

## Mitsui Chemicals Report 2018

Year Ended March 31, 2018

Together with our stakeholders, we will contribute to the realization of our shared vision of an ideal future society.



Back row, from let: Outside Corporate Auditor Member of the Board, Managing Executive Officer Katsuyoshi Shinbo Osamu Hashimoto Front row, from left: Member of the Board, Outside Director

Hiromi Tokuda

Member of the Board, Outside Director

Yukiko Kuroda

Shozo Tokuda Hiroki Nishio Member of the Board, Outside Director

Hajime Bada

Representative Director, Member of the Board, President & CEO Tsutomu Tannowa

Akio Ayukawa

Representative Director, Member of the Board, Executive Vice President Masaharu Kubo

## Corporate Auditor

Shigeru Isayama

Representative Director, Member of the Board, Senior Managing Executive Officer Hideki Matsuo

## Member of the Board, Senior Managing Executive Officer Takayoshi Shimogori

Mitsui Chemicals Report 2018 1



# We will strengthen ties with customers and lead the new trends in manufacturing.

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- Helping Solve Social Challenges through the Pursuit of Innovation
- Promoting Customer-Driven Innovations × Strengthening Capabilities to Propose Solutions
- Next Generation Plants





Incorporate global social issues into our strategies and realize a sustainable society.

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- Place ESG at the Core of Management
  - Dialogue: Yukiko Kuroda, Outside Director × Corporate Sustainability Division
- Visualization of Contributions to the Environment and Society: Blue Value<sup>™</sup>/Rose Value<sup>™</sup>
- Key Issues (Materiality)



ESG: Environment, Society, and Governance

## **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

# Chemistry must play a prominent role in addressing a variety of social issues.

The Mitsui Chemicals Group's Future Vision

Economy

# Solving Social Challenges through Business Activities

**Environment** 

Society

Realizing health and happiness in an aging society
Realizing industrial platforms that are

in harmony with local communities

• Realizing a cohesive society that is in harmony with the environment

The Sustainable Development of Society and the Mitsui Chemicals Group



We strongly believe that the chemical industry must play a prominent role in addressing a variety of social issues through the development of innovative products and technologies.

Our goal is to contribute to society through our business activities and to help solve a host of social challenges while smoothly navigating an operating environment that continues to change at a dizzying pace. In 2017, we finally kicked off the 2025 Long-Term Business Plan. We set an ambitious target of achieving

¥200 billion in operating income by 2025, and, considering our accomplishments to date, we believe this to be fully within our reach. Supporting these efforts, we have been actively investing in growth, accelerating the development of new products, cultivating new next generation businesses, and further accelerating the transformation of our business portfolio.

We will continue to engage in meaningful discussions with all stakeholders, ingrain our triple bottom line management focused on economy, environment, and society to realize the future society our Group aspires to, and work diligently to help realize a sustainable society.

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Tsutomu Tannowa President & CEO



## Value Creation Story

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#### Editorial Policy

In compiling this Mitsui Chemicals Report 2018, 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.

### 価値協創ガイダンス Guidance for

Guidance for Collaborative Value Creation

#### Scope and Principles

Period: April 1, 2017, to March 31, 2018 (FY2017) Please note some data may postdate April 2018

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 (JGAAP)

#### 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 15, 2018)

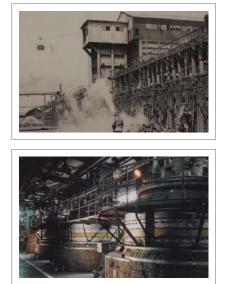
## Addressing the Social Challenges of the Times through Materials Innovation

Start of the Chemical Business

Mitsui Mining initiated a full-scale chemical business in Omuta that later became the Omuta Works.

## 1912 -

Mitsui Mining launched its coal chemical business in 1912. The company began manufacturing raw materials for fertilizers from the exhaust gas produced as a byproduct of the coal business, thereby helping solve food shortages caused by rapid population growth—a social problem of the times. This was the first step toward the chemical business we operate today. We went on to successfully produce the synthetic dye alizarin in Japan, and developed a full-scale chemical business. Testament to this success was our achievement in synthesizing indigo—regarded as the king of dyes. This led to major changes in Mitsui Mining, which had been underpinned by profits from coal.



## Birth of Japan's Petrochemical Industry

Completed construction of Japan's first petrochemical complex.



In 1955, Mitsui Petrochemical Industries was established through joint funding provided by eight companies: Mitsui Chemical Industry, Toyo Koatsu Industries, Mike Gosei Chemical Industry, Mitsui Mining, Mitsui Mining & Smelting, Koa Oil, Toyo Rayon, and Mitsui Bank. After its founding, the company secured the land it needed, purchasing an army fuel depot in Iwakuni from the government. The company pressed ahead with establishing full-scale operations, focusing on introducing new technologies, especially those from overseas. Then in April 1958, construction of Japan's first general petrochemical complex was completed and production began.



A Shift to Full-Scale Overseas Production

Helped to make automobiles lightweight and improved fuel efficiency.

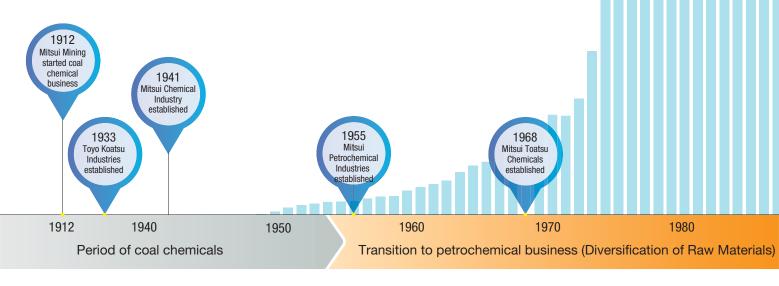


We developed lightweight materials like MILASTOMER™, which has been adopted for automobile bumper components, thereby improving fuel efficiency. The overseas expansion of the polypropylene (PP) compound business in the 1980s turned out to be a major leap forward for the business, which now commands a 20% share of the global market. At the time, against the backdrop of a strong yen and strained U.S.-Japan relations, domestic automakers were shifting to full-scale production overseas. In 1986, Mitsui Toatsu Chemicals, Inc. established a manufacturing base in the state of Ohio that eventually grew into Advanced Composites, Inc.—presently our PP compound base in the United States.



In 1892, Mitsui Mining launched the full-scale coke operations that set us on the road to launching a coal chemical business at the Omuta Works in 1912, a turning point now over 100 years behind us. The Mitsui Chemicals Group has always striven to provide innovative technological solutions and products to meet the needs of the times.

Going forward, we aim to ensure sustainable growth by using the power of chemistry to help solve various global issues, including those related to the environment, energy, food, and water.



Founding of Mitsui Chemicals

Aim to become a corporate group with undisputed global presence.

## <u> 1997 —</u>

Mitsui Chemicals was founded through the merger of Mitsui Petrochemical Industries and Mitsui Toatsu Chemicals, Inc. In fiscal 2007, we implemented triple bottom line management focused on economy, environment, and society.



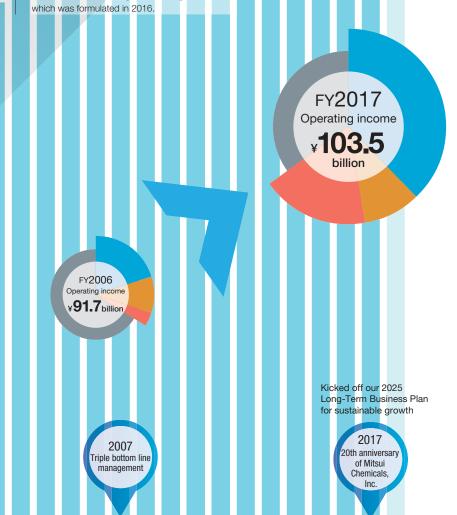
## Heading toward a New Stage

Transforming our business portfolio, we focused on expansion in three targeted business domains and restructured the Basic Materials business.

## 2010 -

In the wake of the global financial crisis that started in 2008, demand stagnated worldwide, and the Company recorded losses for the three consecutive periods of loss from fiscal 2011 to 2013. In light of this, we worked diligently to reinforce our financial and operating position under the 2014 Mid-Term Business Plan by expanding targeted business domains to drive growth and restructuring our bulk and commodity product operations in the Basic Materials business.

We are now heading toward a growth stage. We aim to become a corporate group with undisputed global presence by pursuing growth through ceaseless innovation aimed at achieving the targets set out in the 2025 Long-Term Management Plan, which was formulated in 2016.



2010

Acceleration to become a global company

1990

1997

Mitsui Chemicals

founded

2000

2017

## Value Creation Cycle

The Mitsui Chemicals Group aspires to the realization of a cohesive society that is in harmony with the environment, health and happiness in an aging society, and industrial platforms that are in harmony with local communities. With this in mind, the Group aims to solve social challenges through its business activities.

In line with our corporate mission, our value creation process employs triple bottom line management with a focus on economy, environment, and society. In addition, we are bringing to bear our combined strengths—a century of technological progress, an extensive lineup of products & services, a truly global platform & diverse human resources, and a robust customer base—to further the missions and enforce the driving concepts of operations in each of our five business domains: Mobility, Health Care, Food & Packaging, Basic Materials, and Next Generation Business.

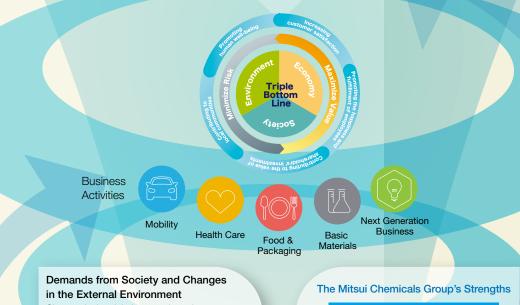
Through the perpetuation of this value creation cycle, we will continue to help solve various social challenges and ensure sustainable growth and development alongside society.

#### Helping build a better future society

- A cohesive society that is in harmony with the environment
- · Health and happiness in an aging society
- · Industrial platforms that are in harmony with local communities

## Mitsui Chemicals Group

Realizing the Mitsui Chemicals Group's Corporate Mission Solving Social Challenges and Customer Issues



Changes in the global economic environment; Decreasing birth rate and aging population in Japan; Economic growth in emerging markets; Regional growth in Japan; Rising populations in emerging and developing countries; Advancement of women and promotion of diversity; Climate change; Environmental regulations; Growing geopolitical risks

- A century of technological progress
- An extensive lineup of products & services
- A daught all head all all affer an of all sources have a second
  - A robust customer base

#### Reinvestments Growth investments Creation of new value Shareholder returns

## **Creation of Value**

#### Returns to society

Contributing to local communities Increasing customer satisfaction Contributing to the value of shareholders' investments Promoting the happiness and self-fulfillment of employees Promoting human well-being

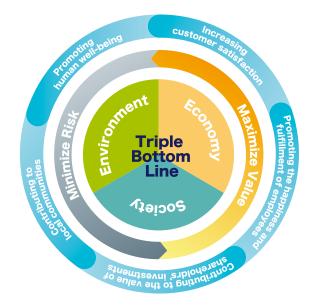


Value Creation Story

The Mitsui Chemicals Group integrates its triple bottom line management with its four areas of strength to provide products and services that help solve social challenges as it works to help realize a sustainable society.

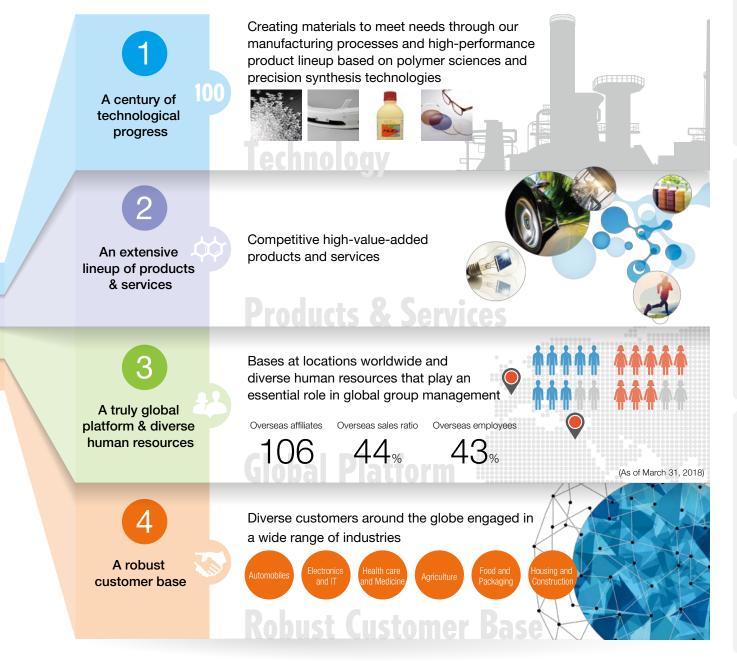
## The Triple Bottom Line Management

The Group's triple bottom line management focused on economy, environment, and society was clearly laid out in fiscal 2007. For the Group to sustainably grow, it must continue working to solve social challenges, maintaining relationships with various stakeholders, and striving to minimize risks and maximize opportunities while striking a balance across the triple bottom lines. Efforts in each of these areas help maximize corporate value.



## Four Areas of Strength

Maximizing the Mitsui Chemicals Group's Strengths to Help Realize a Better Future Society





## Start of the 2025 Long-Term Business Plan

We achieved our highest ever income and are seeing signs of change in the mindsets of our employees.

The Group formulated a three-year Medium-term Business Plan, but amid upheavals in the environment, there seemed to be some difficulty in advancing the plan toward the fixed three-year goals. In addition, even as we achieved operating income of around ¥100 billion, we considered it necessary to delve into debates about the best direction in which to point employees and the best action to take to maintain a high growth rate. We therefore decided to set relatively long-term goals, take environmental changes into consideration, and implement annual plans on a rolling basis.

Although we set an ambitious goal of ¥200 billion in operating income in the Long-Term Business Plan, I think the mindset of employees is changing significantly and feel that we are firmly beginning to move toward our target.

Fiscal 2017 was the first, crucial year of the Long-Term Business Plan and we were able to make a solid first step by expanding sales of our major products. However, this was, regrettably, a second year of loss for the dental materials business, and it seems that expansion will remain an ongoing issue for the Health Care domain. In the Mobility domain, we made ARRK CORPORATION a Group company in an M&A effort for growth and can see that smoothly carrying out the post-merger integration (PMI) will be a major concern going forward.

Mitsui Chemicals Group will continue aiming to achieve **sustainable growth alongside society** as well as a

# firmly established presence.

#### **Tsutomu Tannowa**

Representative Director, Member of the Board, President & CEO

Three targeted business domains, their current status and challenges.

In the Mobility domain, we offer a wide variety of functional polymeric materials that can provide solutions to meet needs for lighter automobiles and more electric vehicles. The business handling PP compounds, one such central material, seizes growth opportunities and continues to steadily expand. Being weakened by not possessing our own factory in Europe, in April 2018 we decided to set up a new European base when we had secured a certain level of sales. Furthermore, because we are running at full production capacity for TAFMER<sup>™</sup>, we are considering expanding our current facilities and then building new facilities in North America. Frankly, limiting the amount of investment during the course of the 2014 Mid-Term Business Plan has come back to bite us in the form of an ever tighter production capacity situation

at certain facilities. I therefore think that a big issue for the Mobility domain will be taking action to establish a stable supply system capable of meeting the expanding needs in the near future.

The acquisition of ARRK CORPORATION will be key to growth going forward. Following the acquisition of the molds manufacturer Kyowa Industrial Co., Ltd., we expanded our scope to include markets not related to material provision. Seizing the opportunity this afforded, we integrated our expertise in functional polymeric material technology with ARRK's expertise in design, prototype, analytic, and other technologies in line with our ongoing focus on enhancing our ability to provide solutions. In the Health Care domain, we are seeing steady expansions in sales of such products as vision care materials, which command the largest share of the global market, and our high-performance nonwoven used in premium disposable diapers, which are becoming very popular in Asia. In addition, we launched sales of our new, next generation TouchFocus<sup>™</sup> eyewear, which can instantaneously switch between nearand far-sightedness at the push of a button. Looking ahead, we will continue working to expand our sales network to ensure sales grow to a certain volume.

As for dental materials, the situation remains harsh due to sluggish sales in Germany and a delay in the launch of digitalrelated items. Nevertheless, we are continuing to strengthen our sales system and working to establish a base for launching and expanding sales of digital products. In fiscal 2018, we will continue focusing on steps we can take to turn around the aspects characterized as current weaknesses. Food & Packaging is a business segment with a wide scope. In films and sheets, sales were favorable for ICROS<sup>™</sup> TAPE, a protective tape used in semiconductor manufacturing processes that enjoys the largest share of the global market. We established a subsidiary as a new base in Taiwan, which is a major global market. It is important that we quickly begin operations.

In agrochemicals, we have Five Next Generation Active Ingredients in the pipeline. Of these five, we have already released products containing two of them on the market. As for our major new insecticides and fungicides, however, we are working with influential agrochemical manufacturers in Europe and the United States to release the products on the markets there by around 2020 as we take steps to expand our agrochemical business.

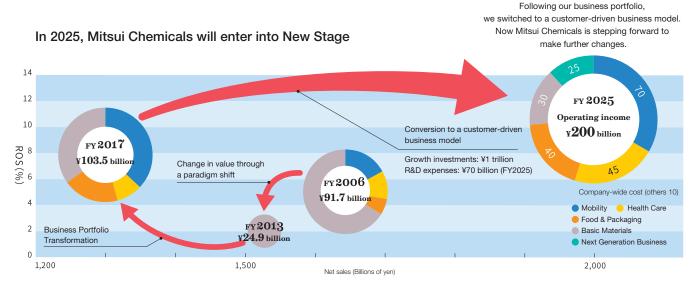
## We will continue creating forward-looking Next Generation Businesses and further strengthening the Basic Materials domain.

In the Next Generation Business domain, although we aim to create new solution businesses with an eye toward the next 10 or 20 years, it finally appears that the domain has begun to make sales as a lead player. It is becoming increasingly important to quickly meet societal demand by introducing, for example, such products as our rapid diagnosis system for sepsis, solar photovoltaic power generation diagnosis, and the iCAST<sup>™</sup>, an irrigation system that significantly reduces the amount of water needed. We are moving ahead with plans to respond to social demands with an emphasis on speed, although profits are also important.

The Basic Materials domain has been the center of our structural reforms to date, and we have done what we

needed to do. However, we believe further investment is necessary to strengthen this domain. There seems to be some misunderstanding surrounding this issue. Although we talk about focusing investment in growth areas, that does not mean we are saying we shouldn't invest in the Basic Materials domain. Rather, that means that by working to strengthen this area, the products in the Mobility and other domains will gain vigor.

For example, regarding polypropylene, we are considering scrap and build measures. But this is not simply to raise efficiency, it is to raise quality, and, by providing higher quality polypropylene for making PP compounds and nonwoven, we will maintain competitiveness in those areas, which is important.



## Strengthening Our ESG Promotion System

We will continue laying a foundation from a long-term perspective as we place SDG initiatives and ESG responses at the core of management.

Since the United Nations' adoption of sustainable development goals (SDGs), sustainability has become a keyword. In response to these shifts in society, companies are being asked how they can spur innovation in order to contribute to the realization of a sustainable society and how they will transform their business models to enable sustainable growth alongside society while accurately perceiving opportunities and risks.

Issues strongly relevant to the chemicals industry include climate change and marine plastic pollution, such as microplastics. What kind of solutions can chemistry offer to help improve the quality of people's lives going forward while we work diligently on these issues? Although realizing a sustainable society is an issue that requires radical innovation, it can also be thought of as a big opportunity.

Environment, social, and governance (ESG) indicators have recently gained attention as important tools for assessing investments. Corporations have to accurately assess the opportunities and risks related to SDGs and various ESG issues and show what role they can play through their business activities. This proposition is indispensable to the sustainable growth of the global Mitsui Chemicals Group. In April 2018, the Company established the ESG Promotion Office, a new organization.

I believe that it is important to set easy-to-understand key performance indicators (KPIs) and share the value of those KPIs with all stakeholders. Under the 2025 Long-Term Business Plan, we set 13 KPIs related to the environment and society and promoted relevant initiatives. One KPI was to raise the net sales ratio of Blue Value<sup>™</sup> and Rose Value<sup>™</sup> certified products and services to 30% each by fiscal 2025. Blue Value<sup>™</sup> represents value that helps the environment, and Rose Value<sup>™</sup> represents value that helps improve quality of life (QOL). We will hold active discussions about ESG matters at Board of Directors meetings and Company-wide strategy conference and reflect those decisions in the Group's management.

We must change mindsets inside the Company so that each employee understands the importance of ESG topics and maintains a daily awareness of social issues.

See p. 24 for the special feature: ESG

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Chemistry is a major industry that supports the foundation of society while being in the vanguard of revolutions. We must be aware of the scale of the role chemistry is playing in solving social issues and actually demonstrating said role through action. Foundation for Growth

## Long-Term Innovation Initiatives

#### Innovation is necessary to provide solutions to social issues.

The advancement of AI, IoT, electric vehicles, and other technologies is heralding what has been called a once-in-a-century era of transformation, and automakers are showing signs of crisis. I think this transformative period is actually a big opportunity for chemical companies.

Take the shift to electric vehicles, for instance. Chemical manufacturers are involved in most lithium-ion battery technologies. In addition, no matter the source of power for automobiles, there will always be demand for lighter vehicles.

When it comes to responding to a changing world, chemical manufacturers lead the way in generating innovation. Today, it feels like we have entered an era where we are providing solutions to customers' issues by opening the conversation with reassuring words like, "these are methods we can use" or "we can set up these kinds of devices." However, the social issues the world faces are monumental in scale, and there is a limit to how much one company can do with regard to any given issue. If we don't use open innovation to develop new technologies and business fields, we will fall behind. We also need to work across different industries. Each company has its own strengths, and the steps taken to cultivate technology vary. It is important to fully understand the nature of the technological base your company has created and what your company's strengths are and then to expand from that clearly defined point.

See p. 18 for the special feature: Innovation

## 4 Safety Initiatives

We will fulfill our social responsibility while ensuring safety and pursuing higher quality.

One goal of the long-term business plan is to ensure comprehensive safety, high quality, and fairness throughout the supply chain. Of these things, what I'm most focused on is safety.

To continue to preserve safety, what we must not forget is the explosion that occurred at the Iwakuni-Ohtake Works in 2012. We constantly try to remind employees to put safety into everything we do, yet fire broke out at the Mobara Branch factory and the Osaka Works in 2017 and in 2018. There is no easy road to Safety. We take these facts to heart, and revise our initiatives to date and continue building a solid track record of steady efforts to ensure safety.

We are now working to ensure safety and improve quality at all steps in our supply chain as we fulfill our social responsibility and bolster governance globally.



Safety Monument: Erected following the explosion and fire at the Group's lwakuni-Ohtake Works, the Safety Monument is an expression of how seriously the Mitsui Chemicals Group takes the incident and symbolizes the pledge of each and every employee to prevent a recurrence.

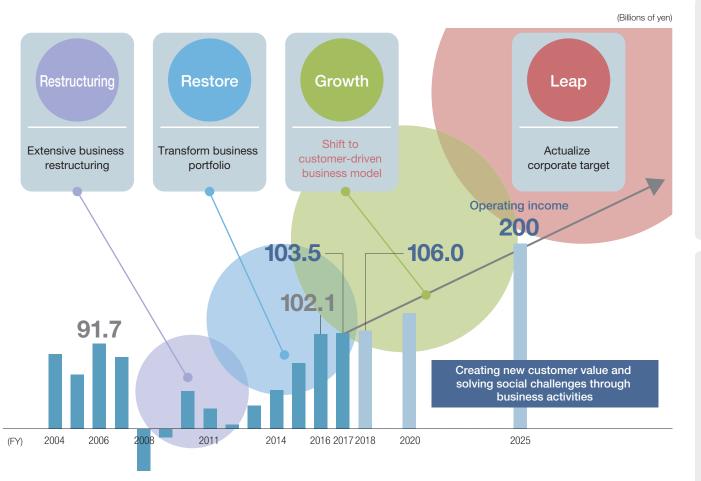
## Sustainable Development of Society and the Group

We aim to realize management balanced along three axes and achieve the sustainable development of society and the Group through business activities.

Over the three years of the 2014 Mid-Term Business Plan, we improved our financial standing, prioritized returning to profitability, and restrained investment. We have recovered since then, and turning toward the goals of our 2025 Long-Term Business Plan, we declared that we were changing our stance to a more active investment style. My mission with regard to the Long-Term Plan is to return to a stable growth trajectory.

To this end, we must be able to bring in cash. I aim to steadily raise profit and allot it to investments, repeating this process to ensure we are on a growth trajectory. We will continue working to enhance shareholder returns. What I've been telling employees is that I would like them to show initiative and take action in the first person, declaring, "I want to do this." Each employee must be aware of their connection with society and generate innovation of their own volition. It has been gradual, but I get the feeling that an increasing number of various self-directed actions are being taken.

We will continue holding high-quality discussions with all stakeholders going forward and work toward realizing our ambitious dreams and future vision. We aim to create new customer value and achieve sustainable development for society and the Group itself.



## **Special Feature: Innovation**

## Helping Solve Social Challenges through the Pursuit of Innovation



## The Mitsui Chemicals Group's Technological Strengths and Social Contributions

Over the course of its 100-plus-year history since launching ammonium sulfate factory operations in 1912, the Mitsui Chemicals Group has supported the innovation of entire industries by applying its core technologies in the areas of materials sciences, process technology, and polymer sciences to provide a wide range of materials meeting the needs of the times.

Today, our automotive materials account for a large share of the global market, helping to make automobiles lighter and preserve the environment. Our ophthalmic lens materials and other health care products contribute to a healthy and aging society and a higher quality of life. At the same time, our Basic Materials product lineup serves a wide range of industries and has enabled a reduction in GHG emissions and energy-savings at our six plants in Japan and 42 manufacturing bases overseas. Furthermore, through our alliances with neighboring communities, we play a large role in social infrastructure.

Chemistry is central to the innovation needed to solve global issues, and Mitsui Chemicals will continue to contribute in a big way going forward.

Strategy

One of the basic strategies outlined in the 2025 Long-Term Business Plan is the pursuit of innovation, and technology plays an indispensable role in spurring that innovation. As stated above, the Mitsui Chemicals Group has built up its core technologies over a history spanning more than 100 years. We will continue to work to further strengthen these technologies while also preserving their traditions.

However, it is impossible to keep up with the rapid pace of innovation in modern times with only our proprietary technology.

We must actively introduce new technologies and work with companies across different industries beyond chemicals. We are currently moving ahead with technological alliances with a number of venture companies and research organizations, such as euglena Co., Ltd. and Microwave Chemical Co., Ltd. We are pursuing process innovation by cultivating unprecedented ideas that draw from biology and cutting-edge technologies.

## Using AI and IoT

Using AI, IoT, and other advanced technologies can lead to innovation. The Group aims to construct next generation plants and is promoting adaption to various fields at each plant. We aim to make operations at chemical plants safer and more efficient through measures that include the use of AI in operations and quality inspections, the use of big data in predictive maintenance, and the use of IoT in passing on veterans' technical knowledge.

We are also looking to use Al in areas other than plants. In R&D, we are taking measures to promote materials informatics\* to create materials. In the dental materials business, we are integrating CAD and Al to make treatments for missing teeth more efficient and to make the design more detailed.

\* A development method that applies informatics (the study of natural and engineered computation systems) to new materials design

## Creating New Customer Value

Technology is one way to spur innovation, but technology by itself will not create new customer value. To transform from a materials supplier into a solutions provider, we need to broaden our view, understand customer views and needs from more inclusive scope, and enhance our ability to provide solutions as a partner.

We are currently promoting initiatives aimed at understanding various needs from new perspectives, such as MOLp café open laboratory events and our partnership with the venture rimOnO Corporation, which is developing ultra compact electric cars. In addition, we are enhancing our ability to provide solutions, for example, by acquiring the molds manufacturer Kyowa Industrial

MOLp café https://www.mitsuichem.com/en/molp/index.htm

Co., Ltd. and shares of ARRK CORPORATION, which provides development support services focusing on the automotive sector. In these and other ways we are incorporating open innovation concepts and will continue to provide new value to customers.

We are also beginning to see results in entirely new fields, in particular, our solar photovoltaic power generation diagnostics business is bolstering the solar energy market, our rapid testing system for the identification of bacteria is supporting the medical industry, and our new cultivation system iCAST<sup>™</sup> is transforming the agricultural industry. Going forward, we will continue to contribute to society by establishing new businesses.

## **Changing Mindsets**

Because a zeal for problem solving is indispensable to innovative thought, we need to encourage a shift in the mindsets of our researchers and engineers. The aforementioned initiatives will also help to motivate researchers and engineers. Furthermore, we will need talented persons that can work beyond the silos of manufacturing, sales and marketing and create relationships with various companies. People are what creates new value—not Al. We will therefore continue to train personnel that believe in the possibility of chemistry, deftly deploy proprietary technology, keep an eye on the wider world, and cooperate with external organizations to create new value alongside customers.

Expect exciting developments from the Mitsui Chemicals Group to be coming soon.

## Promoting Customer-Driven Innovations



## Heading toward a New Era of Innovation

Mitsui Chemicals has made the pursuit of innovation one of the basic strategies of its 2025 Long-Term Business Plan. In R&D and new business development, we are promoting customerdriven innovations and strengthening our capabilities to propose solutions as basic policies supporting this pursuit.

Looking back on past innovation in the chemical industry, the 20th century was an era of new materials. In some cases, a chemical manufacturer would develop a material with more advanced specifications and their sales rep would then present a table of the material's properties to a customer and that would be all that was required. They did not even need to specify the material's applications for a sale to be made. Now, however, customer needs are growing ever more sophisticated and diverse, and this trend appears to be constantly accelerating. Given this situation, we need to be solution providers, uncovering customers' latent needs in light of major trends and social challenges and then shaping tangible solutions to those needs in order to make proposals that include practical materials applications. Going forward, we will continue embracing a new form of innovation for chemical manufacturers that looks to strengthen our customer-driven business model and transform our position from a materials supplier into a solutions provider.

## Initiatives Aimed at Open Innovation

There are limits to what our development efforts alone can do to provide solutions to customers' increasingly sophisticated and diversifying needs. Open innovation, wherein new value is created through collaboration with a wide variety of people, grows in importance each year. Mitsui Chemicals is cooperating with many partners, including customers and universities, and one of its initiatives is collaboration with ventures.

The breadth of a major company's technological lineup is a major advantage when it comes to open innovation. However, as an organization grows larger, it tends to compartmentalize vertically, making it more difficult to fully tap into that advantage. Within Mitsui Chemicals, there are still cases where employees do not really know what other people in the same research facilities are doing. In addition, with the increasing compartmentalization of roles, there are not many opportunities for people to start from scratch and see a product all the way through to the design of practical applications. Conditions are similar all across research and development, making it difficult for anyone to have a hand in development from beginning to end.

So what should we do? Right now, we are working to bring together capable and eager people and provide them with a spark.

## Customer Views × Solutions

## ARRK/Mitsui Chemicals Seat Project

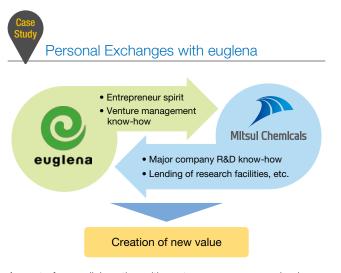
Mitsui Chemicals incorporated ARRK CORPORATION into the Group in January 2018. Operating mainly in the automotive sector, ARRK provides developmental support as well as total support for customers' product development, from design and analysis to prototyping. Going forward, the Group will combine these operations with Mitsui Chemicals' material technologies with the aim of providing total solutions. As part of our efforts to provide such solutions, we have launched the ARRK/Mitsui Chemicals Seat Project. This project will make use of both companies' technologies to create appealing automobile seats with the watchwords of lightness, leading edge, and comfort.

As a first step, we have incorporated a Mitsui Chemicals piezoelectric sensor into a seat made with one of ARRK's leading-edge designs to propose automobile seats that collect data on the driver's vital signs, such as heart rate and breathing rate. Such data could be used for a wide range of applications, such as health care services and helping to prevent drowsy driving. We are also working to make the seat lighter and more comfortable by incorporating Mitsui Chemicals materials, including urethane and carbon-fiber composite materials.



The leading-edge technologies of ventures and the entrepreneur spirit of the people working there are the fuel for that spark. Through collaboration with these people, we will ignite a zeal for development among Mitsui Chemicals employees. And, as that flame spreads, it will help create value and generate new ideas while opening communications between a variety of people inside and outside of the Company. This is already happening. Our open innovation efforts have only just begun, but, going forward, we will continue to help solve social challenges and create new value through various initiatives.

## Initiatives Aimed at Open Innovation



As part of our collaboration with ventures, we are engaging in personnel exchanges with euglena Co., Ltd. involving the mutual dispatch of employees. This provides our employees with opportunities to learn about entrepreneur spirit and venture management while euglena personnel gain access to the R&D know-how of a major company and use Mitsui Chemicals' facilities to help promote research and development. Furthermore, as a joint initiative between the two companies, we are promoting the development of new process technologies that help reduce environmental impact.

Foundation for Growth

Strategy

## Next Generation Plants

## Our Aim: Smart Plants That Facilitate Human Capabilities

Mitsui Chemicals Group aims to construct next generation plants that can manufacture a wide variety of high-performance products while ensuring safety, stability, high quality, and high efficiency. The plants will facilitate human capabilities by combining manufacturing technical know-how cultivated over the years with cutting-edge technologies, such as IoT and AI.

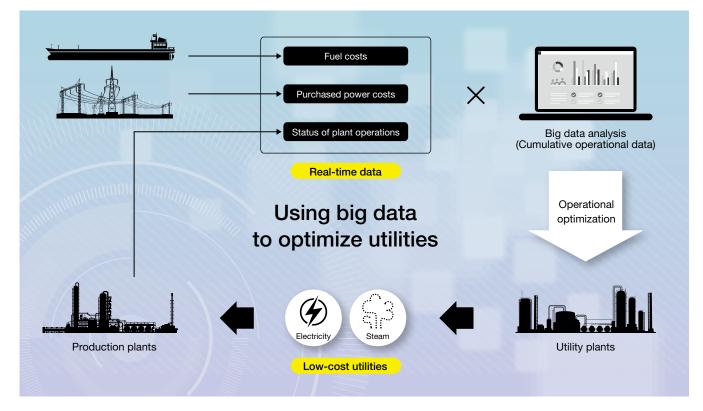
## Overview of Our Initiatives

We will continue to enhance our competitiveness and improve productivity through each of the following initiatives:

Initiatives	Example actions	Anticipated effects
<ol> <li>Safe and stable operations</li> </ol>	<ul><li>Analyzing big data to detect equipment abnormalities</li><li>Enhancing monitoring with high-performance cameras</li></ul>	Preventing accidents and other trouble, Minimizing lost opportunities
<sup>(2)</sup> Quality stabilization	<ul> <li>Using AI to forecast quality</li> <li>Introducing soft sensors to stabilize quality</li> <li>Using machine learning to detect quality abnormalities</li> </ul>	Reducing quality loss, Reducing burden on operators
③ Higher efficiency	<ul><li>Using big data to optimize utilities</li><li>Using tablets to make maintenance operations more effective</li></ul>	Improving yield, Reducing utility costs, Accelerating reporting
④ Human resources training	<ul> <li>Using virtual reality in safety training</li> <li>Using machine learning to make document searches more effective</li> </ul>	Improving safety awareness, Enhancing intergenerational communication of techniques

## Initiative Case Study: Using Big Data to Optimize Utilities

We analyze all the operational data accumulated to date on a big data basis and then calculate the optimal operational conditions for boilers and turbines. Costs for all plant utilities (electricity and steam) are kept as low as possible by monitoring fuel costs, purchased power costs, the status of all plant operations, and other factors in real time while ensuring operations under optimal conditions. We currently do this at our Osaka Works, and our efforts have helped reduce the utility costs of the entire plant. Going forward, we will continue working to enhance the entire Company's competitiveness by rolling out this initiative to other plants.



# From Zero to One

Mitsui Chemicals creates new value.

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Chemicals alone aren't enough.

Mitsui Chemicals is

creating a brighter future

with boundless opportunities,

with new value that

turns zero into one.



What Mitsui Chemicals creates. Better things for the near future.

Going from 0 to 1, the beginning of everything.

The 1 that fills people with potential. The 1 that inspires people's creativity. The 1 that makes it possible for people to change the future shape.

Some change it to beauty. Some change it to amusement. Some change it to stylishness. Some change it to convenience.

Products are not derived simply from chemistry alone. It is the addition of creativity that generates unlimited potential.

## Place ESG at the Core of Management

#### Sustainability in the Mitsui Chemicals Group

With sights fixed on the global ESG issues set forth in SDGs and other initiatives, the Mitsui Chemicals Group aims to achieve sustainable development for itself and society through the following efforts.

- Work to discover business opportunities, and to find solutions to problems through our business activities
- Recognize future risks while fulfilling its social responsibility as a corporate group

Around the world, initiatives to find solutions to social challenges including sustainable development goals (SDGs) are picking up pace. In line with this, expectations are rising for corporations. For the creation of a sustainable society, it is critical to continuously build social value while companies themselves grow by offering such solutions. For companies, this is why it is of ever-greater importance to gain a precise grasp of opportunities and risks that take into consideration ESG concerns, and to reflect such insights into management initiatives.

In April 2018, the Mitsui Chemicals Group newly established the Corporate Sustainability Division as an expression of our commitment to advance triple bottom line (economic, environmental, and social) management, and position ESG concerns at the heart of our sustainability management efforts. The objective of this division is to integrate the elements of ESG into management and business strategies, while strengthening the disclosure of ESG-related information to all of our stakeholders.

#### **Issues to Address**

Incorporate ESG elements in the Group's management and strategies

- Reflect ESG elements in strategic discussions and management at Board of Directors' and Group-wide Strategy Committee meetings
- Generate opportunities and advance innovation that involve business as well as R&D operations

## Incorporate ESG Elements in the Group's Management and Strategies

Undertaking sustainable management requires the promotion of innovation with an understanding that SDGs and other long-term social challenges are to be approached as business opportunities. Together with this, it is important to mitigate future risks and to heighten management resilience.

Positioning ESG as a core theme of our sustainability management issues, we will deliberate the direction to take at Board of Directors' meetings, Corporate Sustainability Committee and other venues, and move forward on applying this to strategies at each division. Within this, we will deepen deliberations with business and R&D departments so as to actively expand Blue Value<sup>™</sup> and Rose Value<sup>™</sup> products that contribute to the environment and society, as is defined as key performance indicators (KPIs) in our 2025 Long-term Business Plan.

In addition, in order to link ESG initiatives to the specific activities of each and every employee, it is essential that all of us become aware of just how important ESG is and transform our consciousness so as to think from the perspective of social challenges. To this end we are promoting discussions about ESG at each

division, as well as activities such as social challenge workshops, laterally throughout our organization.



#### Improve the disclosure of ESG information

- Increase appeal to customers as well as investment and corporate sustainability rating agencies
- Deepen ESG dialogue

### Improve the Disclosure of ESG Information

Amidst the rising importance of non-financial including ESG information, we strive to disclose useful information for our stakeholders, namely shareholders and investors, customers and others. We disclose information from both the risk and opportunity perspectives. This includes, for example, consideration of the impact our business activities have on the environment and society, initiatives aimed at solving social challenges, and the development of human resources who form the well-spring of sustainable value creation.

In addition, as an opportunity for dialogue, we hold IR meetings with regard to ESG for institutional investors and analysts. At the same time as briefing them on our initiatives, we seriously listen to their opinions, and work to improve how we reflect them to management and our disclosure of information.



## Dialogue: Yukiko Kuroda, Outside Director × Corporate Sustainability Division

The Mitsui Chemicals Group set up the Corporate Sustainability Division and will strengthen sustainability management from an ESG perspective. With this in mind, we asked outside director, Yukiko Kuroda, for her thoughts on how the Group should go about targeting sustainable growth.

Corporate Sustainability Division What are your thoughts on the Group's initiatives?

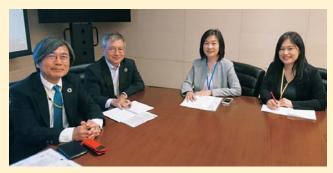
Yukiko Kuroda The concept of sustainability that also encompass ESG concerns has already been thoroughly incorporated into Mitsui Chemicals' Corporate Mission and triple bottom line management approach as well as its 2025 Long-term Business Plan. I very much hope that the Corporate Sustainability Division will function in a way that substantively advances sustainability management while increasing the effectiveness of the Group's efforts to address ESG concerns.

While it may take some time to increase awareness and incorporate ESG concerns into the Group's business activities, I would like to see the Division proceed as quickly as possible. As the concept is understood by each organization within the Group, incorporated into targets and evaluations, and promoted through specific measures, I am confident that sustainability management will gather momentum.

Corporate Sustainability Division We are looking to promote various measures in a bid to increase awareness. This includes lectures by experts and workshops. Our goal is for the Mitsui Chemicals Group to adopt a concept that is based on social challenges.

Yukiko Kuroda Incorporating an approach that draws on ideas that spring from social challenges for creating new products in conjunction with the R&D Division is in my opinion extremely effective. In order to promote this approach, one method is to logically break down social challenges from an SDGs perspective, and to determine what the Group can do to assist in resolving each challenge. I believe that one further method is to move closer to frontline social challenges as well as the needs of each individual within society and to link the affinities that emerge to new ideas.

Numerous products that contribute to society already exist. From the outside world, however, it is difficult to ascertain exactly what the chemical industry is doing to address social challenges.



Yukiko Kuroda, Outside director and members of the Corporate Sustainability Division (From left: Yoshiyuki Itoh; Ken Migita, General Manager; Yukiko Kuroda, outside director; and Reiko Abe)

Yukiko Kuroda Outside Director Director and Founder of People Focus Consulting Co., Ltd.



With this in mind, it is important for the Group to better visualize its contributions to society, and to present its initiatives in an easy to understand manner both internally and externally.

Corporate Sustainability Division Blue Value<sup>™</sup> and Rose Value<sup>™</sup> have been created based on this concept. We plan to ramp up efforts aimed at distributing information and increasing awareness.

Yukiko Kuroda Rather than settle for a sales ratio target of 30%, I would like the Group to raise the bar even higher for Blue Value<sup>™</sup> and Rose Value<sup>™</sup> products.

Despite the difficulties involved, I think it is also important to somehow numerically visualize the impact on society in a manner other than sales. For example, it would be good if through the use of Blue Value<sup>™</sup> products, reductions achieved and improvements made were identified.

Corporate Sustainability Division In closing, what are your expectations of the Group?

Yukiko Kuroda Corporate sustainability that incorporates ESG concerns differs from the conventional notion of corporate social responsibility. Looking beyond simply contributing to society, it entails the injection of management resources that will also lead to corporate sustainable growth in concert with society. For this reason, it does not mean that anything is acceptable so long as it benefits society.

In order for the Mitsui Chemicals Group to continue as a going concern to 2025 and beyond, it is important to question what investments need to be made, what goals should be pursued, and what direction the Group should take. I would hope that each and every employee would see this as an opportunity and think seriously about the path they need to follow.

The very fact that these discussions are taking place is in my opinion a step in the right direction. Moving forward, I would like to promote discussions regarding sustainability in the Mitsui Chemicals Group by raising ESG themes at outside director study groups.

Corporate Sustainability Division We would very much like to receive comments and opinions from a wide variety of angles and to increase the effectiveness of Group's sustainability management, which include ESG initiatives. Our goal is to secure sustainable growth in both social and corporate value.

Value Creation Story

## **Special Feature: ESG**

## Visualization of Contributions to the Environment and Society: Blue Value™ / Rose Value™

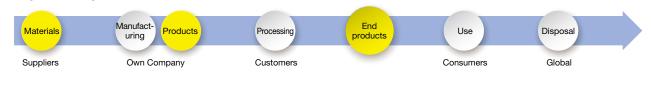
#### Establishing Blue Value<sup>™</sup> and Rose Value<sup>™</sup>

The Mitsui Chemicals Group's ideals for a future society are to realize a "cohesive society in harmony with the environment" and "health and happiness in an aging society." In pursuit of this vision, we are presenting in visual form the contributions to the environment and society from the products and services we provide and sharing those values with all stakeholders. What enables this sharing are Blue Value<sup>™</sup> and Rose Value<sup>™</sup>. By adopting Blue Value<sup>™</sup> Index, Mitsui Chemicals Group's distinctive index used to assess environmental impact, and the Rose Value<sup>™</sup> Index to assess QOL improvement contribution value, we certify products and services according to application with high environmental contribution value and high QOL improvement contribution value as Blue Value<sup>™</sup> and Rose Value<sup>™</sup> products and services, respectively.

#### Offering value through the Blue Value<sup>™</sup> & Rose Value<sup>™</sup> Chain

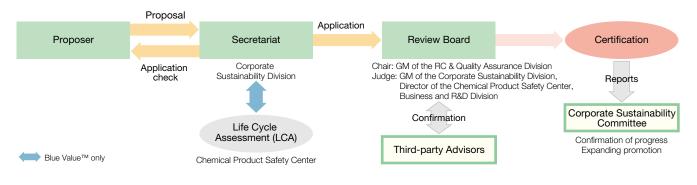
#### Features

- Visualize the contribution to the environment and society through our business activities
- Check the contribution of elements according to application in each stage of the product lifecycle
- Develop and offer products and services with a high contribution value, sharing benefits with stakeholders
- By building a Blue Value<sup>™</sup> and Rose Value<sup>™</sup> chain, we aim to realize our targeted future society



### **Review and Certification Process**

The proposer nominating the candidate product or service conducts respective advance assessments with Blue Value<sup>™</sup> and Rose Value<sup>™</sup> Index, and then submits the proposal to the secretariat. The Review Board deliberates on the relevance of the subject's product concept and sales points versus its evaluation criteria, as well as the advantages of the contribution, its level and other factors. Those items that fulfill the standards are certified. Conducting certifications that emphasize fairness and objectivity with regard to assessment method and judgement standards is supported by accepting and utilizing third-party advice. In addition, these third-parties also confirm each review's details.



### Setting of KPIs

We set the ratios to net sales of Blue Value<sup>™</sup> and Rose Value<sup>™</sup> products as one of the key performance indicators (KPIs) under our 2025 Long-term Business Plan. In addition, the Corporate Sustainability Committee deliberates on that progress, and this is tied to business strategy.

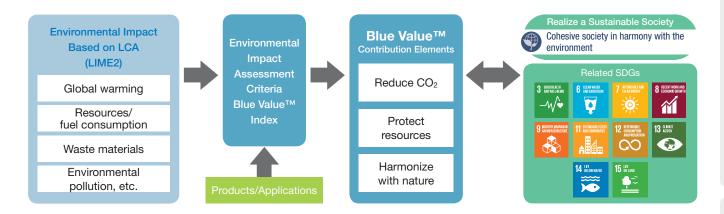
The expansion of the product sales ratio of certified products demonstrates steady progress toward realizing the Group's targeted future society. It is through such initiatives that we offer solutions to achieving SDGs and solving other that confront society. We aim for sustainable development for both the Mitsui Chemicals Group and society.



#### Blue Value™

Numerous chemical products pass through a variety of life cycles, from manufacturing and processing to final disposal after use. At each life cycle stage, we visualize from the perspective of product stewardship how much we can reduce environmental impact and share this with a wide array of stakeholders, a practice that often leads to further environmental contributions. It was with these ideas in mind that we developed the environmental contribution value, Blue Value™, in 2015 in order to achieve our goal of realizing a "cohesive society in harmony with the environment". Under the unique environmental impact assessment criteria Blue Value™ Index, the Mitsui Chemicals Group certifies products and services as having Blue Value™ that are deemed to reduce CO<sub>2</sub>, protect resources, and harmonize with nature, thereby contributing to the environment in three elements.

Conducting comparative assessments targeting market-standard products and existing in-house products, Blue Value<sup>™</sup> comprises certification requirements that not only involve passing evaluation standards but also not falling below these at each life stage. In addition, Blue Value<sup>™</sup> incorporates qualitative and semi-quantitative assessments while becoming a system that enables simplified evaluations. On an as needed basis, Blue Value<sup>™</sup> has become a framework to assess the superiority of specialized and quantitative environmental contributions by departments responsible for Life Cycle Assessment (LCA).



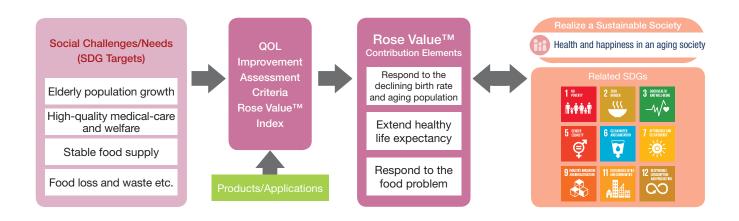
	Environmental Impact Assessment Criteria, Blue Value™ Index			
Contribution Elements	Evaluation Criteria		Related Assessment Criteria	
Reduce CO <sub>2</sub> 7 AFRORABLE AND 7 AFRORABLE AND 9 MOLSTITY INVOLUTION 13 CLIMATE 13 ACTION	Reduction of GHG emissions	Reduce GHG emissions at the raw materials acquisition, manufacturing/ processing, and end products use/disposal stages		
	Saving of energy, electricity, fuel	<ul> <li>Reduce energy such as electricity and fuel at the raw materials acquisition, manufacturing/processing, and end products use/disposal stages</li> <li>Use of end products in the energy conservation field</li> </ul>	•	
Protect resources	3Rs, easy sorting, resource conservation	<ul> <li>Use reusable/recyclable materials at the manufacturing/processing stages for products, processed items, and end products as well as reduce material usage</li> <li>Products, processed items, and end products based on reuse/recycling</li> <li>Possible separation at the time of disposal</li> </ul>	<ul> <li>Weight-saving/ Volume reduction</li> <li>Extended service life</li> <li>Natural energy sources</li> <li>Non-fossil raw materials</li> </ul>	
Harmonize with nature	Ecosystem conservation (human health)	Reduce the impact on human health from chemical substances across product lifecycles; specifically, reduce the addition of chemical substances harmful to human health, curb their formation, use chemical substances that are less toxic, and use end products in the health & safety fields	Environmental cleanup The above are assessed on contribu- tions to all evaluation	
14 LIFE MILLAO	Ecosystem conservation (environmental organisms)	• Reduce the impact on ecosystems from chemical substances across product lifecycles; specifically, reduce the addition of chemical substances harmful to ecosystems, curb their formation, use chemical substances that are less toxic	criteria	
	Prevention of environmental contamination	• Reduce the impact on the global environment excluding people/living organisms from environmental pollutants across product lifecycles; specifically, reduce the addition of environment pollutants harmful to ecosystems, curb their formation, and use substances that do not pollute the environment		

Note: GHG emission-related global warming substances, chemical substances harmful to ecosystems, and environmental pollutants are all substances subject to LIME2.

#### Rose Value™

The Group has set "health and happiness in an aging society" as a targeted future society vision. In moving toward the realization of that vision and to show what kind of value the Group can offer, we established the quality of life (QOL) improvement contribution value, or "Rose Value™" in 2016.

We conduct evaluations of QOL improvement contribution value using our distinctive Rose Value<sup>™</sup> Index in light of the needs of society, including the SDGs and associated targets. We certify as Rose Value<sup>™</sup> those products and services that fall into any of the three contribution element categories, namely those that either respond to the declining birth rate and aging population, extend healthy life expectancy, or respond to the food problem. Rose Value<sup>™</sup> sets easy-to-understand criteria that are qualitative and that take the perspective of universal design, universal health coverage, food security and other issues. The value offered through product or service functionality or concept is carefully scrutinized to confirm if it contributes to meeting the criteria for raising QOL.



	Q	OL Improvement Assessment Criteria, Rose Value™ Index		
Contribution Elements	Evaluation Criteria			
Respond to the declining birth rate and aging population	Support for products, buildings, and expectant mothers, and those with	d spatial issues with regard to the lives of a broad range of people, including infants, children, disabilities		
3 GOODHEALTH AND WELLERING 	Enhancing comfort in daily living	Provide products, buildings and spaces that take into consideration the needs of a variety of people		
	Enhancing nursing and caregiving	Specialized nursing and caregiving is a component of "enhancing comfort in daily living"		
Extend healthy life expectancy	Maintenance of one's own physical extension of lives with autonomous	well-being, without dependency on daily and continuous medical or nursing care, and inestyles		
	Advancement of medical and pharmaceutical fields	Raise the level of medical technology and service in every phases of health, from pre-symptomatic disease to illness Or be able to improve aspects of medicine functionality, quality and production		
	Support for physical well-being	Assist, improve and heighten functions throughout the body, either directly or indirectly		
	Help prevent 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		
Respond to the food problem	Raising the level of food productivity	y, consumption without waste, and realizing worry-free, safe and stable supply		
2 ZERO HUNGER 12 RESPONSIBLE CONSUMPTION AND PRODUCTION	Enhancing food productivity	Raise food yields as well as work efficiency; improve related equipment capabilities		
	Securing safe and stable food distribution	Secure and raise the level of safety and stability in food distribution		
	Reducing food loss and 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		

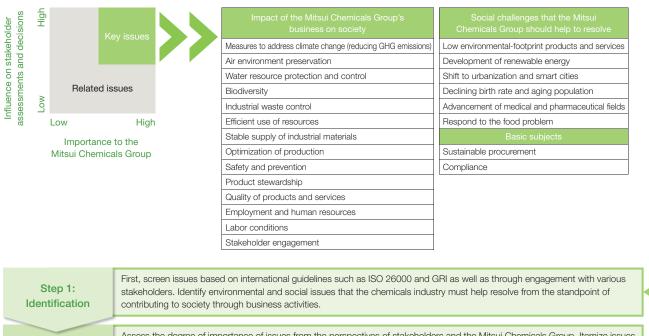
Blue Value™/Rose Value™ https://www.mitsuichem.com/en/sustainability/mci\_sustainability/contribution\_value/index.htm

## Key Issues (Materiality)

## Selecting Key Issues to Address

The Group is working to solve social challenges with the aim of contributing to the realization of an ideal future society, specifically, "a cohesive society that is in harmony with the environment," "health and happiness in an aging society," and "industrial platforms that are in harmony with local communities." These efforts make clear the Group's commitment to promoting the development of society and the Group through its business activities.

Considering the above, in 2014 the Group selected key issues (materiality) to address. In making this decision, we referenced various international guidelines, including the UN Global Compact signed in 2008, to evaluate the characteristics of Group businesses and the location of those activities from the standpoint of the various impacts of their operations as well as their contributions to society. We also considered the opinions of stakeholders. We are focusing on corporate governance and risk management as issues critical to the entire Group.



contributing to society through business activities.	
2	
Assess the degree of importance of issues from the perspectives of stakeholders and the Mitsui Chemicals Group. Itemize issues with common characteristics in order to consider their importance and cross reference them from the standpoint of stakeholders as well as based on the original materials used by stakeholders to evaluate and analyze these issues. Based on this, consider measures that the Mitsui Chemicals Group needs to implement in order to address these issues. In assigning priorities to the issues from the standpoint of the Mitsui Chemicals Group, take into account the Group's Corporate Mission, Action Guidelines, and business strategies. Evaluating these items on a quantitative basis, select key issues and rank them in order of priority.	
Solicit opinions from outside experts and confirm the validity of issues through the Corporate Sustainability Committee after veri- fying the comprehensiveness of these identified issues.	
Conduct a review of the key issues to establish detailed and quantitative targets based on business plans. Then, regularly review the process for identifying key issues at the Corporate Sustainability Committee level. As a part of this review, take steps to ensure that processes and the setting of targets are in line with social conditions. Then, confirm the status of implementation progress.	
	Assess the degree of importance of issues from the perspectives of stakeholders and the Mitsui Chemicals Group. Itemize issues with common characteristics in order to consider their importance and cross reference them from the standpoint of stakeholders as well as based on the original materials used by stakeholders to evaluate and analyze these issues. Based on this, consider measures that the Mitsui Chemicals Group needs to implement in order to address these issues. In assigning priorities to the issues from the standpoint of the Mitsui Chemicals Group, take into account the Group's Corporate Mission, Action Guidelines, and business strategies. Evaluating these items on a quantitative basis, select key issues and rank them in order of priority. Solicit opinions from outside experts and confirm the validity of issues through the Corporate Sustainability Committee after verifying the comprehensiveness of these identified issues. Conduct a review of the key issues to establish detailed and quantitative targets based on business plans. Then, regularly review the process for identifying key issues at the Corporate Sustainability Committee level. As a part of this review, take steps to ensure

### **Review of Key Issues**

We are currently conducting a review of the key issues with the knowledge that progress toward resolving them will help us achieve the goals of the 2025 Long-Term Business Plan and address social challenges.

Our selection of issues will reflect our understanding that changes in societal expectations, which have led to such developments as the formulation of the SDGs in 2015, have prompted a change in the importance of external perspectives. We will then assess the significance of the issues from a corporate perspective to determine what needs to be done to carry out strategies aimed at realizing our Corporate Mission and achieving the goals of the Long-Term Business Plan. Finally, we will integrate these two perspectives and reselect key issues as necessary. We also plan to hold hearings inside and outside the Company to confirm the validity of the issues through the Corporate Sustainability Committee.

WE SUPPORT

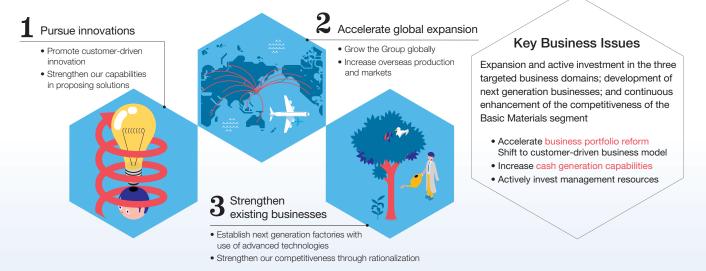
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## Progress Made toward Goals related to Management, Environment, and Society

In its 2025 Long-Term Business Plan, the Mitsui Chemicals Group has defined its ideal future society as embodying "a cohesive society that is in harmony with the environment," "health and happiness in an aging society," and "industrial platforms that are in harmony with local communities." To help realize this future, the Group has set targets in line with the triple bottom line management with a focus on economy, environment, and society.

Using the strengths it has accumulated over its 100-year history, the Group will work to achieve these goals as a highly profitable, growing, and sustainable company that contributes to society.

### Three basic strategies providing value to society



## Environmental and Social Targets

т	he 2025 Long-Term Business Targets	KPI
Maximize Products and Services to Achieve a Low Carbon, Recycling-oriented, and Cohesive Society in	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
Harmony with the Environment	Reduce environmental impact in production and logistics ⇒ Reduce GHG and environmentally harmful substance emissions and efficiently utilize resources throughout the Group as a whole	<ul> <li>GHG emissions reduction rate: 25.4% or more compared with fiscal 2005 (FY2030)*1</li> <li>Per-unit energy consumption reduction rate: Continue by an average of over 1% per year over five years*2</li> </ul>
Maximize Products and Services to Achieve Increased 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 increase 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 increasingly diverse human resources, equipment and facilities as well as technologies in line with global growth and services efforts to transform the business portfolio	<ul> <li>Incidence of major accidents: Continue at zero</li> <li>Work-related significant occupational injury frequency rate: Continue at less than 0.15</li> </ul>
	Provide high quality products and services ⇒ Ensure the stable supply of products that meet and satisfy customers' requirements at a high level	<ul> <li>Incidence of non-conformance: Less than 10 ppm</li> </ul>
	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	<ul> <li>Product risk assessment implementation rate: 99% or more (FY2020)</li> <li>Provision ratio of the latest safety information for all products: Continue at 100%</li> </ul>
	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	<ul> <li>Incidence of major legal and regulatory violations: Continue at zero</li> </ul>
	⇒ Exert an influence on the sustainability of business partners	<ul> <li>Supplier sustainability assessments and improvement support (sustainable procurement ratio of 70% or more</li> </ul>
	⇒ Enable Group employees to work in a vibrant manner and to fulfill their potential	<ul> <li>Ratio of women in line manager or higher positions: 10% or more*<sup>3</sup></li> <li>Increase employee engagement</li> </ul>

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## **Financial Targets**

	2025 Long-Term Business Plan Target	FY2017 Results	FY2018 Outlook
Operating Income	¥ <b>200</b> billion	¥103.5 billion	¥106 billion
Net Sales	¥ <b>2,000</b> billion	¥1,328.5 billion	¥1,480 billion
ROE	10% or more	14.9%	14.7%
ROS	10%	7.8%	7.2%
Net D/E	<b>0.8</b> or less	0.75	0.70
Shareholder Returns	Total return ratio of <b>30</b> % or more Stable and continuous dividend increase Flexibly acquire treasury stock	Dividends ¥ <b>90</b> /share* Acquire treasury stock: ¥5.0 billion (Total return ratio: 32%)	Dividends ¥100/share (Aim to gradually achieve a total return ratio of 30% or more by continuously and steadily increasing dividends and flexibly acquiring treasury stock.)
Growth Investment	¥1,000 billion Including strategic investment ¥400 billion (Total for the 10-year period, excluding maintenance investments)	Capital expenditures ¥81.2 billion (Including acquisition of shares of ARRK CORPORATION ¥23.9 billion)	Capital expenditures ¥84.0 billion
R&D expenses	¥ <b>70.0</b> billion	¥ <b>33.4</b> billion	¥36.0 billion

## **7 ISSUES** in FY2018

## **Business Strategy**

- 1 Expansion and growth in three targeted business domains
- Diversification of investment themes
- Business expansion, including in peripheral business areas
- Secure production capacity corresponding to demands 2 Accelerate development of next generation businesses and
- creation of new products
- $\ensuremath{\mathbf{3}}$  Further strengthen competitiveness of the Basic Materials business

#### Manufacturing

- 4 Enhance works bases by utilizing advanced technologies
- 5 Improve safety technologies and enhance manufacturing site capabilities

#### Management

- 6 Enhance group-global management
- 7 Promote ESG management

FY2017 Results	FY2018 Targets	Related SDGs & Key Issues
• 19%	<ul> <li>Introduce Blue Value<sup>™</sup> perspective in the research and development Stage Gate System</li> <li>New Blue Value<sup>™</sup> certifications: 5 or more</li> </ul>	3 Minimum       0 Minimum       7 Minimum       8 Minimum       9 Minimum       • Measures to address climate change (reduction of GHG emissions)         11 Minimum       12 Minimum       13 Minimum       15 Minimum       • Minimum       • Minimum         11 Minimum       12 Minimum       13 Minimum       15 Minimum       • Minimum       • Minimum
• 24.5%	<ul> <li>GHG emissions reduction: 150 thousand tons or more compared with the previous fiscal year</li> <li>Per-unit energy consumption reduction rate:</li> </ul>	Industrial waste control Industrial waste control
• 0.9%	Average reduction of over 1% per year over 5 years, or an average annual reduction of over 1% based on the standard of FY2009.	<ul> <li>Low environmental-footprint products and services</li> <li>Development of renewable energy</li> </ul>
•14%	<ul> <li>Introduce a Rose Value™ perspective in the research and development Stage Gate System.</li> <li>New Rose Value™ certifications: 5 or more</li> </ul>	1 Herry       2 Herry       3 HERRER       5 HERR       6 HERRER       9 HERRER       3 HERRER       6 HERRER       9 HERRER       1 HERRER       1 HERRER       9 HERRER       1 HERRER       1 HERRER       1 HERRER       1 HERRER       1 HERRER       9 HERRER       1
•0	•0	3 minuter 4 team 5 mar 8 minuter 10 minuter 0 Safety and prevention
• 0.24	• 0.15 or less	Approximate to the services     A product stewardship     A produ
Number of complaints     (Company responsible):	Number of complaints (Company responsible):     Over 10% reduction compared with the previous	Sustainable procurement • Compliance

Number of complaints (Company responsible): 15% reduction compared with the previous fiscal year, Mitsui Chemicals, Inc.	Number of complaints (Company responsible): Over 10% reduction compared with the previous fiscal year, Mitsui Chemicals, Inc.
<ul> <li>36% (Complete assessment of high-priority products)</li> <li>100%</li> </ul>	Complete assessment of low-priority products     100%
•1	• 0
• 39% (Mitsui Chemicals, Inc.)	<ul> <li>Exert an influence on suppliers based on sustainable procurement Self Assessment Questionnaire (SAQ) results</li> <li>Review purchasing policy, raise awareness of sustainable procurement policy both within and outside the Group</li> </ul>
• 2.7% • Employee engagement	• 3.2% (FY2018), 4.0% (FY2019) • Conduct the first survey, ascertain engagement level

survey method determined



Foundation for Growth

Premised on the maintenance of sound financial standing, we aim to ensure stable shareholder returns as well as active investment and financing for growth and expansion.

> Masaharu Kubo Representative Director, Member of the Board, Executive Vice President & CFO

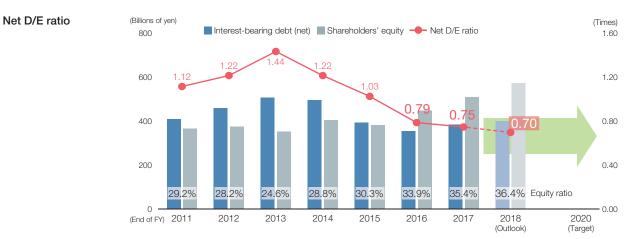
## Investment Strategy Looking toward 2025

The Mitsui Chemicals Group worked to thoroughly improve its finances over the three-year period from 2014 to 2016. As a result, the net D/E ratio shrunk to 0.7 times, and we believe our financial standing improved somewhat. On the other hand, as a result of restraining investment, the potential sales expansion of our major products gradually declined, and we needed to expand capital investment, including boosting the production sites, which are in high demand.

In the 2025 Long-Term Business Plan, we are planning growth investments of ¥1 trillion over the ten-year period to 2025. Of this

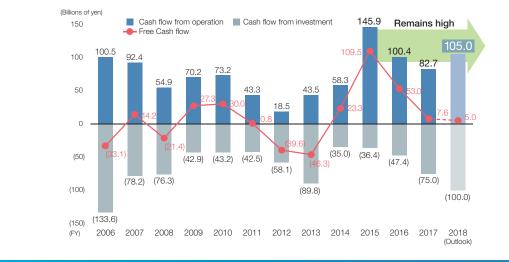
amount, we plan to earmark ¥400 million for M&A and other strategic investments.

In existing business fields in fiscal 2017, we boosted the global production capacity of our PP compound facilities and expanded and built facilities for high-performance nonwovens. As for M&A, we steadily carried out investment in line with our strategies, including the acquisition of shares in ARRK CORPORATION and the acquisition of a styrene thermoplastic olefinic elastomer business.



In the three-year period starting with fiscal 2018, we plan to invest a total of ¥360 billion. Although this amount is about the same as net cash provided by operating activities calculated in the threeyear rolling plan unveiled in fiscal 2018, the net D/E ratio will be kept at around 0.8 times, growth expanded in three targeted business domains, and we will continue to carefully choose a good balance of projects that help enhance the competitiveness of the Basic Materials business.

In addition, the Group is emphasizing the internal rate of return (IRR) as an indicator for investment decision making. In particular, regarding investment in growth fields, we have set the hurdle rate at a level higher than capital costs and are holding deliberations at investment and financing assessment meetings in addition to other meetings.



### Measures to Improve the Cash Efficiency Ratio

The cash efficiency ratio is indispensable to maximizing our cash flow. In particular, reducing inventory, which accounts for about ¥300 billion on the balance sheet, is a major issue for the Group. Since 2016, we have launched projects to better manage inventory and taken steps to reduce it. We have implemented

continuous PDCA cycles where we set inventory standards based on scientific methods, visualized inventory data, and manage inventory levels. We are currently working to roll out these cycles to the entire Group.

Going forward, in addition to steadily raising dividends to reflect

performance trends, we will continue to enhance and reinforce

stock in response to share price levels and market conditions.

shareholder returns by dynamically and flexibly acquiring treasury

### Stable Shareholder Returns

Mitsui Chemicals considers the return of profit to shareholders an important management issue and aims to incrementally reach a return ratio, which includes acquired treasury stock, of 30% or above.

Cash dividends per share for fiscal 2017 were ¥90, and we are planning for ¥100 for fiscal 2018, which would make five continuous years of dividend increases.

#### Shareholder Returns

Cash flows

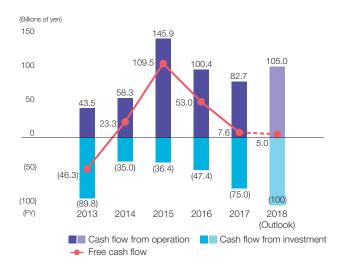


Note: On October 1, 2017, Mitsui Chemicals conducted a 5-to-1 share consolidation. All dividends are recalculated based on this share consolidation.

7.7 Net sales Operating ROS (Billions of yen) (%) (Billions of yen) 1,600 160 16 1,566.0 1,550.1 1,480.0 1,343.9 1,328.5 1,212.3 1.200 120 12 106.0 103.5 102.1 8. 800 80 8 16 70.9 5. 42.0 400 40 4 2 24.9 0 0 0 (FY) 2013 2014 2015 2016 2017 2018 (Outlook)

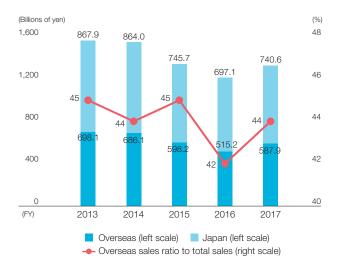
Free Cash Flows



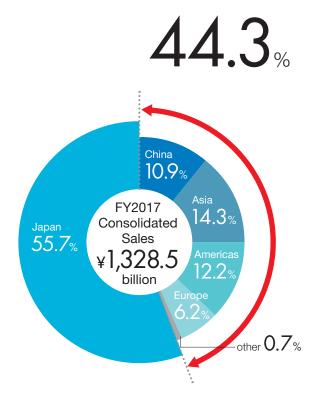


**Overseas Sales** 

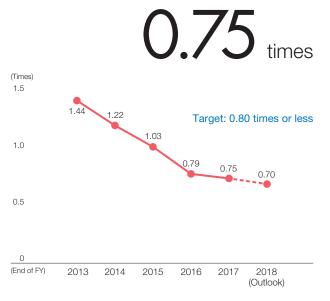




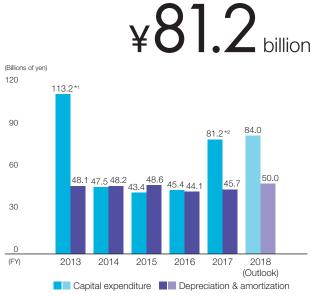
Overseas Sales Ratio



Net D/E Ratio

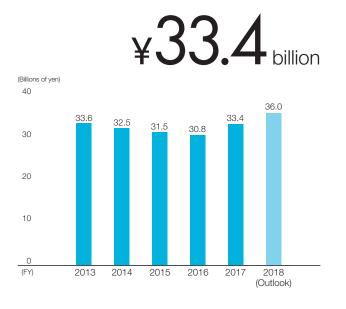


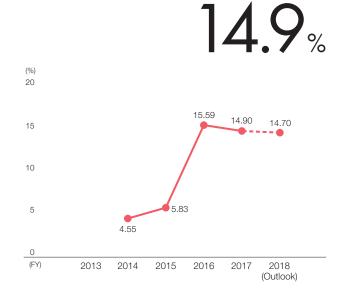
# Capital Expenditure



\*1 This figure includes Heraeus dental business acquisition ¥56.0 billion. \*2 This figure includes acquisition of shares of ARRK CORPORATION ¥23.9 billion.

# **R&D** Expenses





ROE

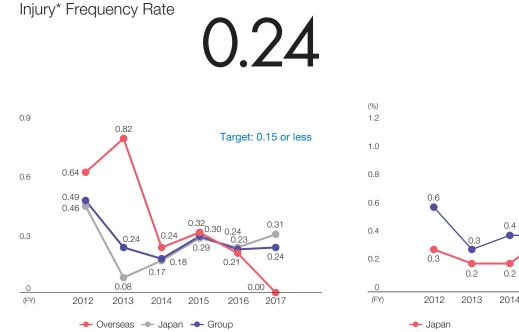


# Total Return Ratio\*



\* Total return ratio=(dividends paid+treasury stock acquired)/profit attributable to owners of parent

Work-Related Significant Occupational

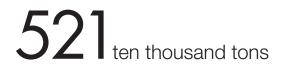


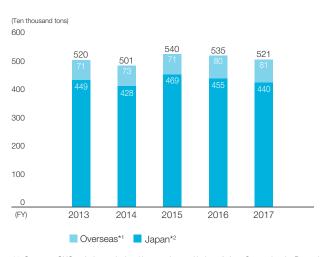
\* Work-related Significant Occupational Injuries (WSOI): Occupational accidents and injuries that are directly related to operations and result in days away from work cases or fatality or, of those resulting in no lost work or only minor injury, occupational accidents in which the cause was serious and there was a risk of death or days away from work.

# Landfill Ratio for Industrial Waste



# GHG Emissions

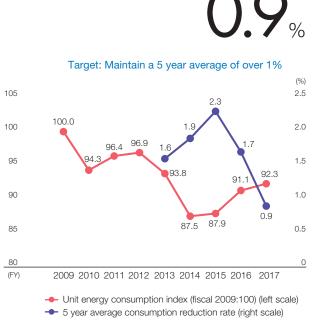




\*1 Overseas: GHG emissions calculated in accordance with Japan's Law Concerning the Promotion of Measures to Cope with Global Warming (2005 Amendment) based on energy consumption figures for overseas consolidated subsidiaries. (CO<sub>2</sub> emission factors from electricity generation were retroactively changed to International Energy Agency (IEA) emission factors by country.) I construction that the commented provided that devide the factors of the comment.

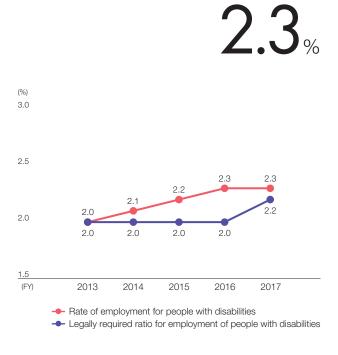
\*2 Japan: Mitsui Chemicals, Inc. and domestic consolidated subsidiaries

# Energy Intensity Consumption Reduction Rate\*

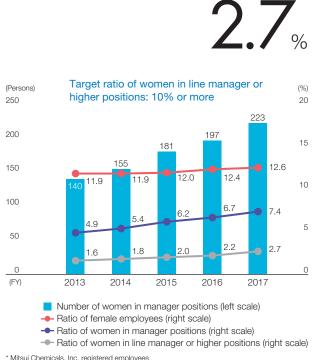


\* Mitsui Chemicals, Inc. only

# Rate of Employment for People with Disabilities



# Ratio of Women in Manager Positions



\* Mitsui Chemicals, Inc. registered employees

# Rose Value<sup>™</sup> Sales Ratio



# Blue Value<sup>™</sup> Sales Ratio



Blue Value™ Sales (left scale) → Blue Value™ Sales Ratio (right scale)



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

For the Fiscal Year		2007	2008	2009	2010	2011	
Operating Results (for the y	/ear)						
Net sales	,	¥1,786,680	¥1,487,615	¥1,207,735	¥1,391,713	¥1,454,024	
Operating income (loss)		77,176	(45,493)	(9,461)	40,548	21,564	
Profit (loss) attributable to ow	ners of parent	24,831	(95,237)	(28,010)	24,854	(1,007)	
Reference: Ordinary income (		66,146	(50,768)	(13,132)	38,851	22,884	
EBITDA*1	× /	155,719	38,873	69,275	117,089	89,854	
Net cash provided by operati	ng activities	92,423	54,882	70,173	73,196	43,302	
Net cash used in investing ac	8	(78,206)	(76,253)	(42,913)	(43,204)	(42,452)	
Free cash flows		14,217	(21,371)	27,260	29,992	850	
Financial Position (at year-e	end)	,	( ) - )	,	- ,		
Total current assets	,	¥ 726,361	¥ 529,606	¥ 604,556	¥ 665,976	¥ 661,311	
Property, plant and equipmer	nt	564,805	522,641	498,183	467,735	430,629	
Total intangible assets, invest other assets		178,082	136,692	135,347	161,916	164,363	
Total assets		1,469,248	1,188,939	1,238,086	1,295,627	1,256,303	
Total current liabilities		569,560	377,858	386,203	442,298	451,507	
Total non-current liabilities		335,461	412,950	432,879	422,228	389,025	
Total shareholders' equity & to other comprehensive income		500,044	349,908	377,283	383,740	367,436	
Interest-bearing debt		485,972	535,391	494,219	480,701	464,773	
Other							
Depreciation and amortization	n	¥ 72,596	¥ 81,374	¥ 74,878	¥ 69,237	¥ 62,749	
Capital expenditures		84,667	81,041	49,054	45,137	44,814	
R&D expenses		42,130	40,628	38,131	36,166	33,176	
Per Share Data*2							
Net income (loss) per share (basic)		¥161.10	¥(627.3)	¥(165.2)	¥ 124	¥ (5.05)	
Cash dividends per share		60.00	45.00	15.00	30.00	30.00	
Ratios							
Return (operating income (loss)) on sales		4.32	(3.06)	(0.78)	2.91	1.48	
Return (net income (loss)) on	equity	4.94			6.53		
Return (operating income (los	ss)) on assets	5.20			3.20	1.69	
Net D/E ratio		0.93	1.39	1.11	1.04	1.12	
Social Data							
	Consolidated	12,814	12,964	12,892	12,782	12,868	
Employees	Non-consolidated	8,671	8,557	8,297	7,878	7,633	
Percentage of women	Non-consolidated	9.8	10.4	10.8	11.2	11.4	
Environmental Data*3							
WSOI*4 frequency rate*5	Consolidated*6				0.28	0.22	
Energy consumption	Consolidated*7			99	103	99	
	Domestic* <sup>8</sup>	567	514	493	490	467	
GHG emissions	Consolidated*9			571	583	561	
Landfill disposal volume	Consolidated*6	53.1	30.1	18.8	18.1	1.1	
Landfill rate for industrial	Consolidated*6	14.5	8.7	6.1	10.1	1.1	

\*1 EBITDA = Operating income + Depreciation and amortization + Equity in earnings of non-consolidated subsidiaries and affiliates

\*2 On October 1, 2017, Mitsui Chemicals conducted a 5-to-1 share consolidation. Net income (loss) per share (basic) is calculated as if the consolidation had been conducted at the start of the previous fiscal year. The figures listed for cash dividends per share have also been retroactively adjusted to account for the impact of the consolidation.

\*3 Due to changes in aggregation methods and legal revisions, only data that complies with such methods and laws is presented.

\*4 Occupational accidents and injuries that are directly related to operations and result in days away from work cases or fatality or, of those resulting in no lost work or only minor

injury, occupational accidents in which the cause was serious and there was a risk of death or days away from work.

\*5 Work-related Significant Occupational Injury (WSOI) frequency rate: The number of deaths or WSOIs per million hours worked.

\*6 Production sites operated by consolidated subsidiaries and affiliated companies eligible for Responsible Care support.

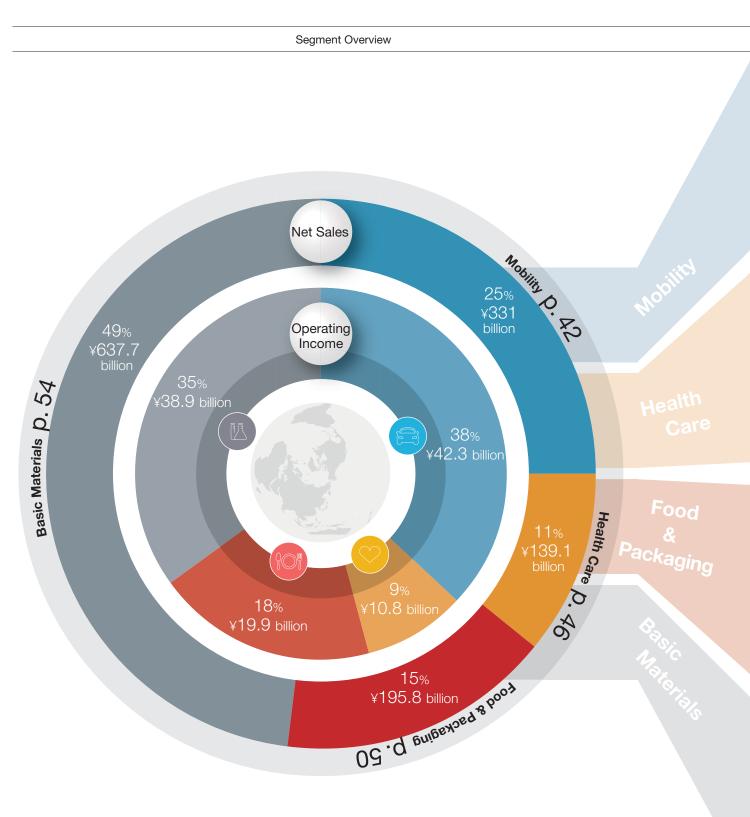
2017	2017	2016	2015	2014	2013	2012
(Thousands of U.S. dollars	(Millions of yen)					
\$12,504,951	¥1,328,526	¥1,212,282	¥1,343,898	¥1,550,076	¥1,566,046	¥1,406,220
974,125	103,491	102,149	70,926	42,040	24,899	4,290
673,804	71,585	64,839	22,963	17,261	(25,138)	(8,149)
1,037,321	110,205	97,196	63,183	44,411	22,522	9,206
1,470,331	156,208	146,414	117,416	90,218	73,828	49,729
778,047	82,660	100,440	145,913	58,287	43,476	18,512
(706,335	(75,041)	(47,395)	(36,365)	(35,036)	(89,781)	(58,136)
71,712	7,619	53,045	109,548	23,251	(46,305)	(39,624)
(Thousands of U.S. dollars	(Millions of yen)					
\$ 7,055,271	¥ 749,552	¥ 678,938	¥ 628,210	¥ 731,708	¥ 777,015	¥ 715,396
4,074,812	432,908	409,429	413,402	433,629	425,840	446,637
2,462,763	261,644	237,158	217,336	246,453	229,307	175,962
13,592,846	1,444,104	1,325,525	1,258,948	1,411,790	1,432,162	1,337,995
4,171,668	443,198	392,783	364,259	448,499	507,056	493,908
3,899,680	414,302	418,107	451,452	491,992	515,459	415,173
4,811,032	511,124	449,692	381,971	406,235	352,843	376,779
4,364,241	463,657	439,868	472,986	548,713	581,260	507,183
(Thousands of U.S. dollars	(Millions of yen)					
\$ 422,016	¥ 45,653	¥ 44,057	¥ 48,640	¥ 48,251	¥ 48,143	¥ 43,864
764,759	81,248	45,383	43,405	47,531	113,200	56,649
314,533	33,377	30,777	31,493	32,473	33,569	31,997
(U.S. dollars)	(Yen)					
\$3,373	¥358.38	¥324.05	¥114.75	¥86.20	¥(125.5)	¥ (40.7)
847	90.00	70.00	40.00	25.00	15.00	30.00
%	7.79	8.43	5.28	2.71	1.59	0.31
%	14.90	15.59	5.83	4.55		
%	7.47	7.90	5.31	2.96	1.80	0.33
Times	0.75	0.79	1.03	1.22	1.44	1.22
Persons	17,277	13,423	13,447	14,363	14,271	12,846
Persons	6,541	6,516	6,733	6,931	7,129	7,266
%	12.6	12.4	12.0	11.9	11.9	11.7
	0.24	0.23	0.30	0.18	0.24	0.49
PJ	89	90	89	86	89	94
Ten thousand tons	440	455	469	428	449	453
Ten thousand tons	521	535	540	501	520	546
	0.7	0.9	1.0	0.7	0.6	1.2
Thousand tons	0.7	0.9	1.0	0.7	0.0	1.2

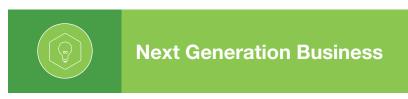
\*7 Mitsui Chemicals, Inc. and domestic and overseas consolidated subsidiaries.

\*8 Mitsui Chemicals, Inc. and domestic consolidated subsidiaries.

\*9 GHG emissions for overseas consolidated subsidiaries are calculated in accordance with Japan's Law Concerning the Promotion of Measures to Cope with Global Warming (2005 Amendment) based on energy consumption figures. (CO<sub>2</sub> 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.

# At a Glance





\* Exclude company-wide development costs and some other costs.

# Main Products

# Fiscal 2017 Business Overview



## Elastomers

Ethylene-Propylene Terpolymer (Mitsui EPT™), Alpha-olefinic 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™) Performance materials products—especially elastomers and polypropylene compounds—have kept up with expanding global demand for automotive components and IT products. In addition to ongoing demand propelled by the trend toward lighter and more advanced automobiles, the market is seeing the emergence of new needs related to electrification and driving-assistance. To meet these wide-ranging needs, the Group added the new product development support company ARRK CORPORATION to its consolidated subsidiaries and tightened its focus on strengthening its ability to offer solutions.



## Vision Care Materials

Ophthalmic lens materials (MR™, RAV7™), Photochromic lens materials (SunSensors™)

Nonwovens

Nonwovens (SYNTEX<sup>TM</sup>, TAFNEL<sup>TM</sup>, AIRYFA<sup>TM</sup>), Breathable films (ESPOIR<sup>TM</sup>), Polyolefin synthetic pulp (SWP<sup>TM</sup>, KEMIBESTO<sup>TM</sup>)

- Personal Care Materials
- Acrylamide, Medical materials
- Dental Materials

Restoratives (Charisma<sup>™</sup>, Venus<sup>™</sup>), Adhesives (Super-Bond<sup>™</sup>, iBOND<sup>™</sup>), Artificial teeth, Denture materials (PALA<sup>™</sup>), Impression (Flexitime<sup>™</sup>), Digital equipment / materials (cara<sup>™</sup>, DIMA<sup>™</sup>)

Sales of ophthalmic lens materials, for which the Group boasts the largest global market share remained healthy. The Group also launched sales of the next generation eyewear TouchFocus™, which combines liquid crystal technology with the Group's lens technology to enable wearers to easily switch between near- and far-sighted lenses at a touch.

In nonwovens, the Group worked to expand production capacity in line with market growth to meet demand for premium disposable diapers, which are gaining popularity in Asia. In addition, the Group launched the nonwoven AIRYFA<sup>™</sup>, which is both soft and strong while remaining gentle on skin.

In dental materials, the Group recorded an impairment loss for intangible assets, including goodwill, as a result of revised plans due to decreasing sales in Germany and a delayed launch of digital goods. In response, the Group has worked to strengthen its sales activities and digital goods to expand the market with the aim of sustainably growing its dental materials business.



# Coatings & Engineering Materials

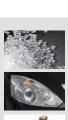
Polyurethane resins (TAKENATE<sup>™</sup>, TAKELAC<sup>™</sup>), Packaging adhesives, Polyolefin resins, Coating resins, Sealants for displays **Packaging Films** 

Biaxially oriented polypropylene films, Cast polypropylene films, Linear low-density polyethylene film (T.U.X<sup>™</sup>)

- Industrial Films & Sheets
- Semiconductor and electronic components manufacturing process films (ICROS<sup>™</sup> TAPE), Foam sheets, Encapsulant sheets for solar cells (SOLAR ASCE<sup>™</sup>, SOLAR EVA<sup>™</sup>)
- Agrochemicals

Insecticides, Fungicides, Herbicides, Non-crop specialty chemicals, Pet medication ingredients

The sales volume of performance films and sheets expanded as the Group captured robust demand. The Group established a new subsidiary in Taiwan, a major source of global demand, for manufacturing and marketing ICROS<sup>™</sup> TAPE, which commands the largest share of the global market for protective tape used in semiconductor manufacturing processes. In agrochemicals, the Group decided to form an alliance with the major European companies BASF and Bayer in new product development, thereby accelerating the global expansion of the agrochemical business.



### 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™)

Focusing on petrochemicals and basic chemicals, the Group maintained high-capacity operations at its naphtha crackers and other plants due to strong domestic demand while continuing to progress with business structure improvement. Sales of polyethylene and polypropylene remained firm, backed by domestic demand. As for phenols, overseas market conditions were stronger than the previous fiscal year, and efforts to promote structural business reforms are bearing fruit. The Group also worked to ensure greater competitiveness by cutting costs and expanding its lineup of differentiated products. Value









- Agricultural System Solutions
- IoT Solutions
- Energy Solutions
- Medical Solutions

Koichiro Sato

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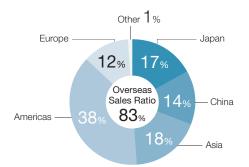
# Mobility

In the automotive and ICT markets, which are facing a major transformative period, we will continue to offer new value by enhancing our ability to provide solutions and developing new products and businesses while reinforcing the global expansion of our existing businesses through active investment.

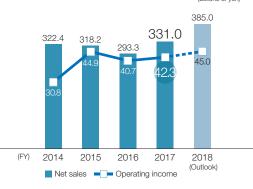
Mobility







Trends in Net Sales and Operating Income (Billions of yen)



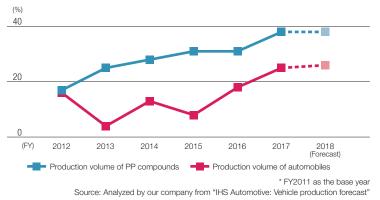
# Social Issues and Needs

With awareness of the need for environmental preservation growing worldwide, CO<sub>2</sub> emission regulations are tightening in every country while every year demand for increased vehicle fuel efficiency continues to grow and the shift toward electric automobiles makes progress. In addition, the development of autonomous vehicles and car sharing and other changes in the environment surrounding the Mobility business are prompting the creation of new, diversified demand, namely for ways of increasing the use of electrical components and improving comfort.

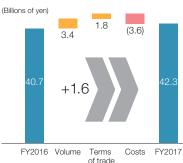
# **Business Vision**

The Mitsui Chemicals Group defines mobility as the full range of modes of transportation for both people and things, most notably automobiles. Within the Mobility domain, the Group seeks to achieve sustainable growth in global markets by providing solutions to diversifying needs and reinforcing the competitiveness of its businesses.

# Cumulative Growth rates of PP Compound and Automobile Production Volume



## Increase/Decrease in Operating Income



¥42.3 billion (+¥1.6 billion year on year)
Volume +¥3.4 billion
Prompt response to healthy global

- automotive use demandPrompt response to healthy demand for
- Prompt response to healthy demand for information and communication technology applications

#### Terms of trade +¥1.8 billion

- Increase from weak yen, etc.
- Costs ¥(3.6) billion
- Development costs, etc.

Market Analysis and Strategic Issues

# Strengths

High technological capabilities and

• Expanding need for lighter weight materials

**Opportunities & Risks** 

- Expanding needs for more safety and comfort
- Emergence of new needs, including for electrification and drivingassistance

#### assistance • Stagnant growth in developed countries

- Growth in emerging countries
- Total solution proposal capabilities spanning the value chain

A broad materials lineup

quality

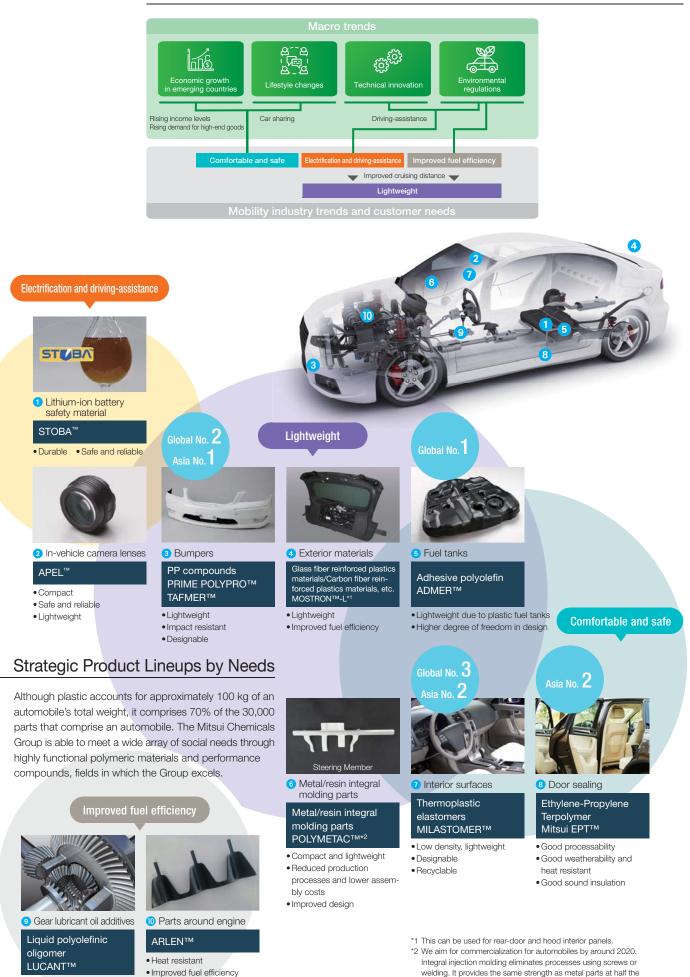
Customer base

Technical support

# Challenges

- To capture the trend toward lighter weight automobiles and battery materials for business growth
- To capture new market needs in which ICT and automotives are integrated
  To enhance proposal capabilities by anticipating needs from the initial
- development stages of automobiles

# Customer Needs Identified from Market Trends



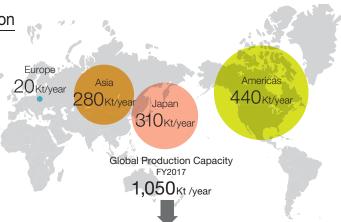
Improved fuel efficiency

Long service life

weight by combining polypropylene resin with aluminum.

# Aiming to Become the World Leader Fuelling Further PP Compound Business Expansion

The Mitsui Chemicals Group's automotive material PP compound business ranks second globally and first in Asia. The Group has also built a solid track record in North America and holds an approximately 30% share of the U.S. automobile manufacturing sector. PP compounds combine polypropylene with other polymers and additional agents to achieve functionality and performance that polypropylene alone is unable to provide. Leveraging its proven expertise in material design technologies in combination with proprietary resins, the Mitsui Chemicals Group is providing highly acclaimed high-quality PP compounds that address various customer needs. Moreover, the Group is building a structure that is finely attuned to the global strategies of automobile manufacturers. In a bid to address customer needs in a timely manner, the Group currently maintains eight production sites and five R&D bases worldwide. We recently established a new production base in the Netherlands-our first in Europe-as we expect business to expand in Europe. Commercial operation is slated to begin in fiscal 2020. The Group is progressively increasing production capacity in line with growing demand and its efforts to increase its market share. Moving forward, every effort will be made to identify markets that exhibit continued growth and to further reinforce Group operations.



# Aim for production capacity of 1,080Kt/year in FY2020

PP Cor	mpounds		TAFME	R™	
	Market Share	Market Growth Rate*		Market Share	Market Growth Rate*
Global	2nd (21%)	3%	Global	2nd	6%
Asia	1st	3%	Asia	1st	9%
Japan	1st		Japan	1st	
		* FY2015-2018			* FY2015-2018

# Topics

# Welcoming

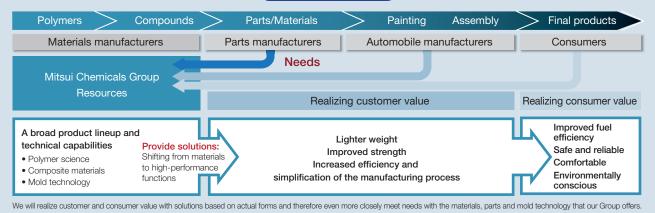
The Mitsui Chemicals Group acquired ARRK, which is a provider of development support services, in January 2018 to enhance the Group's ability to provide solutions on the international level. This acquisition will allow us to draw on both companies' customer networks, functions, and technologies to continue expanding our customeroriented problem-solving business.

### - Measures Aimed at Enhancing Our Ability to Offer Solutions -

- Expand our materials businesses by leveraging our total solution functions to encourage the switch to plastic products.
- Support wide-ranging high-value-added development support services capable of in-depth analysis to determine the best materials to use.
- Expand both companies' businesses by tapping both customer networks and global bases.
- Expand molding and prototyping businesses using each other's bases.



# Value Chain



# Fiscal 2025 Target

# Operating income: ¥70.0 billion + New businesses

Boosting production capacity for many of the Group's products in the next business term is essential to translate current demand growth into business opportunities. Accordingly, the Mitsui Chemicals Group will steadily increase its production capacity in line with its business plan for each product. In addition to expanding and reinforcing existing businesses, energies will be channeled toward promoting the Mobility strategy across the Group as a whole. Moving forward, every effort will be made to strengthen the Group's ability to provide its customers with optimal solutions.

# Growth Strategies

- Continually introduce new differentiated products and boost production capacity as part of ongoing expansion efforts focused on existing businesses.
- Work to enhance our product portfolio in the mobility business by bolstering our customer support, establishing technology for fiber-reinforced composite materials, and facilitating the switch to multi-material solutions.
- Foster open innovation and collaboration to anticipate customer needs with the aim of promoting new business development in new markets and facilitating a shift toward downstream businesses and services.

# Investment Strategies

- As for our polymer product lines, which require large-scale production facilities, we will continue working to bolster our competitive advantage by quickly boosting production capacity in optimal locations to meet growing global demand.
- As for our compound products, we will continue to strengthen our global supply system, which is designed to best meet customer needs, by boosting production capacity in locations where the products are manufactured and consumed.

# Fiscal 2018 Plan

By capturing growth in ICT-related markets and increasing automobile production we expect to expand sales of major products. Despite such risks as rising raw material prices, earnings are expected to continue on the previous year's upward trend in fiscal 2018, boosted by higher sales. We plan also to raise production capacity at existing businesses to keep up with expanding demand. In addition, we will strengthen our global supply network. Furthermore, we will promote new business creation and accelerate new product development as we work to implement mobility business strategies aiming for long-term growth.

#### Blue Value<sup>™</sup> and Rose Value<sup>™</sup> Products in the Mobility Domain Blue Value<sup>™</sup> Blue Value<sup>™</sup> Reduce CO<sub>2</sub> Protect resources Reduce CO<sub>2</sub> Bumper and instrument Adhesive polyolefin for panel materials plastic fuel tanks **ADMER™** PP compounds Reduce GHG emissions Reduce weight of fuel tanks by 10-30% by using plastics by 13% without the need for any painting process instead of metals Blue Value<sup>™</sup> Blue Value<sup>™</sup> Reduce CO<sub>2</sub> Reduce CO<sub>2</sub> Bumper and instrument Lubricant additive for automobiles panel materials **TAFMER™ LUCANT**<sup>TM</sup> Improve fuel efficiency and as a viscosity Reduce energy consumption during the manufacturing stage through the modifier contribute to maintain consisuse of catalysts (promotion of chemical tent viscosity through the reduction of reactions) that enhance productivity viscosity changes with temperature

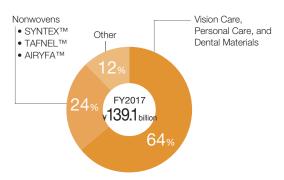
Mitsui Chemicals Report 2018 45



that improve quality of life (QOL for a healthy and long-lived society by strengthening and expanding existing businesses and creating new growth platforms through peripheral and downstream business development.

#### Sales by Product

Osamu Hashimoto





Trends in Net Sales and Operating Income (Billions of yen)



# Social Issues and Needs

Health awareness has been on the rise against a backdrop of declining birth rates, aging populations in advanced countries and economic growth in emerging countries. Customer values have diversified, and individual preferences and needs have grown. Customers have come to look for "care" that fits their life stage.

# **Business Vision**

The Mitsui Chemicals Group aims to establish new growth platforms by creating and providing products and services that help improve QOL through innovation in chemicals.

#### Market Growth Rate for Key Products

Vision Care	Ophthalmic lens monomers (MR™ series, RAV7™ series)	4%
Nonwovens	SYNTEX™ (High-performance spunbonded nonwoven hygienic materials)	7%

Note: FY2013-2017

#### Increase/Decrease in Operating Income



FY2016 Volume Terms Costs of trade

# Market Analysis and Strategic Issues

## **Opportunities & Risks**

## Vision Care

# Global market growth

- Nonwovens • Growing popularity of disposable diapers made in Japan; a growing export market for premium disposable baby diapers
- Increasing competition due to the enhancement of production capacity in East and Southeast Asia

#### **Dental Materials**

 Rapid changes in trends (growing shift toward compact instruments) and expansion of the digital dental technology market

# Strengths

Vision Care

# A broad product lineup

# Nonwovens

- Comprehensive technological capabilities that extend from base resins to final processing
- A robust customer base

# Dental Materials

- Global brand power
- Research and development capabilities that cover products ranging from basic materials to dental materials

#### Challenges

#### Vision Care

• Further expanding business through the development and release of new products Nonwovens

#### NOTWOVETIS

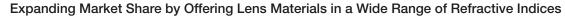
Maximizing production and sales through strategic alliances with customers
Steadily implementing plans aimed at boosting production

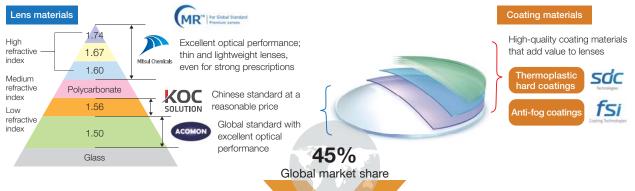
#### **Dental Materials**

Expanding business through the launch of products that support and promote digitization

The Mitsui Chemicals Group offers plastic ophthalmic lens materials ranging from low refractive to high refractive indices. In particular, our MR<sup>™</sup> series of world-leading high refractive lens materials have become the de facto standard for thin and lightweight lens materials.

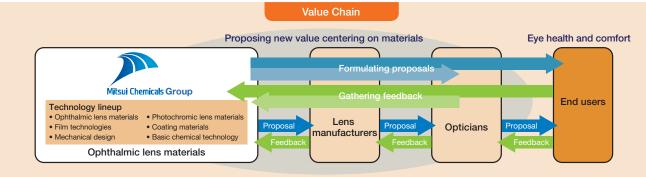
In addition, Mitsui Chemicals Group's affiliated company in the U.S., SDC Technologies, Inc., has developed high-quality coating materials for thermoplastic and anti-fog coating that are distributed worldwide. The Mitsui Chemicals Group aims to provide comprehensive solutions for diverse needs instead of simply providing lens materials for vision correction. We are expanding the potential of lens materials and addressing social needs for health and comfort by leveraging our wavelength control, polarization, and photochromic technologies.





Developing New Technologies That Meet Various Social Needs, Including Eye Health and Aging

Ensuring I	Eye Health and Comfort by Controlling the Amount of Light		
420cut	Light wavelength technology that cuts high-energy visible light in addition to blocking all ultraviolet wavelengths	yr Mau Chwell	Photochromic technology that controls the amount of light passing through the lens by darkening and lightening in response to ultraviolet light
NeoContrast <sup>®</sup>	Light wavelength technology that decreases glare and supports contrast sensitivity	<mark>UrbanP≋la</mark> ™	Polarization technology that ensures clearer sight by eliminat- ing diffuse reflections



A new business model and new materials aimed at optimizing eye health

# Topics

# Launched Sales of TouchFocus™

The Group has used next generation technology to tackle the trouble experienced by people who wear bifocal lenses, such as difficulties in switching focus when using stairs or driving, as well as to provide an alternative for those who opt to switch between several pairs of glasses. With the touch of a button, these innovative glasses can switch between different prescriptions, allowing the user to comfortably view things near, far, or anywhere in-between with minimal distortion. The glasses can be custom made for the customer's vision and are offered in 20 frame styles. The glasses are already sold through select retailers in Japan. In 2019, we will expand marketing to 100 stores.

Liquid crystal lens technology enables the user to change focus electrically. TouchFocus™ makes comfortable near, far, and in-between vision a reality.

Next generation eyewear that can instantly switch between the corrections for near- and far-sightedness with one touch

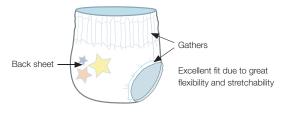


# Nonwovens High-Performance Hygiene Nonwovens with Excellent Flexibility and Stretchability

In East and Southeast Asia, disposable diapers, especially high-quality, high-performance premium disposable diapers made in Japan, are being used by more consumers and have risen in popularity particularly in China. In addition to such basic features as being leakproof, breathable, and unlikely to cause diaper rash, consumers desire high-performance, such as comfort and a snug fit. Developed with the technologies of the Mitsui Chemicals Group, our nonwoven features excellent flexibility and stretchability that satisfies these advanced consumer needs, winning accolades as a result. In fiscal 2018, we further boosted our supply capacity mainly by installing new high-performance nonwoven equipment at two bases in Japan, raising production to 15 Kt per year at Nagoya Works and 6 Kt per year at Sunrex Industry Co., Ltd.

We are fully leveraging our three-pronged Asian production structure in Japan, Thailand, and China to ensure a reliable supply of high-performance nonwovens and constantly expanding our supply capacity to meet growing demand. Moreover, we are developing

# Main Application of High-Performance Nonwovens

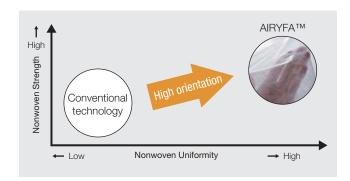


nonwovens for such new applications as medical products in a bid to maintain and expand our top-level share of the Asian market for high-performance nonwovens.

# AIRYFA™, the High Strength Flexible Nonwoven

AIRYFA<sup>™</sup> is a high-performance nonwoven that is gentle on skin, simultaneously offering softness and strength. By capitalizing on its proprietary polyolefin spinning technology to produce this thin textile with a hollow fiber structure characterized by a superior soft hand and even texture, Mitsui Chemicals has simultaneously realized both softness and strength, a feat that conventional technology cannot achieve.

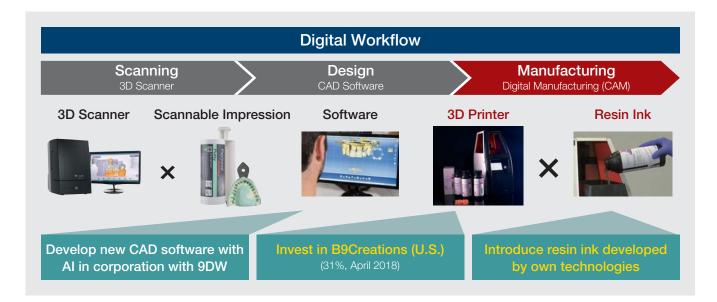
This is an eco-friendly nonwoven that takes global environmental issues into consideration by reducing the amount of raw materials used in production.



# Dental Materials Accelerating the Rollout of Total Solutions through a Digital Workflow

Subsidiary Sun Medical Co., Ltd. boasts a large share of the market for dental adhesives, a core product line it has been selling for 30 years in Japan. In 2013, the Mitsui Chemicals Group acquired the dental materials business of Heraeus Holdings GmbH. In 2017, our globally recognized dental businesses were united under the Kulzer brand in order to advance international expansion. We are also actively working to respond to digitization. To this end, we pursued joint development with 9DW Corporation and, in April 2018, we acquired a stake in B9Creations, LLC, a manufacturer of 3D printers. We are using the polymer science technologies of Mitsui Chemicals to create revolutionary dental materials and to provide the products and services needed by dentists and dental laboratories.

Nowadays, digitization has spread to the dental materials business. Crowns, bridges and other oral repair items are more often than ever designed and produced using digital tools. The Group is rapidly responding to the trend of digital solutions and expanding its business into new fields related to diagnosis, treatment and prevention in addition to its traditional field of oral restoration.



# Fiscal 2025 Target

# Operating income: 445.0 billion + New businesses

Growth investments that have been undertaken in each business area are expected to progressively contribute to earnings from fiscal 2018. While strengthening existing businesses and expanding overseas, the Group is enhancing its ability to provide health care solutions by expanding its lineup of new products as well as creating and strengthening 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 base through the enhancement of peripheral businesses.
- In nonwovens, we will continue expanding and strengthening business by developing high-performance products and pursuing development globally.
- In dental materials, we will continue working to strengthen our growth base by better meeting local needs and developing such new markets as that for digital solutions.

# Investment Strategies

- In vision care materials, we will continue considering growth investments, including expanding facilities in line with growing customer needs.
- In nonwovens, we will expand production capacity for highperformance nonwovens with an eye to the burgeoning Asian market. We will also continue considering investments aimed at expanding applications in the industrial materials field, such as filters and medical materials.
- In the dental materials field, we will continue to actively provide digital workflow solutions by focusing investment in markets that are taking off, including 3D printers and ink.

# Fiscal 2018 Plan

In vision care, we will continue developing new technologies and products that meet various social needs, including those related to eye health, as well as steadily meeting the growing demand for ophthalmic lens monomers.

In nonwovens, we will continue vigorously addressing the growing needs of the premium disposable diaper market, especially in Asia, and working to expand sales of new products, focusing on AIRYFA™.

In dental materials, in addition to implementing marketing plans suited to regional characteristics, we will continue enhancing the development of total digital workflow solutions.

# Blue Value<sup>™</sup> and Rose Value<sup>™</sup> Products in the Health Care Domain

# Rose Value<sup>™</sup>

# Extend healthy life expectancy

Ophthalmic lens materials MR<sup>™</sup> Series. UV+420cut<sup>™</sup> Contribute to eye health and comfort in addition to correcting for visual acuity



Rose Value<sup>™</sup>

Extend healthy life expectancy

# Rose Value<sup>™</sup>

Respond to the declining birth rate and aging population

Nonwovens for disposable diapers **SYNTEX™** 

Search for higher performance, such as comfort and a snug fit in addition to such basics as being leakproof, breathable, and not causing diaper rash

# Rose Value<sup>™</sup> **Blue Value**

Reduce CO<sub>2</sub>

Protect resources

Nonwovens for disposable diapers AIRYFA™

Reduce the amount of waste by using a unique fiber structure that combines "softness" and "strength" Support the comfortable lives of babies and their carers through disposable diapers

Value

Creation Story

Financial Section



Respond to the declining birth rate and aging population



Reduce CO<sub>2</sub>

Blue Value<sup>™</sup>

# Protect resources

Ophthalmic lens materials

# Do Green<sup>™</sup> MR-174<sup>™</sup>

Reduce fossil fuel resource consumption through use of bio-based raw materials

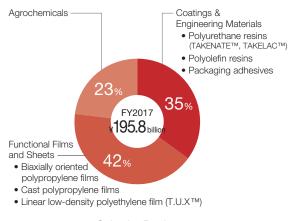


# Food & Packaging

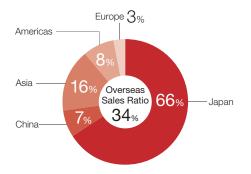


The Mitsui Chemicals Group will leverage its comprehensive strengths to continue developing businesses that help solve social challenges by, for example, boosting food production and reducing food loss.

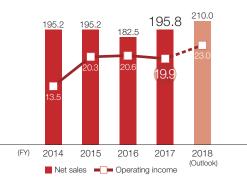
# Sales by Product



Sales by Region



Trends in Net Sales and Operating Income (Billions of yen)



# Social Issues and Needs

Rapid growth in the world's population has led to severe shortages of food, making it imperative for society to reduce food loss and waste and stabilize agricultural production. Moreover, needs have been rising for safe and reliable food sources that also have less of an impact on the environment.

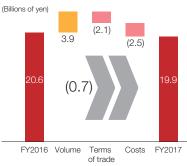
# **Business Vision**

Put in place a next generation pipeline that will serve as another cornerstone by maximizing the use of resources both within and outside the Group, accelerating new business expansion as well as overseas business development, for the sustainable growth of the Mitsui Chemicals Group.

# Market Share and Market Growth Rate of Mainstay Products

Agrocher	nicals		T.U.X	™ (Share as a high-p	erformance sealant)
	Market Share	Market Growth Rate*		Market Share	Market Growth Rate*
Global	_	2.6%	Japan	1st	1–2%
Asia	_	3.8%			* FY2017
Japan	10%	0.7%			
		* FY2016-2021			

# Increase/Decrease in Operating Income



#### ¥19.9 billion (¥(0.7) billion year on year) Volume +¥3.9 billion

 Stable sales of coating & engineering materials, performance films & sheets and agrochemicals

#### Terms of trade ¥(2.1) billion

 Decrease from unfavorable terms of trade due to upward swing in raw material prices, etc.

#### Costs ¥(2.5) billion

• Development costs, etc.

# Market Analysis and Strategic Issues

# **Opportunities & Risks**

- Increasing need for environmental contribution
- Need for boosting food production and reducing food loss due to long-term population growth
- An expansion in demand for packaging materials due to the development of the food processing industry and improving standards of living in Asia
- A decrease in demand in Japan and a murky outlook for China and other emerging economies

# Strengths

• A lineup of high-performance products

customers

- Research capabilities in designing and creating new materials
- Developmental capabilities rooted in collaboration with partner companies
   Good rapport with influential

# Challenges

- Strengthening of global market cultivation by establishing a "market-oriented" framework
- Emphasis on high added-value market
- Expanding development and investment in high-performance products that can also meet niche market needs
- · Developing a lineup of next generation core products

# Agrochemicals High-Performance Agrochemicals That Help Ensure Food Supply Stability

Agricultural production will likely continue to expand due to growing demand amid a rising global population and economic development in emerging countries.

To launch agrochemical products that boost crop yields in line with local needs, the Group company Mitsui Chemicals Agro, Inc. is actively working to establish a business base and strengthen alliances with overseas partners, especially in Asia. Regarding the insecticide dinotefuran and other active ingredients, the company is tapping the expertise of its partners to develop agrochemicals, expand the number of countries where these products are registered, and accelerate the pace of market release.

In addition, regarding next generation active ingredients, we released the fungicide tolprocarb in 2015, and we are planning to

# Insecticides Broflanilide

# Long-Term Commercialization Agreement with BASF

In 2017, Mitsui Chemicals Agro signed a long-term commercialization agreement with BASF. Leveraging the strengths of both companies, the company will accelerate global development, especially in Japan, Asia, the United States, and Europe, and help raise food production and improve the lives of people around the world.

Applications: Potential use applications for the new insecticide

in leafy and fruiting vegetables, as well as urban pest control settings Targeted pests: Many problematic insect pests in crops, and non-crop pests such as termites and flies



release the herbicide cyclopyrimorate, the insecticide broflanilide, and the fungicide guinofumelin after 2019. To meet global demand, we have signed agreements with major global agrochemical companies to promote expansion of broflanilide and quinofumelin.

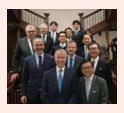
Mitsui Chemicals Agro, Inc. possesses advanced agrochemical discovery technologies backed by a long track record of molecular design, organic synthesis, and biological evaluation. By continuing to discover highly unique next generation active ingredients and to develop agrochemical products, the company helps ensure food supply stability as a R&D-based agrochemical manufacturer with a global presence.

# Fungicides Quinofumelin **Global Licensing Agreement with Bayer**

In 2018, Mitsui Chemicals Agro signed a licensing agreement related to the global development and marketing of quinofumelin with Bayer. Through this agreement, the company will continue helping to raise global food production while accelerating development of its overseas business to Asia, the United States,

Europe, South America, and beyond.

Applications: Potential use applications for the new fungicide in fruit trees, fruiting vegetables, and oil seed rape Targeted diseases: Fungal diseases including scab, gray mold, anthracnose, and rice blast



# Topics

ZERO by 40: Agriculture Industry Unites to Help Eradicate Malaria by 2040



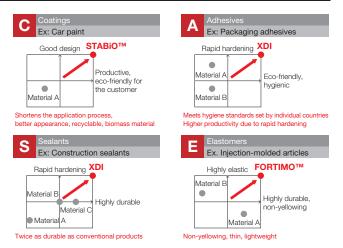
In 2018, the Mitsui Chemicals Group joined an initiative with the global agrochemical companies BASF, Bayer, Sumitomo Chemical, and Syngenta with the support of the

Bill & Melinda Gates Foundation and the Innovative Vector Control Consortium. The initiative, which was announced at the Commonwealth Heads of Government Meeting, is to support the research, development, and supply of innovative products that will help eradicate malaria by 2040. Using the organic synthesis technologies that we have developed over the years, we will contribute to the eradication of Malaria, an issue covered by one of the SDGs.

**Financial Sectior** 

# Coatings & Engineering Materials Expansion of Specialty Isocyanate Product Lineup

To better meet the varied needs of consumers, we are developing a wide range of applications for products in our extensive lineup of coatings and engineering materials, including TAKENATE™, TAKELAC™, and CHEMIPEARL™, which are employed in high-performance packaging materials. The Group was the first in the world to develop the specialty isocyanates FORTIMO™ and STABiO<sup>™</sup>. These products join a lineup that includes meta-xylylene diisocyanate (XDI), a high-performance product that enjoys wide market recognition. We are developing a wide range of applications for this lineup of specialty isocyanates as well as derivative products that incorporate them. All our new products create new customer value and are expected to help strengthen and expand the coatings & engineering materials business.



Value

# Functional Films and Sheets (Packaging Films Field) More Functional Food Packaging and Development in Asia

The packaging materials market in Asia has considerable growth potential as living standards improve and the region develops as a food processing and export center. The Mitsui Chemicals Group is keeping ahead of its rivals with production bases in Asia for products like T.U.X<sup>TM</sup>, a high-performance sealant film; EVOLUE<sup>TM</sup>, one of its raw materials, which now boasts approximately 60% market share in Asia; as well as such multi-material adhesives as TAKENATE<sup>TM</sup>, TAKELAC<sup>TM</sup> and ADMER<sup>TM</sup> that are capable of precisely meeting our customers' needs. Through technical support and cross-sectional marketing, we are promoting business development in Asia.

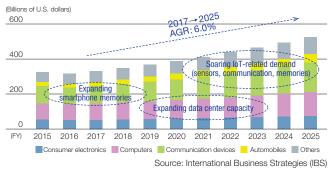
# Functional Films and Sheets (Industrial Films Field) Expanding the ICROS<sup>™</sup> TAPE Business

ICROS<sup>™</sup> TAPE is a surface protection tape used for silicon wafer backgrinding in the post-fabrication process of semiconductors. Among the major competitive manufacturers of this kind of tape, we are the only manufacturer and processor of resins, and we possess the largest share of the global market thanks to our resin design and film forming technologies.

# New Plant

To keep up with rapid market growth and expanding demand, we will establish a new plant for ICROS<sup>™</sup> TAPE in Taiwan, which is where demand is highest. We aim to expand our supply capacity by 1.5 times, build a stable supply system, and further expand business.

# Semiconductor Market Trends by Application



# Topics

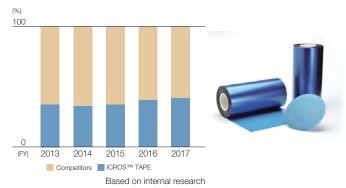
# Freshness-Retaining Bag SPASH™

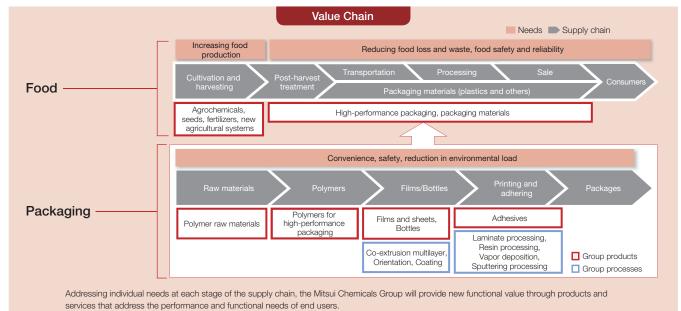
SPASH<sup>™</sup> is a packaging film that helps preserve freshness by retaining the water generated from the respiration of produce and other foods and keeping the inside of the bag clean thereby inhibiting wilting and decomposition.

The product received the Minister of Agriculture, Forestry and Fisheries Award at the Third Food Industry Mottainai Awards for its contributions to reducing food loss. It can be used with all produce and in a wide range of applications, including as a bag for household use, transportation use, and retail use.



# ICROS<sup>™</sup> TAPE: Share of the Global Market for Surface Protection Tape





# Fiscal 2025 Target

# Operating income: 440.0 billion + New businesses

The Mitsui Chemicals Group recognizes the pressing need to reduce food loss and waste, ensure food safety, and increase food production, and reduce environmental impact as a part of its efforts to address a variety of social issues. In addition to placing particular emphasis on high-growth and high-value-added markets, the Group will work to capture a share of burgeoning demand overseas, especially in Asia, while further expanding its business. In addition, the Group will endeavor to promote increased collaboration between business divisions and to develop core products that will provide a platform for further growth.

# Growth Strategies

- In agrochemicals, we will continue working to maintain growth through the five next generation active ingredients, reinforce R&D, and strengthen our overseas business base.
- In coatings & engineering materials, we will continue aiming to steadily spur demand for new products and brands and expand the scale of each product cluster by accelerating overseas expansion.
- In functional films and sheets, we will continue aiming to accelerate the overseas expansion of the food packaging materials business and expanding the business scale of industrial films.
- To accelerate the growth of the food packaging business, we will continue launching solution businesses aimed at maintaining the quality of food products.

# Investment Strategies

- In agrochemicals, we will continue aiming to steadily promote capital investment for the five next generation active ingredients and further accelerate growth.
- In functional films and sheets, we will continue actively promoting capital investment for expanding the scale of industrial films and strengthening the business base of packaging.

# Fiscal 2018 Plan

In fiscal 2018, despite risks posed by rising raw materials prices, we expect to secure a stable profit base thanks to an expansion in sales amid firm domestic demand and wider overseas expansion. Building on sales growth in its lineup of specialty isocyanate products, high-performance packaging materials, fungicides, and insecticides, the Group will expand its marketing efforts, especially in Asia, and focus on further sales expansion.

# Blue Value<sup>™</sup> and Rose Value<sup>™</sup> Products in the Food & Packaging Domain

# 💏 Rose Value™

# Respond to the food problem

# Keep-fresh film

**SPASH™** 

Inhibit the wilting and discoloration of fruits and vegetables thereby contributing to reduction in the amount of food waste



# P Blue Value™

# Reduce CO<sub>2</sub>

Food packaging milky-white film

Deliver a white finish by diffusing light on layers of air created inside films. Reduce the amount of resin used by 20-30% without the need for white printing



Protect resources

# 🕯 Rose Value<sup>™</sup>

# Respond to the food problem

Insecticide

**TREBONTM** Contribute to stable crop production and an increase in food production

# ✓ Blue Value

Reduce CO<sub>2</sub>

Protect resources

Sealant film **T.U.X™** 

Saves energy by lowering the heat seal temperature and reduces resin usage by improving film strength.

Its excellent sealing performance and impact resistance reduce the amount of food wasted in food production and distribution processes



# 🕯 Rose Value

Respond to the food problem



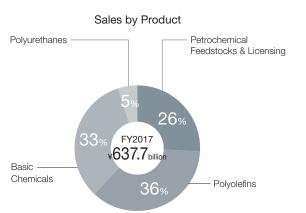
Strategy

# Basic Materials

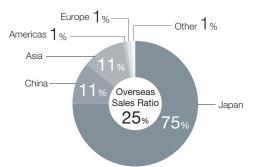


framework that will serve as a cornerstone business while supporting the Mitsui Chemicals Group as a whole. To this end, we will put in place a stable earnings foundation based on the competitive advantage our domestic facilities give us and our proven ability to capture Asian market share in value-added fields.

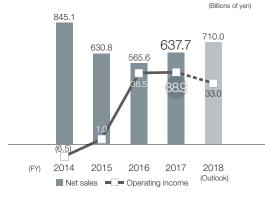
We are committed to building a



Sales by Region



Trends in Net Sales and Operating Income



# **Basic Materials Mission**

In the Basic Materials Business Sector, Mitsui Chemicals provides materials across such wide-ranging fields as automobiles, housing, consumer electronics, infrastructure, and food packaging. Every effort is being made to forge a presence in Asia and to secure stable profits by providing distinctive technologies and high value added products while further reinforcing cost competitiveness.

Over the past several years, the Basic Materials Business Sector has undertaken a major restructuring of its activities, including substantial cutbacks in production capacity.

# **Business Vision**

We are substantially improving our earnings structure though steady restructuring.

Moreover, we are working diligently to improve the operational stability and profitability of ethylene, a basic raw material for petrochemical products. Specifically, we are expanding sales of EVOLUE<sup>™</sup>, a core product in our high-value-added polymer lineup.

Despite the cloud of uncertainty that continues to hover over petrochemicals supply and demand, we adhere strictly to a policy of rationalization, make every effort to add value to our derivatives lineup, and maintain our high utilization rate in line with the growing trend toward local production for local consumption. As a result, we are putting in place a stable earnings platform that is resilient to changes in the external environment, including shifts in market conditions and the balance between supply and demand.

#### Increase/Decrease in Operating Income



# Market Analysis and Strategic Issues

#### Opportunities & Risks

- Infusion of U.S. shale oil- and Chinese coal chemical-derived production
- Bulk and commodity product price
- volatility in Asia
- Influx of imported products and worsening export terms due to the strong yen
- Surging crude oil prices
- Shrinking domestic demand and
- slowing Chinese economic growthShift in the market toward
- high-performance packaging
- Rising need for eco-friendly products

# Strengths

- Domestic production structure based naphtha cracker facilities located in two sites (one east, one west)
- Metallocene and other polyolefin
- catalytic technologiesRobustly cost competitive
- polyurethane system business with a growing global facility network underpinned by the establishment of Mitsui Chemicals & SKC Polyurethanes Inc.
- An expanding lineup of unique, differentiated products

# Challenges

- Expanding value-added fields using polyolefin catalytic technologies
- Accelerating global expansion of new system houses by leveraging synergies with Mitsui Chemicals & SKC Polyurethanes Inc.
- Establishing a stable earnings structure by business restructuring

# Strategy

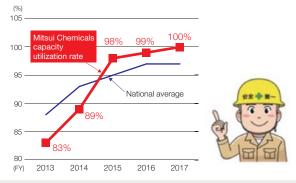
# Topics

# The Tireless Efforts at Our Works

Responding to concerns about the import of U.S. shale-derived petrochemical products and other developments in the petrochemicals market, Mitsui Chemicals worked hard to reinforce the earnings base of its naphtha crackers by drafting and executing profit enhancement measures focused mainly on supply chain revisions and strategies for leveraging opportunities and corporate strengths. In addition, we achieved stable operations, cost reductions, and technological innovation of our works.

# 1. Operating naphtha crackers at full capacity

Our capacity utilization rates exceed the national average and significantly contribute to our stable earnings.



# 2. Dramatically reducing costs and CO<sub>2</sub> emissions We realized steep cost reductions through our diligent rationaliza-

tion efforts.

# 3. Using revolutionary energy-saving technologies

We possess the world's most advanced energy-saving technologies. We were included in the first round of the Top Ten Energy Efficiency Best Practices List compiled by the International Partnership for Energy Efficiency Cooperation (IPEEC). The case was titled, "Large-scale Energy Conservation at the Ethylene Plant by using LNG Cold Energy."

# Fiscal 2025 Target

# Operating income: ¥30.0 billion

The impact of the expansion of facilities for polyethylene and other production derived from shale gas and Chinese coal chemicals is expected to be felt in Asia from mid-2018. Nevertheless, we will look to build a Basic Materials business that has a strong presence in the Asian market by reinforcing our cost competitiveness and shifting to high-value-added products.

# Growth Strategies

- We aim to further increase earnings by expanding our lineup of highly profitable differentiated products and derivatives.
- We plan to further enhance our competitiveness by establishing a local production for local consumption system and an optimal production system for bulk and commodity products.

# Investment Strategy

· We will actively pursue capital investment aimed at further enhancing our competitiveness.

# Fiscal 2018 Plan

In petrochemicals, operating rates are expected to remain at high levels for naphtha cracker and derivatives facilities on the back of firm domestic demand. With regard to our overseas bases, sales of EVOLUE™ have been sound since the start of commercial operations at a facility in Singapore in fiscal 2016. Looking ahead, operating rates are anticipated to increase.

In the basic chemicals and polyurethanes, we expect to post stable earnings. This largely reflects successful efforts to put in place an optimal production system and a structure that is resilient to changes in market conditions.

# Blue Value<sup>™</sup> and Rose Value<sup>™</sup> Products in the Basic Materials Domain

# Blue Value<sup>™</sup>

# Reduce CO<sub>2</sub>

Exhaust gas (NOx) reduction agent AdBlue™

# Reduce NOx emissions

Contribute to fuel conservation

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



# Blue Value<sup>™</sup>

# Reduce CO<sub>2</sub>

# Seat cushion material **ECONYKOL™** Reduce fossil fuel resource

consumption through use of bio-based raw materials

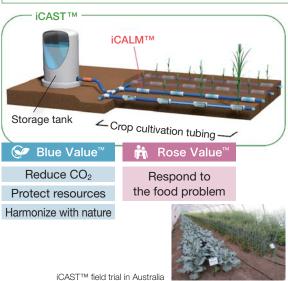
Protect resources



# Next Generation Business

# Creation of Solutions Businesses at the Boundaries and in the Peripheral Areas of Targeted Growth Domains

In New Business and Next Generation Business—newly added to the Group's 2025 Long-Term Business Plan—we are bringing to bear our combined knowledge to take on new challenges in areas with high potential. We have already begun to plant seeds for the future in expectation of the growth in 10 to 20 years.



**Next Generation Business Mission** 

Speaking of the Next Generation Business, our mission is to create solutions businesses through open innovation at the boundaries and in the peripheral areas of the three targeted growth domains. Collaborative initiatives across different business sectors are being undertaken, among the conventional business divisions, the New Health Care Business Development Division, the New Mobility Business Development Division, the Next Generation Business Development Division, and the Robot Materials Business Development Division.

For its part, the mission of the Next Generation Business Development Division is social implementation of new business models, and to make it happen, we will "Think Globally, Act Locally." The division is striving to create a new business model based on marketing Mitsui Chemicals Group know-how. Four projects are currently under way in the fields of agriculture, loT, energy and medical, all of which originated from contacts with start-up companies, academia and other external entities. Corporate Venture Capital (CVC) Group in the Next Generation Business Development Division is promoting the expansion of new businesses through open innovation.

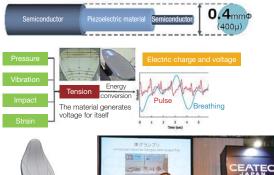
# **Agricultural Systems Solutions**

# Field Trials of the Crop Cultivation System iCAST™

The requirement of agriculture in water scarcity regions is increasing under global food and water shortages, and therefore irrigation technologies such as sprinkler or drip system are applied in 25% of the 1.5 billion hectares of the arable land in the world.

iCAST<sup>™</sup> is a novel crop cultivation system that provides water, nutrients and the air necessary for plant growth as much as plant wants and whenever plant wants. It was confirmed in the field trials in the United States and Australia that the crops were harvested at 1.3 to 1.5 time higher yield and quality with 30 to 50% of water comparing with the conventional methods.







# Development of Next Generation Display Materials Using Piezoelectric Lines

Piezoelectric lines are flexible and highly sensitive sensors composed of organic piezoelectric materials that can be cut to any desired length and then affixed to a surface. The lines' incredibly thin (Ø 0.4 mm) coaxial structure allows for unprecedented applications, including installation over large surface areas and on uneven media, where conventional ceramic sensors cannot be applied for. The high sensitivity and non-pyroelectric property (i.e., independency of temperature change) of piezoelectric lines is suitable for applications like vital sign monitoring and for detecting subtle warping in substrates. As such lines can be installed in seats or beds to monitor breathing and pulse, we are exploring applications such as a monitoring system for seniors in caregiving facilities.

In October 2017, we received a Semi-Grand Prix designation in the Connected Industries Category of the CEATEC AWARD 2017.

# Fiscal 2025 Target

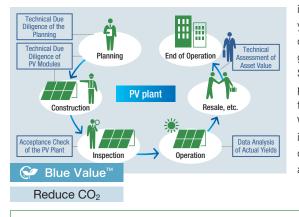
# Operating income: ¥25.0 billion in ot

(Includes new businesses in other targeted business domains)

# **Energy Solutions**

# Diagnostics and Consulting Business for Photovoltaic Power Generation

The business began when an employee with over 10 years of experience in encapsulants saw some solar panels as he was going down the street one day, found himself questioning whether they really could last for 20 years. One of the greatest strengths in our Diagnostics



is our life time expectation technology of the solar panel based on over 25 years of solar encapsulant manufacturing experience. Moreover, we draw on our experience in developing and operating the Tahara Solar-Wind<sup>™</sup> power generation facility, a joint venture, for an accurate energy yield analysis. Specifically, it uses data accumulated at the Mobara Branch Factory and the prototype power plant at the Sodegaura Center while sharing power generation data with power plants nationwide in cooperation with investment funds. We are also working with solar power plants that use storage batteries, an industry that has been on the rise recently. Going forward, the subsidiary will continue expanding services to Asia, which is experiencing marked growth, and then on to the rest of the world.

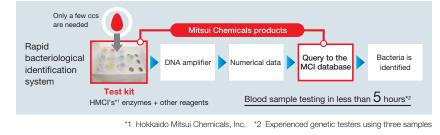
# **Medical Solutions**

# Rapid Identification System for Sepsis-Causing Bacteria

Sepsis is a bacterial infection with a high mortality rate. Every year 20 to 30 million people around the world develop sepsis, which kills about 10 million. Even a slight acceleration in identifying sepsis-causing bacteria would significantly increase the survival rate. Addressing this issue, the Mitsui Chemicals Group and Toyama University jointly developed a world-first groundbreaking system that is able to identify the bacteria causing sepsis within about five hours of taking a blood sample—a process that currently takes around two to three days. We aim to file a new drug application in Japan in 2019 while conducting trials with multiple medical institutions and moving ahead with an overseas rollout.

# Held a Seminar at SIIDC

In August 2017, Mitsui Chemicals held a seminar on its rapid identification system for sepsis-causing bacteria at the Singapore International Infectious Disease Conference (SIIDC). Dr. Hideki Niimi of Toyama University Hospital gave a technical explanation of the system and the results of clinical research conducted at the institution. Dr. Yoji Uejima of Saitama Children's Medical Center went over the results of clinical research using the system to diagnose severe infections of infants. The system provoked great interest among the participants and overseas medical professionals as evidenced by the exclamations and other reactions seen during the presentations.





# Topics

# Alliance with Leave a Nest Co., Ltd.

The Company has partnered with the technological venture accelerator Leave a Nest Co., Ltd. and venture capitalists to promote open innovation with startups tackling social challenges. Through direct interaction with a number of startups both in Japan and overseas and by leveraging our resources, including materials, know-how, analytical technologies,

production facilities, and sales networks, we are accelerating social implementation through joint development and corporate venture capital (CVC).



#### Alliance with Microwave Chemical Co., Ltd.

Microwave Chemical Co., Ltd. is a start-up company founded by Osaka University. It focuses on developing highly efficient processes and high-performance products using microwave

technology—the same kind used in microwave ovens. Mitsui Chemicals has partnered with this company in an effort to create new business and jointly develop new chemical processes.



Financial Section

# **R&D Strategies**

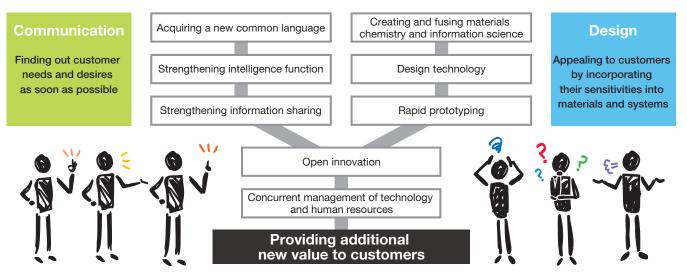
# **Basic Policy**

Committed to contributing to society, the Mitsui Chemicals Group works to provide solutions to a variety of social issues in such areas as the global environment, natural resources, energy, and food. These solutions are backed by material and product innovation spearheaded by the Group's R&D Division. At the same time, the Group strives to ensure its own sustainable development.

# R&D Strategies Looking toward 2025

In the R&D Division, we will expand ways to pursue customer-driven innovation to achieve growth in targeted business domains and create new businesses and products. The 2025 Long-Term Business Plan will expand resource allocations and double the Company's R&D expenses to ¥70 billion in fiscal 2025 compared with fiscal 2016.

# Quickly Find Solutions to Diversifying Customer Needs



# Specific Measures to Strengthen Cornerstone Technologies

Creating and fusing materials chemistry and information science Design technology Acquiring a new common language Open innovation	Beyond working to further develop and increase the sophistication of our technologies, we will strategically enhance the technological platforms, including evaluation technologies and design methods, needed to provide solutions.		
Rapid prototyping	As part of boosting our proposal capabilities for a diverse array of customers, we will enhance systems geared toward the rapid production and proposal of prototypes. To begin this process, we newly established the Mobility Development Center in April 2017. We will propose solutions to customers focusing on the mobility field through the design and processing evaluation of component parts.		
Intelligence function enhancement	We will enhance the intelligence functions that enable us to integrate, analyze, and interpret information from both inside and outside the Company in order to quickly identify signs of changes in new markets, leading to new business creation.		
Information dissemination capability enhancement We will strengthen the external appeal of the Company's material and technological capabilities and pr wide-ranging dissemination of information to customers in untapped fields and new customers in targ We aim to be the company that customers in a wide array of fields turn to first.			
Concurrent management of technology and HR	gement of technology We aim to develop creative researchers with far-reaching knowledge and strong technical skills as well as high-level communication skills that will enable them to identify latent customer needs.		

# Topics

## Participating in the Chemicals Industry's Open Platform

The Materials Open Platform (MOP) for Chemistry is a framework for open innovation established around the National Institute for Materials Science (NIMS). Taking advantage of the ongoing stream of new and rapidly developing Al and IoT technologies now emerging, we will work with Mitsubishi Chemical Corporation, Sumitomo Chemical Company, Ltd., and Asahi Kasei



Corporation to acquire the data analysis methods needed to support the further advancement of polymer materials within an all-Japan framework.



# Establishing the Mobility Development Center to Create Appealing Products

We established the Mobility Development Center as the first step toward our transformation from providing materials to providing solutions. The slogan of the center is "Creating Appealing Products." At the center, we aim not only to provide the materials that match the components and parts customers need but to furnish customers with total solutions that encompass design, analysis, and evaluation. We are continuing to acquire and develop technologies and human resources within and without the Mitsui Chemicals Group for the center.

# Topics

# Opening the MOLp Café for a Limited-Time Only

The Mitsui Chemicals Material Oriented Laboratory (MOLp<sup>™</sup>) is an open laboratory project by the Mitsui Chemicals Group which aims to discover the hidden enchantment and functional value of materials by making full use of multiple senses. MOLp<sup>™</sup> invites collaboration to share our innovative ideas and solutions. For five days (March 7 to March 11, 2018), MOLp<sup>™</sup> opened the MOLp Café, "CONCEPT of MIXOLOGY," as its first stand-alone exhibit. The MOLp Café elevated to art the concept of experiencing the novel appeal of materials in the form of everyday objects. These objects were put on display with some produced for sale and could be held in visitors' hands for a direct experience. Over the five days of the event, the cafe recorded a total of 1,200 visitors, who experienced the appeal of materials in various forms. MOLp<sup>™</sup> will continue to blaze a trail for the future of materials through communication with society.

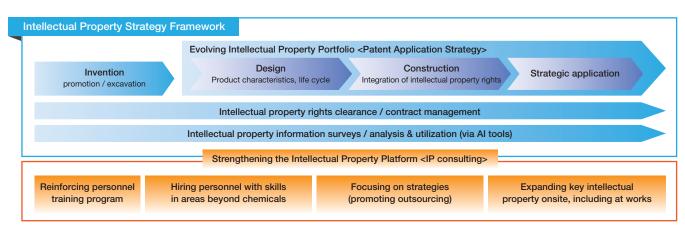


# **Intellectual Property Strategies**

### **Basic Policy**

The Mitsui Chemicals Group regards intellectual property as a wide range of intangible assets that contribute to its business, including a host of rights under contract and trade secrets, as well as intellectual property rights like patents, confidential know-how, utility models, designs, brands (trademarks), and copyrights. The Group understands the importance of strategically leveraging an optimal mix of intellectual property.

Under the 2025 Long-Term Business Plan, the Company will reassess its policy (patent application strategy) for acquiring and utilizing intellectual property that gives it an edge over the competition. Through tight-knit cooperation among business divisions, R&D divisions, production/technology divisions and other concerned departments, the Mitsui Chemicals Group aims to maximize the business opportunities afforded by intellectual property while minimizing any associated business risk.



#### Mintellectual Property https://www.mitsuichem.com/en/techno/ip/index.htm

Mitsui Chemicals was selected as one of the 2017 Top 100 Global Innovators by Clarivate Analytics, which is a global data services company. We garnered praise for the intellectual property efforts we are undertaking in Japan and overseas. Clarivate Analytics analyzed intellectual property and patent trends using its name brand patent data to select the world's most innovative companies and organizations.

Selected as One of the 2017 Top 100 Global Innovators



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# **Basic Strategies**

In the 2025 Long-Term Business Plan (LTBP), the Group set out three basic strategies: (1) pursue innovation, (2) accelerate global expansion, and (3) strengthen the competitiveness of existing businesses. In implementing these strategies, human resources strategy and human resources management will play a critical role in the success of LTBP implementation.

Mitsui Chemicals Group will continue working towards improving corporate value and achieve its LTBP targets through comprehensive talent acquisition management, people development, placement, and utilization of human resources.

# Key Issues

# ① While Mitsui Chemicals Group continue its effort in realizing LTBP, the effort in talent management for attracting, retaining, developing and deploying talents also running in parallel to support the businesses

Aside from the traditional annual recruitment intake of fresh graduates from the tertiary educational institutions, the Group ramped up its efforts to hire mid-career experienced professionals. In fiscal 2017, we hired 92 experienced professionals and 77 new graduates. Around half of the experienced hires were to fill positions in R&D and process engineering. This is a concerted effort to further strengthen our competitiveness and development capabilities geared toward future growth.

New/Experienced Hires



In addition, we are also professionals with expertise in the areas that we are focusing on, with the aim to develop businesses and make offers that are more aligned with customer needs, and at the same time, incorporating and enhancing the Company's internal knowledge.

Going forward, we will continue to create new values by actively recruiting professionals and talents with new knowledge and ideas that are not currently in the Company, enabling us to approach challenges from a variety of perspectives.

# **2** Recruiting and developing Future Leaders

The Group is faced with the urgent need to ensure continuous supply and readiness of future leaders. As the business growing, the number of affiliates networks also expanded, it is important to ensure there are sufficient capable leaders readily available for the assignment. The Group has started the Key Talent Management (KTM) system (detail following) from fiscal 2016.

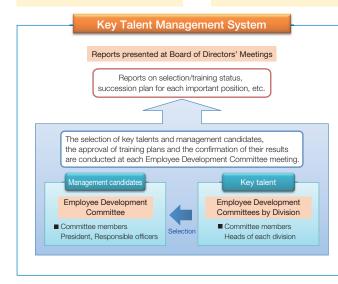
Going forward, we will further enhance the KTM system to enlarge the pool of talents and continue groom talents and professionals who can support the growth of the Group.

## Key Talent Management Progress in Fiscal 2017

100 critical positions were selected and reviewed on the individual development plans. This is to ensure the right amount of developmental trainings are put in place for the future executive candidates, including affiliates' employees.

### Specific Plans Moving Forward

- (1) Hold follow-up discussions regarding their individual development plans (i.e., placement, training) with future executives selected from division managers and group leaders at Mitsui Chemicals, Inc. and its affiliates, as well as separate discussions with newly selected individuals.
- (2) Continually review the individual development plans of key talents selected from team leaders at Mitsui Chemicals (and equivalent positions at affiliates).
- (3) Following 2017 efforts, continue to formulate succession plans for the 100 critical positions.
- (4) Strengthen the assessments of future executives.



① Key Talents and Management Candidates

Key talents : Those among the Group's worldwide human resources who consistently demonstrate high levels of performance, competence (qualification requirements), potential, and enthusiasm
 Management candidates : Those among the key talents who have the potential to become future managers

② Talent Development Committees Established

The committees select key talents and future executives, approve the training programs, and confirm the results of said programs. The committees discuss their employees' potential assignments and necessary training from five perspectives: Bird's eye view, business restructuring, new business development, Company-wide projects, and overseas subsidiary operations. They then decide on the direction of the individual development plans.

# **③ Global HR Management in Line with Accelerating Global Business**

Since the founding of Mitsui Chemicals in 1997, the Group's overseas affiliates have grown to 106, the ratio of its employees working overseas has increased to 43%, and the ratio of overseas sales has expanded to 44%. With the progression of globalization, the establishment of a seamless global system has become a major challenge in the field of HR management. That would include system integration for overseas bases arising from post-merger integration (PMI) for cross-border M&A.

# Value Creation Story

# Financial Section

# **HR Challenges**

- Establish a unified HR tools and policy to universally implement KTM across each site around the world and overcome regional differences. This entails a universal approach across each global base in terms of skills and knowledge competencies, HR record databases, job levels, employee global mobility, affiliates' executive compensation and benefits guidelines, and other aspects.
- · Build a holistic communication network or platform that enables all our employees from every country to connect globally beyond their region or nation.
- Secure outstanding pool of talents with a range of different backgrounds who can work effectively on a global stage.

# Group Globalization and Global HR Transition

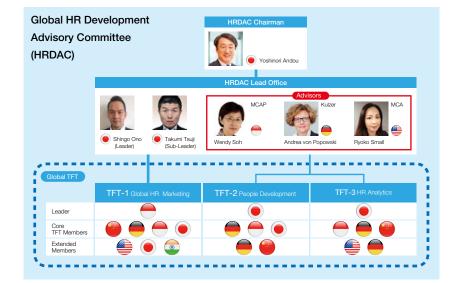


# The Virtual Global HR Organization

The HR Development Advisory Committee (HRDAC) is a virtual global HR organization comprising members from the Tokyo Head Office, Regional Head Quarters, and companies specified by the Head Office. The committee promotes global HR measures virtually and has official management rules, meetings, and a budget.

# **HRDAC Key Targets**

- 1. Key Talent Management
- 2. Localization
- 3. HR Business Partner
- 4. HR Governance, Reporting Line
- 5. Global Employee Engagement Survey
- 6. Global HR Analytics (KPI)



(GLP) in partnership with an acclaimed German

academic institution (Mannheim Business

# From Asia Pacific to the World

Mitsui Chemicals Asia Pacific, Ltd. (MCAP) has started its shared services model since 2006 for its affiliates in Singapore covering HR, Finance & Accounting, IT and Legal & risk compliance. These four functional services are grouped under MCAP Corporate Service Center. In recent years, HR, IT & Legal & risk compliance has extended its services to support affiliates in Asia Pacific region.

MCAP HR has been actively involved with Mitsui Chemicals HR in spearheading several global HR projects. Some of the MCAP HR staff are the HRDAC Task force leaders or members. The virtual HRDAC structure has been a very practical, efficient and instrumental to allow Mitsui Chemicals HR to tap on overseas HR capability from Singapore, Germany, China and US in driving global HRM initiatives.

To achieve the HRDAC key targets, Task Force Team (TFT) were formed to work on the challenges. We took a wide range of measures, including implementing the Global Leadership Program

# Looking to the Future

Going forward, we will continue with various enhancement projects and shape the current virtual organization into a full-fledged global organization, in line with the increasing speed of business globalization.

been gaining momentum.

With more than 17,000 people to organize, the Group is facing urgent needs in enhancing HR management around the globe as business areas continue to expand. The Key Talent Management system will be the center of this. It was launched to intentionally and strategically develop and acquire talents who can strategically and efficiently lead global business and people, and can develop the business in line with the

unique characteristics of each region. We will take on the aforementioned challenges by tapping into the various capabilities of diverse talents to help achieve more accomplishments that will shape the future.

Yoshinori Andou Executive Officer, General Manager, Human Resources Division

Wendy Soh Director,

Business Excellence Center

Mitsui Chemicals Asia Pacific, Ltd.

School), establishing a KTM program, and introducing global job

assessments. In recent years, because of the efforts of HRDAC,

much synergy between the HR divisions from various countries

transcend nationalities and represent one of our core values) have

has been observed. The diverse One Team operations (which



# Board of Directors, Board of Corporate Auditors and Executive Officers (As of June 26, 2018)

# Board of Directors

Board of Directors

Attended/Meetings

10/10

Held



Representative Director, Member of the Board, President & CEO

#### Tsutomu Tannowa

	Joined Mitsui Toatsu Chemicals, Inc. Executive Officer of the Company
7.pn 2001	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 (to present)



Representative Director, Member of the Board, Executive Vice President

#### Masaharu Kubo

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
  - (to present)

Independent Outside Directors

9/10



Representative Director, Member of the Board, Senior Managing Executive Officer

#### Hideki Matsuo

- 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 Member of the Board, Senior Managing
- Apr. 2017 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 (to present)



Board of Directors Attended/Meetings Held

8/8\*1

Member of the Board Senior Managing Executive Officer

#### Takayoshi Shimogori

- 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
- Polymetric Materials Subctu And Construction of the Company, Business Sector President, Functional Polymetric Materials Business Sector Sector President, Functional Polymetric Materials Business Sector President, Mobility Business Sector Apr. 2016 Managing Executive Officer of the Company Business Sector President, Food & Packaging Business Sector President, Food & Packaging Business Sector President, Mobility Business Sector President, Food & Packaging Business Sector Packaging Business Pachaging B
- \*1 The number of meetings held since Mr. Shimogori's appointment.

Board of Directors

Attended/Meetings

10/10

Held



# Member of the Board, Managing Executive Officer

Newly appointed

#### Osamu Hashimoto

Anr 1987	Joined the Company
	General Manager, Planning and
7.012	Administration Div., Functional Chemicals
	Business Sector
A	Business Sector

- Apr. 2014 Senior Director, Planning and Administration Div., Functional Chemicals Business Sector Oct. 2014 Senior Director, General Manager,
- Corporate Planning Div. Apr. 2015 Executive Officer of the Company
- General Manager, Corporate Planning Div. Managing Executive Officer of the Company Business Sector President, Health Care Apr. 2017
- 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 (to present)



## Member of the Board, Outside Director

- Yukiko Kuroda
- Apr. 1986 Joined Sony Corporation Jan. 1991 Representative Director of People Focus
- 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 Marubani 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)

#### Maior Activities

She 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.

**Board of Directors** 

## Member of the Board, Outside Director

# Hajime Bada

- 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

CORPORATION (to present) Jun. 2018 Outside Corporate Auditor of NSK Ltd. (to present)

#### Maior Activities

He 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

Maior Activities He primarily speaks about sound and efficient corporate management from the point of view of one concerned with the validity of business execution strategy based on

Executive Officers

President & CEO	Tsutomu Tannowa	Overall corporate and group management
Executive Vice Masaharu Kubo President		Executive Advisor (CFO) Responsibilities: Corporate Administration & Legal Div. Finance & Accounting Div., Corporate Communications Div., Corporate Sustainability Committee, Risk Compliance Committee
Senior Managing Executive Officer	Hideki Matsuo	Executive Advisor (CTO) Responsibilities: R&D Center, Production & Technology Center, Fabricated Products Business Coordination Div. and Intellectual Property Div.
Senior Managing Executive Officer	Takayoshi Shimogori	Business Sector President, Food & Packaging Business Sector Responsibilities: Mobility Business Sector, New Mobility Business Development Div. and Robot Materials Business Development Div. Director, Chairman of ARRK CORPORATION
Managing Executive Officer	Osamu Hashimoto	Business Sector President, Health Care Business Sector Responsibilities: New Health Care Business Development Div. and H-Project Div.

Managing Executive Officer	Shinji Ogawa	Responsibilities: RC & Quality Assurance Div. Purchasing Div., Logistics Div. Information System Div. and Responsible Care Committee
Managing Executive Officer	Shin Fukuda	Center Executive, R&D Center Responsibilities: Next Generation Business Development Div.
Managing Executive Officer	Koichiro Sato	Business Sector President, Mobility Business Sector Responsibilities: Nagoya Branch
Managing Executive Officer	Hiroshi Tsunashima	Center Executive, Production & Technology Center Responsibilities: Works
Managing Executive Officer	Tadashi Yoshino	Business Sector President, Basic Materials Business Sector Responsibilities: Osaka Branch and Fukuoka Branch

62 Mitsui Chemicals Report 2018



Attended/Meetings Held 9/10



# Member of the Board, Outside Director

#### Hiromi Tokuda Apr. 1971 Joined Nippondenso Co., I

- currently Denso CoRPORATION Jun. 2000 Director of DENSO CORPORATION Jun. 2004 Managing Officer of DENSO CORPORATION Jun. 2006 Senior Managing Director of DENSO CORPORATION
- CORPORATION Jun. 2008 Executive Vice President of DENSO CORPORATION
- UCHPURATION Jun. 2011 President and CEO, Representative Director of Nippon Soken, Inc. (currently SOKEN,Inc) Jun. 2014 Advisor, Senior Technical Executive of DENSO CORPORATION
- Jun. 2016 Member of the Board of the Company
- (to present) Jul. 2016 Advisor of DENSO CORPORATION
- his extensive experience related to the Mobility domain, which is a main focus of the Company.





# Board of Corporate Auditors .....



#### Board of Directors Attended/Meetings Held

10/10 Board of Auditors Attended/Meetings 14/14

#### Corporate Auditor

#### Akio Ayukawa

- Apr. 1975 Joined the Company Jun. 2011 Executive Officer of the Company Business Sector President, Petrochemicals Business Sector Jun. 2012 Managing Executive Officer of the Company
- Jun. 2012 Managing Executive Officer of the Company Business Sector President, Petrochemicals Business Sector Apr. 2014 Managing Executive Officer of the Company Jun. 2014 Member of the Board, Managing Executive Officer of the Company Apr. 2015 Member of the Board, Senior Managing Executive Officer of the Company Apr. 2016 Member of the Board of the Company Jun. 2016 Corporate Auditor of the Company (to present)





## Corporate Auditor

# Shigeru Isayama

- 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, Mitri Chamical America 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 Corporate Auditor of the Company (to present)

# Independent Outside Corporate Auditors Board of Directors



# eetings 9/10 Board of Auditors Attended/Meetings

14/14

Outside Corporate Auditor

- Hiroki Nishio
- Apr. 1974 Joined the Mitsui Bank, Limited Apr. 2007 Senior Managing Director of Sumitomo Mitsui Banking
- Apr. 2007 Senior Managing Director of Sumitomo Mitsui Banking Corporation Jun. 2008 Representative Director and Senior Managing Director of Sumitomo Mitsui Financial Group, Inc. Orporate Auditor of Sumitomo Mitsui Banking Corporation Corporate Auditor of Sumitomo Mitsui Banking Corporation Jun. 2011 Representative Director and President of Muromachi Co., Ltd. Representative Director and President of Muromachi Building Co. Ltd.
- Co., Ltd. Jun. 2010 Outside Director of SANKI ENGINEERING CO., LTD. (to present) Jun. 2015 Corporate Auditor of the Company (to present) Jun. 2016 Special Advisor of Muromachi Co., Ltd. (to present)

#### Maior Activities

He has been involved in the management of financial institutions as well as private sector companies for many years and has experience serving as an outside officer of other companies. Based on his all-round knowledge and experience in management, he advocates sound and efficient corporate management with a view to ensuring that the Company's business is executed in an appropriate manner as well as improving the profitability and stability of the business.

#### Maior Activities

Outside Corporate Auditor

Katsuvoshi Shinbo

Corporation

He speaks about sound and efficient corporate management from the perspective of one concerned with ensuring that the execution of the Company's business is appropriate based on his specialist knowledge and extensive experience not only as a lawyer but also as an outside officer of other companies. \*2 The number of meetings held since Mr. Shinbo's appointment

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

Jun. 2017 Corporate Auditor of the Company (to present) Outside Corporate Auditor of Sumitomo Mitsui Financial Group, Inc. (to present)

#### Maior Activities

He has a wealth of experience serving as a certified public accountant as well as an auditor for other companies; hence, he speaks about sound and efficient corporate management from the perspective of one concerned with ensuring that the execution of the Company's business is appropriate based on his extens all-round knowledge and experience in management. \*3 The number of meetings held since Mr. Tokuda's appointment

Executive Officer	Yasunori Nishiyama	Representative in the Americas President, Mitsui Chemicals America President, Whole You
Executive Officer	Akira Misawa	CEO & Chairman, Kulzer
Executive Officer	Keishi Susowake	General Manager, Omuta Works
Executive Officer	Satoshi Ozawa	President, Mitsui Chemicals Agro
Executive Officer	Yoshinori Andou	General Manager, Human Resources Div. Responsibilities: Mitsui Chemicals Asia Pacífic, Mitsui Chemicals China, Mitsui Chemicals America, Mitsui Chemicals Europe, and Affiliates Coordination Div.
Executive Officer	Akio Hirahara	General Manager, Corporate Planning Div.
Executive Officer	Ichiro Kondo	General Manager, Ichihara Works
Executive Officer	Yasuhiro Hosomi	General Manager, Iwakuni-Ohtake Works
Executive Officer	Takehiko Takagi	General Manager, Osaka Works

Executive Officer	Akihiro Tachibana	Business Sector Vice President, Health Care Business Sector and General Manager, Nonwovens Div. Health Care Business Sector
Executive Officer	Hajime Nakajima	General Manager, Finance & Accounting Div.
Executive Officer	Hiroshi Nishio	General Manager, Internal Control Div.
Executive Officer	Naoshi Hamada	President, Prime Polymer
Executive Officer	Koichi Yanase	Business Sector Vice President, Mobility Business Sector and General Manager, Planning & Coordination Div., Mobility Business Sector
Executive Officer	Shingo Shibata	Co-CEO, Mitsui Chemicals & SKC Polyurethanes (Korea) and President, Mitsui Chemicals & SKC Polyurethanes (Japan)
Executive Officer	Atsushi Komoriya	Director, Executive Vice President of ARRK CORPORATION
Executive Officer	Fumio Yoshizumi	Business Sector Vice President, Basic Materials Business Sector

Board of Directors Attended/Meetings Held 8/8\*3 Board of Auditors Attended/Meetings

11/11\*3

# Outside Corporate Auditor

- Shozo Tokuda
- 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 Corporate Auditor of ITOCHU ENEX CO., LTD.
- (to present) Jun. 2017 Corporate Auditor of the Company (to present)

Strategy



Board of Directors



# **Corporate Governance**

The Company holds the enhancement of corporate governance to be one of the key management issues enabling it to fulfill its corporate social responsibility and maintain the trust of its stakeholders.

# **Basic view**

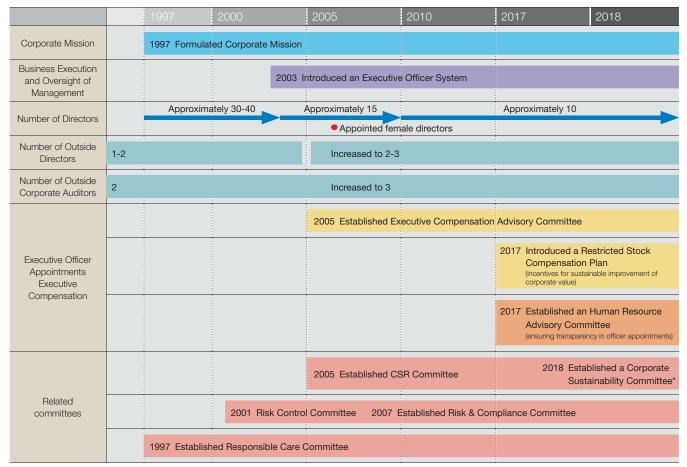
The Mitsui Chemicals Group is constantly engaged in business activities to realize its Corporate Vision, which consists of its Corporate Mission and Corporate Target. We recognize that efforts to achieve effective corporate governance as part of that process will allow us to: ① maintain and develop trust with Mitsui Chemicals' shareholders and all other diverse stakeholders of the Group, and ② create a framework that can execute transparent, fair, timely, and decisive decision making, through which the Group can achieve sustainable growth and increased corporate value over the medium to long term.

Sorporate Governance https://www.mitsuichem.com/en/corporate/governance.htm

🕙 Corporate Governance Guidelines https://www.mitsuichem.com/pdf/en/corporate/governance/governance\_guide\_e.pdf

# **Corporate Governance Reforms**

We have continuously instituted reforms since the founding of the Mitsui Chemicals with the aim of raising the effectiveness of our corporate governance to an even higher level.



\* In order to respond to societal demands and further enhance its efforts with regard to ESG, in June 2018 the Company reorganized the CSR Committee into the Corporate Sustainability Committee.

# Enhancing Governance

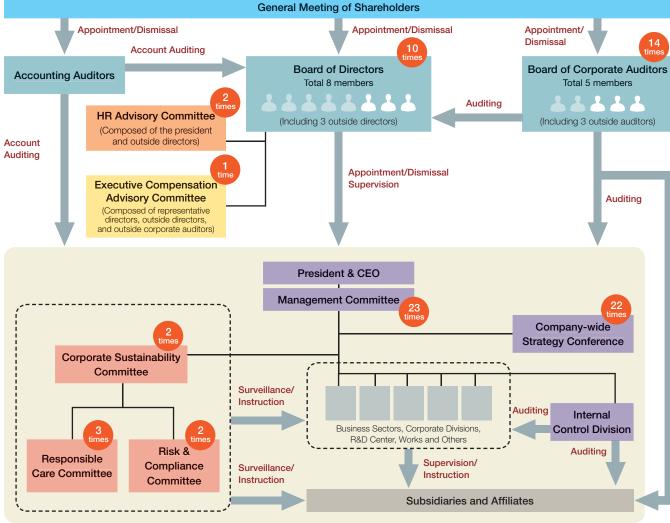
**Conducting Training for Corporate Ethics and Corporate Governance** As the Group steps up its global management, it is facing the pressing challenges of establishing and unifying corporate ethics throughout the Group and enhancing governance.

In one of its latest efforts, the Group has introduced governance training at Mitsui Chemicals India, Pvt. Ltd. focused on communicating corporate ethics concepts to ensure each workplace can practice them.

Looking ahead, we plan to roll out this training program in every country in a timely manner.







# General Meeting of Shareholders

Make important decisions as the supreme decision-making body.

**Corporate Governance Framework** 

### **Board of Directors**

The Board of Directors decides, reports, and deliberates on business strategies, business plans, and all other important matters related to management in addition to overseeing the execution of business.

## **Board of Corporate Auditors**

Corporate auditors conduct audits on such matters as the directors' performance of duties in accordance with audit policies and plans established by the Board of Corporate Auditors.

### Human Resource Advisory Committee

To ensure the transparency and the validity of executive officer appointments, this committee reviews and reports on executive officer candidates to the Board of Directors.

# Executive Compensation Advisory Committee

To ensure the transparency of performance evaluations and the validity of the compensation levels, this committee reviews and reports on executive compensation to the Board of Directors. : Number of meetings held in fiscal 2017

### Management Committee

This committee reviews items that need to be discussed in advance of being put on the agenda of Board of Directors meetings and deliberates on important matters related to business execution.

# Company-wide Strategy Conference

This committee deliberates on strategy from a Company-wide perspective related to management and operational issues.

# **Executive Compensation System Overview**

# Basic Policies

- ① Compensation is commensurate with the authority delegated to the individual by the Company's management and will be tied to the growth and performance improvement of the Mitsui Chemicals Group.
- <sup>®</sup> Compensation schemes are devised to reflect both corporate performance and the performance of the individual director.
- ③ Compensation for those in higher positions more strongly reflects their contributions to medium- and long-term corporate growth and aligns their values with shareholders.
- <sup>④</sup> We ensure transparency and maintain accountability to our shareholders and other related parties regarding the determination of compensation for directors.

#### Procedure

The Company's executive compensation is reported to and deliberated on by the Executive Compensation Advisory Committee and then decided on by resolution of the Board of Directors.

## Composition of Compensation

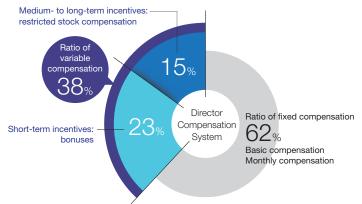
Compensation for directors (excluding outside directors) comprises ①monthly compensation (a fixed amount), ②bonuses, and ③restricted stock compensation.

Compensation for outside directors and corporate auditors solely comprises monthly compensation (a fixed amount), the level of which is established with reference to third-party surveys regarding compensation for corporate managers in Japan and other information.

# Director Compensation System (Fiscal 2017 onwards)

	Description	Compensation Type	
Medium- to long-term incentives	<ul> <li>Results-based</li> <li>Work toward sustainable improvement in the Company's medium- to long-term corporate value</li> <li>Promote the concept of shared value with the Company's shareholders</li> </ul>	Restricted stock compensation	
Short-term incentives	Given in line with business performance for the fiscal period	Bonuses	
Basic compensation		Monthly compensation	

# Fiscal 2017 Ratio of Directors' Basic Compensation to Incentives (excluding outside directors)



## Total Compensation for Fiscal 2017

	Total	Total Compensation by Type (Millions of yen)			Number of
Classification	Compensation (Millions of yen)	Basic Compensation	Bonuses	Stock Compensation	Persons Applicable
Members of the Board (excluding outside directors)	360	223	83	53	6
Tsutomu Tannowa	(112)	(65)	(29)	(18)	—
Corporate auditors (excluding outside auditors)	64	64	—	—	2
Outside directors and corporate auditors	72	72	—	—	8
Total	496	359	83	53	16

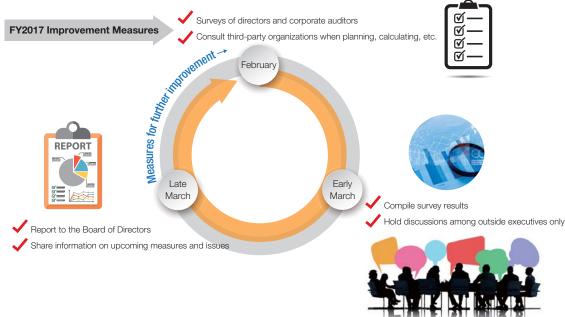
Notes: 1. The figures in the table above include amounts paid to one member of the board and two corporate auditors who retired as of the close of the Annual General Meeting of Shareholders for the Company's 20th Business Term held on June 27, 2017, covering the period from April 2017 through to the date of retirement.

2. Figures in parentheses are included in the total figures in the line above.

# Strategy

The Company's Board of Directors strives toward constant self-improvement, analyzing and evaluating the effectiveness of the Board of Directors every year using such methods as self-evaluations performed by each director.

# ■ Method for Evaluating the Effectiveness of the Board of Directors



# Measures Taken in Fiscal 2017

# ① Expanded Discussion Agenda

• Allowed for discussion prior to meetings about the direction of matters that will have a large impact on business, such as large-scale M&A projects

- 2 Improved Content of Briefings
  - Made the content of briefings more concise, focusing on salient points
- **3 Secured Flexibility** 
  - Created a system for action by unanimous written consent for matters that require speed or good timing
  - Enabled the use of TV conferencing and other forms of ICT for remote attendance of Board of Directors meetings

## Evaluation Results and Measures Going Forward

In fiscal 2017, by moving to enhance the supervisory function of the Board of Directors, we ensured that improvements are progressing swiftly. The evaluation confirmed that the effectiveness of the Board of Directors has remained sufficient since the previous year.

#### Remaining Issues

We need to revise management to further expand discussion agendas and the types of matters to be reported on as well as to enhance discussions by the Board of Directors.

The Company will review and implement necessary measures as appropriate to reinforce the supervisory functions of the Board of Directors based on the result of the annual evaluation of effectiveness.

# Measures for Further Improvement

Opinions of Outside Directors and Corporate Auditors in Discussions

- They wish to use their knowledge in specialized fields to hold constructive discussions that influence the future.
- They wish to exert their capabilities with regard to matters that will have a large impact on the Company's business, mainly business plans, strategies, M&A, and risk.
- They wish to be involved in discussions related to the overall direction of the Company's strategies, from the earliest stages of planning through the tracking of progress made during execution, as was done in 2016 when many discussions were held on the long-term business plan.

# **Risk and Compliance Management**

Risk and compliance management systems must be firmly in place and effectively run for a company to fulfill its social responsibilities and earn the trust of its stakeholders. The Mitsui Chemicals Group makes concerted efforts to enhance such systems as the basis for corporate activities.

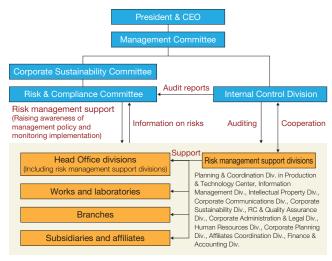
🔏 Risk and Compliance Management https://www.mitsuichem.com/en/sustainability/corporate/compliance/index.htm

# Risk Management System

The Mitsui Chemicals Group Risk Management System has been introduced to facilitate the early discovery of risks and prevention of risks materializing. Key risks are identified in the fiscal year budgets of each Group company and division, risk conditions are analyzed, and measures are taken to address these risks.

The Group also uses compliance checklists as part of a risk management PDCA cycle designed to monitor progress and to prevent risks from materializing. The risk management system has internal control systems, and the status of internal corporate control systems is reported to the Board of Directors.

#### Structure of Group Risk Management System



# Compliance

As an indication of the priority given to compliance with laws and regulations over any pursuit of profit, the Mitsui Chemicals Group has identified compliance with laws and regulations as the first item in its Group Action Guidelines formulated in February 2006. In addition to putting in place a risk management framework that includes the Risk & Compliance Committee and Risk Hotline, Mitsui Chemicals is acutely aware of the critical need to have its employees who drive its risk management framework forward

strictly adhere to all laws and regulations. With this in mind, the Company has undertaken four initiatives in an effort to promote compliance. In addition to preparing a basic *Compliance Guidebook*, 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.

# **Declaration on Preventing Bribery**

Amid the accelerating development of global business and in light of growing international concern over bribery scandals in recent years, a key issue the Mitsui Chemicals Group must address is the upgrading and strengthening of systems to prevent bribery around the world.

To prevent bribery in countries and regions where it has operations, the Mitsui Chemicals Group complies fully with regulations, including the Unfair Competition Prevention Act in Japan, the Foreign Corrupt Practices Act in the United States and the Bribery Act in the United Kingdom. The Mitsui Chemicals Group always prioritizes compliance with laws and regulations over profit in instances where decisions hinge on profit or compliance.

> Com TINI

# With Our Shareholders and Other Investors

The basic stance of the Mitsui Chemicals Group is that it should release information in an impartial and timely manner in line with fair disclosure. Top management, including the president and CFO, and all the Group's departments are working together to hold dialogues with shareholders, other investors, and analysts to continue furthering their understanding of the Group, including its growth strategies and business plans.

Going forward, the Group aims to further develop the relationships of trust it has with all its stakeholders, including shareholders and other investors. To this end, we disclose information in an appropriate and timely manner to promote fairness and transparency while continuing to promote active communication throughout the entire Group, including top management.

# Results of Major Activities in FY2017

- Dialogues with institutional investors: Around 300 institutions
- Business overview briefing by the President (2 times/year)
- Works tours (3 times/year)



# With Local Communities

To ensure regular and stable business operations at each site, the Group considers it important to build relationships of trust based on close-knit relationships with community members. We therefore create opportunities to communicate with all members of the community.



# With Our Business Partners

# Conducting Sustainable Procurement

In line with the Mitsui Chemicals Group Purchase Policy established in April 2006, the Group conducts surveys covering a wide range of topics, including data security, human rights, fair trade, corporate governance, quality assurance, occupational safety, and environmental preservation, and provides guidance on making improvements as needed.

We regard all of our suppliers as good partners. We always deal with our suppliers fairly and in good faith and make every effort to ensure the mutually sustainable development of our corporate activities.

# With Our Customers

Tapping into the Group's comprehensive capabilities, we are endeavoring to provide optimal solutions that take into consideration such issues as utility value for final consumers across the full range of our technologies, products, and services. Through these efforts, in 2017 we received for the third consecutive year the General Motors Company's Supplier of the Year award, which is given to companies that find value exceeding GM's expectations and bring out innovation.



The award ceremony in Florida, U.S.A.

# Financial Section

#### Laboratory Classes on the Wonders of Chemistry (Passing on the possibilities of chemistry to the next generation)

# **External Recognition**

# Inclusion in SRI Indices

The Mitsui Chemicals Group has been included in leading global ESG investment indices. (As of September 2018)

# MEMBER OF Dow Jones Sustainability Indices In Collaboration with RobecoSAM 🐽







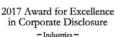




Women Index (WIN)

MSCI

MSCI 💮



2018 Constituent

MSCI Japan ESG

2018 Constituent

Select Leaders Index

MSCI Japan Empowering

SAAJ The Securities Analysts Association of Japan

Institutional Investor magazine's 2017 All-Japan Executive Team survey: 1st in all seven chemicals sector categories

The NIKKEI Annual Report Awards 2017: Special Award

Main Recognition and Awards for IR Activities

Nikko Investor Relations' Survey of All Japanese Listed Companies' Websites: 5th in the chemicals sector category

The Securities Analysts Association of Japan (SAAJ) of 2017 Award for Excellence

in Corporate Disclosure: 1st in the chemicals and fiber sector category

# **Responsible Care**

The chemical industry voluntarily carries out Responsible Care (RC) activities. The aim is to contribute to improve QOL and ensure the sustainable development of society by minimizing the impact of business operations on the environment and society while also providing innovative technologies and solutions that address social issues. The Mitsui Chemicals Group has established the Responsible Care Policy below. In line with this policy, we carry out RC activities, and we aim to live up to the expectations of and trust placed in us by local communities and society, and, through our businesses, contribute to the sustainable development of society.



Responsible Care https://www.mitsuichem.com/en/sustainability/rc/index.htm

# **Responsible Care Policy and Activities**

Based on its Corporate Mission and Action Guidelines, the Mitsui Chemicals Group acknowledges that its business challenge is not only to comply with laws and regulations of the countries in which it does business, but also to continuously contribute to the improvement of safety, health, the environment, and quality, for the sustainable development of society. We will expand our business focus while continuing to improve and maintain good communication with all our stakeholders and business partners.

Responsible Care Policy	Policy Details and Related Activities				
We pledge that safety is our top priority and will focus on achieving zero accidents and occupational injuries.	Determined to ensure that the lessons learned from the 2012 explosion and fire do not fade, Mitsui Chemicals promotes fundamental safety activities. To foster a culture of safety and ensure safe production activities, essential prerequisites for a company's survival, we strive to improve and pass on technical capabilities, wholeheartedly engage in safety activities, and work to confirm safety throughout the entire supply chain.				
	Safety, Health & Environment (SHE) meetings:	A program that is part of each region's Responsible Care activities, SHE meetings bring together the staffs in charge of Responsible Care of affiliates. Through these meetings, affiliates learn about each other's best practices by case studies like those related to occupational accidents and injuries.			
	Incidence of major accidents:	<ul> <li>Progress Made toward Goals related to Management, Environment, and Society (p. 30)</li> </ul>			
	Work-related significant occupational injury frequency rate:	➡ Non-Financial Highlights (p. 36)			
	Monthly RC Logistics Safety & Quality Reports, Monthly and Weekly RC Reports:	We are working hard to reduce and eradicate accidents and occupational injuries by promoting creatively original risk prevention activities, for example, reinforcing the basic rules for vehicle safety. We also share case studies on logistics accidents and difficulties across the Company			
We will assess the risks to people and the environment from our products throughout their life cycles, while working to ensure the health and	Through assessments of risks and the proper management of chemical substances throughout the product life cycle (from development to production, distribution, use, final consumption, and logistics), we aim to minimize the impact of chemical substances on people and the environment, ensure the health of those that interact with the product, and mitigate environmental impact across the entire life cycle.				
safety of all persons and to reduce the environmental impact of those products.	Product stewardship:	We are working to achieve the international goal of minimizing negative effects of chemical substances on people and the environment by 2020. We comply with tightening national chemical regulations worldwide, conduct surveys of the chemical substances in our products, provide necessary information to customers and other stakeholders, ensure the health of consumers, customers and employees, and work to reduce our ecological impact.			
	Product risk assessment:	<ul> <li>Progress Made toward Goals related to Management, Environment, and Society (p. 30)</li> </ul>			
	GHG emissions and Per-unit energy consumption reduction:	Non-Financial Highlights (p. 36)			
	Reducing industrial waste:	➡ Non-Financial Highlights (p. 36)			
	Certified Eco Rail Mark:	We are working to reduce CO <sub>2</sub> emissions by promoting a modal shift, improving utilization rates through more joint logistics, and taking other measures.			
We will contribute to improve QOL and protect the environment through business activities focused on developing	We aim to solve various social challenges through such business activities as developing Blue Value <sup>™</sup> and Rose Value <sup>™</sup> products designed to help achieve a low-carbon, recycling-oriented and cohesive society in harmony with the environment and an improved QOL and smart society.				
beneficial technologies and products.	Blue Value™/Rose Value™:	Special Feature: ESG (p. 26)			
We will provide high-quality products and services that satisfy the needs of our customers and respond to the trust that they place in us.	Constantly thinking about the technologies, products and services that are genuinely needed by society and its customers, the Mitsui Chemicals Group continues to create new value. Taking a two-pronged approach to quality management based on quality control and quality assurance, we supply products and services that satisfy customers. We aim to win over customers' trust by conducting activities based on customer's perspective in order to resolve issues.				
	Incidence of customer non-conformance:	<ul> <li>Progress Made toward Goals related to Management, Environment, and Society (p. 30)</li> </ul>			
We will actively promote the well-being of all our employees.	We believe that promoting the health of our employees is in itself a contribution to society. The Mitsui Chemicals Group proactively works to help every employee live a healthy life. Mental health is just as important as physical health. We therefore help our employees in their voluntary efforts to ensure good health and promote the creation of lively and healthy work environments.				
	Certified Health and Productivity Management Organization (White 500):	2018 健康経営優良法人 Health and productivity ホワイト500			

#### **Fundamental Safety Initiatives**

Mitsui Chemicals takes extremely seriously the explosion and fire that occurred in 2012. Five years have now elapsed since we started to implement a series of fundamental safety initiatives to thoroughly review and improve the problem areas relevant to ensuring safety and prevention on a companywide safety basis. Various measures that have been developed through many deliberations are incorporated into daily activities and form daily tasks in ongoing activities that entail PDCA cycles. While continuing to prioritize the fundamental safety initiatives to further raise levels of safety, we will continue to advance the initiatives in the years ahead.

#### Key Points of the Fundamental Safety Initiatives

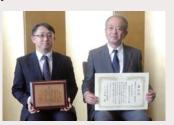
- Reporting directly to the president, the steering committee\*1 deliberates Group-wide issues and sets the direction for activities
- Increasing opportunities for visits to Works by Head Office departments spearheaded by management participation in safety through active dialogue
- Guidance from third parties, including external experts, reflected in the operations of Works
- Safety discussions by Works' general managers and cross-sectional safety activity inspections by safety advisors\*<sup>2</sup>
  Enhanced communication through forums such as foreman meetings spearheaded by section managers
- \*1 In order to make prompt progress with the fundamental safety initiatives, members meet to discuss Group-wide issues and set the direction of activities.
- \*2 Veteran employees who are involved in improving the overall level of Works safety by entering daily activities and exchanging views.

In fiscal 2017, we focused on ensuring that safety was the top priority by promoting thorough compliance with the basic rules and strengthening the weak points at workplaces in light of results from safety culture assessments. In addition, we are moving toward implementing a plan to strengthen safety management based on the system that was revised after the fire at the Mobara Branch Factory in July 2017. We will steadily maintain these activities in 2018 as well. Regarding the fire at the Osaka Works in June 2018, we will continue working to prevent recurrences as we uncover the underlying factors.

0

Received the RC Outstanding Award from the Japan Chemical Industry Association

Mitsui Chemicals garnered praise for achieving significant reduction of logistics difficulties by making thorough communication between the management department and the on-site.



#### Received the RC Merit Award from AICM



Mitsui Chemicals received the RC Merit Award from the Association of International Chemical Manufacturers (AICM) in China in recognition of its activities promoting Responsible Care in that country.

#### Living up to Customers' Trust

#### Missions to Fulfill as a Manufacturer

We manufacturers have a duty to reliably provide products that customers can use safely and with confidence. Since our products are used in various applications a quality-related incompliance causes troubles to the customers. Moreover, it will cause a lot of trouble and concern to consumers who use the product made by our customer. We never want to make such a situation happen. To prevent this, we abide by the following two rules.



#### **Keep Our Promises with Customers**

Before the Company's products are shipped, we decide delivery details in consultation with the customer. During the consultation, it is important to ensure that every detail of the customer's requests is dealt with and the Company's supply system can meet expectations.

If the sales team overpromises on a deadline or agrees to a delivery specification which taxes the existing process capability, it could push people at manufacturing sites too far. Eventually, we may not be able to keep promises (deadline and delivery specifications) with the customer. So we do not make promises that we cannot keep. We build open relationships under which both parties communicate properly and exchange opinions that transcend the boundaries of each department, in order to keep our promises with customers.

#### **Consider the Customers' Perspective**

Many of our products are used as raw materials by the customers, and they are processed and shaped into the final products for consumers by the customers. While we work, we should remember that the quality of our products is directly linked to the quality of our customers' products, to the safety of their manufacturing process, and eventually to the safety of consumers who use the final products. Manufacturing products from the customers' point of view will lead to true quality improvement.

#### Corporate Information (As of March 31, 2018)

Date of Establishment October 1, 1997

**Paid-in Capital** ¥125,125,600,699

Number of Employees 17,277 (Consolidated)

Shares of Common Stock Issued and Outstanding 204,454,615

Number of Shareholders 63,571

Stock Listing Tokyo

Transfer Agent Sumitomo Mitsui Trust Bank, Limited

#### Offices

Head Office

Shiodome City Center, 1-5-2 Higashi-Shimbashi, Minato-ku, Tokyo 105-7122, Japan Phone: +81-3-6253-2100 Facsimile: +81-3-6253-4245

#### U.S.A.

Mitsui Chemicals America, Inc. 800 Westchester Avenue, Suite S306, Rye Brook, NY 10573, U.S.A. Phone: +1-914-253-0777 Facsimile: +1-914-253-0790

#### Germany

Mitsui Chemicals Europe GmbH Oststraße 34, 40211 Düsseldorf, Germany Phone: +49-211-173320-0 Facsimile: +49-211-17332-701

#### Singapore

Mitsui Chemicals Asia Pacific, Ltd. 3 HarbourFront Place, #10-01 HarbourFront Tower 2, Singapore 099254, Singapore Phone: +65-6534-2611 Facsimile: +65-6535-5161

#### China

Mitsui Chemicals (China) Co., Ltd. Room 2102, Capital Square, 268 Hengtong Road, Jing'an District, Shanghai, 200070, China Phone: +86-21-5888-6336 Facsimile: +86-21-5888-6337

### **Financial Section**

Management's Discussion and Analysis 74 Business Risks 84 Consolidated Balance Sheets 86 Consolidated Statements of Operations 88 Consolidated Statements of Comprehensive Income 89 Consolidated Statements of Changes in Net Assets 89 Consolidated Statements of Cash Flows 90 Notes to Consolidated Financial Statements 91 Independent Auditor's Report 117 Global Network 118 Stock Information 120

#### **Overview**

In the fiscal period under review (the twelve-month period from April 1, 2017 to March 31, 2018, hereinafter "fiscal 2017"), the U.S. and European economies enjoyed constant recovery. However, the state of geopolitical risks and government policy trends in major countries remained and careful attention was paid to fluctuations in the global economy.

In Japan, the economy continued to gradually recover amid improvements in the employment and income. In the domestic chemical industry, despite higher crude oil prices, naphtha crackers operated at a consistently high capacity due to a steady expansion in demand and the effects of business structure improvement, including a reduction in superfluous domestic facilities.

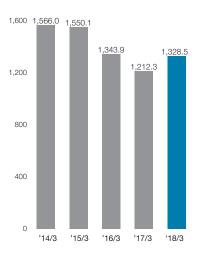
Under these circumstances, the Mitsui Chemicals Group (hereafter "the Group") launched the 2025 Long-Term Business Plan for business expansion and growth in the three business domains of Mobility, Health Care, and Food & Packaging while creating and developing Next Generation Business operations and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

In Mobility, performance materials products—especially elastomers and polypropylene compounds—have kept up with expanding global demand for automotive components and IT products. In addition to ongoing demand propelled by the trend toward lighter and more advanced automobiles, the market is seeing the emergence of new needs related to electric and self-driving automobiles. To meet these wide-ranging needs, the Group added the new product development support company ARRK Corporation to its consolidated subsidiaries and tightened its focus on strengthening its ability to offer solutions.

In Healthcare, sales of ophthalmic lens materials, which boast the largest share of the global market, remained healthy. In addition, the Group launched sales of the next-generation eyewear TouchFocus<sup>™</sup>, which combines liquid crystal technology with the Group's lens technology to enable the wearer to easily switch between nearand far-sightedness at a touch. In nonwoven fabrics, the Group worked to expand production capacity in line with market growth to meet demand for premium disposable diapers, which are gaining popularity in Asia. In addition, the Group launched the nonwoven fabric AIRYFA<sup>™</sup>, which is both soft and strong while remaining gentle on skin. In dental materials, the Group recorded an impairment loss for intangible assets, including goodwill as a result of revised business plan due to decreasing sales in Germany and a delay in the launch of digital goods. In response to this, the Group has worked to strengthen its sales activities and its business regime of digital goods with the aim of sustainably growing its dental materials business.

In Food & Packaging, the sales volume of performance films and sheets expanded as the Group captured robust demand. The Group established a new subsidiary in Taiwan, a major source of global demand, for manufacturing and marketing ICROS<sup>™</sup> TAPE, which commands the largest share of the global market for protective tape used in semiconductor manufacturing processes. In agrochemicals, the Group decided to form an alliance with the major European companies BASF and Bayer in new product development, thereby accelerating the global expansion of the agrochemical business.

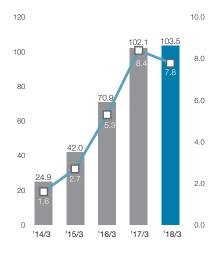
In Basic Materials, which is centered on petrochemicals and basic chemicals, the Group maintained highcapacity operations at its naphtha crackers and other plants due to strong domestic demand, in addition to continuous progress of business structure improvement. The Group also worked to ensure greater competitiveness by cutting costs and expanding lineup of differentiated products.



Net sales

(Billions of yen)

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



Operating income (left scale)
 Ratio to net sales (right scale)

#### Operating Results Net Sales

Net Sales increased ¥116.2 billion, or 9.6%, compared with the previous fiscal year to ¥1,328.5 billion. This was mainly attributable to increase in sales prices due to the rise in the prices of naphtha and other raw materials and fuel as well as changes in foreign exchange rates.

Net sales overseas were ¥588.0 billion, up 1.8 percentage points from the previous fiscal year to 44.3% of total net sales.

#### **Operating Income**

Operating income was ¥103.5 billion, an increase of ¥1.4 billion or 1.3% year on year. This result was due to healthy sales despite an increase in fixed costs due to major scheduled maintenance.

#### Ordinary Income

Ordinary income was ¥110.2 billion, an increase of ¥13.0 billion or 13.4% year on year. This result was due to a rise in the share of profit of entities accounted for using the equity method as well as the expansion in operating income.

#### Extraordinary income and losses

Extraordinary income and losses worsened ¥4.6 billion year on year to a ¥16.0 billion net loss mainly due to an impairment loss for intangible assets, including goodwill, in the dental materials business, in spite of a gain on sales of noncurrent assets and a gain on forgiveness of debts from a non-controlling interest in a liquidated subsidiary.

As a result of the aforementioned factors, profit before income taxes amounted to ¥94.2 billion, an increase of ¥8.4 billion, or 9.8% year on year.

#### Profit Attributable to Owners of Parent

Profit attributable to owners of parent after accounting for income taxes and non-controlling interests was ¥71.6 billion, an increase of ¥6.8 billion, or 10.4% compared with the previous fiscal year. The Group conducted a 5-to-1 share consolidation on October 1, 2017 and net income per share for the period was ¥358.38.

#### Segment Information

#### **Business Segment Results**

The status of each segment during fiscal 2017 is as follows.

With the aim of accelerating the business strategies outlined in the 2014 Mid-Term Business Plan, the Group undertook minor reorganization in some of its business segments on April 1, 2016. Specifically, overseas polypropylene compound businesses, which had been components of the Petrochemicals segment, were integrated with the former Functional Polymeric Materials segment, which, in turn, has been reclassified as the Mobility segment. Moreover, the Group reclassified the Food & Packaging segment by incorporating the coatings & engineering materials business that had been a part of the Polyurethane segment. The former Basic Chemicals segment was integrated with the Petrochemicals segment—after relocating its overseas polypropylene compound businesses—as well as the polyurethane materials business, which had been a part of the Polyurethane segment, thereby forming the new Basic Materials segment.

Accordingly, segment information for the corresponding period of the previous fiscal year is based on this reclassification.

#### Mobility

Net sales increased ¥37.7 billion compared with the previous fiscal year to ¥331.0 billion and comprised 25% of total sales. Operating income increased ¥1.6 billion to ¥42.3 billion year on year. The increase in income was due to the effect of an increase in sales volume and favorable trading terms.

In elastomers, which are primarily used in automotive components and as resin modifiers, the Group was able to meet healthy demand.

In performance compounds, the Group was able to satisfy healthy demand especially in Asia, Europe and the Americas.

In performance polymers, which are primarily used in information communication technology (ICT)-related products, sales remained steady.

In the overseas polypropylene compound businesses, the Group was able to meet increasing demand due to the rising production volume in the automobile industry, particularly in Asia.

The Group absorbed the newly consolidated subsidiaries of the ARRK Group into the solution business as of January 2018.

	Million		
Mobility	2018/3	2017/3	Change (%)
Net sales	¥331,038	¥293,283	12.9
Operating income (loss)	42,296	40,716	3.9
Total assets	316,313	241,814	30.8
Depreciation and amortization	10,264	9,241	11.1
Capital expenditures	32,179	10,447	208.0

#### Health Care

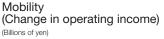
Net sales increased ¥4.9 billion year on year to ¥139.1 billion and comprised 10% of total sales. Operating income increased ¥0.7 billion to ¥10.8 billion year on year, mainly due to steady sales despite a rise in raw material prices.

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

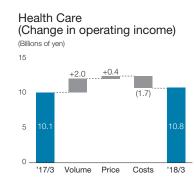
In nonwoven fabrics, sales of premium disposable diapers remained firm, but profits were impacted by an increase in raw material prices.

In dental materials, sales volume decreased mainly in Germany.

	Million	Millions of yen			
Health Care	2018/3	2017/3	 Change (%)		
Net sales	¥139,120	¥134,198	3.7		
Operating income (loss)	10,830	10,118	7.0		
Total assets	200,684	206,186	(2.7)		
Depreciation and amortization	9,501	10,197	(6.8)		
Capital expenditures	16,018	8,745	83.2		







#### Food & Packaging

Net sales increased ¥13.3 billion compared with the previous fiscal year to ¥195.8 billion and comprised 15% of total sales. On the other hand, operating income decreased ¥0.7 billion to ¥19.9 billion year on year, due to increases in raw material prices and fixed costs of R&D in spite of steady sales.

In coatings & engineering materials, although sales were healthy, profits were impacted by an increase in raw material prices.

In performance films and sheets, sales volume increased although profits had impacts from an increase in raw material prices.

In agrochemicals, sales remained steady mainly in overseas.

	Million		
Food & Packaging	2018/3	2017/3	Change (%)
Net sales	¥195,840	¥182,468	7.3
Operating income (loss)	19,924	20,606	(3.3)
Total assets	221,550	209,310	5.8
Depreciation and amortization	6,961	6,687	4.1
Capital expenditures	9,508	7,145	33.1

#### **Basic Materials**

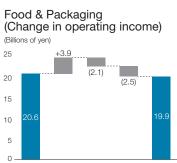
Net sales increased ¥72.1 billion compared with the previous fiscal year to ¥637.7 billion and accounted for 48% of total sales. Operating income increased ¥0.4 billion year on year, to ¥38.9 billion. This was mainly attributable to the effect of firm domestic demand and business structure improvement.

Naphtha cracker operating rates kept at high level as the previous fiscal year.

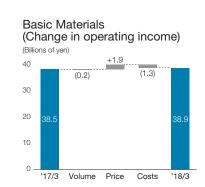
Performances of polyethylene and polypropylene were firm, backed by domestic demand.

In phenols, the overseas market environment was at higher level than the previous fiscal year and the result of business structure improvement emerged.

	Million		
Basic Materials	2018/3	2017/3	Change (%)
Net sales	¥637,700	¥565,617	12.7
Operating income (loss)	38,903	38,504	1.0
Total assets	606,896	544,307	11.5
Depreciation and amortization	14,467	13,341	8.4
Capital expenditures	15,752	14,221	10.8



'17/3 Volume Price Costs '18/3



#### Others

Net sales decreased ¥11.8 billion to ¥24.9 billion, comprised 2% of total sales. Operating loss was ¥0.9 billion, increase of ¥0.6 billion compared to the previous year.

	Million	_	
Others	2018/3	2017/3	Change (%)
Net sales	¥24,828	¥36,716	(32.4)
Operating income (loss)	(906)	(353)	—
Total assets	50,052	59,396	(15.7)
Depreciation and amortization	3,118	4,234	(26.4)
Capital expenditures	6,110	3,936	55.2

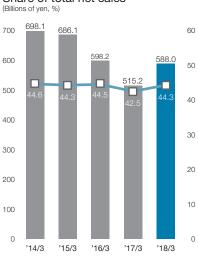
#### Net Sales

	Billions of yen					
	Increase (Decrease)				se)	
	2018/3	2017/3	Volume Pric Total contribution contrib			
Mobility	¥ 331.0	¥ 293.3	¥ 37.7	¥22.8	¥14.9	
Health Care	139.1	134.2	4.9	4.3	0.6	
Food & Packaging	195.8	182.5	13.3	7.8	5.5	
Basic Materials	637.7	565.6	72.1	13.4	58.7	
Others	24.9	36.7	(11.8)	_	(11.8)	
Total	¥1,328.5	¥1,212.3	¥116.2	¥48.3	¥67.9	

#### **Operating Income (Loss)**

	Billions of yen					
			Increase (Decrease)			
	2018/3	2017/3	Total	Volume contribution	Price*	Fixed and other cost differential
Mobility	¥ 42.3	¥ 40.7	¥1.6	¥3.4	¥1.8	¥(3.6)
Health Care	10.8	10.1	0.7	2.0	0.4	(1.7)
Food & Packaging	19.9	20.6	(0.7)	3.9	(2.1)	(2.5)
Basic Materials	38.9	38.5	0.4	(0.2)	1.9	(1.3)
Others	(0.9)	(0.3)	(0.6)		_	(0.6)
Adjustments	(7.5)	(7.5)	0.0		_	0.0
Total	¥103.5	¥102.1	¥1.4	¥9.1	¥2.0	¥(9.7)

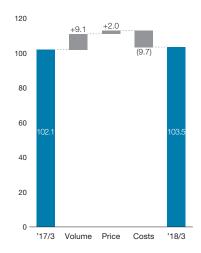
\*Price = Price contribution + Variable cost differential



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

Overseas sales (left scale)Share of total net sales (right scale)

#### Operating income (Billions of yen)



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Financial Position	Assets Total assets at the end of fiscal year stood at ¥1,444.1 billion, an increase of ¥118.6 billion compared with the end of the previous fiscal year.
	<i>Liabilities</i> Total liabilities at the end of fiscal year increased ¥46.6 billion compared with the previous fiscal year-end to ¥857.5 billion. Interest-bearing debt amounted to ¥463.7 billion, an increase of ¥23.8 billion compared with the previous fiscal year-end. As a result, the interest-bearing debt ratio was 32.1%, a decrease of 1.1 point.
	<ul> <li>Net Assets</li> <li>Net assets totaled ¥586.6 billion, an increase of ¥72.0 billion compared with the previous fiscal year-end.</li> <li>The ratio of shareholders' equity to total assets was 35.4%, 1.5 point increase from the previous fiscal year-end.</li> <li>Accounting for the aforementioned factors, the net debt-equity ratio stood at 0.75 at the end of the fiscal year, 0.04 point decrease from the previous fiscal year-end.</li> </ul>

#### Capital Resources and Liquidity

Cash Flows

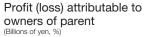
Cash and cash equivalents (hereafter called "cash") decreased ¥4.1 billion to ¥78.8 billion as of the end of this fiscal year compared with the previous fiscal year-end.

#### Cash Flows from Operating Activities

Net cash provided by operating activities decreased ¥17.7 billion to ¥82.7 billion due to worsening of working capital although profit before income taxes increased.

#### Cash Flows from Investing Activities

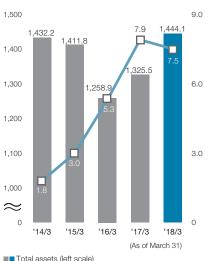
Net cash used in investing activities increased ¥27.7 billion compared with the previous fiscal year to ¥75.1 billion, mainly due to cash outflows from the tender offer for ARRK Corporation shares.





Profit (loss) attributable to owners of parent) (left scale)
-D- Return (profit (loss)) on sales (right scale)

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



-D- Return (operating income) on assets (right scale)

#### Cash Flows-Related Performance Indicators

	2018/3	2017/3	2016/3	2015/3	2014/3
Shareholders' equity ratio (%)	35.4	33.9	30.3	28.8	24.6
Shareholders' equity ratio on a market value basis (%)	46.2	41.5	29.8	27.4	17.7
Ratio of interest-bearing debt to cash flows	5.6	4.4	3.2	9.4	13.4
Interest coverage ratio (times)	14.8	17.3	20.7	7.7	5.6

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.

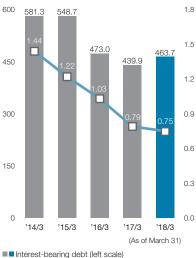
#### Fund Procurement

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.



#### -D- Net debt-to-equity ratio (right scale)

Interest-bearing debt/

(Billions of yen)

Net debt-to-equity ratio

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



Total shareholders' equity (left scale) -D- Return (profit attributable to owners of parent) on shareholders' equity (right scale)

#### Capital Expenditures (Summary)

The Company and its consolidated subsidiaries undertook capital expenditures totaling ¥81.3 billion in fiscal 2017. This amount includes expenditures on intangible fixed assets as well as long-term prepaid expenses. Expenditures by business segment were as follows.

#### Mobility

Tokyo Stock Exchange-listed ARRK Corporation was acquired through a tender offer and subsequently consolidated along with its corporate group, resulting in an increase in consolidated fixed assets. The total amount of capital expenditures in the Mobility segment was ¥32.2 billion.

#### Health Care

At both the Nagoya works and Sunrex Industry Co., Ltd., construction aimed at increasing the Group's nonwoven fabric production capacity continued.

The total amount of capital expenditures in the Health Care segment was ¥16.0 billion.

#### Food & Packaging

The total amount of capital expenditures in the Food & Packaging segment was ¥9.5 billion.

#### **Basic Materials**

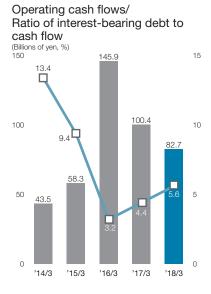
The total amount of capital expenditures in the Basic Materials segment was ¥15.8 billion.

#### Others

The total amount of capital expenditures in the Others segment was ¥6.1 billion.

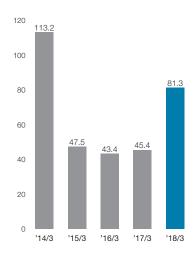
#### Corporate Expenses

The total amount of capital expenditures recorded under corporate expenses was ¥1.7 billion and was related to the development of new businesses.



Operating cash flows (left scale)
 Ratio of interest-bearing debt to cash flow (right scale)

Capital expenditure (Billions of yen)



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#### 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, 2018 amounted to ¥33.4 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.

#### Corporate Research

The Company is playing a central role in the fundamental technology development for each segment's product family. The Company also engages in the basic research of computing science and advanced analytical technique to support its product development. Mitsui Chemicals Singapore R&D Centre Pte. Ltd. is leading the basic research in consideration of new business creation in Asia.

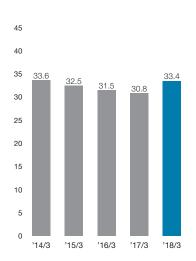
Research and development expenses relating to corporate research amounted to ¥4.0 billion and were allocated among all reportable segments.

#### Development for New Businesses

The Company is playing a central role in research and development activities by project, all of which are aimed at new businesses creation in the Mobility domain and the Healthcare domain. In fiscal 2017, the Company worked on the development and assessment of metal and resin injection assembly technology, which lightens automobiles and improves mileage, components of lithium-ion batteries for a higher safety level, and technology development for solar power consultation.

In the Food & Packaging domain, the Company and Mitsui Chemicals Tohcello, Inc. collaborated in research and development for new business development.

Research and development expenses related to new businesses creation amounted to ¥3.1 billion. Those are presented in corporate expenses and other segments.





#### Mobility

The Company engages in the development of elastomers, performance compounds, and performance polymer resins in the Mobility domain. In fiscal 2017, the Company placed considerable weight on development activities encompassing new polyolefin elastomers for automobiles and packaging, engineering plastic compounds for use as heat-resistant materials for automobiles, and polyolefins for ICT.

Research and development expenses related to this segment were ¥7.6 billion.

#### Health Care

The Company engages in development in the Healthcare domain in such areas as vision-care, oral-care materials, and highly functional non-woven fabrics for both hygiene material use and medical use. Heraeus Kulzer GmbH and Sun Medical Co., Ltd. engage in the product development of dental materials. In fiscal 2017, efforts were mainly directed toward materials for glass lenses and dental materials.

Research and development expenses related to this segment were ¥4.2 billion for the fiscal year.

#### Food & Packaging

Mitsui Chemicals Tohcello Inc. takes the lead in developing food packaging materials and fabricated products, including Food & Packaging in the fields of IT and energy. Mitsui Chemicals Agro, Inc. engages in agrochemical research and development. In fiscal 2017, priority was placed on food packaging materials, integrated circuit and semiconductor materials, solar cell components, highly functional agrochemicals, and pesticides for disinfection.

Research and development expenses related to this segment were ¥10.1 billion.

#### Basic Materials

The Company engages in the research and development of 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, Mitsui Chemicals & SKC Polyurethanes Inc. are active in the development of such functional products as polyurethane foam materials in the Mobility domain.

Also, together with Prime Polymer Co., Ltd. the Company is developing such highly-functional products as PP compounds in the Mobility domain and highly-functional catalysts that strengthen the competitiveness of its polyolefin resin in the Food & Packaging domain.

Research and development expenses related to this segment were ¥4.4 billion.

The Mitsui Chemicals Group recognizes that management activities may be threatened by a wide range of conceivable and apparent risks. For this reason, the Group is dedicated to crafting initiatives able to prevent or minimize 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, 2018.

#### (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, and deterioration in market conditions caused by oversupply due to increased production capacity at rival firms or the market entry of low-priced 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. Other conceivable risks include an increase in the tax burden attributable to changes in legal systems. 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.

#### (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. The occurrence of such risks could impair the Group's business activities overseas, which may adversely impact operating performance.

#### (3) Changes in laws and tightening of regulations

The business development of the Mitsui Chemicals Group is subject to a wide range of legal acts and ordinances, which include a variety of licensing and regulatory requirements. Consequently, the Group remains keenly aware that its continued survival as a corporation is contingent on strict compliance with laws and regulations. To this end, the Group has enacted training programs that incorporate examples of legal violations within and outside Mitsui Chemicals together with other initiatives aimed at promoting legal compliance.

Other risks faced by the Group are the prospect of major changes to or a tightening of laws relevant to the Group, or unexpected amendments to laws and regulations overseas. Restrictions placed on the Group's activities, as well as increased costs associated with compliance with amended laws or more stringent regulations, could impair the Group's business activities, thus adversely impacting operating performance and financial position.

#### (4) 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. Assumed risks for each key business are as follows.

#### 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.

#### ii. Health Care

Health care segment product earnings could be adversely impacted by price competition caused by the business expansion of rivals.

#### 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.

#### 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.

#### (5) 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.

#### (6) 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.

# Strategy

#### (7) Impairment of marketable securities

The Mitsui Chemicals Group holds marketable securities with fair values that are mainly from its customers and financial institutions in order to maintain and strengthen relationships with them. Any incidence of impairment attributable to a substantial drop in the market prices of marketable securities held by the Group may adversely impact the Group's operating performance and financial position.

#### (8) Deferred tax assets

The Mitsui Chemicals Group determines the collectability of deferred tax assets based on forecasts and assumptions related to future taxable income. Any change in the forecasts and assumptions related to future taxable income may adversely impact the operating performance and financial position of the Group. 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 operating performance and performance and financial position of the operating performance and performance a

#### (9) Retirement benefits 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.

#### (10) Corporate acquisition, capital alliance and business reorganization

Aiming for a transformation of its business portfolio, the Mitsui Chemicals Group engages in a variety of activities, including the acquisition of companies and the establishment of business alliances. Any failures to realize the growth synergy benefits or other expected merits due to such factors as a deterioration in the operating environment of the Group and the companies in which it is invested, may adversely impact the operating performance and financial position of the Group.

In addition, business reorganization, along with the withdrawal from unprofitable businesses and the liquidation of subsidiaries or affiliates, may also adversely impact the operating performance and financial position of the Group.

#### (11) Accidents and disasters

In an effort to ensure workplace safety, the Mitsui Chemicals Group 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. 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. The occurrence of these risks may 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.

#### Supplementary Information

#### A fire at the Osaka Works

On June 21, 2018, a fire broke out at the Company's Osaka Works as repair work was under way at the utility plant, which had been shut down for regular maintenance. At this time, an investigation led by the relevant authorities is being conducted, and once the cause has been determined and preventive measures have been drafted and put in place, work will begin on restoring the damaged plant.

The effects of the fire could adversely impact the Group's operating performance and financial position. In addition, the fire has impeded the supply of products to customers, which could potentially undermine the social standing of the Group.

#### (12) 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. The occurrence of these risks may not only adversely impact the Group's operating performance and financial position, but could also potentially undermine the social standing of the Group.

#### (13) The environment

As a group that handles a wide range of chemical substances, the Mitsui Chemicals Group has made harmony with the environment one of its long-term management targets. In addition to ensuring compliance with environmental laws and regulations, the Group promotes initiatives for reducing greenhouse gas (GHG) emissions and minimizing the amount of industrial waste sent to landfill for final disposal.

Environmental risks relevant to the Group include the incurrence of new social responsibilities due to tighter environmental regulations or changes in public sentiment regarding environmental protection, as well as the discovery of environmental pollution stemming from actions taken by the Group prior to the enactment of environmental laws. These and other situations could increase costs associated with legal compliance and environmental countermeasures and have other consequences, which could adversely impact the Group's operating performance and financial position.

#### (14) 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. The occurrence of such events could adversely impact the Group's operating performance and financial position.

#### **Consolidated Balance Sheets**

MITSUI CHEMICALS, INC. AND CONSOLIDATED SUBSIDIARIES March 31, 2018 and 2017

		Million	s of yen	Thousands of U.S. dollars (Note 4)
		2018/3	2017/3	2018/3
ASSETS	Current assets			
	Cash and deposits (Notes 13 and 15)	¥ 80,209	¥ 84,120	\$ 754,979
	Notes and accounts receivable-trade (Note 15)	306,899	271,706	2,888,733
	Inventories (Note 5)	274,342	247,544	2,582,285
	Deferred tax assets (Note 18)	18,226	16,192	171,555
	Accounts receivable—other	60,356	52,279	568,110
	Other	10,193	7,628	95,944
	Allowance for doubtful accounts	(673)	(531)	(6,335)
	Total current assets	749,552	678,938	7,055,271
	Non-current assets			
	Property, plant and equipment			
	Buildings and structures	343,555	335,957	3,233,763
	Accumulated depreciation	(236,725)	(232,255)	(2,228,210)
	Buildings and structures, net	106,830	103,702	1,005,553
	Machinery, equipment and vehicles	997,563	988,248	9,389,712
	Accumulated depreciation	(865,884)	(861,563)	(8,150,264)
	Machinery, equipment and vehicles, net	131,679	126,685	1,239,448
	Land	159,018	155,441	1,496,781
	Construction in progress	20,462	11,465	192,602
	Other	76,136	72,481	716,642
	Accumulated depreciation	(61,217)	(60,345)	(576,214)
	Other, net	14,919	12,136	140,428
	Total property, plant and equipment	432,908	409,429	4,074,812
	Intangible assets			
	Goodwill	5,684	7,407	53,502
	Other	25,792	27,781	242,771
	Total intangible assets	31,476	35,188	296,273
	Investments and other assets			
	Investment securities (Notes 15 and 16)	159,428	141,873	1,500,640
	Net defined benefit asset (Note 6)	41,549	31,103	391,086
	Deferred tax assets (Note 18)	5,242	6,755	49,341
	Other	26,369	24,610	248,202
	Allowance for doubtful accounts	(2,420)	(2,371)	(22,779)
	Total investments and other assets	230,168	201,970	2,166,490
	Total non-current assets	694,552	646,587	6,537,575
	Total assets	¥1,444,104	¥1,325,525	\$13,592,846

		Millions	s of yen	Thousands of U.S. dollars (Note 4)
		2018/3	2017/3	2018/3
LIABILITIES AND	Current liabilities			
NET ASSETS	Notes and accounts payable-trade (Note 15)	¥ 162,179	¥ 145,658	\$ 1,526,534
	Short-term loans payable (Notes 7 and 15)	94,348	90,276	888,065
	Current portion of long-term loans payable (Note 7)	24,834	18,582	233,754
	Commercial papers (Notes 7 and 15)	20,000	_	188,253
	Current portion of bonds payable (Notes 7 and 15)	15,426	24,142	145,200
	Accounts payable—other	69,299	69,531	652,287
	Income taxes payable (Note 18)	7,956	5,735	74,887
	Provision for directors' bonuses	158	140	1,487
	Provision for repairs	13,585	12,173	127,871
	Other (Notes 7 and 18)	35,413	26,546	333,330
	Total current liabilities	443,198	392,783	4,171,668
	Non-current liabilities			
	Bonds payable (Note 7)	31,864	35,574	299,925
	Long-term loans payable (Notes 7 and 15)	274,099	268,654	2,579,998
	Deferred tax liabilities (Note 18)	26,560	24,169	250,000
	Provision for directors' retirement benefits	250	251	2,353
	Provision for repairs	2,880	3,878	27,108
	Provision for environmental measures	675	732	6,354
	Net defined benefit liability (Note 6)	55,220	55,200	519,767
	Asset retirement obligations	4,330	4,196	40,757
	Other (Notes 7 and 18)	18,424	25,453	173,418
	Total non-current liabilities	414,302	418,107	3,899,680
	Total liabilities	857,500	810,890	8,071,348
	Net assets			
	Shareholders' equity (Note 11)			
	Capital stock	125,125	125,053	1,177,758
	Capital surplus	89,327	90,491	840,804
	Retained earnings	290,538	236,961	2,734,733
	Treasury stock	(19,842)	(14,708)	(186,766)
	Total shareholders' equity	485,148	437,797	4,566,529
	Accumulated other comprehensive income (Note 12)			
	Valuation difference on available-for-sale securities	26,558	20,337	249,981
	Deferred gains or losses on hedges	(16)	(25)	(151)
	Foreign currency translation adjustment	5,037	4,211	47,412
	Remeasurements of defined benefit plans	(5,603)	(12,628)	(52,739)
	Total accumulated other comprehensive income (loss)	25,976	11,895	244,503
	Non-controlling interests	75,480	64,943	710,466
	Total net assets	586,604	514,635	5,521,498
	Total liabilities and net assets	¥1,444,104	¥1,325,525	\$13,592,846

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# Consolidated Statements of Operations MITSUI CHEMICALS, INC. AND CONSOLIDATED SUBSIDIARIES

For the years ended March 31, 2018 and 2017

	Million	Millions of yen		
	2018/3	2017/3	2018/3	
Net sales	¥1,328,526	¥1,212,282	\$12,504,951	
Cost of sales (Notes 6 and 9)	1,019,160	919,268	9,592,997	
Gross profit	309,366	293,014	2,911,954	
Selling, general and administrative expenses (Notes 6 and 9)	205,875	190,865	1,937,829	
Operating income	103,491	102,149	974,125	
Non-operating income and expenses				
Non-operating income				
Interest income	1,471	941	13,846	
Dividends income	3,317	2,679	31,222	
Share of profit of entities accounted for using equity method	7,063	208	66,482	
Rent income	744	718	7,003	
Insurance income	2,318	151	21,819	
Other	2,408	1,985	22,665	
Total non-operating income	17,321	6,682	163,037	
Non-operating expenses				
Interest expenses	5,478	5,749	51,563	
Loss on suspension of operations	588	557	5,535	
Foreign exchange losses	1,201	1,257	11,305	
Provision of allowance for doubtful accounts	_	1,370	_	
Other	3,340	2,702	31,438	
Total non-operating expenses	10,607	11,635	99,841	
Ordinary income	110,205	97,196	1,037,321	
Extraordinary income and losses				
Extraordinary income				
Gain on sales of non-current assets	2,778	253	26,148	
Gain on sales of investment securities	767	2,381	7,220	
Gain on transfer of business	591	_	5,563	
Gain on forgiveness of debts	2,010	_	18,919	
Gain on revision of retirement benefit plan	326	_	3,069	
Total extraordinary income	6,472	2,634	60,919	
Extraordinary losses				
Loss on disposal of non-current assets	2,389	7,375	22,487	
Loss on sales of non-current assets	9	10	85	
Impairment loss (Note 10)	15,012	4,111	141,303	
Loss on valuation of investment securities	5,059	196	47,619	
Contract termination fees	_	2,366	_	
Total extraordinary losses	22,469	14,058	211,494	
Profit (loss) before income taxes	94,208	85,772	886,746	
Income taxes—current	18,819	15,704	177,137	
Income taxes—deferred	(3,629)	(3,789)	(34,159)	
Total income taxes	15,190	11,915	142,978	
Profit (loss)	79,018	73,857	743,768	
Profit (loss) attributable to non-controlling interests	7,433	9,018	69,964	
Profit (loss) attributable to owners of parent	¥ 71,585	¥ 64,839	\$ 673,804	

Amounts per share of common stock:

	Ye	en	U.S. dollars (Note 4)
Earnings per share	¥358.38	¥324.05	\$3.373
Cash dividends per share	54.00	14.00	0.508

#### **Consolidated Statements of Comprehensive Income**

MITSUI CHEMICALS, INC. AND CONSOLIDATED SUBSIDIARIES For the years ended March 31, 2018 and 2017

	Millions	Thousands of U.S. dollars (Note 4)	
	2018/3	2017/3	2018/3
Profit (loss)	¥79,018	¥73,857	\$743,769
Other comprehensive income (loss) (Note 12)			
Valuation difference on available-for-sale securities	6,405	5,647	60,288
Deferred gains or losses on hedges	(5)	0	(47)
Foreign currency translation adjustments	(2,311)	(3,870)	(21,753)
Remeasurements of defined benefit plans	6,975	11,380	65,653
Share of other comprehensive income (loss) of entities accounted for using equity method	3,049	(1,614)	28,699
Total other comprehensive income (loss)	14,113	11,543	132,840
Comprehensive income (loss)	¥93,131	¥85,400	\$876,609
Comprehensive income (loss) attributable to:			
Owners of parent	¥85,667	¥77,184	\$806,354
Non-controlling interests	7,464	8,216	70,255

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, 2018 and 2017

		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, 2016	¥125,053	¥90,847	¥181,128	¥(14,607)	¥14,650	¥(48)	¥8,930	¥(23,982)	¥61,266	¥443,237
Issuance of new shares	_	_	_	_	_	_	_		_	_
Dividends of surplus	_	_	(9,005)	_	_	_	_		_	(9,005)
Profit attributable to owners of parent	_	_	64,839	_	_	_	_		_	64,839
Purchase of treasury stock	_	_	_	(103)	_	_	_		_	(103)
Disposal of treasury stock	_	_	(1)	2	_	_	_	_	_	1
Change in ownership interest of parent related to transactions with non-controlling interests	_	(356)	_	_	_	_	_	_	_	(356
Net changes of items other than shareholders' equity	_	_	_	_	5,687	23	(4,719)	11,354	3,677	16,022
Balance at April 1, 2017	¥125,053	¥90,491	¥236,961	¥(14,708)	¥20,337	¥(25)	¥4,211	¥(12,628)	¥64,943	¥514,635
ssuance of new shares	72	72	—	_	_		_	_		¥144
Dividends of surplus			(18,007)	_	_	_	_			(18,007
Profit attributable to owners of parent	_		71,585	—	_	—	_	—	_	71,585
Purchase of treasury shares			_	(5,141)	_	_	_			(5,141
Disposal of treasury stock		(O)	_	7	_	_	_			7
Change in ownership interest of parent related to transactions with non-controlling interests	_	(1,236)	_	_	_	_	_	_	_	(1,236
Net changes of items other than shareholders' equity	_	_	_	_	6,221	9	826	7,025	10,537	24,618
Balance at March 31, 2018	¥125,125	¥89,327	¥290,538	¥(19,842)	¥26,558	¥(16)	¥5,037	¥(5,603)	¥75,480	¥586,604

		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	<ul> <li>Remeasurements</li> <li>of defined benefit</li> <li>plans</li> </ul>	Non-controlling interests	Total net assets
Balance at April 1, 2017	\$1,177,080	\$851,760	\$2,230,431	\$(138,441)	\$191,425	\$(235)	\$39,637	\$(118,863)	\$611,285	\$4,844,079
Issuance of new shares	678	678	_	_	_	_	—	—	_	1,356
Dividends of surplus	_	_	(169,504)			_	_	_		(169,504)
Profit attributable to owners of parent	_	_	673,806			_	_	_		673,806
Purchase of treasury shares	_	_	_	(48,391)		_	_	—	_	(48,391)
Disposal of treasury stock	_	_	_	66		_	_	_		66
Change in ownership interest of parent related to transactions with non-controlling interests	_	(11,634)	_	_	_	_	_	_	_	(11,634)
Net changes of items other than _shareholders' equity	_	_	_	_	58,556	84	7,775	66,124	99,181	231,720
Balance at March 31, 2018	\$1,177,758	\$840,804	\$2,734,733	\$(186,766)	\$249,981	\$(151)	\$47,412	\$(52,739)	\$710,466	\$5,521,498

#### **Consolidated Statements of Cash Flows**

MITSUI CHEMICALS, INC. AND CONSOLIDATED SUBSIDIARIES For the years ended March 31, 2018 and 2017

	Millions	s of ven	Thousands of U.S. dollars (Note 4)
	2018/3	2017/3	2018/3
Cash flows from operating activities			
Profit (loss) before income taxes	¥94,208	¥85,772	\$886,747
Depreciation	44,835	42,809	422,016
Amortization of goodwill	819	1,248	7,709
Impairment loss	15,012	4,111	141,303
Increase (decrease) in net defined benefit liability	323	(2,314)	3,040
Decrease (increase) in net defined benefit asset	(4,393)	(3,989)	(41,350)
Increase (decrease) in allowance for doubtful accounts	(7)	1,353	(66)
Increase (decrease) in provision for repairs	414	3,671	3,897
Increase (decrease) in provision for environmental measures	(57)	(54)	(537)
Interest and dividend income	(4,788)	(3,620)	(45,068)
Insurance income	(2,318)	(151)	(21,819)
Interest expenses	5,478	5,749	51,563
Share of (profit) loss of entities accounted for using equity method	(7,063)	(208)	(66,482)
Loss (gain) on sales of investment securities	(814)	(2,379)	(7,662)
Loss (gain) on valuation of investment securities	5,059	196	47,619
Loss on disposal of non-current assets	1,067 (2,769)	709	10,043
Loss (gain) on sales of non-current assets		(243)	(26,064)
Decrease (increase) in notes and accounts receivable—trade	(23,381)	(27,375)	(220,077)
Decrease (increase) in inventories	(26,419)	(8,014) 27,580	(248,673) 129,763
Increase (decrease) in notes and accounts payable—trade Other, net	13,786		
	(15,314)	(11,485)	(144,144)
Subtotal	93,678	113,366	881,758
Interest and dividends income received	9,011	7,699	84,817
Interest expenses paid	(5,583)	(5,818)	(52,552)
Proceeds from insurance income	2,752	151	25,903
Income taxes paid	(17,198)	(14,958)	(161,879)
Net cash provided by (used in) operating activities	82,660	100,440	778,047
Cash flows from investing activities			
Purchase of property, plant and equipment	(49,587)	(39,530)	(466,745)
Proceeds from sales of property, plant and equipment	337	1,082	3,172
Purchase of intangible assets	(3,085)	(1,968)	(29,038)
Proceeds from sales on intangible assets	2,502	9	23,551
Purchase of long-term prepaid expenses	(1,346)	(1,431)	(12,669)
Purchase of investment securities	(3,986)	(10,390)	(37,519)
Proceeds from sales and redemption of investment securities (Note 16)	1,521	4,179	14,317
Proceeds from transfer of business	1,486	0	13,987
Purchase of shares of subsidiaries resulting in change in scope of	(16,350)	0	(153,897)
consolidation (Note 13)	(10,000)	0	(100,001)
Proceeds from sales of shares of subsidiaries resulting in change in scope		00	
of consolidation	(5,000)	30	(40.001)
Payments of long-term loans receivable	(5,208)	(3)	(49,021)
Other, net	(1,325)	627	(12,472)
Net cash provided by (used in) investing activities	(75,041)	(47,395)	(706,335)
Cash flows from financing activities			
Net increase (decrease) in short-term loans payable	4,072	4,154	38,328
Increase (decrease) in commercial papers	20,000	—	188,253
Proceeds from long-term loans payable	29,711	10,000	279,659
Repayment of long-term loans payable	(19,476)	(27,818)	(183,321)
Proceeds from issuance of bonds	10,000		94,127
Redemption of bonds	(24,284)	(20,142)	(228,577)
Proceeds from stock issuance to non-controlling shareholders	—	8	—
Proceeds from sales of treasury stock	7	1	66
Purchase of treasury stock	(5,141)	(103)	(48,390)
Cash dividends paid	(18,007)	(9,005)	(169,494)
Dividends paid to non-controlling interests	(6,397)	(4,006)	(60,213)
Payments from changes in ownership interests in subsidiaries that do not	(552)	(548)	(5,196)
result in change in scope of consolidation			
Other, net	(138)	(116)	(1,299)
Net cash provided by (used in) financing activities	(10,205)	(47,575)	(96,056)
Effect of exchange rate change on cash and cash equivalents	(1,170)	(737)	(11,010)
Net increase (decrease) in cash and cash equivalents	(3,756)	4,733	(35,354)
Cash and cash equivalents at beginning of period	82,884	78,151	780,158
Decrease in cash and cash equivalents resulting from exclusion of		,	
subsidiaries from consolidation	(300)	—	(2,824)
Cash and cash equivalents at end of period (Note 13)	¥78,828	¥82,884	\$741,980
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#### Notes to Consolidated Financial Statements

MITSUI CHEMICALS, INC. AND CONSOLIDATED SUBSIDIARIES For the years ended March 31, 2018 and 2017

#### 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, were 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 have been 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, 2018, the Group comprised 115 consolidated subsidiaries, 21 more than in the previous fiscal year. This reflected the inclusion of 25 new companies, including ARRK Corporation and its 20 subsidiaries, and the exclusion of four former subsidiaries, of which Chiba Phenol Co., Ltd was excluded due to liquidation.

The equity method is applied to 39 non-consolidated subsidiaries and affiliates, two more than in the previous fiscal year.

#### 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 have reported 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 assets leased)

Property, plant and equipment are stated at cost. Depreciation is calculated principally 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 straightline method. The cost of software intended for internal use is amortized using the straight-line method over its estimated useful life (5 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 referred to as finance leases.

Depreciation of leased assets is 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 value 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 have been 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 in the following year in which the gain or loss is recognized by the straightline 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.

#### I. Accrued directors' bonuses

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

#### m. 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.

#### n. Provision for repairs

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

#### o. Provision for environmental measures

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

#### p. 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.

#### q. 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.

# Strategy

#### r. 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.

#### s. Consolidated taxation system

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

#### t. Consumption taxes

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

## 3. Accounting changes

#### a. Accounting standards issued but not yet adopted

- Accounting Standard for Revenue Recognition (ASBJ Statement No. 29, March 30, 2018)
- Implementation Guidance on Accounting Standard for Revenue Recognition (ASBJ Guidance No. 30, March 30, 2018)

#### (1) Overview

The International Accounting Standards Board (IASB) and the Financial Accounting Standards Board (FASB) worked together to develop a comprehensive accounting standard for revenue recognition. In May 2014, they announced the line item "Revenue from Contracts with Customers," which the IASB has named IFRS 15 and the FASB has named Topic 606. IFRS 15 is to be adopted from fiscal years beginning on or after January 1, 2018, and Topic 606 is to be adopted from fiscal years beginning on or after December 15, 2017. In light of this, the Accounting Standards Board of Japan (ASBJ) has developed a comprehensive accounting standard for revenue recognition and announced it along with guidance on implementation.

Following the ASBJ's development of an accounting standard for revenue recognition, the Company's basic policy has been to first adopt the basic principles of IFRS 15 with an eye toward compatibility when comparing financial statements, which is one advantage of attempting to be consistent with IFRS 15. From there, the Company then decides on accounting standards. In addition, if there are items that require attention be paid to practices in Japan to date, the Company will add substitute treatment as long as compatibility for comparisons is not hindered.

#### (2) Planned adoption date

The implementation date is still under consideration at present.

#### (3) Impact of the adoption of the accounting standard

The impact on consolidated financial statements of the adoption of the accounting standard and implementation guidance for revenue recognition is still being evaluated at present.

#### b. Changes in presentation

Consolidated statements of operations

In the current fiscal year, "Rent income," which was included in "Other" of "Non-operating income," exceeded 10% of total non-operating income. Therefore, it is presented as a separate line item from the fiscal year ended March 31, 2018. In compliance with this change in presentation, prior years consolidated statements of operations have been restated.

Consequently, in the consolidated statements of operations for the fiscal year ended March 31, 2017, ¥2,136 million previously classified as "Other" has been reclassified to "Insurance income" of ¥151 million and "Other" of ¥1,985 million.

#### Consolidated statements of cash flows

1) In the current fiscal year, "Insurance income," "Loss (gain) on valuation of investment securities" and "Proceeds from insurance income" which were included in "Other" of "Net cash provided by (used in) operating activities" have become significant enough to present as separate line items from the fiscal year ended March 31, 2018. On the other hand, "Increase (decrease) in provision for business structure improvement" has become too insignificant to present as a separate line item. Therefore, it is included in "Other" from the fiscal year ended March 31, 2018. In compliance with these changes in presentation, prior consolidated statements of cash flows have been restated.

Consequently, in the consolidated statements of cash flows for the fiscal year ended March 31, 2017, ¥(8,425) million previously classified as "Other" of "Net cash provided by (used in) operating activities" has been reclassified to "Insurance income" of ¥(151) million, "Loss (gain) on valuation of investment securities" of ¥196 million and "Proceeds from insurance income" of ¥151 million. In addition, ¥(2,864) million previously classified as "Increase (decrease) in provision for business structure improvement" has been reclassified to "Other".

	2) In the current fiscal year, "Proceeds from sales of intangable" which was included in "Other" of "Net cash providicant enough to present as separate line items from the this change in presentation, prior consolidated statements. Consequently, in the consolidated statements of case 4633 million previously classified as "Other" of "Net case reclassified to "Proceeds from sales of intangible assets able" of ¥(3) million and "Other" of ¥627 million.	ded by (used in) in e fiscal year ended nts of cash flows ash flows for the fis sh provided by (us	vesting activities"   March 31, 2018. have been restated scal year ended M ed in) investing act	have become signi In compliance with d. arch 31, 2017, tivities" has been
4. U.S. dollar amounts	The translation of yen amounts into U.S. dollar amounts is ¥106.24=US\$1.00, the approximate rate of exchange in e construed as a representation that yen amounts have bee at the above or any other rate.	effect on March 31	, 2018. The transl	ation should not be
5. Inventories	Inventories at March 31, 2018 and 2017 were as follows:			
		Million	s of yen	Thousands of U.S. dollars
		2018/3	2017/3	2018/3
	Finished goods	¥183,195	¥165,838	\$1,724,350
	Work in process	6,421	5,974	60,439
	Raw materials and supplies	84,726	75,732	797,496
	Total	¥274,342	¥247,544	\$2,582,285
6. Retirement benefit plans	The Company and most of its consolidated subsidiaries has or defined contribution plans. In addition, some overseas or Reporting Standards for the recognition, measurement, and c	onsolidated subsic	liaries apply Interna	ational Financial
		er factors.		
	The liabilities and expenses for severance and retiremen lated actuarially under certain assumptions. The changes in the retirement benefit obligation during the Movements in defined benefit obligation	t benefits are dete		017 were as follows
	lated actuarially under certain assumptions.	t benefits are dete	h 31, 2018 and 20	
	lated actuarially under certain assumptions.	t benefits are dete years ended Marc	h 31, 2018 and 20	017 were as follow Thousands of
	lated actuarially under certain assumptions.	t benefits are dete years ended Marc Millions	h 31, 2018 and 20 s of yen 2017/3 ¥200,542	D17 were as follow Thousands of U.S. dollars
	lated actuarially under certain assumptions. The changes in the retirement benefit obligation during the Movements in defined benefit obligation Defined benefit obligation as of April 1 Service cost	t benefits are dete years ended Marc Millions 2018/3 ¥188,204 5,398	th 31, 2018 and 20 to f yen 2017/3 ¥200,542 5,228	017 were as follow Thousands of U.S. dollars 2018/3
	lated actuarially under certain assumptions. The changes in the retirement benefit obligation during the Movements in defined benefit obligation Defined benefit obligation as of April 1 Service cost Interest cost	t benefits are deter years ended Marc Millions 2018/3 ¥188,204 5,398 417	th 31, 2018 and 20 s of yen 2017/3 ¥200,542 5,228 229	017 were as follow Thousands of U.S. dollars 2018/3 \$1,771,498 50,809 3,925
	lated actuarially under certain assumptions. The changes in the retirement benefit obligation during the Movements in defined benefit obligation Defined benefit obligation as of April 1 Service cost Interest cost Actuarial gains/losses	t benefits are deter years ended Marc <u>Millions</u> 2018/3 ¥188,204 5,398 417 (885)	th 31, 2018 and 20 s of yen 2017/3 ¥200,542 5,228 229 (1,961)	017 were as follow Thousands of U.S. dollars 2018/3 \$1,771,498 50,809 3,925 (8,330)
	lated actuarially under certain assumptions. The changes in the retirement benefit obligation during the Movements in defined benefit obligation Defined benefit obligation as of April 1 Service cost Interest cost Actuarial gains/losses Past service cost	t benefits are deter years ended Marc <u>2018/3</u> ¥188,204 5,398 417 (885) (155)	th 31, 2018 and 20 to f yen 2017/3 ¥200,542 5,228 229 (1,961) 44	017 were as follow Thousands of U.S. dollars 2018/3 \$1,771,498 50,809 3,925 (8,330) (1,459)
	lated actuarially under certain assumptions. The changes in the retirement benefit obligation during the Movements in defined benefit obligation Defined benefit obligation as of April 1 Service cost Interest cost Actuarial gains/losses Past service cost Benefits paid	t benefits are deter years ended Marc 2018/3 ¥188,204 5,398 417 (885) (155) (11,170)	th 31, 2018 and 20 s of yen 2017/3 ¥200,542 5,228 229 (1,961)	017 were as follow Thousands of U.S. dollars 2018/3 \$1,771,498 50,809 3,925 (8,330) (1,459) (105,139)
	lated actuarially under certain assumptions. The changes in the retirement benefit obligation during the Movements in defined benefit obligation Defined benefit obligation as of April 1 Service cost Interest cost Actuarial gains/losses Past service cost Benefits paid Decrease due to transfer to defined contribution plan	t benefits are deter years ended Marc 2018/3 ¥188,204 5,398 417 (885) (155) (11,170) (2,373)	th 31, 2018 and 20 s of yen 2017/3 ¥200,542 5,228 229 (1,961) 44 (14,995) —	017 were as follow Thousands of U.S. dollars 2018/3 \$1,771,498 50,809 3,925 (8,330) (1,459) (105,139) (22,336)
	lated actuarially under certain assumptions. The changes in the retirement benefit obligation during the Movements in defined benefit obligation Defined benefit obligation as of April 1 Service cost Interest cost Actuarial gains/losses Past service cost Benefits paid Decrease due to transfer to defined contribution plan Others	t benefits are deter years ended Marc 2018/3 ¥188,204 5,398 417 (885) (155) (11,170) (2,373) 1,403	th 31, 2018 and 20 s of yen 2017/3 ¥200,542 5,228 229 (1,961) 44 (14,995) — (883)	017 were as follow Thousands of U.S. dollars 2018/3 \$1,771,498 50,809 3,925 (8,330) (1,459) (105,139) (22,336) 13,206
	lated actuarially under certain assumptions. The changes in the retirement benefit obligation during the Movements in defined benefit obligation Defined benefit obligation as of April 1 Service cost Interest cost Actuarial gains/losses Past service cost Benefits paid Decrease due to transfer to defined contribution plan	t benefits are deter years ended Marc 2018/3 ¥188,204 5,398 417 (885) (155) (11,170) (2,373)	th 31, 2018 and 20 s of yen 2017/3 ¥200,542 5,228 229 (1,961) 44 (14,995) —	017 were as follow Thousands of U.S. dollars 2018/3 \$1,771,498 50,809 3,925 (8,330) (1,459) (105,139) (22,336)
	lated actuarially under certain assumptions. The changes in the retirement benefit obligation during the Movements in defined benefit obligation Defined benefit obligation as of April 1 Service cost Interest cost Actuarial gains/losses Past service cost Benefits paid Decrease due to transfer to defined contribution plan Others	t benefits are deter years ended Marc 2018/3 ¥188,204 5,398 417 (885) (155) (11,170) (2,373) 1,403	th 31, 2018 and 20 s of yen 2017/3 ¥200,542 5,228 229 (1,961) 44 (14,995) — (883)	017 were as follow Thousands of U.S. dollars 2018/3 \$1,771,498 50,809 3,925 (8,330) (1,459) (105,139) (22,336) 13,206 \$1,702,174
	lated actuarially under certain assumptions. The changes in the retirement benefit obligation during the Movements in defined benefit obligation Defined benefit obligation as of April 1 Service cost Interest cost Actuarial gains/losses Past service cost Benefits paid Decrease due to transfer to defined contribution plan Others Defined benefit obligation as of March 31	t benefits are deter years ended Marc 2018/3 ¥188,204 5,398 417 (885) (155) (11,170) (2,373) 1,403	th 31, 2018 and 20 3 of yen 2017/3 ¥200,542 5,228 229 (1,961) 44 (14,995) — (883) ¥188,204	017 were as follow Thousands of U.S. dollars 2018/3 \$1,771,498 50,809 3,925 (8,330) (1,459) (105,139) (22,336) 13,206
	lated actuarially under certain assumptions. The changes in the retirement benefit obligation during the Movements in defined benefit obligation Defined benefit obligation as of April 1 Service cost Interest cost Actuarial gains/losses Past service cost Benefits paid Decrease due to transfer to defined contribution plan Others Defined benefit obligation as of March 31	t benefits are deter years ended Marc 2018/3 ¥188,204 5,398 417 (885) (155) (11,170) (2,373) 1,403 ¥180,839	th 31, 2018 and 20 3 of yen 2017/3 ¥200,542 5,228 229 (1,961) 44 (14,995) — (883) ¥188,204	017 were as follow Thousands of U.S. dollars 2018/3 \$1,771,498 50,809 3,925 (8,330) (1,459) (105,139) (22,336) 13,206 \$1,702,174 Thousands of
	lated actuarially under certain assumptions. The changes in the retirement benefit obligation during the Movements in defined benefit obligation Defined benefit obligation as of April 1 Service cost Interest cost Actuarial gains/losses Past service cost Benefits paid Decrease due to transfer to defined contribution plan Others Defined benefit obligation as of March 31	t benefits are deter years ended Marc 2018/3 ¥188,204 5,398 417 (885) (155) (11,170) (2,373) 1,403 ¥180,839 Millions	th 31, 2018 and 20 s of yen 2017/3 ¥200,542 5,228 229 (1,961) 44 (14,995) — (883) ¥188,204 s of yen	D17 were as follow Thousands of U.S. dollars 2018/3 \$1,771,498 50,809 3,925 (8,330) (1,459) (105,139) (22,336) 13,206 \$1,702,174 Thousands of U.S. dollars
	lated actuarially under certain assumptions.         The changes in the retirement benefit obligation during the Movements in defined benefit obligation         Defined benefit obligation as of April 1         Service cost         Interest cost         Actuarial gains/losses         Past service cost         Benefits paid         Decrease due to transfer to defined contribution plan         Others         Defined benefit obligation as of March 31         Movements in plan assets         Plan assets as of April 1         Expected return on plan assets	t benefits are deter years ended Marc 2018/3 ¥188,204 5,398 417 (885) (155) (11,170) (2,373) 1,403 ¥180,839 Millions 2018/3	th 31, 2018 and 20 2017/3 ¥200,542 5,228 229 (1,961) 44 (14,995) — (883) ¥188,204 3 \$ of yen 2017/3 ¥158,454 3,572	D17 were as follow Thousands of U.S. dollars 2018/3 \$1,771,498 50,809 3,925 (8,330) (1,459) (105,139) (22,336) 13,206 \$1,702,174 Thousands of U.S. dollars 2018/3
	lated actuarially under certain assumptions.         The changes in the retirement benefit obligation during the Movements in defined benefit obligation         Defined benefit obligation as of April 1         Service cost         Interest cost         Actuarial gains/losses         Past service cost         Benefits paid         Decrease due to transfer to defined contribution plan         Others         Defined benefit obligation as of March 31         Movements in plan assets         Plan assets as of April 1         Expected return on plan assets         Actuarial gains/losses	t benefits are deter years ended Marc 2018/3 ¥188,204 5,398 417 (885) (155) (11,170) (2,373) 1,403 ¥180,839 Millions 2018/3 ¥164,107 3,314 4,211	th 31, 2018 and 20 2017/3 ¥200,542 5,228 229 (1,961) 44 (14,995) — (883) ¥188,204 3 of yen 2017/3 ¥158,454 3,572 6,748	D17 were as follow Thousands of U.S. dollars 2018/3 \$1,771,498 50,809 3,925 (8,330) (1,459) (105,139) (22,336) 13,206 \$1,702,174 Thousands of U.S. dollars 2018/3 \$1,544,682
	lated actuarially under certain assumptions.         The changes in the retirement benefit obligation during the Movements in defined benefit obligation         Defined benefit obligation as of April 1         Service cost         Interest cost         Actuarial gains/losses         Past service cost         Benefits paid         Decrease due to transfer to defined contribution plan         Others         Defined benefit obligation as of March 31         Movements in plan assets         Plan assets as of April 1         Expected return on plan assets         Actuarial gains/losses         Employer contributions	t benefits are deter years ended Marc 2018/3 ¥188,204 5,398 417 (885) (155) (11,170) (2,373) 1,403 ¥180,839 Millions 2018/3 ¥164,107 3,314 4,211 5,078	th 31, 2018 and 20 3 of yen 2017/3 ¥200,542 5,228 229 (1,961) 44 (14,995) — (883) ¥188,204 3 of yen 2017/3 ¥158,454 3,572 6,748 4,669	D17 were as follow Thousands of U.S. dollars 2018/3 \$1,771,498 50,809 3,925 (8,330) (1,459) (105,139) (22,336) 13,206 \$1,702,174 Thousands of U.S. dollars 2018/3 \$1,544,682 31,194 39,637 47,797
	lated actuarially under certain assumptions.         The changes in the retirement benefit obligation during the Movements in defined benefit obligation         Defined benefit obligation as of April 1         Service cost         Interest cost         Actuarial gains/losses         Past service cost         Benefits paid         Decrease due to transfer to defined contribution plan         Others         Defined benefit obligation as of March 31         Movements in plan assets         Plan assets as of April 1         Expected return on plan assets         Actuarial gains/losses	t benefits are deter years ended Marc 2018/3 ¥188,204 5,398 417 (885) (155) (11,170) (2,373) 1,403 ¥180,839 Millions 2018/3 ¥164,107 3,314 4,211	th 31, 2018 and 20 2017/3 ¥200,542 5,228 229 (1,961) 44 (14,995) — (883) ¥188,204 3 of yen 2017/3 ¥158,454 3,572 6,748	017 were as follow: Thousands of U.S. dollars 2018/3 \$1,771,498 50,809 3,925 (8,330) (1,459) (105,139) (22,336) 13,206 \$1,702,174 Thousands of U.S. dollars 2018/3 \$1,544,682 31,194 39,637

398

¥167,168

(548)

¥164,107

3,745

\$1,573,494

Others

Plan asset as of March 31

#### Funded status of the pension plans

	Millions	Thousands of U.S. dollars	
	2018/3	2017/3	2018/3
Funded retirement benefit obligation	¥136,451	¥ 143,859	\$1,284,366
Plan assets at fair value	(167,168)	(164,107)	(1,573,494)
	(30,717)	(20,248)	(289,128)
Unfunded retirement benefit obligation	44,388	44,345	417,808
Net liability for retirement benefits in the balance sheet	13,671	24,097	128,680
Net defined benefit liability	55,220	55,200	519,767
Net defined benefit asset	(41,549)	(31,103)	(391,087)
Net liability for retirement benefits in the balance sheet	¥ 13,671	¥ 24,097	\$ 128,680

#### Retirement benefit expenses

	Million	Millions of yen		
	2018/3	2017/3	2018/3	
Service cost	¥5,398	¥5,228	\$50,810	
Interest cost	417	229	3,925	
Expected return on plan assets	(3,314)	(3,572)	(31,194)	
Amortization of actuarial gains/losses	2,092	2,530	19,691	
Amortization of past service cost	5	41	47	
Premium severance pay	580	528	5,459	
Total	¥5,178	¥4,984	\$48,738	

Regarding the year ended March 31, 2018, extraordinary income of ¥326 million was recorded due to the transition from the defined benefit plan to the defined contribution plan.

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

	Millions of yen		Thousands of U.S. dollars	
	2018/3	2017/3	2018/3	
Past service cost	¥ 5	¥ 3	\$ 47	
Actuarial gains/losses	(6,926)	(11,426)	(65,192)	
Total	¥(6,921)	¥(11,423)	\$(65,145)	

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

	Millions	Thousands of U.S. dollars	
	2018/3	2017/3	2018/3
Unrecognized past service cost	¥ (58)	¥ (63)	\$ (546)
Unrecognized actuarial gains/losses	6,681	13,606	62,886
Total	¥6,623	¥13,543	\$62,340

Plan assets by category (%)

	2018/3	2017/3
Bonds	35%	34%
Stocks	46%	51%
Cash on hand and in banks	2%	1%
Other	17%	14%
Total	100%	100%

A retirement benefit trust set up for the corporate pension plan accounted for 21% of total plan assets at March 31, 2018 and 2017.

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

	2018/3	2017/3
Discount rate	Principally 0.1%	Principally 0.1%
Rate of expected return on the pension plan assets	Principally 2.2%	Principally 2.5%
Rate of estimated future salary increases	Principally 1.0-5.0%	Principally 1.0-5.0%

#### Expenses for defined contribution plans

Millions of yen		Thousands of U.S. dollars	
2018/3	2017/3	2018/3	
¥525	¥475	\$4,942	
	2018/3	2018/3 2017/3	

### 7. Loans and bonds

#### 1. Loans payable breakdown

	Millions of yen		Thousands of U.S. dollars
	2018/3	2017/3	2018/3
Short-term loans payable (0.60%)	¥ 94,348	¥ 90,276	\$ 888,065
Current portion of long-term loans payable (2.03%)	24,834	18,582	233,754
Current portion of lease obligations	213	116	2,005
Long-term loans payable due in 2019—2028 (1.00%)	274,099	268,654	2,579,998
Long-term lease obligations due in 2019—2031	2,874	2,524	27,052
Commercial papers (0.00%)	20,000	_	188,253
Total	¥416,368	¥380,152	\$3,919,127

The aforementioned interest rate is an average, shown as the weighted average interest rate on the outstanding balance as of March 31, 2018.

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 loans payable due within 5 years:

Year ending March 31	Millions of yen	Thousands of U.S. dollars
2020	¥57,519	\$541,406
2021	41,978	395,124
2022	42,718	402,090
2023	41,088	386,747

Maturities of lease obligations due within 5 years:

Year ending March 31	Millions of yen	Thousands of U.S. dollars
2020	¥204	\$1,920
2021	209	1,967
2022	513	4,829
2023	168	1,581

#### 2. Bonds payable breakdown

	Millions	Millions of yen	
	2018/3	2017/3	2018/3
1.93% bonds due in 2017	¥ —	¥10,000	\$ —
1.246% bonds due in 2020	10,000	10,000	94,127
1.354% bonds due in 2021	10,000	10,000	94,127
0.651% bonds due in 2017	_	14,000	—
0.682% bonds due in 2018	15,000	15,000	141,190
0.260% bonds due in 2024	5,000	—	47,063
0.370% bonds due in 2027	5,000	—	47,063
0.49% bonds due in 2021	574	716	5,403
0.070% bonds due in 2024	430	—	4,047
0.310% bonds due in 2024	428	_	4,029
0.070% bonds due in 2024	430	—	4,047
0.310% bonds due in 2024	428	—	4,029
	¥47,290	¥59,716	\$445,125

Maturities of bonds payable due within 5 years:

Year ending March 31	Millions of yen	Thousands of U.S. dollars
2019	¥15,426	\$145,200
2020	426	4,010
2021	10,426	98,136
2022	10,432	98,193
2023	284	2,673

### 8. Contingent liabilities

Contingent liabilities at March 31, 2018 and 2017 were as follows:

	Million	s of yen	Thousands of U.S. dollars
	2018/3	2017/3	2018/3
As endorser of trade notes discounted	¥ 180	¥ 164	\$ 1,694
As guarantor of indebtedness, principally of non-consolidated subsidiaries and affiliates	72,852	69,084	685,730

# 9. Research and development expenses for the years ended March 31, 2018 and 2017 were as follows: development expenses 2018/3 2017/3 Research and development expenses ¥33,377 ¥30,777

#### 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.

The Company conducted an impartment test for business assets in use in the dental materials business in light of the fact that business results deviated from the plan due to changes in the operating environment. As a result, the book value was reduced to the recoverable amount. The amount that was written down is accounted for as an extraordinary loss and listed as an impairment loss (¥14,350 million).

Year	ended	March	31,	2018
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Location		Major use	Asset category	Millions of yen	Thousands of U.S. dollars	Remarks *
Dental mater (Europe, etc	rials business .)	Others	Goodwill, others	¥14,350	\$135,072	Business assets in use
Others	6 items	Production, etc.	Machinery and vehicles, others	¥549	\$5,168	Business assets in use
	5 items	Production, etc.	Buildings and structures	¥96	\$904	Idle properties
	1 item	Welfare facilities	Buildings and structures	¥17	\$160	Idle properties
Total				¥15,012	\$141,303	

Business assets in use comprised ¥6,503 million for goodwill, ¥6,211 million for customer-related intangible assets, and ¥1,636 million for trademarks. Furthermore, the recoverable amount has been estimated using the value in use based on future cash flows with a discount rate of 5%. In addition, the goodwill impairment loss of ¥6,503 million includes ¥474 million in amortization of goodwill based on rules in Paragraph 32 of the Practical Guidelines for Capital Consolidation Procedures in Consolidated Financial Statements (Accounting System Committee Report No. 7, February 16, 2018).

For measurements of impairment loss on business assets in use outside of the dental materials business, 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 (¥549 million). The impairment loss comprises ¥237 million for machinery and vehicles, ¥136 million for goodwill, and ¥176 million for others. Furthermore, the value in use was used as the recoverable amount in measuring impairment loss, and the value in use was evaluated as being zero.

As for idle properties, 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 (¥113 million). The impairment loss comprises ¥97 million for buildings and structures and ¥16 million for others. Furthermore, the value in use was used as the recoverable amount in measuring impairment loss, and the value in use was evaluated as being zero.

#### Year ended March 31, 2017

Location		Major use	Asset category	Millions yen	of Thousands of U.S. dollars	Remarks *
Shimonoseki Chemicals, In (Yamaguchi P	с.	Production and sales	Land, machinery, equipment and vehicles, buildings and structures, others	¥2,76	1 \$25,988	Business assets in use
Others	6 items	Production, etc.	Buildings and structures, machinery, equipment and vehicles, intangible assets-others, others	¥ 83	6 \$ 7,869	Business assets in use
	1 item	Factory land	Land	¥ 34	0 \$ 3,200	Idle properties
	2 items	Welfare facilities	Buildings and structures	¥ 17	4 \$ 1,638	Idle properties
Total				¥4,11	1 \$38,695	

\* Business assets in use comprised ¥1,319 million for land, ¥1,086 million for buildings and structures, ¥818 million for machinery, equipment and vehicles, ¥209 million for intangible assets-others, and ¥165 million for other assets. These amounts were showed in impairment loss as ¥3,597 million, respectively.

Idle properties comprised ¥340 million for land, ¥174 million for building and structures. These amounts were showed in impairment loss as ¥514 million, respectively.

(1) Shares issued and outstanding / Treasury stock

#### 11. Shareholders' equity

		(Thousands of shares)			
	Number of shares at April 1, 2018	Increase	Decrease	Number of shares at March 31, 2018	
Shares issued					
Common stocks	1,022,020	253	817,818	204,455	
Total	1,022,020	253	817,818	204,455	
Treasury stock					
Common stocks	21,684	1,510	17,427	5,767	
Total	21,684	1,510	17,427	5,767	

(Thousands of shares)

Notes:

1. The increase of 253 thousands of shares in common stock issued and outstanding was due to an issuance of transferrestricted shares

2. The decrease of 817,818 thousands of shares in common stock issued and outstanding was due to a 5-to-1 share consolidation conducted on October 1, 2017.

3. The increase of 1,510 thousands of shares in treasury stock was due to an increase of 115 thousands of shares through purchases of odd lots, an increase of 1,384 thousands of shares through treasury stock acquisitions by resolution of the Board of Directors, and an increase of 11 thousands of shares through purchases of fractional shares following the share consolidation.

4. The decrease of 17,427 thousands of shares in treasury stock was due to a decrease of 5 thousands of shares through sales of odd lots and a decrease of 17,422 thousands of shares through a 5-to-1 share consolidation of common stock conducted on October 1, 2017.

#### (2) Dividends

Under the Companies 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, 2018 include amounts representing the year-end cash dividends approved at the shareholders' meeting held on June 26, 2018.

	Millions of yen	Thousands of U.S. dollars
Cash dividends of ¥45 (US\$0.42) per share	¥8,941	\$84,159

#### 12. Consolidated statements of comprehensive income

Reclassification adjustments and tax effects for components of other comprehensive income (loss) for the years ended March 31, 2018 and 2017 were as follows:

	Millions of yen		Thousands of U.S. dollars	
	2018/3	2017/3	2018/3	
Valuation difference on available-for-sale securities:				
Amount arising during the year	¥ 9,320	¥ 9,734	\$ 87,726	
Reclassification adjustment to profit or loss	(215)	(1,926)	(2,024)	
Amount before income tax effect	9,105	7,808	85,702	
Income tax effect	(2,700)	(2,161)	(25,414)	
Total	6,405	5,647	60,288	
Deferred gains (losses) on hedges:				
Amount arising during the year	(8)	0	(75)	
Adjustments of acquisition cost for assets	_	_	_	
Amount before income tax effect	(8)	0	(75)	
Income tax effect	3	_	28	
Total	(5)	0	(47)	
Foreign currency translation adjustments:				
Amount arising during the year	(3,079)	(3,774)	(28,982)	
Reclassification adjustment to profit or loss	768	(96)	7,229	
Total	(2,311)	(3,870)	(21,753)	
Remeasurements of defined benefit plans:				
Amount arising during the year	4,795	8,909	45,134	
Reclassification adjustment to profit or loss	2,126	2,514	20,011	
Amount before income tax effect	6,921	11,423	65,145	
Income tax effect	54	(43)	508	
Total	6,975	11,380	65,653	
Share of other comprehensive income of associates accounted for using equity method:				
Amount arising during the year	3,177	(1,637)	29,904	
Reclassification adjustment to profit or loss	(128)	23	(1,205)	
Total	3,049	(1,614)	28,699	
Total other comprehensive income (loss)	¥14,113	¥11,543	\$132,840	

#### 13. Supplementary cash flow information

#### (1) Cash and cash equivalents at March 31, 2018 and 2017 were as follows:

	Millions	Thousands of U.S. dollars	
	2018/3	2017/3	2018/3
Cash and deposits	¥80,209	¥84,120	\$754,979
Long-term time deposits recorded under "Other" of investments and other assets	1,609	_	15,145
Deposit due over 3 months	(2,990)	(1,236)	(28,144)
Total	¥78,828	¥82,884	\$741,980

(2) Main breakdown of assets and liabilities of companies newly becoming consolidated subsidiaries upon acquisition of shares.

Previous fiscal year (from April 1, 2016 to March 31, 2017) Not applicable.

Current fiscal year (April 1, 2017 through March 31, 2018)

Breakdown of assets and liabilities at the time of consolidation due to newly consolidating ARRK Corporation through the acquisition of shares and the acquisition price.

The relationship between the amount and expenditure for acquisition (net) is as follows:

Year ended March 31, 2018	Millions of yen
Current assets	¥31,089
Non-current assets	19,591
Goodwill	5,241
Current liabilities	(10,455)
Non-current liabilities	(6,898)
Non-controlling interests	(8,435)
Business transfer price	¥30,133
Cash and cash equivalents	(13,783)
Purchase of shares of subsidiaries resulting	¥16,350

#### 14. Leases

Obligations under noncancelable operating leases at March 31, 2018 and 2017, were as follows: Future minimum lease payments:

	Millions	I housands of U.S. dollars	
	2018/3	2017/3	2018/3
Due within one year	¥ 828	¥174	\$ 7,794
Due after one year	2,760	97	25,979
Total	¥3,588	¥271	\$33,773

## 15. 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.

Short-term investment securities and investment securities, other securities, primarily the shares of companies with which the Group has operational relationships, are exposed to stock market 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 ten 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."

# Strategy

#### 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 creditrated 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-tomaturity 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 "17. 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, 2018 and 2017 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, 2018	Carrying value	Fair value	Differences
Assets			
(1) Cash and deposits	¥ 80,209	¥ 80,209	¥ —
(2) Trade notes and accounts receivable	306,899	306,899	—
(3) Short-term investment securities and investment securities, other securities	57,628	57,628	_
Total	444,736	444,736	_
Liabilities			
(1) Trade notes and accounts payable	162,179	162,179	
(2) Short-term bank loans	94,348	94,348	
(3) Commercial papers	20,000	20,000	
(4) Corporate bonds (*1)	47,290	47,893	603
(5) Long-term loans payable (*1)	298,933	306,860	7,927
Total	622,750	631,280	8,530
Derivative transactions (*2)	¥ (25)	¥ (25)	¥ —
*1 These employed include the surrent partice of lang term lange powelle a	nd comparate band	a reasonatively	

1 These amounts include the current portion of long-term loans payable and corporate bonds respectively.

\*2 Derivative assets and (liabilities) are on net basis.

	Thousands of 0.3. dollars		
Year ended March 31, 2018	Carrying value	Fair value	Differences
Assets			
(1) Cash and deposits	\$ 754,979	\$ 754,979	\$ —
(2) Trade notes and accounts receivable	2,888,733	2,888,733	
(3) Short-term investment securities and investment securities,			
other securities	542,433	542,433	
Total	4,186,145	4,186,145	—
Liabilities			
(1) Trade notes and accounts payable	1,526,534	1,526,534	—
(2) Short-term bank loans	888,065	888,065	
(3) Commercial papers	188,253	188,253	
(4) Corporate bonds (*1)	445,125	450,800	5,675
(5) Long-term loans payable (*1)	2,813,752	2,888,366	74,614
Total	5,861,729	5,942,018	80,290
Derivative transactions (*2)	\$ (235)	\$ (235)	\$ —

Thousands of U.S. dollars

\*1 These amounts include the current portion of long-term loans payable and corporate bonds respectively. \*2 Derivative assets and (liabilities) are on net basis.

		Millions of yen	
Year ended March 31, 2017	Carrying value	Fair value	Differences
Assets			
(1) Cash and deposits	¥ 84,120	¥ 84,120	¥ —
(2) Trade notes and accounts receivable	271,706	271,706	_
(3) Short-term investment securities and investment securities, other securities	47,327	47,327	_
Total	403,153	403,153	_
Liabilities			
(1) Trade notes and accounts payable	145,658	145,658	_
(2) Short-term bank loans	90,276	90,276	_
(3) Commercial papers	_	_	_
(4) Corporate bonds (*1)	59,716	60,810	1,094
(5) Long-term loans payable (*1)	287,236	297,378	10,142
Total	582,886	594,122	11,236
Derivative transactions (*2)	¥ (1)	¥ (1)	¥ —

\*1 These amounts include the current portion of bonds payable and long-term loans 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) Trade notes and accounts receivable

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

. The fair value of equity securities equals quoted market price, if available. The fair value of debt securities equals quoted market price or provided price by financial institutions. Moreover, investment securities for different holding purposes are described in "16. Securities".

#### Liabilities

1) Trade notes and accounts payable, 2) Short-term bank loans, 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) Corporate bonds

The fair value of corporate bonds equals the quoted market price, if available. If the market prices bonds are not available, fair value is calculated based on the present value of the total amount of principal and interest, discounted by the rate. 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, 2018	Millions of yen	Thousands of U.S. dollars
Unlisted equity securities	¥13,065	\$122,976
Unlisted preferred securities	8,000	75,301
Year ended March 31, 2017	Millions of yen	
Unlisted equity securities	¥17,880	
Unlisted preferred securities	5,537	

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 subsequent to the consolidated balance sheet date.

	Millions of yen			
Year ended March 31, 2018	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	¥ 80,209	¥—	¥—	¥—
Trade notes and accounts receivable	306,899	—	—	—
Total	¥387,108	¥—	¥—	¥—

	Thousands of U.S. dollars			
Year ended March 31, 2018	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	\$ 754,979	\$—	\$—	\$—
Trade notes and accounts receivable	2,888,733	—	_	_
Total	\$3,643,712	\$—	\$—	\$—

		Millions of yen			
Year ended March 31, 2017	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	¥ 84,120	¥ —	¥ —	¥ —	
Trade notes and accounts receivable	271,706	_	—	_	
Total	¥355,826	¥ —	¥ —	¥ —	

Note 4. The redemption schedule for corporate bonds and long-term bank loans subsequent to the consolidated balance sheet date.

	Millions of yen								
Year ended March 31, 2018	one year tw Due within but within b		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	¥ 94,348	¥ —	¥ —	¥ —	¥ —	¥ —			
Commercial papers	20,000	—		_	—				
Corporate bonds	15,426	426	10,426	10,432	284	10,296			
Long-term loans payable	24,834	57,519	41,978	42,718	41,088	90,796			
Total	¥154,608	¥57,945	¥52,404	¥53,150	¥41,372	¥101,092			

	(Thousands of U.S. dollars)								
Year ended March 31, 2018	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	\$ 888,065	\$ —	\$ —	\$ —	\$ —	\$ —			
Commercial papers	188,253			_		_			
Corporate bonds	145,200	4,010	98,136	98,193	2,673	96,913			
Long-term loans payable	233,754	541,406	395,124	402,090	386,747	854,631			
Total	\$1,455,272	\$545,416	\$493,260	\$500,283	\$389,420	\$951,544			

	Millions of yen							
Year ended March 31, 2017	one year t Due within but within b		Due over two years but within three years		Due over four years but within five years	Due over five years		
Short-term bank loans	¥ 90,276	¥ —	¥ —	¥ —	¥ —	¥ —		
Commercial paper	_	_	_	_	_	_		
Corporate bonds	24,142	15,142	142	10,142	10,148	_		
Long-term loans payable	18,582	25,094	57,013	41,519	38,135	106,893		
Total	¥133,000	¥40,236	¥57,155	¥51,661	¥48,283	¥106,893		

#### **16. Securities**

Information on securities held by the Company and its subsidiaries at March 31, 2018 and 2017 was as follows:

(1) Other securities						
		Millions of ye	٦	Thous	ands of U.S.	dollars
Year ended March 31, 2018	Carrying value	Acquisition cost	Differences	Carrying value	Acquisition cost	Differences
Securities whose carrying value exceeds their acquisition value :						
(1) Equity securities	¥56,978	¥19,787	¥37,191	\$536,314	\$186,248	\$350,066
(2) Others	5	5	0	47	47	0
Securities whose carrying value does not exceed their acquisition value :						
(1) Equity securities	644	829	(185)	6,062	7,803	(1,741)
(2) Others	1	1	(0)	9	9	(0)
Total	¥57,628	¥20,622	¥37,006	\$542,432	\$194,107	\$348,325

Note: Unlisted equity securities with carrying value of ¥13,065 million and unlisted bonds with carrying value of ¥8,000 million as of March 31, 2018 have no market value and their future cash flows cannot be estimated. Those securities' fair value is extremely difficult to measure and not included in the table above.

	Millions of yen				
Year ended March 31, 2017	Carrying value	Acquisition cost	Differences		
Securities whose carrying value exceeds their acquisition value :					
(1) Equity securities	¥ 46,463	¥ 19,917	¥ 26,546		
(2) Others	5	5	0		
Securities whose carrying value does not exceed their acquisition value :					
(1) Equity securities	858	1,031	(173)		
(2) Others	1	1	(0)		
Total	¥47,327	¥20,954	¥26,373		

Note: Unlisted equity securities with carrying value of ¥17,880 million and unlisted bonds with carrying value of ¥5,537 million as of March 31, 2017 have no market value and their future cash flows cannot be estimated. Those securities' fair value is extremely difficult to measure and not included in the table above.

#### (2) Other securities sold during the fiscal years ended March 31, 2018 and 2017

	Millions of yen			Thousands of U.S. dollars			
Year ended March 31, 2018	Sales price	Gain on sales	Loss on sales	Sales price	Gain on sales	Loss on sales	
Equity securities	¥1,461	¥815	¥ (1)	\$13,752	\$7,671	\$ (9)	
Others	_	_	_	_	—	_	
Total	¥1,461	¥815	¥ (1)	\$13,752	\$7,671	\$ (9)	

	Millions of yen					
Year ended March 31, 2017	Sales price	Gain on sales	Loss on sales			
Equity securities	¥4,088	¥2,354	¥ (2)			
Others	_	_	_			
Total	¥4,088	¥2,354	¥ (2)			

#### (3) Impairment of investment securities

For the fiscal years ended March 31, 2018 and 2017, the Group recognized impairment losses on investment securities of ¥5,059 million (¥5,059 million on other marketable securities with no market values) and ¥196 million (¥196 million on other marketable securities with market values) respectively.

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, 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 recognized.

#### **17. Derivatives**

The Company and certain of its subsidiaries had the following derivatives contracts outstanding at March 31, 2018 and 2017.

#### (1) Derivative transactions to which the Company did not apply hedge accounting Currency related

ourron of rolatou								
		Millions	of yen		Thousands of U.S. dollars			
Year ended March 31, 2018	Contract amount	(Contract amount over one year)	Fair value	Unrealized gain (loss)	Contract amount	(Contract amount over one year)	Fair value	Unrealized gain (loss)
Off-market transactions:								
Forward foreign exchange contracts for								
Buying U.S. dollar	¥ 797	¥—	¥(20)	¥(20)	\$ 7,502	\$—	\$(188)	\$(188)
Currency swap transaction for								
Receiving CNY and paying U.S. dollar	419	_	(3)	(3)	3,944	_	(28)	(28)
Total	¥1,216	¥—	¥(23)	¥(23)	\$11,446	\$—	\$(216)	\$(216)

Note: Fair value is based on information provided by financial institutions at the end of the fiscal year.

	Millions of yen						
Year ended March 31, 2017	Contract amount	(Contract amount over one year)	Fair value	Unrealized gain (loss)			
Off-market transactions:							
Forward foreign exchange contracts for							
(1) Buying U.S. dollar	¥1,097	¥—	¥(1)	¥(1)			
Total	¥1,097	¥—	¥(1)	¥(1)			

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 yer	۱	Thousands of U.S. dollars			
Year ended March 31, 2018	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)	¥ 170	¥—	¥(1)	\$ 1,600	\$—	\$ (9)	
(2) Selling Swedish Krona (hedged item—loans receivable)	381	_	(4)	3,586	_	(38)	
(3) Buying U.S. dollar (hedged item—trade accounts payable)	778	_	_	7,323	_	_	
(4) Buying Yen (hedged item—loans payable)	181	_	3	1,704	_	28	
Alternative method (*):							
Forward foreign exchange contracts for							
<ol> <li>Selling U.S. dollar (hedged item—trade accounts receivable)</li> </ol>	¥53	¥—	(Note 2)	\$ 499	\$—	(Note 2)	
(2) Buying U.S. dollar (hedged item—trade accounts payable)	136	—	(Note 2)	1,280	_	(Note 2)	
Total	¥1,699	¥—	¥(2)	\$15,992	\$—	\$(19)	

\* 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 trade accounts payable, 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 trade accounts receivable or trade accounts payable.

, i i i i i i i i i i i i i i i i i i i	Millions of yen			
Year ended March 31, 2017	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)	¥ 191	¥—	¥0	
(2) Buying U.S. dollar (hedged item—trade accounts payable)	28	_	(0)	
Alternative method (*):				
Forward foreign exchange contracts for				
(1) Selling U.S. dollar (hedged item—trade accounts receivable)	¥842	¥—	(Note 2)	
(2) Buying U.S. dollar (hedged item—trade accounts payable)	107	_	(Note 2)	
Total	¥1,168	¥—	¥0	

\* 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 trade accounts payable, 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 trade accounts receivable or trade accounts payable.

#### 2. Interest related

	Millions of yen		Thousa	nds of U.S. do	of U.S. dollars	
Year ended March 31, 2018	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 bank loans)						
Receiving floating rate and paying fixed rate	¥100,969	¥ 96,429	(Note)	\$ 950,386 \$	\$ 907,652	(Note)
Currency swap contracts (hedged item—long-term bank loans)						
Receiving floating rate and paying fixed rate	24,915	24,915	(Note)	234,516	234,516	(Note)
Total	¥125,884	¥121,344	¥—	\$1,184,902	\$1,142,168	\$—

Note: For certain long-term bank loans for which interest swap contracts are used to hedge the interest rate fluctuations, fair value of derivative financial instrument is included in trade accounts payable, other accounts payable and loans payable as hedged.

	Millions of yen			
Year ended March 31, 2017	Contract amount	(Contract amount over one year)	Fair value	
Alternative method:				
Interest swap contracts (hedged item—long-term bank loans)				
Receiving floating rate and paying fixed rate	¥106,089	¥100,969	(Note)	
Currency swap contracts (hedged item—long-term bank loans)				
Receiving floating rate and paying fixed rate	20,655	20,655	(Note)	
Total	¥126,744	¥121,624	¥—	

Note: For certain long-term bank loans for which interest swap contracts are used to hedge the interest rate fluctuations, fair value of derivative financial instrument is included in trade accounts payable, other accounts payable and loans payable as hedged.

## 18. Income taxes

(1) The Company and its consolidated domestic subsidiaries are subject to a number of income taxes in Japan which, in the aggregate, resulted in statutory tax rates of approximately 30.9% for the years ended March 31, 2018 and 2017, respectively.

(2) The significant components of the Company and its consolidated subsidiaries' deferred tax assets and liabilities as of March 31, 2018 and 2017 were as follows:

	Million	s of yen	Thousands of U.S dollars
	2018/3	2017/3	2018/3
Deferred tax assets:			
Net defined benefit liabilities	¥ 23,698	¥ 27,427	\$ 223,061
Accrued bonuses	4,199	3,839	39,524
Depreciation	3,932	5,250	37,011
Accrued enterprise tax	798	976	7,510
Tax loss carryforwards	45,206	36,183	425,508
Provision for repairs	5,298	5,489	49,868
Unrealized gains on fixed assets	2,505	2,618	23,579
Loss on valuation of inventories	3,257	2,868	30,657
Loss on valuation of investment securities	5,928	4,187	55,798
Impairment loss	7,518	8,055	70,764
Other	15,779	17,044	148,521
Subtotal	118,118	113,936	1,111,801
Valuation allowance	(81,060)	(79,697)	(762,989)
Total deferred tax assets	37,058	34,239	348,812
Deferred tax liabilities:			
Net defined benefit assets	¥ (12,870)	¥ (11,534)	\$ (121,141)
Gain on contribution of securities to retirement benefit trust	(3,147)	(3,147)	(29,622)
Net unrealized holding gain on securities	(10,187)	(7,414)	(95,887)
Deferred gain on real properties	(284)	(212)	(2,673)
Retained earnings of overseas consolidated subsidiaries, etc.	(5,592)	(3,965)	(52,636)
Adjustment of book value based on fair value	(5,771)	(6,795)	(54,320)
Other	(2,391)	(2,572)	(22,506)
Total deferred tax liabilities	(40,242)	(35,639)	(378,785)
Net deferred tax assets (liabilities)	¥ (3,184)	¥ (1,400)	\$ (29,973)

(3) The following table summarizes the significant differences between the statutory tax rate and effective tax rates for consolidated financial statement purposes for the years ended March 31, 2018 and 2017:

	2018/3	2017/3
Statutory tax rate	30.9%	30.9%
Non-deductible expenses	0.7	1.2
Permanently non-deductible items including dividend income	(0.8)	(0.7)
Changes in valuation allowance	(16.7)	(13.7)
Differences of statutory tax rate in overseas consolidated subsidiaries	(1.7)	(1.2)
Goodwill amortization	2.4	0.4
Share of loss (profit) of entities accounted for using equity method	(2.7)	(0.1)
Other	4.0	(3.0)
Effective tax rate	16.1%	13.9%

# 19. 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 regard- ing to 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 Segments					
Year ended March 31, 2018	Mobility	Health Care	Food & Packaging	Basic Materials	Total	Others (Note 1)	Sum total
I. Net sales:							
Customers	¥331,038	¥139,120	¥195,840	¥637,700	¥1,303,698	¥ 24,828	¥1,328,526
Inter-segment	10,954	2,376	1,238	66,690	81,258	54,210	135,468
Total	¥341,992	¥141,496	¥197,078	¥704,390	¥1,384,956	¥79,038	¥1,463,994
II. Segment income (loss)	¥ 42,296	¥ 10,830	¥ 19,924	¥ 38,903	¥ 111,953	¥ (906)	¥ 111,047
III. Segment assets	¥313,613	¥200,684	¥221,550	¥606,896	¥1,342,743	¥50,052	¥1,392,795
IV. Other items:							
Depreciation and amortization (Note 2)	¥ 10,264	¥ 9,501	¥ 6,961	¥ 14,467	¥ 41,193	¥ 3,118	¥ 44,311
Amortization of goodwill	131	586	_		717	102	819
Investment in equity method affiliates	17,220	4,920	2,878	54,977	79,995	2,660	82,655
Capital expenditures (Note 2)	32,179	16,018	9,508	15,752	73,457	6,110	79,567

	Thousands of U.S. dollars							
		Reportabl	e Segments	_				
Year ended March 31, 2018	Mobility	Health Care	Food & Packaging	Basic Materials	s Total	Others (Note 1	) Sum total	
I. Net sales:								
Customers	\$3,115,945	\$1,309,488	\$1,843,373	\$6,002,447	\$12,271,253	\$233,698	\$12,504,951	
Inter-segment	103,106	22,364	11,653	627,730	764,853	510,259	1,275,112	
Total	\$3,219,051	\$1,331,852	\$1,855,025	\$6,630,177	\$13,036,105	\$743,958	\$13,780,063	
II. Segment income (loss)	\$ 398,117	\$ 101,939	\$ 187,538	\$ 366,180	\$ 1,053,774	\$ (8,528)	\$ 1,045,246	
III. Segment assets	\$2,951,930	\$1,888,968	\$2,085,373	\$5,712,500	\$12,638,771	\$471,123	\$13,109,894	
IV. Other items:								
Depreciation and amortization (Note 2)	\$ 96,611	\$ 89,430	\$ 65,521	\$ 136,173	\$ 387,735	\$ 29,350	\$ 417,085	
Amortization of goodwill	1,233	5,516	—	_	6,749	960	7,709	
Investment in equity method affiliates	162,086	46,310	27,090	517,479	752,965	25,038	778,003	
Capital expenditures (Note 2)	302,890	150,772	89,495	148,268	691,425	57,511	748,936	

				Millions of yen			
	Reportable Segments						
Year ended March 31, 2017	Mobility	Health Care	Food & Packaging	Basic Materials	Total	Others (Note 1)	Sum total
I. Net sales:							
Customers	¥293,283	¥134,198	¥182,468	¥565,617	¥1,175,566	¥36,716	¥1,212,282
Inter-segment	10,217	2,166	5,132	57,379	74,894	50,747	125,641
Total	¥303,500	¥136,364	¥187,600	¥622,996	¥1,250,460	¥87,463	¥1,337,923
II. Segment income (loss)	¥ 40,716	¥ 10,118	¥ 20,606	¥ 38,504	¥ 109,944	¥ (353)	¥ 109,591
III. Segment assets	¥241,814	¥206,186	¥209,310	¥544,307	¥1,201,617	¥59,396	¥1,261,013
IV. Other items:							
Depreciation and amortization (Note 2)	¥ 9,241	¥ 9,049	¥ 6,687	¥ 13,341	¥ 38,318	¥ 4,134	¥ 42,452
Amortization of goodwill	—	1,148	_	—	1,148	100	1,248
Investment in equity method affiliates	16,666	4,628	2,322	46,381	69,997	2,760	72,757
Capital expenditures (Note 2)	10,447	8,745	7,145	14,221	40,558	3,936	44,494

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	Thousands of U.S. dollars	
Net sales:	2018/3	2017/3	2018/3
Total reportable segment sales	¥1,384,956	¥1,250,460	\$13,036,107
Net sales classified under "Others"	79,038	87,463	743,956
Elimination of intersegment transactions	(135,468)	(125,641)	(1,275,112)
Net sales recorded in Consolidated Statements of Operations	¥1,328,526	¥1,212,282	\$12,504,951

	Millions	Thousands of U.S. dollars		
Income:	2018/3	2017/3	2018/3	
Total reportable segment income	¥111,953	¥109,944	\$1,053,774	
Income (loss) classified under "Others"	(906)	(353)	(8,528)	
Elimination of intersegment transactions	26	(596)	245	
Corporate expenses (Note)	(7,582)	(6,846)	(71,366)	
Operating income recorded in Consolidated Statements of Operations	¥103,491	¥102,149	\$ 974,125	

Note: Corporate expenses mainly comprise general and administrative expenses not usually attributed to segments.

Million	Millions of yen		
2018/3	2017/3	2018/3	
¥1,345,443	¥1,201,617	\$12,664,185	
50,052	59,396	471,122	
(130,898)	(116,819)	(1,232,097)	
179,507	181,331	1,689,636	
¥1,444,104	¥1,325,525	\$13,592,846	
	2018/3 ¥1,345,443 50,052 (130,898) 179,507	2018/3         2017/3           ¥1,345,443         ¥1,201,617           50,052         59,396           (130,898)         (116,819)           179,507         181,331	

Note: 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.

	Million	Thousands of U.S. dollars	
Depreciation and amortization:	2018/3	2017/3	2018/3
Total reportable segment amounts	¥41,193	¥38,318	\$387,735
Amounts classified under "Others"	3,118	4,134	29,349
Adjustment amounts (Note)	524	357	4,932
Amounts from Consolidated Financial Statements	¥44,835	¥42,809	\$422,016

Note: Adjustment amounts are Depreciation and amortization expenses related to new businesses development.

	Millions of yen		Thousands of U.S. dollars
Amortization of goodwill:	2018/3	2017/3	2018/3
Total reportable segment amounts	¥717	¥1,148	\$6,749
Amounts classified under "Others"	102	100	960
Adjustment amounts	—	_	_
Amounts from Consolidated Financial Statements	¥819	¥1,248	\$7,709

	Millions of yen		Thousands of U.S. dollars
Amount of investment in equity method affiliates:	2018/3	2017/3	2018/3
Total reportable segment amounts	¥79,995	¥69,997	\$752,965
Amounts classified under "Others"	2,660	2,760	25,038
Adjustment amounts	_	_	_
Amounts from Consolidated Financial Statements	¥82,655	¥72,757	\$778,003

	Millions of yen		Thousands of U.S. dollars
Capital expenditures:	2018/3	2017/3	2018/3
Total reportable segment amounts	¥73,457	¥40,558	\$691,425
Amounts classified under "Others"	6,110	3,936	57,511
Adjustment amounts (Note)	1,681	889	15,823
Amounts from Consolidated Financial Statements	¥81,248	¥45,383	\$764,759

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:	2018/3	2017/3	2018/3	
Japan	¥740,562	¥ 697,065	\$6,970,651	
China	144,699	121,188	1,362,001	
Asia	189,448	167,617	1,783,208	
America	162,219	153,434	1,526,911	
Europe	82,960	66,082	780,873	
Other regions	8,638	6,896	81,306	
Total	¥1,328,526	¥1,212,282	\$12,504,950	

Notes:

Notes:
 Net sales are classified by country and region based on customer location.
 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) America: The United States, Mexico

(3) Europe: Germany, France(4) Other regions: Oceania, Africa

	Million	Millions of yen	
Property, plant and equipment:	2018/3	2017/3	2018/3
Japan	¥345,017	¥321,672	\$3,247,524
Singapore	35,920	42,279	338,102
Asia	27,129	23,022	255,356
Other regions	24,842	22,456	233,830
Total	¥432,908	¥409,429	\$4,074,812

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)

			Thousands of U.S. dollars
Net sales:	2018/3	2017/3	2018/3
Mitsui & Co., LTD.	¥236,002	¥208,382	\$2,221,404

Note: Related segments are as follows: Mobility, Health Care, Food & Packaging, Basic Materials, Others

## Information Concerning Impairment Loss of Fixed Assets by Reportable Segment

	Million	Millions of yen	
Impairment loss:	2018/3	2017/3	2018/3
Mobility	¥ 395	¥ 51	\$ 3,718
Health Care	14,350	85	135,072
Food & Packaging	7	405	66
Basic Materials	_	461	_
Others	150	2,769	1,412
Corporate Expenses	110	340	1,035
Total	¥15,012	¥4,111	\$141,303

# 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:	2018/3	2017/3	2018/3	
Mobility	¥131	¥ —	\$1,233	
Health Care	586	1,148	5,516	
Food & Packaging	—	-	—	
Basic Materials	—	-	—	
Others	102	100	960	
Corporate Expenses	_	_	_	
Total	¥819	¥1,248	\$7,709	

	Millions of yen		Thousands of U.S. dollars
Unamortized balance:	2018/3	2017/3	2018/3
Mobility	¥5,110	¥ —	\$48,099
Health Care	519	7,105	4,885
Food & Packaging	—	—	—
Basic Materials	—	—	—
Others	55	302	518
Corporate Expenses		—	_
Total	¥5,684	¥7,407	\$53,502

# 20. Information on related party transactions

## (1) Related party transactions

Main transactions of the Company with its affiliated companies for the year ended March 31, 2018 were as follows:

Name of company	Chiba Chemicals Manufacturing LLP
Type of related party	Affiliated company
Location	Chiyoda-ku, Tokyo
Common stock	¥200 million (US\$1,883 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, 2)	¥917 million (US\$8,631 thousand)
Balance at end of year (Note 2)	Other accounts receivable: ¥14,481 million (US\$136,305 thousand)
	Accounts payable: ¥12,780 million (US\$120,294 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
Common stock	¥16,369 million (US\$154,076 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)	¥18,501 million (US\$174,143 thousand)

Note: 3. The Company conducts loan guarantees for the related party without guarantee fees.

Value Creation Story

Shanghai Sinopec Mitsui Elastomers, Co., Ltd.
Affiliated company
Shanghai, China
¥11,013 million (US\$103,662 thousand)
Manufacturing and sales of ethylene, propylene and diene monomer rubber in China
Direct 50%
Loan guarantee, interlocking directors
¥17,528 million (US\$164,985 thousand)
-

Note: 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 Du Pont-Mitsui Fluorochemicals Company, Ltd. and Shanghai Sinopec Mitsui Chemicals Co., Ltd. for the year ended March 31, 2018.

Du Pont-Mitsui Fluorochemicals Company, Ltd.

	Millions	Millions of yen		
	2018/3	2017/3	2018/3	
Balance Sheet				
Total current assets	¥22,350	¥17,359	\$210,373	
Total non-current assets	13,585	13,563	127,871	
Total current liabilities	9,470	11,299	89,138	
Total non-current liabilities	330	253	3,106	
Total net assets	26,135	19,370	246,000	
Statement of Operations				
Net sales	30,544	28,172	287,500	
Profit (loss) before income taxes	9,443	7,820	88,884	
Profit (loss)	6,603	5,293	62,152	

Shanghai Sinopec Mitsui Chemicals, Co., Ltd.

	Millions	Millions of yen		
	2018/3	2017/3	2018/3	
Balance Sheet				
Total current assets	¥ 8,157	¥ 9,460	\$ 76,779	
Total non-current assets	27,721	29,649	260,928	
Total current liabilities	39,737	39,358	374,029	
Total non-current liabilities	9,605	7,453	90,409	
Total net assets	(13,464)	(7,702)	(126,732)	
Statement of Operations				
Net sales	40,923	26,687	385,194	
Profit (loss) before income taxes	(5,289)	(6,478)	(49,784)	
Profit (loss)	(5,308)	(7,573)	(49,962)	

# Financial S

# 21. Business combination

## Tender Offer for ARRK Corporation Shares through Subsidiary

On November 29, 2017, the wholly-owned Mitsui Chemicals (the Company) subsidiary MC Investment 01 Corporation agreed to make a tender offer (the "Tender Offer") for ordinary and preferred shares issued by Tokyo Stock Exchange-listed ARRK Corporation ("ARRK"). In accordance with this agreement, the Tender Offer was carried out from November 30, 2017 and completed on January 17, 2018, resulting in ARRK becoming a consolidated subsidiary of the Company on January 24, 2018.

- (1) Outline of the Acquisition
- ① Name of acquired company and nature of business
  - Name of acquired company: ARRK Corporation

Nature of business: Manufacture and marketing of industrial design models; product development, planning, design and engineering; design and manufacture of various types of metallic molds; production and marketing of small-lot molded products and other comprehensive services regarding to the development of new products.

Purpose

The purchase of shares was intended to help both the Company and ARRK further expand their business foundations by mutually putting each other's technologies to use to achieve continued growth in the global market. The Company aims to use the strengths of ARRK to broaden the range of business domains for its own products and services, strengthen its ability to offer solutions in the Mobility domain, and bring more products to commercialization. Meanwhile, ARRK will be able to apply the materials expertise of the Company, utilizing its diverse lineup of products and materials technologies in carrying out design, prototyping and analytical activities aimed at enhancing the value of its comprehensive development assistance services.

- 1) Date of business combination January 24, 2018
- 2) Legal type of business combination All-cash tender offer
- 3) Name of resulting entity ARRK Corporation
- Share of voting rights acquired 74.69%
- Main rationale for selecting the acquiring entity The acquisition company (MC Investment 01 Corporation), a subsidiary of the Company, has acquired all shares of ARRK Corporation for cash.
- (2) Period of Performance of the Acquired Company Included in the Consolidated Financial Statements

From January 1, 2018 to March 31, 2018

- (3) Breakdown of acquisition cost and consideration paid Consideration paid (cash): ¥30,133 million (U.S.\$28,363 thousand)
- (4) Details and amounts of main acquisition-related costs Advisory fees etc.: ¥498 million (U.S.\$4,688 thousand)
- (5) Amount and reason for goodwill arising from the acquisition, amortization method and period
- 1) Amount of goodwill incurred: ¥5,241 million (U.S.\$49,332 thousand)
- 2) Reason: Since the acquisition cost exceeded the net amount of acquired assets and liabilities, the excess amount was recognized as goodwill.
- 3) Amortization method and period: Equally amortized over 10 years
- (6) Amounts and breakdown of assets acquired and liabilities assumed on date of business combination

	Millions of yen	Thousands of U.S. dollars		
Current assets:	¥31,089	\$292,630		
Non-current assets:	19,591	184,403		
Total assets:	50,680	477,033		
Current liabilities:	10,455	98,409		
Non-current liabilities:	6,898	64,928		
Total liabilities:	17,353	163,338		

# (7) Amount allocated to intangible assets other than goodwill, its breakdown by principal type, and amortization period (useful life) by principal type

	Millions of yen	Thousands of U.S. dollars	Useful Life	
Customer-related assets:	¥4,544	\$42,771	17 years	
Outstanding orders:	424	3,991	5 years	

(8) Estimated amount and method of calculating the impact on the consolidated statement of income for the current fiscal year assuming that the business combination had been completed at the beginning of the current fiscal year

	Millions of yen	Thousands of U.S. dollars		
Net sales:	¥32,216	\$303,238		
Operating income:	362	3,407		
Ordinary income:	325	3,059		

The above effect represents the approximate differences between the estimated amounts of revenues and profit/ loss and the amounts computed under the assumption of completion of business combination at the beginning of the consolidated fiscal year and those on the consolidated statements of income of the acquired company. Please be advised that the above stated notes have not been certified by an auditor.

# 22. Subsequent events

#### A fire at the Osaka Works

On June 21, 2018, a fire broke out at the Company's Osaka Works as repair work was under way at the utility plant, which had been shut down for regular maintenance. At this time, an investigation led by the relevant authorities is being conducted, and once the cause has been determined and preventive measures have been drafted and put in place, work will begin on restoring the damaged plant.

Moreover, because of uncertainties pertaining to the current situation and future developments, the impact on business, including that of sales and costs related to restoration, is difficult to reasonably estimate.



## Independent Auditor's Report

The Board of Directors Mitsui Chemicals, Inc.

We have audited the accompanying consolidated financial statements of Mitsui Chemicals, Inc. and its consolidated subsidiaries, which comprise the consolidated balance sheet as at March 31, 2018, and the consolidated statements of operations, comprehensive income, changes in net assets, and cash flows for the year then ended and a summary of significant accounting policies and other explanatory information, all expressed in Japanese yen.

#### Management's Responsibility for the Consolidated Financial Statements

Management is responsible for the preparation and fair presentation of these consolidated financial statements in accordance with accounting principles generally accepted in Japan, and for designing and operating such internal control as management determines is necessary to enable the preparation and fair presentation of the consolidated financial statements that are free from material misstatement, whether due to fraud or error.

#### Auditor's Responsibility

Our responsibility is to express an opinion on these consolidated financial statements based on our audit. We conducted our audit in accordance with auditing standards generally accepted in Japan. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the consolidated financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the consolidated financial statements, whether due to fraud or error. The purpose of an audit of the consolidated financial statements is not to express an opinion on the effectiveness of the entity's internal control, but in making these risk assessments the auditor considers internal controls relevant to the entity's preparation and fair presentation of the consolidated financial statements in order to design audit procedures that are appropriate in the circumstances. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

#### Opinion

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the consolidated financial position of Mitsui Chemicals, Inc. and its consolidated subsidiaries as at March 31, 2018, and their consolidated financial performance and cash flows for the year then ended in conformity with accounting principles generally accepted in Japan.

#### Convenience Translation

We have reviewed the translation of these consolidated financial statements into U.S. dollars, presented for the convenience of readers, and, in our opinion, the accompanying consolidated financial statements have been properly translated on the basis described in Note 4.

Ernst & young Shin Nihon LLC

June 26, 2018 Tokyo, Japan Strategy

# Global Network (As of March 31, 2018)

Countries in which the Group operates

## Major Subsidiaries and Affiliates (Equity-method affiliates indicated with asterisks)

Companies	Location	Paid-in (In mil		Equity Interest (%)	Major Products or Lines of Business
Mobility					
Advanced Composites, Inc.	U.S.A.	US\$	14	61.8	Polypropylene compounds
Grand Siam Composites Co., Ltd.	Thailand	Baht	64	47.1	Polypropylene compounds
litsui Elastomers Singapore Pte. Ltd.	Singapore	US\$	96	100.0	Elastomer
dvanced Composites Mexicana S.A. de C.V.	Mexico	US\$	3	61.8	Polypropylene compounds
litsui Advanced Composites (Zhongshan) Co., Ltd.	China	Yuan	117	63.0	Polypropylene compounds
litsui Chemicals Industrial Products, Co., Ltd.	Bunkyo-ku, Tokyo	¥	400	100.0	Civil engineering and construction materials, and piping materials for synthetic resins
litsui Prime Advanced Composites India Pvt. Ltd.	India	Rupee	2,450	84.0	Polypropylene compounds
itsui Prime Advanced Composites do Brasil dústria e Comércio de Compostos Plásticos S.A.	Brazil	BRL	107	93.0	Polypropylene compounds
RRK CORPORATION	Osaka City, Osaka	¥	2,000	74.7	Industrial products for automobiles
RRK Europe Ltd.	U.K.	£	3	74.7	Industrial products for automobiles
hapers' France SASU	France	€	26	74.7	Industrial products for automobiles
RRK CORPORATION (Thailand) Ltd.	Thailand	Baht	1,180	74.7	Industrial products for automobiles
u Pont-Mitsui Polychemicals Co., Ltd.*	Minato-ku, Tokyo	¥	6,480	50.0	Ethylene vinyl acetate copolymers and other ethylenic copolymers
hemours-Mitsui Fluoroproducts Co., Ltd.* (On July 1, 2018, company name changed from Du Pont-M	Minato-ku, Tokyo	¥	2,880	50.0	Fluorocarbon resins and gases, and other related chem

## Health Care

Kulzer GmbH	Germany	€	25	80.0	Dental materials
Mitsui Fine Chemicals, Inc.	Chuo-ku, Tokyo	¥	400	100.0	Fine chemical products and inorganic chemicals
Kulzer, LLC	U.S.A.	US\$	6	80.0	Dental materials
Mitsui Hygiene Materials Thailand Co., Ltd.	Thailand	Baht	1,310	100.0	Hygiene materials
SDC Technologies, Inc.	U.S.A.	US\$	84	100.0	High-performance coating materials for plastics and nonferrous metals
Mitsui Chemicals Nonwovens (Tianjin) Co., Ltd.	China	Yuan	164	100.0	Nonwoven fabrics for hygiene materials

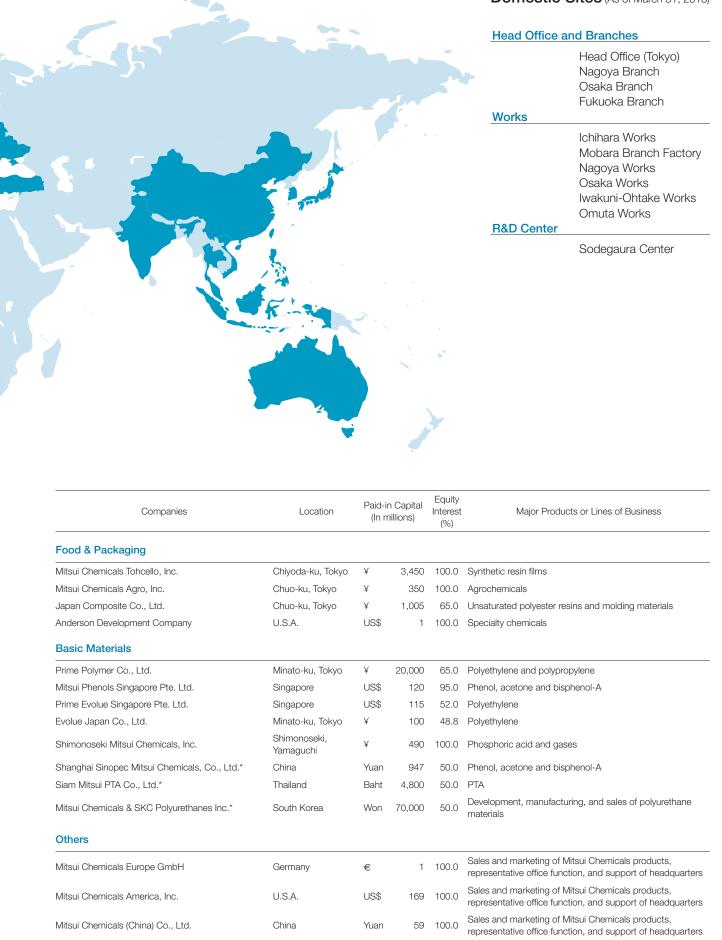


Value

Creation Story

Strategy

Foundation for Growth



NT\$

US\$

¥

14

95

2 100.0

100.0

100.0

Taiwan

Singapore

Sanjo City, Niigata

Taiwan Mitsui Chemicals, Inc.

Mitsui Chemicals Asia Pacific, Ltd.

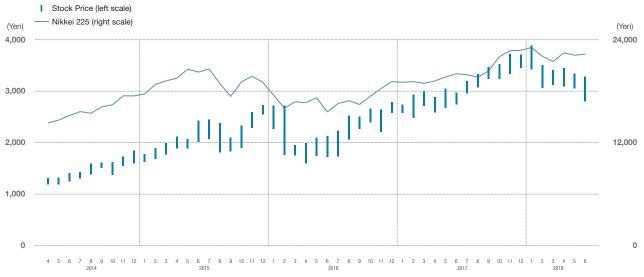
Kyowa Industrial Co., Ltd.

Sales and marketing of Mitsui Chemicals products, representative office function, and support of headquarters

Sales and marketing of Mitsui Chemicals products in Taiwan

Sales and manufacture of molds

## 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.

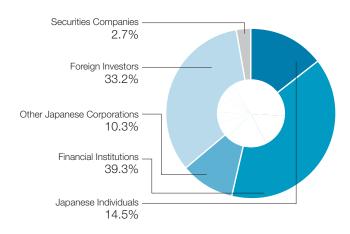
# Major Shareholders

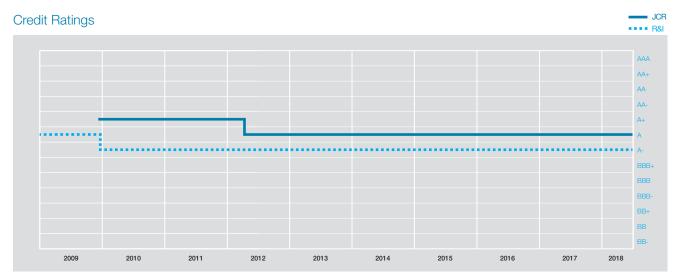
(As of March 31, 2018)		
Major Shareholders	Number of shares held (Thousands)	Percentage of shares held (%)
Japan Trustee Services Bank, Ltd. (Trust account)	15,030	7.56
The Master Trust Bank of Japan, Ltd. (Trust account)	13,488	6.78
Japan Trustee Services Bank, Ltd. (Trust account 4)	4,543	2.28
Toray Industries, Inc.	4,485	2.25
Japan Trustee Services Bank, Ltd. (Trust account 5)	3,638	1.83
Sumitomo Mitsui Banking Corporation	3,485	1.75
Mitsui & Co., Ltd.	3,474	1.74
Japan Trustee Services Bank, Ltd. (Sumitomo Mitsui		
Trust Bank, Limited Re-trust account, Mitsui & Co.,	3,474	1.74
Ltd. Pension trust account)		
STATE STREET BANK WEST CLIENT	2 405	1.71
– TREATY 505234	3,405	1./1
Japan Trustee Services Bank, Ltd. (Trust account 7)	3,212	1.61

Note: The company's holdings of treasury stock (5,766,674 shares) are not including in the above figures.

## Composition of Shareholders







JCR: Japan Credit Rating Agency, Ltd. R&I: Rating and Investment Information, Inc.

