ sales
¥207.7bn

*Actual results as of FY2019

Outcome

Helping build a better future society

- Cohesive society in harmony with the environment
- Health and well-being in an aging society
- Industrial platforms in harmony with local communities

2025 Long-Term Business Plan
https://jp.mitsuichemicals.com/en/corporate/vision/index.htm

Environment

Maximize Value

Expanding Blue Value™ products

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Minimize Risk

Tackling climate change and problems with plastic

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Society

Maximize Value

Implementing human resources strategy

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Expanding Rose Value™ products

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Minimize Risk

Implementing intellectual property strategy

P. 56 ▶▶

Promoting Responsible Care

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Four Strengths of the Mitsui Chemicals Group

Ever since we started up our coal chemical business in 1912 in Omuta (Fukuoka), the Mitsui Chemicals Group has continued to produce numerous different products. And after operations at Japan's first ethylene plant came online in 1958, we started to accumulate state-of-the-art technologies in the petrochemicals field. Since the establishment of Mitsui Chemicals in 1997, we have built a global customer and human resource base and are striving to reach further heights.

100 years of technological prowess

Over the course of our history, we have built our competitive advantage on the pillars of precision synthesis technology and polymer science as well as manufacturing process technology that underpins both. These technologies continue to be the driving force behind our broad lineup of products to this day.

Our History
https://jp.mitsuichemicals.com/en/corporate/history/index.htm

Precision synthesis technology
derived from coal chemicals

Making fertilizer from exhaust gas produced as a byproduct of the coal business was our starting point. Since then, we have honed our precision synthesis technology in the course of creating various products.

- **1912** Started operations at Mitsui Mining's Omuta Works
- **1915** First in Japan — Industrialized synthetic dye alizarin
- **1932** Started production of synthetic dye indigo
- **1963** Polyurethane material TDI
- **1987** TREBON™ MR™
- **2001** STARKLE™

Polymer science
to meet varied customer needs

We have cultivated our polymer science by developing resins to meet various needs, mainly with our cutting-edge polyolefin technology.

- **1958** First in Japan — Ethylene plant operations came online (Japan's first petrochemical complex)
- **1975** TAFMER™
- **1986** Established Advanced Composites, Inc.
- **1987** ICROS™ Tape
- **1995** APEL™
- **1998** World's first — EVOLUE™

Manufacturing process technology
The bedrock of our strong competitive advantage

Through a process of developing and improving various methods over the course of our long history, we have continued to raise the level of our technology so that we can stably manufacture high-quality products at low cost.

Global platform & diverse human resources

We are continuing to actively expand our global operations—overseas sales currently account for 45% of total sales. Globalization of our business is accelerating with more than 40% of employees now based overseas.

Global operations
31 countries

Employees
17,979
Percentage of overseas employees
43%

Consolidated companies
156

Overseas sales ratio
45%

Diverse range of products & services

Backed by the technology honed over our 100-year history, we develop a diverse range of competitive and high value-added products and services.

Robust customer base

Our products are rated highly by industry-leading companies, so much so that we boast a number one or number two share in certain global markets.

Precision synthesis technology

	Main products	Main applications	Market share
Health Care	MR™ (ophthalmic lens materials)	Plastic ophthalmic lens materials	Global No.1 (Share: 45%)
Food & Packaging	TREBON™ (etofenprox) STARKLE™ (dinotefuran)	Insecticide	Japan No.2

Polymer science

	Main products	Main applications	Market share
Mobility	Polypropylene compounds	Auto bumper and instrument panel materials	Global No.2 (Share: 21%) Asia No.1
	TAFMER™ (alpha-olefin copolymer)	Auto bumper and instrument panel materials	Global No.2 Asia No.1
	APEL™ (cyclic olefin copolymer)	Smartphone camera lens materials	Global No.1 (Share: >50%)
Food & Packaging	ICROS™ Tape	Semiconductor manufacturing process tapes	Global No.1
Basic Materials	EVOLUE™ (metallocene linear low density polyethylene)	High-performance packaging materials	Asia No.1

Manufacturing process technology

CFO Message



Transformation of our business portfolio

The business environment for commodity petrochemicals in which the Mitsui Chemicals Group operates has entered a period of dramatic change. The significant decline in earnings that resulted from the 2008 global financial crisis has been followed by addition and expansion of commodity petrochemical plants as part of economic stimulus packages in China and other countries, the shale gas revolution in the US, and entry into downstream markets by Middle Eastern competitors. This has necessitated bold reform of our previous business structure, which was centered on the basic materials business.

Against this backdrop of changing business conditions, we have been pursuing transformation of our business portfolio, restructuring the Basic Materials domain that underpins our earnings base in combination with expanding the three target domains which are charged with driving growth: Mobility, Health Care, and Food & Packaging.

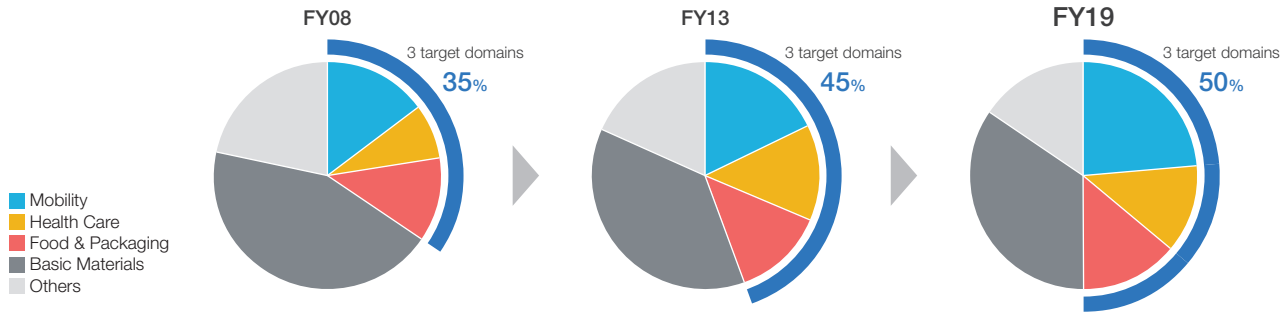
In an effort to reduce the susceptibility of the Basic Materials domain to fluctuations in overseas market conditions, we downgraded the size of our production capacity based on the principle of local production for local consumption, while also shifting from commodity products to differentiated products with the aim of securing a stable earnings structure. In the three target domains, we have expanded and newly installed production facilities in line with demand growth in order to establish a major earnings pillar for the Group.

As a result, earnings volatility in the Basic Materials

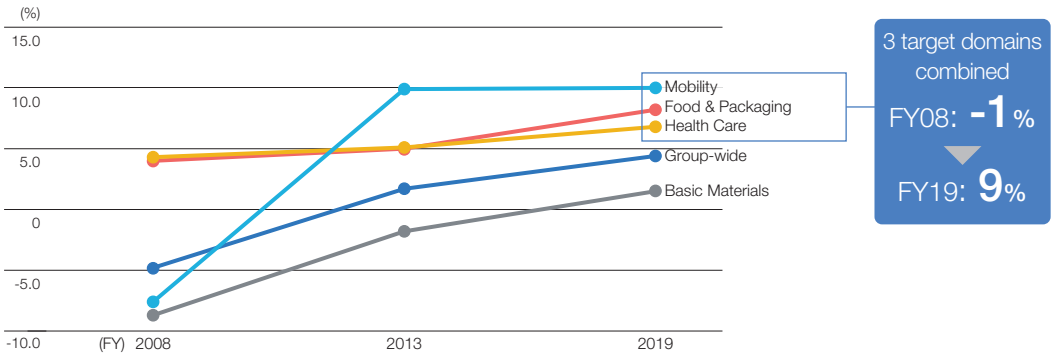
domain has steadily declined, improving ROIC. Moreover, the combined share of invested capital in the three target domains has expanded from 35% of the Group total in fiscal 2008 to 50% in fiscal 2019. We also engineered a significant upturn in combined ROIC in the three target domains from -1% to 9% over the same period.

These efforts to transform our business portfolio also enabled us to improve our net D/E ratio, a key indicator of sound finances, from 1.44 at the end of fiscal 2013 to 0.76 at the end of fiscal 2019, creating a financial position to support further growth investment.

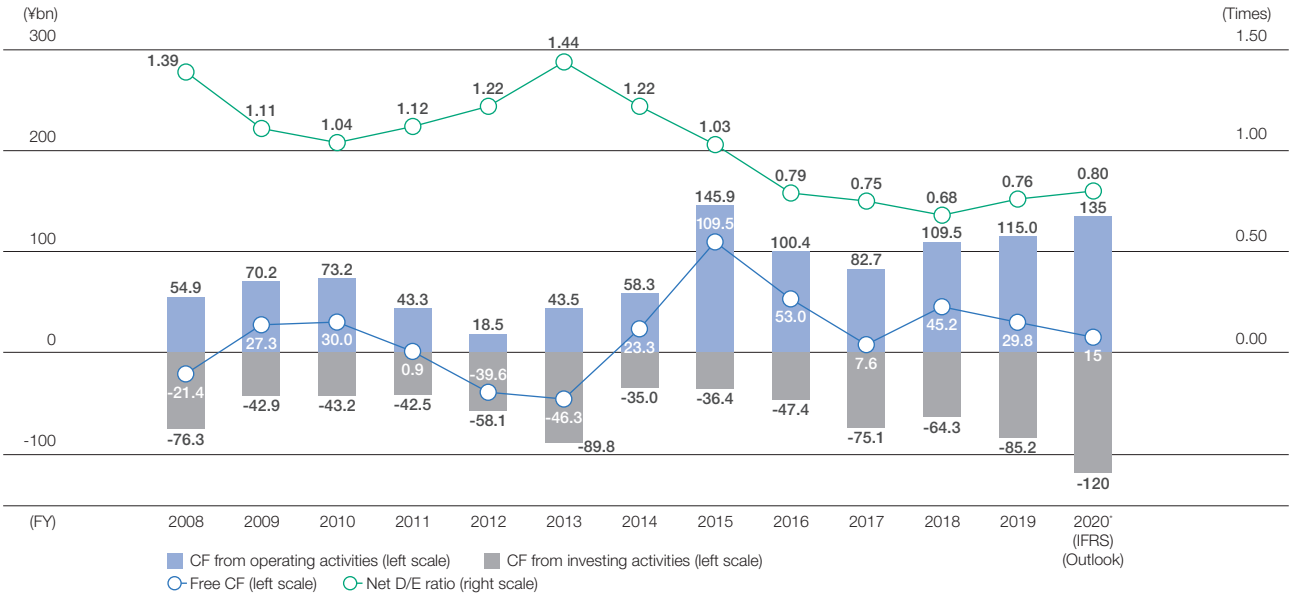
Invested capital



ROIC



Cash flows and net D/E ratio



*Outlook as of the date of announcement for the 1st Quarter of FY2020 results.

Future direction

In fiscal 2019, we began disclosing ROIC for each of our business segments to serve as a yardstick to quantitatively measure the transformation of our business portfolio. Under our basic policy of maximizing corporate value by enhancing capital efficiency (i.e., increasing the ROIC spread), we will continue pursuing a range of initiatives designed to accelerate this transformation.

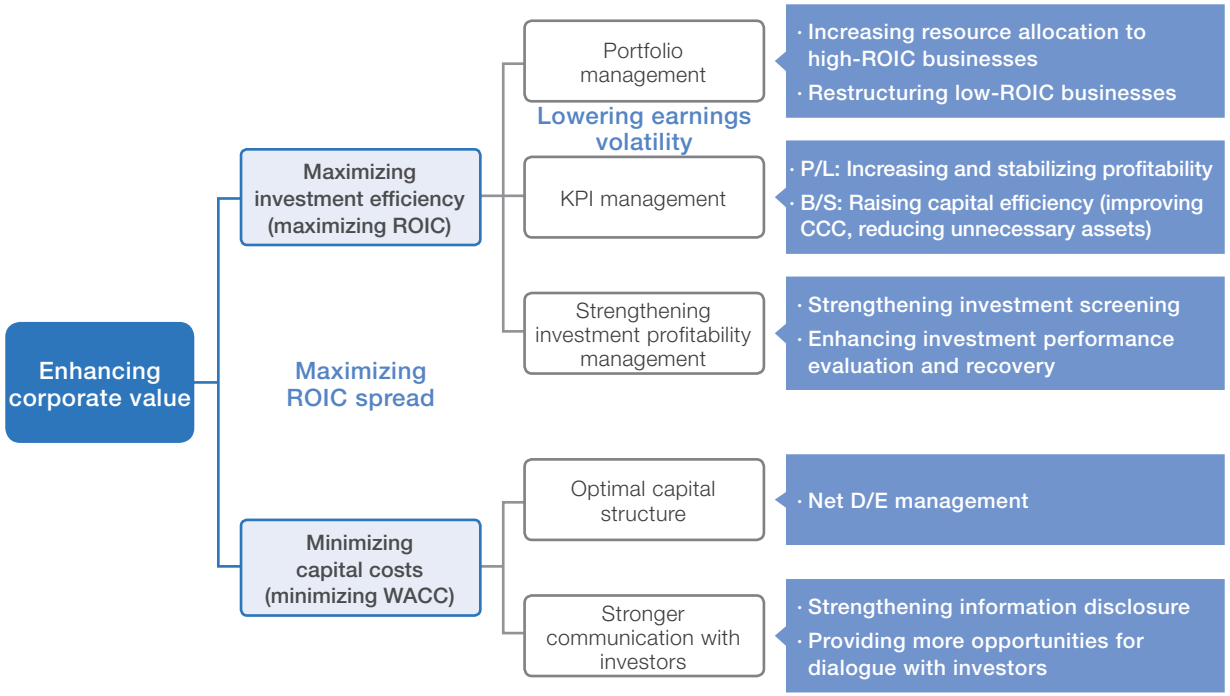
For the three target domains, we are working to steadily recover previous investments, in addition to swiftly establishing a new growth model that leverages collaboration in Group resources and our ability to propose solutions. Moreover, in domains such as ICT and Health Care, we are actively investing to accelerate growth, also making use of M&As in areas where our capabilities are insufficient. For both types of investment, we will conduct strict screening of profitability by giving due consideration to the cost of capital while employing indicators such as IRR to secure ample returns.

In the Basic Materials domain, although we have succeeded in improving earnings volatility and ROIC compared to the past, we believe that further restructuring is necessary, as these levels are still short of our expectations. We will compile detailed plans during fiscal 2020 and execute them with the aim of further improving volatility and profitability.

While pursuit of these measures may require increases in interest-bearing debt from time to time, we will endeavor to keep our net D/E ratio and credit ratings* at current levels over the medium term as we aim to balance financial soundness and minimizing capital costs.

In order to facilitate understanding of these measures and the Group's business position, we will continue to strengthen information disclosure and provide more opportunities to engage in dialogue with investors.

*Japan Credit Rating Agency, Ltd. (JCR): A+
Rating and Investment Information, Inc. (R&I): A



The impact of COVID-19

It is currently difficult to assess the likely impact of the COVID-19 pandemic on the global economy and corporate earnings up ahead. However, as measures against recession, we are reviewing costs in all areas with a view to achieving cost reductions of more than ¥3 billion, and also pursuing initiatives to secure cash, such as by reducing inventory sizes and enacting strict management of notes and accounts receivable.

In addition, we have also bolstered resistance to a further worsening in the environment by expanding our committed credit line to approximately ¥100 billion.

In investment areas too, we plan to push back execution of projects worth a total of around ¥13 billion, mainly non-urgent projects. However, we will steadily pursue investments and development that are necessary for our future growth.

Once the COVID-19 pandemic winds down, we anticipate many aspects of the world will have changed. As well as accommodating new ways of working, such as remote working, we intend to invest management resources to tap the new demand created by this different environment, including these new ICT-related trends and increased awareness of public health.

Shareholder returns

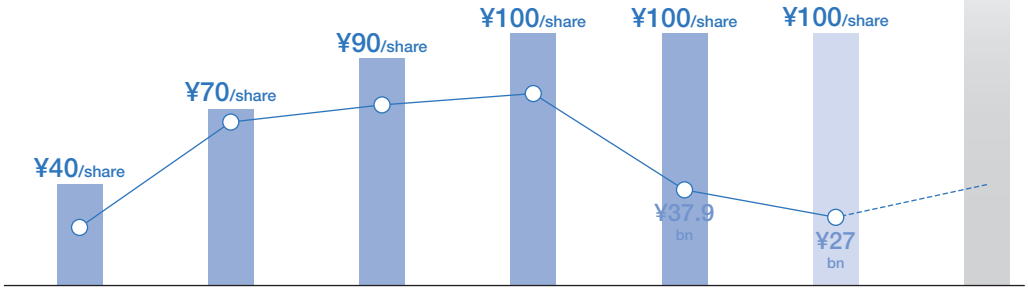
While the Mitsui Chemicals Group's top priority is the enhancement of corporate value through business growth and expansion, we also see the return of profit to our shareholders as a key management priority.

Our basic order of priority for profit allocation is: 1) investment for the continuation and growth of business, 2) shareholder returns, and 3) reduction in interest-bearing debt. These allocations will reflect ongoing comprehensive evaluation of the Group's financial situation, cash flows, and future earnings prospects.

Based on these policies, our approach to shareholder returns is to continue to pay stable dividends with due consideration given to DOE and other indicators, while also aiming to achieve a total return ratio of 30% or more by flexibly acquiring treasury stock depending on the share price and market conditions.

Flexible acquisition of treasury stock

Targeting shareholder returns of 30% or more



	FY15	FY16	FY17	FY18	FY19	FY20 (Outlook*3)
Annual dividend per share*1 (Yen)	40	70 (Memorial: ¥10)	90	100	100	100
Net income attributable to owners of the parent*2 (¥ bn)	23.0	64.8	71.6	76.1	37.9	27
Total return ratio (%)	34.9	21.6	32.1 (Acquisition of treasury stock: ¥5bn)	39.0 (Acquisition of treasury stock: ¥10bn)	77.2 (Acquisition of treasury stock: ¥10bn)	30% or more

*1 Mitsui Chemicals conducted a 5-to-1 share consolidation on October 1, 2017. Annual dividends per share have been adjusted retrospectively to reflect the share consolidation for all periods presented.

*2 Mitsui Chemicals has voluntarily adopted International Financial Reporting Standards (IFRS) from FY2020. Figures for FY2019 and before are profit attributable to owners of parent under Japanese Generally Accepted Accounting Principles (J-GAAP).

*3 Owing to the impact of COVID-19, dividends for FY2020 were "Undecided" at the time of FY2019 results announcement. Figures for FY2020 dividends and net income are forecasts as of the date of announcement for the 1st Quarter of FY2020 results.

VISION 2025 in Figures

In aiming to realize a future cohesive society in harmony with the environment, health and well-being in an aging society, and industrial platforms in harmony with local communities, as set forth in our 2025 Long-Term Business Plan, the Mitsui Chemicals Group has established respective targets for economy, environment, and society, the three dimensions of our management approach. Drawing on the strengths we have accumulated over our 100-year history, we will take on the challenge of achieving these goals as a highly profitable, growing, and sustainable company that contributes to society.

Economy

2025 Long-Term Business Plan Targets and KPIs

Accelerating our business portfolio transformation (shifting to a customer-driven business model)

- Expand three target domains
- Develop next generation businesses
- Strengthen competitiveness of the Basic Materials domain

Enhancing cash generation capabilities

- Conduct active investments while maintaining fiscal discipline
- Improve capital efficiency

Boosting shareholder returns

- Stable and continuous dividend payment
- Flexible acquisition of treasury stock

Operating income	¥200bn
Net sales	¥2,000bn
ROS	10%
ROE	10% or more
ROIC	8% or more
Net D/E	0.8 or less
Shareholder returns	Total return ratio of 30% or more
Growth investment	¥1,000bn incl. strategic investments ¥400bn (total amount for 10 years, excl. maintenance investments)
R&D expenses	¥70bn

Environment and Society

Maximize products and services to achieve a low-carbon, recycling-oriented, and cohesive society in harmony with the environment	Expand sales of environmentally oriented products and services ▶ Expand products and services that help realize a low-carbon, recycling-oriented, and cohesive society in harmony with the environment across the entire value chain.	• Blue Value™ products sales ratio: 30% or more
	Reduce environmental impact in production and logistics ▶ Reduce Greenhouse Gas (GHG) and environmentally harmful substance emissions and efficiently utilize resources throughout the Group as a whole.	• GHG emissions reduction rate*1: 25.4% or more compared with FY2005 (FY2030) • Energy intensity reduction*2: Continue at 1% or above (5-year annual reduction rate)
Maximize products and services to achieve better quality of life (QOL) and a smart society	Expand sales of products and services that contribute to a healthy and happy society ▶ Expand products and services that can improve QOL by addressing such issues as the declining birth rate and aging population, extending healthy life expectancy, and the food problem.	• Rose Value™ products sales ratio: 30% or more
Pursue thorough safety, high quality, and fairness across the entire supply chain	Ensure safety ▶ Maintain high levels of safety even in the face of diversifying human resources, facilities, and technologies associated with ongoing global growth and business portfolio transformation.	• Incidence of major accidents: Continue at zero • Significant occupational injury frequency: Continue at or below 0.15
	Provide high-quality products and services ▶ Ensure the stable supply of products that satisfy customers' requirements at a high level.	• Incidence of customer non-conformance: 10 ppm or less
	Implement product stewardship ▶ Implement risk management across the supply chain through the risk assessment of products and provision of safety information to customers and other stakeholders.	• Product risk assessment implementation rate*2: 99% or more (FY2020) • Provision of latest product safety information*2: Continue at 100%
	Continue as a company that is fair and trusted by society ▶ Thoroughly comply with all statutory and regulatory requirements and prevent misconduct in all global business activities.	• Incidence of major legal and regulatory violations: Continue at zero
	▶ Encourage sustainability initiatives of business partners.	• Supplier sustainability assessments and improvement support (sustainable procurement ratio): 70% or more
	▶ Enable Group employees to thrive at work and make the most of their potential.	• Ratio of women in management positions (manager-level or above)*3: 10% or more • Increase employee engagement

Three basic strategies to provide value to society



1 Pursue innovation

- Promote customer-driven innovation
- Strengthen our ability to propose solutions through R&D and by acquiring peripheral technologies and products



2 Accelerate global expansion

- Aim to grow the Group globally and reinforce overseas production and sales channels mainly through our own regional expansion and business alliances



3 Strengthen existing businesses

- Build next-generation plants with the use of IoT, AI, and other cutting-edge technologies
- All-out streamlining, including supply chains

	FY2019 Results	FY2020 Targets (IFRS)*4	
	¥71.6bn	Operating income before special items	¥35bn
	¥1,339bn	Sales revenue	¥1,145bn
	5.4%	ROS	3.1%
	7.0%	ROE	3.7%
	4.4%	ROIC	2.0%
	0.76	Net D/E	0.80
	Dividends **¥100**/share Acquisition of treasury stock **¥10**bn (Total return ratio **77**%)	Pending (Total return ratio of 30% or more)	
	Capital expenditure **¥76.3**bn (incl. maintenance investments)	Capital expenditure ¥122bn (incl. maintenance investments)	
	¥36.4bn	¥36bn	
	• **18**%	• New Blue Value™ and Rose Value™ certifications: 15 or more • Pre-launch Blue Value™ and Rose Value™ candidate products: Identify 15 or more	
	• **27.7**% • **-0.4**%	• GHG emissions reduction: 50 thousand tons or more compared with the previous fiscal year • Energy intensity reduction: 1% or more (5-year annual reduction rate), or 1% or more (annual reduction rate with FY2009 as base year)	
	• **16**%	• New Blue Value™ and Rose Value™ certifications: 15 or more • Pre-launch Blue Value™ and Rose Value™ candidate products: Identify 15 or more	
	• **0** • **0.31**	• 0 • 0.15 or less	
	• Number of complaints (Company-responsible)*2: Increased (compared with FY2017)	• Number of complaints (Company-responsible)*2 : Reduce by 10% or more (compared with FY2017)	
	• **99**% or more • **100**%	• 99% or more; formulate new assessment indicators • 100%	
	• **1**	• 0	
	• **44**%*2	• Complete preparations on survey for sustainable procurement in FY2021	
	• **3.0**% • Action plan registration rate **96**%	• 4.0% • Implement action plans	

Strategic Outlook for FY2020

- Redoubling our efforts to **secure cash flow in preparation for further downside risks** (e.g., reviewing our investments; cutting costs; adjusting operations and reducing inventory sizes in advance; expanding our committed credit line)
- **Step up our execution speed** toward further business portfolio reform
- **Solidify within FY2020** further restructuring plans for our Basic Materials segment to reduce volatility
- **Secure returns** from our investments in the target domains and actualize a **new growth model** swiftly
- **Accelerate growth through active investments in ICT, Health Care domains** that tap into growth opportunities

Related SDGs and Key Issues



- Climate change responses (reduction of GHG emissions)
- Air environment preservation
- Water resource protection and control
- Biodiversity
- Industrial waste control
- Efficient use of resources
- Low environmental footprint products and services
- Development of renewable energy



- Shift to urbanization and smart cities
- Declining birth rate and aging population
- Advancement of medical and pharmaceutical fields
- Food problems



- Safety and prevention
- Product stewardship
- Quality of products and services
- Employment and human resources
- Labor conditions
- Sustainable procurement
- Compliance

*1 Mitsui Chemicals, Inc. and consolidated subsidiaries in Japan
*2 Mitsui Chemicals, Inc. only
*3 Mitsui Chemicals, Inc. registered employees
*4 FY2020 targets as of May 14, 2020

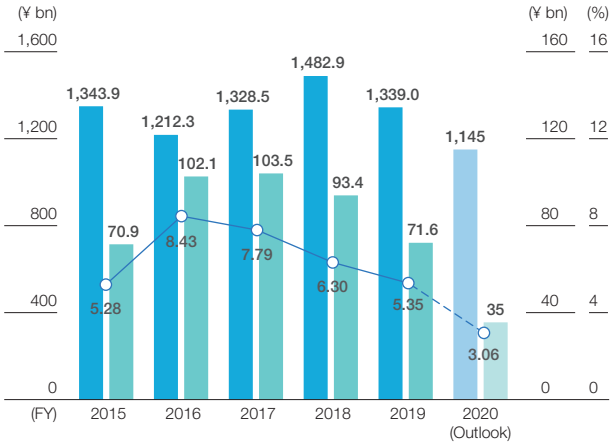
VISION 2025
https://jp.mitsuichemicals.com/en/corporate/vision/index.htm

Financial / Non-Financial Highlights

Financial highlights

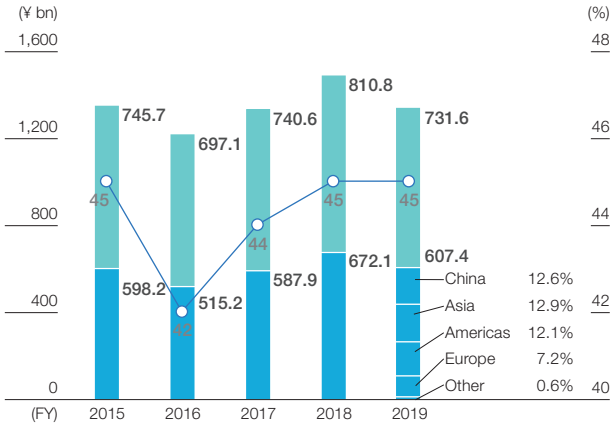
Mitsui Chemicals has voluntarily adopted International Financial Reporting Standards (IFRS) from fiscal 2020. Figures for fiscal 2019 and before are under Japanese Generally Accepted Accounting Principles (J-GAAP) and outlook figures for fiscal 2020 are under IFRS.

Net sales/Operating income/ROS



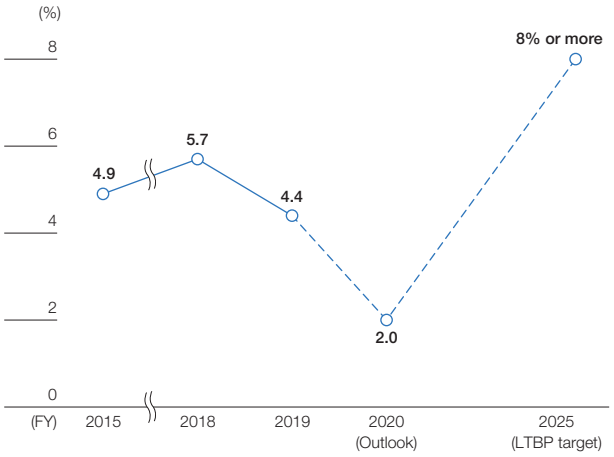
Net sales/Sales revenue (IFRS) (left scale)
Operating income/Operating income before special items (IFRS) (right scale)
ROS: Return on sales (right scale)

Overseas sales/Overseas sales ratio



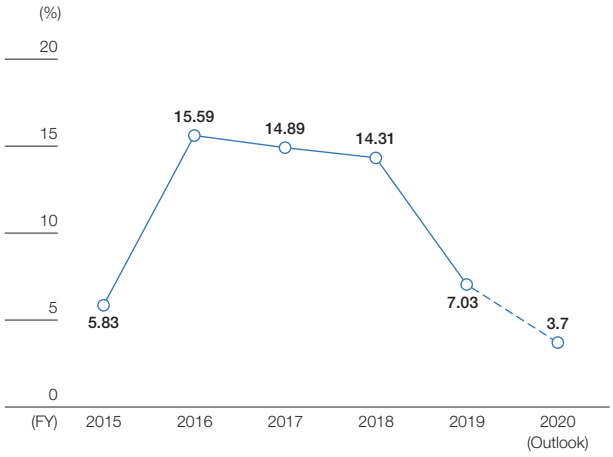
Overseas (left scale)
Japan (left scale)
Overseas sales ratio (right scale)

ROIC



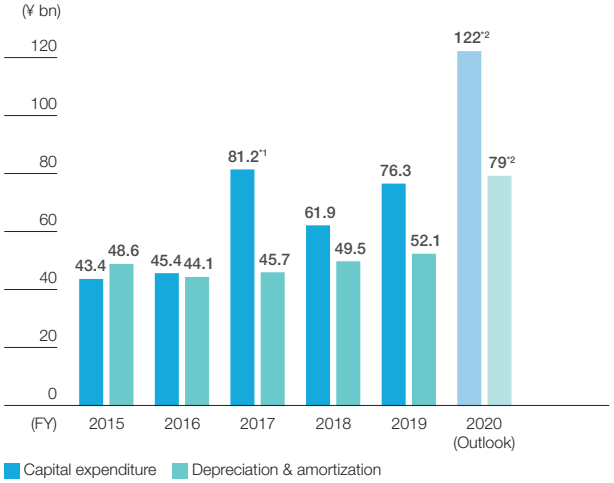
*ROIC: Return on invested capital=NOPAT/Invested capital

ROE



*ROE: Return on equity

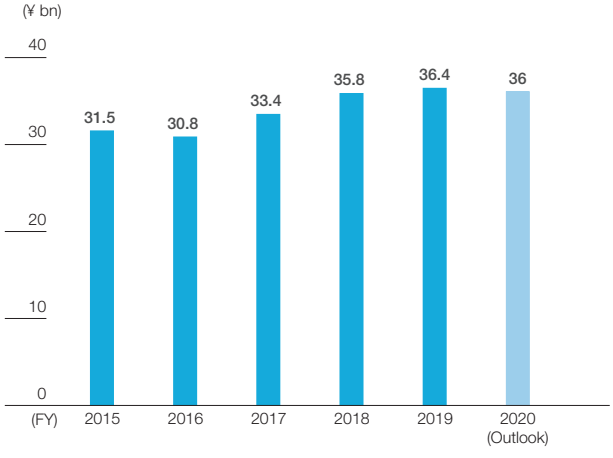
Capital expenditure/Depreciation & amortization



Capital expenditure
Depreciation & amortization

*1 Includes acquisition of shares of ARRK Corporation of ¥23.9 billion
*2 Includes increase from the recognition of regular maintenance and repair costs, etc., under IFRS

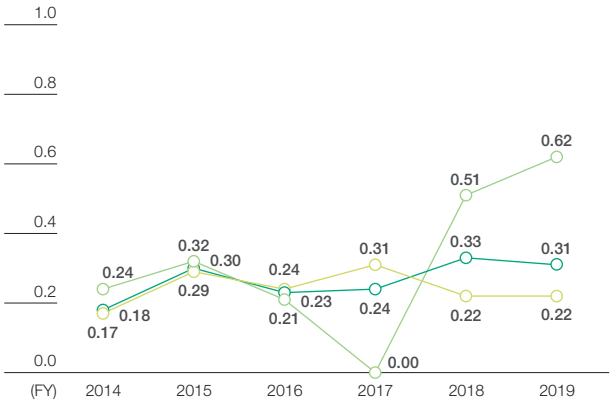
R&D expenses



Fact Book
https://jp.mitsuichemicals.com/en/ir/fact_book/index.htm

Non-financial highlights

Significant occupational injury* frequency

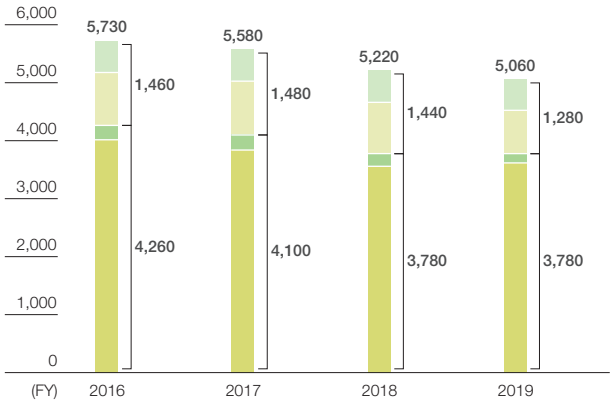


Japan Overseas Group

*Significant Occupational Injuries (SOIs) refer to occupational injuries that resulted in absence from work or death. SOIs also include lighter occupational injuries that, due to the potential danger in the cause of the injury, could have led to absence from work or death. SOIs do not include those injuries that are not directly related to operations.

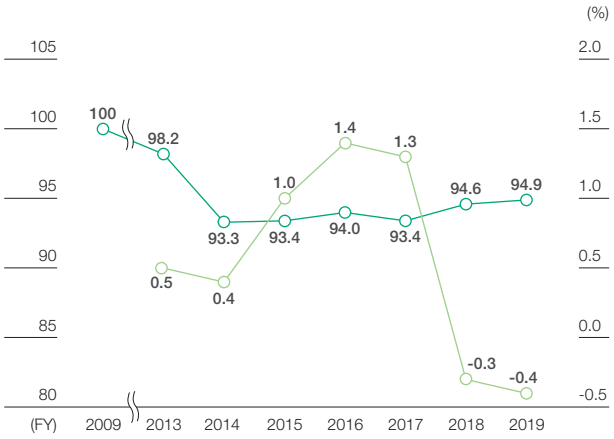
GHG emissions

(Thousand tons)



Scope 1 Japan Overseas Scope 2 Japan Overseas

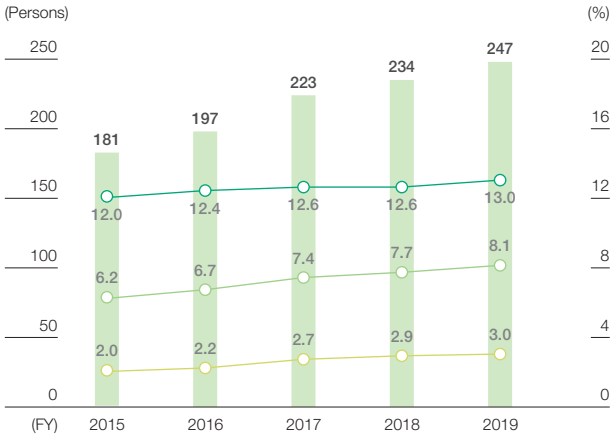
Energy intensity



Energy intensity index (FY2009=100) (left scale)
Five-year annual energy intensity reduction rate (right scale)

*Mitsui Chemicals, Inc.

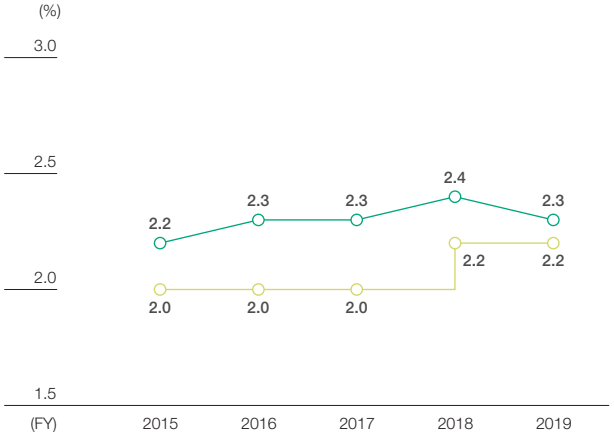
Ratio of female employees



Number of women in management positions (left scale)
Ratio of female employees (right scale)
Ratio of women in management positions (right scale)
Ratio of women in management positions (manager-level or above) (right scale)

*Mitsui Chemicals, Inc. registered employees

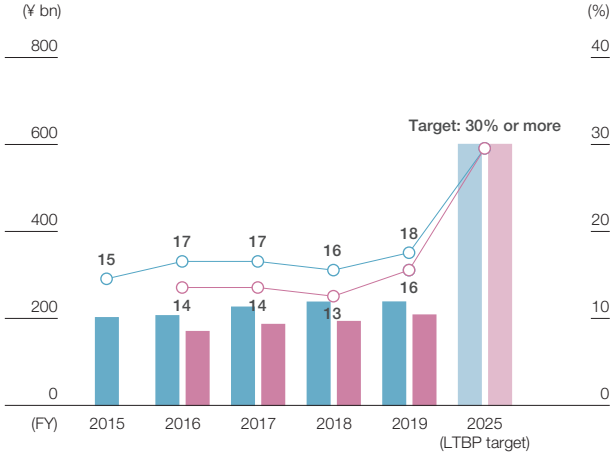
Ratio of employees with disabilities



Ratio of employees with disabilities Legally required ratio

*Mitsui Chemicals, Inc. registered employees

Blue Value™ and Rose Value™ products sales ratios



Blue Value™ sales (left scale) Blue Value™ sales ratio (right scale)
Rose Value™ sales (left scale) Rose Value™ sales ratio (right scale)

Sustainability Management—Message from the Responsible Officer



HIRAHARA Akio
Managing Executive Officer

We are reflecting ESG elements into management to build a sustainable corporate group.

Sustainability management requires companies to generate both social value and corporate value. To do so, it is important that companies accurately identify opportunities and risks from an ESG perspective and reflect them into management. The Mitsui Chemicals Group established the Corporate Sustainability Division in 2018 and has steered its course toward sustainability management with ESG elements at its core. By incorporating ESG elements into our management/strategies, and by improving ESG information disclosure to our stakeholders, we aim to create those two critical values.

Sustainability in the Mitsui Chemicals Group

In addressing global social challenges highlighted in the SDGs and other initiatives, we aim to achieve sustainable development in society and the Group by implementing the following:

- **Seek business opportunities and strive to solve challenges through business activities**
- **Recognize future risks for the Group and uphold our corporate social responsibility**

Challenges

Incorporation of ESG elements into management/strategies

- Reflect ESG considerations in management and strategy discussions at the Board of Directors, Company-wide Strategy Committee, and Corporate Sustainability Committee meetings
- Generate business involving business and R&D divisions and promote innovation

Improvement of ESG information disclosure

- Boost appeal to institutional investors, customers, and sustainability rating agencies
- Strengthen ESG dialogue

Creating social and corporate values through Blue Value™/Rose Value™

Blue Value™ and Rose Value™ help visualize our Group's efforts to address the challenges faced by society. We are working to expand the sales of our Blue Value™/Rose Value™ certified products as we believe that they provide a measure of how successful we are in achieving both social value and corporate value.

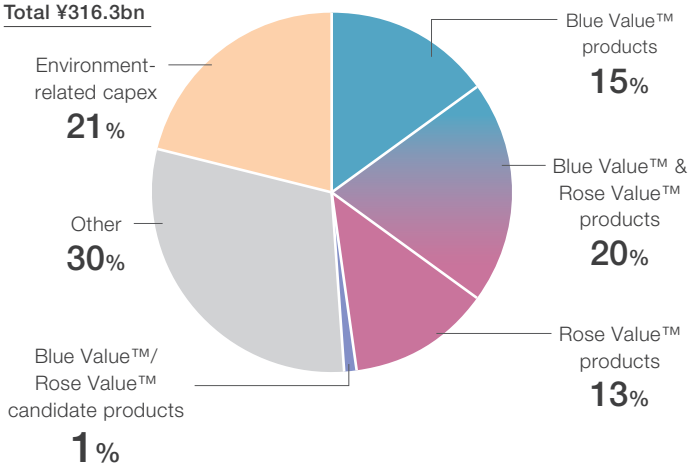
In order to encourage proactive investment that will lead to the growth of Blue Value™/Rose Value™ product sales, from fiscal 2019 we have made it mandatory that applications for large-scale investments include description of the opportunities and risks the project entails from the perspective of social challenges, such as by indicating the project's Blue Value™/Rose Value™ contributions and relevant SDG targets. This is a mechanism for reflecting ESG elements in investment decisions. It also provides an opportunity for our employees to think deeply about how they can contribute to solving these challenges. Starting in fiscal 2020, sales of Blue Value™/Rose Value™ certified products are being used as a management indicator for business divisions. By having each division incorporate medium- to long-term measures for expanding these products into their business strategies and even into their budgeting, it encourages each of them to take responsibility in this Group-wide effort. In addition, we are devoting our energy to developing future candidates of certified products by including Blue Value™/Rose Value™ perspectives from the stage of developing new research ideas and combining that with our stage management system.

Investment planning form (Example)

Name of proposed project [_____]
Name of div. [_____] Applicant [_____]
Outline of investment plan
Works [_____] Plant [_____] Products [_____]
Purpose & details, total investment amount, execution plan [_____]
Economic viability evaluation IRR [__] % PP [__] years
Competitor analysis; business & marketing strategies; sales, profit, production, & headcount plans [_____]
ESG elements ◆Related SDG Targets [____] [____] [____] ◆Blue Value™/Rose Value™ contributions [__] Reducing CO_2 [__] Enriching life and society [__] Conserving resources [__] Extending healthy life-span [__] Coexisting with nature [__] Protecting food ◆Social challenges [_____] ◆GHG emissions CO_2 increase or decrease [__] ton/year Estimated carbon price [__] yen

FY2020 large-scale investments*

Total ¥316.3bn



*Not including alliances, M&A, financial assistance, etc. For FY2020–2022.

Key Issues (Materiality)
https://jp.mitsuichemicals.com/en/sustainability/mci_sustainability/materiality/index.htm

Addressing climate change and the problems with plastic with a view to transition to a circular economy

As we strive to realize a circular economy, we believe that climate change and the problems with plastic should be addressed together as a single, inseparable challenge. The creation of a new Climate Change/Plastics Strategy Department within the Corporate Sustainability Division in June 2020 was intended to embody that concept. This organization will play a leading role in gathering and analyzing the latest global trends and data and will reflect them in Company-wide strategies to accelerate our climate change policy and plastics strategy.

A range of discussions on promoting our sustainability strategy have been held in meetings of the Board of Directors and the Corporate Sustainability Committee. There was a debate, for example, between those, on the one hand, who felt that the difficulty in achieving short-term returns in businesses involving the recycling of resources and reducing environmental impact meant that it could not be left to individual divisions, and that instead we should allocate Company-wide budgets to speed up our efforts. On the other hand, others countered that if we shifted them entirely to the Company-wide level, then it would weaken the sense of responsibility felt by each division. Based on this discussion, we have created a structure to promote our plastics strategy that allows us to oversee all related projects together. With this structure, we can monitor the progress of both projects by individual divisions and cross-organizational projects, and intend to speed up decisions such as on resource allocation and clarify the responsible divisions.

With regard to climate change, the Corporate Sustainability Committee is discussing long-term policy with an eye to 2050 and beyond and is steadily disclosing information in line with the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD). Also, from fiscal 2020, we began identifying climate change-related issues which are viewed as future opportunities and risks and setting targets in every division. As climate change responses are one of the key issues (materiality) of the Group, I think it is important that all divisions, not just certain ones, think about how those issues relate to themselves.

Toward a review of key issues (materiality)

As seen in the table, the Group has selected 22 key issues. Since our review in 2016, when we were drafting the 2025 Long-Term Business Plan, there have been major changes in the environment, including a dramatic rise in the social demands related to climate change and the problems with plastic, the COVID-19 pandemic, and so on. Fiscal 2020 is also the year in which we plan to review the Long-Term Business Plan. Currently, as we look back on the past four years, we are discussing what should or should not be changed and what we want our company to look like in 2030 as we work toward 2050. We plan to revise the key issues to reflect such internal and external conditions and announce them together with the Long-Term Business Plan. I want us to tackle the selected key issues as an integrated part of our business strategy.

Issues for which the Group's business has an impact on society	Issues for which the Group's business can contribute to society
Climate change responses (reduction of GHG emissions)	Low environmental footprint products and services
Air environment preservation	Development of renewable energy
Water resource protection and control	Shift to urbanization and smart cities
Biodiversity	Declining birth rate and aging population
Industrial waste control	Advancement of medical and pharmaceutical fields
Efficient use of resources	Food problems
Stable supply of industrial materials	**Underlying issues**
Optimization of production	Sustainable procurement
Safety and prevention	Compliance
Product stewardship	
Quality of products and services	
Employment and human resources	
Labor conditions	
Stakeholder engagement	

Promoting sustainability strategy throughout the entire Company

Over the past two years, our management has focused on promoting our sustainability strategy throughout the Company and has achieved steady results. In addition to continuing top-down efforts to communicate this strategy, in fiscal 2020 we will also concentrate on gaining wider understanding among mid-career and worksite employees. Our goal is to create an environment where every employee is conscious of sustainability in their daily work so that it is naturally tied to their actions.

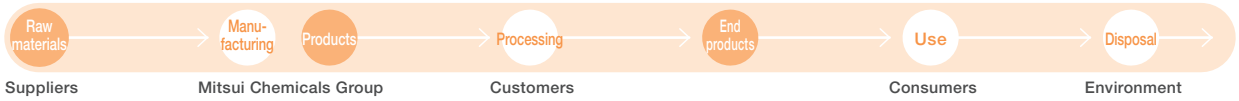
Blue Value™ and Rose Value™ — Visualizing Contributions to the Environment and Society

Our Blue Value™ and Rose Value™ help visualize the contributions our products and services make to the environment and society and enable us to share those values with stakeholders so we can realize a future cohesive society in harmony with the environment and health and well-being in an aging society. We evaluate our products and services according to application using our own distinctive yardsticks: the Blue Value™ Index for assessing environmental impacts and the Rose Value™ Index for assessing improvement in quality of life (QOL). Those that make significant contributions to the environment or improvements to QOL are certified as Blue Value™ and Rose Value™ products, respectively.

Features

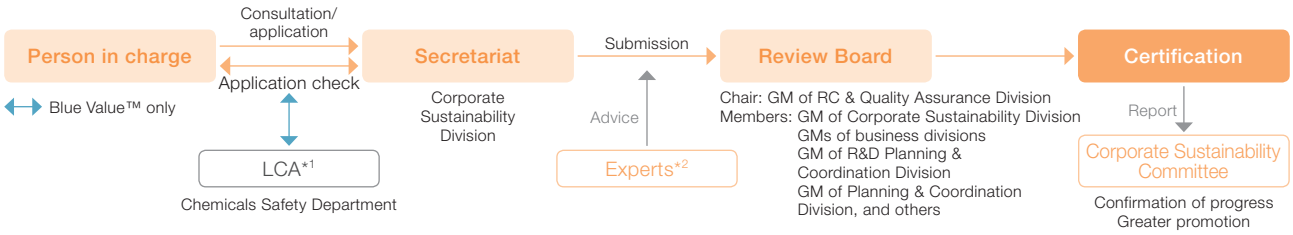
- Visualization of contributions to the environment and society through our business activities
- Ability to check application-specific contributions at each stage of the product life cycle
- Developing and providing products and services with high contribution value and sharing it with stakeholders
- Aim to realize our ideal future society by building a Blue Value™ and Rose Value™ chain

Providing value through the Blue Value™ and Rose Value™ chain



Screening and certification process

The person in charge of sales and marketing first assesses the potential Blue Value™ or Rose Value™ product or service using the aforementioned indices and then consults with and submits an application to the secretariat. The review board deliberates on the supporting evidence and certifies the product or service if it satisfies the criteria. The deliberations focus on whether the product's concept and selling point are consistent with the area in which it offers contributions, as well as to check the level of those contributions. In order to certify products and services with an emphasis on appropriateness and objectivity, our assessment methods and screening criteria have been designed based on the advice of external experts. We also ask these experts to present their opinions prior to the review board regarding the candidate product's level of contribution.



*1 Life cycle assessment: A technique to quantitatively assess environmental impacts associated with all the stages of a product's life, such as development, manufacture, distribution, use, and disposal.

*2 Experts: Blue Value™ advisor
Dr. ITSUBO Norihiro
Professor, Faculty of Environmental Studies
Dean, Graduate School of Environmental and Information Studies, Tokyo City University

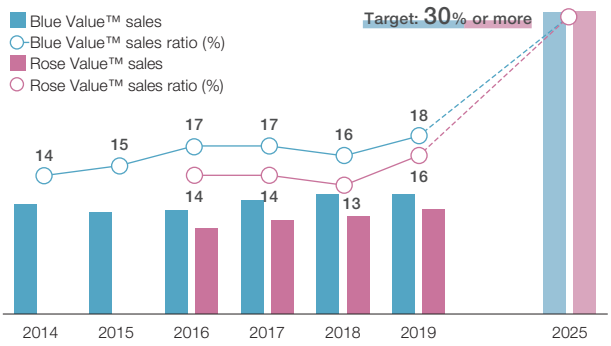
Rose Value™ advisor
Mr. ADACHI Eiichiro
Counselor, Japan Research Institute, Limited

Setting KPIs

The sales ratio of Blue Value™ and Rose Value™ products is set as one of our KPIs in our 2025 Long-Term Business Plan. Growth in the sales ratio for certified products demonstrates that we are making steady progress toward achieving our ideal future society. As an initiative for expanding sales, we are continuing to reflect them into our long-term business strategies and investment plans.

Beginning in fiscal 2020, we are setting expansion strategies as annual targets, with sales of Blue Value™ and Rose Value™ products as management control indicators for each business division. In addition, we set targets on a Group-wide basis for more than 15 pre-launch candidate products. By certifying them as candidate products and monitoring them from the product development stage, we aim to steadily expand certified products.

Blue Value™ products / Rose Value™ products sales ratio



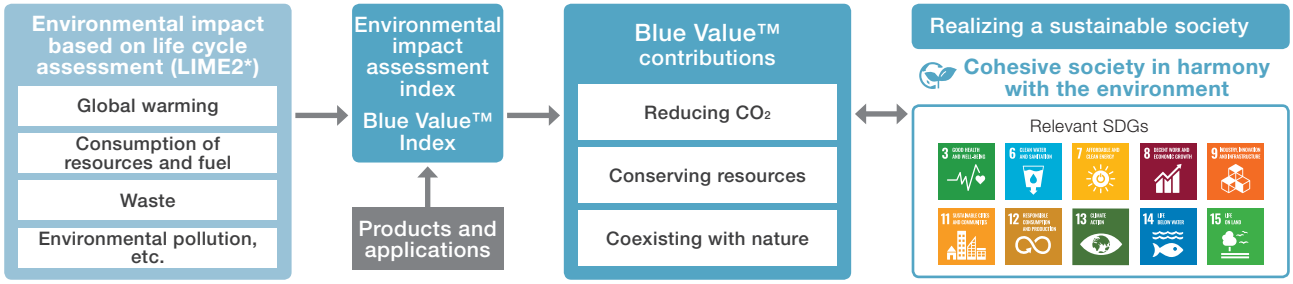
Blue Value™
— Environmental contribution value

Earth blue Instead of green, which is associated with nature and ecology, blue represents something much bigger—the earth. It is also our corporate color and signifies harmony with the global environment and our contributions to society.

Many chemical products pass through various stages; for example, they are manufactured and processed into end products and then disposed of after use. We visualize from a product stewardship perspective how we could reduce a product's impact on the environment at each stage of its life cycle. By sharing this information with various stakeholders, we believe we can further contribute to environmental protection. With this idea in mind, we devised the Blue Value™ standard for environmentally friendly products in 2015 with the aim of achieving a future cohesive society in harmony with the environment.

We use the Blue Value™ Index—our own LCA-based environmental impact assessment index—to evaluate products and services depending on their application and certify them as Blue Value™ if they significantly contribute to protecting the environment in the following three categories: (1) reducing CO_2; (2) conserving resources; and (3) coexisting with nature.

We carry out comparative assessments against market-standard products and our existing product lineup because a requirement for Blue Value™ certification is that not only must the product have a higher score in either of the evaluation categories, it must not be inferior in all categories for each stage of its life cycle. Moreover, the use of qualitative and semi-quantitative assessments means products can be easily evaluated, but whenever required, the department responsible for LCAs can technically and quantitatively assess the superiority of a product's environmental contributions.



*LIME2 (Life-cycle Impact assessment Method based on Endpoint modeling): Damage assessment-type life cycle environmental impact assessment method based on environmental conditions in Japan.

Contributions	Blue Value™ Index		
	Evaluation categories		Related assessment items
Reducing CO_2	**Reduction of GHG emissions**	· Reduce GHG emissions at the raw materials acquisition, manufacturing/processing, and end products use/disposal stages	• Weight and volume reduction • Long service life • Natural energy sources • Non-fossil raw materials • Environmental cleanup The above items are assessed for their contributions to any of the evaluation categories
	Saving of energy, electricity, fuel	· Reduce energy such as electricity and fuel at the raw materials acquisition, manufacturing/processing, and end products use/disposal stages · Use of end products in the energy conservation field	
Conserving resources	**3Rs, ease of sorting, conservation of resources**	· Use reusable/recyclable materials at the manufacturing/processing stages for products, processed items, and end products as well as reduce material usage · Products, processed items, and end products based on reuse/recycling · Possible separation at the time of disposal	
Coexisting with nature	**Ecosystem conservation (human health/environmental organisms)**	· Reduce the impact on ecosystems from chemical substances across product life cycles; specifically, reduce the addition of chemical substances harmful to ecosystems, curb their formation, and use chemical substances that are less toxic	
	Prevention of environmental contamination	· Reduce the impact on the global environment excluding people/living organisms from environmental pollutants across product life cycles; specifically, reduce the addition of environment pollutants harmful to ecosystems, curb their formation, and use substances that do not pollute the environment	

*GHG emission-related global warming substances, chemical substances harmful to ecosystems, and environmental pollutants are all substances for which characterization factors have been calculated in LIME2.

Blue Value™/Rose Value™
https://jp.mitsuichemicals.com/en/sustainability/mci_sustainability/contribution_value/index.htm

Rose Value™

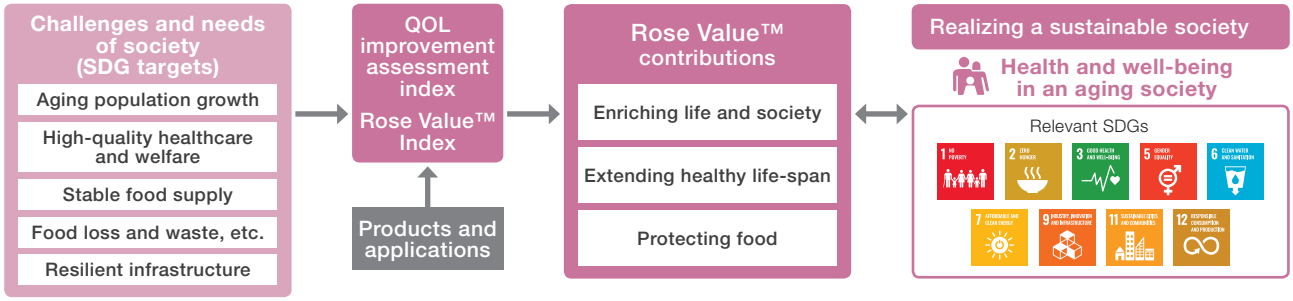
— QOL improvement contribution value

La Vie en rose Days brimming with happiness and hope for people from all walks of life.

In 2016 we devised the Rose Value™ for products and services that help improve QOL in order to demonstrate the kind of value our Group can provide in aiming to realize health and well-being in an aging society in the future. In response to the changing challenges and needs of society, in 2019 we added to and amended the categories to contribute to sustainable communities, including disaster prevention/mitigation and longer infrastructure life.

We use the Rose Value™ Index—our own QOL improvement assessment index developed in accordance with the targets of the SDGs and other needs of society—to evaluate products and services in consideration of sustainable procurement and certify them as Rose Value™ if they significantly contribute to improving QOL in the following three categories: (1) enriching life and society; (2) extending healthy life-span; and (3) protecting food.

We use qualitative and easy-to-understand evaluation criteria incorporating mainly universal design and amenity, resilient and smart city, universal health coverage, and food security perspectives to carefully examine whether the value of the functions and concept of a potential Rose Value™ product or service contributes to improving QOL in the evaluation categories.



Contributions	Rose Value™ Index evaluation categories	
Enriching life and society	**Improving comfort in people's lives**	Provide products, buildings and spaces that take into consideration the needs of a variety of people
	Enhancing nursing care	Specialized nursing and caregiving is a component of "improving comfort in people's lives"
	Ensuring the sustainability of communities	Promote disaster prevention/mitigation measures, longer service life of infrastructure, shift to ICT in communities
Extending healthy life-span	**Supporting physical well-being**	Assist, improve, and heighten functions throughout the body, either directly or indirectly
	Advancing medical care and pharmaceuticals	Raise the level of medical technology and service in every phase of health, from pre-symptomatic disease to illness. Or improve aspects of medicine functionality, quality, and production
	Preventing and taking action against infectious diseases	Prevent or take action against infectious diseases
	Improving accessibility to nutrition and water	Simplify and/or improve production and/or the delivery of nutrition and water
Protecting food	**Improving food productivity**	Raise food yields as well as work efficiency; improve related equipment capabilities
	Guaranteeing safe and stable food distribution	Secure and raise the level of safety and stability in food distribution
	Reducing food loss and food waste	Reduce waste from the perspectives of maintaining food freshness, extending "best-before date," packaging for contents separation and compartmentalization, loss when shipping, and other factors

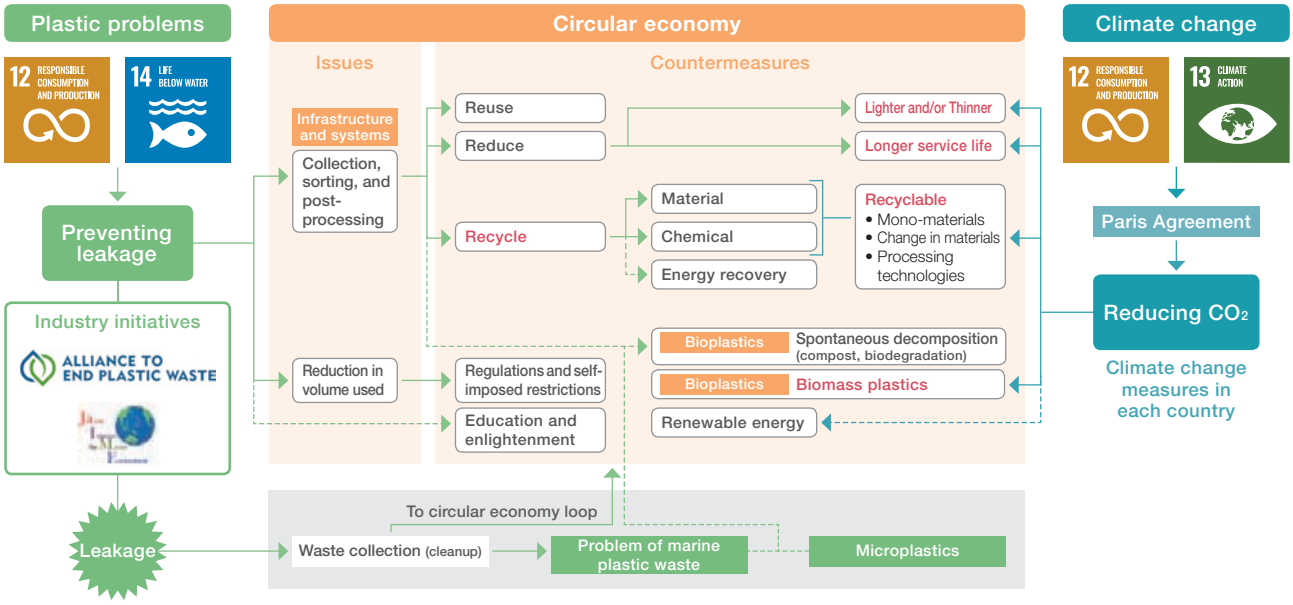
Climate Change and Problems with Plastic

Climate Change and Problems with Plastic
https://jp.mitsuichemicals.com/en/sustainability/mci_sustainability/climate_change/

The Mitsui Chemicals Group is keenly aware that climate change and the problems pertaining to plastic waste are serious issues for society that must be earnestly addressed. Through our supply of chemicals and highly functional plastic products, we have contributed to improving convenience in people's lives and helped to solve challenges in society by, for example, reducing food loss and improving energy efficiency. At the same time, our business activities require the substantial use of fossil resources and energy, which emits large volumes of GHGs. Moreover, marine plastic waste has also become a problem that cannot be ignored in recent times.

To resolve these issues, a transition is needed from a so-called one-way economy of consuming resources and disposing of products to a circular economy whereby resources are collected and products are recycled and reused. To that end, we believe an integrated approach is key to addressing climate change and the problems with plastic together. In June 2020, we established the Climate Change/Plastics Strategy Department within the Corporate Sustainability Division to strengthen our response.

We intend to introduce an LCA perspective and work towards realizing a circular economy from the angles of both climate change and problems with plastic.



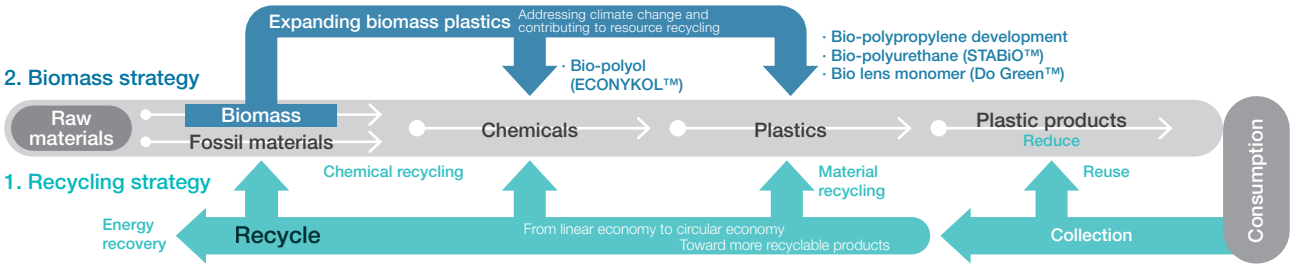
Creation of Company-wide structure to promote plastics strategies

To accelerate our plastics strategies, we have built a Company-wide structure comprised of a working group and a steering committee. Under this structure, the working group gathers candidate projects that align with our plastics strategies from across the company, and works on firming up the details and conducting internal coordination of projects that would be difficult for one division to implement alone. The steering committee selects and approves projects from among those proposed by the working group, and decides on resource allocation in order to reach a swift decision.



Plastics strategies

The Mitsui Chemicals Group focuses on the following two strategies with a view to the entire value chain. By implementing these strategies and measures to address the problem of marine plastic waste, we aim to encourage the recycling of resources and promote a circular economy model.

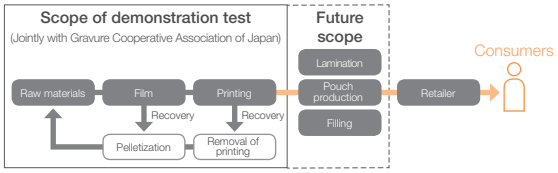


1. Recycling strategy Recycling of plastic resources

In the near future, policy incentives for products that contain recycled plastic and changing consumer attitudes may reduce sales opportunities for virgin plastic. Given this outlook, we intend to incorporate recycled materials into our business. We are exploring a broad range of possibilities, including chemical and material recycling of waste plastic, development of mono-material packaging, and support for startup businesses.

Start of materials recycling demonstration test for flexible packaging materials

We have begun demonstration testing for recycling waste plastic created from film processing and printing processes into film for flexible packaging materials. We are also testing a technology for cleaning and removing printing from printed film, and considering broadening our scope to include waste plastic generated in post-printing processes.



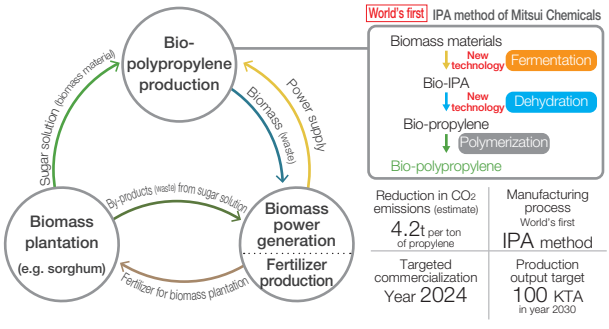
Partnering with the United Nations Environment Programme (UNEP) to support startups helping to reduce waste plastic

As a partner in the Asia Pacific Low Carbon Lifestyles Challenge initiative by UNEP, we have selected three innovative Asian startups. We will provide these companies with grants as well as technological guidance and management support in cooperation with UNEP.



2. Biomass strategy Expanding lineup of biomass plastic products

Biomass plastics made from plants—which grow by absorbing carbon dioxide—are expected to become widely available and more affordable up ahead. As we believe that a shift to biomass materials encourages the recycling of resources, curbs the use of new fossil fuels, and helps mitigate climate change, we aim to expand our lineup of biomass plastic products. In addition, we are taking on the challenge of establishing the world-first bio-polypropylene production process by harnessing our proprietary technology in which fermentation is a key reaction, with sights set on commercial application.



Problem of marine plastic waste

The problem of marine plastic waste owes to plastics that have escaped from the process for recycling resources and ended up in marine environments due to inappropriate waste management. Stopping waste from flowing into rivers and the sea is of utmost importance, which requires a united effort by companies in the entire plastics value chain. We aim to tackle the issue of marine plastic waste by participating in global alliances such as the Alliance to End Plastic Waste (AEPW) and domestic alliances such as the Japan Initiative for Marine Environment (JaIME) and the Japan Clean Ocean Material Alliance (CLOMA).

ALLIANCE TO END PLASTIC WASTE

Climate change policy

We believe that priority must be afforded to solving climate change-related issues in order to realize an ideal future society.

The Mitsui Chemicals Group takes into account foreseeable opportunities and risks from a long-term perspective with a view to the year 2050 and tackles climate change issues with two approaches: mitigation and adaptation. With this in mind, we have formulated a policy on addressing climate change that covers the entire global value chain.

Mitigation

Realizing a low-carbon society by reducing GHG emissions

Opportunities and risks

Low-carbon manufacturing
- Energy conservation and renewable energy
- Switching to alternative raw materials and fuels

Product-driven GHG reductions
- Blue Value™ products

Improved recycling technology
- Innovation in materials and design

Maximization of value chain contributions

Adaptation

Realizing a healthy and sound society resistant to climate change risks

Opportunities and risks

Improving water security
- Risk management at production sites
- Effective use of water resources

Expanding lineup of adaptable products
- Rose Value™ products

Strengthening of value chain resilience

Implementing the recommendations of the TCFD

In January 2019, the Mitsui Chemicals Group announced its support of the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD). The recommendations of the TCFD urge companies to disclose information about climate change-related governance, business strategy, risk management, and metrics and targets. In line with the TCFD's recommendations, the Group will take the following approach.

TCFD TASK FORCE ON CLIMATE-RELATED FINANCIAL DISCLOSURES

1 Assessing materiality of climate-related risks
Qualitatively analyze risks and opportunities concerning climate change in our key businesses

2 Identifying and defining range of scenarios
Forecast the changes in our business environment concerning climate change (scenarios) and examine their impacts

3 Quantifying business impacts
Quantify impacts on future business strategies and financials based on our scenarios and reflect them in strategies

4 Identifying potential responses
Determine the measures for climate change strategy and select management control indicators

1 Assessing materiality of climate-related risks

As a first step, we assessed the impacts of climate change on the Group's businesses.

(1) Assessment scope

Selected key business areas in the Group susceptible to the impacts of climate change.
(1) Mobility, (2) Petrochemical feedstocks, (3) Agriculture, (4) Health Care, (5) Electricals and electronics, (6) Packaging, (7) Energy solutions

(2) Assessment results

(● denotes risks; ● denotes opportunities)

Assessment items		Group-wide	Specific business areas
Physical risks/ opportunities	Acute	● Heightened risk of wind or rain damage (floods/storms)	
	Chronic	● Heightened risk of rising sea levels (high tides) ● Heightened risk of freshwater scarcity	●● Changes in arable land and development of new agricultural technology (3) ●● Wider distribution of pests, weeds, and bacteria (3) ●● Wider prevalence of infectious diseases caused by climate change (4)
Risks/ opportunities related to transition to low-carbon economy	Policy and legal	● Risks from introduction of, and increases in, carbon pricing ● Increase in litigation risks	●● Impacts on business from shift to EVs (1) (5) ● Restrictions on use of synthetic chemical fertilizers (3)
	Technology	●● Uptake of renewable energies ●● Accelerated development of CCU technology and advanced recycling technology	●● Uptake of biomass plastics (1) (2) (6) ● Faster transition to low-GHG emissions technology (2) (5) (6)
	Market	●● Spread of circular economy ●● Transition to renewable raw materials ● Calls for manufacturers to use renewable energy ● Higher prices for scarce resources due to shift to EVs and transition to a hydrogen-fueled low-carbon society	● Decrease in auto manufacturing and sales volume owing mainly to increase in ridesharing and carsharing (1) ● Shortage of naphtha due to decline in oil production output (2) ●● Increased demand for renewable energy (7)
	Reputation	● Increased investor approaches	

*External data used include IPCC RCP2.6, RCP8.5, IEA B2DS, and SDS.

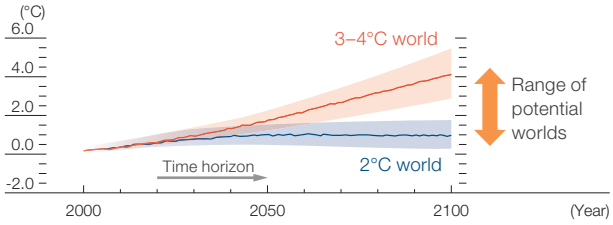
2 Identifying and defining range of scenarios

We have begun scenario analysis based on our materiality assessment. Going forward, we plan to evaluate the impacts of potential key factors to pick out the key factors for our Group, and reflect them in our long-term strategy.

(1) Scenarios used by the Mitsui Chemicals Group

Selected a "3–4°C world" scenario and a "2°C world" scenario. (The scenarios assume that the global average surface temperature in 2100 will increase by 3–4°C and 2°C, respectively, compared to the average between 1986 and 2005.)

Global average surface temperature change



Source: IPCC AR5 SYR Fig. SPM.6

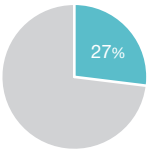
Scope of scenario analysis

Business areas All business areas (priority on the following areas due to significant impact on finances and GHG emissions)

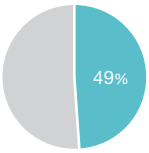
Mobility business

- ✓ Significant contribution to future sales and operating income
- ✓ Significant impact on climate change throughout product life cycles

Mobility business sales ratio



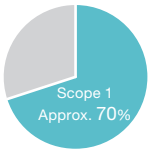
Mobility business operating income ratio



Petrochemicals business

- ✓ Related to fossil fuel and energy (electric power) which is essential for manufacturing products
- ✓ In-house energy production and product manufacturing account for approximately 70% of our GHG emissions

GHG emissions ratio (Scope 1, 2)



Time horizon Present day to 2050 (references data through 2100 on physical risks and opportunities)

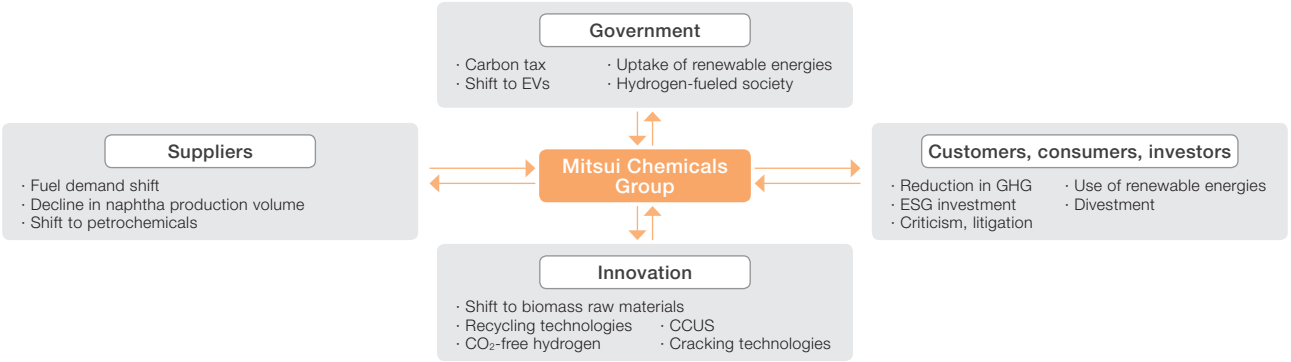
*External data used
Data on transition to low-carbon economy: IEA SDS, 2DS, B2DS, The Future of Petrochemicals
Data on physical aspects: IPCC RCP2.6, RCP8.5

Potential worlds

The 3–4°C world	The 2°C world
Negative on decarbonation due to prioritizing of economic activity	**Realization of carbon-free society being the top priority**
◆ Implementation of current climate change policies only · Introduction of carbon tax ◆ Catastrophic worsening of natural disasters caused by abnormal weather	◆ Implementation of ambitious climate change policies · Large increase in carbon tax · ICE sales suspended, switch to EVs ◆ Gradual worsening of natural disasters
◆ Expansion in demand for fossil energy and raw materials · Rise in prices of coal, gas, and oil · Rise in the price of fossil-fuel generated electric power ◆ GHG emissions to rise around 1.3 times (2050)	◆ Shift to carbon-free energy and raw materials · Renewable energies become mainstream · Cut backs on chemical usage due to recycling · Production of chemicals from bio and CO_2 raw materials ◆ Reduction in GHG emissions of around 50% (2050)

(2) Key consideration

Use the results of environmental analysis based on external data to identify potential key factors under the world scenarios.



Business Overview

Blue Value™ Rose Value™

Mobility

Main Products









- **Elastomers**
  Ethylene-Propylene Terpolymer (Mitsui EPT™),
  Alpha-olefin copolymer (TAFMER™),
  Liquid polyolefinic oligomer (LUCANT™)
- **Performance Compounds**
  Adhesive polyolefin (ADMER™),
  Thermoplastic olefinic elastomer (MILASTOMER™),
  Engineering plastics (ARLEN™)
- **Overseas PP Compounds**
- **Performance Polymers**
  Specialty polyolefins (TPX™, APEL™, HI-ZEX MILLION™, MIPELON™, LUBMER™, RAYPROM™),
  Semiconductor manufacturing material (Mitsui PELLICLE™)

Blue Value™ / Rose Value™ products

Bumper and instrument panel materials
PP compounds



Reduce GHG emissions by roughly 13% by not requiring painting process.

Reduces CO_2 | Conserves resources

Concrete surface reinforcement agent
Toughness Coat™



Resin film formed on the surface of concrete structures gives greater durability and impact resistance, extending the life of infrastructural systems and preventing and reducing the effects of disasters.

Enriches life and society

Adhesive polyolefin for plastic fuel tanks
ADMER™



Lightens fuel tanks by 10–30% with the use of plastics instead of metal.

Reduces CO_2

Lubricant additive for automobiles
LUCANT™



Improves fuel efficiency by reducing temperature dependence of lubricant's viscosity and maintaining appropriate viscosity.

Reduces CO_2

Health Care

Main Products









- **Vision Care Materials**
  Ophthalmic lens materials (MR™, RAV7™),
  Photochromic lens materials (SunSensors™)
- **Personal Care Materials**
  Acrylamide, Medical materials
- **Nonwovens**
  Nonwovens (SYNTEX™, TAFNEL™, AIRYFA™),
  Breathable films (ESPOIR™),
  Polyolefin synthetic pulp (SWP™, KEMIBESTO™)
- **Dental Materials**
  Restoratives (Charisma™, Venus™),
  Adhesives (Super-Bond™, iBOND™),
  Artificial teeth, Denture materials (PALA™),
  Impression (Flexitime™),
  Digital equipment/materials (cara™, DIMA™)

Blue Value™ / Rose Value™ products

Ophthalmic lens materials
MR™



Contributes to vision correction, eye health, and comfort.

Extends healthy life-span

Nonwoven fabric for disposable diapers
SYNTEX™



Pursues the basics of being leak-proof, breathable, and unlikely to cause diaper rash, as well as a higher level of functionality, such as comfort and a snug fit.

Enriches life and society

Nonwoven fabric for disposable diapers
AIRYFA™



Reduces amount of waste by using a fiber structure that offers both softness and strength. Disposable diapers support comfortable living for babies and their carers.

Reduces CO_2 | Conserves resources | Enriches life and society

Synthetic pulp for water purifier filter
SWP™



Capture and removal of heavy metals and other impurities makes water safe to drink.

Extends healthy life-span

Food & Packaging

Main Products









- **Coating & Engineering Materials**
  Polyurethane resins (TAKENATE™, TAKELAC™), Packaging adhesives, Polyolefin resins, Coating resins, Sealants for displays
- **Performance Films & Sheets (Packaging Films)**
  Biaxially oriented polypropylene films, Cast polypropylene films, Linear low density polyethylene film (T.U.X™)
- **Performance Films & Sheets (Industrial Films and Sheets)**
  Semiconductor and electronic components manufacturing process films (ICROS™ Tape), Foam sheets, Encapsulant sheets for solar cells (SOLAR ASCE™, SOLAR EVA™)
- **Agrochemicals**
  Insecticides, Fungicides, Herbicides, Non-crop specialty chemicals, Pet medication ingredients

Blue Value™ / Rose Value™ products

Keep-fresh film
SPASH™, PALFRESH™



Suppresses wilting and discoloration of fruits and vegetables and contributes to a reduction in food loss. Reduces GHG emissions by reducing the amount of food waste.

Reduces CO_2 | Protects food

Sealant film **T.U.X™**



Saves energy by using a lower heat seal temperature, while its improved film strength means less resin is used. Its excellent sealing performance and impact resistance reduces the amount of food wasted in food production and distribution.

Reduces CO_2 | Conserves resources | Protects food

Insecticide
TREBON™



Contributes to stable crop production and helps boost food production.

Protects food

Insecticide
VECTRON™



Controls mosquitos, a carrier of infectious diseases like malaria. Contributes to the eradication of malaria.

Extends healthy life-span

Basic Materials

Main Products







- **Petrochemicals**
  Ethylene, Propylene, High density polyethylene, Metallocene linear low density polyethylene (EVOLUE™), Linear low density polyethylene, Polypropylene, Olefin polymerization catalysts
- **Basic Chemicals**
  Phenol, Bisphenol A, Acetone, Isopropyl alcohol, Methyl isobutyl ketone, Purified terephthalic acid, PET resin, Ethylene oxide, Ethylene glycol, Hydroquinone, Meta/Para-cresol, Ammonia, Urea, Melamine, Semiconductor gas
- **Polyurethane Raw Materials**
  TDI (COSMONATE™), MDI (COSMONATE™), PPG (ACTOCOL™, ECONYKOL™)

Blue Value™ / Rose Value™ products

Seat cushion materials
Nextyol™



Improved automotive fuel economy delivered from lighter weight and drastic reduction in VOCs and odor contribute to mitigating climate change and to creating a comfortable living environment.

Reduces CO_2 | Coexists with nature | Enriches life and society | Extends healthy life-span

Exhaust gas reduction agent
AdBlue™



Reduces NOx emissions. Contributes to fuel efficiency.

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

Reduces CO_2 | Coexists with nature

New Business

Main businesses



ICT Materials Business



Energy Solutions



Robot Materials Business



Open Innovation

Blue Value™ / Rose Value™ products

Diagnostics and consulting services for solar power generation plants



Reduce GHG emissions, which in turn assists clients in preventing yield reduction of solar power generation plants.

Reduces CO_2

Strategy by Business Segment

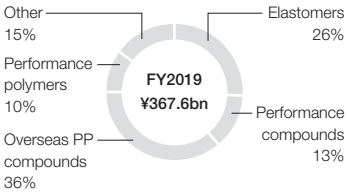
Mobility



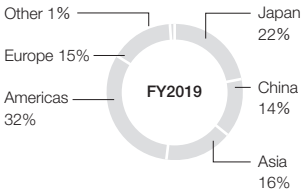
SATO Koichiro
Managing Executive Officer,
Business Sector President,
Mobility Business Sector

In order to quickly seize on business opportunities that arise in the automotive and ICT markets, which are facing a period of major transformation, we will steadily execute strategic investment for growth. At the same time, we will provide new value through the continued development of new customer-oriented products and businesses and through the strengthening of our ability to propose solutions centering on our technological know-how in materials.

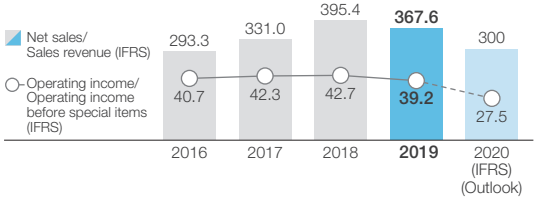
Sales by product



Sales by region



Trends in net sales and operating income (¥ bn)



*FY2020 forecasts on an IFRS basis.

Challenges and needs of society

There is increasing uncertainty surrounding market conditions, such as the COVID-19 pandemic forcing automobile manufacturers to reduce or suspend production activity in many regions, and concerns about decline in automobile demand owing to the slump in the global economy. On the other hand, increasing global environmental awareness is driving demands for better fuel efficiency and the shift towards vehicle electrification continues to progress year after year, creating diverse new needs for even lighter weights and increased comfort in automobiles.

Business vision

Mitsui Chemicals defines “mobility” as the various modes of transportation for both people and things, but most notably automobiles. While responding in an appropriate and speedy manner to minimize the near-term business impact of COVID-19 in our Mobility domain, we aim to achieve sustainable growth by providing solutions to meet diversified needs and bolstering the competitiveness of each business.

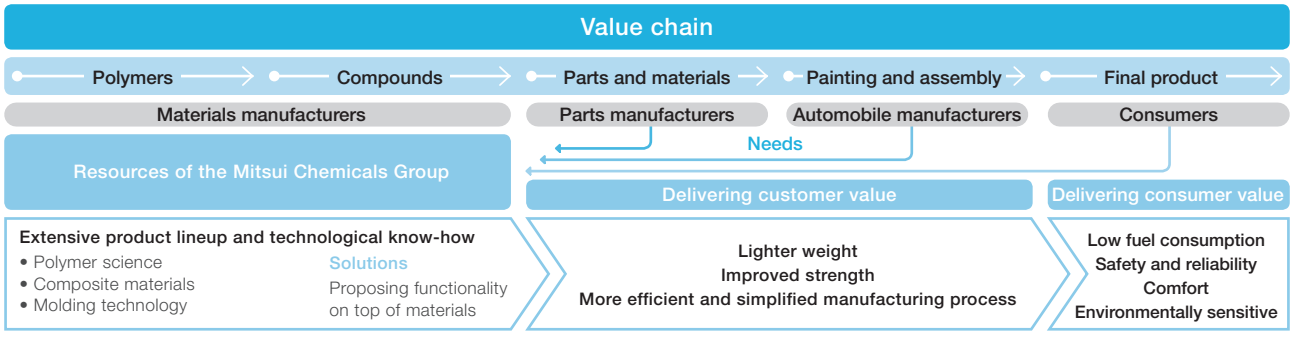
Market analysis and strategies

Opportunities and risks
- Growing demand for lighter weight
- Growing demand for safety and comfort
- Emergence of new demand mainly for electrification and autonomous driving systems
- Slump in automobile demand owing to COVID-19

Strengths
- Extensive lineup of materials
- Advanced technological capabilities and product quality
- Customer base
- Technical support
- Ability to propose total solutions across the value chain

Basic strategies
- Generate expanded business opportunities from lighter weight and battery material trends
- Generate business opportunities from the integration of vehicles and ICT
- Beef up proposal capabilities by anticipating demand from the initial stages of automotive development

Value chain



We aim to deliver customer and consumer value by harnessing the Group’s various materials, components, molding technology, and development support capabilities to provide real and tangible solutions.

Customer needs identified from market trends

Macro trends

- Economic growth in emerging countries
  - Rising income levels
  - Growing preference for high-end goods
- Lifestyle changes
  - MaaS
- Technological innovation
  - Autonomous driving
- Environmental regulations

→ Comfort and safety

→ Electrification and automation

→ Improved fuel efficiency

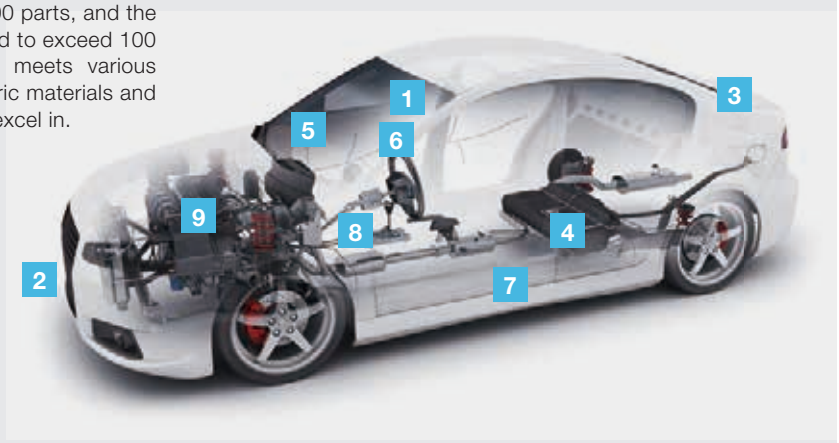
→ Improved cruising range

→ Lighter weight

Trends and customer needs in mobility industry

Function-specific lineup of strategic products

Automobiles are made up of roughly 30,000 parts, and the total weight of plastic materials used is said to exceed 100 kilograms. The Mitsui Chemicals Group meets various social needs with highly functional polymeric materials and performance compounds—areas that we excel in.



1 In-vehicle camera lenses



APEL™

- Compact
- Safe and reliable
- Lightweight

Electrification and automation | Lighter weight

2 Bumpers



PP compounds PRIME POLYPRO™ TAFMER™

- Lightweight
- Impact resistant
- Designable

Lighter weight

3 Exterior materials



Glass fiber-reinforced plastic materials/carbon fiber-reinforced plastic materials, etc. MOSDIO™*

- Lightweight
- Improved fuel efficiency

Lighter weight

4 Fuel tanks



Adhesive polyolefin ADMER™

- Lightweight
- Higher degree of freedom in design

Lighter weight | Comfort and safety

5 Metal/resin integral molding parts



POLYMETAC™

- Lightweight and compact
- Fewer production processes and lower assembly costs
- Improved design

Lighter weight | Comfort and safety

6 Interior surfaces



Thermoplastic elastomers MILASTOMER™

- Low density, lightweight
- Designable
- Recyclable

Lighter weight | Comfort and safety

7 Door sealing



Ethylene-Propylene Terpolymer Mitsui EPT™

- Good processability
- Good weatherability and heat resistance
- Good sound absorption/insulation

Comfort and safety

8 Gear lubricant oil additives



Liquid polyolefin oligomer LUCANT™

- Improved fuel efficiency
- Longer service life

Improved fuel efficiency

9 Parts around engine



ARLEN™

- Heat resistance
- Improved fuel efficiency

Improved fuel efficiency

*Can be used for rear-door and hood interior panels.

Challenges of automotive industry and lighter car bodies

Growth in polypropylene (PP) compounds and other automotive parts

Environmental regulations and rise of EVs are making vehicles increasingly lighter

Reducing the amount of CO_2 emissions in order to prevent global warming is a challenge for the automotive industry today, and realizing lower fuel consumption in vehicles lies at the heart of this issue. To that end, automakers need to make car bodies much lighter too. At the same time, powertrain electrification and the shift to electric vehicles are also making cars lighter so as to improve cruising range.

Many automobile manufacturers are now making the switch from traditional metal parts and components to those made from plastics as a means to realize more lightweight vehicles, and this shift is expected to further accelerate.

Pursuing top global share

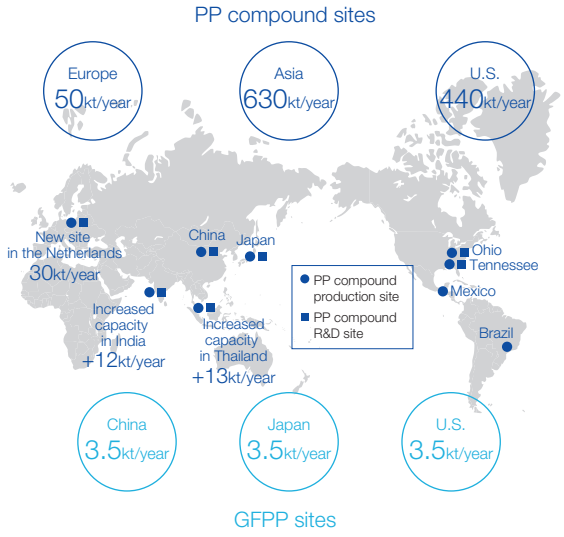
Growth and expansion of PP compound business

The Group's automotive material PP compound business boasts the second-highest global share and the top share in Asia. We also maintain a leading share among Japanese automakers, while in North America we already hold a share of roughly 30%, having received a high evaluation and built a solid track record supplying compounds to US auto manufacturers.

PP compounds are materials that enhance impact resistance and rigidity because other polymers and additional agents, such as elastomers and talc, are added to polypropylene, which has superior moldability. Currently, around 50–60 kilograms of PP compounds per car are used to make components such as bumpers and instrument panels.

Our superior proprietary compound recipes and the know-how to design the resins, or in other words the raw materials, have enabled the Group to provide high-quality products meeting various customer needs. And that is why we have been rated very favorably. Moreover, we have built a system capable of quickly accommodating the global strategies of automobile manufacturers, by maintaining eight production sites and six R&D sites in key regions around the world. In the past our share of the market in Europe was not high; we, therefore, have taken steps to expand our business there by setting up a development site. We expect sales in Europe to increase as a result of these initiatives, and thus began commercial operation of a newly built in-house production site in the Netherlands in June 2020.

In order to tap demand in the growing Asian market, we have also been pushing ahead with plans to expand capacity at our production sites in Thailand and India, and concluded expansion work at the Thai site in June 2020. Up ahead, we aim to further consolidate our business drawing on our technological superiority and supply capabilities. To this end, we will make sure to identify growth markets and augment production capacity in order to meet demand growth and increased market share.



		Share
PP compounds	Global	No.2 (21%)
	Asia	No.1
	Japan	No.1

Further initiatives for metal alternatives

Glass fiber-reinforced polypropylene

Glass fiber-reinforced polypropylene (GFPP) is a compound material made by impregnating fibrous glass with polypropylene resin. It is lightweight and strikes the right balance between rigidity and impact resistance because of the long glass fibers, and increasingly adopted for use in the rear doors of cars as a replacement for metal. Our GFPP also has a nice appearance, which helps shorten the manufacturing process at automakers because it can be used without being coated. Given the growth in global demand for lighter materials, auto manufacturers are examining whether they can use other materials to replace the metal components in other parts of the car, like sliding doors, on top of rear doors. Fiber-reinforced resins are certainly a strong candidate. GFPP in particular costs less to make than carbon fiber, which is why demand is expected to increase in the future. We have built a solid three-pronged global production framework consisting of sites in Japan, China, and the US that will enable us to meet growing demand for lightweight materials globally.



TOPICS

Increasing applications for cyclic olefin copolymer APEL™





APEL™ is a proprietary cyclic olefin copolymer (COC) that integrates the performance of polyolefin resins and that of amorphous resins. With the highest refractive index among the amorphous polyolefins, it is low in optical anisotropy and essentially low in birefringence. These superior optical properties make it ideal for high-transparency optical lenses and optical components, and it has been well received. Sales are currently expanding for the main application of smartphone camera lenses, and owing to a rapid increase in demand for APEL™ on the back of an ongoing rise in the number of cameras in smartphones, we have begun constructing a new plant at our Osaka Works (Takaishi City, Osaka Prefecture) to create a supply structure that can accommodate this demand. Construction began in April 2020, and is scheduled to be completed in March 2022. We estimate that the resulting increase in production capacity of approximately 50% will enable us to meet near-term demand expansion. However, APEL™ is used in a broad range of applications, including automotive camera lenses (used in sensing cameras, surround view cameras, dashboard cameras, and rear-view monitors, etc.), head-up display components (such as focusing lenses and combiners), and optical components in AR/VR devices. Applications are also increasing in areas such as food packaging and medical packaging to take advantage of excellent moisture-proofing, chemical resistance, and non-attachment characteristics. As we expect demand to grow further in the future, we have also begun considering the next phase of capacity expansion. In these ways, we are aiming to grow this business by steadily creating a supply system that can meet increasingly diverse applications and rapidly expanding market needs.

Fiscal 2025 target

Operating income of ¥70 bn + new businesses

We will steadily execute strategic investment plans in order to translate the business opportunities afforded by medium- to long-term demand expansion into growth. In addition, in a bid to accelerate the mobility strategy across the entire Group, we have established a Center of Excellence (CoE) Project Office with cross-organizational powers and responsibilities. Leading global efforts for information gathering, strategizing, and business development with these initiatives, we will expand and strengthen existing businesses and provide speedy and optimal solutions to customers.

Growth strategies

- In existing businesses, we intend to steadily execute and secure returns from investments to which we have already committed, while also pushing ahead with considerations for the next phase of capacity increases. We are also aiming to further expand these businesses by continually bringing to market new differentiated products.
- We will work to enhance our product portfolio in the Mobility domain by addressing demand for multi-material solutions, establishing technology for fiber-reinforced composite materials, and expanding customer support functions.
- We aim to promote new business development in new markets and facilitate a shift towards downstream processes and services by anticipating customer needs through open innovation and collaboration.

Investment strategies

- For polymer product lines that require large-scale production facilities, we will aggressively invest in further strengthening our competitive advantage by expanding production capacity in optimal locations to meet global demand growth.
- For compound products, we will continue to strengthen our customer-oriented global supply system by expanding production capacity in a timely manner to ensure local production for local consumption.

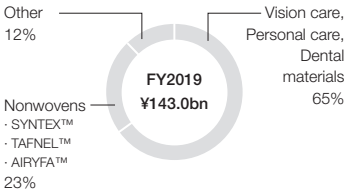
Health Care

TANAKA Hisayoshi
Executive Officer
Business Sector President,
Health Care Business Sector

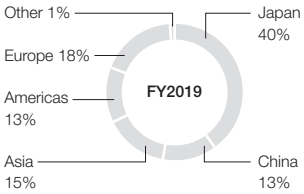


With changes in the external environment such as the COVID-19 pandemic, there are even stronger societal needs for health and well-being. While responding swiftly to these changes, we aim to actively provide products and services that contribute to improved quality of life (QOL).

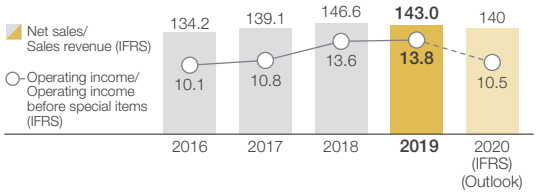
Sales by product



Sales by region



Trends in net sales and operating income (¥ bn)



*FY2020 forecasts on an IFRS basis.

Challenges and needs of society

Interest in health is growing due to factors such as the declining birth rate and aging population in developed countries and economic growth in emerging countries, as well as the ongoing fight against the COVID-19 pandemic. Customer values have diversified and individual preferences and needs are expanding. Customers now look for “care” depending on their lifestyles.

Business vision

We aim to establish new growth platforms for the Mitsui Chemicals Group by leveraging chemical innovation to create and provide products and services that help improve QOL.

Market analysis and strategies

Opportunities and risks

Vision care
- Global market growth

Nonwovens
- Slowing in exports of baby diapers but stable growth in domestic adult diaper market
- Intensifying competition in East and Southeast Asia

Dental materials
- Rapid changes in trends (shift towards smaller instruments) and expansion in digital dental technology market

Strengths

Vision care
- Broad product lineup

Nonwovens
- Consistent technological capabilities, from base resins to processing

Dental materials
- Global brand power
- R&D capabilities ranging from raw materials to dental materials

Basic strategies
- Expand existing businesses by steadily tapping growth demand
- Step up development of new products and businesses that help improve QOL
- Harness M&As and alliances to expand and reinforce business platforms

Specific strategies

Vision care	Nonwovens	Dental materials
• Further expand business by developing and bringing new products to market	• Maximize production and sales through strategic alliances with customers	• Expand business by launching products that support and promote digitalization

Market growth rate for key products

Vision care	Ophthalmic lens materials (MR™ series, RAV7™ series)*1	4%
Nonwovens	SYNTEX™ (spunbonded nonwoven hygiene materials)*2	5%

*1 FY2014–2019 *2 FY2013–2020

Vision care

A world leader in ophthalmic lens materials

The Mitsui Chemicals Group develops plastic ophthalmic lens materials, ranging from low refractive to high refractive indices. In particular, our MR™ brand of high refractive index lens material is rated highly as a lens brand of its own that underpins the superb quality of the world's top brand lenses.

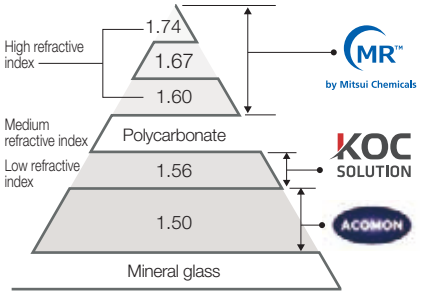
In addition, our US affiliates SDC Technologies and FSI Coating Technologies have respectively developed and now globally distribute high-quality abrasion-resistant coatings and high-quality anti-fog coatings.

Through our innovative lens materials, coating materials, and new technologies, we strive to deliver the best Quality of View (QOV*) to all people who need eyewear.

*Quality of View is a scale for measuring a person's quality of life and level of satisfaction regarding their eyes, such as optimization of vision, vision comfort, eye health management, and disease prevention.

Expanding market share with a broad product lineup

Lens materials

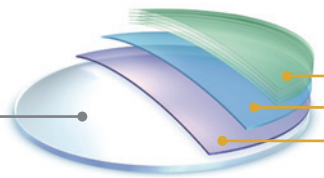


MR™ by Mitsui Chemicals — Global standard that enables thin and light lenses even for strong prescriptions and delivers excellent optical performance

KOC SOLUTION — Chinese standard at reasonable prices

ACOMON — Global standard with excellent optical performance

Coating materials



High-quality coating materials that add value to lenses

- Abrasion-resistant coatings (sdc)
- Anti-fog coatings (fsi)

Global market share **45**%

Developing new technologies that capture the trends of aging, eye health awareness, needs for more comfortable eyewear, and more

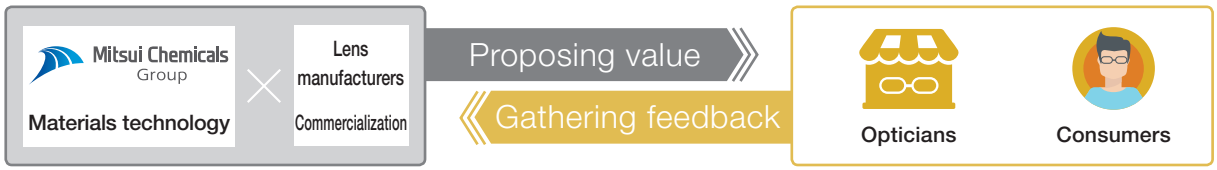
UV+ 420cut — Specific light wavelength control technology that cuts harmful UV light and some high-energy visible light

NeoContrast — Specific light wavelength control technology that improves contrast

SunSensors — Photochromic technology that protects the eyes from glare by adjusting the color depending on the amount of ultraviolet light

Value chain

Creating new businesses to deliver **Quality of View**



TOPICS

TouchFocus™ next-generation eyewear that makes life more pleasant with just one touch

Since launching in 2018, TouchFocus™ eyewear has consistently been featured in a variety of media outlets for its innovative lens functionality, and is offered at 70 stores nationwide, including partner department stores and retailers, with favorable sales. Last year, we expanded the product lineup to satisfy customer needs, adding color lenses and photochromic lenses, as well as frame designs for women and frames with spring hinges that prioritize comfort. We began selling in the two major markets of China and the US in fiscal 2020, with a consolidated sales target of 30,000 units by 2023.

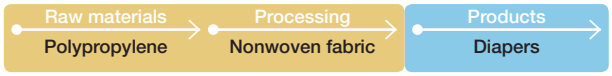


Nonwovens

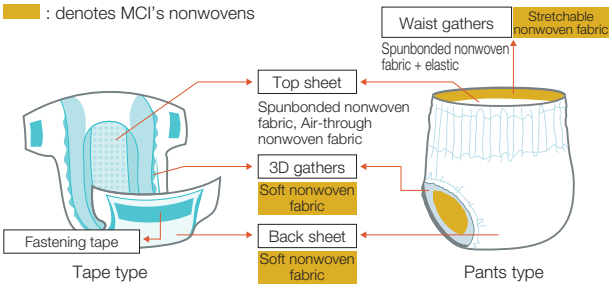
High-performance nonwovens for hygiene materials boasting excellent softness and stretchability

In East and Southeast Asia, the use of disposable diapers has become more widespread and high-quality, high-performance premium disposable diapers are growing in popularity. In addition to such basic features as being leak-proof, breathable, and unlikely to cause diaper rash, consumers now demand a higher level of functionality, including comfort and a snug fit. The Mitsui Chemicals Group has applied its technology to satisfy these consumer needs by developing highly acclaimed nonwoven fabric that demonstrates excellent softness and stretchability. We further boosted our supply capacity in fiscal 2018 mainly by installing new equipment for high-performance nonwovens at two sites in Japan, raising production to 15kt per year at Nagoya Works and 6kt at Sunrex Industry Co., Ltd. We are fully leveraging our three Asian production bases in Japan, Thailand, and China to ensure a reliable supply of high-performance nonwovens to meet growing demand. Moreover, we are stepping up efforts to expand this business into new domains, for example medical applications, in a bid to maintain and expand our top-level share of the Asian market for high-performance nonwovens.

Value chain and market structure

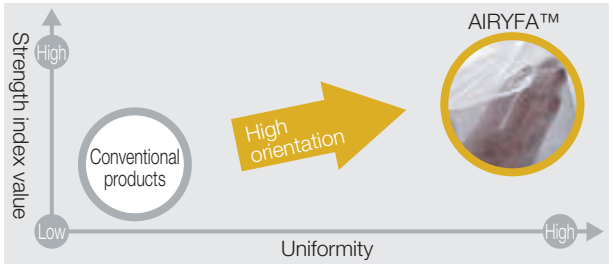


Application of nonwoven fabric in super premium disposable diapers



AIRYFA™—new high-strength soft nonwoven

Our new product AIRYFA™ is a high-performance nonwoven that is gentle on the skin, providing both softness and strength. By capitalizing on our proprietary polyolefin spinning technology to produce a hollow and thin fiber structure, this textile is characterized by a superior level of softness and even texture. We have thus been able to develop a nonwoven fabric that offers both softness and strength, a feat conventional technology was hitherto unable to achieve. After bringing the production site in China online in February 2019, we now have a tripolar Asian supply framework in place spanning Japan, Thailand, and China.

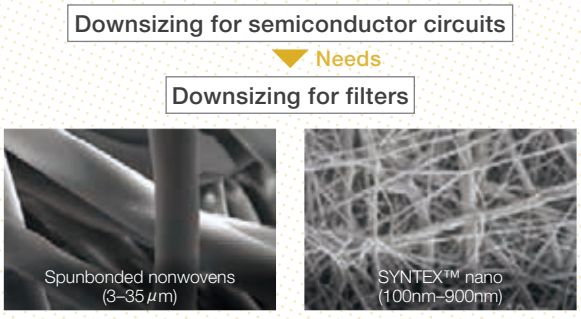


TOPICS

Expanding meltblown nonwovens business for industrial materials

In the nonwovens business, we supply nonwovens not only for hygiene materials, but also high-quality nonwovens for industrial materials, including for car seats (product name: TAFNEL™), masks (product name: SYNTEX™), and agricultural sheets (product name: SYNTEX™). To accommodate growth in industrial-use nonwovens driven by robust demand in the semiconductor market, we have expanded production facilities for meltblown nonwovens, increasing our production capacity by 50 percent.

Our nano brand of microfiber meltblown nonwovens (peak fiber diameter of several hundred nanometers) has much finer fiber diameters than spunbonded nonwoven fabrics, and are being developed for applications such as filters used in the semiconductor manufacturing process. To deftly respond to demand such as for 5G applications up ahead, we aim to further strengthen and expand our nonwovens business.





External view of Sunrex Industry Co., Ltd.

Dental materials

Accelerating our contribution to digitalization in dental care

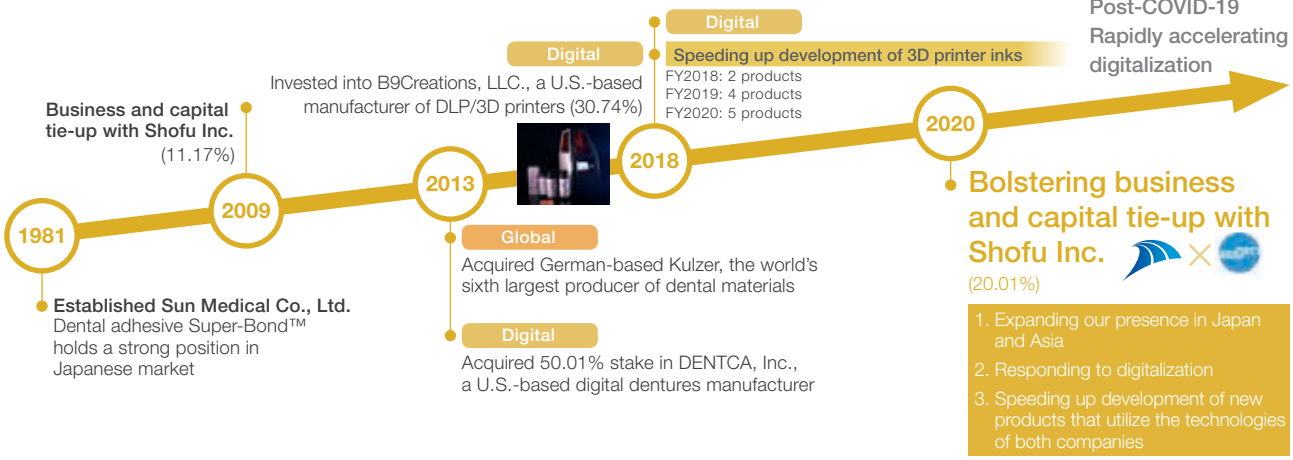
Dental materials are increasingly being made out of plastics, rather than metal. By bringing to bear our development capabilities in materials, we aim to contribute to improving quality of life in the field of dental care with innovative products and services needed by dental surgeons and laboratories alike.

Digitalization in dental care is advancing, driven by the use of 3D printers. Having a lineup of inks that can be used in various applications is particularly important for the effective use of 3D printers.

We have thus far accumulated assets in this business through acquisitions and investments—we gained a global business platform from Kulzer and acquired digital technology platforms from DENTCA and B9Creations. In addition, through bolstering our business and capital tie-up with Shofu Inc., we will continue to (1) expand our presence in the Japan and Asian markets, (2) respond to digitalization, and (3) speed up development of new products that utilize the technologies of both companies.

We intend to bring together all of these capabilities within the Group in an effort to expand our global dental materials business.

History of dental materials



Fiscal 2025 target

Operating income of ¥45 bn + new businesses

We expect the growth investments to gradually start contributing to earnings. In addition to strengthening existing businesses and expanding overseas, we are enhancing our ability to provide healthcare solutions by expanding our lineup of new products, as well as bolstering and furthering the creation of new businesses.

Growth strategies

- To meet diversifying needs as a global leader in the vision care materials field, we will continue working to expand and strengthen our business platform by stepping up operations in peripheral businesses.
- In nonwovens, we will continue expanding and strengthening business by developing high-performance products and pursuing global development.
- In dental materials, we will continue working to strengthen our growth platform by better meeting local needs and tapping into digitalization and other new markets.

Investment strategies

- In vision care materials, we will continue considering growth investments, including production capacity expansion to accommodate growth in customer needs.
- In nonwovens, we will expand production capacity for high-performance nonwovens with an eye to the burgeoning Asian market. We will also continue considering investments in growing industrial filters and other applications.
- In the dental materials field, we will continue to actively provide digital workflow solutions by focusing investments in markets that are taking off, including 3D printers and ink.

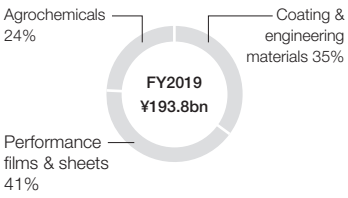
Food & Packaging

SHIMOGORI Takayoshi
Member of the Board,
Senior Managing Executive Officer
Business Sector President,
Food & Packaging Business Sector

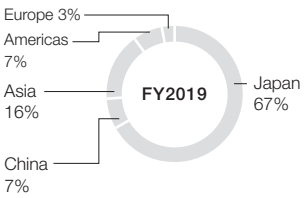


In addition to the ongoing need to boost food production, reduce food loss, and the like, there is a societal demand for products and services that meet the needs of reducing environmental impact, particularly in packaging materials. We will leverage the strengths of the Mitsui Chemicals Group to help solve these challenges faced by society.

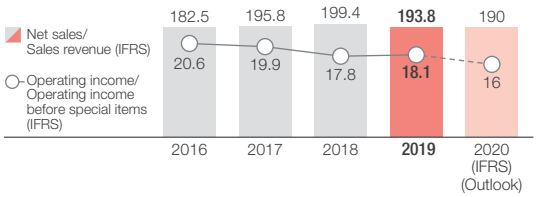
Sales by product



Sales by region



Trends in net sales and operating income (¥ bn)



*FY2020 forecasts on an IFRS basis.

Challenges and needs of society

The serious global issues of population growth and climate change call for measures to stabilize agricultural production and improve crop yields as well as to reduce food loss and waste. Moreover, addressing the problem of plastic waste and other needs of reducing environmental impact is now a matter of urgency for society.

Business vision

By maximizing the use of information, technologies, and customer relationships that cross company and organizational boundaries, we aim to drive the sustained growth of the Mitsui Chemicals Group through customer-driven innovation, providing products and services related to agriculture, food, and packaging.

Market analysis and strategies

Opportunities and risks

- Growing agrochemicals markets in Asia and South America, growth in the market for agrochemical-related products (disease prevention fields)
- Growing Asian market and sluggish domestic market for packaging materials, growing needs to address environmental issues
- Growth in ICT markets such as for 5G and high-performance displays
- Uncertainty surrounding China and emerging economies

Strengths

- Broad product lineup
- Proprietary R&D and production technology
- Overseas expansion, particularly in Asia
- Customer base built on providing a swift response

Basic strategies

- Strengthen our business portfolio by shifting to high value-added products
- Expand businesses by tapping into overseas growth markets
- Create new products and businesses and respond to environmental needs through collaboration within and outside the Group

Specific strategies

Agrochemicals
- Tap growth in the Asian and South American markets
- Strengthen agrochemical-related areas (disease prevention fields)

Coating & engineering materials
- Tap growth in the Asian market
- Globally expand environmentally friendly products
- Accelerate market penetration of high-performance products

Performance films & sheets
- Bolster our business platform by transforming our product portfolio
- Maintain and expand our market share in ICT fields

Market share and market growth rate of key products (FY2019)

		Market share	Market growth rate
Agrochemicals	Global	—	3.0%*
	Asia	—	2.3%*
	Japan	10%	1.1%*
TAKELAC™ / TAKENATE™ packaging adhesives	Japan	29% (No. 2)	<1%
	ASEAN	30% (No. 1)	7%
T.U.X™ high-performance sealant film	Japan	34% (No. 1)	<1%

*FY2018–2023

Performance films & sheets (Packaging films field)

Expansion of packaging materials in Asia and providing comprehensive solutions

The packaging materials market in Asia has considerable growth potential thanks to rising living standards and the development of the region as a food processing and export hub. The Group has a lead on our rivals with production sites in Asia for packaging materials like T.U.X™, a high-performance sealant film, EVOLUE™, a metallocene LLDPE which is used as a raw material in the former's production, and packaging adhesives TAKENATE™, TAKELAC™, and ADMER™. In addition, we established a Center of Excellence (CoE) Office in fiscal 2020 to lead cross-organizational and global efforts for information gathering, strategizing, and business development. By providing speedy, optimal solutions to customers with this new system, we will contribute to solving environmental issues and improving convenience.

TOPICS

A new material sheet that adapts to the body HUMOFIT™

HUMOFIT™, a shape memory sheet for which market development began in May 2020, is a new material that senses temperature and conforms to the contours of the human body. Using the glass transition temperature of 28°C (the temperature at which polymers undergo dramatic softening), which sits between room temperature and the temperature of the human body, the sheet reacts with the warmth of the body to give a swift and comfortable fit to the skin. Its properties such as shape memory and high stretchability are also expected to make it a material suited to growing demand for devices that attach to the body, such as in wearables, VR, AR, eSports, and medical IoT applications.



Performance films & sheets (Industrial films and sheets field)

Strengths of ICROS™ Tape and further business expansion

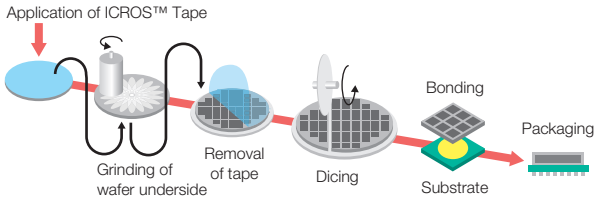
ICROS™ Tape is a surface protection tape used during silicon wafer backgrinding in the post-fabrication process for semiconductors. Of the major competitive manufacturers of this kind of tape, we are the only company that manufactures and processes resins, and we possess the largest share of the global market because we differentiate ourselves with resin design and film forming technologies.

Completion of new plant in Taiwan

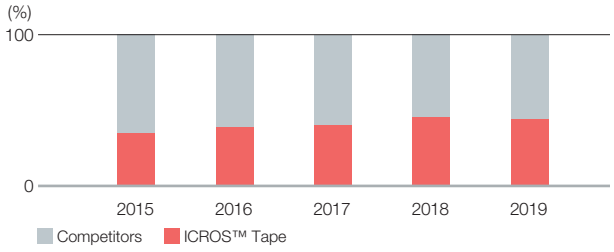
Amid expanding demand for semiconductors on the back of 5G, IoT, and other technological innovations, in 2019 we completed construction of a new plant in Taiwan, where the demand is stronger than anywhere else in the world. This has increased our supply capacity for ICROS™ Tape by 50%. By building a stable supply system, we aim to further expand business.



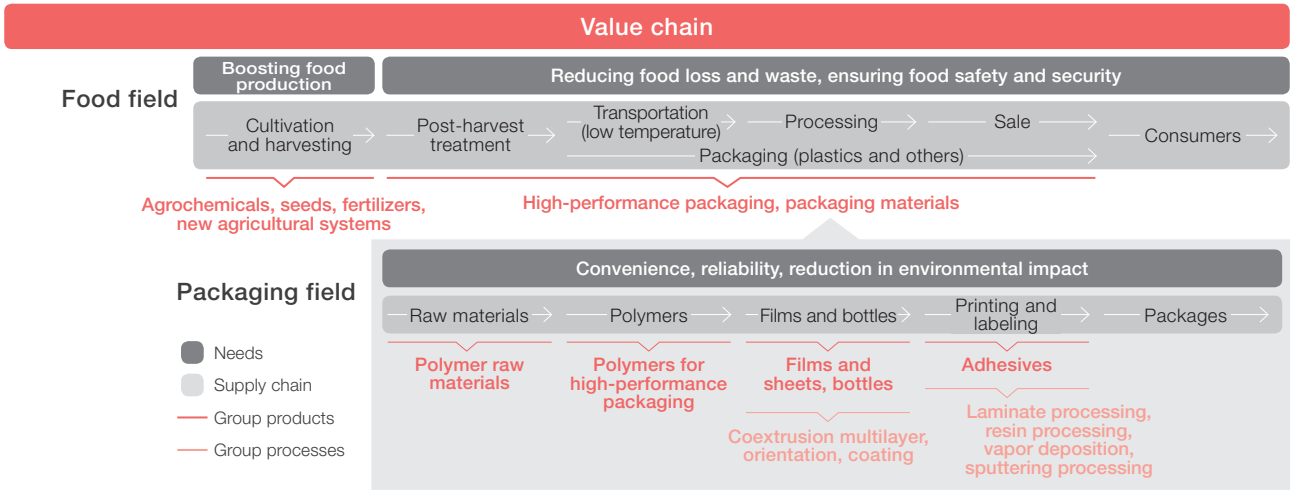
What is ICROS™ Tape?



Global share of ICROS™ Tape



Value chain



Agrochemicals

High-performance agrochemicals to help ensure stable food supply

Agricultural production will likely continue to expand over the medium- to long-term due to growing demand for produce, driven by global population increase and economic development in emerging countries. In order to expand agrochemical products that boost crop yields into markets around the globe, Mitsui Chemicals Agro, Inc. is working to strengthen its overseas business platforms.

For the insecticide dinotefuran and other existing active ingredients, the company is working closely with its global and local partners to develop products that meet market needs, thereby accelerating registration and market launch in more countries. In fiscal 2019, dinotefuran, which has demonstrated superior efficacy against major pests, was registered as an agrochemical in Brazil, the world's largest agrochemicals market. Given high expectations among local farmers, we are working to further expand its sales. For next generation active ingredients, we are making preparations to bring to market products containing the herbicide CYRA™ as the active ingredient.

Mitsui Chemicals Agro, Inc. possesses advanced agrochemical discovery technologies backed by a long track record of molecular design, organic synthesis, and biological evaluation. As it continues to discover highly unique active ingredients and develop agrochemical products, the company will help to enhance comfort in people's lives by improving crop yields, extending life expectancies by preventing infectious diseases, and improving housing amenity.

TOPICS

Toward full-scale expansion of next generation agrochemical active ingredient TENEBENAL™

TENEBENAL™ (name of substance: broflanilide) is an insecticide developed by Mitsui Chemicals Agro, Inc. with a novel mode of action, and global market development is progressing in partnership with BASF SE. It will contribute to controlling agricultural pests, termites, and mosquitoes which develop pesticide resistance.

We began overseas sales of agrochemicals containing TENEBENAL™ as the active ingredient in 2019, and will expand agrochemical registration to more countries. Also in 2019, we started sales of termite-proofing products in the Japanese market. In disease prevention applications, as part of a joint initiative to eradicate malaria with the support of the Bill & Melinda Gates Foundation and the Innovative Vector Control Consortium, TENEBENAL™ is expected to demonstrate efficacy against malaria-carrying mosquitoes that show chemical resistance, and we plan to carry out large-scale trials.

Through full-scale expansion of TENEBENAL™, Mitsui Chemicals Agro, Inc. will contribute to improving global food production and living environment.





Coating & engineering materials

Extensive lineup of products and a broad range of applications

To better meet the varied needs of consumers, we are expanding our lineup of coating and engineering materials and developing a wide range of applications for these products. This lineup includes TAKENATE™, TAKELAC™, and CHEMIPEARL™, all of which are used in applications such as paints for cars and plastics and in packaging materials. In packaging materials, to respond to growing worldwide needs to address environmental issues, we are actively pursuing global expansion of water-based heat-sealant materials and barrier coating materials. For coating and other applications, we are developing derivatives that incorporate FORTIMO™ and STABiO™, novel isocyanates which we were the first in the world to develop, and meta-xylene diisocyanate (XDI), a specialty isocyanate which enjoys wide market recognition as a high-performance product. All our products create new customer value and are expected to help strengthen and expand the coating & engineering materials business.

Coatings

Example: Car paint



- STABiO™
- U-VAN™

Adhesives

Example: Packaging materials



- TAKENATE™/TAKELAC™
- CHEMIPEARL™
- UNISTOLE™

Sealants

Example: Sealing materials for construction



- TAKENATE™
- HIPRENE™

Elastomers

Example: Injection-molded items



- FORTIMO™
- TAKENATE™

TOPICS

STABiO™ receives Incentive Award at the 19th GSC Awards

With STABiO™, we have developed the world's first bio-based isocyanate PDI™ and created a polyisocyanate hardener using this. In recognition of the product's high reactivity and rapid curing at a level not found with conventional polyurethane materials, we received an Incentive Award as part of the 19th GSC Awards* run by The Japan Association for Chemical Innovation. STABiO™ is used in paints for cars and plastics and in adhesive products, as it provides chemical resistance, abrasion resistance, and gloss. Its high reactivity allows for curing at lower temperatures and in shorter times, leading to increased energy efficiency. Being bio-based, the material also helps to reduce environmental footprint. Development is



now advancing for new applications that require materials with new textures, including a resin product that is lightweight but strong and transparent, as well as a gel with unique softness.

*The awards acknowledge individuals and organizations who have made excellent contributions to the pursuit of green and sustainable chemistry (GSC).

Pursuing new textures using STABiO™ through collaboration with designers

TORCH/STABiO™ × PIEZOLA™

With just a gentle squeeze, TORCH emits a warm, soft light from within its transparent case. A piezoelectric line and a flex PCB made by Elephantech Inc. are contained within STABiO™, which is transparent and can be freely adjusted for hardness. Rather than having a traditional on/off switch, this innovative new product uses the material itself as the interface.



Air cushion LACE

LACE is an air cushion using STABiO™ that was born from collaboration with design studio YOY. Utilizing the special properties of STABiO™, polyurethane, which is normally used as a stuffing material inside a cushion, is highlighted as an outer material in this work. A combination of material, structure, and design has enabled the creation of this "air-through" cushion.



Photography: Yasuko Furukawa

Fiscal 2025 target

Operating income of ¥40 bn + new businesses

As well as further strengthening the local production and sales systems we have steadily built to tap into overseas growth markets, we aim to expand our business by providing products and services that meet the needs of reducing environmental impact. In addition, to achieve sustainable growth, we will continue to transform our product portfolio by bolstering our business platforms and creating new products and businesses.

Growth strategies

- In agrochemicals, we will continue to expand overseas businesses with strong growth prospects and strengthen agrochemical-related areas where demand potential is expected to rise up ahead.
- In coating & engineering materials, we will expand our overseas businesses centering on environmentally friendly products and high-performance products.
- In performance films & sheets, we will maintain and expand our market share in ICT fields in areas such as semiconductors and electronic components, and strengthen our business by expanding our lineup of packaging films that meet the needs of reducing environmental impact.

Investment strategies

- In agrochemicals, we will continue to expand our production platform for mainstay active ingredients and next generation active ingredients, in which we see growth potential up ahead.
- In coating & engineering materials, we will consider focusing investments on environmentally friendly products and high-performance products.
- In performance films & sheets, we will consider capital investments in environmentally friendly products and ICT-related products.

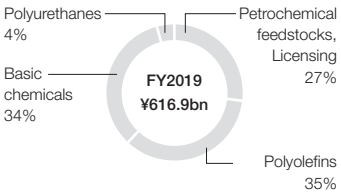
Basic Materials



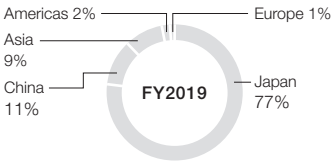
YOSHINO Tadashi
Senior Managing Executive Officer,
Business Sector President,
Basic Materials Business Sector

By leveraging our strengths in the entire chain from raw materials through to derivative products and tapping into value-added fields, we aim to secure stable earnings and build a framework that serves as a foundational business and supports the Group as a whole.

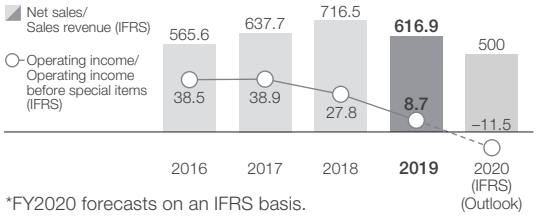
Sales by product



Sales by region



Trends in net sales and operating income (¥ bn)



*FY2020 forecasts on an IFRS basis.

Mission of the Basic Materials domain

Starting with petrochemicals and basic chemicals, we provide materials in a wide range of fields in this business, such as automotive, housing, consumer electronics, infrastructure, and food packaging. We aim to forge a presence in Asia, secure stable earnings, and build a foundational business by providing distinctive technologies, expanding our lineup of value-added products, and further strengthening our cost competitiveness.

Business vision

We have been improving our earnings structure by steadily implementing business restructuring through fiscal 2019. The global economy has seen a major slowdown recently as a result of COVID-19, and this led to the booking of a large inventory valuation loss to reflect the steep decline in the prices of crude oil and naphtha, our key raw materials. Despite the uncertainty and volatility in the environment surrounding this business, we are striving to further deepen its operations and explore opportunities by continuing to implement thorough cost reduction, expand our differentiated products, and maintain our high operating rate by sticking to our local production for local consumption approach. In doing so, we aim to build a stable earnings base that is resistant to changes in market prices and the supply-demand balance.

Market analysis and strategies

Opportunities and risks

- Shift to the high-performance packaging domain/market
- Developments in digital technology and biotechnology
- Influx of US shale and polyolefins
- Economic slowdown and volatility owing to US-China trade friction and the pandemic
- Crude oil and bulk and commodity product price volatility in Asia
- Influx of imported products and worsening export terms of trade due to the strong yen
- Shrinking domestic demand and slowing economic growth in China
- Growing need to address environmental issues

Strengths

- Globally competitive naphtha crackers
- Metallocene and other polyolefin catalytic technologies
- Distinctive differentiated products and derivatives
- Global expansion of polyurethane system house business based on high-performance polyols

Basic strategies

- Strengthen businesses that serve as the foundation of the Mitsui Chemicals Group and maintain and expand their earnings
- Expand distinctive high value-added derivative and niche products and enhance their profitability
- Complete business restructuring, further strengthen cost competitiveness, and reduce volatility
- Actively address environmental issues such as marine plastics and plastics recycling

Specific strategies

Petrochemical feedstocks & licensing
- Further strengthen competitiveness of crackers and expand catalyst and licensing businesses
- Further deepen petrochemicals business, including production balance and distribution

Basic chemicals
- Secure stable earnings through implementation of thorough cost reductions, promotion of local production for local consumption, and reinforcement of derivatives
- Actively adopt AI, IoT, and other sophisticated production technologies

Polyolefins
- Expand value-added fields using polyolefin catalytic technologies
- Build long-term relationships of trust with customers in Japan
- Enhance cooperation with the Mobility domain

Polyurethanes
- Continue global expansion leveraging advanced formulation design technology utilizing high-performance materials
- Expand eco-friendly products such as biomass-based polyurethane

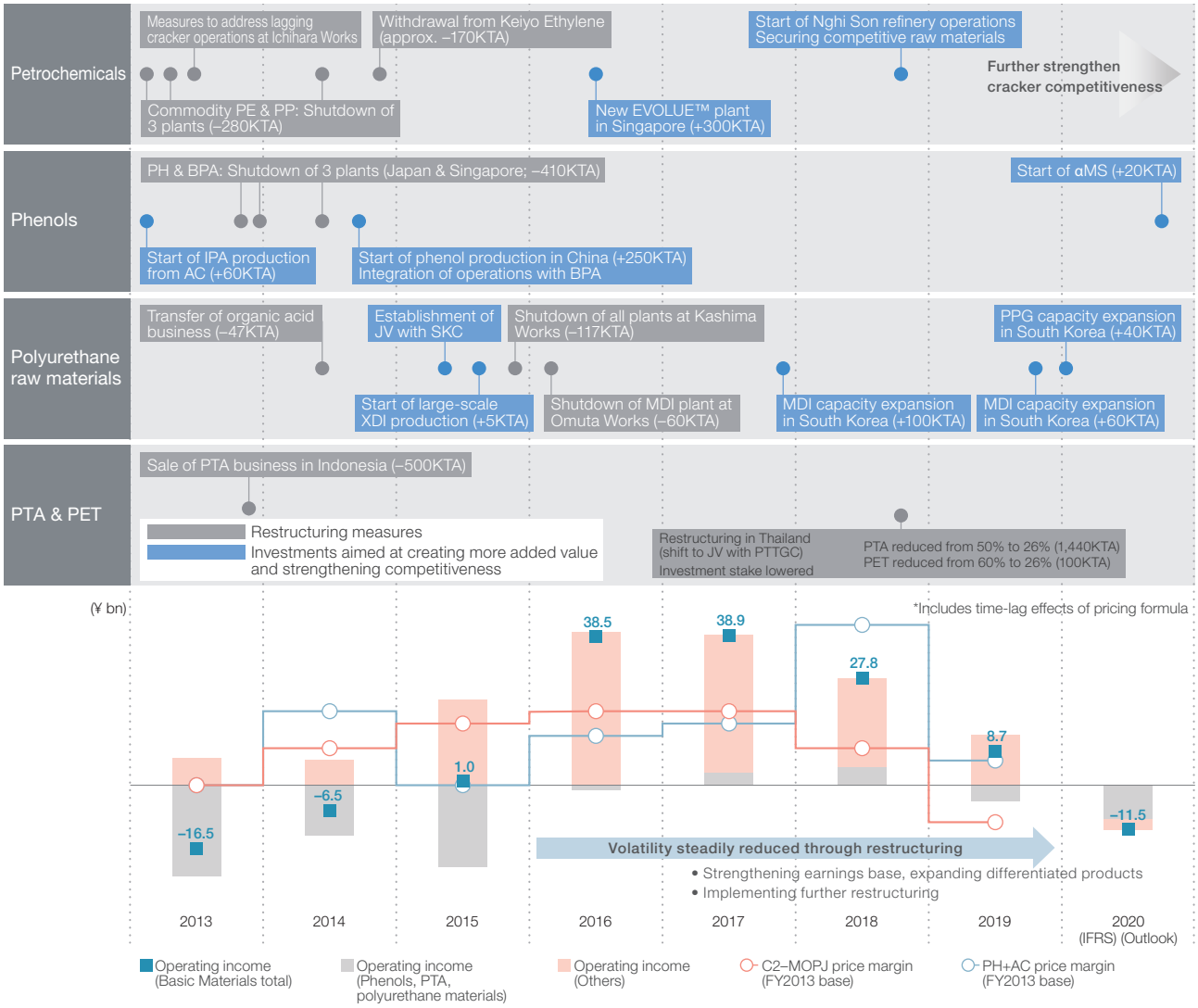
1. Building a stable earnings base

In the global financial crisis of 2008, commodity products for which we maintained a high export ratio, like phenols, purified terephthalic acid (PTA), and polyurethane materials, fell sharply into the red. Since then, we have undertaken structural reforms for these businesses. We downgraded the size of our production capacity to meet the level of demand through measures such as retiring our production facilities, which also included the closure of plants based on a strategy of local production for local consumption. In parallel, we have introduced a formula method to automatically link changes in raw material cost to product prices for those three products and other key materials in an effort to improve our resilience against fluctuations in market prices. As a result of these initiatives, earnings volatility has been improving—the weighting of local production for local consumption for phenols, PTA, and polyurethane materials has now reached more than 80%, while the price formula ratio of mainstay products together with domestic polyolefins now stands at more than 70%.

On the other hand, the competitiveness of our crackers compares favorably with the new large-scale crackers in Asia and they have been rated highly by specialized overseas agencies for their superior energy efficiency. This is the source of competitiveness in our derivative products including our lineup of high value-added products outside of the basic materials field.

However, we expect a loss in operating income before special items in fiscal 2020 owing to the demand slump caused by COVID-19 and the booking of an inventory valuation loss caused by the decline in raw materials prices. Up ahead, we intend to pursue further cost reductions in our crackers by lowering and stabilizing input costs through diversification of raw materials and improving energy efficiency with the installation of gas turbines. We also plan to streamline production and distribution in our existing businesses by actively employing AI, IoT, and other highly advanced technologies. In the pursuit of further restructuring, we will consider a variety of initiatives without being bound by previous methods.

Reducing volatility through steady restructuring



2. Expanding our lineup of value-added products

We are working to increase our ratio of captive ethylene consumption and develop derivative products with more added value. In 2014, we withdrew from Keiyo Ethylene Co., Ltd., closed our commodity polyethylene plants, and took steps to expand capacity for the production of EVOLUE™ and other ethylene-based high value-added polymers. As a result, our captive consumption of ethylene is now quite high at 80%, while the export ratio, which is susceptible to overseas market conditions, is less than 10%. In addition, our weighting of high value-added polymers has reached 90%. This has enabled us to shift to a product mix which makes it difficult for shale-derived polyethylene, which is mostly commodities, to take the place of.

For other distinctive value-added products, such as ICT- and EV-related materials, we will work on achieving business growth by maintaining and expanding our share in growth markets. Moreover, we aim to explore the growth potential of this foundational business by acquiring new business opportunities through strengthened collaboration with customers.

The impact of COVID-19 is causing a major shift in the supply-demand balance for chemical products. We will respond rapidly to changes as we also keep a close watch on post-COVID-19 trends.

3. Initiatives to tackle global environmental issues

We contribute to society by supplying a wide range of plastic materials that are essential to people's everyday lives, including polyethylene, polypropylene, PET resin, and polyurethane materials. However, there are growing concerns about climate change and marine plastic waste, calling for companies to contribute to solving these issues.

We are strengthening our initiatives for global environmental protection. In addition to expanding biomass plastics such as ECONYKOL™, we are actively considering how we can help realize a recycling-oriented society, such as by developing materials that can reduce the volume of plastics used and reusing waste plastic as a raw material.

Blue Value™

Reduces CO_2 | Conserves resources

Seat cushion material ECONYKOL™



Reduces fossil resource consumption with use of bio-based raw materials.

Fiscal 2025 target

Operating income of ¥30 billion

In polyolefins, although the impact of products like shale gas-based polyethylene is also beginning to be felt in Asia, we aim to build a polyolefin business with a strong presence in the Japanese and Asian markets by shifting to high value-added products. In monomers and basic chemicals too, by leveraging our strength as a manufacturer of the entire chain from raw materials through to end products, we aim to develop and expand even higher value-added derivatives and downstream products.

Growth strategies

- We aim to further boost earnings through initiatives to expand our high-margin differentiated products and derivatives.

Investment strategies

- We plan to actively carry out capital investments to further strengthen competitiveness.

New Business



ZENKOH Hirofumi
General Manager,
New Business Incubation Center

Drawing on the knowledge of the Mitsui Chemicals Group, we are taking on the challenge of new possibilities in the New and Next Generation Businesses freshly added to our targeted business domains in the 2025 Long-Term Business Plan. We have already started sowing the seeds to ensure our businesses bear an abundance of fruits in 10 to 20 years' time.

Mission of the New Business domain

The mission of our New Business domain is to create businesses that provide new customer value in a society that is undergoing dramatic change. Each business sector, the New Health Care Business Development Division, the New Mobility Business Development Division, and the New Business Incubation Center are working in collaboration with each other to develop products and services that break new ground.

The mission of the New Business Incubation Center in all of this is to come up with new business models, underpinned by a "think globally, act locally" policy. Leveraging collaboration with startups and academia through open innovation initiatives, the Center endeavors to create new business models based on the idea of marketing the Group's knowledge, and aims to cultivate cutting-edge materials businesses in areas such as ICT and robot materials.

New business development structure

- New Health Care Business Development Division
- New Mobility Business Development Division
- New Business Incubation Center
  - Robot Materials Business Department
  - ICT Materials Business Department
  - Energy Solution Department
  - Open Innovation Department

Responsibilities of the New Business Incubation Center

(1) Exploring and creating new businesses
(2) Exploration of new business ideas and early stage development in all fields, including our four business domains
(3) Timely gathering of information on market and technological trends through venture investment and external information networks, and dissemination of this information to relevant departments
(4) Formulating, developing, promoting, and managing business strategy for new businesses for which it is responsible
(5) Administrative duties for products for which it is responsible and affiliates under its jurisdiction

Positioning ICT materials that contribute to digitalization as our next target domain

We are positioning ICT materials as our next target domain to accelerate the creation of new businesses. Thus far, the Mitsui Chemicals Group has been developing ICT-related materials in a wide variety of fields from semiconductors to display & imaging, sensing, and electronic component materials in our Mobility and other segments. We will organically link these projects to further cultivate businesses in this domain, with an initial sales target of around ¥100 billion.

		Mobility	Health Care	F&P	Basic Materials	New Business Incubation Center
ICT-related materials in the Mitsui Chemicals Group	Semiconductors	**MITSUI PELLICLE™** Dustproof cover	**SYNTEX™ nano** Filters, etc.	**ICROS™ Tape** Process tape for semiconductors	**Special gas** Silane, disilane, etc.	Semiconductor testing process
	Display & Imaging	**TPX™** Reflective film **PROVEST™** Reflective parts for LED	**TouchFocus™** Next-gen. eyewear **Functional dye** Color filter Luminous sensitivity adjustment filter	**STRUCTBOND™** Sealing material for LCD and OLED		Display process **ECRIOS™:** transparent polyimide Imaging process
	Sensing	**APEL™** Lens material				Sensors & Solutions **μFLEX™, PIEZOLA™** Piezoelectric materials
	Electronic materials	**ARLEN™** Modified polyamide 6T		**SP-PET™** Film for MLCC **Opulent™** Heat-resistant release film		Packaging process for electronic devices With Elephantech Inc., CONNECTEC JAPAN Corporation

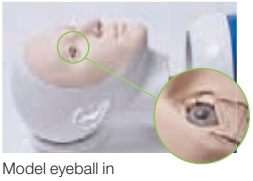
Robot materials business

New gel material adopted for use in BIG CLAPPER

The 2020 model of Bye Bye World Inc.'s entertainment robot BIG CLAPPER features clapping hands developed using one of our new materials. BIG CLAPPER is a clapping robot that brings enjoyment to people using a combination of clapping and sounds. By producing sets of clapping hands with differing hardness and repulsion from a gel material with an altered molecular structure and then conducting sound tests, it was possible to recreate a clapping sound closer to that of humans. This new gel material was also used in a model eyeball that can be mounted in a humanoid eye surgery simulator. Going forward, we intend to expand its application to a variety of products that require a soft texture close to that of human skin, including for service robots and medical uses.



Clapping robot
BIG CLAPPER



Model eyeball in
a humanoid eye surgery simulator

Open innovation

Collaboration with Elephantech Inc.

In October 2019, we agreed to a strategic partnership with Elephantech Inc., a startup company in the printed electronics sector. In an effort toward realizing a sustainable society, Elephantech is pursuing a flexible printed circuit boards (PCBs) production business that uses inkjet printing to manufacture PCBs using just 1/15th the energy and 1/13th the water of conventional processes. Under the partnership, we will make the buildings and plant infrastructure of our Nagoya Works available for Elephantech to use in order to expand the mass production system for this business, while pursuing cooperation in areas of technical development. Through these joint efforts, we aim to expand inkjet-based additive manufacturing and find broader use for it in society.

Elephantech



Nagoya Works entrance

ICT materials business

Product development with Z-Works Inc.

From March 2020, we began investing in Z-Works Inc., a company which develops IoT devices and provides consulting services to support nursing care sites, and entered a partnership for product development. Z-Works offers LiveConnect, a nursing care support system which utilizes IoT and AI technology to solve a variety of problems faced at nursing care facilities. Our proprietary high-sensitivity PIEZOLA™ sensors have been adopted for use in its vigilant sensing systems for nursing beds. With low-profile vital sign sensors that monitor the sleep condition, heart rate, and breathing of residents and quickly detect when someone is getting out of bed, they help to reduce the workload of care staff and improve operational efficiency. Through continued collaboration with Z-Works, we will focus on solving issues at nursing care sites in our increasingly aging society.



PIEZOLA™
piezoelectric sensor



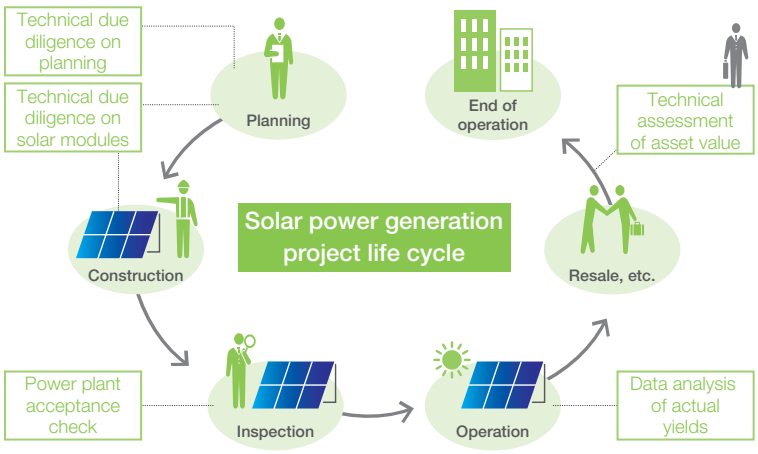
Nursing bed featuring vigilant sensing system

Energy solutions

Diagnostics business for solar power generation

We are able to diagnose the overall condition of a solar power generation plant. We do this by accurately forecasting solar panel service life with technology that can predict deterioration in solar panel encapsulants, a product manufactured and sold by Mitsui Chemicals Tohcello, Inc. for more than 25 years. We also draw on our experience in developing and operating the Tahara Solar-Wind™ power generation facility, as well as data accumulated at the prototype power plants located in the Mobara Branch Factory and Sodegaura Center. In recent years, we have worked together with investment funds to share data on the volume of power generated at plants nationwide, which have helped us make even more accurate forecasts. In addition, we can offer our services to solar power generation plants that have installed increasingly popular storage battery facilities and predict changes in electricity sales volume that may result from restricted output. In the fast-growing Indian market, we have opened a solar panel testing and certification lab and are aiming to begin accepting BIS certification* testing during fiscal 2020.

*BIS (Bureau of Indian Standards) certification is comparable to Japan's JIS certification but obtainable only through accredited organizations in India.





Testing and certification lab in India



Fiscal 2025 target

Operating income of ¥25 billion (incl. new businesses in other targeted business domains)

Drawing on the knowledge of the Mitsui Chemicals Group, we are taking on the challenge of new possibilities in the New and Next Generation Businesses freshly added to our targeted business domains in the 2025 Long-Term Business Plan.

R&D Strategy

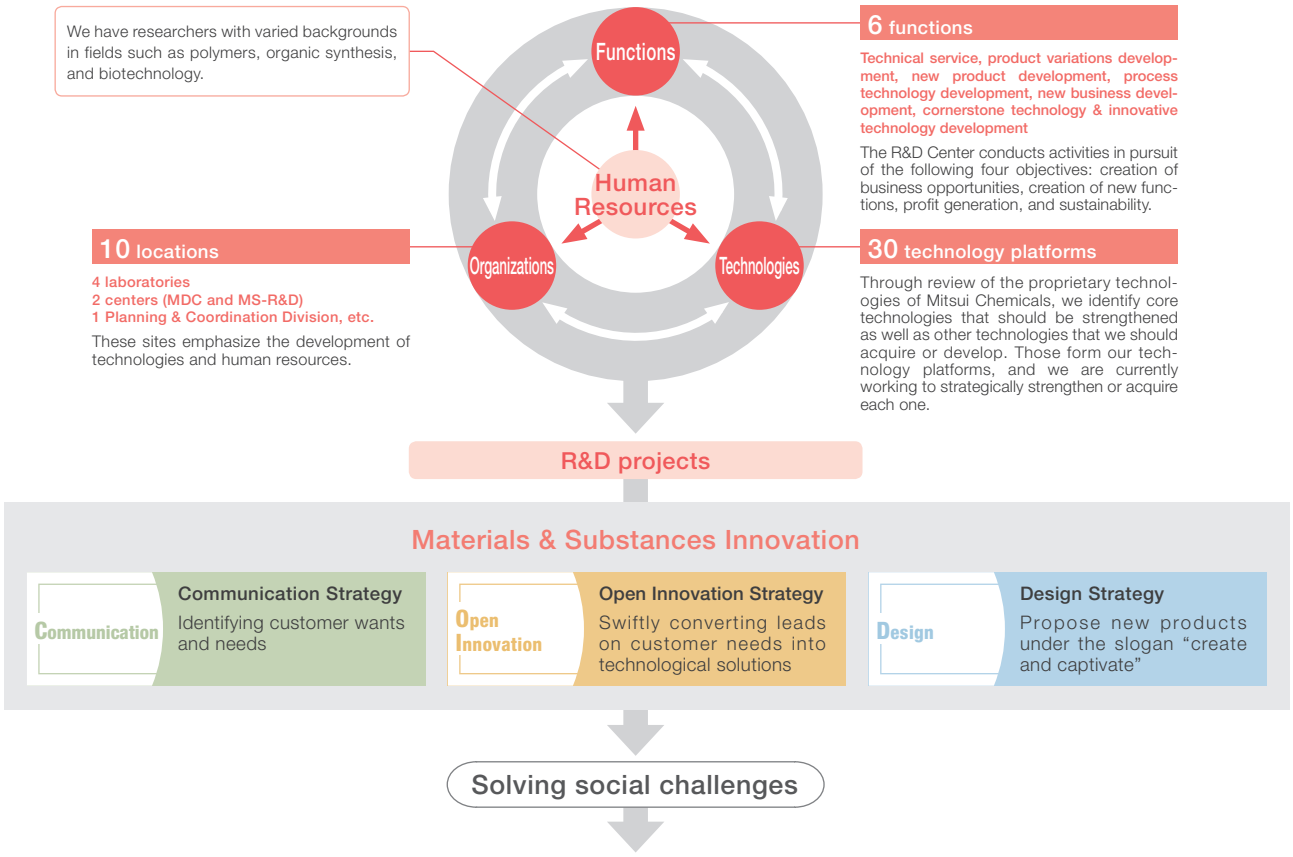
R&D and Technology
https://jp.mitsuichemicals.com/en/techno/index.htm

Policy

Led by our R&D Center, we pursue innovation in materials to address various social challenges in the areas of the global environment, resources, energy, and food. In doing so, we can contribute to the realization of a cohesive society in harmony with the environment and health and well-being in an aging society, which eventually leads to the sustainable development of our society.

Strategy

At the base of the Mitsui Chemicals Group R&D strategy are five key components: Functions, Organizations, Technologies, the Human Resources who connect them, and our individual R&D Projects. As we enhance and expand each of these parts, at the same time we are also attempting to create “Materials & Substances Innovation” that contributes to solving social challenges. We are doing so through a combination of our Communication Strategy, which seeks to anticipate social changes and link that to R&D activities; our Open Innovation Strategy, which accelerates the pace of technology development itself; a fusion with information technology, and our Design Strategy, which seeks to deliver the products and services that customers want as soon as possible.





SHIBATA Shingo
Managing Executive Officer
Center Executive,
R&D Center

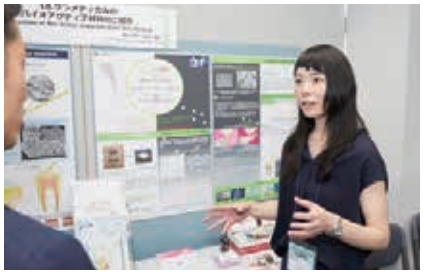
As stated in the Corporate Vision, we seek to harness the comprehensive power of chemistry in order to contribute broadly to society. From the time I joined the company, I have believed that the power of chemistry has infinite potential to impact and contribute to changing society. Many changes are occurring in human society, but when I look to the future and think about how we should pursue the types of transformations that can be brought about through the power of chemistry, I am keenly aware of the very important roles and responsibilities that fall to those of us involved in research and development.

The Mitsui Chemicals Group has exceptionally talented human resources. Each person remembers to constantly review their own actions and has the energy to take on any challenge. I hope we can consolidate that tremendous energy to bring about further innovation.

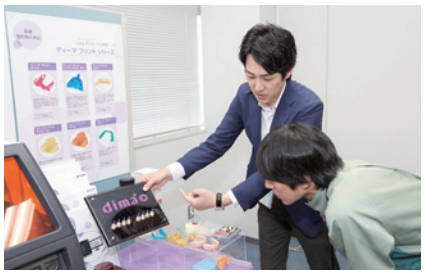
Tech Finder

Tech Finder is an exchange meeting to introduce the Group's products, technologies, and services through seeing, touching, and feeling. It began in 2017 as one of the Group's Open Innovation initiatives. Participants in the exchange meetings include not only researchers, but also a diverse range of other participants from both within and outside the Company. The proactive discussions and exchanges of ideas that take place at each of the various exhibition booths sow the seeds for new joint research topics and new businesses. By continuing to hold these events on a regular basis in the future, we will seek to strengthen our collaborations with others and tackle the challenge of R&D for creating a better future.





Tech Finder 2019 introductory video
https://www.youtube.com/watch?time_continue=9&v=d8wlkU2wjxg&feature=emb_logo



See × Touch × Feel
TECH FINDER



Mitsui Chemicals Catalysis Science Awards "Catalysis Science Contributing to Sustainable Society"

To contribute to the sustainable development of chemistry and the chemical industry, Mitsui Chemicals established these awards in 2004 to recognize researchers who have made outstanding achievements particularly in catalysis science. From the current round, we have added the subheading of "Catalysis Science Contributing to Sustainable Society." In addition to catalysis R&D in such areas as solid catalysts, molecular catalysts, biocatalysts, etc., we are soliciting applications for a wide range of catalysis research, such as green process research and process research on the effective utilization of rare metals, in which catalysts are applied.

	Mitsui Chemicals Catalysis Science Award	Mitsui Chemicals Catalysis Science Award for Creative Work
Eligible applicants	Researchers at universities or public research institutions who have made extraordinary achievements in the catalysis science fields as in the subheading One (1) winner (every other year)	Researchers at universities or public research institutions who have made original achievements in the catalysis science fields as in the subheading Up to two (2) winners (every other year)
Criteria	Must be 47 years old or younger	Must be 37 years old or younger

2020 Mitsui Chemicals Catalysis Science Award
Dr. Frank Glorius (Professor, University of Münster, Germany)

Title: "Development of Chemo- and Enantioselective Arene Hydrogenation and of Additional Tools for Improving Synthesis"



Dr. Frank Glorius has developed various catalysts that selectively and efficiently achieve reactions that are extremely important in the field of synthetic organic reactions, such as arene hydrogenation. He has also been successful in methods for smart data generation and machine learning. These wide-ranging studies have contributed greatly to the development of sustainable catalysis science.

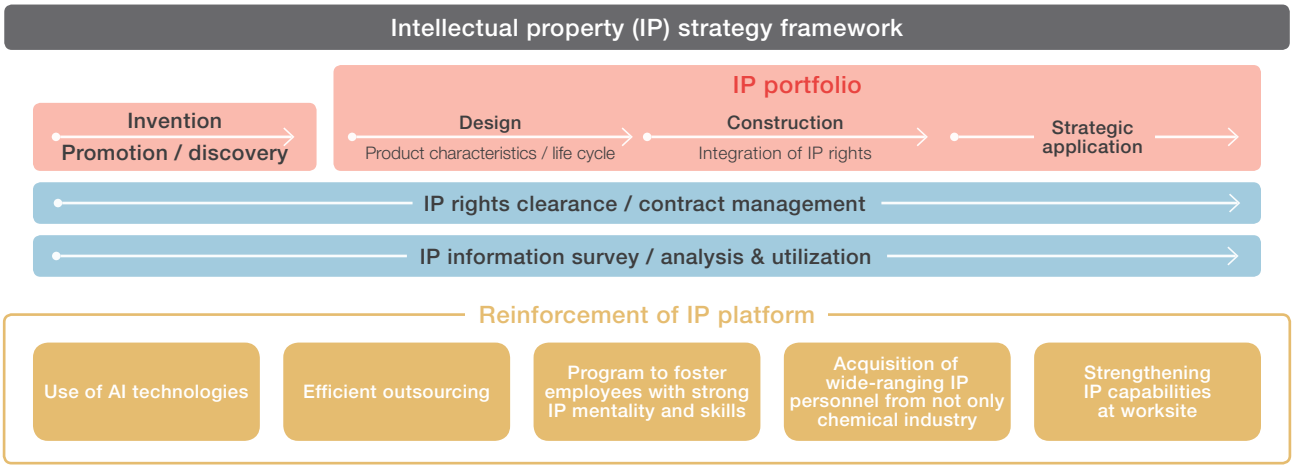
Intellectual Property Strategy

Intellectual Property
https://jp.mitsuichemicals.com/en/techno/ip/index.htm

Basic Strategy

The Mitsui Chemicals Group recognizes intellectual property to be the intangible assets that contribute to business, which broadly include patents, confidential know-how, utility models, designs, brands (trademarks), copyrights, as well as rights under contract, trade secrets, and the like. We believe that strategically designing and utilizing the best mix of our intellectual property is key to accomplishing sustained competitive advantage. At the same time, we respect the legitimate intellectual property rights of other companies and ensure compliance by taking appropriate responses and actions wherever necessary.

Under our 2025 Long-Term Business Plan, we intend to review our policy on acquiring and utilizing intellectual property, adequately focusing on each business, its products and related technologies, in close collaboration with business divisions, R&D divisions, production/technology divisions, and other relevant departments within and outside of the Group. By constructing business-specific intellectual property portfolios, we aim to maximize the business opportunities afforded by intellectual property and minimize any business risks associated with intellectual property.



Strengthening our information research and analysis capabilities and promoting IP strategy that is directly linked to business strategy

In keeping with the Group's objective of promoting customer-driven innovation, the Intellectual Property Division is strengthening IP consultant-type activities through which we actively and autonomously collaborate with the business divisions to propose IP strategies. As information research and analysis capabilities are becoming increasingly important for building the IP portfolio needed to realize a desired business image, we are incorporating the latest research and analysis methods and technologies, and we are training and utilizing experts such as intellectual property analysts. In addition, by presenting knowledge on intellectual property information and other areas that we have obtained through research and analysis of all types of internal and external information—comparisons of our established areas of technology with those of our competitors, the strengths and weaknesses of our IP rights acquisition status, our market position as a business, potential fields for new business development, etc.—we are deepening cooperation with the relevant divisions, including the business divisions and R&D divisions. Through these efforts, we will draw an overall picture of the Group's products and businesses, giving a bird's-eye view of the business as a whole that includes the trends of competitors and the customer's perspective as well. By anticipating and identifying what types of technologies, materials, and services will be needed in the future, we are promoting initiatives that directly link the implementation of our IP strategies with the Group business strategies.

Promotion of a global IP strategy

As the Group business is expanding globally, it is essential that we provide IP support for the business growth of our company and our overseas subsidiaries and affiliates in each country and region. There are many important issues facing us, including addressing new business development in Europe and the United States, implementing brand strategies, and dealing with IP risks in emerging economies in Asia and elsewhere. A new global IP strategy project was launched in fiscal 2019, and while adapting to changes in the global business environment in a timely manner, Mitsui Chemicals, our regional headquarters, and our overseas Group companies are working closely together to strengthen the protection of the Mitsui Chemicals Group brand and to improve awareness of and promote our IP strategy in our overseas businesses.

Human Resources Strategy

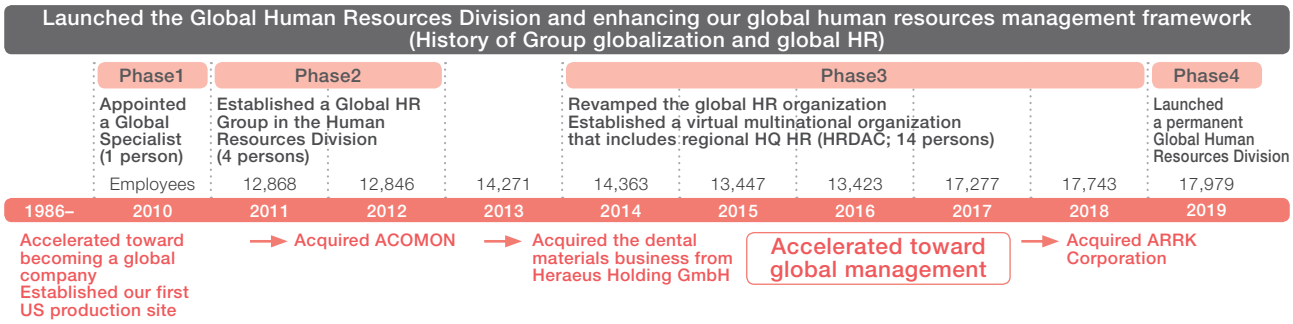
Human Resources Management
https://jp.mitsuichemicals.com/en/sustainability/society/employee/index.htm

Basic Strategies

The Mitsui Chemicals Group sets out three basic strategies: (1) pursuing innovation, (2) accelerating global expansion, and (3) strengthening the competitiveness of existing businesses in our 2025 Long-Term Business Plan. Human resources will serve as one of our most valuable management resources in the implementation of these strategies.

The Group will continue working on enhancing our corporate value and achieving the Long-Term Business Plan targets through comprehensive management of recruiting, development and training, placement, and utilization of human resources.

Global Human Resources Management and Strategies



Since the founding of Mitsui Chemicals in 1997, the Group's consolidated companies have grown in number to a total of 156, and our consolidated employees (as of March 31, 2020, excluding contract employees) have increased to 17,979 persons. The overseas sales ratio has expanded to 45%. With the progress of business globalization, we have worked to build a framework on a global basis in the area of human resources management, including the operation of overseas bases, as well as post-merger integration (PMI) for cross-border M&As. In order to further accelerate these efforts, we established the Global Human Resources Division in April 2019 to expand from our conventional virtual HR organization to a permanent global HR organization. We will enhance our global business competitiveness by executing effective human resources management on a Group and global level, and enhancing our human resources governance.

Following the launch of the Division, we established functions for system development at the global headquarters, including talent management, human resources development and training, and compensation and evaluation. At the same time, we are using schemes from the HR Development Advisory Committee (HRDAC), a virtual project framework involving human resources at the regional headquarters, held continuously since 2014, in order to accelerate the planning of various globally-shared programs and expansion into local regions. We have redefined matters that should be unified globally, as well as matters that should be operated with a degree of freedom in each region or company. We operate the human resources organization that supports both effective human resources management on a Group and global level and the growth of each region and our businesses.

Key Talent Management: Developing future leaders

It is a pressing task for the Group to develop and train future leaders, as well as human resources who are capable of managing our overseas subsidiaries and affiliates, the number of which are increasing due to overseas development and M&As. To this end, the Group has introduced the Key Talent Management system, which began operations in fiscal 2016.

We will further develop this system, in order to promote the development and training of employees who will ensure the continued growth for the Group.

Progress in fiscal 2019

- Held meetings of the Divisional Key Talent Management Committees in all divisions (both business and functional). Selected key talents from across the entire Group, including from domestic and overseas affiliates, and formulated individual development plans (placement and training) for those talents.
- Held meetings of the Company-wide Key Talent Management Committee, in which all officers participate. Identified management candidates, talents who might join the senior management ranks in the future, from among the key talents selected by the Divisional Key Talent Management Committees, and confirmed and approved the individual development plans (placement and training) for these candidates. Also confirmed the direction of development and placement of other key talents (those in positions equivalent to Supervisor at Mitsui Chemicals or below, including those at domestic and overseas affiliates).
- Confirmed and approved the revised succession plans for the 100 critical positions based on the business strategies for fiscal 2019.
- As part of efforts to strengthen organizational diversity, created individual development plans for potential female line managers who had been selected as key talents.
- Formulated a Key Talent Management Assessment System to increase objectivity and transparency in the management candidate development process.

Specific plans going forward

(1) Review and implement the individual development plans (placement and training) based on the qualities, motivation, experience, and competency of management candidates selected from among key talents.
(2) Formulate individual development plans for newly selected key talents.
(3) Implement a talent rotation program between sectors based on individual development plans for Supervisor-level key talents in Japan and overseas.
(4) Formulate succession plans for the 100 critical positions.
(5) Specify qualifications and attributes required of management candidates, and introduce a skills development program to determine the direction of longer-term development of management candidates (key talent management assessment).

Overview of Key Talent Management

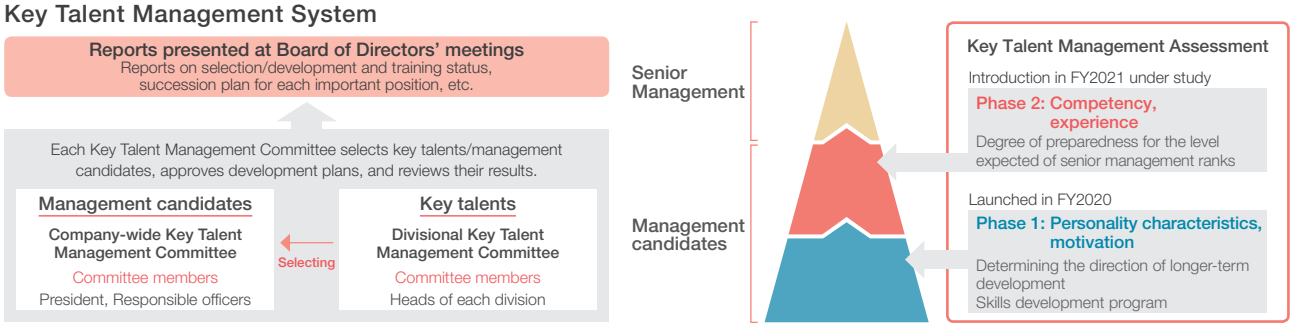
(1) Key Talents and Management Candidates

Among the Group's worldwide human resources, those who consistently demonstrate a high level of performance and competence, potential, and enthusiasm are identified as key talents. Among such key talents, those who have the potential to become future leaders are selected as management candidates.

(2) Key Talent Management Committees

The Key Talent Management Committees have been established as a body to select key talents/management candidates, approve development plans, and review their results. The Committees review the work experience of selected human resources, and determine where they should be assigned based on five perspectives: managerial viewpoint, business restructuring, new business development, Company-wide projects, and the operations of overseas subsidiaries and affiliates.

Key Talent Management System



Global position management: Appropriate placement of human resources throughout the entire Group

The Mitsui Chemicals Group currently has approximately 18,000 positions, of which close to 40% are based overseas. As the Group continues to grow globally, in order to ensure that the overall design of our organizational and job structures is aligned with the Group's management strategies, we have standardized and clearly specified the basic principles, systems, and procedures related to the creation and phasing out of positions within the Group. In addition, we are introducing a global grade structure to delineate positions within the Group. These measures will enable us to place the right human resources in the right places and to build a cross-national and cross-regional transfer system, which will facilitate career development within the Group.

Example of Activity: Global position management in action

One advantage a large, globally operating corporation has to offer, is the opportunity for its employees to move within the organization—to new responsibilities and also to new countries. During my career at Mitsui Chemicals I have been fortunate to work in different roles in three different countries, Singapore, Japan and Germany. When I joined the company in 2009, the first overseas R&D site had recently been established in Singapore. After eight rewarding years in R&D, I was given the chance to move to MCI headquarters in Tokyo and expand my responsibilities. I changed my field of work to New Business Development, a logical next step after customer directed R&D. Two exciting years in Japan followed where I prepared the expansion of the project to Europe. I relocated back to my native Germany in 2019 to join Mitsui Chemicals Europe to implement this plan. In preparing for and undertaking these moves, I could always rely on the advice and encouragement from my managers as well as the support from local and global HR teams. Moreover, the memories of people, country and food of Singapore and Japan will last a lifetime. I am confident that as the Mitsui Chemicals Group expands its global presence, global mobility of its employees will follow suit.



Dominik Jürgen-Lohmann
New Generation Business Development Manager,
Health Care Division
Mitsui Chemicals Europe GmbH



ANDOU Yoshinori
Managing Executive Officer
General Manager,
Global Human Resources Division

Our global human resources strategies

The Mitsui Chemicals Group's consolidated employees have increased to around 20,000 persons (including contract employees) in part as a result of M&As in recent years, and the ratio of overseas employees has reached around 40%. Our business domain is also no longer restricted to the development, production, and sale of materials, but has expanded to include the proposal of solutions to our customers. Amid significant growth in the diversity of nationalities and specialties of the talents that work in our Group, we need more than ever to carry out human resources strategies with a Group-wide and global scope. We launched the Global Human Resources Division in April 2019, and are aiming to strengthen center-of-excellence (CoE) functions that enable the Group-wide and global formulation and rollout of human resources strategies. In the just over one year since the establishment of the Global Human Resources Division, we have made steady progress on developing a Group-Global Human Resources Platform that incorporates the perspectives of talent management, position management, and talent development. To continue to create value in global markets, we will work to recruit, train, and effectively deploy the required human resources on a Group global basis.

Diversity
https://jp.mitsuichemicals.com/en/sustainability/society/employee/diversity.htm

Diversity and inclusion (Empowerment of women in the workplace)

The Mitsui Chemicals Group is aiming to change its business model by transforming the business portfolio. As we seek to reach out to markets closer to consumers, which require understanding of diverse values and tastes, we are actively working to promote diversity and inclusion so that our people can feel comfortable bringing their unique perspectives to work and make the most of their potential. In particular, our efforts to promote the empowerment of women in the workplace have been recognized by external organizations, including the Company being selected as a Nadeshiko Brand enterprise and as part of the MSCI Japan Empowering Women Index (WIN).

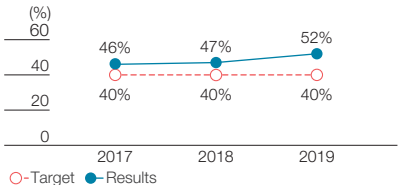
As KPIs to measure the empowerment of women in the workplace, we track the ratio of women in management positions (manager-level or above) and the percentage of women among regular hires. In fiscal 2019, we set the target for this ratio of women in management positions at 4% and achieved a result of 3%. In fiscal 2020 and beyond, with the aim of promoting greater appointment of women to managerial roles, we will select mentors for potential female managers and conduct training for general managers who hold the key to their development and appointment.

In addition, because it is necessary to strengthen the pipeline of female talent to continue to raise the ratio of women in management positions, we have set targets for the percentage of women among regular hires, and are working on steady and continuous recruitment of female talent. We have successfully surpassed the targets set for career-track administrative positions for three years running, and have also steadily increased the ratio of female hires in career-track technical positions as we strive to reach the target for this job category too. Going forward, we will communicate the appeal of working in technical workplaces for women through video messages from the President and other means.

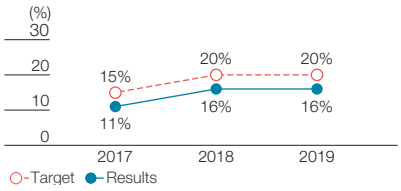
It is said that minorities will have an impact on the decision-making of a group when they represent more than 30% of the total. As our ratio of female hires in career-track administrative and career-track technical positions was 26% in fiscal 2019, we are close to reaching the 30% mark. We are actively developing and training our female talent so that, by the time our recent female hires become ready to take on managerial roles, we will have attained a ratio of women in management positions that is close to the percentage of female employees at the time of their hiring.

Percentage of women among regular hires

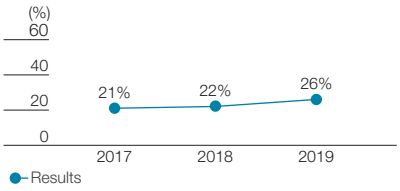
Career-track administrative positions



Career-track technical positions



Total career-track positions



Initiatives for work styles in the "New Normal" era

We are actively implementing teleworking and staggered working hours as well as considering moves to online training, in order to put first the health and safety of our employees and their families, our customers and suppliers, and other stakeholders as well as lower their risk of infection.

Our stance on online training

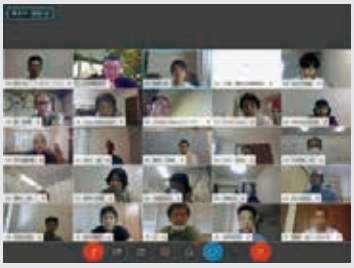
- We divide our training programs into four types: self-contained programs, mutual engagement, teaching, and learning. Depending on the desired training outcome, the programs will be taken online, via a mix of online and face-to-face training, via face-to-face training, or postponed during the COVID-19 pandemic.
- When it is decided to move a training program online, we redesign it taking advantage of the characteristics of appropriate tools: knowledge input will be achieved through prior individual study; those that require mutual engagement through dialogue will be offered via online sessions; and e-learning will be used for iterative learning after the completion of the training.

Future plans

- Plan and prepare to move existing training programs online
- Conduct online learning trials in fiscal 2020 on a global basis, with a view to Group-wide and global rollout to keep up the pace of our growth regardless of external conditions.

Actual cases of training moved online
FY2018 Business Site Managers LDP* Follow-up
FY2019 Business Site Managers/Supervisors LDP
FY2019 Global Business Skill Training Final Session
FY2020 New Career-Track Employee Training

*LDP: Leadership Development Program



Corporate Governance



Corporate Governance
https://jp.mitsuichemicals.com/en/corporate/governance.htm

Corporate Governance Guideline
https://jp.mitsuichemicals.com/pdf/en/corporate/governance/governance_guide_e.pdf

Basic Philosophy

The Mitsui Chemicals Group is constantly engaged in business activities to realize its Corporate Vision, which comprises a Corporate Mission and a Corporate Target. We recognize that efforts to achieve effective corporate governance as part of that process will allow us to:

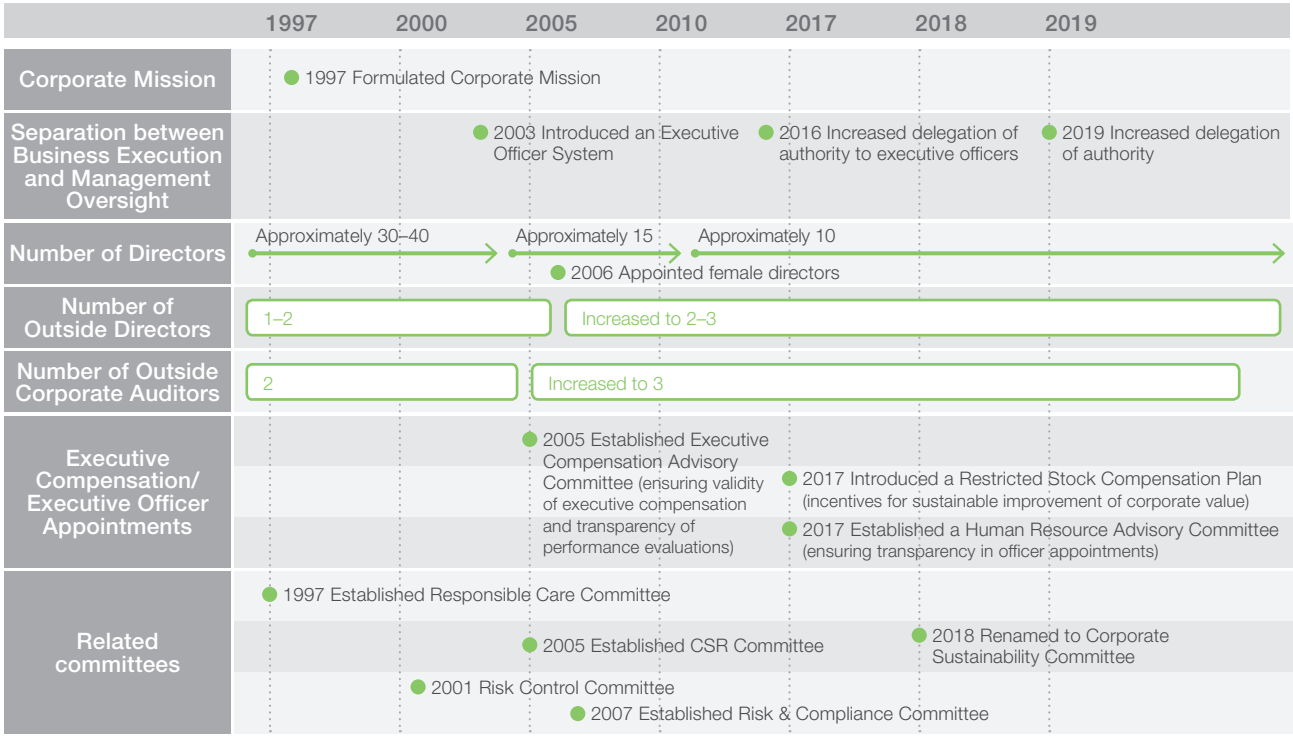
(1) maintain and strengthen trusting relationships with shareholders and various other stakeholders of the Group, and

(2) create a framework that can execute transparent, fair, timely, and decisive decision making.

Through these means, the Group can achieve sustainable growth and increased corporate value over the medium to long term.

Corporate Governance Reforms

Since the founding of Mitsui Chemicals in 1997, we have continued to carry out reforms with the aim of realizing more effective corporate governance.



TOPICS

Winner Company in the Corporate Governance of the Year 2019 awards

Held since 2015 and organized by the Japan Association of Corporate Directors, the Corporate Governance of the Year awards form part of the Japanese government's growth strategy, aimed at boosting the earning power of Japanese companies by supporting those companies that are achieving sound medium- to long-term growth through corporate governance. Mitsui Chemicals was selected as one of the three winners in the 2019 awards from among the approximately 2,000 companies listed on the First Section of the Tokyo Stock Exchange.

We have made steady ongoing efforts to maintain an awareness of corporate governance in our management activities, including appointing our first outside director before our 1997 merger. This award will spur us on to pursue even more effective corporate governance, thereby enhancing Mitsui Chemicals' corporate value.

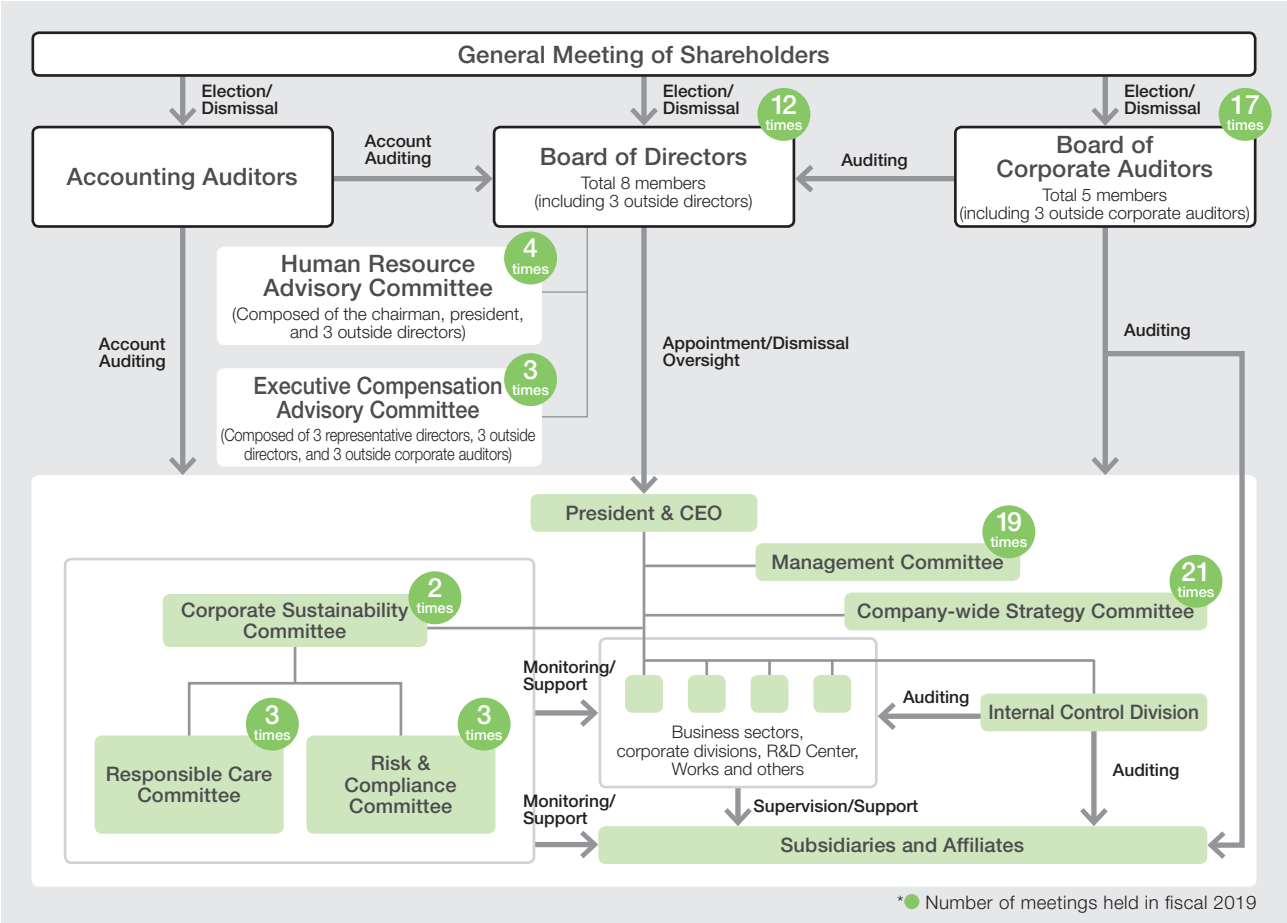
Reasons for Mitsui Chemicals' Selection

1. Effective use of governance as a means of taking on the challenge of expanding into high value-added fields through business restructuring in the difficult business environment of the chemical industry, and the resulting improvement in ROE by 10% in the last four years.
2. Steady commitment to well-balanced corporate governance, such as discussion of succession plans at the Human Resource Advisory Committee and active efforts in ESG activities.
3. This is the first time a former conglomerate-affiliated, heavy-duty, large company has been chosen in the history of this award, demonstrating that traditional Japanese companies can use governance effectively.



Corporate Governance Framework

The Board of Directors of the Company, which is presided over by the Chairman who is independent of the business execution, makes key management decisions and oversees the operations of each individual director, and as a company with a Board of Corporate Auditors, the status of each director's performance of his or her duties is audited by the corporate auditors and the Board of Corporate Auditors independently from the Board of Directors. In accordance with such organizational design, the Company aims to realize smooth and efficient management through initiatives such as to clarify official authority and decision making rules based on company rules, clarify the division of responsibilities between management oversight and business execution by introducing an executive officer system, deliberate on important matters at the Management Committee, and deliberate on strategies from a company-wide perspective at the Company-wide Strategy Committee. In addition, the Company strives to ensure soundness and appropriateness through an internal control system based on serious regard for the roles of corporate auditors, auditing of appropriateness of business operations and sound risk management by the Internal Control Division.



Policy on Cross-Shareholdings

The Company acquires and holds the shares of customers and suppliers in cases where we deem that such holdings can contribute to the medium- to long-term enhancement of our corporate value from the perspective of establishing and strengthening relationships and forming business partnerships with them. Meanwhile, the Company maintains a basic policy of promptly disposing of or reducing the amount of shares it considers no longer worth holding, and on an annual basis, has the Board of Directors examine whether or not it would be appropriate to continue holding such shares in view of the respective business alliance, status of business transactions, capital costs, and other factors.

During fiscal 2019, this was examined at a Board of Directors meeting in February 2020 and some shares were sold, as shown in the table below.

Sales of cross-shareholdings

		FY2018	FY2019
Listed and non-listed shares	No. of issues	5	17
	Total sales value	¥341 million	¥7,190 million

*Including some of the shares which have been sold.

Election and dismissal of senior management and nomination of candidates for directors and corporate auditors

The Company has a Human Resource Advisory Committee that functions as an advisory body to the Board of Directors in order to ensure suitability and transparency in the election of directors and corporate auditors. The Committee deliberates the proposed list of candidates for directors and corporate auditors based on their election standards and reports the results to the Board of Directors. The Board of Directors decides upon the final list of candidates for directors and corporate auditors by giving the fullest possible consideration to the results report from the Human Resource Advisory Committee.

The president formulates a proposal on candidates for corporate auditors in consultation with the full-time corporate auditors in advance, and following the above deliberations, the Board of Directors resolves the proposal with the consent of the Board of Corporate Auditors.

Dismissal of the CEO or others in key positions

The Human Resource Advisory Committee deliberates on the dismissal of the CEO or others in key positions in cases where it is deemed that the individual has not adequately carried out his or her role in light of business performance or other factors, or where there has been a serious compliance violation. If the Board of Directors receives findings from the Human Resource Advisory Committee constituting grounds for dismissal of a representative director, CEO, or others in key positions, the Board of Directors shall make a decision on dismissal after examining the results report.

Succession planning for the CEO and others in key positions

The Board of Directors continually and systematically oversees succession planning for the CEO and others in key positions in light of the Corporate Vision and long-term business plan and by consulting with the Human Resource Advisory Committee. We have positioned our Key Talent Management* system as a framework for succession planning encompassing the senior management ranks. It clearly specifies the attributes required of management executives, fast tracks candidates for filling future senior management roles, and strategically trains candidates. Every year divisional and company-wide committees select candidates and contribute to their development by establishing customized training plans for each candidate, performing assessments, and implementing training. In addition, every year the Board of Directors receives reports on the status of such initiatives and provides appropriate oversight.

▶▶ See Human Resources Strategy on page 57.

Capabilities of the Board of Directors as a whole and views on diversity

As stipulated in the Articles of Incorporation, the Company shall have no more than 12 directors. The appropriate number within that range is decided as necessary in consideration of the authorities delegated to executive officers and the need to streamline decision making in response to business expansion. In principle, the Company appoints multiple independent outside directors in order to reflect in our management policies the opinions of individuals from outside the Company that hold extensive experience and insight, such as corporate managers, academics, and legal professionals. This also increases the effectiveness of overseeing director operations. The Company appoints executive directors in consideration of the specific characteristics of our businesses irrespective of gender, race, nationality, or other factors so that the executive directors as a whole possess balanced business experience in areas such as corporate planning, business operations, production and technology, research and development, accounting and finance, and general, personnel, and legal affairs.

Main specialties and fields of experience of directors and corporate auditors

	Independence	Specialties and experience						
		Corporate management and planning	Production and technology/R&D	Global business	Marketing	HR/labor management	Finance/ accounting	Legal/risk management
TANNOWA Tsutomu		●		●	●	●		
HASHIMOTO Osamu		●		●	●	●		
MATSUO Hideki		●	●	●				
SHIMOGORI Takayoshi		●		●	●			
NAKAJIMA Hajime		●					●	
KURODA Yukiko	●	●		●		●		
BADA Hajime	●	●	●	●				
YOSHIMARU Yukiko	●	●		●		●		
ISAYAMA Shigeru		●	●	●	●			
KUBO Masaharu		●					●	●
SHINBO Katsuyoshi	●			●				●
TOKUDA Shozo	●			●			●	●
FUJITSUKA Mikio	●	●		●			●	●

*The above is not intended to represent the entire knowledge of the directors and corporate auditors.

Executive Compensation System

Basic policy

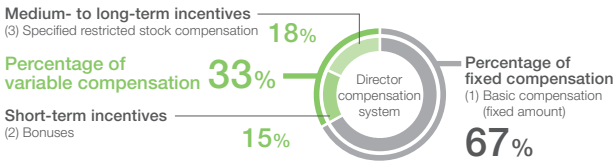
The Company's executive compensation system is designed and implemented based on the following basic policy: (1) to be commensurate with management delegation and conducive to the Group's growth and earnings improvement; (2) to reflect both corporate performance and the performance of the individual officer; (3) for officers in higher positions, to more strongly reflect their contributions to medium- to long-term corporate growth and deepen shared value with shareholders; and (4) to fully ensure accountability to shareholders and other related parties and guarantee transparency.

Process for determining executive compensation

Executive compensation is determined each business year by resolution of the Board of Directors following deliberations and reports by the Executive Compensation Advisory Committee, which is a voluntary advisory body to the Board of Directors established to ensure the fairness of compensation levels and the transparency of performance evaluations.

Composition and overview of executive compensation

Compensation for the Company's directors (excluding outside directors) comprises (1) basic compensation (fixed amount), (2) bonuses, and (3) stock compensation. The Company increases the proportion of (2) bonuses and (3) stock compensation in accordance with improvement in business performance.



*Composition of compensation for directors (excluding outside directors) in FY2019

	Fixed compensation	Variable compensation	
	(1) Basic compensation (fixed amount)	(2) Bonuses	(3) Specified restricted stock compensation
Position	Fixed compensation	Short-term incentive compensation	Medium- to long-term incentive compensation
Recipient	Directors Corporate auditors	Directors (excluding outside directors)	Directors (excluding outside directors)
Payment format	Cash	Cash	Stock (stock with transfer restrictions)
Payment details	Monthly fixed compensation	• Paid out in line with business performance for the current fiscal year • Benchmarked mainly to operating income	• To contribute to sustained improvement in medium- to long-term corporate value • To promote greater shared value with shareholders • Transfer restriction period of three to five years
Calculation formula, etc.	—	a) Formula for base bonus amount Operating income × Coefficient × Director-title-specific index b) Determination of bonus amount for each individual The amount of bonus depends on the extent to which earnings targets were achieved, and is calculated based on the above formula. c) Target and performance of main benchmark for performance-based compensation* Target: Operating income ¥105 billion Performance: Operating income ¥71.6 billion	The total level of compensation including (1) basic compensation (fixed amount) and (2) bonuses is set to be equivalent to that at other companies (particularly manufacturers of similar type and size). *Stock compensation will be reduced or otherwise unpaid in the event of a serious compliance violation, major accident, or other such incident that would adversely affect the Company and its operations.

*FY2019

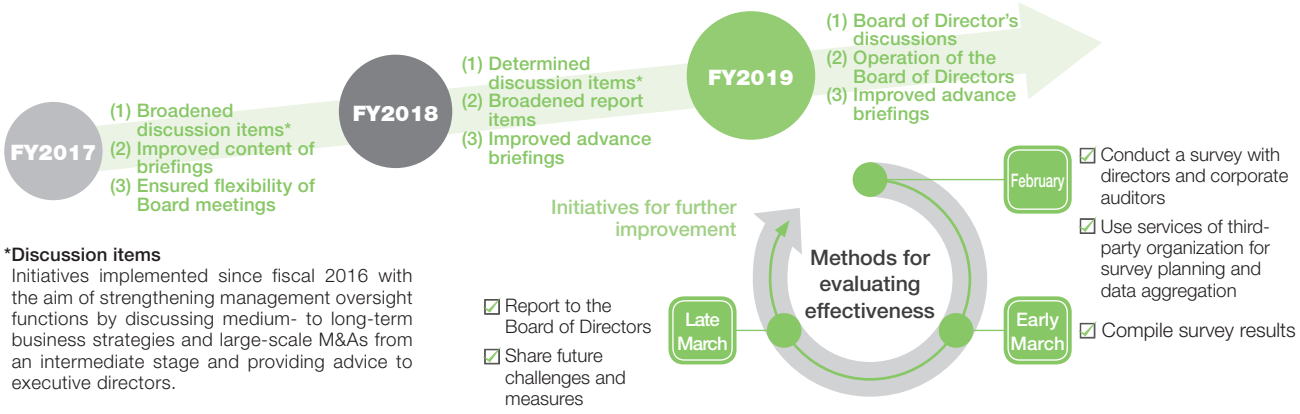
Total compensation for directors and corporate auditors in fiscal 2019

Classification	Number of recipients	Total compensation (millions of yen)	Basic compensation	Bonuses	Stock compensation
Directors (of which outside directors)	9 (4)	408 (40)	287 (40)	55 (–)	65 (–)
TANNOWA Tsutomu	–	(111)	(71)	(18)	(22)
Corporate auditors (of which outside corporate auditors)	6 (4)	102 (39)	102 (39)	– (–)	– (–)
Total (of which outside directors and outside corporate auditors)	15 (8)	511 (78)	390 (78)	55 (–)	65 (–)

*The figures in the table above include amounts paid to one director and one corporate auditor who retired as of the close of the Annual General Meeting of Shareholders for the Company's 22nd Business Term held on June 25, 2019, covering the period from April 1, 2019 through to the date of retirement.

Evaluation of the Effectiveness of the Board of Directors

The Company's Board of Directors strives to improve its meetings by analyzing and evaluating the effectiveness of the Board as a whole every year using such methods as self-evaluations performed by directors and corporate auditors, and discussions only among outside directors and outside corporate auditors.



***Discussion items**
Initiatives implemented since fiscal 2016 with the aim of strengthening management oversight functions by discussing medium- to long-term business strategies and large-scale M&As from an intermediate stage and providing advice to executive directors.

Measures taken in fiscal 2019

(1) Board of Directors' discussions
In addition to increasing the number of meetings held in order to further enhance discussions regarding medium- to long-term business strategies, periodically had discussions regarding medium- to long-term objectives and strategies as well as capital costs.

(2) Operation of the Board of Directors
Revised the Rules for Meetings of the Board of Directors, and reviewed standards in order to narrow down and discuss even more significant projects.

(3) Improved advance briefings
Expanded related materials provided in advance to outside directors and outside corporate auditors, and changed procedures so that outside directors and outside corporate auditors receive explanations regarding significant projects in advance.

Evaluation results and future initiatives

The results of directors' and corporate auditors' self-evaluations in fiscal 2019 were generally in line with last year. The Company has also confirmed that the Board of Directors has been improved and invigorated by implementing measures to enhance its oversight functions and concludes that its effectiveness is fully sufficient, as was the case in the previous fiscal year.

Future challenges

(1) Further broaden discussions on medium- to long-term business strategies

(2) Further improve advance briefings to outside directors and outside corporate auditors, and thoroughly distribute materials in advance

(3) Review method for managing the report on the status of execution of duties

The Company strives to review and implement necessary measures as appropriate to enhance the oversight functions of the Board of Directors in light of the results of the annual effectiveness evaluations.

Initiatives for further improvement

Opinions of outside directors and outside corporate auditors

- In order to further enhance discussions related to medium- to long-term business strategies, information needs to be provided on discussions held at Management Committee meetings and investment deliberation meetings. (Outside director)
- Improving the provision of information through the use of IT tools warrants consideration (granting access to materials, meeting minutes, and important rules and policies). (Outside director)
- As the reporting on the status of execution of duties tends to be generalized and formalized, members of the Board should consider explaining how they came to this decision from among the available options, particularly for important matters. (Outside director)
- The Board of Directors requires more detailed reports from the Human Resource Advisory Committee about its discussions (including explanations of the details and direction of discussions). (Outside corporate auditor)
- Deliberations on medium-term rolling plans begun in fiscal 2019 warrant continued discussions, including regularly scheduled follow-ups. (Outside corporate auditor)

Chairman's Message

I am looking forward to the strong leadership of our new president, Mr. Hashimoto, in ensuring that we are both a "strong company" and a "good company."

In 2016, Mitsui Chemicals formulated a long-term business plan, VISION 2025, and began working to transform our portfolio with a focus on solving the challenges faced by society. VISION 2025 is the compass pointing our Company to our goal of becoming a corporate group with an undisputed global presence. We are in a stage of accelerating our growth investment to further strengthen the foundation of our business, but we are currently facing a new and difficult situation as we grapple with the impact of COVID-19 and other factors. I am looking forward to the strong leadership of our new president, Mr. Hashimoto, in ensuring that we are both a "strong company" and a "good company."

Since the establishment of the Corporate Governance Code in 2015, Mitsui Chemicals has continued to implement efforts to improve our corporate governance. As part of that, in 2017 we established the Human Resource Advisory Committee consisting of outside directors. I have continued to consult with the committee as we deliberated on the issues of my tenure as the Company's president then and my successor. After consideration of their aptitude on various fronts, the candidates were narrowed down to the current president, and following the committee's report on this result, the decision was made by the Board of Directors.

I would also like to clarify the division of duties between the positions of chairman and president. My role as chairman is to supervise the management. In order to properly exercise the supervisory authority of the Board of Directors, I will oversee the overall execution of business operations from a standpoint that is independent from the operation of that business and will take the lead to see that the role of the Board of Directors is effectively carried out. Meanwhile, the president is in charge of the overall execution of business operations.

In order to further improve corporate governance, it is essential that its mechanisms be highly effective. I am conscious of the importance of finding the right balance between its proactive aspects including mechanisms that enable transparent, fair, quick, and decisive decision-making, and its defensive features of avoiding and containing risk and preventing misconduct.

As a result of the reforms implemented so far, we have seen active discussions aimed at improving corporate value over the medium to long term, but we continue to consider the enhancement of corporate governance as one of our key management priorities and will strive to continuously improve its effectiveness.



TANNOWA Tsutomu
Representative Director, Chairman

Messages from Outside Director and Corporate Auditor

I will keep supporting reforms aimed at becoming a company with global presence.



Mr. BADA Hajime

Outside Director
Outside Corporate Auditor of
ASAGAMI CORPORATION
Outside Director of NSK Ltd.
Honorary Advisor of JFE Holdings, Inc.

Since assuming the position of outside director in 2016, I have been offering recommendations and advice based on the experience I cultivated as a business executive. By vigorously performing site visits not only in Japan but overseas as well, I have had many opportunities to speak with employees and get a better understanding of the actual situation of our business and management.

The strength of Mitsui Chemicals is an open and serious corporate culture that responds sincerely even to harsh opinions, and I believe that our governance, compliance, and risk management are conducted at an extremely high level. We often have gatherings of just the outside directors, and we believe that the effectiveness of the Board of Directors is being ensured. On the other hand, one issue that should be considered going forward is whether the Company's seriousness runs the risk of making us too conservative, and therefore how we should lay the groundwork for accepting more diverse values. For example, I think the Company needs to take steps toward reforming the composition of its executives, such as increasing the proportion of women and non-Japanese nationals, in order to meet global standards.

By steadily carrying out its 2025 Long-Term Business Plan, Mitsui Chemicals aims to be a company with a truly global presence. In order to become a company that is considered "top class," there are still many issues to be addressed, such as further expanding the scope of the business, but the outside directors will continue to offer our strong support to realize that goal.

It is the role of outside directors and corporate auditors to maintain the conscience of the organization.

I believe that the main role of outside directors and corporate auditors is to figure out how to maintain the "conscience of the organization." For example, if an organization is, so to speak, looking to the right when it should be looking to the left in light of the organization's conscience, I view it as my job to support the efforts of those who are looking to the left. As an independent corporate auditor responsible for auditing the execution of duties by the directors, I always feel a sense of tension in carrying out my work.

Mitsui Chemicals' Board of Directors and Board of Corporate Auditors have lively discussions and have an open atmosphere in which we can freely exchange opinions, and I consider them to be highly effective. At the same time, however, there are some aspects that are difficult to understand from the viewpoint of other industries, such as a business sense that is peculiar to the chemical industry, so there is still room for improvement in areas such as the advance briefings on proposed measures.

In terms of compliance as well, I do not feel that there are any major organizational issues, but I do have some concerns over some troubles that have occurred over the past few years. Small troubles can lead to major risk, and so I would hope that we all be fully prepared every day.

Looking ahead, I will continue to fulfill my duties with the spirit of saying what I must say, based on my career and knowledge as a lawyer and from my independent position as an outside corporate auditor.



Mr. SHINBO Katsuyoshi

Outside Corporate Auditor
Attorney at Shinbo & Partners
Outside Director of Sumitomo
Mitsui Financial Group, Inc.

Special Feature

M-GRIP was launched to strengthen the Group's global business governance.

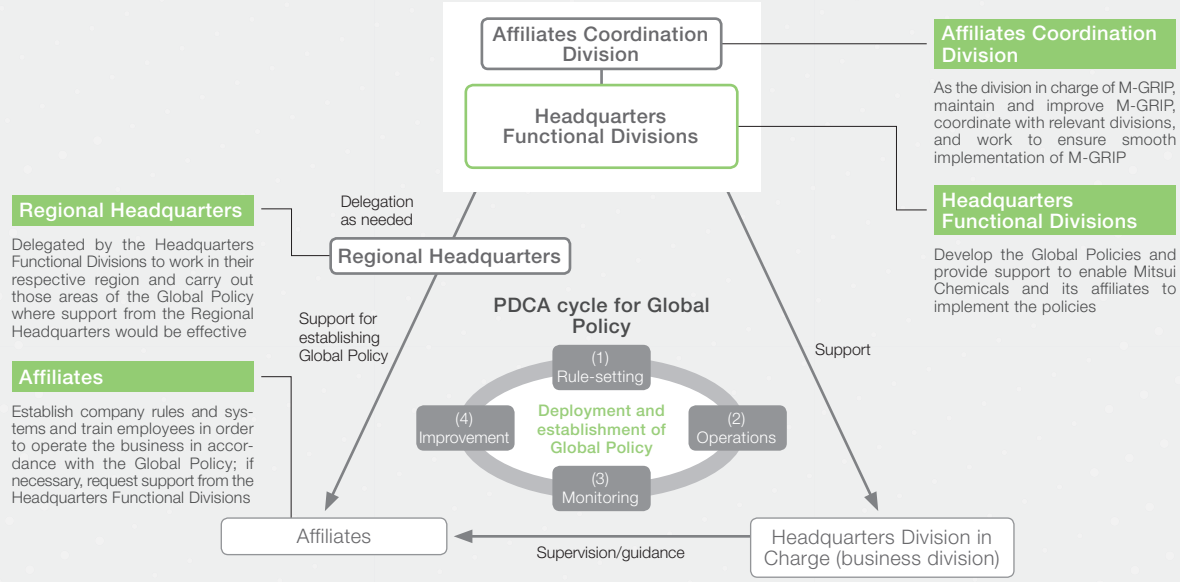
With the goals of reducing the risks that have grown as globalization accelerates and of further transforming and expanding its business, the Mitsui Chemicals Group has begun deploying the "Mitsui Chemicals Global Policy Platform" (M-GRIP*), which is a shared indirect operations platform for the Group.

M-GRIP is the mechanism that lays out a "Global Policy" comprising measures that are common to the entire Group regarding indirect operations such as human resources, accounting, and logistics. By ensuring that each company within the Group implements those measures, it allows the PDCA cycle to be run to execute and improve business operations. By fostering a common awareness throughout the Group and promoting ESG management and thorough compliance, which helps improve corporate value, we are working to reduce and avoid risk and improve business efficiency, creating a corporate group with a global presence.

*M-GRIP: The abbreviation of "**M**itsui Chemicals – **G**lobal **R**isk Management & Business Support **I**mprovement **P**latform"

M-GRIP Deployment Chart

The Headquarters Functional Divisions, the Regional Headquarters, the affiliates, and the Affiliates Coordination Division are working together, each playing its respective role.





TAKEMURA Yasuo
M-GRIP Office
Deputy General Manager,
Affiliates Coordination Division

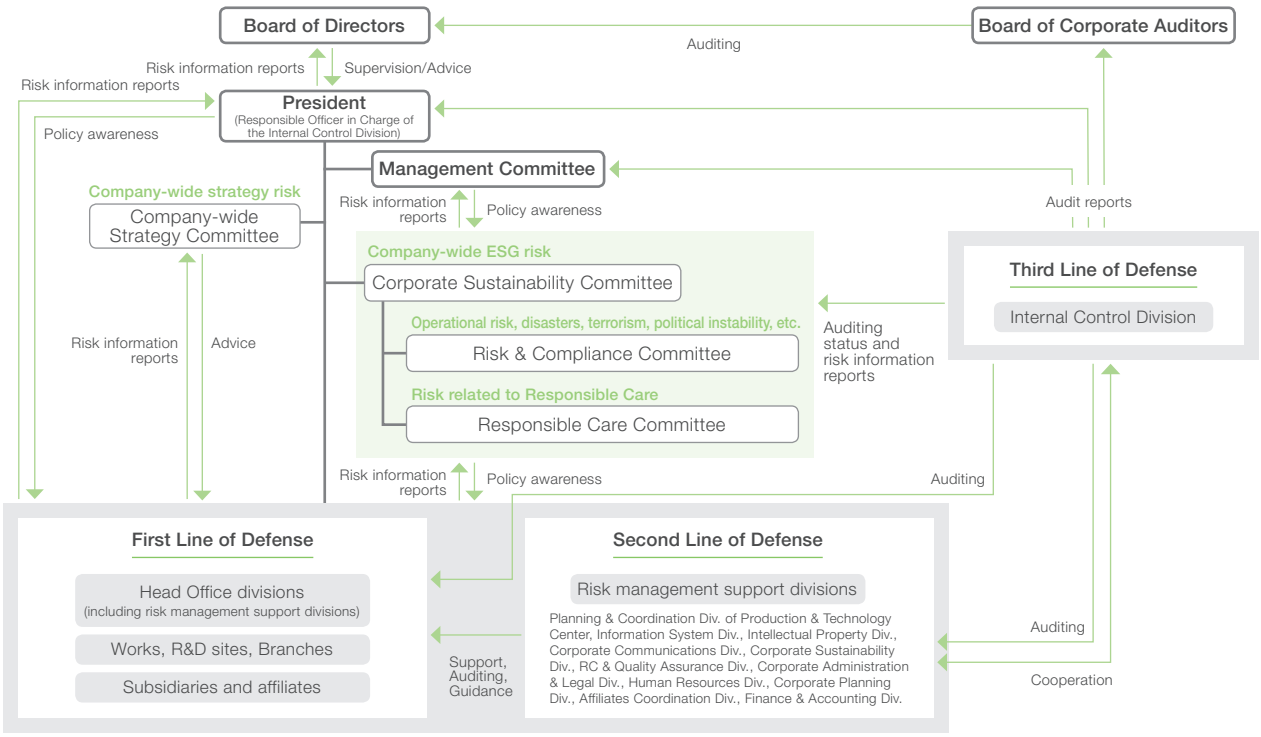
Currently, the Mitsui Chemicals Group has 168 affiliates in 31 countries and regions (as of July 2020). As we push to expand operations globally, that number will increase further and the risks surrounding our business will rapidly expand as well. Strengthening governance will become even more crucial for the sound development of the Group as a whole. Two-way efforts are important for strengthening governance, and from that perspective, given the number of companies in the Group, there is a limit to our ability to deal with each one face-to-face. For that reason, now is the perfect time to introduce a mechanism to solidify the foundation of our business. The name "M-GRIP" conveys the idea of "hand in hand." With that in mind, we will work together to promote and deploy M-GRIP throughout the Group.

Risk and Compliance Management

Risk and Compliance Management
https://jp.mitsuichemicals.com/en/sustainability/risk_compliance/index.htm

In order for a company to earn the trust of its stakeholders and fulfill its corporate social responsibility, it is essential that a fully developed and reliably operated structure for risk management and compliance promotion is in place.

Risk Management System



First Line of Defense

In the annual budgeting of each Group division we include risk assessments based on risk models and procedure documents, and after appropriate recognition of risks, we design and implement organizational controls in response.

Second Line of Defense

To ensure risk management in each division, risk management support divisions with expert knowledge provide support to all parts of the organization, and, where necessary, auditing and guidance.

Third Line of Defense

The Internal Control Division conducts auditing on operations and Responsible Care from an independent perspective, and aims to maintain and strengthen internal control standards throughout the Group and also manage operational risk.

Compliance

As the first of the Mitsui Chemicals Group Action Guidelines formulated in February 2006, we declared our intent to give priority to compliance with laws and regulations over the pursuit of any profit. The Group considers it important not only to build the framework of the risk management system, but also for each individual employee who drives forward the framework to strictly adhere to all laws and regulations. With this in mind, the Group undertakes four initiatives in an effort to promote compliance. In addition to having prepared a basic Compliance Guidebook, for the purpose of raising awareness, we conduct compliance awareness education and training, as well as workplace discussions covering case studies of violations of laws and regulations. From a skills and knowledge perspective, we also conduct legal and regulatory compliance training.

Board of Directors and Board of Corporate Auditors

(As of June 24, 2020)

Board of Directors



TANNOWA Tsutomu

Representative Director, Member of the Board, Chairman

Board of Directors Meetings Attended/Held
12/12

Term of Office **8 years**

Apr. 1976 Joined Mitsui Toatsu Chemicals, Inc.
Apr. 2007 Executive Officer of the Company
General Manager, Human Resources & Employee Relations Div.
Apr. 2010 Managing Executive Officer of the Company
Business Sector President, Basic Chemicals Business Sector
Jun. 2012 Member of the Board, Managing Executive Officer of the Company
Apr. 2013 Member of the Board, Senior Managing Executive Officer of the Company
Apr. 2014 Representative Director, Member of the Board, President & CEO of the Company
Apr. 2020 Representative Director, Member of the Board, Chairman of the Company (to present)



HASHIMOTO Osamu

Representative Director, Member of the Board, President & CEO

Board of Directors Meetings Attended/Held
12/12

Term of Office **2 years**

Apr. 1987 Joined the Company
Apr. 2015 Executive Officer of the Company
General Manager, Corporate Planning Div.
Apr. 2017 Managing Executive Officer of the Company
Business Sector President, Health Care Business Sector, and General Manager, New Health Care Business Development Div.
Sep. 2017 Managing Executive Officer of the Company, Business Sector President, Health Care Business Sector
Jun. 2018 Member of the Board, Managing Executive Officer of the Company, Business Sector President, Health Care Business Sector
Apr. 2019 Member of the Board, Senior Managing Executive Officer of the Company, Business Sector President, Health Care Business Sector
Apr. 2020 Representative Director, Member of the Board, President & CEO of the Company (to present)



MATSUO Hideki

Representative Director, Member of the Board, Executive Vice President

Board of Directors Meetings Attended/Held
12/12

Term of Office **4 years**

Apr. 1982 Joined Mitsui Toatsu Chemicals, Inc.
Apr. 2013 Executive Officer of the Company
Center Executive, Production & Technology Center
Apr. 2014 Managing Executive Officer of the Company
Center Executive, Production & Technology Center
Jun. 2016 Member of the Board, Managing Executive Officer of the Company
Center Executive, Production & Technology Center
Apr. 2017 Member of the Board, Senior Managing Executive Officer of the Company
Center Executive, Production & Technology Center
Apr. 2018 Representative Director, Member of the Board, Senior Managing Executive Officer of the Company
Apr. 2020 Representative Director, Member of the Board, Executive Vice President of the Company
(to present)



SHIMOGORI Takayoshi

Member of the Board, Senior Managing Executive Officer

Board of Directors Meetings Attended/Held
12/12

Term of Office **3 years**

Apr. 1985 Joined the Company
Apr. 2014 Executive Officer of the Company
General Manager, Performance Compound Div., Functional Polymeric Materials Business Sector
Apr. 2015 Executive Officer of the Company
Business Sector President, Functional Polymeric Materials Business Sector
Apr. 2016 Managing Executive Officer of the Company
Business Sector President, Mobility Business Sector
Apr. 2017 Managing Executive Officer of the Company
Business Sector President, Food & Packaging Business Sector, and Business Sector President, Mobility Business Sector
Jun. 2017 Member of the Board, Managing Executive Officer of the Company, Business Sector President, Food & Packaging Business Sector, and Business Sector President, Mobility Business Sector
Mar. 2018 Chairman of ARRK Corporation (to present)
Apr. 2018 Member of the Board, Senior Managing Executive Officer of the Company, Business Sector President, Food & Packaging Business Sector (to present)



NAKAJIMA Hajime

Member of the Board, Managing Executive Officer

Newly appointed

Apr. 1984 Joined Mitsui Toatsu Chemicals, Inc.
Apr. 2013 General Manager, Performance Management Div. of the Company
Apr. 2015 Senior Director of the Company
General Manager, Finance & Accounting Div.
Apr. 2017 Executive Officer of the Company
General Manager, Finance & Accounting Div.
Apr. 2020 Managing Executive Officer of the Company
Jun. 2020 Member of the Board, Managing Executive Officer of the Company (to present)

Board of Corporate Auditors



ISAYAMA Shigeru

Full-time Corporate Auditor

Board of Directors Meetings Attended/Held
12/12

Board of Corporate Auditors Meetings Attended/Held
17/17

Term of Office **2 years**

Apr. 1980 Joined the Company
Apr. 2007 Executive Officer of the Company, General Manager, Information & Electronics Materials Div., Performance Materials Business Sector
Apr. 2009 Executive Officer of the Company, General Manager, Business Planning & Development Div., Performance Materials Business Sector
Jun. 2009 Member of the Board of the Company, Business Sector Vice President, Performance Materials Business Sector, and General Manager, Business Planning & Development Div., Performance Materials Business Sector
Jun. 2011 Assistant to the President of the Company Representative in the Americas, and General Manager, Mitsui Chemicals America, Inc.
Apr. 2013 Managing Executive Officer of the Company
Jun. 2013 Member of the Board, Managing Executive Officer of the Company
Apr. 2016 Representative Director, Member of the Board, Senior Managing Executive Officer of the Company
Apr. 2018 Member of the Board of the Company
Jun. 2018 Full-time Corporate Auditor of the Company (to present)
Jun. 2019 Outside Director of Fukuvi Chemical Industry Co., Ltd. (to present)



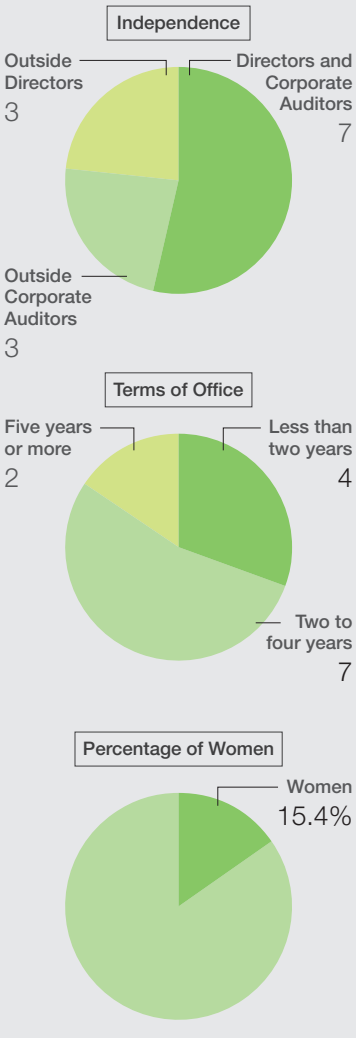
KUBO Masaharu

Full-time Corporate Auditor

Newly appointed

Apr. 1980 Joined the Company
Apr. 2010 Executive Officer of the Company
General Manager, Corporate Administration Div.
Apr. 2013 Managing Executive Officer of the Company
Jun. 2013 Member of the Board, Managing Executive Officer of the Company
Apr. 2014 Member of the Board, Senior Managing Executive Officer of the Company
Apr. 2016 Representative Director, Member of the Board, Senior Managing Executive Officer of the Company
Apr. 2017 Representative Director, Member of the Board, Executive Vice President of the Company
Apr. 2020 Member of the Board of the Company
Jun. 2020 Full-time Corporate Auditor of the Company (to present)

Composition of the Boards of Directors and Corporate Auditors



Board of Directors (Independent Outside Directors)



KURODA Yukiko

Member of the Board, Outside Director

Board of Directors Meetings Attended/Held
12/12

Term of Office **5 years**

Apr. 1986 Joined Sony Corporation
Jan. 1991 Representative Director of People Focus Consulting
Jun. 2010 Outside Audit & Supervisory Board Member of Astellas Pharma Inc.
Mar. 2011 Outside Director of CAC Corporation (currently CAC Holdings Corporation) (to present)
Apr. 2012 Managing Director and Founder of People Focus Consulting (to present)
Jun. 2013 Outside Director of Marubeni Corporation
Jun. 2015 Member of the Board of the Company (to present)
Jun. 2018 Outside Director of Seven Bank, Ltd. (to present)
Outside Director of Terumo Corporation (to present)

Major Activities

Ms. KURODA Yukiko primarily speaks about sound and efficient corporate management from the point of view of one concerned with the validity of business execution and corporate social responsibility based on her extensive experience as a corporate manager and as an outside officer and consultant at other companies.



BADA Hajime

Member of the Board, Outside Director

Board of Directors Meetings Attended/Held
11/12

Term of Office **4 years**

Apr. 1973 Joined Kawasaki Steel Corporation (currently JFE Steel Corporation)
Jun. 2000 Director of Kawasaki Steel Corporation
Apr. 2003 Senior Vice President of JFE Steel Corporation
Apr. 2005 Representative Director, President and CEO of JFE Steel Corporation
May 2006 Chairman of The Japan Iron and Steel Federation
Apr. 2010 Representative Director, President and CEO of JFE Holdings, Inc.
Apr. 2015 Director of JFE Holdings, Inc.
Jun. 2015 Advisor of JFE Holdings, Inc.
Jun. 2016 Member of the Board of the Company (to present)
Outside Corporate Auditor of ASAGAMI CORPORATION (to present)
Jun. 2018 Outside Director of NSK Ltd. (to present)
Jun. 2019 Honorary Advisor of JFE Holdings, Inc. (to present)

Major Activities

Mr. BADA Hajime primarily speaks about sound and efficient corporate management from the point of view of one concerned with the validity of business execution and the intrinsic nature of the Mitsui Chemicals Group based on his extensive experience as a corporate manager and president of an industry organization.



YOSHIMARU Yukiko

Member of the Board, Outside Director

Board of Directors Meetings Attended/Held
10/10

Term of Office **1 year**

Apr. 1982 Joined Oki Electric Industry Co., Ltd.
Apr. 1998 Director of Oki America Inc., and Head of New York Office of Oki Electric Industry Co., Ltd.
Oct. 2004 General Manager of Diversity Development Office of NISSAN MOTOR CO., LTD.
Apr. 2008 Joined Nifco Inc.
Jun. 2011 Executive Officer of Nifco Inc.
Apr. 2018 Outside Director of Sekisui House, Ltd. (to present)
Jun. 2019 Member of the Board of the Company (to present)

Major Activities

Ms. YOSHIMARU Yukiko primarily speaks about sound and efficient corporate management from the point of view of one concerned with the validity of business execution and globalization based on her experience as an executive at other companies in areas such as diversity promotion and her extensive international experience.

Board of Corporate Auditors (Independent Outside Corporate Auditors)



SHINBO Katsuyoshi

Outside Corporate Auditor

Board of Directors Meetings Attended/Held
11/12

Board of Corporate Auditors Meetings Attended/Held
14/17

Term of Office **3 years**

Apr. 1984 Registered as an attorney
Nov. 1999 Attorney at Shinbo Law Office (currently Shinbo & Partners) (to present)
Jun. 2015 Outside Corporate Auditor of Sumitomo Mitsui Banking Corporation
Jun. 2017 Corporate Auditor of the Company (to present)
Outside Director of Sumitomo Mitsui Financial Group, Inc. (to present)

Major Activities

Mr. SHINBO Katsuyoshi primarily speaks about sound and efficient corporate management from the perspectives of ensuring appropriate business execution of the Company and reinforcing management oversight functions of the Board of Directors based on his specialist knowledge and extensive experience not only as a long-standing lawyer but also as an outside officer of other companies.



TOKUDA Shozo

Outside Corporate Auditor

Board of Directors Meetings Attended/Held
12/12

Board of Corporate Auditors Meetings Attended/Held
17/17

Term of Office **3 years**

Nov. 1981 Joined Asahi Accounting Company (currently KPMG AZSA LLC)
Aug. 1985 Registered as a certified public accountant
Jul. 2002 Representative Partner of Asahi & Co. (currently KPMG AZSA LLC)
Jun. 2006 Board Member of KPMG AZSA & Co. (currently KPMG AZSA LLC)
Jun. 2010 Senior Board Member of KPMG AZSA & Co. (currently KPMG AZSA LLC)
Jul. 2015 Senior Partner of KPMG AZSA LLC
Jun. 2017 Outside Audit & Supervisory Board Member of ITOCHU ENEX CO., LTD. (to present)
Corporate Auditor of the Company (to present)

Major Activities

Mr. TOKUDA Shozo primarily speaks about sound and efficient corporate management from the perspectives of ensuring appropriate business execution of the Company and reinforcing management oversight functions of the Board of Directors based on his specialist knowledge and extensive experience not only as a long-standing certified public accountant but also as an outside officer of other companies.



FUJITSUKA Mikio

Outside Corporate Auditor

Board of Directors Meetings Attended/Held
9/10

Board of Corporate Auditors Meetings Attended/Held
12/13

Term of Office **1 year**

Apr. 1977 Joined Komatsu Ltd.
Apr. 2005 Executive Officer of Komatsu Ltd.
Apr. 2010 Senior Executive Officer (Jomu) of Komatsu Ltd.
Apr. 2011 Senior Executive Officer (Jomu) and CFO of Komatsu Ltd.
Jun. 2011 Director, Senior Executive Officer (Jomu) and CFO of Komatsu Ltd.
Apr. 2013 Director, Senior Executive Officer (Senmu) and CFO of Komatsu Ltd.
Apr. 2016 Representative Director, Executive Vice President and CFO of Komatsu Ltd.
Apr. 2018 Representative Director and Executive Vice President of Komatsu Ltd.
Apr. 2019 Director of Komatsu Ltd.
Jun. 2019 Senior Adviser of Komatsu Ltd. (to present)
Outside Director of Yamaha Corporation (to present)
Corporate Auditor of the Company (to present)

Major Activities

Mr. FUJITSUKA Mikio primarily speaks about sound and efficient corporate management from the perspectives of ensuring appropriate business execution of the Company and reinforcing management oversight functions of the Board of Directors based on his extensive experience not only as a corporate manager and CFO of a listed company but also as an outside officer of other companies.

Responsible Care

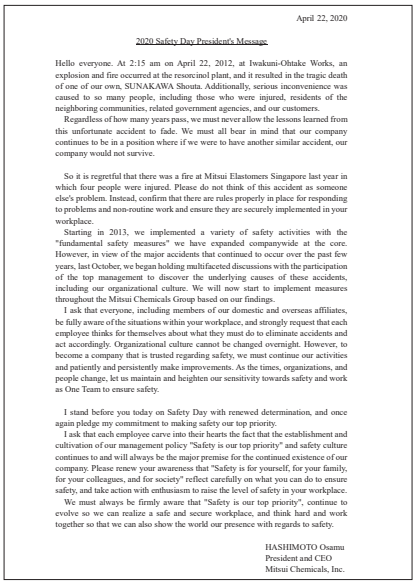
Responsible Care
https://jp.mitsuichemicals.com/en/sustainability/rc/index.htm

Responsible Care is an activity that the world's chemical industry is integrally promoting to improve the quality of life (QOL) by chemical products and to contribute to the sustainable development of society. All companies voluntarily implement activities designed to ensure safety, health, and quality as well as protect the environment throughout the entire life cycles of their chemical products, publicize the results of their activities, and engage in dialogue with the local communities where they operate. The Mitsui Chemicals Group has set out in our Responsible Care Policy certain basic elements of the Responsible Care activities undertaken by the Group. Guided by this Policy, we engage in various activities in such areas as safety and prevention, environmental protection, occupational health, product stewardship, the quality of products and services, and logistics. The Responsible Care Committee focused its discussions on topics related to safety and prevention in fiscal 2019.

Responsible Care®
OUR COMMITMENT TO SUSTAINABILITY

Safety & Prevention

The Mitsui Chemicals Group recognizes safety to be an essential prerequisite for our Group's sustainable growth. Safety is the cornerstone of the trust placed in us by society, and at the same time, ensuring safety increases our manufacturing quality, leading to improvement of corporate value from the financial viewpoint. With this approach, based on the management policy that states "Safety is our top priority," our Responsible Care Policy declares that, "We pledge that safety is our top priority and will focus on achieving zero accidents and occupational injuries." Top management repeats this as the President's message, etc., to all Group employees on many occasions, such as in opening addresses, plant visits, Safety Day messages, and in Company newsletters.



April 22, 2020

2020 Safety Day President's Message

Hello everyone. At 2:15 am on April 22, 2012, at Iwakuni-Ohtake Works, an explosion and fire occurred at the resorcinol plant, and it resulted in the tragic death of one of our own, SUNAKAWA Shouta. Additionally, serious inconvenience was caused to so many people, including those who were injured, residents of the neighboring communities, related government agencies, and our customers.

Regardless of how many years pass, we must never allow the lessons learned from this unfortunate accident to fade. We must all bear in mind that our company continues to be in a position where if we were to have another similar accident, our company would not survive.

So it is regretful that there was a fire at Mitsui Elastomers Singapore last year in which four people were injured. Please do not think of this accident as someone else's problem. Instead, confirm that there are rules properly in place for responding to problems and non-routine work and ensure they are securely implemented in your workplace.

Starting in 2013, we implemented a variety of safety activities with the "fundamental safety measures" we have expanded companywide at the core. However, in view of the major accidents that continued to occur over the past few years, last October, we began holding multifaceted discussions with the participation of the top management to discover the underlying causes of these accidents, including our organizational culture. We will now start to implement measures throughout the Mitsui Chemicals Group based on our findings.

I ask that everyone, including members of our domestic and overseas affiliates, be fully aware of the situations within your workplace, and strongly request that each employee thinks for themselves about what they must do to eliminate accidents and act accordingly. Organizational culture cannot be changed overnight. However, to become a company that is trusted regarding safety, we must continue our activities and patiently and persistently make improvements. As the times, organizations, and people change, let us maintain and heighten our sensitivity towards safety and work as One Team to ensure safety.

I stand before you today on Safety Day with renewed determination, and once again pledge my commitment to making safety our top priority.

I ask that each employee carve into their hearts the fact that the establishment and cultivation of our management policy "Safety is our top priority" and safety culture continues to and will always be the major premise for the continued existence of our company. Please renew your awareness that "Safety is for yourself, for your family, for your colleagues, and for society" reflect carefully on what you can do to ensure safety, and take action with enthusiasm to raise the level of safety in your workplace.

We must always be firmly aware that "Safety is our top priority", continue to evolve so we can realize a safe and secure workplace, and think hard and work together so that we can also show the world our presence with regards to safety.

HASHIMOTO Osamu
President and CEO
Mitsui Chemicals, Inc.

President's message to all employees on Safety Day

Review of occupational injury targets

The Mitsui Chemicals Group positions as KPIs and monitors major accidents, the number of abnormal conditions/accidents as well as the occupational injury frequency. Compared with the Japanese overall industry average and the Japanese chemical industry average, we maintain a high level in terms of Days Away from Work Cases (DAFWCs) and, in aiming to achieve the world's highest standards for safety, target a frequency of 0.15 or below with regard to significant occupational injuries*1.

The significant occupational injury frequency for the Mitsui Chemicals Group for fiscal 2019 was 0.31, and thus we were unable to achieve the targeted numerical value. Once again, the long-term issue is developing human resources with an awareness of hazards and spreading the safety culture throughout the entire Group. Accidents in the category, "becoming caught or entangled in machinery" often result in severe occupational injuries, and preventing this type of accident has become a priority issue over the past several years. Because the numbers of such accidents have not dropped at our domestic affiliates, we plan to focus our support in fiscal 2020 on preventing these types of accidents.

We have re-examined our targets for fiscal 2020 and beyond. The first objective is zero serious occupational injuries*2, a critical target that must be achieved by the entire Group. Next, the targets for the frequency of significant occupational injuries have been categorized according to the category of the accident. We clarified which body is responsible for management by separating the targets for Mitsui Chemicals, domestic affiliates, overseas affiliates, and construction subcontractors. In particular, the targets for construction subcontractors have been reviewed and set below the average record over the past three years. In recent years, the number of occupational injuries to personnel working in our factories on a temporary basis has increased, requiring better safety management on the part of the Mitsui Chemicals Group as project owner. We are directing our efforts to preventing occupational injuries by implementing measures that address issues specific to the category of the injury.

*1 Significant Occupational Injuries: "Significant Occupational Injuries (SOIs)" refer to occupational injuries that resulted in absence from work or death. SOIs also include lighter occupational injuries that, due to the potential danger in the cause of the injury, could have led to absence from work or death. SOIs do not include those injuries that are not directly related to operations.

*2 Serious Occupational Injuries: Occupational injuries that fall under disability grades 1 to 7, causing death, injury, or illness.

Financial and Company Data

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11-Year Overview of Major Financial and Non-Financial Indicators

For the Fiscal Year		2009	2010	2011	2012
Financial Data					
Operating Results (for the year)					
Net sales		¥1,207,735	¥1,391,713	¥1,454,024	¥1,406,220
Operating income (loss)		(9,461)	40,548	21,564	4,290
Profit (loss) attributable to owners of parent		(28,010)	24,854	(1,007)	(8,149)
Reference: Ordinary income (loss)		(13,132)	38,851	22,884	9,206
Net cash provided by operating activities		70,173	73,196	43,302	18,512
Net cash used in investing activities		(42,913)	(43,204)	(42,452)	(58,136)
Free cash flows		27,260	29,992	850	(39,624)
Financial Position (at year-end)					
Total current assets		¥ 604,556	¥ 665,976	¥ 661,311	¥ 715,396
Property, plant and equipment		498,183	467,735	430,629	446,637
Total intangible assets, investments and other assets		135,347	161,916	164,363	175,962
Total assets		1,238,086	1,295,627	1,256,303	1,337,995
Total current liabilities		386,203	442,298	451,507	493,908
Total non-current liabilities		432,879	422,228	389,025	415,173
Total shareholders' equity & Total accumulated other comprehensive income (loss)		377,283	383,740	367,436	376,779
Interest-bearing liabilities		494,219	480,701	464,773	507,183
Other					
Depreciation and amortization		¥ 74,878	¥ 69,237	¥ 62,749	¥ 43,864
Capital expenditures		49,054	45,137	44,814	56,649
R&D expenses		38,131	36,166	33,176	31,997
Per Share Data*1					
Net income (loss) per share (basic)		¥ (165.20)	¥ 124.00	¥ (5.05)	¥ (40.70)
Cash dividends per share		15.00	30.00	30.00	30.00
Ratios					
Return (operating income (loss)) on sales		(0.78)	2.91	1.48	0.31
Return (profit (loss) attributable to owners of parent) on equity		—	6.53	—	—
Return (operating income (loss)) on assets		—	3.20	1.69	0.33
Net D/E ratio		1.11	1.04	1.12	1.22
Non-Financial Data					
Social Data					
Employees	Consolidated	12,892	12,782	12,868	12,846
	Non-consolidated	8,297	7,878	7,633	7,266
Percentage of women	Non-consolidated	10.8	11.2	11.4	11.7
Environmental Data*2					
SOI*3 frequency*4	Consolidated	—	0.28	0.22	0.49
GHG emissions (Scope1, 2)*5	Consolidated*6	571	583	561	546
Energy consumption	Consolidated	99	103	99	94
Industrial waste	Landfill disposal volume (Consolidated)	18.8	18.1	1.1	1.2
	Landfill rate (Consolidated)	6.1	5.4	0.4	0.4

*1 On October 1, 2017, Mitsui Chemicals conducted a 5-to-1 share consolidation. Net income (loss) per share is calculated as if the consolidation had been conducted at the start of fiscal 2016. The figures listed for cash dividends per share have also been retroactively adjusted to account for the impact of the consolidation.
*2 Due to changes in aggregation methods and legal revisions, only data that complies with such methods and laws is presented.
*3 "Significant Occupational Injuries (SOIs)" refer to occupational injuries that resulted in absence from work or death. SOIs also include lighter occupational injuries that, due to the potential danger in the cause of the injury, could have led to absence from work or death. SOIs do not include those injuries that are not directly related to operations.
*4 SOI frequency: The number of deaths or SOIs per million hours worked.

2013	2014	2015	2016	2017	2018	2019	2019	
						(Millions of yen)	(Thousands of U.S. dollars)	
¥1,566,046	¥1,550,076	¥1,343,898	¥1,212,282	¥1,328,526	¥1,482,909	¥1,338,987	$12,303,473	
24,899	42,040	70,926	102,149	103,491	93,427	71,636	658,238	
(25,138)	17,261	22,963	64,839	71,585	76,115	37,944	348,654	
22,522	44,411	63,183	97,196	110,205	102,972	65,517	602,012	
43,476	58,287	145,913	100,440	82,660	109,492	114,974	1,056,455	
(89,781)	(35,036)	(36,365)	(47,395)	(75,041)	(64,255)	(85,168)	(782,578)	
(46,305)	23,251	109,548	53,045	7,619	45,237	29,806	273,877	
						(Millions of yen)	(Thousands of U.S. dollars)	
¥ 777,015	¥ 731,708	¥ 628,210	¥ 678,938	¥ 731,326	¥ 786,677	¥ 781,347	$ 7,179,518	
425,840	433,629	413,402	409,429	432,908	443,063	485,531	4,461,372	
229,307	246,453	217,336	237,158	267,075	271,334	213,189	1,958,918	
1,432,162	1,411,790	1,258,948	1,325,525	1,431,309	1,501,074	1,480,067	13,599,807	
507,056	448,499	364,259	392,783	443,105	458,758	478,498	4,396,747	
515,459	491,992	451,452	418,107	400,982	410,577	393,548	3,616,172	
352,843	406,235	381,971	449,692	511,586	551,915	527,589	4,847,827	
581,260	548,713	472,986	439,868	463,658	485,043	554,243	5,092,741	
						(Millions of yen)	(Thousands of U.S. dollars)	
¥ 48,143	¥ 48,251	¥ 48,640	¥ 44,057	¥ 45,654	¥ 49,504	¥ 52,106	$ 478,783	
113,200	47,531	43,405	45,383	81,248	61,924	76,294	701,038	
33,569	32,473	31,493	30,777	33,377	35,796	36,368	334,173	
						(Yen)	(U.S. dollars)	
¥ (125.50)	¥ 86.20	¥ 114.75	¥ 324.05	¥ 358.38	¥ 385.60	¥ 194.94	$ 1.79	
15.00	25.00	40.00	70.00	90.00	100.00	100.00	0.92	
1.59	2.71	5.28	8.43	7.79	6.30	5.35	%	
—	4.55	5.83	15.59	14.89	14.31	7.03	%	
1.80	2.96	5.31	7.90	7.51	6.37	4.81	%	
1.44	1.22	1.03	0.79	0.75	0.68	0.76	Times	
14,271	14,363	13,447	13,423	17,277	17,743	17,979	Persons	
7,129	6,931	6,733	6,516	6,541	6,670	6,770	Persons	
11.9	11.9	12.0	12.4	12.6	12.6	13.0	%	
0.24	0.18	0.30	0.23	0.24	0.33	0.31		
520	501	5,780	5,730	5,580	5,220	5,060	Thousand tons	
89	86	95	97	95	93	89.3	PJ	
0.6	0.7	1.0	0.9	0.7	0.7	0.8	Thousand tons	
0.2	0.2	0.4	0.4	0.3	0.3	0.4	%	

*5 We had disclosed our GHG emissions as a combination of both Scope 1 and Scope 2 less the amount of electricity and steam sold up to 2014, but after 2015 we have been disclosing the sum of Scope 1 and Scope 2.

*6 GHG emissions for overseas consolidated subsidiaries are calculated in accordance with Japan's Law Concerning the Promotion of Measures to Cope with Global Warming based on energy consumption figures. (CO_2 emission factors from electricity generation were retroactively changed to the International Energy Agency (IEA) emission factors for each country.) Data reflect the total of domestic and overseas consolidated subsidiaries.

Management's Discussion and Analysis

Overview

In the fiscal period under review (the twelve-month period from April 1, 2019 to March 31, 2020, hereinafter the "fiscal 2019"), the economy of the United States enjoyed constant recovery. On the other hand, the state of trade policy in the United States, the Chinese economy's deceleration and geopolitical risks remained unsettled, and careful attention was paid to fluctuations in the global economy. In addition, there was a large impact in the fourth quarter from the spread of the coronavirus.

In Japan, although the economy continued to gradually recover amid improvements in employment and incomes, the outlook appears more uncertain and stagnant due mainly to the impact of the spread of the coronavirus going forward.

In the domestic chemical industry, despite fluctuations in naphtha prices, naphtha crackers operated at a consistently high capacity on the back of firm domestic demand until the spread of the coronavirus, which, in turn, caused facility utilization to decline toward the end of the fiscal year.

Under these circumstances, based on the 2025 Long-Term Business Plan, the Mitsui Chemicals Group (hereafter "the Group") worked for business expansion and growth in the three business domains—Mobility, Health Care, and Food & Packaging—while also creating and developing Next Generation Business and further enhancing competitiveness in the area of Basic Materials.

In Mobility, there has been an expansion in new needs, particularly for lightweight, electric-powered and more comfortable products in the automotive and ICT industries. The Group's first production base in Europe for polypropylene compounds used in automotive bumpers has been built and currently preparing towards operating production. In addition, the Group also built and began operating production bases in the United States and Japan for long glass fiber reinforced polypropylene, a material that when used in place of metal for back doors and other parts reduces vehicle weight. Also, the Group worked to enhance its ability to offer customer-driven solutions with ARRK Corporation, a global development support company that was made into a consolidated subsidiary in January 2018.

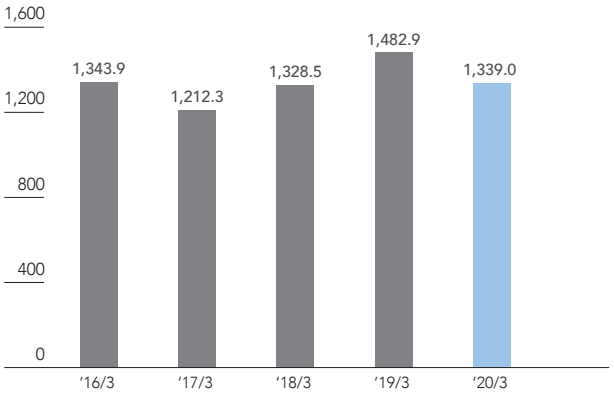
In Health Care, in line with declining birthrates and aging populations in advanced countries and growing economies in emerging markets, health consciousness is rising and individual wants and needs are diversifying. Sales of our ophthalmic lens materials, which boast the largest share of the global market, remained healthy, and the Group worked to expand their use in China and India. In nonwoven fabrics, the Group applied the technologies it has developed in hygiene materials to industrial materials and boosted the capabilities of its nano-nonwoven fibers for filters and other products.

In Food & Packaging, food security is becoming a major social issue as the global population continues to grow. With standards of living in Asia rising, the packaging field is seeing growing needs for more highly functional products with a smaller environmental footprint. In performance films and sheets, construction of a new plant finished in Taiwan, a major source of demand. The new facilities produce ICROS™ Tape, which commands the largest share of the global market for protective tape used in semiconductor manufacturing processes, increasing supply capacity 1.5 times. In agrochemicals, the Group completed the registration process and made its first shipments of Dinotefuran in Brazil, thereby accelerating the global expansion of the agrochemical business.

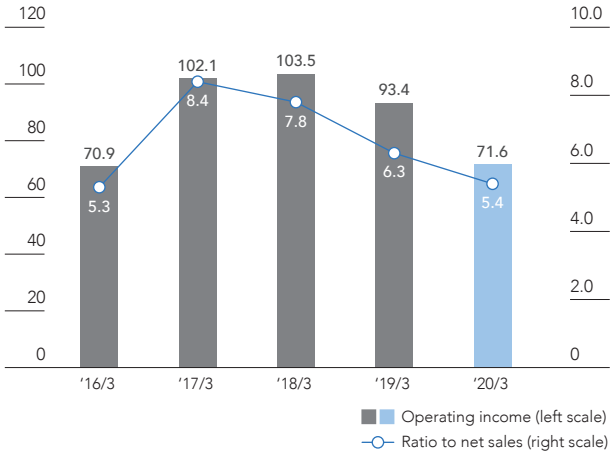
In Basic Materials, which is centered on petrochemicals and basic chemicals, the Group provides materials to various manufacturing fields, including automobiles, residences, consumer electronics, infrastructure and packaging. In fiscal 2019, the Group continued to strengthen competitiveness mainly by expanding its lineup of differentiated products and through local production for local consumption, despite the effects of fluctuations in overseas market and the impact of typhoons.

Moreover, the spread of the coronavirus has put a damper on sales in each segment. The Group continues to minimize the negative impact on profit or loss by shrinking inventory and reducing fixed costs.

Net sales (Billions of yen)



Operating income/Ratio to net sales (Billions of yen, %)



Operating Results

Net Sales

Net sales decreased 143.9 billion yen, or 9.7%, compared with the previous fiscal year to 1,339.0 billion yen. This was mainly attributable to decrease in sales prices due to the fall in naphtha and other raw materials and fuel prices, in addition to decrease in sales resulting from the spread of coronavirus.

Net sales overseas were 607.4 billion yen, an increase of 0.1% compared with the previous fiscal year to 45.4% in the total net sales.

Operating Income

Operating income was 71.6 billion yen, a decrease of 21.8 billion yen or 23.3% year on year. This result was due to unfavorable terms of trade in addition to decrease in sales resulting from the spread of coronavirus and increase of fixed costs.

Ordinary Income

Ordinary income was 65.5 billion yen, decreased 37.5 billion yen or 36.4% year on year. This result was due to decrease of operating income and share of profit of entities accounted for using equity method.

Extraordinary income and losses

Extraordinary income and losses improved 0.7 billion yen year on year to 3.0 billion yen profit. This result was due to gain on contribution of securities to retirement benefit trust, in spite of a loss on valuation of investments in capital from operational stagnation of Nghi Son Refinery and Petrochemical LCC, in which the Company has invested.

As a result of the aforementioned factors, profit before income taxes amounted to 68.5 billion yen, a decrease of 36.8 billion yen, or 35.0% year on year.

Total income taxes

Total income taxes were 22.2 billion yen, an increase of 3.4 billion yen year on year. This was the result of factors including a partial draw down of deferred tax assets owing to a review of the collectability of these assets included in previous projections to reflect the impact of COVID-19.

Profit Attributable to Owners of Parent

Profit attributable to owners of parent after accounting for income taxes and non-controlling interests was 37.9 billion yen, a decrease of 38.2 billion yen, or 50.1% compared with the previous fiscal year. Earnings per share for the period were 194.94 yen.

Segment Information

Business Segment Results

The status of each segment during fiscal 2019 is as follows.

Mobility

Net sales decreased 27.8 billion yen compared with the previous fiscal year to 367.6 billion yen and comprised 27% of total sales. Operating income decreased 3.5 billion yen to 39.2 billion yen year on year. The decrease in income was due to slowing demand for automobile.

In elastomers, which are primarily used in automotive components and as resin modifiers, sales were affected by slowing demand mainly in Asia.

In performance compounds, sales were affected by deceleration of automotive production in the United States, Europe and China.

In performance polymers, the Group captured demand and sales remained healthy, despite the demand for information communication technology (ICT)-related products were stagnating in general.

In overseas polypropylene compound businesses, the Group was affected by deceleration of global automotive production, in addition to the spread of the coronavirus.

In solution business, sales remained healthy as the Group captured demand for the development of products for Japanese customers, while demand was declining in Europe.

Millions of yen

Mobility	2020/3	2019/3	Change (%)
Net sales	¥367,626	¥395,365	(7.4)
Operating income (loss)	39,193	42,736	(8.3)
Total assets	358,667	348,824	2.8
Depreciation and amortization	13,727	12,582	9.1
Capital expenditures	27,129	17,256	57.2

Health Care

Net sales decreased 3.6 billion yen year on year to 143.0 billion yen and comprised 11% of total sales. On the other hand, operating income increased 0.2 billion yen to 13.8 billion yen, mainly due to increase of sales volume, despite of increasing fixed costs.

In vision care materials, sales of ophthalmic lens materials were firm.

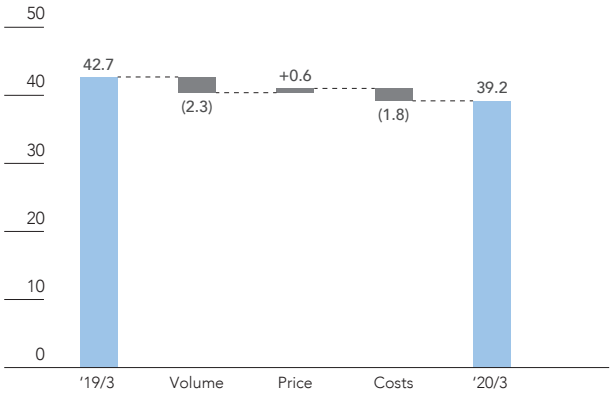
In nonwoven fabrics, sales volume stayed around the same level as the same period of the previous fiscal year.

In dental materials, sales were generally stable, however some regions were affected by coronavirus.

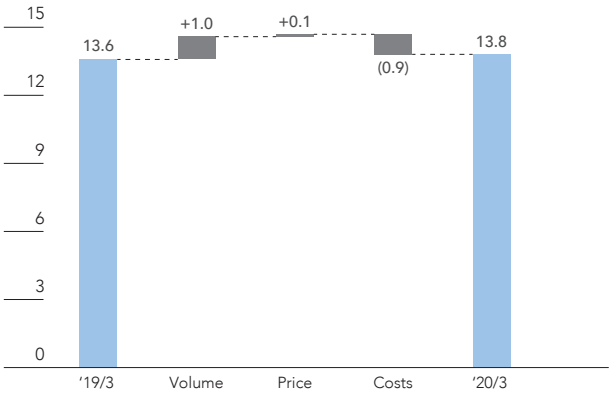
Millions of yen

Health Care	2020/3	2019/3	Change (%)
Net sales	¥143,016	¥146,598	(2.4)
Operating income (loss)	13,833	13,622	1.5
Total assets	197,126	195,713	0.7
Depreciation and amortization	10,425	9,412	10.8
Capital expenditures	9,403	6,579	42.9

Mobility (Change in operating income) (Billions of yen)



Health Care (Change in operating income) (Billions of yen)



Food & Packaging

Net sales decreased 5.6 billion yen compared with the previous fiscal year to 193.8 billion yen and comprised 15% of total sales. On the other hand, operating income increased 0.3 billion yen to 18.1 billion yen year on year, due to favorable terms of trade, despite of increasing fixed costs.

In coatings & engineering materials, profits were impacted by decrease of fixed costs and favorable terms of trade, despite of decreasing sales volume.

In performance films and sheets, sales were firm in industrial films and sheets, although sales volume decreased in the area of packaging films.

In agrochemicals, sales volume decreased.

Millions of yen

Food & Packaging	2020/3	2019/3	Change (%)
Net sales	¥193,822	¥199,435	(2.8)
Operating income (loss)	18,117	17,791	1.8
Total assets	231,164	232,533	(0.6)
Depreciation and amortization	7,631	7,496	1.8
Capital expenditures	12,879	15,019	(14.2)

Basic Materials

Net sales decreased 99.6 billion yen compared with the previous fiscal year to 616.9 billion yen and accounted for 46% of total sales. Operating income decreased 19.1 billion yen to 8.7 billion yen, due to the effect of overseas market.

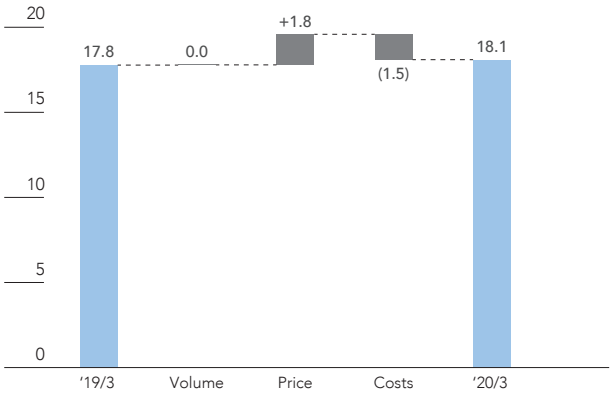
Naphtha cracker operating rates were lower than the previous fiscal year due to facility defects at Ichihara Works and typhoons. Performances of polyethylene and polypropylene were affected by slowing demand for the packaging products, in addition to decreasing inbound demand due to the spread of coronavirus.

In olefins and phenols, oversea market was at lower level than the previous fiscal year.

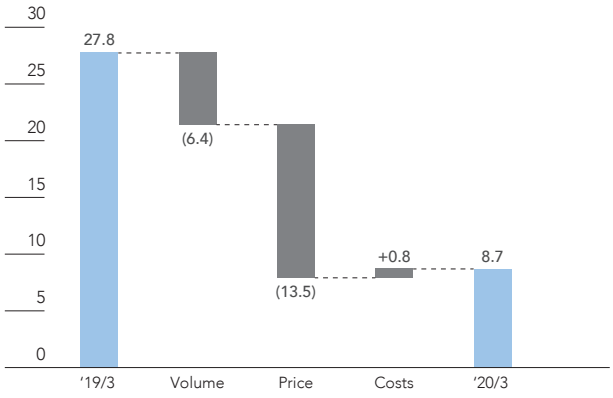
Millions of yen

Basic Materials	2020/3	2019/3	Change (%)
Net sales	¥616,878	¥716,524	(13.9)
Operating income (loss)	8,642	27,776	(68.9)
Total assets	560,151	598,707	(6.4)
Depreciation and amortization	15,217	14,826	2.6
Capital expenditures	21,099	18,453	14.3

Food & Packaging (Change in operating income) (Billions of yen)



Basic Materials (Change in operating income) (Billions of yen)



Others

Net sales decreased 7.3 billion yen to 17.7 billion yen, comprised 1% of total sales. Operating loss was 2.0 billion yen, increase of 0.6 billion yen compared to the previous year.

Millions of yen

Others	2020/3	2019/3	Change (%)
Net sales	¥17,645	¥24,987	(29.4)
Operating income (loss)	(1,959)	(1,375)	—
Total assets	51,248	55,129	(7.0)
Depreciation and amortization	3,795	3,857	(1.6)
Capital expenditures	5,283	3,870	36.5

Net Sales

Billions of yen

			Increase (Decrease)		
	2020/3	2019/3	Total	Volume contribution	Price contribution
Mobility	¥ 367.6	¥ 395.4	¥ (27.8)	¥ 0.8	¥ (28.6)
Healthcare	143.0	146.6	(3.6)	2.6	(6.2)
Food & Packaging	193.8	199.4	(5.6)	(3.8)	(1.8)
Basic Materials	616.9	716.5	(99.6)	(22.8)	(76.8)
Others	17.7	25.0	(7.3)	(6.9)	(0.4)
Total	¥1,339.0	¥1,482.9	¥(143.9)	¥(30.1)	¥(113.8)

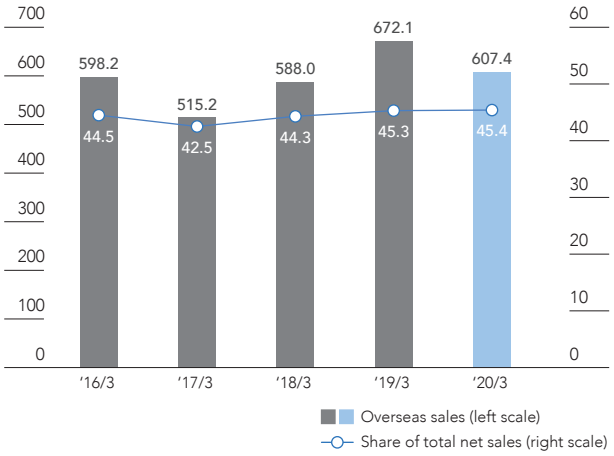
Operating Income (Loss)

Billions of yen

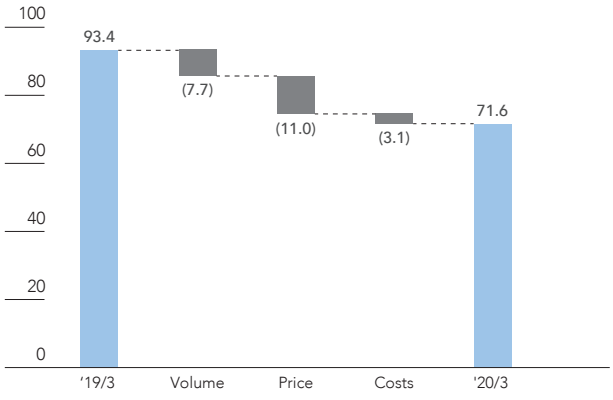
			Increase (Decrease)			
	2020/3	2019/3	Total	Volume contribution	Price*	Fixed and other cost differential
Mobility	¥39.2	¥42.7	¥ (3.5)	¥(2.3)	¥ 0.6	¥(1.8)
Healthcare	13.8	13.6	0.2	1.0	0.1	(0.9)
Food & Packaging	18.1	17.8	0.3	0.0	1.8	(1.5)
Basic Materials	8.6	27.8	(19.1)	(6.4)	(13.5)	0.8
Others	(2.0)	(1.4)	(0.6)	—	—	(0.6)
Adjustments	(6.2)	(7.1)	0.9	—	—	0.9
Total	¥71.6	¥93.4	¥(21.8)	¥(7.7)	¥(11.0)	¥(3.1)

*Price = Price contribution + Variable cost differential

Overseas sales/Share of total net sales (Billions of yen, %)



Operating income (Billions of yen)



Financial Position

Assets

Total assets at the end of fiscal year stood at 1,480.1 billion yen, a decrease of 21.0 billion yen compared with the end of the previous fiscal year.

Liabilities

Total liabilities at the end of fiscal year increased 2.7 billion yen compared with the previous fiscal year-end to 872.1 billion yen. Interest-bearing debt amounted to 554.2 billion yen, an increase of 69.2 billion yen compared with the previous fiscal year-end. As a result, the interest-bearing debt ratio was 37.4%, an increase of 5.1 percentage points.

For overseas consolidated subsidiaries following International Financial Reporting Standard (IFRS) and US GAAP, IFRS 16—Leases and ASC Topic 842—Leases were applied from the first quarter. As a result, the closing balance of lease assets and lease liabilities have increased.

Net Assets

Net assets totaled 608.0 billion yen, a decrease of 23.7 billion yen compared with the previous fiscal year-end. The ratio of shareholders' equity to total assets was 35.6%, 1.2 percentage point decrease from the previous fiscal year-end.

Accounting for the aforementioned factors, the net debt-equity ratio stood at 0.76 at the end of the fiscal year, 0.08 point increase from the previous fiscal year-end.

Capital Resources and Liquidity

Cash Flows

Cash and cash equivalents (hereafter called "cash") increased 37.5 billion yen to 147.3 billion yen as of the end of this fiscal year compared with the previous fiscal year-end.

Cash Flows from Operating Activities

Net cash provided by operating activities increased 5.5 billion yen to 115.0 billion yen due to improvement of working capital.

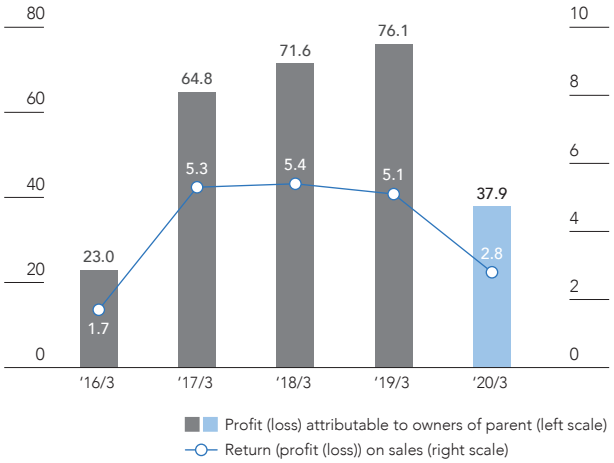
Cash Flows from Investing Activities

Net cash used in investing activities increased 20.9 billion yen compared with the previous fiscal year to 85.2 billion yen, mainly due to increase of cash outflows from capital expenditure.

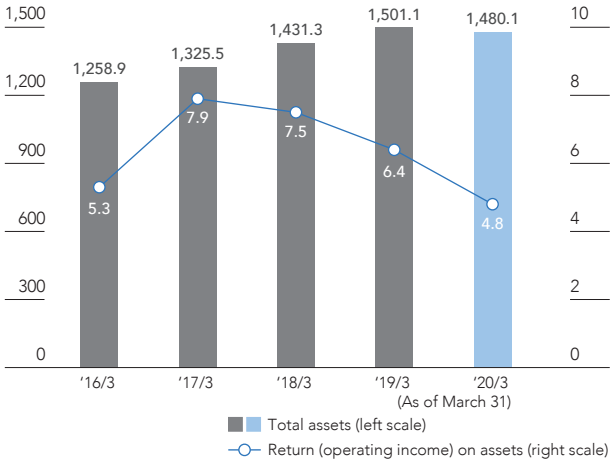
Cash Flows from Financing Activities

Net cash used in financing activities improved 23.1 billion yen compared with the previous fiscal year to 9.0 billion yen due primarily to increase of cash inflows from issuing commercial papers.

Profit (loss) attributable to owners of parent (Billions of yen, %)



Total assets/Return (operating income) on assets
(Billions of yen, %)



Cash Flows-Related Performance Indicators

	2020/3	2019/3	2018/3	2017/3	2016/3
Shareholders' equity ratio (%)	35.6	36.8	35.7	33.9	30.3
Shareholders' equity ratio on a market value basis (%)	26.5	34.7	46.6	41.5	29.8
Ratio of interest-bearing debt to cash flows	4.8	4.4	5.6	4.4	3.2
Interest coverage ratio (times)	20.8	19.9	14.8	17.3	20.7

Notes: - Shareholders' Equity Ratio: Shareholders' equity to total assets.
- Shareholders' Equity Ratio on a Market Value Basis: Market capitalization to total assets.
- Ratio of Interest-bearing Debt to Cash Flows: Interest-bearing debt to cash flows.
- Interest Coverage Ratio: Cash flows to interest paid.
- Each of the indicators was calculated using consolidated financial figures.
- The market capitalization was calculated by multiplying the closing share price as of the end of the period with the number of shares outstanding (excluding treasury stock).
- Operating cash flow figures have been used for cash flow calculations.
- Interest-bearing debt is the portion of total debt booked on the consolidated balance sheet on which interest is being paid. Interest paid is the amount of interest paid as reported in the consolidated statements of cash flows.
- Consolidated balance sheet as of FY2017 is restated due to amendments to accounting standards for tax effect accounting. Consequently, shareholders' equity ratio and shareholders' equity ratio on a market value basis are calculated based on the restated figures.

Fund Procurement

In connection with its fund procurement activities, the Group adopts the following basic policies.

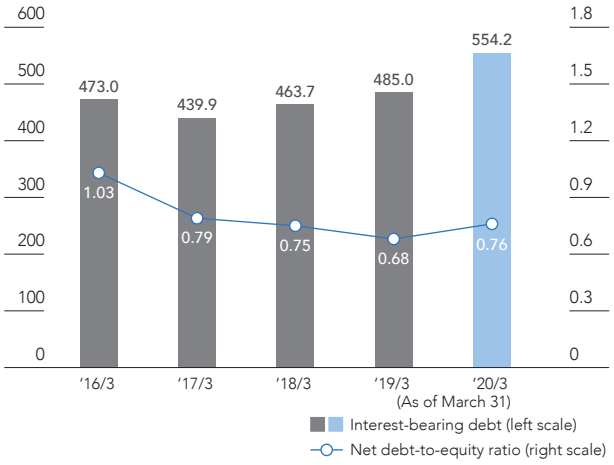
1. Maintain a high credit rating so that low-cost funds can be procured, mainly through bonds, loans, and commercial paper whenever necessary.
2. Utilize a certain level of indirect financing to preserve the stability of fund procurement activities.
3. Employ securitization and other schemes to liquidate assets in an effort to diversify fund procurement means.

Financial Liquidity

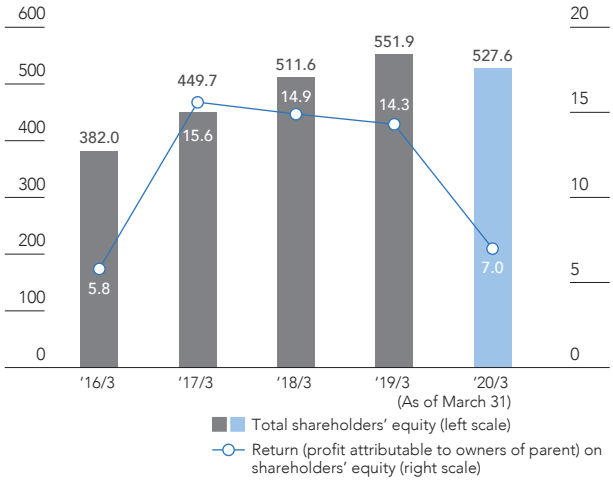
With regard to asset efficiency, the Group will ensure sufficient levels of liquidity in hand while at the same time securing alternative sources of fund procurement, including credit and overdraft facilities.

In addition, the Company signed a 20 billion yen-syndicate loan agreement in March 2020 while taking other measures aimed at ensuring long-term, stable fund procurement. Furthermore, the Company secured sufficient liquidity supported by commitment lines offered by multiple financial institutions, with a total unused loan facility of 40.0 billion yen. The Company is currently engaged in negotiation with financial institutions to raise these commitment lines to ensure its worst-case scenario preparedness, assuming that the economic impact of the coronavirus continues for a longer period of time and results in even more serious conditions.

Interest-bearing debt/Net debt-to-equity ratio (Billions of yen, %)



Total shareholders' equity/Return (profit attributable to owners of parent) on equity (Billions of yen, %)



Capital Expenditures (Summary)

The Company and its consolidated subsidiaries undertook capital expenditures totaling ¥76.3 billion in fiscal 2019. This amount includes expenditures on intangible fixed assets as well as long-term prepaid expenses.

Expenditures by business segment were as follows.

Mobility

In Singapore (Mitsui Elastomers Singapore Pte. Ltd.), TAFMER™ increase production facility was under construction.

The total amount of capital expenditures in the Mobility segment was ¥27.1 billion.

Health Care

The total amount of capital expenditures in the Health care segment was ¥9.4 billion.

Food & Packaging

The total amount of capital expenditures in the Food & Packaging segment was ¥12.9 billion.

Basic Materials

In Ichihara, propylene refining capacity increase production facility was under construction.

The total amount of capital expenditures in the Basic Materials segment was ¥21.1 billion.

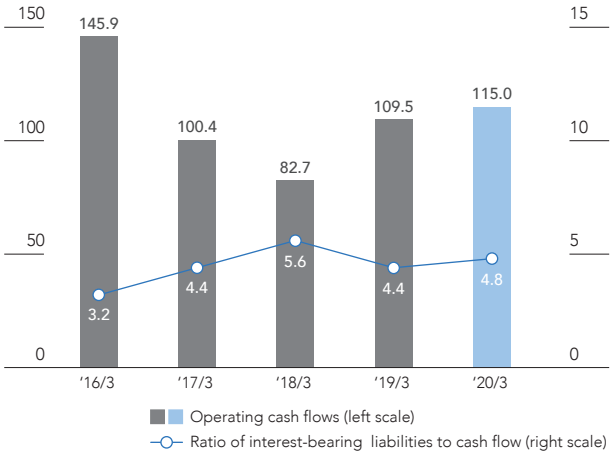
Others

The total amount of capital expenditures in the Others segment was ¥52.8 billion.

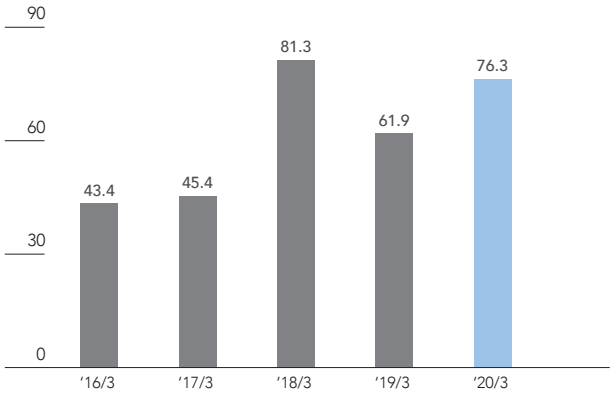
Corporate Expenses

The total amount of capital expenditures recorded under corporate expenses was ¥0.5 billion and was related to the development of new businesses.

Operating cash flows/Ratio of interest-bearing liabilities to cash flow (Billions of yen, %)



Capital expenditure (Billions of yen)



Research and Development

Research and development at Mitsui Chemicals, Inc. and its consolidated subsidiaries is conducted by their research and development divisions. The research and development expenses in the fiscal year ended March 31, 2020 amounted to ¥36.4 billion. The Group's research and development organizations are as listed as below:

R&D Planning & Coordination Division
Mitsui Chemicals Singapore R&D Center Pte. Ltd.
Synthetic Chemicals Laboratory
Polymeric Materials Laboratory
Functional Materials Laboratory
New Products Development Laboratory
Process Technology Center
Mobility Development Center

Major research and development issues confronting corporate research, development for new businesses and each business sector, and their research and development expenses for fiscal 2017 are briefly stated as follows.

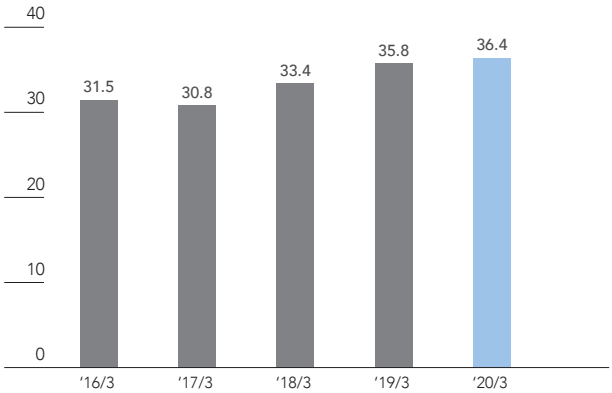
Mobility

The Company engages in the development of elastomers, performance compounds, and performance polymer resins in the Mobility domain. In fiscal 2019, the Company placed considerable weight on development activities encompassing new elastomers and performance compounds for automotive materials, and new performance polymer resins for ICT and optical materials. Research and development expenses related to this segment were ¥8.7 billion for the fiscal year.

Healthcare

The Company engages in development in the Healthcare domain in such areas as vision-care materials, personal-care materials, and highly functional non-woven fabrics. Kulzer GmbH and Sun Medical Co., Ltd. engage in the product development of oral-care materials, both in conjunction with the Company and separately. In fiscal 2019, efforts were mainly directed toward dental materials, non-woven fabrics for hygiene applications, and biocatalysts. Research and development expenses related to this segment were ¥4.3 billion for the fiscal year.

R&D expenses (Billions of yen)



Food & Packaging

The Company engages in the development of packaging materials and of coatings and adhesives for ICT applications in the Food & Packaging domain. Mitsui Chemicals Tohcello, Inc. develops films and sheets for packaging, while also working with the Company on developing functional products for ICT fields. In addition, Mitsui Chemicals Agro, Inc. develops products for agriculture and disease prevention applications. In fiscal 2019, priority was placed on recycling technology for packaging materials, new products in the ICT field, and development of new bulk agrochemicals. Research and development expenses related to this segment were ¥10.4 billion.

Basic Materials

The Company continues to develop streamlined processes for phenol and its derivative products, industrial chemicals such as hydroquinone, purified terephthalic acid (PTA), and PET resin for strengthening its business in the Basic Materials domain. In addition, the Company is developing high-performance polymerization catalysts that strengthen the competitiveness of its polyolefin resin, and together with Prime Polymer Co., Ltd. is developing new brands and products for polyolefin resins and PP compounds. Mitsui Chemicals & SKC Polyurethanes Inc. is active in the development of polyurethane foam materials. Research and development expenses related to this segment were ¥4.9 billion.

Development for New Businesses

The Company is engaged in research and development activities with the aim of creating "new business centered on proprietary materials that contribute to solving social issues." Mitsui Chemicals Singapore R&D Centre Pte Ltd. conducts research with a view to formulating new businesses originating in the Asia/Pacific region. In fiscal 2019, the Company worked on fiber-reinforced composite materials and composite materials using metal and resin injection assembly technology, as well as the development of lighter automotive components.

Research and development expenses related to new businesses creation amounted to ¥3.2 billion. Those are presented in corporate expenses and other segments.

Corporate Research

The Company plays a central role in the development of fundamental technology and innovative new technology needed to maintain, strengthen, and expand the products and services of each business segment. In recent years, it has particularly worked on cutting-edge fundamental technologies in the fields of materials informatics and sensitivity evaluation technology, and actively acquired new technology through open innovation. Research and development expenses relating to corporate research amounted to ¥4.9 billion and were allocated among all reportable segments.

Business Risks

The Mitsui Chemicals Group recognizes that management activities may be threatened by a wide range of implicit and explicit risks. For this reason, the Group is dedicated to crafting initiatives to prevent or mitigate the escalation of these risks.

The items detailed below represent some of the risks that could potentially and adversely impact the Group's future operating performance and financial position. Readers are cautioned that this partial list does not constitute all of the risks faced by the Group.

Please note that the risks discussed below were those deemed relevant as of March 31, 2020.

(1) External operating environment

The Mitsui Chemicals Group businesses may be influenced by certain elements of the operating environment outside of the Group, including customer, market, alliance partner trends and the business operations of rival firms as well as changes in legal systems. In the event that actual circumstances upon which the Group's business strategies are based change as a result of these environmental influences, the Group's ability to implement these strategies on schedule could be impaired, and anticipated results may not materialize. The Group takes into consideration risks posed by such unavoidable environmental changes. With respect to products, a variety of risks could conceivably result in a decline in profitability. These include, but are not limited to, an erosion of market demand, loss of customers, a deterioration in market conditions or decline in sales volume significantly exceeding forecasts caused by oversupply due to increased production capacity at rival firms or the market entry of low-priced products, and the emergence of alternative products. Profitability may also decline due to drastic changes in the cost of raw materials, as well as the impact of supply stoppages due to accidents or bankruptcies at raw material manufacturers. In readiness for such changes in the external environment, constant vigilance is maintained within each business division, while the most important issues are discussed by the Company-wide Strategy Committee and the conclusions are reflected in the yearly strategy review for each business. The occurrence of any or all of these risks could adversely impact the Group's business development as well as operating performance and financial position. However, it is not possible to efficiently estimate the probability of these risks materializing or their concrete impacts, etc.

The spread of COVID-19 infection has caused reductions in sales demand and production and has had other negative impacts on the Mitsui Chemicals Group. Going forward, there may be additional impacts from further falls in sales demand, stoppages at Mitsui Chemicals Group production facilities, and other eventualities. Mitsui Chemicals has made an energetic response to these risks with measures that emphasize cash flow, including strict control of inventories and related items, restriction of non-essential and non-urgent expenditures, increased borrowing limits and securing of cash reserves, while at the same time keeping a close watch on demand trends and taking action to secure the supply chain. Meanwhile, effective March 4, 2020, a COVID-19 Infection Response Division was set up presided over by the officer responsible for the Risk Compliance Committee. The new division has gathered information on the impact on each of Mitsui Chemicals' domestic and overseas bases and related matters and has formulated the necessary measures to reduce personnel infection risk (teleworking, staggered work hours, etc.). The division has also reported as appropriate, including to the Board of Directors, on the information gathered from Mitsui Chemicals bases, the response measures formulated and its other activities. After the lifting of the state of emergency on May 25, the recommendation to telework remained in place and the Company continued with other efforts to maintain the functions of the Company and ensure the safety and stable operation of manufacturing plants. At the same time, the Company began exploring sustainable new ways of working based on the themes of infection prevention, operational efficiencies, and effective communication. At present, it is not clear when an end can be expected to the spread of COVID-19 infection and it is therefore not possible to reasonably estimate its impact on the Mitsui Chemicals Group's operating performance, financial position and cash flow. Nevertheless, the Company has formulated a fiscal 2020 consolidated performance forecast, which is based on the expectation that the impact of COVID-19 infection will pass its peak by the end of the first half year and be followed by a gradual recovery, and which also assumes a large fall in the crude oil price.

(2) Overseas activities (Country risk)

The Mitsui Chemicals Group is involved in a wide range of activities outside of Japan, from the export of products to production at overseas bases. These activities overseas are subject to various risks, including difficulties in securing personnel, deterioration in political and economic conditions, regulations regarding imports and foreign capital, deterioration in public safety and security, labor unrest, and the outbreak of terrorism or warfare. Through the regional headquarters located in each of its main overseas regions (Asia Pacific, China, Americas, and Europe), Mitsui Chemicals constantly gathers information from its affiliates in the regions and countries where it operates, and additionally appoints a Regional Safety Officer in the main countries where its affiliates are located who works to ensure stable business continuity in the event of changes in public safety or health. In the event of a risk materializing, the safety officer liaises with Tokyo Head Office and responds accordingly. It is not possible to efficiently estimate the probability of such risks materializing or their concrete impacts, etc. Nevertheless, the occurrence of such risks could impair the Group's business activities overseas, which may adversely impact operating performance.

(3) Causes of changes in segment operating performance

The Mitsui Chemicals Group engages in the manufacture and sale of a wide array of products led by mobility, health care, food & packaging and basic materials. So far, the Group has been impacted by a certain amount of demand reduction due to COVID-19 infection. The assumed risks for each key business are as set out below.

Mitsui Chemicals carries out an annual strategy review for each business following discussion at the Company-wide Strategy Committee to take account of changes in the internal and external environment, changes in business risks, and other factors. In this way, the Group does its utmost to prevent risk from materializing and to minimize its impact if it does.

*Mitsui Chemicals intends to apply International Financial Reporting Standards (IFRS) from fiscal 2020.

Items i. to iii. below present the impact of COVID-19 infection and the resulting outlook for the forthcoming period (fiscal 2020) together with the increase or decrease in core operating income compared to fiscal 2019 and fiscal 2020. The fiscal 2019 core operating income figure is a calculation made for the sake of comparison with fiscal 2020, and differs from the figure appearing in corporate accounting materials. Please note also that the present fiscal 2019 financial results based on IFRS have not been subject to audit attestation.

i. Mobility
Mobility segment products are primarily produced from ethylene, propylene, and other naphtha derivatives. As described below, segment product earnings could be adversely impacted by temporary delays in passing higher raw material prices on to product prices in the event of a sharp increase in naphtha supply prices caused by circumstances in the Middle East or global economic conditions.
Specific risks and opportunities recognized in this business division are as follows:
• Expanding demand for lightweight specifications
• Expanding demand for safety and convenience
• Emergence of new demand in electric vehicles, autonomous driving, etc.
• Stagnant vehicle demand due to impact of COVID-19 infection
(Impact of COVID-19 infection and resulting outlook for forthcoming period)
• Forecast of 20% global slowdown in vehicle production
• Negligible impact on Mitsui Chemicals ICT applications
• Fiscal 2020 business performance: forecast of 36% fall in core operating income

ii. Health Care
Health care segment product earnings could be adversely impacted by price competition caused by the business expansion of rivals.
Specific risks and opportunities recognized in this business division are as follows:
Vision care materials
• Global expansion of market
Nonwovens
• Stable domestic growth in disposable diapers for adults
• Intensified competition in East and Southeast Asia
Dental materials
• Rapidly changing trends in the digital technology market (shift toward smaller instruments) and market expansion
(Impact of COVID-19 infection and resulting outlook for forthcoming period)
• Vision care materials: temporary fall in demand due to the closure of optician's stores in China, Europe and other countries, followed however by a gradual recovering trend
• Nonwovens: special demand for masks, medical gowns, etc., and recovery in demand for diapers
• Dental materials: fall in demand due to reduced activity in dental treatment
• Fiscal 2020 business performance: forecast of 17% fall in core operating income.

iii. Food & Packaging
Performance films and sheets products are primarily produced from polyethylene, polypropylene and other naphtha derivatives handled by the Basic Materials segment. As described below, those product earnings could be adversely impacted by delays in passing higher raw material prices on to product prices in the event of a sharp swing in naphtha supply prices caused by circumstances in the Middle East or global economic conditions.
Agrochemicals earnings could be adversely affected by such factors as changing global weather patterns, the appearance of harmful insects, and fluctuations in the cost of tests required for the development and registration of new products.
Specific risks and opportunities recognized in this business division are as follows:
• Agrochemicals: market expansion in Asia and South America, expansion of agrochemical peripherals market (epidemic prevention)
• Packaging materials: market expansion in Asia, market stagnation in Japan, expansion of demand in environmental response field
• ICT: market expansion in 5G, high-function displays, etc.
• China and emerging economies: future development uncertain
(Impact of COVID-19 infection and resulting outlook for forthcoming period)
• Overall, negligible impact of COVID-19 infection
• Packaging sector: strong performance on stay-at-home demand
• Semiconductor-related sector: reduced sales in first half, but move to recovery in the second
• Fiscal 2020 business performance: forecast of 2% fall in core operating income.

iv. Basic Materials
Petrochemicals products are primarily produced from naphtha. Naphtha supply volume and prices could fluctuate sharply due to circumstances in the Middle East or global economic conditions. In the event of a sharp increase or decrease in naphtha prices, segment product earnings could be adversely impacted by delays in passing such fluctuations on to product prices, the emergence of inventory valuation losses, or other factors.
Basic chemicals products could be adversely impacted by a rapid deterioration in market conditions caused by an oversupply, as these products are vulnerable to fluctuations in this overcrowded market.
More specific risks and opportunities recognized in this business division are as follows:
• Completion of business reconstruction and strengthening cost competition
• Expansion of distinctive value-added derivative products
• Active initiatives including marine plastic waste, plastic recycling and other environmental issues
(Impact of COVID-19 infection and resulting outlook for forthcoming period)
• Forecast of a negative figure for fiscal 2020 core operating income due to inventory valuation loss and other impacts resulting from a sharp fall in the crude oil price and corresponding sharp fall in the naphtha price
• Flexible operation of cracker facilities in line with demand.

(4) Financial risks
Major financial risks faced by the Mitsui Chemicals Group are increased concerns about customer confidence due to deteriorating economic conditions, currency exchange losses due to dramatic fluctuations in exchange rates, and rising interest rates and a reluctance to lend by financial institutions with respect to fund procurement. The occurrence of any one of these risks could adversely impact the Group's financial position.

At present, we see expansion of the impact of COVID-19 infection as presenting the greatest risk of deterioration in fund procurement conditions. To deal with this risk, Mitsui Chemicals concluded a 20.0 billion yen syndicated loan contract in March 2020 and took other measures for stable fund procurement in the long term. The Group has secured adequate liquidity with an as yet unused 40.0 billion yen commitment line from a number of financial institutions. Moreover, the commitment line sum agreed has been increased to allow for the worst-case scenario in which the impact of COVID-19 infection becomes serious and prolonged.

(5) Impairment of fixed assets
The Mitsui Chemicals Group has adopted the accounting standard for the impairment of fixed assets.

Looking ahead, any downturn in profitability due to a marked deterioration in operating conditions or other factors, or drop in the market value of fixed assets held by the Group, may cause impairment losses to be recorded and have an adverse impact on the Group's operating performance and financial position.

At the present time, we see the greatest risk as being production stoppages, reduction of operational levels or similar impacts at Mitsui Chemicals Group plants due to expansion of the impact of COVID-19 infection. However, it is not possible to efficiently estimate the probability of such risks materializing.

(6) Deferred tax assets
The Mitsui Chemicals Group determines the collectability of deferred tax assets based on forecasts and assumptions related to future taxable income. If a future revision of the business plan results in a divergence from the business plan as of the time when the collectability was determined, this may adversely impact the operating performance and financial position of the Group.

In fiscal 2019, a portion of the deferred tax assets was reversed based on a revised assessment of their collectability which factored into future planning the impact of COVID-19 infection. However, if a negative impact exceeding the initial forecasts and assumptions emerges in the future, a further reversal of deferred tax assets is possible. If an impact of COVID-19 infection becomes apparent in the following fiscal year, this risk may be actualized.

Any change in a key parameter that is significant enough to require a revision of deferred tax asset calculations, such as a shift in the income tax rate due to an amendment to the taxation regulations, may also adversely impact the operating performance and financial position of the Group.

(7) Retirement benefit plans
The retirement benefit obligation and retirement benefit expenses applicable to employees and former employees of the Mitsui Chemicals Group are calculated on an actuarial valuation basis that incorporates a variety of factors, including a wide range of basic rates and pension asset investment yields. Any fluctuations in retirement benefit expenses attributable to such factors as a drop in the market values of pension assets, a change in the interest rate, or a revision to the retirement benefit plan may adversely impact the operating performance and financial position of the Group. It is not possible to efficiently estimate the probability of this risk materializing.

(8) Accidents and disasters
As part of its committed efforts to ensure workplace safety, the Mitsui Chemicals Group pursues a policy of safety as the top priority and vigorously promotes OHSAS 18001 certification of the occupational health and safety management systems used in its production activities at works. Business continuity plans have also been formulated to quickly reestablish the business chain of command in the event that head office functions are affected by a major earthquake in the Tokyo metropolitan area. These include the establishment of a Company-wide Response Headquarters at the Osaka Works. Nevertheless, the Group faces risks from a variety of unforeseen events, including damage to production facilities caused by natural disasters such as major earthquakes and typhoons, plant accidents, and accidents during the course of product transport or storage at warehousing facilities outside the Group. It is not possible to efficiently estimate the probability of such risks materializing or their impacts, etc., but their occurrence might not only impede plant operations or the supply of products to customers, thereby adversely impacting the Group's operating performance and financial position, but could also potentially undermine the social standing of the Group.

(9) Quality
To uphold its quality assurance system, the Mitsui Chemicals Group vigorously promotes efforts to obtain ISO 9001 certification of the quality management systems at each of its plants. Nevertheless, the Group faces risks from the discovery of unforeseen quality defects in its products and product liability lawsuits. Because many the Group's products are used as raw materials in finished consumer goods, the appearance of large-scale customer recalls due to product defects could potentially result in massive damages. It is not possible to efficiently estimate the probability of such risks materializing or their impacts, etc., but their occurrence might not only adversely impact the Group's operating performance and financial position, but could also potentially undermine the social standing of the Group.

(10) Intellectual property
Possessing a significant array of proprietary technologies and expertise, the Mitsui Chemicals Group manages information in accordance with strict rules. Nevertheless, information leaks could potentially occur due to unforeseen circumstances. In addition, the Group could potentially be subject to unfavorable court judgement in the event of a future legal dispute concerning intellectual property. Up to the present time, Mitsui Chemicals has not experienced a serious leak of intellectual property or a serious dispute involving intellectual property and it is not possible to efficiently estimate the probability of such eventualities or their impacts, etc., but their occurrence could adversely impact the Group's operating performance and financial position.

(11) Climate change

The negative effects of climate change are becoming increasingly severe and are thus recognized as social issues that must be addressed globally, as demonstrated by the Paris Agreement and the SDGs. The process of manufacturing chemicals emits large amounts of greenhouse gases (GHG), the primary cause of climate change. The physical risks associated with climate change and risks pertaining to the transition to a low-carbon society have the potential to adversely affect the Group's business results and financial position. Accordingly, the Mitsui Chemicals Group considers its response to climate change a key issue (materiality).

In terms of physical risks, extreme weather events such as typhoons and floods have the potential to become more serious. Such events could lower production capacity at the Group's manufacturing bases and trigger an increase in costs from damages. Moreover, in regions where there is a heightened water risk owing to fluctuations in rainfall, production activity at our manufacturing bases may be limited by restrictions on water use as a result of drought.

As for risks pertaining to the transition to a low-carbon society, in the event GHG emission restrictions are introduced, for example, a carbon tax or an emissions trading scheme, prices for raw materials and fuel will likely increase and subsequently push up the cost of electricity. This could drive up the Group's manufacturing costs and dent earnings. And depending on the circumstances surrounding the shift to a low-carbon society, we may see more calls from our stakeholders for products that help reduce GHG emissions. In responding to those demands, the Group's earnings could decline as a result of higher R&D expenses and an increase in capital expenditure for implementing new technologies.

Although it is not possible at the present time to efficiently estimate the probability of such risks materializing or their impacts, etc., the Mitsui Chemicals Group considers climate change to be not only a risk, but also an opportunity, and is engaged in ongoing related information gathering activities. The Group therefore responds through its business activities to social issues related to climate change with the aim of resolving them through an approach based on both mitigation and adaptation. The Mitsui Chemicals Group supports the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD) and seeks to continuously assess the impact of climate change and engage in related information disclosure. For the Group's main business domains that are susceptible to the impact of climate change, transitional and physical risks and opportunities have been assessed in accordance with the information disclosure framework indicated in the TCFD Final Report. Going forward, the Group will act to identify particularly significant risks and opportunities and continuously assess their effect on business activities taking account of their impacts in terms of change in the business environment.

(12) Plastic pollution

Plastic is a material that brings convenience and benefits and also helps solve challenges in society by, for example, reducing food waste and improving energy efficiency thanks to its advanced functionality. However, concerns have been raised for some time now about the problem of plastic ending up in the world's oceans—the result of a few million tons of plastic waste being disposed inappropriately every year. Interest in this issue has grown rapidly in recent years as companies begin to focus more on the Paris Agreement, the SDGs, and ESG topics, and as a result, active steps are being taken worldwide to find a solution.

With a range of control measures under discussion globally and reinforced restrictions on international movements of plastic waste introduced under amendments to the Basel Convention, governments and corporations are exploring the use of recycled plastics, enacting self-imposed bans on single-use plastics and increasingly looking for the use of alternative materials. Measures that seek to recycle resources are also gaining traction, particularly in Europe, with all companies in the value chain examining ways to reuse and recycle. At present, it is not possible to efficiently estimate the probability or the extent, etc., of any impact on operating performance. Nevertheless, these movements could negatively affect the Group's business results and financial position.

The Mitsui Chemicals Group recognizes that plastic is a key issue which the chemicals industry needs to take the lead in addressing and that, together with climate change, it constitutes a major social problem requiring serious attention. To resolve these issues, it is essential that we shift from the linear economic model based on consumption then disposal of resources to a circular model based on collection, recycling and reuse of resources. Towards that goal, we believe that it is important to take an integrated approach to dealing with the related issues of climate change and plastic.

As part of our efforts to address the aforementioned risks, we work together with plastic-related value-chain corporations and industry bodies and participate in related activities, including those of the Alliance to End Plastic Waste (a movement supported by large donations from and participation by global plastic value-chain corporations), the Japan Initiative for Marine Environment, and the Clean Ocean Material Alliance. Through these activities we are working to solve problems by actively contributing to the promotion of innovation, the development of infrastructure for waste control, education and awareness activities, and clean-up campaigns.

We also think the recycling of resources presents business opportunities and have formulated a plastics strategy around the two main pillars of recycling and biomass. In connection, we are examining a broad range of possibilities around the use of recycled raw materials, the development of recycling technologies such as recycling methods for plastic thin films and chemical recycling to turn automotive scrap into useful plastic, and the design of recycle-friendly products such as packaging made of a single material. We are also promoting the recycling of resources by expanding the available range of biomass plastics, which contribute to combating climate change, including starting work on the development of biopropylene.

As a manufacturer and provider of plastic materials that have thus far solved various challenges in society, the Mitsui Chemicals Group will continue to proactively address the problem of plastic in the environment.

Consolidated Balance Sheets

MITSUI CHEMICALS, INC. AND CONSOLIDATED SUBSIDIARIES
March 31, 2020 and 2019

	Millions of yen		Thousands of U.S. dollars (Note 4)
	2020/3	2019/3	2020/3
ASSETS			
Current assets			
Cash and deposits (Notes 15 and 17)	¥ 149,348	¥ 111,056	$ 1,372,305
Notes and accounts receivable—trade (Note 17)	275,332	310,591	2,529,927
Inventories (Note 5)	288,006	301,890	2,646,384
Accounts receivable—other	55,959	55,288	514,187
Other	16,211	8,570	148,958
Allowance for doubtful accounts	(3,509)	(718)	(32,243)
Total current assets	781,347	786,677	7,179,518
Non-current assets			
Property, plant and equipment			
Buildings and structures	365,837	352,569	3,361,546
Accumulated depreciation	(245,922)	(241,112)	(2,259,689)
Buildings and structures, net	119,915	111,457	1,101,857
Machinery, equipment and vehicles	1,041,644	1,030,949	9,571,295
Accumulated depreciation	(902,136)	(889,978)	(8,289,405)
Machinery, equipment and vehicles, net	139,508	140,971	1,281,890
Land	156,646	156,556	1,439,364
Construction in progress	29,910	18,515	274,832
Other	103,134	78,508	947,661
Accumulated depreciation	(63,582)	(62,944)	(584,232)
Other, net	39,552	15,564	363,429
Total property, plant and equipment	485,531	443,063	4,461,372
Intangible assets			
Goodwill	4,412	5,061	40,540
Other	24,529	24,324	225,388
Total intangible assets	28,941	29,385	265,928
Investments and other assets			
Investment securities (Notes 17 and 18)	110,340	151,847	1,013,875
Net defined benefit asset (Note 6)	36,084	42,653	331,563
Deferred tax assets (Note 20)	11,610	11,386	106,680
Other	29,022	38,511	266,673
Allowance for doubtful accounts	(2,808)	(2,448)	(25,802)
Total investments and other assets	184,248	241,949	1,692,989
Total non-current assets	698,720	714,397	6,420,289
Total assets	¥1,480,067	¥1,501,074	$13,599,807

The accompanying notes are an integral part of these consolidated financial statements.

	Millions of yen		Thousands of U.S. dollars (Note 4)
	2020/3	2019/3	2020/3
LIABILITIES AND NET ASSETS			
Current liabilities			
Notes and accounts payable—trade (Note 17)	¥ 128,458	¥ 163,908	$ 1,180,355
Short-term loans payable (Notes 7 and 17)	106,040	92,733	974,364
Current portion of long-term loans payable (Note 7)	42,186	57,571	387,632
Commercial papers (Notes 7 and 17)	60,000	10,000	551,319
Current portion of bonds payable (Notes 7 and 17)	10,426	426	95,801
Accounts payable—other	78,165	79,245	718,230
Income taxes payable (Note 20)	5,383	9,372	49,462
Provision for directors' bonuses	241	175	2,214
Provision for repairs	10,666	13,089	98,006
Asset retirement obligations	—	5	—
Other (Notes 7 and 20)	36,933	32,234	339,364
Total current liabilities	478,498	458,758	4,396,747
Non-current liabilities			
Bonds payable (Note 7)	76,012	66,438	698,447
Long-term loans payable (Notes 7 and 17)	233,775	254,850	2,148,075
Lease obligations	22,564	2,803	207,333
Deferred tax liabilities (Note 20)	14,553	11,471	133,722
Provision for directors' retirement benefits	262	243	2,407
Provision for repairs	5,626	2,682	51,695
Provision for environmental measures	410	551	3,767
Net defined benefit liability (Note 6)	26,350	56,428	242,121
Asset retirement obligations	3,165	3,203	29,082
Other (Notes 7 and 20)	10,831	11,908	99,523
Total non-current liabilities	393,548	410,577	3,616,172
Total liabilities	872,046	869,335	8,012,919
Net assets			
Shareholders' equity (Note 13)			
Capital stock	125,298	125,205	1,151,319
Capital surplus	89,514	89,406	822,512
Retained earnings	366,330	348,202	3,366,075
Treasury stock	(39,254)	(29,869)	(360,691)
Total shareholders' equity	541,888	532,944	4,979,215
Accumulated other comprehensive income (Note 14)			
Valuation difference on available-for-sale securities	1,495	21,421	13,737
Deferred gains or losses on hedges	5	(3)	46
Foreign currency translation adjustment	(2,188)	4,195	(20,104)
Remeasurements of defined benefit plans	(13,611)	(6,642)	(125,067)
Total accumulated other comprehensive income (loss)	(14,299)	18,971	(131,388)
Non-controlling interests	80,432	79,824	739,061
Total net assets	608,021	631,739	5,586,888
Total liabilities and net assets	¥1,480,067	¥1,501,074	$13,599,807

Consolidated Statements of Operations

MITSUI CHEMICALS, INC. AND CONSOLIDATED SUBSIDIARIES
For the years ended March 31, 2020 and 2019

	Millions of yen		Thousands of U.S. dollars (Note 4)
	2020/3	2019/3	2020/3
Net sales	¥1,338,987	¥1,482,909	$12,303,473
Cost of sales (Notes 6 and 9)	1,041,840	1,166,577	9,573,096
Gross profit	297,147	316,332	2,730,377
Selling, general and administrative expenses (Notes 6 and 9)	225,511	222,905	2,072,139
Operating income (loss)	71,636	93,427	658,238
Non-operating income and expenses			
Non-operating income			
Interest income	2,334	2,063	21,446
Dividends income	2,493	2,799	22,907
Share of profit of entities accounted for using equity method	3,165	10,807	29,082
Rent income	783	819	7,195
Insurance income	253	419	2,325
Other	3,246	3,890	29,826
Total non-operating income	12,274	20,797	112,781
Non-operating expenses			
Interest expenses	5,501	5,534	50,547
Loss on suspension of operations	2,824	893	25,949
Foreign exchange losses	3	372	28
Provision of allowance for doubtful accounts	2,707	17	24,874
Loss on disaster	1,873	786	17,210
Other	5,485	3,650	50,399
Total non-operating expenses	18,393	11,252	169,007
Ordinary income (loss)	65,517	102,972	602,012
Extraordinary income and losses			
Extraordinary income			
Gain on sales of non-current assets	453	79	4,163
Gain on sales of investment securities	192	3,663	1,764
Gain on transfer of business	—	743	—
Gain on contribution of securities to retirement benefit trust	19,243	—	176,817
Insurance income	4,916	11,368	45,171
Total extraordinary income	24,804	15,853	227,915
Extraordinary losses			
Loss on disposal of non-current assets	4,200	4,352	38,592
Loss on sales of non-current assets	32	75	294
Impairment loss (Note 10)	2,508	1,454	23,045
Loss on restructuring of subsidiaries and affiliates (Note 12)	2,298	—	21,115
Loss on valuation of investment securities	24	171	221
Loss on valuation of investments in capital	12,105	—	111,229
Loss on business transfer	694	—	6,377
Loss on fire (Note 11)	—	7,476	—
Total extraordinary losses	21,861	13,528	200,873
Profit (loss) before income taxes	68,460	105,297	629,054
Income taxes—current	12,302	18,879	113,039
Income taxes—deferred	9,869	(105)	90,682
Total income taxes	22,171	18,774	203,721
Profit (loss)	46,289	86,523	425,333
Profit (loss) attributable to non-controlling interests	8,345	10,408	76,679
Profit (loss) attributable to owners of parent	¥ 37,944	¥ 76,115	$ 348,654

	Yen		U.S. dollars (Note 4)
Amounts per share of common stock:			
Earnings per share	¥194.94	¥385.60	$1.791
Cash dividends per share	100.00	100.00	0.919

The accompanying notes are an integral part of these consolidated financial statements.

Consolidated Statements of Comprehensive Income

MITSUI CHEMICALS, INC. AND CONSOLIDATED SUBSIDIARIES
For the years ended March 31, 2020 and 2019

	Millions of yen		Thousands of U.S. dollars (Note 4)
	2020/3	2019/3	2020/3
Profit (loss)	¥ 46,289	¥86,523	$ 425,333
Other comprehensive income (loss) (Note 14)			
Valuation difference on available-for-sale securities	(19,991)	(5,581)	(183,690)
Deferred gains or losses on hedges	11	4	101
Foreign currency translation adjustments	(5,622)	1,632	(51,658)
Remeasurements of defined benefit plans	(7,034)	(969)	(64,633)
Share of other comprehensive income (loss) of entities accounted for using equity method	(1,707)	(2,383)	(15,685)
Total other comprehensive income (loss)	(34,343)	(7,297)	(315,565)
Comprehensive income (loss)	¥ 11,946	¥79,226	$ 109,768
Comprehensive income (loss) attributable to:			
Owners of parent	¥ 4,675	¥69,109	$ 42,957
Non-controlling interests	7,271	10,117	66,811

The accompanying notes are an integral part of these consolidated financial statements.

Consolidated Statements of Changes in Net Assets

MITSUI CHEMICALS, INC. AND CONSOLIDATED SUBSIDIARIES
For the years ended March 31, 2020 and 2019

	Millions of yen									
	Capital stock	Capital surplus	Retained earnings	Treasury stock	Valuation difference on available-for-sale securities	Deferred gain (loss) on hedges	Foreign currency translation adjustments	Remeasurements of defined benefit plans	Non-controlling interests	Total net assets
Balance at April 1, 2018	¥125,125	¥89,327	¥291,000	¥(19,842)	¥ 26,558	¥(16)	¥5,037	¥ (5,603)	¥75,636	¥587,222
Issuance of new shares	80	80	—	—	—	—	—	—	—	160
Dividends of surplus	—	—	(18,878)	—	—	—	—	—	—	(18,878)
Profit attributable to owners of parent	—	—	76,115	—	—	—	—	—	—	76,115
Purchase of treasury stock	—	—	—	(10,033)	—	—	—	—	—	(10,033)
Disposal of treasury stock	—	(1)	—	6	—	—	—	—	—	5
Cumulative effects of changes in accounting policies	—	—	—	—	—	—	—	—	—	—
Change of scope of equity method	—	—	(35)	—	—	—	—	—	—	(35)
Change in ownership interest of parent related to transactions with non-controlling interests	—	—	—	—	—	—	—	—	—	—
Net changes of items other than shareholders' equity	—	—	—	—	(5,137)	13	(842)	(1,039)	4,188	(2,817)
Balance at April 1, 2019	¥125,205	¥89,406	¥348,202	¥(29,869)	¥ 21,421	¥ (3)	¥4,195	¥ (6,642)	¥79,824	¥631,739
Cumulative effects of changes in accounting policies	—	—	(307)	—	—	—	—	—	—	(307)
Issuance of new shares	92	92	—	—	—	—	—	—	—	185
Dividends of surplus	—	—	(19,509)	—	—	—	—	—	—	(19,509)
Profit attributable to owners of parent	—	—	37,944	—	—	—	—	—	—	37,944
Purchase of treasury stock	—	—	—	(9,389)	—	—	—	—	—	(9,389)
Disposal of treasury stock	—	—	—	4	—	—	—	—	—	4
Change in ownership interest of parent related to transactions with non-controlling interests	—	16	—	—	—	—	—	—	—	16
Change of scope of equity method	—	—	—	—	—	—	—	—	—	—
Net changes of items other than shareholders' equity	—	—	—	—	(19,926)	8	(6,383)	(6,969)	608	(32,662)
Balance at March 31, 2020	¥125,298	¥89,514	¥366,330	¥(39,254)	¥ 1,495	¥ 5	¥(2,188)	¥(13,611)	¥80,432	¥608,021

	Thousands of U.S. dollars (Note 4)									
	Capital stock	Capital surplus	Retained earnings	Treasury stock	Valuation difference on available-for-sale securities	Deferred gain (loss) on hedges	Foreign currency translation adjustments	Remeasurements of defined benefit plans	Non-controlling interests	Total net assets
Balance at April 1, 2019	$1,150,464	$821,520	$3,199,504	$(274,456)	$ 196,830	$(28)	$ 38,546	$ (61,031)	$733,474	$5,804,824
Cumulative effects of changes in accounting policies	—	—	(2,821)	—	—	—	—	—	—	(2,821)
Issuance of new shares	845	845	—	—	—	—	—	—	—	1,700
Dividends of surplus	—	—	(179,262)	—	—	—	—	—	—	(179,262)
Profit attributable to owners of parent	—	—	348,654	—	—	—	—	—	—	348,654
Purchase of treasury shares	—	—	—	(86,272)	—	—	—	—	—	(86,271)
Disposal of treasury stock	—	—	—	37	—	—	—	—	—	37
Change in ownership interest of parent related to transactions with non-controlling interests	—	147	—	—	—	—	—	—	—	147
Change of scope of equity method	—	—	—	—	—	—	—	—	—	—
Net changes of items other than shareholders' equity	—	—	—	—	(183,093)	74	(58,650)	(64,036)	5,587	(300,119)
Balance at March 31, 2020	$1,151,319	$822,512	$3,366,075	$(360,691)	$ 13,737	$ 46	$(20,104)	$(125,067)	$739,061	$5,586,888

The accompanying notes are an integral part of these consolidated financial statements.

Consolidated Statements of Cash Flows

MITSUI CHEMICALS, INC. AND CONSOLIDATED SUBSIDIARIES
For the years ended March 31, 2020 and 2019

	Millions of yen		Thousands of U.S. dollars (Note 4)
	2020/3	2019/3	2020/3
Cash flows from operating activities			
Profit (loss) before income taxes	¥ 68,460	¥105,297	$ 629,054
Depreciation	51,464	48,853	472,884
Amortization of goodwill	642	651	5,899
Impairment loss	2,508	1,454	23,045
Increase (decrease) in net defined benefit liability	1,534	417	14,095
Decrease (increase) in net defined benefit asset	1,275	(1,085)	11,716
Increase (decrease) in allowance for doubtful accounts	3,159	97	29,027
Increase (decrease) in provision for repairs	521	(694)	4,787
Increase (decrease) in provision for environmental measures	(141)	(126)	(1,296)
Interest and dividends income	(4,827)	(4,862)	(44,354)
Insurance income	(5,169)	(11,787)	(47,496)
Interest expenses	5,501	5,534	50,547
Share of (profit) loss of entities accounted for using equity method	(3,165)	(10,807)	(29,082)
Loss (gain) on sales of investment securities	(187)	(3,650)	(1,718)
Loss (gain) on valuation of investment securities	24	171	221
Loss (gain) on contribution of securities to retirement benefit trust	(19,243)	—	(176,817)
Loss on valuation of investments in capital	12,105	—	111,229
Loss on disposal of non-current assets	898	1,050	8,251
Loss (gain) on sales of non-current assets	(421)	(4)	(3,868)
Decrease (increase) in notes and accounts receivable—trade	33,033	(3,255)	303,528
Decrease (increase) in inventories	11,255	(26,629)	103,418
Increase (decrease) in notes and accounts payable—trade	(34,544)	1,300	(317,412)
Other, net	728	9,870	6,690
Subtotal	125,410	111,795	1,152,348
Interest and dividends income received	9,145	8,975	84,030
Interest expenses paid	(5,522)	(5,507)	(50,740)
Proceeds from insurance income	5,169	11,353	47,496
Income taxes paid	(19,228)	(17,124)	(176,679)
Net cash provided by (used in) operating activities	114,974	109,492	1,056,455
Cash flows from investing activities			
Purchase of securities	(5,000)	—	(45,943)
Purchase of property, plant and equipment	(71,896)	(53,191)	(660,627)
Proceeds from sales of property, plant and equipment	1,007	4,016	9,253
Purchase of intangible assets	(4,446)	(2,564)	(40,853)
Purchase of investment securities	(1,217)	(23,952)	(11,183)
Proceeds from sales and redemption of investment securities (Note 18)	584	9,434	5,366
Proceeds from transfer of business	—	743	—
Purchase of long-term prepaid expenses	(734)	(189)	(6,744)
Payments of long-term loans receivable	(2,175)	(90)	(19,985)
Other, net	(1,291)	1,538	(11,862)
Net cash provided by (used in) investing activities	(85,168)	(64,255)	(782,578)
Cash flows from financing activities			
Net increase (decrease) in short-term loans payable	13,557	(1,739)	124,570
Increase (decrease) in commercial papers	50,000	(10,000)	459,432
Proceeds from long-term loans payable	22,598	38,221	207,645
Repayment of long-term loans payable	(58,736)	(25,166)	(539,704)
Proceeds from issuance of bonds payable	20,000	35,000	183,773
Redemption of bonds payable	(426)	(15,426)	(3,914)
Proceeds from stock issuance to non-controlling shareholders	—	355	—
Repayments of lease obligations	(2,384)	(137)	(21,906)
Proceeds from sales of treasury stock	20	5	184
Purchase of treasury stock	(9,389)	(10,033)	(86,272)
Cash dividends paid	(19,509)	(18,878)	(179,261)
Dividends paid to non-controlling interests	(6,681)	(6,335)	(61,389)
Other, net	0	(1)	(1)
Net cash provided by (used in) financing activities	9,050	(14,134)	83,157
Effect of exchange rate change on cash and cash equivalents	(1,423)	(92)	(13,076)
Net increase (decrease) in cash and cash equivalents	37,433	31,011	343,958
Cash and cash equivalents at beginning of period	109,839	78,828	1,009,272
Cash and cash equivalents at end of period (Note 15)	¥147,272	¥109,839	$1,353,230

The accompanying notes are an integral part of these consolidated financial statements.

Notes to Consolidated Financial Statements

MITSUI CHEMICALS, INC. AND CONSOLIDATED SUBSIDIARIES
For the years ended March 31, 2020 and 2019

1. Basis of preparation

The accompanying consolidated financial statements of Mitsui Chemicals, Inc. (the "Company") and its consolidated subsidiaries have been prepared in accordance with accounting principles generally accepted in Japan and have been compiled from those prepared by the Company as required under the Financial Instruments and Exchange Act, which are different in certain respects as to the application and disclosure requirements of International Financial Reporting Standards.

Certain amounts in the prior years' financial statements have been reclassified to conform to the current year's presentation.

2. Significant accounting policies

a. Consolidation

The accompanying consolidated financial statements include the accounts of the Company and significant companies over which the Company exerts control through majority voting rights or the existence of certain conditions evidencing substantial control by the Company.

The assets and liabilities of the consolidated subsidiaries, including the portions attributable to non-controlling shareholders, are evaluated using the fair value at the time the Company acquired control of the respective subsidiaries. The excess of the cost of investments in consolidated subsidiaries over the net assets acquired is deferred as goodwill and is amortized over a period of 20 years or less.

All significant intercompany transactions and accounts are eliminated in consolidation.

Investments in non-consolidated subsidiaries and affiliates, in which the Company has the ability to exercise significant influence over their operating and financial policies, are accounted for by the equity method.

Non-consolidated subsidiaries and affiliates in the process of liquidation are stated at cost or less.

As of March 31, 2020, the Group comprised 117 consolidated subsidiaries, one more than the previous fiscal year. This reflects the inclusion of two new companies, including COSMO SEATRADE S.A., and the exclusion of one former subsidiary, Image Polymers Company LLC, due to liquidation.

The equity method is applied to 39 non-consolidated subsidiaries and affiliates.

b. Foreign currency translation

Receivables and payables denominated in foreign currencies are translated into Japanese yen at the year-end rates. The Company and its consolidated subsidiaries report foreign currency translation adjustments as a component of accumulated other comprehensive income (loss) and non-controlling interests.

c. Inventories

Inventories are stated primarily at the lower of cost or market. Costs are determined by the weighted-average method.

d. Securities

Securities other than equity securities issued by subsidiaries and affiliates, which are held by the Company and its subsidiaries, are classified into two categories: held-to-maturity or other securities.

Held-to-maturity securities are carried at amortized cost.

Marketable securities classified as other securities are carried at fair value with changes in unrealized holding gain or loss, net of the applicable income taxes, included directly in net assets. Non-marketable securities classified as other securities are stated at cost determined by the moving-average method. Costs associated with other securities sold are determined by the moving-average method.

e. Property, plant and equipment (except for leased assets and right-of-use assets)

Property, plant and equipment are stated at cost. Depreciation is principally calculated by the straight-line method.

Maintenance, repairs and minor renewals are expensed as incurred. Major renewals and improvements are capitalized.

f. Intangible assets (except for leased assets)

Amortization of intangible assets of the Company and its consolidated subsidiaries is calculated by the straight-line method. The cost of software intended for internal use is amortized using the straight-line method over its estimated useful life (five years).

g. Research and development expenses

Expenses relating to research and development activities are charged to income as incurred.

h. Leases

The Company and its consolidated subsidiaries lease certain machinery and equipment under noncancelable leases, which are referred to as finance leases.

Depreciation of leased assets and right-of-use assets are computed by the straight-line method over the respective lease terms.

i. Derivatives and hedge accounting

The Company and its consolidated subsidiaries state derivative financial instruments at fair value and recognize any changes in fair value as gains or losses unless the derivatives are being utilized for hedging purposes.

If the derivatives meet certain hedging criteria, the Company and its consolidated subsidiaries defer recognition of gains or losses resulting from changes in the fair values of the derivatives positions until the related losses or gains on the hedged items are recognized.

In cases where forward foreign exchange contracts used as hedges meet certain hedging criteria, the existing foreign currency receivables or payables are translated at their respective contract rates.

In addition, if interest rate swap contracts meet certain hedging criteria, the net amount to be paid or received under these swap contracts is added to or deducted from the interest on the assets or liabilities for which the swap contracts were executed.

The following summarizes hedging derivative financial instruments used by the Group and items hedged:

Hedging instruments	Items hedged
Forward foreign exchange contracts	Foreign currency receivables and payables
Interest rate swap contracts	Interest on loans
Currency swap contracts	Foreign currency loans

j. Allowance for doubtful accounts

The allowance for doubtful accounts is provided in an amount sufficient to cover probable losses on collection.

It consists of the estimated uncollectible amounts with respect to identified doubtful accounts and an amount calculated by a formula based on actual collection losses incurred in the past with respect to the remaining receivables.

k. Retirement benefit plans

The net defined benefit liability and net defined benefit asset are recorded mainly at the amount calculated based on the retirement benefit obligation and the fair value of the pension plan assets as of the balance sheet date.

The retirement benefit obligation for employees is attributed to each period mainly by the straight-line method over the estimated years of service of the eligible employees.

Actuarial gain or loss is amortized by the straight-line method over a certain number of years (10 to 13 years), which are shorter than the average remaining years of service of the employees.

Prior service cost is recognized as incurred or is amortized by the straight-line method over a certain number of years (10 years), which is shorter than the average remaining years of service of the employees.

Unrecognized actuarial gain or loss and unrecognized prior service cost are recognized as remeasurements of defined benefit plans in accumulated other comprehensive income after adjustment for tax effects.

l. Revenue recognition

The Company and some of its domestic consolidated subsidiaries have adopted ASBJ Statement No. 29 Accounting Standard for Revenue Recognition (March 30, 2018) and ASBJ Guidance No. 30 Implementation Guidance on Accounting Standard for Revenue Recognition (March 30, 2018). They recognize revenue as the amount expected to be received in exchange for promised goods or services at the time when the control of said goods or services is transferred to the customer.

m. Accrued directors' bonuses

The Company and its consolidated subsidiaries provide for the accrual of the estimated amount of directors' bonuses at the end of the year.

n. Accrued directors' and corporate auditors' retirement benefits

Certain domestic consolidated subsidiaries accrue liabilities to secure the aggregate amount payable for directors' and corporate auditors' retirement benefits, pursuant to the internal regulations.

o. Provision for repairs

Provision for repairs of production facilities at plants is recorded based on estimated expense at the end of the year.

p. Provision for environmental measures

Provision for environmental measures is provide for based on estimated expense at the end of the year.

q. Accounting method of significant deferred assets

Stock issuance expenses and bond issuance costs are accounted for expenses in full amount when incurred.

r. Amounts per share of common stock

The computation of earnings per share is based on the weighted average number of shares of common stock outstanding during each year.

Cash dividends per share represent the actual amount applicable to each respective year.

s. Amortization of goodwill

Goodwill arising from the difference between the acquisition costs and the value of the underlying net assets of acquired entities at the date of acquisition is amortized over periods not exceeding 20 years on a straight-line basis. Any immaterial amounts are fully recognized as expenses as incurred.

t. Cash and cash equivalents

In preparing the consolidated statements of cash flows, cash on hand, readily-available deposits and short-term highly liquid investments with maturities not in excess of three months from the date of purchase are considered cash and cash equivalents.

u. Consolidated taxation system

The Company and some of its subsidiaries have adopted the consolidated taxation system, with the Company registered as the consolidated taxation parent company.

v. Consumption taxes

Transactions subject to consumption taxes are recorded in amounts exclusive of consumption taxes.

w. Tax effect accounting for the transition from the consolidated taxation system to the group tax sharing system

Concerning items which transitioned to the group tax sharing system and those for which the nonconsolidated tax payment system were reviewed in line with the transition to the group tax sharing system, which was established under the "Act for Partial Amendment of the Income Tax Act, etc." (Act No. 8 of 2020), the Company and some of its domestic consolidated subsidiaries have not applied the provisions stipulated in Paragraph 44 of the "Implementation Guidance on Tax Effect Accounting" (ASBJ Guidance No. 28, February 16, 2018) in accordance with the treatment set out in Paragraph 3 of the "Practical Solution on the Treatment of Tax Effect Accounting for the Transition from the Consolidated Taxation System to the Group Tax Sharing System" (PITF No. 39, March 31, 2020). Instead, they have applied the provisions of the tax regime before the revision to calculate the amounts of deferred tax assets and deferred tax liabilities.

3. Accounting changes

a. Changes in accounting principles

Adoption of accounting standard for revenue recognition

With the adoption of ASBJ Statement No. 29 Accounting Standard for Revenue Recognition (March 30, 2018) and ASBJ Guidance No. 30 Implementation Guidance on Accounting Standard for Revenue Recognition (March 30, 2018) permitted from the beginning of fiscal years that start on or after April 1, 2018, the Company adopted the standard from the beginning of the current fiscal year. The Company recognizes revenue as the amount expected to be received in exchange for promised goods or services at the time when the control of said goods or services is transferred to the customer.

Regarding the adoption of the standard, the Company followed the transitional treatment outlined in article 84 of the accounting standard. Under said treatment, the cumulative effect of retroactively applying the new accounting policy to periods prior to the start of the current fiscal year is reflected in the balance of retained earnings at the start of the current fiscal year.

The impact of this change on the beginning balance of retained earnings, profit or loss, and per share information for the current fiscal year is minor.

Adoption of IFRS 16—Leases and ASC Topic 842—Leases

For overseas consolidated subsidiaries applying International Financial Reporting Standards (IFRS) and US GAAP, IFRS 16—Leases and ASC Topic 842—Leases are applied from the current fiscal year. Accordingly, a lessee, in principle, recognizes all leases as assets and liabilities on the balance sheet. As for the adoption of IFRS 16, the Company applied a method to recognize the cumulative effect at the commencement date, admitted as the transitional treatment.

Consequently, in the consolidated balance sheet as of March 31, 2020, "Other, net" under property, plant and equipment increased ¥20,793 million, "Other" under current liabilities and "lease liabilities" under non-current liabilities increased ¥2,796 million and ¥17,712 million, respectively. In addition, lease payments from operating leases, previously classified in "Cash flows from operating activities" is classified in "Cash flows from financing activities". The impact of this change on per share information for the current fiscal year is minor and has no effect on the beginning balance of retained earnings.

b. Accounting standards issued but not yet adopted

The Company and its domestic consolidated subsidiaries

- ASBJ Statement No. 30 Accounting Standard for Fair Value Measurement (July 4, 2019)
- ASBJ Statement No. 9 Accounting Standard for Measurement of Inventories (July 4, 2019)
- ASBJ Statement No. 10 (revised 2019) Accounting Standard for Financial Instruments (July 4, 2019)
- ASBJ Guidance No. 31 Implementation Guidance on Accounting Standard for Fair Value Measurement (July 4, 2019)
- ASBJ Guidance No. 19 Implementation Guidance on Disclosures about Fair Value of Financial Instruments (March 31, 2020)

(1) Overview

In light of the International Accounting Standards Board (IASB) and the Financial Accounting Standards Board (FASB) issuing basically similar detailed guidance on fair value measurement (IFRS Article 13, Fair Value Measurement; GAAP Accounting Standards Codification Topic 820, Fair Value Measurement), the Accounting Standards Board of Japan has released the Accounting Standards for Fair Value Measurement, which set out measures to ensure consistency between Japanese and international accounting standards with regard to the guidance and disclosure of the value mainly of financial instruments.

The basic principle used in the Accounting Standards Board of Japan's development of accounting standards for measuring value was that use of a unified measurement method would improve comparability between the financial statements of domestic and overseas companies. To that end, the standards stipulated in IFRS Article 13 are basically applied as is, while to respect established business practices in Japan, other standards are applied for individual items to the extent that they do not significant impede comparability between financial statements.

(2) Planned adoption date

April 1, 2021

(3) Impact of the adoption of accounting standard

The impact on consolidated financial statements of the adoption of Accounting Standard for Fair Value Measurement, etc., is still being evaluated at present.

c. Changes in presentation

Consolidated balance sheets

In the current fiscal year, "Lease obligations", which was included in "Other" of "Non-current liabilities" exceeded 1% of the total assets. Therefore, it is presented as a separate line item from the fiscal year ended March 31, 2020. In compliance with this change in presentation, prior consolidated balance sheets are restated.

Consequently, ¥14,711 million previously classified in "Other" in "Non-current liabilities" is reclassified as ¥2,803 million in "Lease obligations" and ¥11,908 million in "Other".

Consolidated statements of operations

In the current fiscal year, "Provision of allowance for doubtful accounts" and "Loss on disaster", which were included in "Other" of "Non-operating expenses" exceeded 10% of the total assets. Therefore, they are presented as separate line items from the fiscal year ended March 31, 2020. In compliance with this change in presentation, prior consolidated statements of operations are restated.

Consequently, ¥4,453 million previously classified in "Other" of "Non-current liabilities" is restated as ¥17 million in "Provision of allowance for doubtful accounts", ¥786 million in "Loss on disaster", and ¥3,650 million in "Other".

Consolidated statements of cash flows

In the current fiscal year, "Repayments of lease obligations", which was included in "Other" of "Cash flows from financing activities" became significant and is presented as a separate line item from the fiscal year ended March 31, 2020. In compliance with this change in presentation, prior consolidated statements of cash flows are restated.

Consequently, ¥(138) million previously classified in "Other" of "Cash flows from financing activities" is restated as ¥(137) million in "Repayments of lease obligations" and ¥(1) million in "Other".

4. U.S. dollar amounts

The translation of yen amounts into U.S. dollar amounts is included solely for the convenience of readers, using ¥108.83=US$1.00, the approximate rate of exchange in effect on March 31, 2020. The translation should not be construed as a representation that yen amounts have been, or could in the future be, converted into U.S. dollars at the above or any other rate.

5. Inventories

Inventories at March 31, 2020 and 2019 were as follows:

	Millions of yen		Thousands of U.S. dollars
	2020/3	2019/3	2020/3
Finished goods	¥195,432	¥206,544	$1,795,755
Work in process	7,865	7,492	72,268
Raw materials and supplies	84,709	87,854	778,361
Total	¥288,006	¥301,890	$2,646,384

6. Retirement benefit plans

The Company and most of its consolidated subsidiaries have either funded or unfunded defined benefit plans and/or defined contribution plans. In addition, some overseas consolidated subsidiaries apply International Financial Reporting Standards for the recognition, measurement, and disclosure of employees' retirement benefits.

In addition, the Company and certain of its consolidated subsidiaries have set up an employees' retirement benefit trust.

Under these plans, all eligible employees are entitled to certain benefits based on their abilities, occupational roles, work performances, length of service and certain other factors.

The liabilities and expenses for severance and retirement benefits are determined based on the amounts calculated actuarially under certain assumptions.

The changes in the retirement benefit obligation during the years ended March 31, 2020 and 2019 were as follows:

Movements in defined benefit obligation

	Millions of yen		Thousands of U.S. dollars
	2020/3	2019/3	2020/3
Defined benefit obligation as of April 1	¥176,101	¥180,839	$1,618,129
Service cost	5,662	5,222	52,026
Interest cost	197	384	1,810
Actuarial gains/losses	(1,145)	713	(10,521)
Past service cost	(12)	(16)	(110)
Benefits paid	(9,917)	(10,673)	(91,124)
Others	(257)	(368)	(2,361)
Defined benefit obligation as of March 31	¥170,629	¥176,101	$1,567,849

Movements in plan assets

	Millions of yen		Thousands of U.S. dollars
	2020/3	2019/3	2020/3
Plan assets as of April 1	¥162,327	¥167,168	$1,491,565
Expected return on plan assets	3,587	3,295	32,960
Actuarial gains/losses	(11,474)	(2,373)	(105,430)
Employer contributions	248	1,922	2,279
Benefits paid	(7,192)	(7,504)	(66,085)
Establishment of retirement benefit trust	33,231	—	305,348
Others	(364)	(181)	(3,346)
Plan asset as of March 31	¥180,363	¥162,327	$1,657,291

Funded status of the pension plans

	Millions of yen		Thousands of U.S. dollars
	2020/3	2019/3	2020/3
Funded retirement benefit obligation	¥ 168,002	¥ 131,752	$ 1,543,710
Plan assets at fair value	(180,363)	(162,327)	(1,657,291)
	(12,361)	(30,575)	(113,581)
Unfunded retirement benefit obligation	2,627	44,350	24,139
Net liability for retirement benefits in the balance sheet	(9,734)	13,775	(89,442)
Net defined benefit liability	26,350	56,428	242,121
Net defined benefit asset	(36,084)	(42,653)	(331,563)
Net liability for retirement benefits in the balance sheet	¥ (9,734)	¥ 13,775	$ (89,442)

Retirement benefit expenses

	Millions of yen		Thousands of U.S. dollars
	2020/3	2019/3	2020/3
Service cost	¥ 5,662	¥ 5,222	$ 52,026
Interest cost	197	384	1,810
Expected return on plan assets	(3,587)	(3,295)	(32,960)
Amortization of actuarial gains/loss	3,099	2,012	28,476
Amortization of past service cost	(13)	1	(120)
Premium severance pay	465	432	4,273
Total	¥ 5,823	¥4,756	$ 53,505

	Millions of yen		Thousands of U.S. dollars
	2020/3	2019/3	2020/3
Past service cost	¥ 13	¥ 6	$ 120
Actuarial gains/losses	7,057	930	64,844
Total	¥7,070	¥936	$64,964

Remeasurements of defined benefit plans before tax effect included in accumulated other comprehensive income

	Millions of yen		Thousands of U.S. dollars
	2020/3	2019/3	2020/3
Unrecognized past service cost	¥ (39)	¥ (52)	$ (358)
Unrecognized actuarial gains/losses	14,668	7,611	134,779
Total	¥14,629	¥7,559	$134,421

Plan assets by category (%)

	2020/3	2019/3
Bonds	31%	34%
Stocks	48%	46%
Cash and deposits	3%	1%
Other	18%	19%
Total	100%	100%

A retirement benefit trust set up for the corporate pension plan and lump-sum retirement allowances accounted for 21% of total plan assets in the year ended March 31, 2019 and 31% of total plan assets in the year ended March 31, 2020.

Discount rate and rate of expected return on the pension plan assets

	2020/3	2019/3
Discount rate	Principally 0.0%	Principally 0.0%
Rate of expected return on the pension plan assets	Principally 2.2%	Principally 2.2%
Rate of estimated future salary increases	Principally 1.0-5.3%	Principally 1.0-5.0%

Expenses for defined contribution plans

	Millions of yen		Thousands of U.S. dollars
	2020/3	2019/3	2020/3
Total	¥671	¥623	$6,166

7. Loans and bonds

(1) Loans payable breakdown

	Millions of yen		Thousands of U.S. dollars
	2020/3	2019/3	2020/3
Short-term loans payable (0.56%)	¥106,040	¥ 92,733	$ 974,364
Current portion of long-term loans payable (1.28%)	42,186	57,571	387,632
Current portion of lease obligations	3,240	222	29,770
Long-term loans payable due in 2021–2029 (0.84%)	233,775	254,850	2,148,075
Long-term lease obligations due in 2021–2028	22,564	2,803	207,333
Commercial papers (△0.00%)	60,000	10,000	551,319
	¥467,805	¥418,179	$4,298,493

The aforementioned interest rate is an average, shown as the weighted average interest rate on the outstanding balance as of March 31, 2020.

The average interest rate for lease obligations is omitted because lease obligations are recorded on the balance sheet in an amount that includes the equivalent in interest, which is included in the total lease amount:

Maturities of long-term loans payable due within 5 years:

Year ending March 31,	Millions of yen	Thousands of U.S. dollars
2022	¥42,950	$394,652
2023	46,935	431,269
2024	41,338	379,840
2025	25,404	233,428

Maturities of lease obligations due within 5 years:

Year ending March 31,	Millions of yen	Thousands of U.S. dollars
2022	¥3,840	$35,284
2023	2,321	21,327
2024	2,097	19,269
2025	2,001	18,386

(2) Bonds payable breakdown

	Millions of yen		Thousands of U.S. dollars
	2020/3	2019/3	2020/3
1.246% bonds due in 2020 (*1)	¥10,000	¥10,000	$ 91,886
1.354% bonds due in 2021 (*1)	10,000	10,000	91,886
0.260% bonds due in 2024 (*1)	5,000	5,000	45,943
0.370% bonds due in 2027 (*1)	5,000	5,000	45,943
0.260% bonds due in 2025 (*1)	10,000	10,000	91,886
0.390% bonds due in 2028 (*1)	15,000	15,000	137,830
0.900% bonds due in 2038 (*1)	10,000	10,000	91,886
0.270% bonds due in 2029 (*1)	10,000	10,000	91,886
0.680% bonds due in 2039 (*1)	10,000	10,000	91,887
0.49% bonds due in 2021 (*2)	290	432	2,665
0.07% bonds due in 2024 (*3)	290	360	2,665
0.31% bonds due in 2024 (*3)	284	356	2,610
0.07% bonds due in 2024 (*3)	290	360	2,665
0.31% bonds due in 2024 (*3)	284	356	2,610
	¥86,438	¥66,864	$794,248

*1 Mitsui Chemicals, Inc
*2 Mitsui Chemicals Tohcello, Inc.
*3 ARRK Corporation

Maturities of bonds payable within 5 years:

Year ending March 31,	Millions of yen	Thousands of U.S. dollars
2021	¥10,426	$95,801
2022	10,432	95,856
2023	284	2,610
2024	296	2,720
2025	5,000	45,943

8. Contingent liabilities

Contingent liabilities at March 31, 2020 and 2019 were as follows:

	Millions of yen		Thousands of U.S. dollars
	2020/3	2019/3	2020/3
As endorser of trade notes discounted	¥ 64	¥ 140	$ 588
As guarantor of indebtedness, principally of non-consolidated subsidiaries and affiliates	47,105	54,860	432,831

9. Research and development expenses

Research and development expenses for the years ended March 31, 2020 and 2019 were as follows:

	Millions of yen		Thousands of U.S. dollars
	2020/3	2019/3	2020/3
Research and development expenses	¥36,368	¥35,796	$334,173

10. Impairment loss

The Company and its consolidated subsidiaries have categorized their business assets in use based on business divisions or quasi-units. Assets that are to be disposed of due to business withdrawal or other reasons are assessed on an individual basis. Idle properties, which are not in use, are also assessed on an individual basis.

Year ended March 31, 2020

Location		Major use	Asset category	Millions of yen	Thousands of U.S. dollars	Remarks *
Tianjin City, China		Production	Machinery, equipment and vehicles	¥1,185	$10,889	Business assets in use
Others	6 items	Production	Buildings and structures, Machinery, equipment and vehicles, others	¥1,103	$10,135	Business assets in use
	4 items	Research, etc.	Construction in progress, Intangible assets—others, others	¥ 220	$ 2,021	Idle properties, etc.
Total				¥2,508	$23,045	

For measurements of impairment loss on business assets in use, the book values of businesses where the recoverable amount was lower than said value due to a markedly worse operating environment were reduced to the recoverable amount. The amount that was written down is an extraordinary loss and recorded as an impairment loss (¥2,288 million). The impairment loss comprises ¥1,514 million for machinery, equipment and vehicles, ¥761 million for buildings and structures and ¥13 million for others. Furthermore, the measurement of recoverable amounts is based on net sales price or value in use. Net sales price mainly consists of estimated sales price, meanwhile value in use is measured based on the present value of future cash flows with a discount rate of 11.0%.

As for idle properties, etc., because there are no specific use plans in the future, the book values of properties for which the recoverable amount was lower than said value were reduced to the recoverable amount. The amount that was written down is an extraordinary loss and recorded as an impairment loss (¥220 million). The impairment loss comprises ¥93 million for construction in progress, ¥70 million for intangible assets—others and ¥57 million for others. Furthermore, the net sales price or value was used as the recoverable amount in measuring impairment loss, which is mainly calculated from estimated sales price.

Year ended March 31, 2019

Location		Major use	Asset category	Millions of yen	Thousands of U.S. dollars	Remarks *
Kamisu City, Ibaraki Prefecture		Factory land	Land	¥ 655	$ 5,901	Idle properties
Others	8 items	Production, etc.	Machinery, equipment and vehicles, intangible assets—others, others	¥ 686	$ 6,181	Business assets in use
	3 items	Production, etc.	Machinery, equipment and vehicles, construction in progress, others	¥ 113	$ 1,018	Idle properties
Total				¥1,454	$13,100	

* Business assets in use comprised ¥318 million for machinery and vehicles, ¥284 million for intangible assets—others, and ¥84 million for other assets, respectively. Idle properties comprised ¥655 million for land, ¥57 million for machinery and vehicles, ¥38 million for construction in progress, buildings and structures and ¥18 million for others, respectively.

11. Loss on fire

Loss on fire includes expenses related to reconstruction following the fire that occurred at the Osaka Works in June 2018.

12. Loss on restructuring of subsidiaries and affiliates

Loss on restructuring of subsidiaries and affiliates includes expenses mainly related to withdrawing of operations for subsidiaries and affiliates.

13. Shareholders' equity

(1) The type and total number of outstanding shares, types and number of treasury shares

	Thousands of shares			
	Number of shares at April 1, 2019	Increase	Decrease	Number of shares at March 31, 2020
Shares of common stock issued and outstanding				
Common stock	204,510	70	—	204,580
Total	204,510	70	—	204,580
Treasury stock				
Common stock	9,453	4,105	1	13,557
Total	9,453	4,105	1	13,557

Notes:
1 The increase of 70 thousand shares in common stock issued and outstanding is due to an issuance of transfer-restricted shares.
2 The increase of 4,105 thousand shares in treasury stock is due to an increase of 11 thousand shares through purchases of odd lots and an increase of 4,094 thousand shares through treasury stock acquisitions by resolution of the Board of Directors.
3 The decrease of 1 thousand shares in treasury stock is due to sales of odd lots.

(2) Dividends

Under the Corporate Act of Japan (the "Act"), the amount paid for new shares is required to be accounted for as common stock, although a company may account for the amount not exceeding one-half of the price of the new shares as additional paid-in capital, which is included in capital surplus. The Act provides that an amount equal to 10% of distribution from surplus shall be appropriated and set aside as legal earnings reserve or additional paid-in capital, until the total amount of legal earnings reserve and additional paid-in capital equals 25% of common stock. Legal earnings reserve and additional paid-in capital may be used to eliminate or reduce a deficit or may be transferred to common stock by resolution of the shareholders' meeting. The Act also stipulates that the amount of any such excess is available for appropriations by resolution of the shareholders. Legal earnings reserve is included in retained earnings in the accompanying consolidated financial statements. The maximum amount that the Company can distribute as dividends is calculated based on the non-consolidated financial statements of the Company in accordance with the Act. Appropriations are not accrued in the financial statements for the period to which they relate, but are recorded in the subsequent accounting period when the shareholders' approval has been obtained. Retained earnings at March 31, 2020 include amounts representing the year-end cash dividends approved at the shareholders' meeting held on June 24, 2020.

	Millions of yen	Thousands of U.S. dollars
Cash dividends of ¥50 ($0.45) per share	¥9,551	$87,761

14. Consolidated statements of comprehensive income

Reclassification adjustments and tax effects for components of other comprehensive income (loss) for the years ended March 31, 2020 and 2019 were as follows:

	Millions of yen		Thousands of U.S. dollars
	2020/3	2019/3	2020/3
Valuation difference on available-for-sale securities:			
Amount arising during the year	¥ (7,389)	¥(5,443)	$ (67,895)
Reclassification adjustment to profit or loss	(19,410)	(2,284)	(178,352)
Amount before income tax effect	(26,799)	(7,727)	(246,247)
Income tax effect	6,808	2,146	62,557
Total	(19,991)	(5,581)	(183,690)
Deferred gains (losses) on hedges:			
Amount arising during the year	13	5	119
Adjustments of acquisition cost for assets	—	—	—
Amount before income tax effect	13	5	119
Income tax effect	(2)	(1)	(18)
Total	11	4	101
Foreign currency translation adjustments:			
Amount arising during the year	(6,277)	1,242	(57,677)
Reclassification adjustment to profit or loss	655	390	6,018
Total	(5,622)	1,632	(51,659)
Remeasurements of defined benefit plans:			
Amount arising during the year	(10,101)	(2,900)	(92,814)
Reclassification adjustment to profit or loss	3,031	1,964	27,851
Amount before income tax effect	(7,070)	(936)	(64,963)
Income tax effect	36	(33)	330
Total	(7,034)	(969)	(64,633)
Share of other comprehensive income of entities accounted for using equity method:			
Amount arising during the year	(1,697)	(2,231)	(15,593)
Reclassification adjustment to profit or loss	(10)	(152)	(92)
Total	(1,707)	(2,383)	(15,685)
Total other comprehensive income (loss)	¥(34,343)	¥(7,297)	$(315,566)

15. Supplementary cash flow information

(1) Cash and cash equivalents in the consolidated statement of cash flows for the years ended March 31, 2020 and 2019 which are reconciled to cash and deposits in the consolidated balance sheets are as follows:

	Millions of yen		Thousands of U.S. dollars
	2020/3	2019/3	2020/3
Cash and deposits	¥149,348	¥111,056	$1,372,305
Long-term time deposits recorded under "Other" of investments and other assets	85	23	781
Deposit due over 3 months	(2,161)	(1,240)	(19,856)
Total	¥147,272	¥109,839	$1,353,230

(2) Details of important non-cash transactions

Establishment of retirement benefit trust

	Millions of yen		Thousands of U.S. dollars
	2020/3	2019/3	2020/3
Contribution of investment securities to retirement benefit trust (acquisition cost)	¥13,988	¥—	$128,531
Gain on establishment of retirement benefit trust	19,243	—	176,817
Contribution of investment securities to retirement benefit trust (market value)	¥33,231	¥—	$305,348

The contribution of investment securities to the retirement benefit trust (market value) has been excluded from the net liability for retirement benefits.

16. Leases

Obligations under noncancelable operating leases at March 31, 2020 and 2019 were as follows:

Future minimum lease payments:

	Millions of yen		Thousands of U.S. dollars
	2020/3	2019/3	2020/3
Due within one year	¥117	¥ 901	$1,075
Due after one year	121	2,503	1,112
Total	¥238	¥3,404	$2,187

17. Financial instruments

(1) Status of financial instruments

1. Management policy

In light of plans for capital investment, the Group raises the funds it requires primarily through bank loans and bonds issuance. The Group invests temporary surplus funds in financial assets that have high levels of safety and liquidity. Further, the Group raises short-term working capital through bank loans and commercial paper issuance. The Group also utilizes derivative financial instruments to hedge various risks as described in detail below and does not enter into derivatives for trading or speculative purposes.

2. Details of financial instruments and associated risk

The trade notes and accounts receivable are exposed to credit risk of customers. In addition, foreign-currency operating receivables used to carry out overseas business operations are exposed to foreign currency exchange risk. However, foreign exchange forward contracts are used to hedge against such risk for a certain portion of this amount, excluding the amount that falls within the scope of the balance of trade notes and accounts payable denominated in the same foreign currencies as said foreign exchange forward contracts.

Marketable securities are short-term negotiable certificates of deposit which have high degrees of security and liquidity. Investment securities are mainly stock in companies with which the Company has business dealings, and are exposed to market price fluctuation risk.

Almost all trade notes and accounts payable have payment due dates within three months. Funds denominated in foreign currencies are exposed to foreign currency exchange fluctuation risk. Foreign exchange forward contracts are used to hedge against such risks for a certain portion of said funds, excluding the amount that falls within the scope of the balance of trade notes and accounts receivable denominated in the same foreign currencies as said funds.

Loans payable and corporate bonds are primarily for fund raising related to capital investment, with a maximum maturity of twenty years after the balance sheet date. Certain loans payable are exposed to foreign currency exchange risk and interest rate fluctuation risk, and derivative transactions such as foreign currency swaps and interest rate swaps are used to hedge these risks.

Derivative transactions such as foreign exchange forward contracts and foreign currency swaps are used in order to hedge foreign currency exchange risk associated with operating receivables and payables as well as loans payable denominated in foreign currencies and interest rate swaps are used for the purpose of hedging interest rate risk associated with bank loans.

In addition, hedging instruments and hedged items, hedging policy, and effectiveness of hedge transactions are described in “2. Significant accounting policies, i. Derivatives and hedge accounting.”

3. Risk management

1) Credit risk management (risks of default of debtors)

To minimize the credit risk relating to operating receivables and long-term loans receivable, the Group performs due date controls and outstanding balance controls for each customer in accordance with internal customer credit management rules, and regularly screens customers' credit status.

Management of the Company believes that there is no significant risk of default by the counterparties to derivative transactions, as the Company and its consolidated subsidiaries only conduct transactions with high credit-rated financial institutions.

2) Market risk management (risks of exchange and interest rate fluctuations)

The Company and its consolidated subsidiaries utilize foreign exchange forward contracts and foreign currency swaps to hedge foreign currency exchange risk associated with operating receivables and payables as well as bank loans denominated in foreign currencies. Further, the Company and its consolidated subsidiaries also utilize interest rate swaps for the purpose of hedging interest rate fluctuation risk associated with loans payable.

The fair value of short-term investment securities and investment securities together with financial conditions of investees (trading partners) are periodically monitored. The possession of other securities other than held-to-maturity debt securities are reviewed continuously, taking market conditions and trade relations with the issuers into consideration.

Derivative transactions are authorized by the responsible director. Transactions are executed and managed by the financial section. The results of each transaction are reported by the financial section semi-annually at the Management Meeting. Derivative transactions entered into by consolidated subsidiaries are executed and managed in accordance with the management and other criteria for derivative transactions for each company.

3) Liquidity risk management (non-performance risk on payment due date)

The Company's finance department formulates and updates cash flow plans in a timely manner based on each department's estimated cash flow and manages liquidity risks through such measures as maintaining an accessible supply of cash. The cash flows of consolidated subsidiaries are managed in the same manner as those of the Company.

4. Supplemental explanation regarding fair value of financial instruments

Fair value of financial instruments is measured based on the quoted market price, if available, or reasonably assessed value if a quoted market price is not available. Fair value of financial instruments for which a quoted market price is not available is calculated based on certain assumptions, and the estimated fair value might differ if different assumptions are used. In addition, the contract amount of the derivative transactions described below in "18. Derivatives" does not represent the market risk of the derivative transactions.

(2) Fair value of financial instruments

The carrying value on the consolidated balance sheet, fair value, and differences as of March 31, 2020 and 2019 are as follows. In addition, financial instruments, for which is extremely difficult to measure the fair value, are not included. (Please see Note 2)

	Millions of yen		
Year ended March 31, 2020	Carrying value	Fair value	Differences
Assets			
(1) Cash and deposits	¥149,348	¥149,348	¥ —
(2) Notes and accounts receivable—trade	275,332	275,332	—
(3) Short-term investment securities and investment securities,			
①securities held to maturity	5,000	5,000	—
②other securities	9,405	9,405	—
Total	439,085	439,085	—
Liabilities			
(1) Notes and accounts payable—trade	128,458	128,458	—
(2) Short-term bank loans payable	106,040	106,040	—
(3) Commercial papers	60,000	60,000	—
(4) Bonds payable (*1)	86,438	86,410	(28)
(5) Long-term loans payable (*1)	275,961	282,794	6,833
Total	656,897	663,702	6,805
Derivative transactions (*2)	¥ (2)	¥ (2)	¥ —

*1 This amounts includes current portion of long-term loans payable and bonds payable, respectively.
*2 Derivative assets and (liabilities) are on net basis.

	Thousands of U.S. dollars		
Year ended March 31, 2020	Carrying value	Fair value	Differences
Assets			
(1) Cash and deposits	$1,372,305	$1,372,305	$ —
(2) Notes and accounts receivable—trade	2,529,927	2,529,927	—
(3) Short-term investment securities and investment securities,			
①securities held to maturity	45,944	45,944	—
②other securities	86,419	86,419	—
Total	4,034,595	4,034,595	—
Liabilities			
(1) Notes and accounts payable—trade	1,180,355	1,180,355	—
(2) Short-term bank loans payable	974,364	974,364	—
(3) Commercial papers	551,319	551,319	—
(4) Bonds payable (*1)	794,248	793,991	(257)
(5) Long-term loans payable (*1)	2,535,707	2,598,493	62,786
Total	6,035,993	6,098,522	62,529
Derivative transactions (*2)	$ (18)	$ (18)	$ —

*1 This amounts includes current portion of long-term loans payable and bonds payable, respectively.
*2 Derivative assets and (liabilities) are on net basis.

	Millions of yen		
Year ended March 31, 2019	Carrying value	Fair value	Differences
Assets			
(1) Cash and deposits	¥111,056	¥111,056	¥ —
(2) Notes and accounts receivable—trade	310,591	310,591	—
(3) Short-term investment securities and investment securities,			
①securities held to maturity	—	—	—
②other securities	48,970	48,970	—
Total	470,617	470,617	—
Liabilities			
(1) Notes and accounts payable—trade	163,908	163,908	—
(2) Short-term bank loans payable	92,733	92,733	—
(3) Commercial papers	10,000	10,000	—
(4) Bonds payable (*1)	66,864	67,363	499
(5) Long-term loans payable (*1)	312,421	320,190	7,769
Total	645,926	654,194	8,268
Derivative transactions (*2)	¥ 2	¥ 2	¥ —

*1 This amounts includes current portion of long-term loans payable and bonds payable, respectively.
*2 Derivative assets and (liabilities) are on net basis.

Note 1. Fair value measurement of financial instruments and items relating to short-term investment securities and derivative transactions.

Assets
1) Cash and deposits, and 2) Notes and accounts receivable—trade
The relevant book values are used, as the carrying amount approximates fair value due to the short maturity of these instruments.
3) Short-term investment securities and investment securities
As negotiable certificates of deposit are settled within a short term, the fair value is approximately equal to the book value. Therefore, the book value is listed as the fair value for these items. Stocks are listed at market price, and bonds and other instruments are listed at market price or the price presented by financial institutions. Please refer to the main notes regarding "Marketable Securities" for details on market securities held for each purpose.

Liabilities
1) Notes and accounts payable—trade, 2) Short-term bank loans payable, and 3) Commercial papers
The relevant book values are used, as the carrying amount approximates fair value due to the short maturity of these instruments.
4) Bonds payable
The fair value of bonds payable equals the quoted market price, if available. If the market prices of bonds are not available, fair value is calculated based on the discounted present value of the total amount of principal and interest.
5) Long-term loans payable
The fair value of long-term loans payable is calculated by applying a discount rate to the total of principal and interest. The discount rate is based on the assumed interest rate if a similar new loan was entered into. A portion of floating rate long-term loans payable that is subject to special treatment in the form of interest rate swaps (described in "18. Derivatives") is calculated by discounting the total amount of principal and interest—which is handled together with said interest-rate swaps—against assumed interest to be paid when new loans of the same type are undertaken.

Derivative transactions
Contract amount, fair value, unrealized gain or loss, and others are described in "18. Derivatives".

Note 2. Financial instruments of which the fair value is extremely difficult to measure.

Year ended March 31, 2020	Millions of yen	Thousands of U.S. dollars
Unlisted equity securities	¥15,361	$141,147
Unlisted preferred securities	9,398	86,355

Year ended March 31, 2019	Millions of yen
Unlisted equity securities	¥15,170
Unlisted preferred securities	9,596

The above are not included in "(3) Short-term investment securities and investment securities", because there is no market value and the future cash flows cannot be estimated, as well as the fair value is extremely difficult to measure.

Note 3. The redemption schedule for monetary claims and held-to-maturity debt securities with maturities date subsequent to the consolidated balance sheet date.

	Millions of yen			
Year ended March 31, 2020	Due within one year	Due over one year but within five years	Due over five years but within ten years	Due over ten years
Cash and deposits	¥149,348	¥—	¥—	¥—
Notes and accounts receivable—trade	275,332	—	—	—
Short-term investment securities and investment securities				
①securities held to maturity	5,000	—	—	—
Total	¥429,680	¥—	¥—	¥—

	Thousands of U.S. dollars			
Year ended March 31, 2020	Due within one year	Due over one year but within five years	Due over five years but within ten years	Due over ten years
Cash and deposits	$1,372,305	$—	$—	$—
Notes and accounts receivable—trade	2,529,927	—	—	—
Short-term investment securities and investment securities				
①securities held to maturity	45,944	—	—	—
Total	$3,948,176	$—	$—	$—

	Millions of yen			
Year ended March 31, 2019	Due within one year	Due over one year but within five years	Due over five years but within ten years	Due over ten years
Cash and deposits	¥111,056	¥—	¥—	¥—
Notes and accounts receivable—trade	310,591	—	—	—
Short-term investment securities and investment securities				
①securities held to maturity	—	—	—	—
Total	¥421,647	¥—	¥—	¥—

Note 4. The redemption schedule for bonds payable and long-term loans payable subsequent to the consolidated balance sheet date.

	Millions of yen					
Year ended March 31, 2020	Due within one year	Due over one year but within two years	Due over two years but within three years	Due over three years but within four years	Due over four years but within five years	Due over five years
Short-term bank loans payable	¥106,040	¥ —	¥ —	¥ —	¥ —	¥ —
Commercial papers	60,000	—	—	—	—	—
Bonds payable	10,426	10,432	284	296	5,000	60,000
Long-term loans payable	42,186	42,950	46,935	41,338	25,404	77,148
Total	¥218,652	¥53,382	¥47,219	¥41,634	¥30,404	¥137,148

	Thousands of U.S. dollars					
Year ended March 31, 2020	Due within one year	Due over one year but within two years	Due over two years but within three years	Due over three years but within four years	Due over four years but within five years	Due over five years
Short-term bank loans payable	$ 974,364	$ —	$ —	$ —	$ —	$ —
Commercial papers	551,319	—	—	—	—	—
Bonds payable	95,801	95,856	2,610	2,720	45,943	551,318
Long-term loans payable	387,632	394,652	431,269	379,840	233,428	708,886
Total	$2,009,116	$490,508	$433,879	$382,560	$279,371	$1,260,204

	Millions of yen					
Year ended March 31, 2019	Due within one year	Due over one year but within two years	Due over two years but within three years	Due over three years but within four years	Due over four years but within five years	Due over five years
Short-term bank loans payable	¥ 92,733	¥ —	¥ —	¥ —	¥ —	¥ —
Commercial papers	10,000	—	—	—	—	—
Bonds payable	426	10,426	10,432	284	296	45,000
Long-term loans payable	57,571	42,450	43,620	47,589	41,717	79,474
Total	¥160,730	¥52,876	¥54,052	¥47,873	¥42,013	¥124,474

18. Securities

Information on securities held by the Company and its subsidiaries at March 31, 2020 and 2019 was as follows:

(1) Securities held to maturity

	Millions of yen			Thousands of U.S. dollars		
At March 31, 2020	Carrying value	Acquisition cost	Differences	Carrying value	Acquisition cost	Differences
Securities whose carrying value exceeds their acquisition cost:						
(1) Government and municipal bonds	¥ —	¥ —	¥—	$ —	$ —	$—
(2) Corporate bonds	—	—	—	—	—	—
(3) Others	—	—	—	—	—	—
Securities whose carrying value does not exceed their acquisition cost:						
(1) Government and municipal bonds	—	—	—	—	—	—
(2) Corporate bonds	—	—	—	—	—	—
(3) Others	5,000	5,000	—	45,943	45,943	—
Total	¥5,000	¥5,000	¥—	$45,943	$45,943	$—

Note: Others denotes negotiable certificates of deposit.

At March 31, 2019
Not applicable

(2) Other securities

At March 31, 2020	Millions of yen			Thousands of U.S. dollars		
	Carrying value	Acquisition cost	Differences	Carrying value	Acquisition cost	Differences
Securities whose carrying value exceeds their acquisition cost:						
(1) Equity securities	¥8,507	¥4,811	¥3,696	$78,168	$44,207	$33,961
(2) Others	5	5	0	46	46	0
Securities whose carrying value does not exceed their acquisition cost:						
(1) Equity securities	893	1,376	(483)	8,205	12,643	(4,438)
(2) Others	—	—	—	—	—	—
Total	¥9,405	¥6,192	¥3,213	$86,419	$56,896	$29,523

Note: Unlisted equity securities with carrying value of ¥15,361 million and unlisted preferred securities with carrying value of ¥9,398 million as of March 31, 2020 have no market value and their future cash flows cannot be estimated. Those securities' fair values are extremely difficult to measure and not included in the table above.

At March 31, 2019	Millions of yen		
	Carrying value	Acquisition cost	Differences
Securities whose carrying value exceeds their acquisition cost:			
(1) Equity securities	¥47,829	¥18,306	¥29,523
(2) Others	5	5	0
Securities whose carrying value does not exceed their acquisition cost:			
(1) Equity securities	1,135	1,354	(219)
(2) Others	1	1	(0)
Total	¥48,970	¥19,666	¥29,304

Note: Unlisted equity securities with carrying value of ¥15,170 million and unlisted preferred securities with carrying value of ¥9,596 million as of March 31, 2019 have no market value and their future cash flows cannot be estimated. Those securities' fair values are extremely difficult to measure and not included in the table above.

(3) Other securities sold during the fiscal years ended March 31, 2020 and 2019

Year ended March 31, 2020	Millions of yen			Thousands of U.S. dollars		
	Sales price	Gain on sales	Loss on sales	Sales price	Gain on sales	Loss on sales
Equity securities	¥342	¥192	¥(5)	$3,143	$1,764	$(46)
Other	—	—	—	—	—	—
Total	¥342	¥192	¥(5)	$3,143	$1,764	$(46)

Note: The figure for "Other" includes stocks not evaluated at sales prices.

Year ended March 31, 2019	Millions of yen		
	Sales price	Gain on sales	Loss on sales
Equity securities	¥3,050	¥2,462	¥(13)
Other	—	—	—
Total	¥3,050	¥2,462	¥(13)

(4) Impairment of investment securities

Although impairment loss on other securities was recorded for the years ended March 31, 2020, disclosure was omitted as the amounts were immaterial. For the fiscal years ended March 31, 2019, the Group recognized impairment losses on investment securities of ¥171 million (¥171 million on other marketable securities with no market values).

Regarding loss disposal, typically, when the fair value at the fiscal year end falls 50% or greater compared with the acquisition cost, the loss shall be disposed of, in principle. When said fair value falls between 30% and 50% of the acquisition cost, if the rate of decrease remains at 30% or above for a two-year period prior to the end of the fiscal year-end, or if a significant downturn in performance occurs over an approximately three-year period, it shall be determined that there is no possibility of recovery and loss disposed of.

19. Derivatives

The Company and certain of its subsidiaries had the following derivatives contracts outstanding at March 31, 2020 and 2019.

(1) Derivative transactions to which the Company did not apply hedge accounting

Currency related

Year ended March 31, 2020

Not applicable

	Millions of yen			
Year ended March 31, 2019	Contract amount	Contract amount over one year	Fair value	Unrealized gain (loss)
Off-market transactions:				
Forward foreign exchange contracts for				
Buying U.S. dollar	¥699	¥—	¥5	¥5
Currency swap transaction for				
Receiving CNY and paying U.S. dollar	—	—	—	—
Total	¥699	¥—	¥5	¥5

Note: Fair value is based on information provided by financial institutions at the end of the fiscal year.

(2) Derivative transactions to which the Company applied hedge accounting

1. Currency related

	Millions of yen			Thousands of U.S. dollars		
Year ended March 31, 2020	Contract amount	Contract amount over one year	Fair value	Contract amount	Contract amount over one year	Fair value
Principle-based accounting method:						
Forward foreign exchange contracts for						
(1) Selling U.S. dollar (hedged item—loans receivable)	¥ 174	¥—	¥ 0	$ 1,599	$ 0	$ 0
(2) Selling Swedish Krona (hedged item—loans receivable)	324	—	(2)	2,977	—	(18)
(3) Selling U.S. dollar (hedged item—accounts receivable—trade)	353	—	0	3,244	—	—
(4) Buying U.S. dollar (hedged item—accounts payable—trade)	1,584	—	0	14,555	—	—
(5) Buying YEN (hedged item—accounts payable—trade)	9	—	0	83	—	—
Alternative method (*):						
Forward foreign exchange contracts for						
(1) Selling U.S. dollar (hedged item—accounts receivable—trade)	¥ 70	¥—	(Note 2)	$ 643	$—	(Note 2)
(2) Buying U.S. dollar (hedged item—accounts payable—trade)	331	—	(Note 2)	3,041	—	(Note 2)
(3) Buying Euro (hedged item—accounts payable—trade)	90	—	(Note 2)	827	—	(Note 2)
Total	¥2,935	¥—	¥(2)	$26,969	$—	$(18)

*Foreign monetary obligations denominated in foreign currencies for which foreign exchange forward contracts are used to hedge the foreign currency fluctuation are translated at the contracted rate, if the forward contracts qualify for hedge accounting.

Notes:

1. Fair value is based on information provided by financial institutions at the end of the fiscal year.
2. For certain accounts payable—trade, other accounts payable and loans payable denominated in foreign currencies for which foreign exchange forward contracts are used to hedge the foreign currency fluctuations, fair value of derivative financial instrument is included in the hedged accounts receivable—trade or accounts payable—trade.

Year ended March 31, 2019	Millions of yen		
	Contract amount	Contract amount over one year	Fair value
Principle-based accounting method:			
Forward foreign exchange contracts for			
(1) Selling U.S. dollar (hedged item—loans receivable)	¥ 178	¥—	¥(1)
(2) Selling Swedish Krona (hedged item—loans receivable)	358	—	0
(3) Selling U.S. dollar (hedged item—accounts receivable—trade)	193	—	0
(4) Buying U.S. dollar (hedged item—accounts payable—trade)	357	—	(3)
(5) Buying YEN (hedged item—loans payable)	90	—	1
(6) Buying EUR (hedged item—accounts payable—other)	65	—	—
Alternative method (*):			
Forward foreign exchange contracts for			
(1) Selling U.S. dollar (hedged item—trade accounts receivable)	¥ 61	¥—	(Note 2)
(2) Buying U.S. dollar (hedged item—trade accounts payable)	164	—	(Note 2)
Total	¥1,466	¥—	¥(3)

*Foreign monetary obligations denominated in foreign currencies for which foreign exchange forward contracts are used to hedge the foreign currency fluctuation are translated at the contracted rate, if the forward contracts qualify for hedge accounting.

Notes:
1. Fair value is based on information provided by financial institutions at the end of the fiscal year.
2. For certain accounts payable—trade, other accounts payable and loans payable denominated in foreign currencies for which foreign exchange forward contracts are used to hedge the foreign currency fluctuations, fair value of derivative financial instrument is included in the hedged accounts receivable—trade or accounts payable—trade.

2. Interest related

Year ended March 31, 2020	Millions of yen			Thousands of U.S. dollars		
	Contract amount	Contract amount over one year	Fair value	Contract amount	Contract amount over one year	Fair value
Alternative method:						
Interest swap contracts (hedged item—long-term loans payable)						
Receiving floating rate and paying fixed rate	¥69,629	¥68,629	(Note)	$639,796	$630,608	(Note)
Currency swap contracts (hedged item—long-term loans payable)						
Receiving floating rate and paying fixed rate	9,804	9,804	(Note)	90,085	90,085	(Note)
Total	¥79,433	¥78,433	¥—	$729,881	$720,693	$—

Note: For certain long-term loans payable for which interest swap contracts are used to hedge the interest rate fluctuations, fair value of derivative financial instrument is included in accounts payable—trade, other accounts payable and loans payable as hedged.

Year ended March 31, 2019	Millions of yen		
	Contract amount	Contract amount over one year	Fair value
Alternative method:			
Interest swap contracts (hedged item—long-term loans payable)			
Receiving floating rate and paying fixed rate	¥ 96,429	¥69,629	(Note)
Currency swap contracts (hedged item—long-term loans payable)			
Receiving floating rate and paying fixed rate	30,459	9,804	(Note)
Total	¥126,888	¥79,433	¥—

Note: For certain long-term loans payable for which interest swap contracts are used to hedge the interest rate fluctuations, fair value of derivative financial instrument is included in accounts payable—trade, other accounts payable and loans payable as hedged.

20. Income taxes

(1) The significant components of the Company and its consolidated subsidiaries' deferred tax assets and liabilities as of March 31, 2020 and 2019 were as follows:

	Millions of yen		Thousands of U.S. dollars
	2020/3	2019/3	2020/3
Deferred tax assets:			
Accrued bonuses	¥ 4,286	¥ 4,447	$ 39,383
Accrued enterprise tax	429	795	3,942
Depreciation	4,527	6,708	41,597
Net defined benefit liabilities	22,508	23,475	206,818
Loss on valuation of inventories	3,052	2,921	28,044
Loss on valuation of investment securities	9,376	5,447	86,153
Impairment loss	6,895	5,173	63,356
Provision for repairs	5,681	5,212	52,201
Unrealized gains on fixed assets	2,310	2,386	21,226
Tax loss carryforwards (Note 2)	39,871	41,575	366,360
Other	9,188	10,624	84,424
Subtotal	108,123	108,763	993,504
Valuation allowance related to tax loss carryforwards (Note 2)	(38,886)	(35,953)	(357,310)
Valuation allowance related to the total of deductible temporary differences	(35,684)	(33,790)	(327,887)
Total valuation allowance (Note 1)	(74,570)	(69,743)	(685,197)
Total deferred tax assets	33,553	39,020	308,307
Deferred tax liabilities:			
Net defined benefit assets	¥ (12,684)	¥ (13,202)	$(116,549)
Net unrealized holding gain on securities	(790)	(7,820)	(7,259)
Gain on contribution of securities to retirement benefit trust	(8,690)	(3,024)	(79,849)
Deferred gain on real properties	(1,546)	(240)	(14,206)
Retained earnings of overseas consolidated subsidiaries, etc.	(6,567)	(6,650)	(60,342)
Adjustment of book value based on fair value	(4,910)	(5,368)	(45,116)
Other	(1,309)	(2,801)	(12,028)
Total deferred tax liabilities	(36,496)	(39,105)	(335,349)
Net deferred tax assets (liabilities)	¥ (2,943)	¥ (85)	$ (27,042)

*1 The valuation allowance decreased mainly because the amount of tax losses carried forward at the parent and consolidated subsidiaries deemed to be recoverable in anticipation of future taxable income was booked as deferred tax assets.

*2 A breakdown of tax loss carryforwards and valuation allowance by expiry date as of March 31, 2020 is as follows:

	Millions of yen						
As of March 31, 2020	Due within one year	Due over one year but within two years	Due over two years but within three years	Due over three years but within four years	Due over four years but within five years	Due over five years	Total
Tax loss carryforwards (*a)	¥ 27,115	¥ 588	¥ 1,085	¥ 998	¥ 316	¥ 9,769	¥ 39,871
Valuation allowance	(26,742)	(583)	(1,085)	(998)	(316)	(9,162)	(38,886)
Deferred tax assets	373	5	—	—	—	607	985 (*b)

	Thousands of U.S. dollars						
As of March 31, 2020	Due within one year	Due over one year but within two years	Due over two years but within three years	Due over three years but within four years	Due over four years but within five years	Due over five years	Total
Tax loss carryforwards (*a)	$ 249,150	$ 5,403	$ 9,970	$ 9,170	$ 2,904	$ 89,764	$ 366,361
Valuation allowance	(245,723)	(5,357)	(9,970)	(9,170)	(2,904)	(84,186)	(357,310)
Deferred tax assets	3,427	46	—	—	—	5,578	9,051 (*b)

*a) Tax loss carryforwards are multiplied by the statutory effective tax rate.

*b) For the tax loss carryforwards of ¥39,871 million (the amount multiplied by the statutory effective tax rate), ¥985 million was booked as deferred tax assets as the Company deemed it recoverable in anticipation of future taxable income.

As of March 31, 2019	Millions of yen Due within one year	Due over one year but within two years	Due over two years but within three years	Due over three years but within four years	Due over four years but within five years	Due over five years	Total
Tax loss carryforwards (*a)	¥ 5,384	¥ 27,305	¥ 587	¥ 1,096	¥ 1,036	¥ 6,167	¥ 41,575
Valuation allowance	(1,123)	(26,752)	(587)	(1,096)	(1,036)	(5,359)	(35,953)
Deferred tax assets	4,261	553	—	—	—	808	5,622 (*b)

*a) Tax loss carryforwards are multiplied by the statutory effective tax rate.
*b) For the tax loss carryforwards of ¥41,575 million (the amount multiplied by the statutory effective tax rate), ¥5,622 million was booked as deferred tax assets as the Company deemed it recoverable in anticipation of future taxable income.

(2) The following table summarizes the significant differences between the statutory tax rate and effective tax rates reflected in the consolidated statement of income for the years ended March 31, 2020 and 2019:

	2020/3	2019/3
Statutory tax rate	30.6%	30.6%
Non-deductible expenses	2.7	0.7
Permanently non-deductible items including dividend income	(0.8)	(0.6)
Changes in valuation allowance	6.6	(8.0)
Differences of statutory tax rate in overseas consolidated subsidiaries	(4.4)	(4.3)
Goodwill impairment and amortization	0.2	0.2
Share of loss (profit) of entities accounted for using equity method	(1.4)	(3.2)
Other	(1.1)	2.4
Effective tax rate	32.4%	17.8%

21. Revenue recognition

The Company and its domestic consolidated subsidiaries are mainly engaged in business activities related to the manufacture and sale of goods or services in the Mobility, Healthcare, Food & Packaging, and Basic Materials segments. They recognize revenue at the time of the sale of goods or services to the customer as it deemed that transfer of the goods and services to the customer equates to control being transferred to the customer and all performance obligations being fulfilled.

22. Segment information

(1) Overview of reportable segments

The reportable segments of the Group comprise those entities for which obtaining separate financial reports is possible and those are subject to regular review by the Board of Directors, which decides upon the distribution of management resources to said segments.

The Group positions segments distinguished by their products and services within its headquarters. Each segment proposes comprehensive domestic and overseas strategies in addition to pursuing business expansion in its respective product and service area.

The four reportable segments (distinguished by products and services) that therefore comprise the Group's operations are: Mobility, Health Care, Food & Packaging and Basic Materials.

Segment		Major Products
Reportable Segments	Mobility	Elastomers, performance compounds, functional polymers and, polypropylene compounds and comprehensive services regarding the development of automotive and industrial products (Solution business)
	Health Care	Vision care materials, nonwoven fabrics, dental materials and, personal care materials
	Food & Packaging	Coating & engineering materials, performance films and sheets and, agrochemical products
	Basic Materials	Ethylene, propylene, polyethylene, polypropylene, catalysts, phenols, PTA, PET, polyurethane materials and, industrial chemical products
Others	Others	Other related businesses, etc.

(2) Methods to determine net sales, income or loss, assets, and other items by reportable business segment

The accounting methods by reportable business segment herein are almost the same as those described under "significant accounting policies." Income by reportable business segment is stated on an operating income basis. Intersegment net sales and transfers are based on the values of transactions undertaken between third parties.

(3) Information concerning net sales, income or loss, assets, and other items for each reportable segment

	Millions of yen						
	Reportable Segment						
Year ended March 31, 2020	Mobility	Healthcare	Food & Packaging	Basic Materials	Total	Others (Note 1)	Sum total
I. Net sales:							
Customers	¥367,626	¥143,016	¥193,822	¥616,878	¥1,321,342	¥17,645	¥1,338,987
Inter-segment	11,441	2,808	1,320	66,271	81,840	59,905	141,745
Total	¥379,067	¥145,824	¥195,142	¥683,149	¥1,403,182	¥77,550	¥1,480,732
II. Segment income (loss)	¥ 39,193	¥ 13,833	¥ 18,117	¥ 8,642	¥ 79,785	¥ (1,959)	¥ 77,826
III. Segment assets	¥358,667	¥197,126	¥231,164	¥560,151	¥1,347,108	¥51,248	¥1,398,356
IV. Other items:							
Depreciation and amortization (Note 2)	¥ 13,727	¥ 10,425	¥ 7,631	¥ 15,217	¥ 47,000	¥ 3,795	¥ 50,795
Amortization of goodwill	551	91	—	—	642	—	642
Invested in equity method affiliate	22,165	5,692	2,743	55,868	86,468	2,326	88,794
Capital expenditures (Note 2)	27,129	9,403	12,879	21,099	70,510	5,283	75,793

	Thousands of U.S. dollars						
	Reportable Segment						
Year ended March 31, 2020	Mobility	Healthcare	Food & Packaging	Basic Materials	Total	Others (Note 1)	Sum total
I. Net sales:							
Customers	$3,377,984	$1,314,123	$1,780,961	$5,668,272	$12,141,340	$162,133	$12,303,473
Inter-segment	105,127	25,802	12,129	608,941	751,999	550,445	1,302,444
Total	$3,483,111	$1,339,925	$1,793,090	$6,277,212	$12,893,338	$712,579	$13,605,917
II. Segment income (loss)	$ 360,130	$ 127,106	$ 166,471	$ 79,409	$ 733,116	$ (18,001)	$ 715,115
III. Segment assets	$3,295,663	$1,811,320	$2,124,083	$5,147,026	$12,378,092	$470,900	$12,848,992
IV. Other items:							
Depreciation and amortization (Note 2)	$ 126,133	$ 95,792	$ 70,119	$ 139,822	$ 431,866	$ 34,871	$ 466,737
Amortization of goodwill	5,063	836	—	—	5,899	—	5,899
Invested in equity method affiliate	203,666	52,302	25,204	513,352	794,524	21,372	815,896
Capital expenditures (Note 2)	249,279	86,401	118,341	193,870	647,891	48,544	696,435

	Millions of yen						
	Reportable Segment						
Year ended March 31, 2019	Mobility	Healthcare	Food & Packaging	Basic Materials	Total	Others (Note 1)	Sum total
I. Net sales:							
Customers	¥395,365	¥146,598	¥199,435	¥716,524	¥1,457,922	¥24,987	¥1,482,909
Inter-segment	11,652	2,783	1,349	75,760	91,544	58,049	149,593
Total	¥407,017	¥149,381	¥200,784	¥792,284	¥1,549,466	¥83,036	¥1,632,502
II. Segment income (loss)	¥ 42,736	¥ 13,622	¥ 17,791	¥ 27,776	¥ 101,925	¥ (1,375)	¥ 100,550
III. Segment assets	¥348,824	¥195,713	¥232,533	¥598,707	¥1,375,777	¥55,129	¥1,430,906
IV. Other items:							
Depreciation and amortization (Note 2)	¥ 12,582	¥ 9,412	¥ 7,496	¥ 14,826	¥ 44,316	¥ 3,857	¥ 48,173
Amortization of goodwill	527	86	—	—	613	38	651
Invested in equity method affiliate	22,427	5,602	2,849	58,135	89,013	2,451	91,464
Capital expenditures (Note 2)	17,256	6,579	15,019	18,453	57,307	3,870	61,177

Notes:
1. "Others" encompasses operations not included in reportable segments.
2. Depreciation and amortization and capital expenditures include amortization costs and expenditures under long-term prepaid expenses.

(4) Reconciliation of differences between total amounts of reportable segments and amounts in the consolidated financial statements (adjustments)

	Millions of yen		Thousands of U.S. dollars
Net sales:	2020/3	2019/3	2020/3
Total reportable segment sales	¥1,403,182	¥1,549,466	$12,893,338
Net sales classified under "Others"	77,550	83,036	712,579
Elimination of intersegment transactions	(141,745)	(149,593)	(1,302,444)
Net sales recorded in Consolidated Statements of Operations	¥1,338,987	¥1,482,909	$12,303,473

	Millions of yen		Thousands of U.S. dollars
Income:	2020/3	2019/3	2020/3
Total reportable segment income	¥79,785	¥101,925	$733,116
Income (loss) classified under "Others"	(1,959)	(1,375)	(18,001)
Elimination of intersegment transactions	517	(33)	4,751
Corporate expenses (Note)	(6,707)	(7,090)	(61,628)
Operating income recorded in Consolidated Statements of Operations	¥71,636	¥ 93,427	$658,238

Note: Corporate expenses mainly comprise general and administrative expenses and research and development expenses not usually attributed to segments.

	Millions of yen		Thousands of U.S. dollars
Assets:	2020/3	2019/3	2020/3
Total reportable segment assets	¥1,347,108	¥1,375,777	$12,378,094
Assets classified under "Others"	51,248	55,129	470,900
Elimination of intersegment transactions	(111,240)	(125,293)	(1,022,145)
Corporate assets (Notes 1 and 2)	192,951	195,461	1,772,958
Assets recorded in Consolidated Balance Sheets	¥1,480,067	¥1,501,074	$13,599,807

Notes:
1. Corporate assets are mainly attributed to the Company's surplus management funds (cash and savings), long-term investment funds (investment securities), deferred tax assets and administrative departments.
2. Asset balance for the previous fiscal year is restated mainly to reflect the impact of amendments to tax effect accounting standards.

	Millions of yen		Thousands of U.S. dollars
Depreciation and amortization:	2020/3	2019/3	2020/3
Total reportable segment amounts	¥47,000	¥44,316	$431,866
Amounts classified under "Others"	3,795	3,857	34,871
Adjustment amounts (Note)	669	680	6,147
Amounts from Consolidated Financial Statements	¥51,464	¥48,853	$472,884

Note: Adjustment amounts are Depreciation and amortization expenses related to new businesses development.

	Millions of yen		Thousands of U.S. dollars
Amortization of goodwill:	2020/3	2019/3	2020/3
Total reportable segment amounts	¥642	¥613	$5,899
Amounts classified under "Others"	—	38	—
Adjustment amounts	—	—	—
Amounts from Consolidated Financial Statements	¥642	¥651	$5,899

	Millions of yen		Thousands of U.S. dollars
Amount invested in equity method affiliate:	2020/3	2019/3	2020/3
Total reportable segment amounts	¥86,468	¥89,013	$794,523
Amounts classified under "Others"	2,326	2,451	21,373
Adjustment amounts	—	—	—
Amounts from Consolidated Financial Statements	¥88,794	¥91,464	$815,896

	Millions of yen		Thousands of U.S. dollars
Capital expenditures:	2020/3	2019/3	2020/3
Total reportable segment amounts	¥70,510	¥57,307	$647,891
Amounts classified under "Others"	5,283	3,870	48,544
Adjustment amounts (Note)	501	747	4,603
Amounts from Consolidated Financial Statements	¥76,294	¥61,924	$701,038

Note: Adjustment amounts are capital expenditures related to new businesses development.

Related Information

(Information by Region)

	Millions of yen		Thousands of U.S. dollars
Net sales:	2020/3	2019/3	2020/3
Japan	¥ 731,606	¥ 810,846	$ 6,722,466
China	168,364	182,764	1,547,037
Asia	173,176	198,638	1,591,252
America	162,161	177,594	1,490,040
Europe	96,064	104,639	882,698
Other regions	7,616	8,428	69,980
Total	¥1,338,987	¥1,482,909	$12,303,473

Notes:
1. Net sales are classified by country and region based on customer location.
2. Major countries and regions located in areas outside of Japan and China are as follows:
   (1) Asia: Taiwan, South Korea, Thailand, Malaysia, Singapore, India
   (2) Americas: The United States, Mexico
   (3) Europe: Germany, France
   (4) Other regions: Oceania, Africa

	Millions of yen		Thousands of U.S. dollars
Property, plant and equipment:	2020/3	2019/3	2020/3
Japan	¥371,717	¥350,860	$3,415,575
Singapore	46,313	36,011	425,554
Asia	29,324	28,068	269,448
Other regions	38,177	28,124	350,794
Total	¥485,531	¥443,063	$4,461,371

Note: Major countries and regions located in areas outside of Japan and Singapore are as follows:
(1) Asia: China, Taiwan, South Korea, Thailand, Malaysia, India
(2) Other regions: North America, Europe

(Information by main customers)

	Millions of yen		Thousands of U.S. dollars
Net sales:	2020/3	2019/3	2020/3
Mitsui & Co., Ltd.	¥225,225	¥264,168	$2,069,512

Note: Related segments are as follows:
Mobility, Health Care, Food & Packaging, Basic Materials, Others

Information Concerning Impairment Loss of Fixed Assets by Reportable Segment

	Millions of yen		Thousands of U.S. dollars
Impairment loss:	2020/3	2019/3	2020/3
Mobility	¥ 648	¥ 248	$ 5,954
Health Care	1,304	49	11,982
Food & Packaging	211	420	1,939
Basic Materials	195	82	1,792
Others	—	—	—
Corporate Expenses	150	655	1,378
Total	¥2,508	¥1,454	$23,045

Information Concerning the Amount of Amortization and Unamortized Balance of Goodwill by Reportable Segment

	Millions of yen		Thousands of U.S. dollars
Amount of amortization:	2020/3	2019/3	2020/3
Mobility	¥551	¥527	$5,063
Health Care	91	86	836
Food & Packaging	—	—	—
Basic Materials	—	—	—
Others	—	38	—
Corporate Expenses	—	—	—
Total	¥642	¥651	$5,899

	Millions of yen		Thousands of U.S. dollars
Unamortized balance:	2020/3	2019/3	2020/3
Mobility	¥4,093	¥4,628	$37,609
Health Care	319	416	2,931
Food & Packaging	—	—	—
Basic Materials	—	—	—
Others	—	17	—
Corporate Expenses	—	—	—
Total	¥4,412	¥5,061	$40,540

23. Information on related party transactions

(1) Related party transactions

Main transactions of the Company with its affiliated company for the year ended March 31, 2020 were as follows:

Name of company	Chiba Chemicals Manufacturing LLP
Type of related party	Affiliated company
Location	Chiyoda-ku, Tokyo
Capital stock	¥200 million ($1,838 thousand)
Business	Manufacturing petrochemical materials and supplying to partners
Holding ratio of voting rights	Direct 50%
Relationship	Supply and purchases of raw materials
Transaction amount (Notes 1 and 2)	¥890 million (US$8,178 thousand)
Balance at end of year (Note 2)	Other accounts receivable: ¥12,591 million (US$115,694 thousand)
	Accounts payable: ¥10,303 million (US$94,671 thousand)

Notes:
1. The trade terms of the above transactions were shown on a net basis in the Consolidated Statements of Operations.
2. The trade terms of the above transactions were determined based on consideration of the market prices and others.

Name of company	Shanghai Sinopec Mitsui Chemicals Co., Ltd.
Type of related party	Affiliated company
Location	Shanghai, China
Investments in capital	¥36,773 million ($337,894 thousand)
Business	Manufacturing and sales of phenol, acetone and bisphenol A In China
Holding ratio of voting rights	Direct 50%
Relationship	Loan guarantee, interlocking directors
Transaction amount (Note 3)	¥5,740 million (US$52,743 thousand)

Notes:
3. The Company conducts loan guarantees for the related party without guarantee fees.

Name of company	Shanghai Sinopec Mitsui Elastomers, Co., Ltd.
Type of related party	Affiliated company
Location	Shanghai, China
Investments in capital	¥25,651 million ($235,698 thousand)
Business	Manufacturing and sales of ethylene, propylene and diene copolymer rubber in China
Holding ratio of voting rights	Direct 50%
Relationship	Loan guarantee, interlocking directors
Transaction amount (Note 4)	¥6,782 million (US$62,317 thousand)

Notes:
4. The Company conducts loan guarantees for the related party without guarantee fees.

(2) Summary of financial information for significant affiliated companies

The Company's significant affiliates are Chemours-Mitsui Fluoroproducts Co., Ltd. and Shanghai Sinopec Mitsui Chemicals Co., Ltd. for the year ended March 31, 2020.

Chemours-Mitsui Fluoroproducts Co., Ltd.

	Millions of yen		Thousands of U.S. dollars
	2020/3	2019/3	2020/3
Balance Sheet			
Total current assets	¥20,300	¥19,126	$186,529
Total non-current assets	13,311	13,354	122,310
Total current liabilities	12,395	11,775	113,893
Total non-current liabilities	184	340	1,691
Total net assets	21,032	20,365	193,255
Statement of Operations			
Net sales	33,290	34,413	305,890
Profit before income taxes	8,525	9,402	78,333
Profit	5,997	6,599	55,104

Shanghai Sinopec Mitsui Chemicals Co., Ltd.

	Millions of yen		Thousands of U.S. dollars
	2020/3	2019/3	2020/3
Balance Sheet			
Total current assets	¥ 5,367	¥32,334	$ 49,315
Total non-current assets	20,223	23,339	185,822
Total current liabilities	8,874	36,908	81,540
Total non-current liabilities	4,352	6,733	39,989
Total net assets	12,364	12,032	113,608
Statement of Operations			
Net sales	42,921	52,757	394,386
Profit before income taxes	702	2,042	6,450
Profit	702	2,061	6,450

24. Supplementary information

The Company experienced decreases in sales volumes in each segment arising from COVID-19. Some plants also decreased production due to a decline in demand.

Assuming that COVID-19 will reach its peak during the first half of the next fiscal year and will gradually recover thereafter, the Company undertook a review of the recoverability of certain deferred tax assets in the current fiscal year.

However, since the effect of COVID-19 cannot be foreseen completely, additional losses may be incurred in the next fiscal year and beyond depending on the situation.

25. Subsequent events

(Conversion of Subsidiaries into Wholly Owned Subsidiaries via Share Exchanges)

The Company decided at the meeting of the Board of Directors held on May 14, 2020 to conduct a share exchange (the "Share Exchange") in which its consolidated subsidiary, ARRK CORPORATION ("ARRK") will become a wholly- owned subsidiary of the Company and the Company has concluded the share exchange agreement (the "Share Exchange Agreement") with ARRK.

The Share Exchange is planned to be conducted with an effective date of August 1, 2020, with the Company not obtaining approval by a resolution of its shareholders meeting pursuant to simplified share exchange procedures under Article 796, Paragraph (2) of the Companies Act, and ARRK obtaining approval by a resolution of its annual shareholders meeting scheduled to be held on June 26, 2020.

In advance of the effective date of the Share Exchange (scheduled to be August 1, 2020), the common shares of ARRK ("ARRK Shares") are planned to be delisted from the first section of Tokyo Stock Exchange, Inc. on July 30, 2020 (final trading date: July 29, 2020).

(1) Purpose of Share Exchange

Based on the awareness that the Company and ARRK could expand their businesses both domestically and overseas by combining their strengths, the Company established MC Investment 01 and conducted a tender offer on ARRK through MC Investment 01, making ARRK a consolidated subsidiary of the Company on January 24, 2018.

Thereafter, the Company and ARRK have collaborated in the belief that combining the companies' areas of expertise, namely the Company's knowledge of materials and ARRK's understanding of automotive development support, and utilizing the channels and technologies of both companies will enable them to provide solutions that make use of their combined strength and to further expand the customer bases of both companies and create new related businesses, thereby enabling them to achieve sustainable growth together. However, in order to quickly respond to ever-changing customer needs amid the rapid market environment changes that are shaking the entire automobile manufacturing industry, the Company believes that stronger ties between the companies are necessary and that it is desirable to transition to a structure that enables the prompt and smooth provision of solutions utilizing the strength of the entire group.

Based on the above understanding, after considering and discussing the terms and conditions of the Share Exchange, including the share exchange ratio, the Company and ARRK reached an agreement, and the meetings of their respective boards of directors held on May 14, 2020 have resolved to conduct the Share Exchange; accordingly, the Company and ARRK have executed the Share Exchange Agreement on May 14, 2020.

(2) Summary of Share Exchange

1. Schedule of Share Exchange

Record date for annual shareholders meeting to determine approval of Share Exchange Agreement (ARRK)	March 31, 2020
Date of board of directors resolutions concerning execution of Share Exchange Agreement (both companies)	May 14, 2020
Share Exchange Agreement execution date (both companies)	May 14, 2020
Date of annual shareholders meeting to determine approval of Share Exchange Agreement (ARRK)	June 26, 2020 (scheduled)
Final trading date (ARRK)	July 29, 2020 (scheduled)
Delisting date (ARRK)	July 30, 2020 (scheduled)
Effective date of Share Exchange	August 1, 2020 (scheduled)

2. Details of Allotments Pertaining to Share Exchange

	The Company (Wholly-owning parent company resulting from share exchange)	ARRK (Wholly-owned subsidiary resulting from share exchange)
Allotment ratio of Share Exchange	1	0.0511
Number of shares to be delivered through Share Exchange	Common shares of the Company: 5,299,076 shares (planned)	

Note 1:
Share allotment ratio
For each common share of ARRK, 0.0511 common shares of the Company ("The Company Shares") will be allotted and delivered. However, no allotment of shares through the Share Exchange will be made for ARRK Shares held by the Company (at present, 301,326,396 shares*). The allotment ratio for the Share Exchange stated above may be changed upon consultation between the Company and ARRK if any material change occurs in the conditions upon which the calculation is based.
*At present, the direct holder of the ARRK Shares is MC Investment 01, a wholly-owned subsidiary of the Company, however, the board of directors meeting of the Company held on May 14, 2020 resolved to conduct an absorption-type merger in which the Company will be the surviving company and MC Investment 01 will be the disappearing company with an effective date of July 31, 2020, in advance of the effective date of the Share Exchange. It is planned that the Company will directly hold the ARRK Shares on the effective date of the Share Exchange.

3. Basis of Calculation of Details of Allotments Pertaining to Share Exchange

In order to ensure fairness and appropriateness when calculating the Share Exchange Ratio to be used in the Share Exchange, the Company and ARRK each separately requested a third-party valuation agent independent from both companies to calculate the share exchange ratio, with the Company selecting Mizuho Securities Co., Ltd. ("Mizuho Securities") and ARRK selecting Mitsubishi UFJ Morgan Stanley Securities Co., Ltd. ("Mitsubishi UFJ Morgan Stanley Securities") as their respective third-party valuation agents.

In order to ensure the fairness of the Share Exchange, including the fairness of the compensation to be delivered in the Share Exchange, the Company engaged in careful discussion and consideration taking into account the share exchange ratio valuation report received from Mizuho Securities, the Company's third-party valuation agent, the advice from Mori Hamada & Matsumoto, the Company's legal advisor, the results of due diligence on ARRK conducted by the Company, and other such factors, as a result of which the Company reached the determination that the Share Exchange Ratio is appropriate and will contribute to the interests of its shareholders; therefore, the Company has determined that it is appropriate to conduct the Share Exchange using the Share Exchange Ratio.

In order to ensure the fairness of the Share Exchange, including the fairness of the compensation to be delivered in the Share Exchange, ARRK engaged in discussions with the Company on multiple occasions regarding the Share Exchange Ratio and other terms and conditions of the Share Exchange and carefully discussed and considered conducting the Share Exchange using the Share Exchange Ratio, taking into account the share exchange ratio valuation report received from Mitsubishi UFJ Morgan Stanley Securities, ARRK's third-party valuation agent, advice from TMI Associates, ARRK's legal advisor, the results of due diligence on the Company conducted by ARRK, instructions and advice from a special committee composed solely of independent members without interests in the Company, ARRK's controlling shareholder, and a report received from the Special Committee on May 13, 2020. Following that, ARRK reached the determination that the Share Exchange Ratio is not disadvantageous to its minority shareholders, taking into account the fact that the Share Exchange Ratio can be considered reasonable based on the fact that it exceeds the upper limit of the calculation results obtained using the market share price analysis and comparable companies analysis and is within the range of the calculation results obtained using discounted cash flow analysis. Based on the discussions, consideration, and other factors stated above, ARRK has determined that it is appropriate to conduct the Share Exchange using the Share Exchange Ratio.

(3) Summary of Accounting Treatment

The Share Exchange is expected to be treated as a transaction under common control, etc., under the "Accounting Standard for Business Combinations (Accounting Standards Board of Japan Statement No. 21, January 16, 2019) and the Guidance on Accounting Standard for Business Combinations and Accounting Standard for Business Divestitures (Accounting Standards Board of Japan Implementation Guidance No. 10, January 16, 2019)."

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Independent Auditor's Report

The Board of Directors
Mitsui Chemicals, Inc.

Opinion

We have audited the accompanying consolidated financial statements of Mitsui Chemicals, Inc. and its subsidiaries (the Group), which comprise the consolidated balance sheet as at March 31, 2020, and the consolidated statement of income, comprehensive income, changes in net assets, and cash flows for the year then ended, and notes to the consolidated financial statements.

In our opinion, the accompanying consolidated financial statements present fairly, in all material respects, the consolidated financial position of the Group as at March 31, 2020, and its consolidated financial performance and its consolidated cash flows for the year then ended in accordance with accounting principles generally accepted in Japan.

Basis for Opinion

We conducted our audit in accordance with auditing standards generally accepted in Japan. Our responsibilities under those standards are further described in the Auditor's Responsibilities for the Audit of the Consolidated Financial Statements section of our report. We are independent of the Group in accordance with the ethical requirements that are relevant to our audit of the consolidated financial statements in Japan, and we have fulfilled our other ethical responsibilities in accordance with these requirements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Responsibilities of Management, the Corporate Auditor and the Board of Corporate Auditors for the Consolidated Financial Statements

Management is responsible for the preparation and fair presentation of these consolidated financial statements in accordance with accounting principles generally accepted in Japan, and for such internal control as management determines is necessary to enable the preparation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the consolidated financial statements, management is responsible for assessing the Group's ability to continue as a going concern and disclosing, as required by accounting principles generally accepted in Japan, matters related to going concern.

The Corporate Auditor and the Board of Corporate Auditors are responsible for overseeing the Group's financial reporting process.

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Auditor's Responsibilities for the Audit of the Consolidated Financial Statements

Our objectives are to obtain reasonable assurance about whether the consolidated financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these consolidated financial statements.

As part of an audit in accordance with auditing standards generally accepted in Japan, we exercise professional judgment and maintain professional skepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the consolidated financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion.
- Consider internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances for our risk assessments, while the purpose of the audit of the consolidated financial statements is not expressing an opinion on the effectiveness of the Group's internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.
- Conclude on the appropriateness of management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Group's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the consolidated financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Group to cease to continue as a going concern.
- Evaluate the overall presentation, structure and content of the consolidated financial statements, including the disclosures, and whether the consolidated financial statements represent the underlying transactions and events in a manner that achieves fair presentation in accordance with accounting principles generally accepted in Japan.
- Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Group to express an opinion on the consolidated financial statements. We are responsible for the direction, supervision and performance of the group audit. We remain solely responsible for our audit opinion.

We communicate with the Corporate Auditor and the Board of Corporate Auditors regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

We also provide the Corporate Auditor and the Board of Corporate Auditors with a statement that we have complied with the ethical requirements regarding independence that are relevant to our audit of the financial statements in Japan, and to communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, related safeguards.

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Conflicts of Interest

We have no interest in the Group which should be disclosed in accordance with the Certified Public Accountants Act.

Convenience Translation

The U.S. dollar amounts in the accompanying consolidated financial statements with respect to the year ended March 31, 2020 are presented solely for convenience. Our audit also included the translation of Japanese yen amounts into U.S. dollar amounts and, in our opinion, such translation has been made on the basis described in Note 4 to the consolidated financial statements.

Ernst & Young ShinNihon LLC
Tokyo, Japan

June 24, 2020

福原 正三

Shozo Fukuhara
Designated Engagement Partner
Certified Public Accountant

狩野 茂行

Shigeyuki Kano
Designated Engagement Partner
Certified Public Accountant

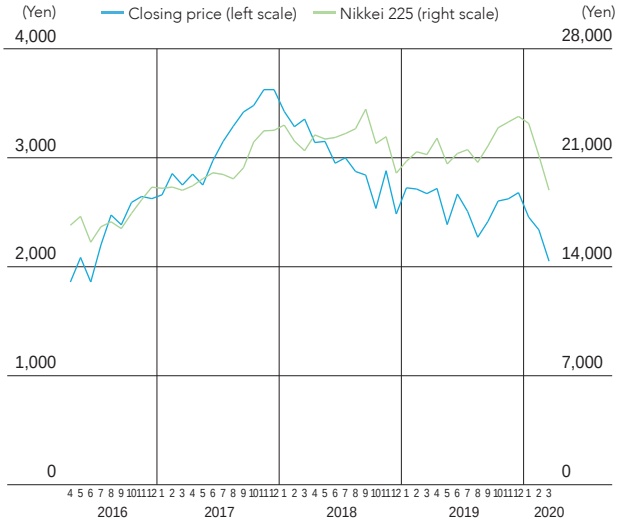
金澤 聡

Satoshi Kanazawa
Designated Engagement Partner
Certified Public Accountant

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Stock Information

Common Stock Price Range



*On October 1, 2017, Mitsui Chemicals conducted a 5-to-1 share consolidation. Stock prices have been recalculated based on this share consolidation.

Major Shareholders

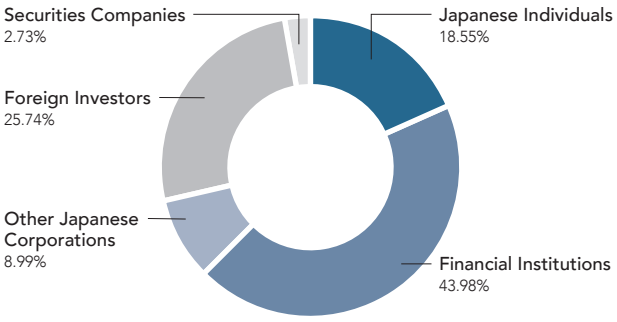
(As of March 31, 2020)

Major Shareholders	Number of shares held (Thousands)	Percentage of shares held (%)
Japan Trustee Services Bank, Ltd. (Trust account)	17,917	9.37
The Master Trust Bank of Japan, Ltd. (Trust account)	17,331	9.07
Japan Trustee Services Bank, Ltd. (Trust account 4)	5,097	2.66
Japan Trustee Services Bank, Ltd. (Trust account 7)	4,392	2.29
Japan Trustee Services Bank, Ltd. (Trust account 5)	3,617	1.89
Mitsui & Co., Ltd.	3,474	1.81
Japan Trustee Services Bank, Ltd. (Sumitomo Mitsui Trust Bank, Limited Re-trust account, Mitsui & Co., Ltd. Pension trust account)	3,474	1.81
Japan Trustee Services Bank, Ltd. (Trust account 9)	3,318	1.73
JP MORGAN CHASE BANK 385151	3,067	1.60
Toray Industries, Inc.	2,847	1.49

Note: The company's holdings of treasury stock (13,557,163 shares) are not included in the above figures.

Composition of Shareholders

(As of March 31, 2020)



Credit Ratings

(As of March 31, 2020)

Rating Agencies	Rating
Japan Credit Rating Agency, Ltd. (JCR)	A+
Rating and Investment Information, Inc. (R&I)	A

Corporate Information

(As of March 31, 2020)

Date of Establishment	October 1, 1997
Paid-in Capital	125,298 million yen
Number of Employees	17,979 (Consolidated)
Subsidiaries and Affiliates	156 (Domestic 48, Overseas 108)
Shares of Common Stock Issued and Outstanding	204,580,115
Number of Shareholders	64,291
Stock Exchange Listing	1st Section, Tokyo Stock Exchange (Code: 4183)
Transfer Agent	Sumitomo Mitsui Trust Bank, Limited

Offices

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Change your perspective, and the future is clear.

In a world where values are so diverse,
how can we achieve happiness for all?
How can we pass on to future generations
our planet's limited resources?

The world today is full of questions
to which the right answers are unclear.

The key to finding solutions
is in boldly changing the way we think
and creating from a new point of view.
Chemistry gives us the power to achieve this
as we continue to look to the future.

One solution at a time, big or small,
we believe chemistry helps bring
about a better world.

0→1 MAKE IT HAPPEN

Corporate Communications Division IR Department

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Please visit our website for more detailed and up-to-date investor relations and sustainability information.

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