



# Tokuyama Report 2020

Fiscal year ended March 31, 2020



## Our Vision

# VISION

### MISSION

Centered on the field of chemistry, the Tokuyama Group will continue to create value that enhances people's lives

### ASPIRATIONS

Shift from a focus on quantity to quality

**FY2025**

**Global leader**  
in advanced  
materials

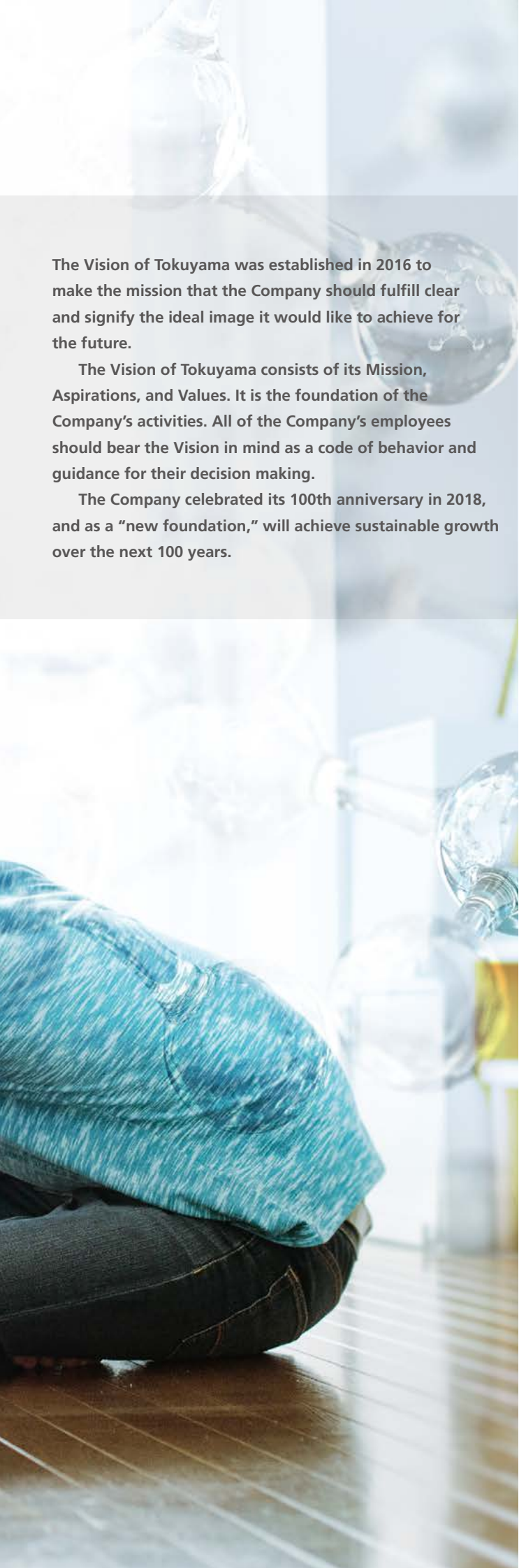
**Leader in Japan**  
in its traditional  
businesses

### VALUES

- Customer satisfaction is the source of profits
- A higher and broader perspective
- Personnel who consistently surpass their predecessors
- Integrity, perseverance, and a sense of fun







The Vision of Tokuyama was established in 2016 to make the mission that the Company should fulfill clear and signify the ideal image it would like to achieve for the future.

The Vision of Tokuyama consists of its Mission, Aspirations, and Values. It is the foundation of the Company's activities. All of the Company's employees should bear the Vision in mind as a code of behavior and guidance for their decision making.

The Company celebrated its 100th anniversary in 2018, and as a "new foundation," will achieve sustainable growth over the next 100 years.

# Tokuyama Report 2020

## Editorial Policy

### Publication of the "Tokuyama Report"

Tokuyama has published annual reports as a tool providing management and financial information to investors. We have changed the title of this report to the Tokuyama Report from this year, which also includes non-financial information. In an effort to convey the value of the Tokuyama Group, we have included information about value creation in the past, present and future, while also enhancing the page content, beginning with the message from the President. We hope that this report will deepen many stakeholders' understanding of the Company and will help facilitate communication.

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# At a Glance

Japan was once completely reliant on imports for its soda ash. In 1918, Tokuyama Corporation was established in Tokuyama (now Shunan City), Yamaguchi Prefecture, to remedy this lack of a domestic source. Tokuyama later began producing cement, and then responded to the growth of Japan's chemicals industry by adding a broad array of chemicals to its product lineup. The Company's main business fields are ICT, in which its principal product is semiconductor-grade polycrystalline silicon; healthcare, which includes eyeglass lens materials, dental materials and equipment, and other such products; and the environment, which includes the recycling and environment business.



## Digital related

- Smartphones, mobile phones
- Automobiles
- Electronic devices
- Data centers



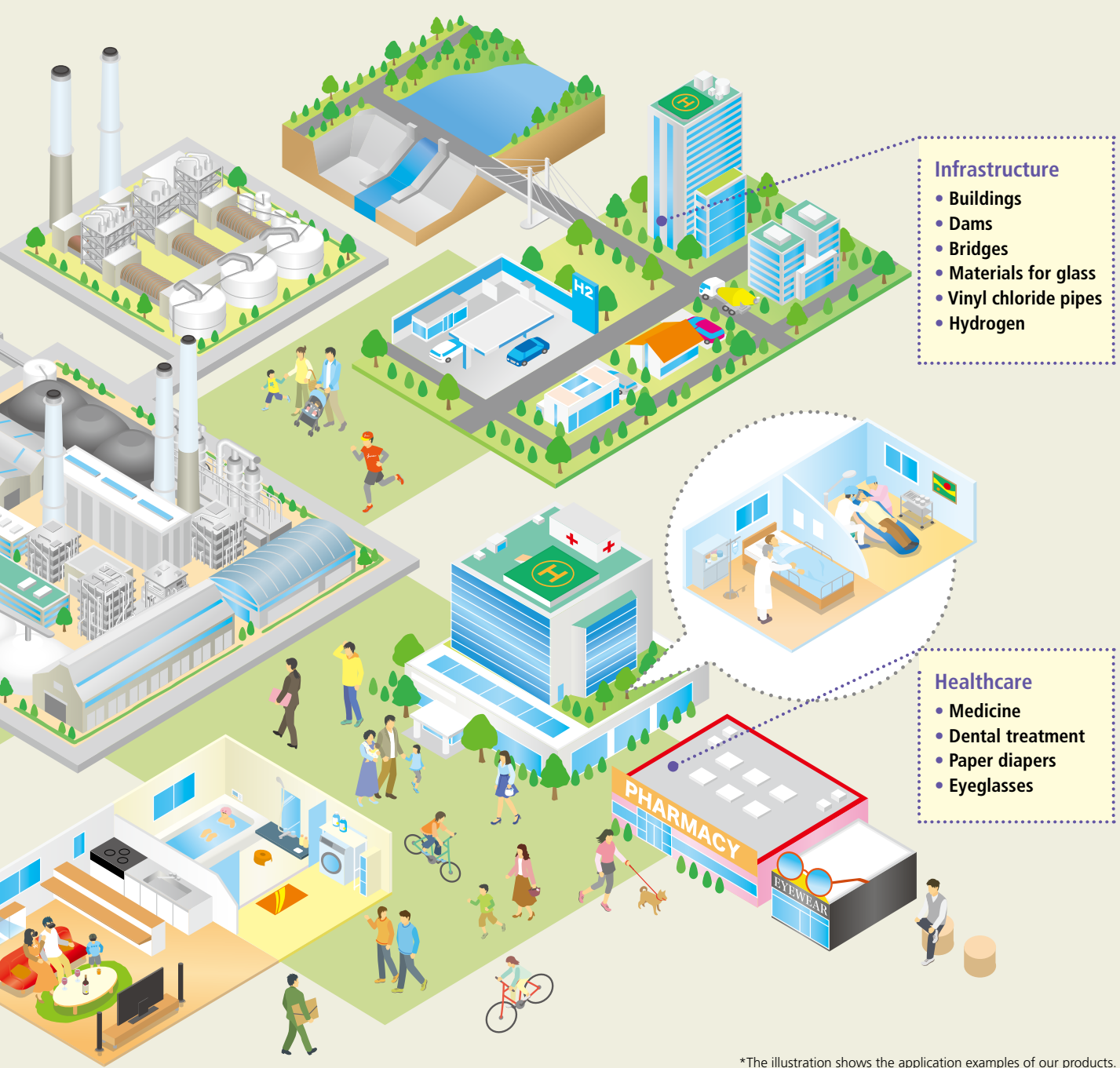
## Household products

- Home appliances
- Food packaging film
- Plastic window sashes
- Bathtubs
- Shampoo
- Foods, seasonings, wine
- Laundry detergent

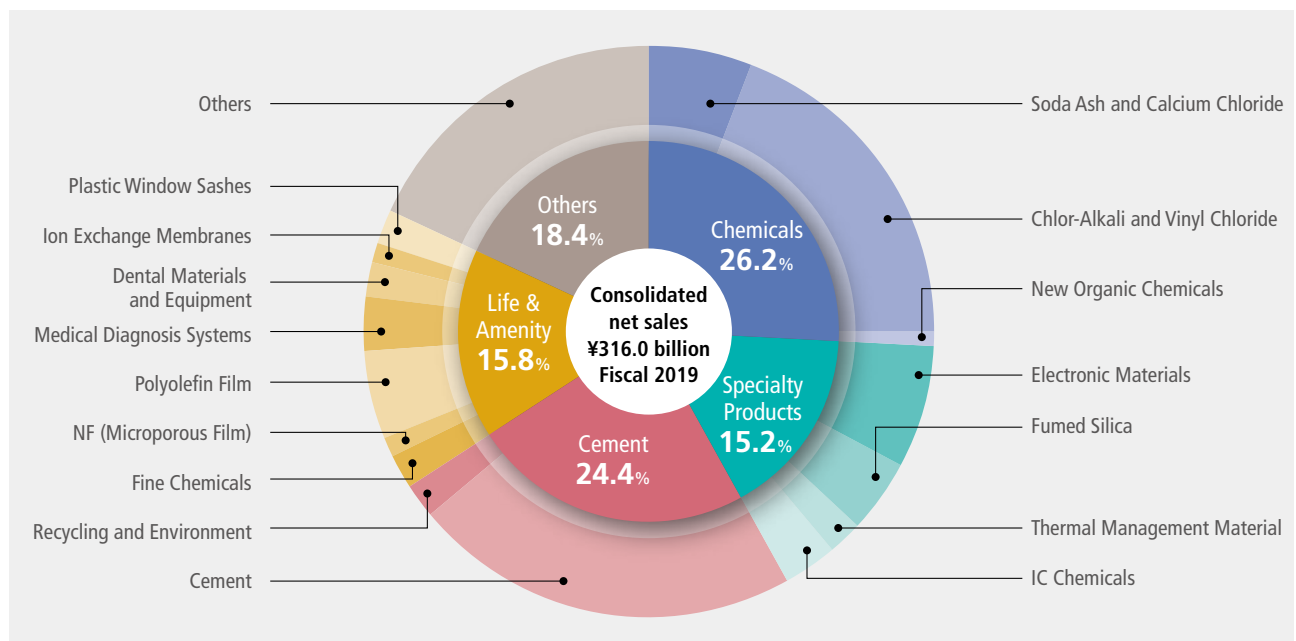
## Major Products

CHEMICALS	SPECIALTY PRODUCTS	CEMENT	LIFE & AMENITY
<b>Soda Ash and Calcium Chloride Business</b> <ul style="list-style-type: none"> <li>• Soda ash</li> <li>• Calcium chloride</li> <li>• Sodium bicarbonate</li> </ul> <b>Chlor-Alkali and Vinyl Chloride Business</b> <ul style="list-style-type: none"> <li>• Caustic soda</li> <li>• Polyvinyl chloride resin</li> <li>• Vinyl chloride monomer</li> <li>• Propylene oxide (PO)</li> <li>• Sodium hypochlorite</li> </ul> <b>New Organic Chemicals Business</b> <ul style="list-style-type: none"> <li>• Isopropyl alcohol (IPA)</li> </ul>	<b>Electronic Materials Business</b> <ul style="list-style-type: none"> <li>• Semiconductor-grade polycrystalline silicon</li> </ul> <b>Fumed Silica Business</b> <ul style="list-style-type: none"> <li>• Fumed silica</li> </ul> <b>Thermal Management Material Business</b> <ul style="list-style-type: none"> <li>• High-purity aluminum nitride (AlN) powder and granules</li> <li>• Aluminum nitride ceramics</li> </ul> <b>IC Chemicals Business</b> <ul style="list-style-type: none"> <li>• High-purity chemicals for electronics manufacturing</li> <li>• Photoresist developer</li> </ul>	<b>Cement Business</b> <ul style="list-style-type: none"> <li>• Portland cement</li> <li>• Cement-type stabilizer</li> <li>• Ready-mixed concrete</li> <li>• Concrete repair material</li> </ul> <b>Recycling and Environment Business</b> <ul style="list-style-type: none"> <li>• Waste plastic recycled as an alternative fuel</li> <li>• Trash incinerator ash recycled as an alternative raw material for cement</li> <li>• Gypsum recycled from waste gypsum board</li> </ul>	<b>Fine Chemicals Business</b> <ul style="list-style-type: none"> <li>• Pharmaceutical ingredients/intermediates</li> <li>• Plastic lens-related materials</li> </ul> <b>NF Business</b> <ul style="list-style-type: none"> <li>• Microporous film</li> </ul> <b>[Group Companies]</b> <ul style="list-style-type: none"> <li>• Polyolefin film</li> <li>• Medical diagnosis systems</li> <li>• Dental materials and equipment</li> <li>• Ion exchange membranes and electrolysers</li> <li>• Plastic window sashes and related products</li> </ul>





## Business Portfolio





**Hiroshi Yokota**

Representative Director  
President and Executive Officer

We would like to express our appreciation to all involved in  
the fight against the new coronavirus (COVID-19).  
We sincerely hope those who are suffering from the virus will recover as soon as possible.  
We are striving to prevent the spread of the infection to our customers,  
employees and other stakeholders.  
We will take every measure possible in the hope that the pandemic will quickly subside.

### **Tokuyama Continues to Grow with Society**

In the Medium-Term Management Plan: Cornerstone of the Group's Revitalization, which was formulated in May 2016, Tokuyama defined its mission as "Centered on the field of chemistry, the Tokuyama Group will continue to create value that enhances people's lives." We strive to provide a stable supply of products needed in society.

Our history started with chemicals, particularly soda ash, which was the reason for the foundation of Tokuyama. Since then, the Company has been developing and manufacturing products that support and enhance people's lives, including cement in the high economic growth period and semiconductor-grade polycrystalline silicon and high-purity chemicals for electronics manufacturing in the IT revolution in the 1990s.

Society is now in a position where it must achieve the Sustainable Development Goals (SDGs) to be



sustainable. The Company will expand its products, technologies and businesses that help build a sustainable society, while widening and deepening its manufacturing to take advantage of its strengths more speedily using its unique chemical technologies.

## Results in Fiscal 2019

In 2019, U.S.-China trade friction increased uncertainty surrounding the future of the world economy. International trade and investment slowed, which slowed economies. From the beginning of 2020, economic activity was sluggish and consumer spending fell around the world due to COVID-19. Against this backdrop, the Japanese economy declined significantly.

The effect of the coronavirus on the Company's results in the fourth quarter of fiscal 2019 was relatively small. However, net sales in the fiscal year fell year on year, reflecting a decrease in the sales volume of mainstay products as a slowdown in the markets became more apparent. Despite the weak sales performance due to the deterioration of the market environment, the decline in profit was less significant compared with the fall in net sales owing to our avid pursuit of profits.

The Specialty Products segment, primarily in the ICT business, and the Life & Amenity segment, primarily in the healthcare business, which are positioned as growth businesses, struggled, showing a sluggish performance in the first half, chiefly because of U.S.-China trade

friction. However, in the second half, these segments, primarily semiconductor-related products, strove to recover lost ground and make a profit.

As for traditional businesses, the Chemicals segment posted a decrease in profit due to higher raw material prices and lower market prices overseas despite the firm sales volume of caustic soda, a mainstay product. In the Cement segment, sales volume was weak, reflecting a fall in demand, but we strove to maintain sales prices and increased market share.

## Progress of the Medium-Term Management Plan

Of the four priority issues in the Medium-Term Management Plan, "Change the Group's Organizational Culture and Structure" remains a top priority. Tokuyama's greatest assets are its people. We believe that recruiting, cultivating and utilizing excellent human resources are the most important things for the Company's survival, growth and development. The purpose of "Change the Group's Organizational Culture and Structure" is to create a vibrant corporate culture where each employee carries out tasks independently and promptly. I believe, as president, that this is my greatest mission.

Our efforts have resulted in faster actions in selecting research and development topics, building pipelines for new operations and launching new businesses in

### ● Business Strategies

	Aspirations	Means of Achieving Goals	Key Management Indicators
<b>Growth Businesses</b> ▶ Specialty Products ▶ Life & Amenity ▶ New businesses	<b>Become a global leader in advanced materials through unique technologies</b> • Thoroughly understand customers' needs, and meet requirements through unique technologies	• Adhere strictly to customer-oriented business activities • Utilize open innovation • Leverage alliances • Review the research and development structure	EBITDA growth rate
<b>Traditional Businesses</b> ▶ Chemicals ▶ Cement	<b>Become a leader in Japan by strengthening competitiveness</b> • Overcome competition in the general-purpose products market • Become an entity that maintains a thirst for increased efficiency	• Adopt a stringent approach toward maintaining and renewing investments; undertake strategic investments aimed at strengthening competitiveness • Increase the efficiency of repairs and maintenance expenses by shortening the periods of periodic maintenance • Strengthen cross-departmental improvement activities • Leverage alliances	ROA, Cash conversion cycle (CCC)

## Top Message

growth businesses. We will expand this corporate culture across the entire Company and will establish a strong business structure that will enable us to grow sustainably as a top manufacturer with the ability to manufacture products that are overwhelmingly superior to those of our competitors in the international market in terms of cost, functionality and quality.

We are actively recruiting work-ready human resources with experience and techniques in specific fields in growth businesses.



We are restructuring our business strategies. In the ICT field, which is a focus, expansion work has been completed as scheduled for aluminum nitride, a thermal management material that is used primarily in environmentally friendly vehicles, renewable energy and 5G products and is expected to grow in the medium- to long-term, and a photoresist developer, a chemical used in semiconductor processing.

New seeds are beginning to bear fruit in the health-care business, another field of focus, including the development of a new manufacturing process for biotin, a vitamin; the commercialization of materials related to veterinary medicine; and the launch of OMNICHROMA, a cavity-filling composite resin, in Europe and the United States. We will continue to steadily implement growth strategies in the fields of ICT and healthcare.

To strengthen the Group's management, we have decided to accept investment from Panasonic Corporation through a private placement to strengthen and develop the plastic window sashes business of Excel Shanon Corporation. Excel Shanon is a specialized manufacturer of plastic window sashes and aims to expand the plastic window sashes business by tapping

into energy saving needs and cooperating with Panasonic, which manufactures a range of building materials. The Group companies involved in logistics are striving to cut costs by reorganizing them to increase efficiency.

Of the targets related to the improvement in our financial position included in the Medium-Term Management Plan, the ROA and CCC targets are not likely to be achieved, but interest-bearing debt of ¥120.0 billion, shareholders' equity of ¥140.0 billion, cash and deposits of ¥80.0 billion and a debt-equity ratio of 0.9 were achieved in fiscal 2019, a year earlier than planned. In July 2019, a certain rating agency's rating of Tokuyama rose to A again.

In this situation, we plan to repair manufacturing equipment and make investments to save energy, which we had not yet been able to do, in fiscal 2020 so as not to carry over investments in repairs to the next medium-term management plan. We will keep the shareholders' equity ratio at around 50% and will invest actively, considering economic conditions and cash flows.

## Toward Realizing Our 2025 Vision

We are drawing up the next medium-term management plan for the five years beginning from fiscal 2021.

Our vision for fiscal 2025 is to be a global leader in advanced materials, and a leader in Japan in its traditional businesses. To achieve this vision, we intend to continue executing our strategy, focusing on ICT and healthcare, and will develop the environment and energy business as a new core business.

In the thermal management materials business, a demonstration test will be started for the mass production of silicon nitride for power semiconductor modules at the Center for Commercialization of Advanced Technology (Yanai City, Yamaguchi Prefecture) in April 2021 to promote quick commercialization. Meanwhile, boron nitride and aluminum nitride fillers, which are being developed, will be launched to expand the thermal management material product lineup.

In the IC chemicals business, we are enhancing the high purification of high-purity chemicals for electronics manufacturing, quality and process management and analysis techniques to meet leading-edge semiconductor manufacturers' quality requirements. We aim to





Base in Taiwan for high-purity chemicals for electronics manufacturing (Yunlin Factory of Taiwan Tokuyama Corporation)

accelerate globalization, particularly in our operations in Asia and promote the supply of locally produced goods.

In the electronic materials business, we will focus on investing to improve the quality of semiconductor-grade polycrystalline silicon and will continue to pursue differentiation from competitors' products in terms of quality.

In the pharmaceutical ingredients / intermediates business, we will strive to expand from the field of pharmaceuticals into peripheral fields. Our targets are active ingredients for supplements, cosmetic ingredients and ingredients on the periphery of veterinary medicine, for which we intend to enhance production, development and marketing. Themes regarding applications for the Company's unique technologies and existing products are being pursued. We will strive for quick commercialization through open innovation with universities and outside research institutions and by other means.

In the plastic lens-related materials business, we will take steps to expand our market share in photochromic dye materials and continue to develop high-performance photochromic dye materials to contribute to improving the quality of our customers' products.

In the dental materials and equipment business, we will continue to focus on increasing market share by developing and expanding sales of the OMNICHROMA series of composite resins, our mainstay product. We will accelerate the development of materials for crown restorations using digital technology as well as dental and preventive dental care products, which are products in next-generation businesses that we plan to make into major businesses following the composite resin business.

We also aim for business creation in the field of the environment and energy to help achieve a sustainable society. In the Chemicals Business Division, we will pursue commercialization through the development of

technology applying soda ash manufacturing technology to utilize CO<sub>2</sub>, and the development of alkaline water electrolyzer units and systems to manufacture and sell green hydrogen and contribute to promoting renewable energy.

In the Cement Business Division, the complete recycling of waste gypsum board has been acclaimed as a recycling technology that does not depend on kilns (rotary kiln). We intend to seek new business development, following that recycling technology, which will contribute to recycling and environmental protection.

## Direction of the Company in the Medium to Long Term

We believe that we cannot survive amid the international trend toward decarbonization and building a sustainable society if we do not position our businesses for the long-term, looking toward 2030 and 2050, where the environment, energy and health are key words, and for which we need to reconsider what our businesses should be from the longer-term perspective.

We will continue to work toward globalization in the chemicals and cement businesses, the businesses that have traditionally been strong sources of revenue, following the trend toward decarbonization and leveraging the technological capabilities that we have accumulated over many years. We will change the structures of these businesses to transform them into businesses that contribute internationally. However, the domestic markets that these businesses target will shrink. We cannot survive unless we take steps to evolve, such as the creation of businesses that contribute to environmental protection. To maintain our existing businesses, we will create new environmental businesses promptly.



## Top Message

In the Specialty Products business and the Life & Amenity business, we are considering new technologies and new business areas to expand sales as well as new products and businesses deriving from existing products. To develop these new businesses, we need to make our strengths clear, enhance them and make the most of limited management resources. We also need to actively procure the resources necessary from outside the Company. Instead of doing everything within the Company, we will pursue every possibility, bringing in new viewpoints and ideas through alliances with other companies, mergers and acquisitions and cooperation with academia.

Open innovation is the key to creating new businesses outside the framework of our existing businesses to reform our business structure over the long-term. We have been increasing pipelines and themes for new development by strengthening cooperation with universities and research institutions. We strongly believe that great possibilities can be realized and a wealth of knowledge can be gained through cooperation with academia in open innovation, enabling us to make ingenious use of this knowledge.

For example, we have recently developed a new chemical synthesis process jointly with a university in the healthcare field. The process enables the manufacture of high-quality active ingredients for supplements and pharmaceutical ingredients at very low cost. The process can be applied also to newly discovered drugs that are already being sold.

We are also giving financial support to universities and research institutions to support basic research and help develop new technologies. Through initiatives like these, we have connected with many university teachers. Our network has been strengthened, and we have

hired mid-career employees. A virtuous cycle has been created, which has produced results.

We primarily have connections with domestic universities and research institutions. We are considering building relationships with overseas organizations to learn about a wider range of cutting-edge technologies and improve the quality and speed of research and development. We will work toward the globalization of our businesses and marketing to demonstrate our strengths. From 2019, we have been conducting joint development with the Industrial Technology Research Institute of Taiwan (ITRI) through the Taiwan Research Laboratory established in 2018. There are many cutting-edge electronics companies in Taiwan, and our technologies have been matched with some of them.



A research and development base focusing on healthcare (Tsukuba Research Laboratory)

## Tokuyama's ESG Management

To promote our CSR activities as a management priority, we have determined nine material challenges\* related to the SDGs. Reconsidering coal-fired power plants, a source of our competitiveness, is a major theme in relation to the global environment. We believe we need to set specific targets related to our direction in the medium- to long-term, reduce CO<sub>2</sub> emissions and change to alternative energy sources. (\*See page 30 for details.)

While we disclose risks and deal with them appropriately, we take steps to create new business opportunities. The key point is changing the business portfolio, taking new environmental businesses into consideration, including enhancing the world's most advanced electrolyzer development technology, making the development technology a business and creating a hydrogen business.







We believe that we need to respect the diversity of knowledge and hire more people with more diverse knowledge, without discrimination, while being inclusive of women and foreign nationals, thereby creating an environment that enables each person to actively participate.

We believe we need to obtain diversity in our corporate governance by actions such as appointing female external directors and foreign external directors associated with our globalization.

## Looking to the Post-COVID World

COVID-19 has changed the ways in which we work significantly. It has become clear that telework is an effective means of conducting office work and data analysis, among other types of work, and is expected to improve productivity. We believe that striking a balance between working at home and working at the office improves operational efficiency and we are revising the work-at-home system.

We will actively promote digitization, preparing information tools and systems to facilitate operations



both at home and at the office.

We expect that COVID-19 will significantly change trends in our divisions and the way cooperation occurs around the world. This has a very significant impact on the Company's global strategy.

Japanese companies have followed the business practices of Europe and the United States. In recent years, we have expanded business in Asia. However, it is questionable whether we have really faced squarely and accepted the cultures in Asia. If Japanese companies really wish to promote globalization, it is important for us to do so, considering the growth potential of their markets and large populations.

The balance of power in the world, particularly between the United States and China, is changing significantly due to COVID-19. I strongly feel that the Company needs to reconsider its approach to globalization.

## Message to Investors

Considering that it is important for society and the Company to develop over the medium to long term, Tokuyama has been developing technologies and human resources, and based on these, has been expanding businesses for the future.

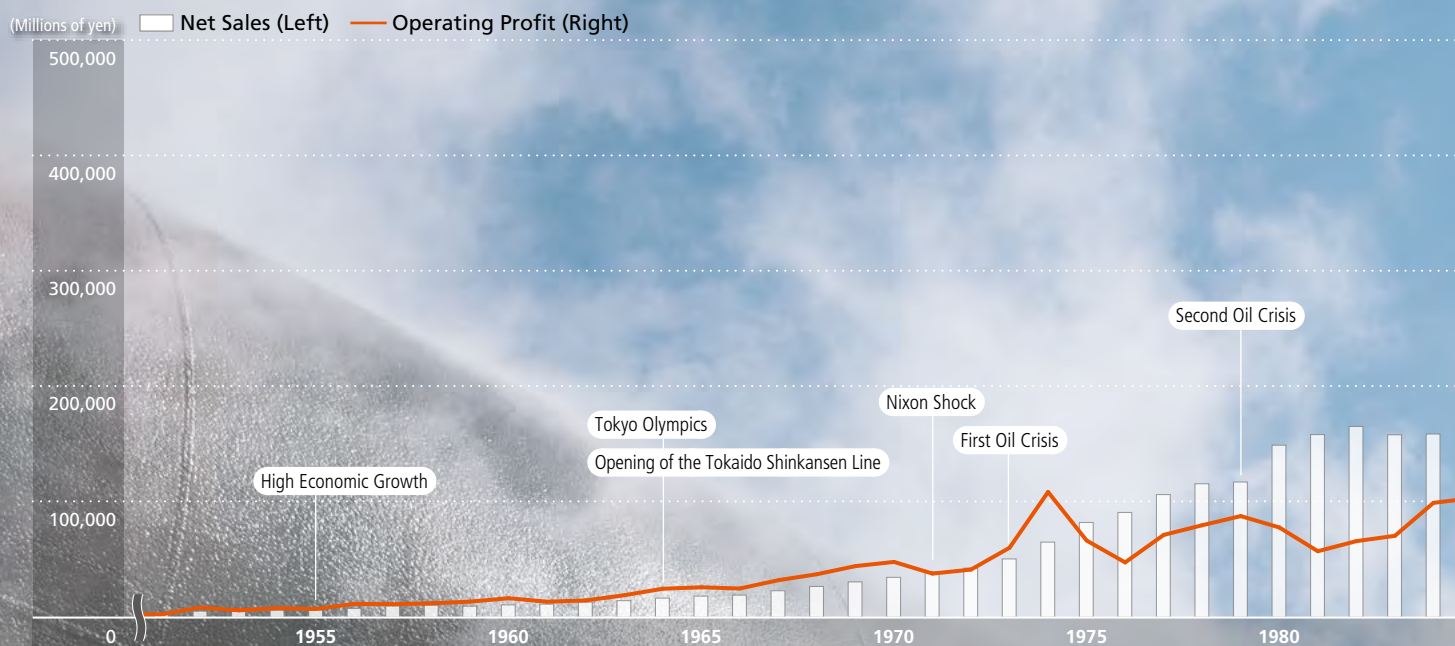
Our policy is to maximize profits, return profits to stakeholders, make appropriate investments and make adequate payments to employees from a medium- to long-term perspective.

To survive in today's very uncertain environment, we have to make adequate business plans to meet the requirements and expectations of society, invest and make sure that we produce results. In this way, we have to be indispensable to society.

I will listen to the voices of stakeholders and would like to go forward together and share the results. Your continued guidance and support are sincerely appreciated.

# Value Creation Story I

## The Path Together with Society



### 1918 - 1974

#### ■ Foundation toward the expansion of the inorganic chemicals business and entry into the petrochemical business

Established domestic production of soda ash to resolve difficulty in securing imports during WWI. Entered the cement business and the petrochemical business in response to expanding demand in a period of high economic growth. Contributed to increasing people's quality of life and infrastructure development. Strengthened environmental measures to meet social expectations in response to serious pollution problems.

- 1918 Established Nihon Soda Kogyo Co., Ltd. to produce soda ash in Tokuyama, Yamaguchi Prefecture (currently Shunan City)
- 1919 Started to produce soda ash
- 1936 The company name is changed to Tokuyama Soda Co., Ltd.



- 1938 Started to produce cement in the wet process from waste mud produced during the production of soda ash
- 1940 Started to produce calcium chloride using distillery effluent produced during the production of soda ash
- 1952 Changed the manufacturing method of caustic soda to the electrolytic process
- 1960 Completed construction of Nanyo Plant to expand cement business
- 1961 Commenced ready-mixed concrete business in response to expanding construction demand
- 1964 Commenced production of propylene oxide by employing chloride that makes use of by-products from caustic soda operations
- 1967 Commenced production of ion exchange membranes that are used for salt production from concentrated seawater (The first commercialization of ion exchange membranes in Japan)
- 1972 Commenced production of isopropyl alcohol (IPA)



### 1975 - 1989

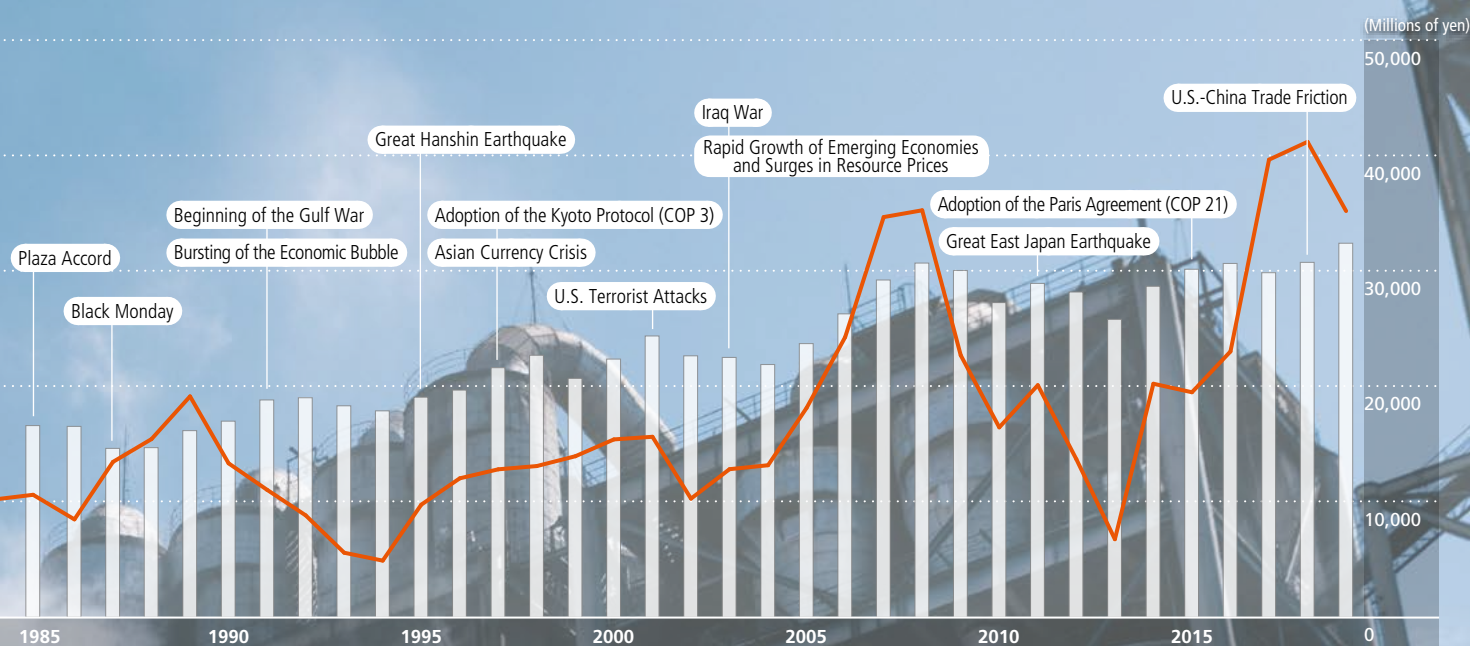
#### ■ Expanded specialty and processing businesses

Promoted Company-wide energy conservation in response to global energy crisis. Created many electronics materials and fine chemical products, including semiconductor-grade polycrystalline silicon and high-purity aluminum nitride, which are mainstream products, to meet new social needs.

- 1976 Commenced production of polyolefin film
- 1982 Synthesized diallyl carbonate using the sodium carbonate method and commenced sales as a plastic lens-related material
- 1982 Developed an aluminum nitride sintered body that has a high thermal conductivity and transmits light
- 1983 Commenced production of high-purity chemicals for electronics manufacturing
- 1983 Commenced sales of enzyme kits for polyamine tests, which resulted in the Company's entry into the diagnostic reagents and systems business
- 1983 Switched over from the caustic soda manufacturing method to the ion exchange membrane method
- 1983 Commenced sales of Palfique, a dental composite resin that applies polymer technology and powder control
- 1984 Commenced production of semiconductor-grade polycrystalline silicon, from which silicon wafers are made, with the development of the information society
- 1985 Completed a plant to manufacture high-purity aluminum nitride using a unique nitride reduction process and commenced production
- 1985 Established the Kashima Factory in Hasaki City (present Kamisu City), Ibaraki Prefecture, to expand fine chemicals business
- 1987 Commenced production of NF Sheet, a microporous film that repels water but allows air to pass through
- 1989 Completed construction of the Tsukuba Research Laboratory in Tsukuba, Ibaraki Prefecture







## 1990 - 2004

### ■ Strengthened and restructured core businesses

Provided cutting-edge materials to the semiconductor industry and contributed to IT innovation. Responded to market demand from a global perspective by establishing business bases overseas and consolidating operations and spinning off businesses.

- 1994 The company name is changed to Tokuyama Corporation
- 1995 Established a joint venture for photoresist developer in South Korea and commenced production in Ulsan, South Korea
- 1997 Established Tokuyama Electronic Chemicals Pte. Ltd. in Singapore and commenced the refinement and filling of high-purity chemicals for electronics manufacturing
- 1998 Established Taiwan Tokuyama Corporation in Taiwan and commenced the refinement and filling of high-purity chemicals for electronics manufacturing
- 1999 Began operating a recycling plant converting waste plastic into alternative of thermal energy for cement
- 2001 Established Yamaguchi Eco-tech Corporation, a joint venture with Ube Industries, Ltd., and commenced recycling of waste incineration ash
- 2004 Established Shanghai Tokuyama Plastics Co., Ltd. in Shanghai, China, as a manufacturing and sales company of microporous film

## 2005 - 2015

### ■ Focused on raising corporate value

Companies' social contributions, including their contribution to the creation of a recycling society, attracted a great deal of attention, and Tokuyama boosted its presence due to its contributions to zero emissions and resource recycling. Promoted globalization.

- 2007 Established Tokuyama Chemicals (Zhejiang) Co., Ltd. in Zhejiang, China, and commenced production of fumed silica in China
- 2008 A GMP-compliant plant to produce drug substances for pharmaceuticals was completed at the Kashima Factory
- 2008 Established Shunan Bulk Terminal Co., Ltd., a joint venture that stores and ships bulk cargo, such as coal, etc.
- 2009 Announced the construction of a polycrystalline silicon plant in Malaysia
- 2013 Tokuyama Chiyoda Gypsum Co., Ltd. established as a joint venture to develop a waste gypsum board recycling business
- 2013 Commenced production of liquified hydrogen at Yamaguchi Liquid Hydrogen Corporation, a joint venture with Iwatani Corporation
- 2015 Commenced operation of cement clinker loading facilities for exports

## 2016 -

### ■ Building a new foundation

To help achieve the SDGs and solve social issues, Tokuyama prioritizes ICT, healthcare and the environment and promotes initiatives to develop products and technologies that will help solve social issues.

- 2017 Transferred Tokuyama Malaysia Sdn. Bhd., a polycrystalline silicon manufacturing and sales company in Malaysia, to South Korea-based OCI Company Ltd.

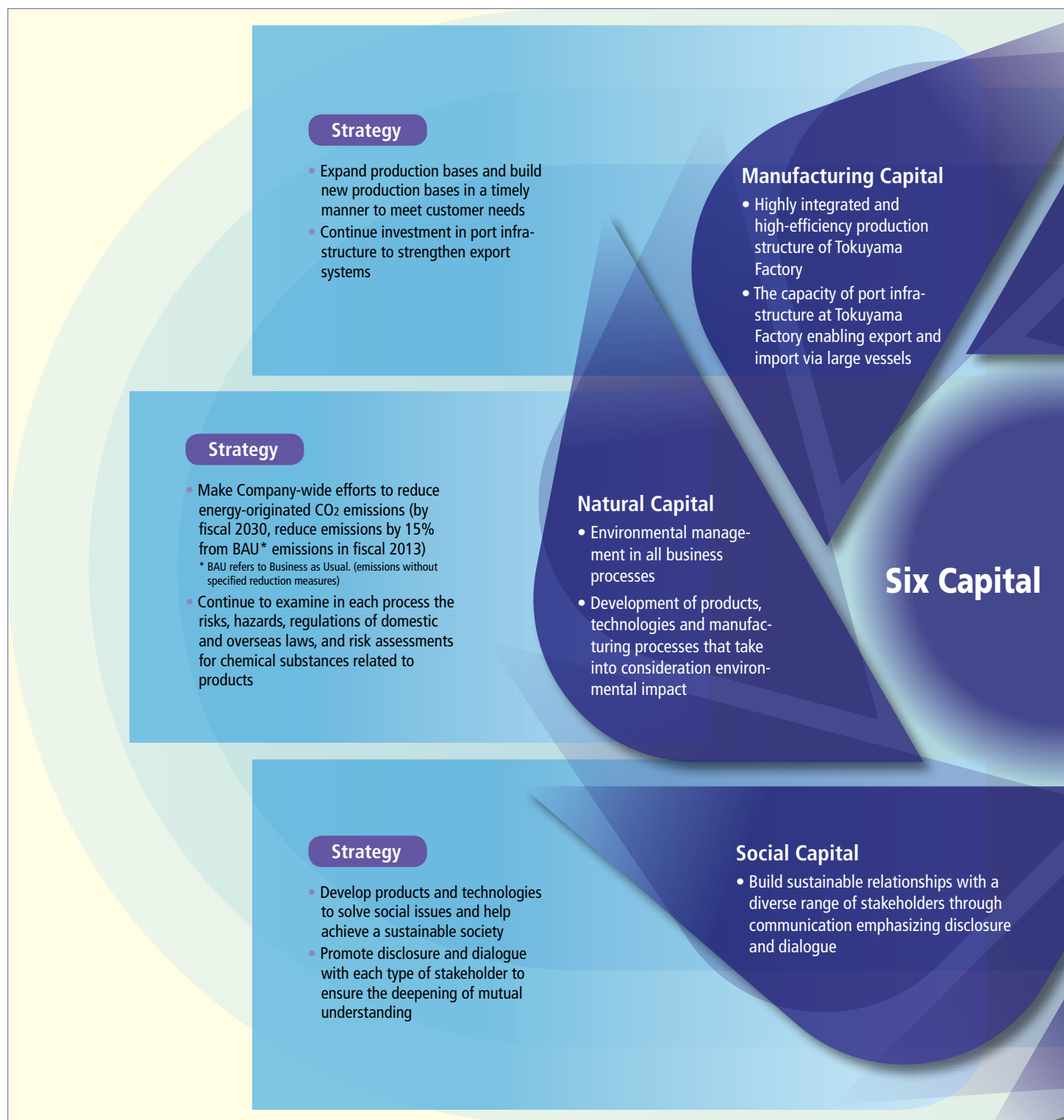


Chemicals Specialty Products Cement Life & Amenity

# Value Creation Story 2

## Our Strengths and Strategies

We have identified our strengths in each of the six capital categories and have determined strategies for each category to undertake a variety of initiatives.







## Human Capital

- Create a vibrant corporate culture by increasing employees' sincerity and tenacity, traditional characteristics of Tokuyama, as well as their independence and speed

### Strategy

- Treat, assign and cultivate employees appropriately and link human resources directly to the growth of the Company
- Hire mid-career employees actively and accelerate human resources innovation
- Thoroughly conduct process safety and disaster prevention activities and activities for industrial safety and health

## Categories

### Financial Capital

- Good, well-balanced relationships with financial institutions
- A credit rating of A
- Improvement of the equity ratio  
12.8%  $\Rightarrow$  44.0%  
(March 31, 2016) (March 31, 2020)

### Strategy

- Build a financial structure that is highly regarded by investors and markets that enables us to procure funding stably at a low interest rate and in a timely manner
- Examine investment plans not only from a financial perspective but also from the perspective of reducing CO<sub>2</sub> emissions and the reduction of required labor

### Intellectual Capital

- Unique technologies based on chemicals developed by Tokuyama

### Strategy

- Create new businesses in the fields of ICT, healthcare and the environment by enhancing distinctive technologies and through open innovation
- Improve safety management using IoT and Big Data



# Value Creation Story 3

## Value Creation Process

Tokuyama provides products that help solve social issues, shifting its focus from quantity to quality using its unique technologies, based on the management resources that it has developed over 100 years, to realize its vision: Centered on the field of chemistry, the Tokuyama Group will continue to create value that enhances people's lives. Tokuyama aims to create social and economic value.

### Social Issues

#### Global issues

- Climate change and global warming mitigation
- Biodiversity conservation
- Stable procurement of energy, resources and food supplies

#### Safety and security

- Natural disaster mitigation
- Improved labor conditions
- Cybersecurity measures

#### Low birth rates, aging demographics

- Contribute to health and longevity
- Sustainable infrastructure building
- Improved industrial competitiveness
- Increased regional vitality

### Management Resources

#### Manufacturing Capital

- Highly integrated and high-efficiency production structure of Tokuyama Factory
- Capacity of port infrastructure at Tokuyama Factory enabling export and import via large vessels

#### Human Capital

- Human resources who possess independence and speed

Number of employees:

**5,679** (consolidated)

\* As of March 31, 2020

#### Financial Capital

- A credit rating of A
- JPX400 constituent
- Improvement of the equity ratio

**44.0%**

\* As of March 31, 2020

#### Intellectual Capital

- Unique technologies based on chemicals developed by Tokuyama

R&D expenses:

**¥9,193** million

\* Results in fiscal 2019

#### Social Capital

- Build sustainable relationships with a diverse range of stakeholders

#### Natural Capital

- Environmental management in all business processes

Waste recycling rate:

**93.9%**

\* Results in fiscal 2019

### Vision

#### Mission

**Centered on Tokuyama value that**

#### Traditional Businesses

- Chemicals
- Cement

#### Tokuyama's Unique Technologies

High purification

Powder control

Photopolymerization

Crystallization, deposition

#### Customer-oriented R&D and Business Activities

- Pharmaceutical ingredients / intermediates
- High-purity chemicals for electronics manufacturing
- Semiconductor-grade polycrystalline silicon

#### Aspirations

**Shift from a Global leader Leader in its**

## Considering the SDGs in business activities

The Tokuyama Group is committed to contributing to the achievement of the Sustainable Development Goals (SDGs) adopted by the United Nations General Assembly in September 2015. The Group verifies that its products and business activities are in alignment with the SDGs in the conduct of its business.



the field of chemistry, the Group will continue to create enhances people's lives

### Advanced Materials

- Specialty Products
- Life & Amenity

▶ P.26-27

Nitride reduction   Sintering   Sol-gel  
Molecular design   Electrode and membrane   Organic synthesis and direct hydration

▶ P.26-27

- Thermal management materials AlN/BN/Si<sub>3</sub>N<sub>4</sub>
- Materials for dental cavity treatment (composite resin)
- Photochromic dye materials
- Technology for 100% recycling of waste gypsum boards

focus on quantity to quality in advanced materials traditional businesses in Japan

## Business Domains ▶ P.2-3

### ICT

- Semiconductor materials
- Thermal management materials
- High-purity chemicals for electronics manufacturing



### Healthcare

- Pharmaceutical ingredients / intermediates
- Plastic lens-related materials
- Microporous film
- Dental materials and equipment
- Medical diagnosis systems



### Environment

- Recycling of industrial waste
- Waste plastic recycled as an alternative fuel
- Waste liquid treatment
- Plastic window sashes (PVC window)



## Value Creation

### Social value ▶ P.16-17

#### • Supporting Innovation

By supplying thermal management materials and high-purity chemicals for electronics manufacturing, among other high-quality products, Tokuyama contributes to enhancing the performance of cutting-edge electronic equipment and energy saving while also supporting technological innovation in digital society.

#### • Contributing to Health and Longevity

In addition to existing businesses, which manufacture pharmaceutical ingredients / intermediates, dental materials and equipment, and other products, Tokuyama is expanding into new business domains, including supplements, cosmetics and disease prevention, to contribute to enhancing the quality of life.

#### • Creating a Carbon-free, Recycling-oriented Society

Building businesses using unique technologies, including the recycling of waste, Tokuyama pursues both profitability and contribution to a sustainable society.

### Economic value

#### Results in Fiscal 2019

▶ P.42-43

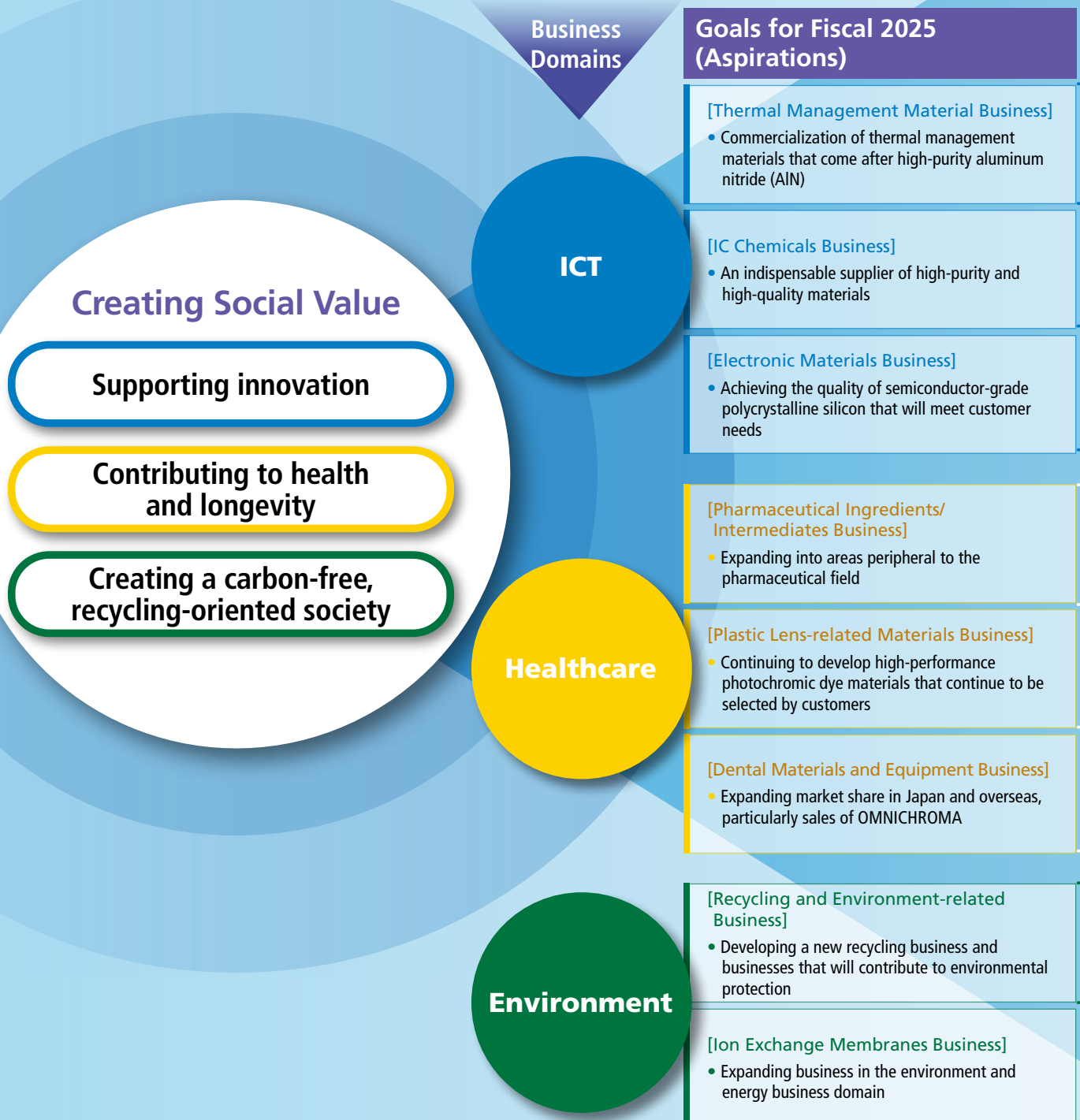
- Net sales      ¥ **316 billion**
- Operating profit      ¥ **34.2 billion**
- ROA      **9.0 %**
- CCC\*      **64 days**
- D/E ratio      **0.69**

\* Cash conversion cycle (CCC): Accounts receivable turnover period + Inventory turnover period – Accounts payable turnover period

# Value Creation Story 4

## Roadmap for Sustainable Growth

We have set a vision, and for creating social value, goals for fiscal 2025 in respective target business domains, and have identified current challenges and possibilities to efficiently undertake a variety of initiatives to achieve the goals.





## Major Initiatives

- Launch of filler-grade aluminum nitride as well as boron nitride
- Early commercialization of silicon nitride

- Improving purification, analysis, quality management and process improvement technology
- Developing optimal production and supply systems

- Investment in improved quality
- Reducing semiconductor-grade polycrystalline silicon manufacturing costs

- Strengthening marketing as well as sales and development systems
- Choosing appropriate development themes and ensuring implementation

- Hiring and cultivating human resources
- Building optimum development and manufacturing systems

- Promoting digital marketing, primarily in the United States
- Strengthening the system for developing next-generation businesses

- Early commercialization of the recycling of solar cell modules
- Seeking out and examining original non-kiln themes

- Increasing supply capacity by investing in the expansion of factories
- Introducing initiatives to penetrate the Chinese market

## Current Challenges and Possibilities

- Inadequate product lineup
- Expectations of increasing demand for thermal management materials with the penetration of 5G and EV

- Adequately responding in terms of technology, equipment and supply capability to semiconductor manufacturers' quality and supply requirements

- Building a production system to respond to wafer manufacturers' quality requirements, which are becoming more exacting with the miniaturization and lamination of semiconductors

- Building a supply chain, including marketing, contract manufacturing overseas and M&A, in the fields of supplements, cosmetics and animal medical medicine

- Building research and development, sales and manufacture systems to expand business

- Lack of name recognition and sales capability overseas
- Inadequate product lineup

- Selection of themes where the Company can take advantage of its unique technologies and the speed of commercialization

- Building a supply system to meet increasing demand
- Expanding sales in overseas markets



Thermal Management Materials



Supplements (application example)



Ion Exchange Membranes

# Segment Information

## Chemicals

Yutaka Tarutani

Executive Officer, General Manager, Chemicals Business Division

This segment, one of our traditional businesses, manufactures and sells inorganic chemicals and chlorine derivatives that are indispensable to industry and society as part of the foundation of life. Taking advantage of the manufacturing technologies and distribution and sales systems that have been developed in this segment over many years, the segment stably supplies high-quality, cost competitive products.

In its sales strategy, the basic policy is “full production and selling out.” The segment always strives to optimize the balance of supply and demand. To maintain full production, the segment continues to strengthen the domestic base that it has built up over many years. Anticipating a decline in domestic demand due to a declining population and customers’ relocation overseas, the segment endeavors to tap into overseas demand, particularly in emerging countries where demand is expected to grow. Staff dedicated to overseas operations in the planning group cooperate with the sales company in Singapore (Tokuyama Asia Pacific Pte. Ltd.) to build our user base overseas. These initiatives resulted in the export ratio of caustic soda increasing from 12% in fiscal 2018 to 18% in fiscal 2019. The export ratio of polyvinyl

chloride resin increased from 3% to 10%. To flexibly respond to an anticipated increase in demand for caustic soda particularly in Southeast Asia, the segment started to improve infrastructure at the Tokuyama Factory to establish a system that enables stable shipment.

Because the electrolytic plant and the soda ash plant, which are the main plants of the segment, consume large amounts of electricity, we strive to enhance electrolyzer unit performance to save energy and reduce CO<sub>2</sub> emissions (by reducing power consumption) and to develop technology that utilizes CO<sub>2</sub>, applying soda ash manufacturing technology. We will use our unique technologies to reduce environmental impact globally and mitigate global warming.

Due to the global impact of COVID-19, there is concern over sluggish demand in the medium to long term. Amid this situation, we will reinforce our system for stable supply by strengthening the supply chain and will seek decarbonization by breaking away from the existing energy consuming businesses. Taking the SDGs into consideration, we will promote new business in the environment and energy business domain.

### SWOT

- A unique domestic soda ash and calcium chloride manufacturer
- Electrolyzer units and electrolytic and manufacturing technologies with an extensive track record

#### S: Strengths

- Inadequate sales networks overseas
- Sales volumes of calcium chloride for cryoprotectants changes depending on weather conditions

#### W: Weaknesses

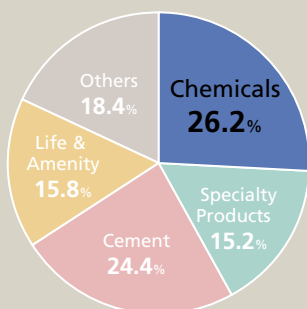
#### O: Opportunities

- Market penetration of fuel-cell vehicles, promotion of a hydrogen society
- Expanding demand for caustic soda and polyvinyl chloride resin on the back of economic growth in Southeast Asia and India
- Application of sodium hypochlorite and IPA in medicine and nursing care

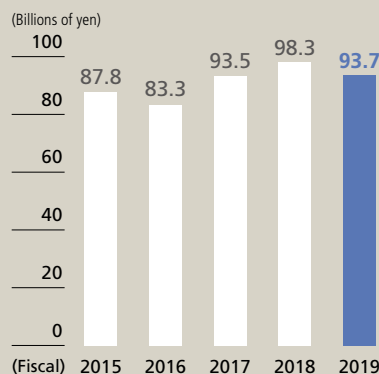
#### T: Threats

- Falling domestic demand due to a decline in the Japanese economy and the relocation of users overseas
- Falling demand due to a slowdown of the Chinese economy

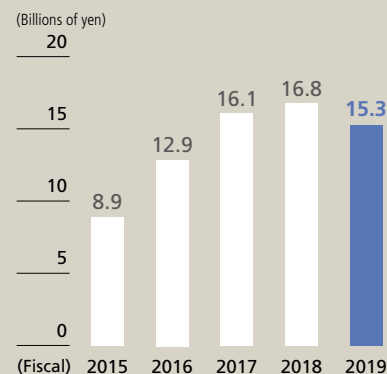
● Sales by Segments  
(Fiscal 2019)



● Net Sales



● Operating Profit



## Overview of Results in Fiscal 2019

Net sales in this segment stood at ¥93,730 million (down 4.7% year on year). Operating profit came to ¥15,366 million (down 8.8% year on year).

The sales volume of caustic soda was firm, but earnings decreased, reflecting higher raw material prices and lower export prices due to a decline in overseas markets.

Earnings from polyvinyl chloride resin rose as the spread between raw material prices and sales prices was maintained.

Earnings from propylene oxide decreased owing to a drop in sales volume for polyurethane, its main application.

Earnings from calcium chloride declined, reflecting a decrease in sales volume for snow melting applications due to the warm winter and low snowfall, and an increase in logistics costs.

## Challenges to Address

Operations in Japan and overseas will likely be affected by the spread of COVID-19 for some time to come. In this environment, we will strive to secure profits by stably supplying domestic customers, taking advantage of our production bases in Japan, identifying customers overseas, building an optimum distribution network including warehouses and inventory control, enhancing cost competitiveness by reducing unit energy consumption and fixed costs, and creating a production system enabling higher productivity.

In January 2020, we reorganized the chemicals development department and began initiatives to help achieve the SDGs. Our themes are the development of a brine electrolyzer unit, an alkaline water electrolyzer unit and system, and technology utilizing CO<sub>2</sub>, an area where we can use and apply our own technologies. Through this development, we will reduce CO<sub>2</sub> emissions and introduce renewable sources of energy, thereby improving our environmental value. We will enhance our corporate value by developing operations focusing on hydrogen in the environment and energy fields.

## Major Topics

## Topics

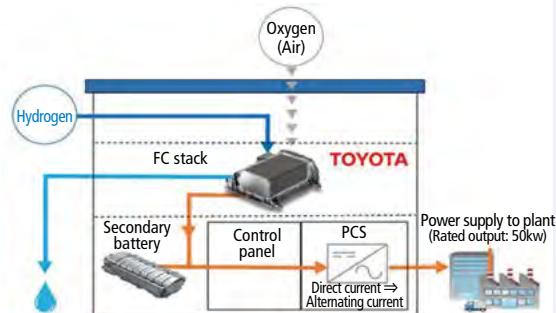
### Tokuyama and Toyota Start Verification Tests in Japan for Stationary Fuel Cell Generator That Uses By-product Hydrogen

Tokuyama Corporation and Toyota Motor Corporation started verification tests of a stationary fuel cell generator (FC generator) using a fuel cell system (FC system) that is installed in Toyota's MIRAI fuel cell electric vehicles and has been set up within the Tokuyama Factory grounds.

In the verification tests, the by-product hydrogen generated during Tokuyama's manufacturing of caustic soda using brine electrolysis is used as fuel for the FC generator. The electricity generated by the FC generator is supplied to the Tokuyama Factory.

Tokuyama will examine a model regional contribution project using by-product hydrogen as one of Japan's leading diversified chemicals manufacturers with the ability to supply high-purity by-product hydrogen.

● System Structure of FC Generator





# Segment Information

## Specialty Products

**Hiroshi Nomura**

Director, Managing Executive Officer, General Manager, Specialty Products Business Division

The Specialty Products segment manufactures and sells high value-added products, such as semiconductor-grade polycrystalline silicon, fumed silica, aluminum nitride and high-purity chemicals for electronics manufacturing, which are used for state-of-the-art digital devices and technological innovation in the field of the environment and to save energy. In the thermal management material business, as a leading company that developed the world's first aluminum nitride sintered body through which light passes in 1982, we supply high-purity aluminum nitride, with its high ability to dissipate heat (thermal conductivity) and its insulating properties. Our share of the global market is over 70%.

The semiconductor market continues to technologically innovate, including in miniaturization, and there are volatile demand changes in the market. The key requirement for market participation is meeting customers' quality, volume, price and service requirements in a timely manner. The market is growing, and the number of new competitors entering the market is increasing worldwide. Competition between existing competitors and new ones is expected to intensify. In this business environment, we focus on manufacturing

higher quality products, developing new products and on accurately identifying the needs of the manufacturers of leading-edge semiconductors and semiconductor materials based on what we consider are our strengths, namely our history of delivering to the world's top manufacturers of semiconductors and semiconductor materials and our production technology and analysis technique that enables us to continue to manufacture high-quality (high-purity) products.

Due to COVID-19, economic activities are sluggish, and the world economy is slowing remarkably. However, in the semiconductor industry, demand for semiconductors for data centers is expected to increase in response to increasing communication volume due to the expansion of working from home and other hours spent at home. To ensure that sales opportunities are seized, we will forcefully implement differentiation strategies. We will invest with the aim of reinforcing the facilities used for each of our products in a timely manner to meet the needs of the market and customers, and we will accelerate our efforts to improve quality and develop new products.

## SWOT

- Superior quality products related to semiconductors
- Unique high purification technologies, such as nitride reduction (thermal management materials) and direct hydration (IPA)
- A large share of the thermal management material market

**S: Strengths**

- Inadequate marketing capability for the global market

**W: Weaknesses**

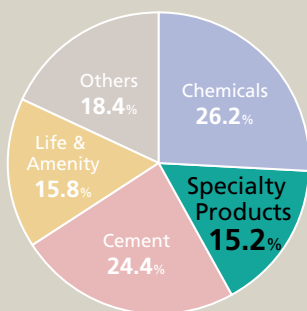
- Shift to the next-generation communications standard (5G) and the sophistication of electronic equipment
- Growth in the semiconductor field attributable chiefly to higher performance, higher-capacity memory and electrical equipment for vehicles
- Higher customer quality requirements due to advances in miniaturization and lamination

**O: Opportunities**

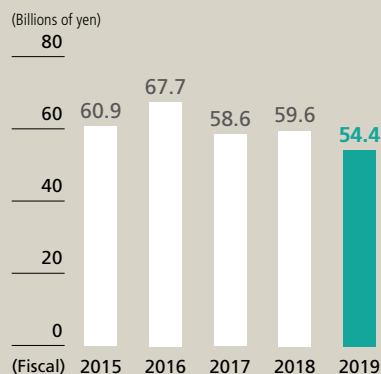
**T: Threats**

- Entrance of new overseas manufacturers
- Technological innovation in the semiconductor market

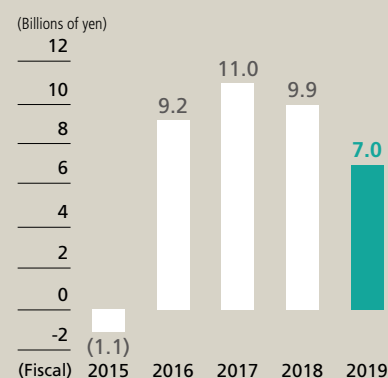
● Sales by Segments  
(Fiscal 2019)



● Net Sales



● Operating Profit



## Overview of Results in Fiscal 2019

Net sales in this segment stood at ¥54,466 million (down 8.7% year on year). Operating profit was ¥7,058 million (down 29.0% year on year).

Although there were signs of recovery in the semiconductor-grade polycrystalline silicon and thermal management materials markets, sales volume fell due to inventory adjustments and earnings decreased. The sales volume of high-purity chemicals for electronics manufacturing, primarily those for overseas markets, recovered and was on a par with the level of the previous fiscal period.

In research and development, we upgraded existing silica products and developed new conformal silica. We strengthened the organization for the trial production of aluminum nitride filler, boron nitride filler and silicon nitride powder and made progress with customer evaluations. Development of a silicon nitride substrate was commenced. We stepped up efforts to meet the need for highly purified materials associated with the miniaturization and 3D integrated processes of semiconductor devices.

## Challenges to Address

We expect that the semiconductor market will continue to grow in the medium to long term. Each business in the Specialty Products segment is being deployed mainly in Asia, particularly in Taiwan, South Korea and China. We are considering expanding the businesses into other regions. If certain conditions are met, we will actively create new bases in new markets to increase the ratio of overseas sales.

We will prepare to continue to invest in what is necessary to expand business, improve quality and launch new products in a timely manner. Meanwhile, we will enhance the production and quality control technologies that make business expansion, quality improvement and new product launches possible. We will also enhance engineering capabilities, designing and building facilities and plants that will enable the production of high-quality products. We aim to build a cost-competitive production system that will also maintain the quality of products to increase customer satisfaction regarding quality and cost.

## Major Topics

## Topics

### Center for Commercialization of Advanced Technology to Be Established for the Commercialization of Silicon Nitride

Tokuyama has started construction of the Center for Commercialization of Advanced Technology, which will be used for the commercialization of silicon nitride, among other advanced materials. The center will begin operating in 2021.

The center will be used as a base for the development and commercialization of products that contribute to global environmental protection and the further application of ICT. For the foreseeable future, the center will focus on the commercialization of silicon nitride for the power semiconductor modules used in environmentally friendly vehicles and renewable energy power generation equipment.

Tokuyama will contribute to the development of the environmentally friendly and sustainable society by promoting the use of silicon nitride materials that are both quality and cost.

- Center for Commercialization of Advanced Technology Ceremony praying for the safety of construction work



# Segment Information

## Cement

### Takahide Taniguchi

Executive Officer, General Manager, Cement Business Division

Our cement business was born from the effective use of the waste generated in the production of soda ash. Tokuyama's cement plant, in terms of production capacity, is one of the largest single plants in Japan. It provides cement and related products, including cement-type stabilizer. These products support infrastructure, such as buildings, port facilities, bridges and roads. The plant's port facilities are capable of unloading raw materials from ships and loading products onto large vessels. Three kilns enable optimized production and stable supply.

Although demand fell due to COVID-19, we actively sell products for construction to increase sales volume. Demand also fell overseas due to COVID-19. We are changing destinations to markets where demand is rising, even if slightly, to increase the volume of exports. On another front, we are striving to tap into new sources of demand, such as customers' capital expenditures, in cooperation with our other business segments.

Coal prices are falling, which is helping reduce manufacturing costs. At the same time, the

operating rate is dropping due to a decrease in sales volume, which is increasing costs. In this environment, we will continue to curb any increases in fixed costs. The aging of equipment is another major challenge. We will strengthen our safety system by continuing to conduct periodic maintenance and invest in replacement, in addition to conducting routine inspections, thereby ensuring stable and safe operation.

In 1995, we succeeded in burning waste plastics in the front portion of the kiln, an industry first, and we have also established a technology to treat large amounts of waste plastics without polluting. While continuing to pursue the resources and environment business using the kiln, we are considering developing a recycling business that would be independent from the kiln to contribute to solutions to social issues.

We will help with measures to improve the aging infrastructure built or improved during the period of high economic growth through concrete patching and reinforcement to support sustainable social development.

## SWOT

- Contributing to environmental conservation by accepting waste in and outside the Company and using it as raw materials for cement and alternative thermal energy sources

- Increasing repair costs due to the aging of equipment

### S: Strengths

### W: Weaknesses

### O: Opportunities

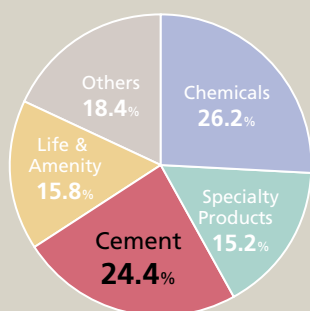
### T: Threats

- Domestic demand related to the National Resilience Initiative and the Linear Chuo Shinkansen Line project
- Demand for infrastructure development associated with economic development in emerging countries

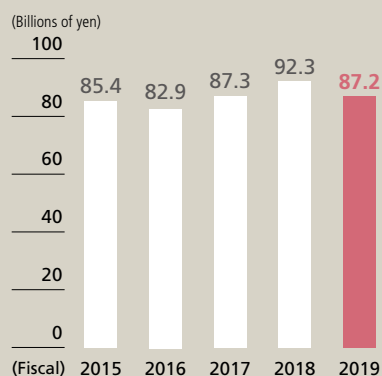
- Intensifying competition due to the reorganization of the cement industry
- The adverse effect of CO<sub>2</sub> emissions on the cement industry
- Falling domestic demand due to the declining population



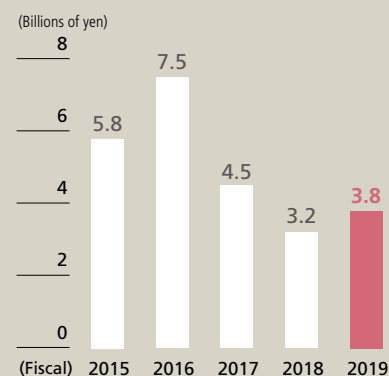
● Sales by Segments  
(Fiscal 2019)



● Net Sales



● Operating Profit



## Overview of Results in Fiscal 2019

Net sales in this segment stood at ¥87,289 million yen (down 5.5% year on year). Operating profit came to ¥3,835 million (up 19.7% year on year).

Although cement manufacturing costs fell due to a decrease in raw material prices, earnings from cement dropped, reflecting lower sales volume and an increase in fixed costs, including repair costs. Earnings from resource recycling rose as a result of an increase in the volume of waste accepted.

In research and development, we are continuing development for the utilization of waste and by-products in the cement production process to reduce environmental impact. We have started to develop a technology to recycle solar panels as a new theme to utilize waste effectively. As basic research into cement, we continued an examination to lower the cement clinker burning temperature to save energy.

## Challenges to Address

We are concerned about a decline in demand as construction work was suspended temporarily, primarily in large cities, due to COVID-19.

In this environment, we will strive to secure earnings through efforts to receive orders after construction work resumes and significant reductions in manufacturing costs. With regard to receiving orders, we are considering tapping into demand in the Tokai area, particularly demand related to the Linear Chuo Shinkansen Line project and redevelopment in front of Nagoya Station, using the Nagoya Service Station, which was established in 2019, as a base. To reduce manufacturing costs, we will create an organization dedicated to the introduction of advanced high energy efficiency technology in the cement manufacturing department and will take steps to ensure we are highly competitive.

We will cultivate the building materials business, which mainly engages in concrete repair materials used for the repair and reinforcement of aging social infrastructure such as roads, tunnels and bridges, as the next core business in this segment by developing new products and enhancing product sales.

## Major Topics

## Topics

### Technology for 100% Recycling of Waste Gypsum Boards Wins Minister of the Environment Award and LCA Society of Japan Chairman's Award

Gypsum board is a material used to build interior walls and ceilings. When new buildings are built and buildings are dismantled and rebuilt, waste gypsum board is generated, and most of it is disposed of in landfills.

Tokuyama Chiyoda Gypsum and Tokuyama have developed a 100% recycling technology for producing material for gypsum board from waste gypsum board and have succeeded in commercializing the technology. The technology was recognized, with the two companies winning the Minister of the Environment Award at the 46th Environmental Awards and the Chairman's Award at the 16th LCA Society of Japan Awards.

There are high expectations as a technology enabling the conservation of raw materials and significantly improving the environmental efficiency of housing construction materials.



Award ceremony for the 46th Environmental Awards

# Segment Information

## Life & Amenity

**Ryo Sugiyama**

Managing Executive Officer, General Manager, Life & Amenity Business Division

This segment provides pharmaceutical ingredients / intermediates, dental materials and equipment, medical diagnosis systems, food packaging materials and materials for disposable diapers, among other products, to help people live comfortable lives. Of these products, photochromic dye materials, which are created using an organic synthetic technology in which we excel, are widely used as photochromic dye materials in plastic eyeglass lenses to protect people's eyes due to their unique properties in which their color quickly develops and fades and they filter out ultraviolet light.

In the present super-aging society, health-care markets, particularly overseas markets, are expanding. The domestic market is undergoing drastic change, including falling drug prices due to the policy of reducing healthcare spending and intensifying competition attributable to the entry of overseas manufacturers, especially Chinese manufacturers, into the market.

In this market environment, the Company operates state-of-the-art manufacturing equipment that conforms to the manufacturing control and quality control standards for pharmaceuticals and quasi drugs under a strict control system that ensures product reliability, and it also develops

high value-added products that are both price competitive and superior in terms of performance, efficacy and usability. The departments responsible for development, manufacturing and sales cooperate with each other to meet the diverse expectations of customers promptly and faithfully.

We also promote open innovation, including joint research with external organizations, and develop products for markets where the uses of products are different from existing markets. To strengthen marketing capabilities overseas, we actively hire human resources that are knowledgeable regarding overseas markets. We aim to expand the markets for dental materials and equipment, medical diagnosis systems and ion exchange membranes, among other types of products.

As environmental regulations that apply to corporate activities are becoming more stringent, we are developing environment-related businesses. The ion exchange membranes business, for example, recycles resources recovered from industrial effluent. Tokuyama will contribute to building a sustainable society by providing products that reduce environmental impact, including ion exchange membranes and plastic window sashes.

### SWOT

- Ability to develop products and technologies based on extensive experience
- The unification of the sales and development divisions enables the Company to respond to users' requests promptly and meticulously

**S: Strengths**

**O: Opportunities**

- Growth in the healthcare field due to the arrival of a super-aging society and increasing health consciousness
- Increasing demand for energy-saving products, including plastic window sashes and home building materials

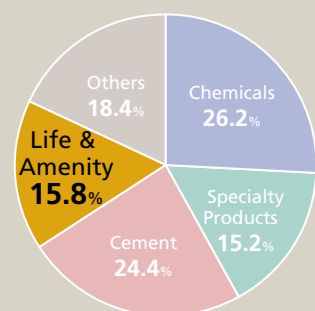
- Presence in overseas markets
- Insufficient expansion into overseas markets

**W: Weaknesses**

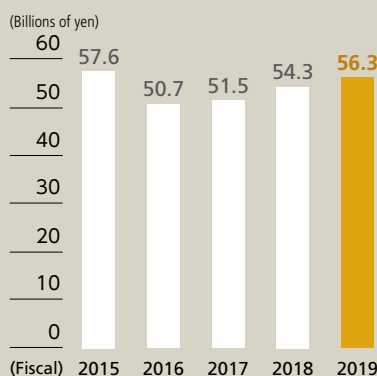
**T: Threats**

- Existing products no longer used due to changes in lifestyles.

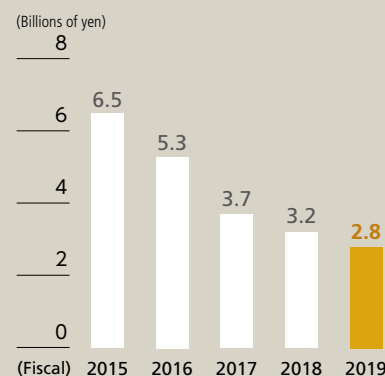
● Sales by Segments  
(Fiscal 2019)



● Net Sales



● Operating Profit



## Overview of Results in Fiscal 2019

Net sales in this segment came to ¥56,307 million (up 3.5% year on year). Operating profit stood at ¥2,885 million (down 10.8% year on year).

Although sales volume of dental materials and equipment increased mainly overseas, earnings from dental materials fell chiefly due to an increase in advertising expenses related to the launch of new products. Earnings from medical diagnosis systems rose, reflecting steady orders for clinical testing devices and systems. Earnings from ion exchange membranes fell due to a decrease in large-scale projects.

The Company developed products in each business. With regard to plastic lens-related materials, the Company developed next-generation photochromic dye materials. In relation to ion exchange membranes, it expanded application technology of bipolar membrane electrodialysis and developed ion exchange membranes for which there were customer needs.

## Challenges to Address

Due to the impact of COVID-19 in Europe and the United States, sales volume of dental materials and equipment, among other products, is expected to fall temporarily. In this environment, the Company will focus on developing and selling new healthcare products in response to changes in customer needs and the market, aiming to expand earnings.

In the pharmaceutical ingredients / intermediates business, we will develop products for supplements and cosmetics, which support healthy and comfortable lives, including skin whitening and skincare products and health foods. We will build optimal development, production and sales systems, while considering alliances with outside entities as well as mergers and acquisitions.

In the ion exchange membranes business, where demand is growing for applications other than existing uses, including resource recovery and the reduction of process effluents that contribute to reducing environmental impact, we will improve the supply system to meet expanding demand. In the polyolefin film business, where the main product is food packaging film, we will focus on environmentally friendly products using biomass plastics.

## Major Topics

## Topics

### Tokuyama Chosen as a CPhI Pharma Awards 2019 Finalist

In recognition of our success in active pharmaceutical ingredient (API) process development, Tokuyama was chosen as one of six finalists for the Excellence in Pharma award in the API Development category of the CPhI Pharma Awards 2019.

The CPhI Pharma Awards are given to technologies based on actual production in each of the sectors in the healthcare business. Nominated in the API Development category that Tokuyama entered are manufacturing technologies in which process chemists from original and generic manufacturers throughout the world pursued the limits of creativity, efficiency and economy. The Company's process development technology can reduce the existing manufacturing process by nearly half and can improve productivity and economic efficiency significantly. Tokuyama will continue striving to develop competitive technologies in both product development and process development to provide technologies and products that contribute to healthy and better lives.





# Research and Development

## R&D



**Fumiaki Iwasaki**

Director, Managing Executive Officer, General Manager, Research & Development Division

### Role of the Research & Development Division and R&D Policy

The raison d'être of the Research & Development Division is to contribute to the growth of the Tokuyama Group by supporting existing businesses and creating new businesses in the fields of ICT, healthcare and the environment through open innovation and the development of the Company's unique technologies. The main role of the division is to comprehensively understand the current state of the Tokuyama Group's technologies from a bird's eye view and to set and implement the development themes

necessary for future growth.

The Company strengthens marketing, which links the Company's technologies to the needs of society. The Company and the Research & Development Division are always considering who our customers are, whether we have a market, whether we are correctly managing schedules and whether prices meet the expectations of our customers, and this is beginning to produce results.

### Characteristics of the Company's R&D

The Company develops new technologies and products with a main focus on the ICT, healthcare and environment fields, leveraging its unique technologies including those listed at right.

Particularly in the area of ICT, we have many themes related to miniaturization and 3D technology that utilize the Company's unique high purification technology. The Research & Development Division will continue to focus on pursuing these themes in cooperation with business divisions.

	Technologies and Products
Unique Technologies	High purification / Nitride reduction / Sintering / Sol-gel / Powder control / Crystallization, deposition / Electrode and membrane / Photopolymerization / Molecular design / Organic synthesis and direct hydration
Uses of Proprietary Technologies	Pharmaceutical ingredients / intermediates, IPA SE / TMAH high-purity chemicals for electronics manufacturing, semiconductor-grade polycrystalline silicon, fumed silica, materials for dental cavity treatment (composite resins), photochromic dye materials, hard coat materials, thermal management materials (AlN, BN and Si <sub>3</sub> N <sub>4</sub> ), technology for 100% recycling of waste gypsum boards

### Achievements in Fiscal 2019

In the fiscal year under review, progress was made in the development themes almost as planned. A major achievement is that a new chemical solution for semiconductors and silica aerogel, "Airluca<sup>®</sup>," came very close to being adopted in customers' products.

In September 2018, the Taiwan Research Laboratory was established to promote open innovation with semi-

conductor manufacturers in Taiwan, a place with advanced semiconductor technology and the location of the Industrial Technology Research Institute (ITRI). In fiscal 2019, we began joint development with ITRI in the fields of healthcare including technology development for semiconductor-related products.

### Future Strategy

In our medium- to long-term management strategy, the Company aims to become a global leader in advanced materials. We will put resources primarily into the fields of ICT, healthcare and the environment and will conduct research and development to expand and develop each business.

Reducing CO<sub>2</sub> emissions is an important management issue. We will promote the reduction of CO<sub>2</sub> emissions from technical aspects by developing technology for utilizing CO<sub>2</sub>, forming alliances with external companies and helping develop business plans to create new businesses.

## New Chemical Solution for Semiconductors

At the Tsukuba Research Laboratory, we are developing a new chemical solution for semiconductors to be used as release agents and washing solutions. We have always developed products from the customer's perspective, using the Taiwan Research Laboratory as a point of contact, to manufacture products that meet the needs of the manufacturers of cutting-edge semiconductors and that are in line with trends in the semiconductor industry where technology evolves rapidly.

While the Company has continued to enhance the quality and features of its products, it has failed to identify market needs accurately. As a result, many development themes have not resulted in commercialization. Considering this failure, in the development of the new chemical solution for semiconductors, we took full advantage of our high purification technology, one of the strengths of the Company, and responded thoroughly to cutting-edge semiconductor manufacturers' challenging requests for quality and speed. This is a major achievement resulting from our actions in line with one of the Company's values: Customer satisfaction is the source of profits. We plan to build a plant with the goal of launching the product in fiscal 2022.



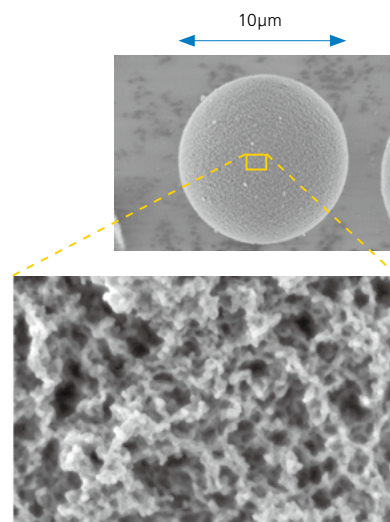
Development at the Tsukuba Research Laboratory

## Airlica® Silica Aerogel

Development started when we generated an interesting type of silica using powder control technology, in which the Company has a leading edge.

Airlica® is a type of silica. Each particle has many pores, and it has high oil absorbance capabilities. It has a very smooth texture. With high oil absorbance capabilities and a smooth texture, Airlica® is a unique type of silica. We have decided to take advantage of these features to develop foundation and other cosmetic products using Airlica®.

We had no previous experience in the cosmetics field. We assessed the functions and features of products being developed and undertook comprehensive marketing along with making proposals to cosmetic manufacturers and providing samples. Currently, Airlica® is close to being selected by a major manufacturer for their cosmetic products and is in the process of final adjustments. We are also accelerating development of the second and third phases for cosmetic products following the development of Airlica®, with a view toward establishing a cosmetics business in the future.



A magnified photograph of an Airlica® particle, with many holes on its surface

## New Thermal Management Materials (Aluminum Nitride Fillers, Boron Nitride, Silicon Nitride)

In the thermal management materials business, we will expand the business domain, augmenting the product lineup of nitride ceramic materials leveraging the Company's unique technology to achieve effective heat management, which is an indispensable part of improving the performance of EV, HEV and other power devices.

We are focusing on developing high-purity aluminum nitride, a mainstay product, and boron nitride, a product being developed, for fillers. Our goal is to see the products used in metal substrates, resin substrates and TIM.

Meanwhile, research and development and demonstration tests for mass production of silicon nitride will be conducted at the Center for Commercialization of Advanced Technology (Yanai City, Yamaguchi), which is expected to commence operations in 2021. Silicon nitride is a hard ceramic that does not break easily. In addition, it has high thermal conductivity. As increasing numbers of automobiles include computerized equipment, demand for silicon nitride to be used in the circuit boards of the electrical control parts installed in automobiles is expected to increase significantly. We will continue to develop products that are useful in the promotion of ICT.



Silicon nitride powder and ceramics

# The Tokuyama Group's Products Contribute to the Improvement of People's Health and Hygiene

The Tokuyama Group manufactures and sells products that contribute to improving people's health and hygiene and curbing the spread of infectious diseases. The Group will continue to focus on and expand its business in the healthcare field and will promote product development and marketing for growth businesses.

## Sodium Hypochlorite (Tokuyama Corporation)

Sodium hypochlorite is used widely by the public in chlorine disinfectants. A familiar example is household chlorine bleach, whose principal component is sodium hypochlorite. In addition to household chlorine bleach, sodium hypochlorite is used for public hygiene. It is added to tap water, swimming pools and septic tanks. It is used also on dairy farms. It is used to disinfect elderly care facilities and milk handling equipment and also to disinfect and deodorize barns for livestock. Sodium hypochlorite is considered an effective means of controlling norovirus.

Although sodium hypochlorite is a widely distributed chemical product, it strongly irritates the skin and generates a toxic gas if mixed with acidic detergents. It requires careful handling. It is important to use sodium hypochlorite carefully and properly after it has been diluted to the appropriate concentration.

### ■ Donation to Shunan City

We donated sodium hypochlorite to Shunan City in Yamaguchi Prefecture to help the city prevent the spread of COVID-19. The sodium hypochlorite donated was delivered to the city and diluted to an effective concentration. The diluted sodium hypochlorite was distributed to businesses in the city for the disinfection of their facilities.



## Isopropyl Alcohol (Tokuyama Corporation)

Isopropyl alcohol is used for pharmaceuticals (see the column at right) and is an important raw material in the medical and pharmaceutical fields.

The isopropyl alcohol delivered to our customers' sites was processed and sold as isopropyl alcohol for disinfection. In Japan, isopropyl alcohol is preferred for disinfection before injections and ethanol is preferred for everyday hand disinfection because of their sterilizing power and rough skin that they can cause. Isopropyl alcohol is often used to disinfect medical devices, and our products contribute to improving hygiene at hospitals and other places.

(Note) Isopropyl alcohol is highly flammable and volatile. Users need to be very careful about fire and static electricity in places where isopropyl alcohol is used. They also must comply with instructions for use, including requirements for adequate ventilation.

### ■ Contribution to the Manufacture of Pharmaceuticals

The Company's high-quality isopropyl alcohol is manufactured using a unique direct hydration technique. It is also used as an extraction solvent in pharmaceutical manufacturing processes and is well received by customers.



A plant for manufacturing isopropyl alcohol



## Pharmaceutical Ingredients / Intermediates (Tokuyama Corporation)

Tokuyama manufactures pharmaceutical ingredients / intermediates for lifestyle-related diseases (diabetes drugs, antihypertensives), eye drops, allergy medication, drugs for improving gastrointestinal function and antipsychotic agents, among other drugs.

We have advanced organic synthesis technology, crystallization technology, powder control and analysis technology. Using those technologies, we are providing high-purity products that meet customer needs. In addition, we have established a consistent quality assurance system that covers processes from research and development to commercial production, which has enabled us to meet our customers' requirements for high-quality products for many years. At present, we are focused on developing original and novel processes and are striving to manufacture high-purity pharmaceutical ingredients that are very economical.

In addition, the Company has identified the development of cosmetics and supplement active ingredients, areas that are peripheral to pharmaceuticals, as a new priority area and is currently strengthening development and marketing.

We will win the trust of customers with our strengths in development, sales, manufacturing and quality assurance, as well as continue to provide products that contribute to the improvement of people's quality of life (QOL).

### Voice of a Development Staff Member



**Takayuki Miyaoku**  
Life & Amenity Business  
Division  
MA Department

Every day, we strive to develop and introduce new technologies and develop competitive processes, leveraging the technological capabilities that we have developed through the development of pharmaceutical ingredients / intermediates. We have expanded into fields peripheral to pharmaceuticals, including cosmetics and supplements, and are expediting development to contribute to the further enhancement of people's lives.

## Tokuyama Dent Zia (Tokuyama Dental Corporation)

Tokuyama Dental Corporation's mission is to contribute to the development of dental care through the manufacture and sale of dental materials and equipment and to contribute to achieving a healthy and prosperous global society.

In addition to expanding our existing business centering around the company's mainstay product, composite resin (a material for dental cavity treatment), we have been strengthening our system for developing next-generation technologies and products, including materials for dentures, prevention and oral care, with the arrival of a super-aged society.

In this environment, we launched Tokuyama Dent Zia high-purity, stabilized hypochlorous acid water in September 2018, inspired by the sodium hypochlorite manufactured by Tokuyama. Tokuyama Dent Zia, which was launched for dental care, is making contributions in dental care settings as a product capable of killing germs and preventing infections at dental clinics. The National Institute of Technology and Evaluation (NITE) has announced that hypochlorous acid water at a certain concentration more effectively controls COVID-19. Tokuyama Dent Zia meets the concentration standard at the recommended dilution ratio.

We will expand beyond the existing business domain and continue to develop unique products from our own perspective to contribute to the development of dental care and people's health.



### Voice of a Dentist



**Dr. Kimiyoshi Tsuchiya**  
Director  
Nihonbashi Tsuchiya Dental  
Clinical Office

We have chosen Tokuyama Dental's Tokuyama Dent Zia, which has a variety of uses. We use a spray to sterilize tooth form models, chairs for patients, cabinets, doorknobs, floors and slippers, among other things. Dent Zia has a deodorizing effect, and we use it for restrooms. It is convenient in many ways.

(Note) Tokuyama Dent Zia is solely for dental treatment and is not sold to the general public.

# Corporate Social Responsibility

## CSR

Tokuyama practices corporate social responsibility (CSR) by fulfilling its mission to use chemistry to create value that enhances people's lives. By leveraging the chemical technologies it has developed and practicing socially responsible management, Tokuyama will help achieve the Sustainable Development Goals (SDGs) while continuing to create and supply new value that brings contentment to people and contributes to social progress.

### CSR Framework



































Tokuyama operates a CSR Promotion Council that is chaired by the President and comprises all executive officers in Japan. The Council decides on CSR policies and goals, and facilitates their implementation. CSR is built upon a platform of appropriate corporate governance and internal controls. Accordingly, the Council discusses important matters related to internal controls.

### Materiality

Tokuyama conducted a materiality assessment to align its CSR initiatives and management priorities. This assessment extracted and identified issues that are of particular material importance to Tokuyama, so that it can concentrate its management resources on resolving these issues.

For details, please refer to the CSR Report or the website.  
<https://www.tokuyama.co.jp/eng/csr/materiality.html>



	Materiality (Identified in March 2019)	Aspirations (Fiscal 2025)
Environment	Helping to fight global warming  	<ul style="list-style-type: none"> <li>Reduce CO<sub>2</sub> emissions from energy consumption: 15% reduction in BAU CO<sub>2</sub> emissions by fiscal 2030, compared with fiscal 2013 levels</li> <li>Expand Scope 3 emissions and c-LCA disclosure data</li> </ul>
	Conserving the environment       	<ul style="list-style-type: none"> <li>Promote recycling and maintain zero landfill waste</li> <li>Maintain low emissions of environmental impact substances</li> <li>Comply with legal requirements and other regulations, achieve zero environmental accidents</li> </ul>
Safety and Accident Prevention/Occupational Health and Safety	Preventing accidents and preparing for disasters    	<ul style="list-style-type: none"> <li>Maintain zero accidents and disasters</li> <li>Foster and improve the safety culture</li> <li>Improve process safety management level</li> <li>Provide amenable working conditions</li> </ul>
Technical Quality	Developing products and technologies that address social issues     	<ul style="list-style-type: none"> <li>Expand the development of products and technologies that help to resolve social issues, focusing on the SDGs</li> </ul>
	Managing chemical substances   	<ul style="list-style-type: none"> <li>Continue to strengthen chemicals management</li> </ul>
Society	Engaging with local communities   	<ul style="list-style-type: none"> <li>Harmoniously co-exist and cooperate with communities</li> <li>Contribute to communities</li> </ul>
	Promoting CSR procurement    	<ul style="list-style-type: none"> <li>Survey and manage supply chains based on CSR procurement guidelines</li> </ul>
	Developing human resources   	<ul style="list-style-type: none"> <li>Develop the next generation of managers</li> <li>Put the right people in the right positions according to their career plan and job skills, and increase job rotations</li> <li>Develop global human resources</li> </ul>
	Emphasizing diversity   	<ul style="list-style-type: none"> <li>Promote diversity and inclusion</li> <li>Employ persons with disabilities</li> <li>Respect for human rights</li> <li>Promote work-life balance</li> </ul>

## Basic Philosophy of Tokuyama's CSR-Oriented Management

Tokuyama approaches its CSR activities in accordance with a basic philosophy of continuously working with society to build a sustainable future by contributing to the resolution of social issues and earning greater trust from various stakeholders with the aim of improving corporate value.

### Environmental Initiatives

For Tokuyama, the pursuit of proactive initiatives to protect the earth's environment is an important part of its corporate social responsibilities. Accordingly, the Company practices environmental management that takes into account the natural environment in all business activities.

#### ■ Helping to Fight Global Warming

Tokuyama is helping to mitigate global warming by conserving energy used in its business activities, developing and manufacturing products that help to reduce GHG emissions and managing Scope 3 emissions.

#### ■ Reducing Substances with Environmental Impact and Waste

Tokuyama is working to reduce its emissions of air and water pollutants and implementing environmental conservation initiatives such as waste recycling.

In order to reduce atmospheric pollution, Tokuyama equips boilers, cement kilns and other pollutant-

generating facilities with flue gas desulfurizers, denitration equipment, low-NOx burners and high-performance dust collectors.

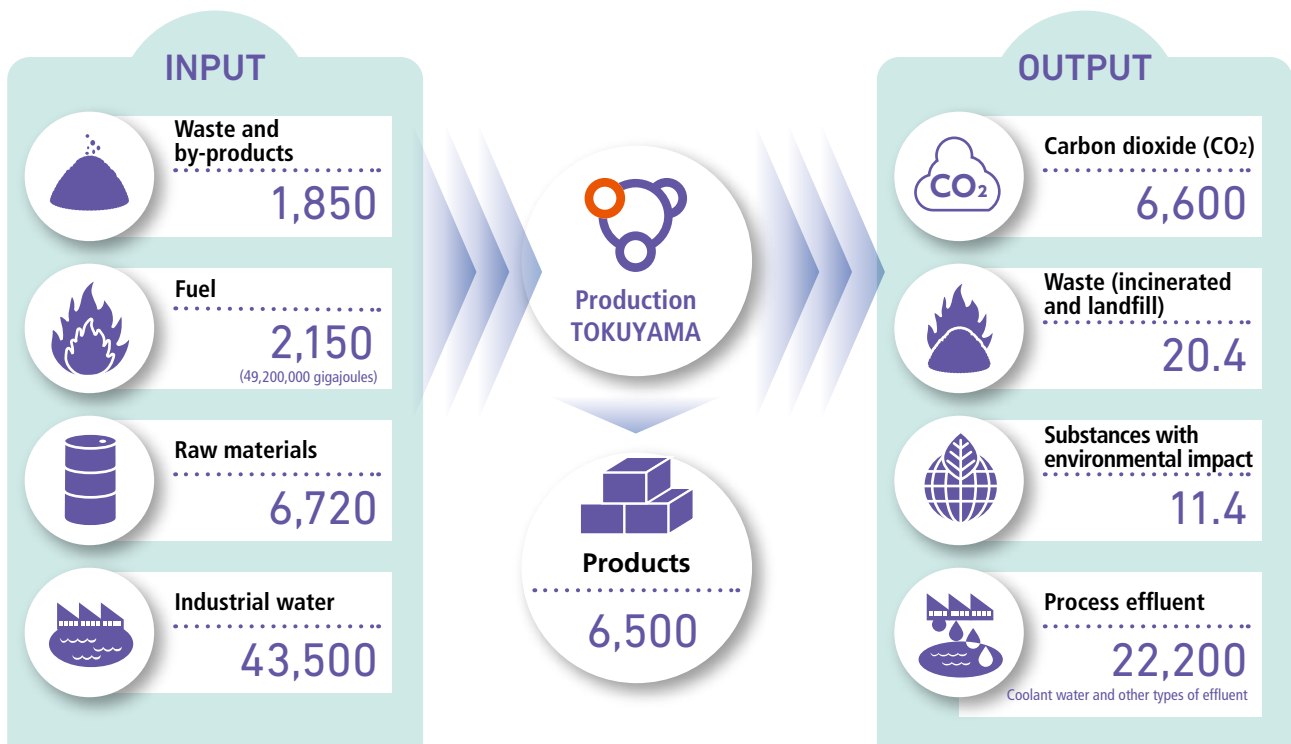
As for the prevention of water pollution, the Tokuyama Factory follows a stringent system for monitoring industrial effluent and purifying wastewater using treatment equipment in order to comply with regulatory standards and limits set by the local government, as well as the Company's own standards, which are even stricter.

The effective utilization rate for waste and the "zero emissions" rate remained high in fiscal 2019 due to efforts to reduce the volume of waste and comprehensive recycling efforts.

#### ■ Proper Management of Chemical Substances

Tokuyama practices thorough product quality control and verifies the hazard level and toxicity of chemical substances so that they can be used with peace of mind. It also complies with chemical regulations in and outside Japan.

● Flow of Materials in Business Activities (Unit: 1,000 metric tons)



\* All amounts are for Tokuyama Corporation on a non-consolidated basis in fiscal 2019.



## Initiatives for Society

As a company that is needed in society, particularly in local communities, Tokuyama places emphasis on communication with local communities and with many different stakeholders as it conducts a range of activities.

### ■ Social Contribution Activities

Tokuyama helps educate children, holding company tours for elementary school children and giving lectures at elementary schools and junior high schools mainly in Yamaguchi Prefecture, where the Tokuyama Factory is located.

The third-grade children of four elementary schools in Shunan City visited the Tokuyama Factory and learned about the production from sea salt of many different products familiar to them, the size of the factory, plant



Students touring the Tokuyama Factory

### ■ Tokuyama Human Resource Development

Tokuyama has established the Human Resources Policy to clarify how employees, who are responsible for the survival, growth and development of the Company, are expected to work, how the Company will encourage them to grow and what they are expected to be. Under this policy, Tokuyama has reformed its personnel system to increase the work satisfaction of employees. The aim is to change the organizational culture by encouraging adoption of the Tokuyama Vision, while adhering to the basics and ensuring that all employees receive impartial treatment under a thoroughly applied, fair evaluation system. Following changes in the personnel systems for managers and senior contract employees, a new personnel system for general employees is being introduced in fiscal 2020.

While the new personnel system is based on the existing performance-based qualifications grade system, it has shifted to being a role-based qualifications system that emphasizes people's roles and work activities. In the new system, the levels of the roles and duties required by the Company for each qualification grade are shown, which encourages employees to take on challenges.

It has been decided that a human resource management system will be introduced in fiscal 2020 for the proper operation of the new personnel system. The human resource management system is expected to have positive effects, including the enhancement of the process from target setting to evaluation, the unified management and

facilities and safety measures.

Tokuyama lectured at the Hikari Kankyo Mirai Juku (class on the environment in the future) held by Hikari City for first-year students at Asae Junior High School. The topic was "What is hydrogen energy?" The MIRAI hydrogen vehicle, powered by hydrogen the Company supplies, was shown to the students, and a sustainable society and the utilization of hydrogen were explained.



Workshop on hydrogen energy at a local school

sharing of information on human resources and the development of human resources and personnel rotations based on different types of data.

### ■ Promoting Diversity

Tokuyama is promoting diversity to ensure that all employees are able to work energetically and succeed. These initiatives emphasize the utilization of employees' knowledge and wisdom (diversity of knowledge) and fairly evaluate employees to ensure their skills are utilized based on their contribution to the improvement of corporate value. For example, we offer opportunities for everyone to diversify their knowledge through the sharing of employees' own knowledge through the introduction of new employees hired mid-career in the Company newsletter and study sessions that are held once a month during lunch within the Group. Additionally, we have discontinued the general system that limited promotions, and in the new personnel system, we created a path for the growth of female employees, which account for a majority of employees. We believe this will lead to achieving the goals of the Action Plan to Promote Opportunities for Women (e.g., ensuring that women make up no less than 6% of management). Moreover, we are expanding the current work from home system, which is currently limited to those raising children or needing to provide nursing care, to improve productivity and employee work satisfaction. Tokuyama is also working to improve workplace environ-

ments for persons with disabilities, aiming for the legally required employment rate of 2.2%.

### ■ Promoting Work-Life Balance

At Tokuyama, employees in workplaces eligible for flextime can choose their workday schedules with no core work-period requirement. The Company is also striving to optimize working hours by tracking and presenting aggregate data based on the computer log details of employees, enabling actual working conditions to be managed.

Under a program to help employees balance work and childcare responsibilities, eligible employees can also use flextime from the time that pregnancy is determined until the child reaches sixth grade\*<sup>1</sup>. Starting April 2019, the period during which paid parental leave can be taken was

extended to within one year of childbirth. Childcare leave can be taken until the child reaches two years of age\*<sup>2</sup>.

Employees can also take family care leave for up to two years (legal requirement: 93 days in total) for each family member requiring care. With family care time off (unpaid), regardless of the number of care recipients, it is possible to take off two days a week (legal requirement: five days a year).

In addition, an employee reinstatement (rehiring) system has been established to allow employees who resigned for childcare or family care reasons to be rehired.

\*<sup>1</sup> Employees who are pregnant or raising a child in sixth grade or younger can work shortened hours below the prescribed monthly work hours, and can work intermittently with interruptions and resumption of work.

\*<sup>2</sup> In certain cases, leave can be taken until the child reaches age two.

### ● Usage of Childcare and Family Care Leave, etc.

	Fiscal 2015	Fiscal 2016	Fiscal 2017	Fiscal 2018	Fiscal 2019
Number of employees taking childcare leave	10	13	11	12	12
Return to work rate	90.0%	84.6%	100.0%	100.0%	100.0%
Number of employees taking parental leave	18	13	25	33	65
Family care leave-taker	1	1	2	2	1
Number of employees taking family care time off	1	1	0	1	1
Number of flextime users	52	55	54	50	52

### ■ Accident Prevention and Occupational Health and Safety

Recognizing that safety is the basis for its business activities, Tokuyama practices safety as the first step to maintaining good relations with the communities in which it operates. Based on this approach, the Company carries out stringent accident prevention measures and occupational health and safety initiatives in its efforts to create a positive and safe work environment that is free of accidents.

### ■ Disaster Preparedness Drills

Tokuyama has carried out various training activities. These include disaster drills for pipe leaks and fires caused by an earthquake, emergency drills at individual company divisions, joint drills involving affiliated companies and contractors, and workplace safety competitions.



General disaster preparedness drill

The Company has also conducted drills for initiating its business continuity plan (BCP) in the scenario of a Tokyo inland earthquake by designating the Tokyo Head Office as the disaster response headquarters and the Tokuyama Factory as the crisis response headquarters.

### ■ Tokuyama Health Management

Based on the basic Company-wide health management plan that focuses on the sound mental and physical health of employees and the promotion of measures to mitigate lifestyle-related diseases, Tokuyama has established the following goals: to improve personal health awareness, to maintain and reduce the rate at which employees are diagnosed with health conditions (below 44%) and to reduce employees' absence rate. The Company performs a variety of activities, with the promotion of the Smart Life Program, health guidance, measures to mitigate lifestyle-related diseases and mental health care as priority tasks.

The Company received Health and Productivity Management certification in March 2020. Tokuyama was praised for its promotion of weight management and anti-smoking measures, its implementation of occupational stress evaluations and its establishment of a consulting service both inside and outside the Company.

\* This certification considers employees' health management from a managerial viewpoint and is awarded to particularly superior companies from among those strategically working on health management. The Ministry of Economy, Trade and Industry established this system and the Nippon Kenko Kaigi awards certification.



# Initiatives for Reducing CO<sub>2</sub> Emissions

## Reduction of CO<sub>2</sub> Emissions as a Management Issue

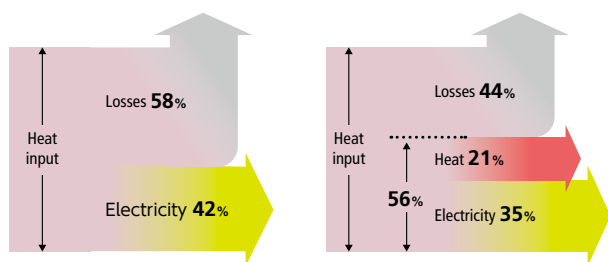
Tokuyama has a coal-fired power plant at the Tokuyama Factory and reducing CO<sub>2</sub> emissions has been a management issue for many years.

The Company has promoted energy consumption rate management, the reduction of greenhouse gas (GHG) emissions and emission intensity management. In 2019, the Company identified material issues for promoting CSR activities and made contributing to the mitigation of global warming its top priority. In addition to the energy-saving activities that the Company has conducted using the energy consumption rate as an indicator, Tokuyama has set a new target of a 15% reduction in energy-originated CO<sub>2</sub> emissions from BAU (base year: fiscal 2013) by fiscal 2030 based on the Paris Agreement. In this way, the Company is accelerating its efforts to mitigate global warming. The Company has already reduced CO<sub>2</sub> emissions by 10% and is undertaking a range of initiatives to achieve the final target.

## Features of In-House Power Generation at the Tokuyama Factory

General thermal power plants supply only electricity, and energy efficiency is said to be around 42%. The thermal power plant within the Tokuyama Factory supplies steam in addition to electricity, and the total thermal efficiency is 56%. Efficiency is approximately 1.3 times higher than general thermal power plants and is about equal to leading-edge thermal power plants.

In its in-house power generation, Tokuyama is taking steps to begin carbon recycling, in which the Company considers CO<sub>2</sub> as a resource and reuses it as a fuel or raw material.



From the 200,000kW pulverized coal-fired power plant design thermal efficiency BAT reference table of the Ministry of Economy, Trade and Industry (as of January 2020), generating end, LHV

Energy flow for the Company's power plant, generating end, LHV

## CO<sub>2</sub> Project Group Established

To achieve the goal of a 15% reduction from BAU, the Company established the CO<sub>2</sub> Project Group within the Tokuyama Factory in January 2020. The project group is undertaking the following initiatives.

### ■ New Technology Development

#### CO<sub>2</sub> Capture and Reuse

In cooperation with outside research institutions, including universities, and other companies, Tokuyama is developing technologies, including a technology to capture CO<sub>2</sub> generated from the Tokuyama Factory as well as a technology for using captured CO<sub>2</sub>.

### ■ Hydrogen Production Using Electric Power Derived from Renewable Energy

The Company is developing and demonstrating a commercial-scale electrolytic cell and process for developing hydrogen production equipment that can use large, variable amounts of power from renewable energy. The Company aims to procure power from renewable energy, which involves variable factors, stably at low cost by producing hydrogen, which is a storable energy source.

### ■ Renewable Energy Introduction

#### Biomass Combustion

The Company will use more biomass at its thermal power generation facility and will reduce the consumption of fossil fuels. The Company will use wood pellets made mainly from waste materials as forest friendly sources of energy.

#### Energy Mix

Tokuyama will examine an energy mix (power source mix) at the Tokuyama Factory in fiscal 2030, devising a scenario about environmental administration and the energy situation by leveraging the knowledge about the environment and energy of Yamaguchi University, with which Tokuyama has concluded a comprehensive collaborative agreement\*, and the chemical technologies that Tokuyama has developed over many years (see following page).

\* Comprehensive collaborative agreement between Yamaguchi University and Tokuyama Corporation: In 2004, Tokuyama concluded a comprehensive collaborative agreement with Yamaguchi University for joint research, the exchange of personnel and cooperation in human resources development. Since November 2019, Tokuyama and Yamaguchi University have been jointly conducting a study examining a future power source mix (energy source) to reduce CO<sub>2</sub> emissions at the Tokuyama Factory.



## ■ Optimization of Energy Efficiency at the Tokuyama Factory

In addition to energy saving at each plant within the Tokuyama Factory, Tokuyama will promote energy circulation between plants and the supply of heat and energy to users outside the facility to optimize energy efficiency throughout the Tokuyama Factory. Tokuyama is examining joint energy use at plants and energy

circulation outside the Company's facilities and within the Shunan Industrial Complex for energy saving in respective manufacturing departments.

In fiscal 2020, Tokuyama will work out a roadmap for the above initiatives up to fiscal 2030 based on key performance indicators (KPIs). The Company will make a Company-wide effort to steadily achieve the plan.

## Column

### Kazuhiro Fukuyo

Director and Professor at Yamaguchi University's Graduate School of Innovation and Technology Management

## Background of Academic Guidance

I conduct research on technology management in the industrial sector where large amounts of energy are generated and consumed at industrial complexes. One of the research themes is energy circulation systems connecting multiple companies (plants), for example, systems where companies (plants) provide emitted steam to each other or where waste heat from electric furnaces is reused in different plants.

I have executed a variety of projects with Tokuyama, forming comprehensive alliances. I proposed the development of a future energy mix using scenario planning, and Tokuyama has agreed to it.

At the Tokuyama Factory, multiple plants are connected to each other for the reuse and effective use of energy, and this is closely related to my research.

## Concept of Technology Management

In the technological world, engineers play a central role. In technology management, the perspective of management is incorporated and profitability through the effective use of technology is taken into consideration. How will the company use the technologies that it has? What services will the company provide using the technologies that it has? Who will it provide the services to? In addition to increasing efficiency and profitability, technology management identifies future growth areas for development. Creating a vision for the company is one of the roles of technology management.

## Evaluation of CO<sub>2</sub> Reduction by Tokuyama

The chemical industry plays an important role in people's lives. However, due to large volumes of CO<sub>2</sub> emissions, the chemical industry tends to have a negative feeling. Amid this environment, Tokuyama aims to reuse CO<sub>2</sub>, and I appreciate Tokuyama's stance. Reusing emitted CO<sub>2</sub> for products in addition to reducing CO<sub>2</sub> emissions by

efficiently reusing thermal energy is a bold initiative that only a chemical manufacturer can take.

ICT companies can contribute to reducing CO<sub>2</sub> emissions by replacing power from fossil fuels with power from renewable energy and through carbon offsets. However, inherently, chemical manufacturers cannot avoid CO<sub>2</sub> emissions. It can be said that reducing CO<sub>2</sub> emissions and reusing CO<sub>2</sub> are the missions of the chemical industry. I appreciate Tokuyama's stance of taking the initiative before global warming becomes more serious.

## Expectations for Tokuyama Going Forward

Global environmental conservation is a long-term issue that needs to be addressed. Reducing CO<sub>2</sub> emissions is a particularly significant issue. It is the mission of the chemical industry to tackle this problem from a long-term perspective. I believe Tokuyama, a leading global company in Yamaguchi Prefecture, has this same mission. I would like to conduct research with Tokuyama while taking into consideration Tokuyama's long-term growth.



**Kazuhiro Fukuyo**  
Director and Professor at  
Yamaguchi University's Graduate  
School of Innovation and  
Technology Management

In 1998, completed the doctoral program at the Division of Environmental Engineering of the Osaka University Graduate School of Engineering. Joined Hitachi, Ltd. Engaged in the development of air-conditioning equipment. In 2001, won the Award of The Society of Heating, Air-Conditioning, and Sanitary Engineers of Japan. In 2002, became a lecturer at the Faculty of Engineering of Yamaguchi University. From 2002 to 2004, served as manager of the Environmental Engineering Committee of The Architectural Institute of Japan. From 2003, engaged in MOT education. In 2004, received the Education Award from Yamaguchi University's Faculty of Engineering for his engagement in MOT education. In 2005, became an Associate Professor at Yamaguchi University's Graduate School of Innovation and Technology Management. In 2010, assumed current position.



## Message from an External Director

### Shin Kato

Director, Audit and Supervisory Committee Member  
(External Director)

#### Toward the Facilitation of Management

I have been involved in the management of Tokuyama as an external director for about seven years. Through my duties during that time, I have strongly felt that there are no definitive answers in the tasks of external directors. Different directors have different areas of expertise and different careers, and each company that brings in external directors also has different needs.

At Tokuyama, external directors have had diverse careers. I have learned a lot from working with them. In this environment, I have always asked where in the Company I can apply my expertise and experience. Manufacturing and technology are not my fields of expertise and there is little I can do here in the way of assistance. I have thus sought to contribute to the facilitation of management by giving advice about organizational structures, personnel affairs and management methods.

#### The Corporate Culture of Tokuyama and Challenges to Address

It is not easy for a manufacturer to operate for 100 years. Over a century, the things needed by society change. Products do not continue to sell. Manufacturers cannot survive unless they respond to changes in society. Tokuyama's strengths lie in its history of responding to social change.

However, Tokuyama has not been able to respond to certain changes. Tokuyama is said to be a sound and diligent company in society. From a different perspective, Tokuyama appears to be a company that avoids risk and does not take on challenges. This will not create problems if things go well. However, if the Company faces difficulties, the employees involved tell themselves that they can somehow deal with any difficulties if they work together and do not assume responsibility for doing so. I think this is the type of corporate culture and the challenge that needs to be addressed.

The Company is confident about the products and technologies that it has developed over its 100-year history and has actively conducted research and development. In the past, however, the Company was not enthusiastic about bringing in outside human resources and tended to adopt a self-reliant policy. The Company is not determined enough to demonstrate greater-than-expected,

overwhelming speed or technology, maybe because of its long history. If the Company continues to take this attitude, it may be able to maintain its traditional businesses, but will not succeed in advanced materials.

#### Not Repeating the Failure of Tokuyama Malaysia

The failure at Tokuyama Malaysia is related to the Company's unique corporate culture. The direction of the business plan as a whole was wrong. The system was unclear. The person in charge was not able to correctly respond to drastic changes in the business environment. There was a discrepancy between management and frontline staff. Tokuyama Malaysia was not able to correct its direction.

Considering this failure, Tokuyama changed its management system significantly in 2017. In addition to changing from a company with a Board of Auditors to a company with an Audit and Supervisory Committee, the Company reviewed the organization of Board of Directors meetings and the methods for discussion. To exchange information in and outside the Company, a communicative system has been established enabling employees to talk directly with the president and executive officers at any time if necessary. One of the roles of external directors in this system is to take the lead in gathering negative information about possible risks and proposing agenda items related to this information. This is an important initiative that ensures that the failure in Malaysia is not repeated.

#### Expectations for Tokuyama and Recommendations

The COVID-19 that we are facing now will substantially affect the Company. The effects are not limited to numerical results. Management will be requested to make decisions more actively than ever before regarding what they expect each employee to do, how they ask employees to work and how they connect employees' work to business results. Employees are important assets that we cannot replace. Moreover, we have human resources that overcame the failure of Tokuyama Malaysia. I believe that we can overcome COVID-19.

External director Yuzo Kawamori stated: "When a drastic change occurs, change is irreversible and a new world emerges. Companies cannot survive unless they

quickly become aware of this new world. If companies can respond to the change, they will find opportunities to develop.” This is an important message. We should already

be responding to the change. Considering this, I will continue to actively help Tokuyama grow.

\* Interview held on April 7, 2020

## Corporate Governance

### Basic Stance

Tokuyama, guided by its philosophy, contributes to people's happiness and the development of society by continuing to create and provide new value using the chemical technologies developed by the entire Group. We believe that the relationships of trust and cooperation that have been built with customers, business partners, employees, local communities and other stakeholders are indispensable in continuing to create and provide new value. These relationships result in sustainable growth and an increase in corporate value over the medium to long term. We believe that corporate governance is an important management issue for achieving sustainable growth and enhancing corporate value, and we consider it necessary to continue striving to strengthen corporate governance.

Taking into consideration the introduction of the Corporate Governance Code in Japan as its basic policy, the Company places the utmost emphasis on ensuring the rights and equality of its shareholders and cooperating properly with various stakeholders while strengthening the supervisory function and securing the independence of the Board of Directors. At the same time, Tokuyama works diligently to accelerate decision making and to clarify the business execution responsibilities of its Board of Directors while ensuring appropriate disclosure and transparency and promoting constructive dialogue with its shareholders.

### Corporate Governance Structure (as of June 25, 2020)

Tokuyama introduced an executive officer system to separate the supervision and execution functions. It has

appointed three external directors as of June 2020.

In 2017, the Company transitioned from a company with a Board of Auditors to a company with an Audit and Supervisory Committee. The Audit and Supervisory Committee is comprised of four directors, including three outside committee members. They attend Board of Directors meetings and other important meetings to monitor the execution of business by executive officers.

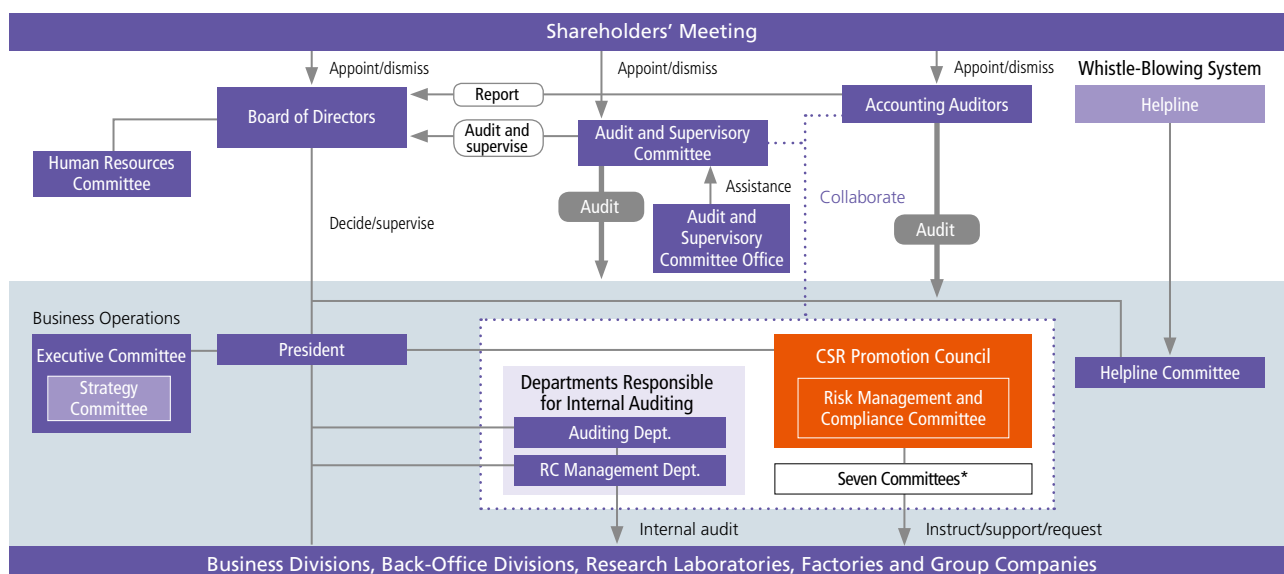
As a company with an Audit and Supervisory Committee, Tokuyama seeks to enhance corporate governance at all times by making the best of its rapid decision making as well as effective supervising/auditing functions.

### Policies and Procedures When the Board of Directors Selects/Dismisses Management Executives and Nominates Director and Auditor Candidates

To enable the direction and supervision of business execution as well as appropriate decision making with regard to the Company's business operations, which are centered on chemicals, the selection of executive officers and the nomination of internal candidates for directorships appoints people who are well-balanced in terms of their knowledge of each business segment and area as well as the experience they possess.

When nominating executive officer and director candidates (excluding directors who are Audit and Supervisory Committee members), discussions are held at a Human Resources Committee meeting in advance of the subject appearing on the agenda at a Board of Directors' meeting. The Human Resources Committee is an entity that

#### Corporate Governance Structure



\* Tokuyama operates committees focused on risk management and compliance in seven critical and specialized areas, separately from the Risk Management and Compliance Committee. The committees operate under the CSR Promotion Council, overseeing the following areas: financial reporting, antimonopoly and security trade, export trade control, information security, environmental measures, security measures and product safety and quality assurance.



## Corporate Governance

comprises representative directors and external directors. The Board of Directors makes its decisions in response to the Human Resources Committee's report. In the case of the nomination of directors who are Audit and Supervisory Committee member candidates, the Board of Directors makes its decisions after receiving the assent of the Audit and Supervisory Committee.

### Criteria for Defining the Independence of External Directors

In April 2019, the criteria for selecting external directors was revised. This enables freer choice of independent external director candidates suitable for improving the governance of the Company and enhances the independence and supervisory function of the Board.

### Support System for External Directors

Prior to each meeting of the Board of Directors, the Corporate Planning Division explains the agenda items to external directors and answers their questions. If external directors have any inquiries about management issues, industry trends, business strategies, the construction and operation of internal control systems or other issues, directors and executive officers meet with them individually to answer their questions.

When external directors take office, the Company provides opportunities to take plant tours and understand the Company, including the status of business operations and functions.

### Analysis and Evaluation of the Effectiveness of the Board of Directors

To ensure transparent and fair processes, the Company commissioned an external organization to evaluate the effectiveness of the Board of Directors.

From March to May 2020, all directors answered a questionnaire and were interviewed, and an analysis of the results was reported at a meeting of the Board of Directors held in May 2020. The answers to the questionnaire revealed that the Board of Directors is generally effective. The promotion of digital transformation and the development of a risk management system were pointed out as challenges to be addressed.

The interviews reveal that relationships of trust have been built between those supervising (external directors) and those executing business activities (management) and that the provision of adequate information to the external directors has contributed to enhancing the advisory and supervisory functions of the Board of Directors. Meanwhile, it was pointed out that the examination of medium- to long-term management policies from a broad perspective based on an objective analysis of the business environment is not adequate.

The Board of Directors will continue to increase its effectiveness by selecting agenda items at Board of Directors meetings, reinvigorating deliberation through intelligent explanations and creating meeting materials that make points clear.

#### ● External Directors

Name	Audit and Supervisory Committee Members	Independent External Directors	Reason for Selection	Attendance (FY2019)	
				Meetings of the Board of Directors	Meetings of the Audit and Supervisory Committee
Shin Kato	○	○	Given his wealth of experience and broad insight and knowledge as an attorney at law, Mr. Kato is put forward for election as an external director who is an Audit and Supervisory Committee member.	17 / 17	25 / 25
Yuzo Kawamori	○	○	The Company appoints those whom it judges, from their outstanding insight and wealth of experience in overseas business development as managers of industry-leading companies, to be suitably qualified to serve as external directors who will be members of the Company's Audit and Supervisory Committee.	13 / 13	18 / 18
Naoki Matsumoto	○	○	The Company appoints those whom it judges, from their wealth of experience and outstanding insights into finance and accounting as managers in a wide variety of businesses in the finance industry, to be suitably qualified to serve as external directors who will be members of the Company's Audit and Supervisory Committee.	12 / 13	17 / 18

\* The difference in the total number of times for both the Board of Directors and the Audit and Supervisory Committee is due to the difference in the time of inauguration.

### Executive Remuneration

Based on the executive remuneration rules and executive remuneration stock issuance rules, the remuneration of the Company's executives (excluding directors who are Audit and Supervisory Committee members) comprises fixed basic remuneration and performance-linked stock remuneration, the specific calculations of which will be made by the representative director, president and executive officer upon authorization by the Board of Directors in accordance with the following policy.

- (1) For the fixed portion, the basic remuneration is calculated by taking into consideration the previous year's consolidated performance and the achievement level of each director's business goals.
- (2) To realize the Company's Medium-Term Management

Plan, performance-linked stock remuneration has been introduced from September 2018 to clarify the link between executive remuneration and the corporate value of the Company. Consolidated operating profit and other indicators, which are the main financial targets of the Medium-Term Management Plan, have been adopted as indicators for performance-linked remuneration. Based on the achievement level for the fiscal year ending March 31, 2021, which is the final fiscal year of the target period, the system involves the issuance of stock, etc. of the Company as executive remuneration.

- (3) The appropriateness of the level of remuneration, etc. is to be confirmed based on the findings of surveys of domestic competitors and comparable companies

obtained from a remuneration research company. Remuneration for directors who are Audit and Supervisory Committee members is limited to fixed remuneration only, taking into consideration the distinction between full- and part-time work, the status of the division of audit duties, and the content and level of remuneration of directors. This is decided following discussions with directors who are Audit and Supervisory Committee members.

To achieve more transparent and objective management from the perspective of corporate governance, we have set up a Human Resources Committee, comprising a majority of external directors, who have the task of deliberating on personnel matters and remuneration concerning officers and making reports or recommendations to the Board of Directors.

The content of executives' remuneration (excluding directors who are Audit and Supervisory Committee members) is calculated in detail by the representative director, president and executive officer and discussed and determined by the Board of Directors after deliberation by the Human Resources Committee.

● Amount of Remuneration Paid to Directors and Audit and Supervisory Committee Members (For FY 2019)

Subject of Remuneration	Number of People	Remuneration Amount
Directors (Excluding external directors)	7	¥238 million
Directors who are Audit and Supervisory Committee members (Excluding external directors)	2	¥33 million
External Directors	5	¥42 million

### Policy on the Holding of Listed Shares for Purposes Other Than Pure Investment

Tokuyama holds shares of publicly listed companies on a strategic basis in accordance with the necessities of its business activities as a part of its overall management strategy. This includes the need to maintain and bolster transactions, raise funds and stably procure raw materials. As far as the strategic holding of shares in publicly listed companies is concerned, the Company will limit its holdings to the minimum level possible taking into consideration the need to ensure efficient corporate management. It sold all shares of one listed issue in 2019, resulting in a total of 24 listed issues of shareholdings as of March 31, 2020.

In addition, the Board of Directors takes steps to verify the economic rationality of holding shares in publicly listed companies by comparing capital costs that factor in associated risks with accrued benefits while confirming the propriety of its holdings based on an outlook of the future each year.

### Risk Management

Tokuyama manages risk through the Risk Management and Compliance Committee, which operates under the CSR Promotion Council. It also has expert committees focused on risk management and compliance in seven critical and specialized areas to ensure management through the deliberation of key issues. The Company has

designated a unit responsible for regulations concerning management of the risk of loss and conducts activities based on the management regulations.

It also works to mitigate compliance risk by establishing management systems for understanding important laws and regulations that are relevant to business execution and keeping track of trends in amendments to these laws and regulations. The Company also has established a business continuity plan (BCP) and other measures in order to ensure an appropriate response for the type and severity of any crisis.

### Compliance

Tokuyama understands "compliance" to have a broad meaning, including not only compliance with laws and internal rules but also behaving sensibly in a manner that conforms with corporate ethics and meets social expectations. To communicate and spread awareness of compliance throughout the Group, the Company has put together a handbook that includes the Tokuyama Group Code of Conduct. It is distributed to all Group employees.

### Promoting Information Security

In order to reinforce the security of information assets, such as client information, Tokuyama has formulated a security policy and implemented various measures, including the establishment of a computer security incident response team (CSIRT) which works to prevent incidents and to minimize damage if an incident occurs. In March 2020, it was found that at an overseas subsidiary, employees' account information was stolen and (approximately 440) spam emails were sent by an entity that was not authorized to access the system. No secondary damage has been confirmed. We will take steps to prevent a recurrence, including the thorough management of accounts and passwords, and will bolster information security.

### Business Continuity Management (BCM)

For the continuation of important operations in unforeseen circumstances, the Company has formulated a BCP and updates it, secures funding and resources to ensure business continuity, engages in business continuity management in normal times, including the taking of preventive measures, and thereby improves its ability to continue its business operations.

### Responsibility in the Value Chain

Tokuyama recognizes that the cooperation and support received from all of its trading partners play an underpinning role in the Company's business activities. We would also like to remain a good partner with the common goal of creating valuable products that enhance people's lives. To achieve this goal, we will carry out purchasing activities according to the following basic policy and CSR procurement guidelines.

[https://www.tokuyama.co.jp/eng/company/purchase\\_policy.html](https://www.tokuyama.co.jp/eng/company/purchase_policy.html)

# Management Team (as of June 24, 2020)

## Directors



### Hiroshi Yokota

Representative Director,  
President and Executive Officer

Apr. 1985 Joined the Company  
Mar. 2015 President and Executive Officer  
Jun. 2015 Representative Director,  
President and Executive Officer (To present)



### Hideki Adachi

Representative Director,  
Senior Managing Executive Officer

Apr. 1981 Joined the Company  
Apr. 2012 Executive Officer  
Apr. 2015 Managing Executive Officer  
Jun. 2015 Director, Managing Executive Officer  
Apr. 2019 Director, Senior Managing Executive Officer  
Jun. 2019 Representative Director, Senior Managing  
Executive Officer (To present)



### Hideo Sugimura

Director, Managing Executive Officer

Apr. 1984 Joined the Company  
Apr. 2015 Executive Officer  
Apr. 2017 Managing Executive Officer  
Jun. 2017 Director, Managing Executive Officer  
(To present)



### Hiroshi Nomura

Director, Managing Executive Officer

Apr. 1983 Joined the Company  
Apr. 2014 Deputy Executive Officer  
Apr. 2015 Executive Officer  
Apr. 2018 Managing Executive Officer  
Jun. 2019 Director, Managing Executive Officer  
(To present)



### Fumiaki Iwasaki

Director, Managing Executive Officer

Apr. 1986 Joined the Company  
Apr. 2017 Executive Officer  
Apr. 2020 Managing Executive Officer  
Jun. 2020 Director, Managing Executive Officer  
(To present)



### Youji Miyamoto

Director, Audit and Supervisory Committee  
Chair

Apr. 1980 Joined the Company  
Jun. 2013 Audit and Supervisory Board Member  
Jun. 2017 Director (Audit and Supervisory Committee  
Member)  
Jun. 2019 Director (Audit and Supervisory Committee  
Chair) (To present)



### Shin Kato

Director, Audit and Supervisory Committee  
Member (External Director)

Apr. 1990 Registered as Lawyer, Hiranuma Law Office  
Apr. 1995 Aoyama Central Law Office  
Sep. 2001 South Toranomon Law Office  
Jun. 2013 Audit and Supervisory Board Member of the  
Company  
Jan. 2014 Representative lawyer, Kato Law Office (To  
present)  
Jun. 2017 Director (Audit and Supervisory Committee  
Member) of the Company (To present)



### Yuzo Kawamori

Director, Audit and Supervisory Committee  
Member (External Director)

Apr. 1971 Joined Kansai Paint Co., Ltd.  
Jun. 2002 Director  
Jun. 2005 Managing Director  
Jun. 2007 Senior Managing Director  
Apr. 2010 Representative Director and President  
Apr. 2013 Representative Director  
Jun. 2013 Advisor  
Jun. 2017 Honorary Councilor (To present)  
Jun. 2019 Director (Audit and Supervisory Committee  
Member) of the Company (To present)



### Naoki Matsumoto

Director, Audit and Supervisory Committee  
Member (External Director)

Apr. 1975 Joined The Sanwa Bank, Ltd.  
Jan. 2002 Executive Officer, UFJ Bank Ltd.  
Jun. 2004 Managing Executive Officer  
Oct. 2005 Managing Executive Officer, Mitsubishi  
Tokyo UFJ Financial Group, Inc.  
Jan. 2006 Managing Executive Officer, The Bank of  
Tokyo-Mitsubishi UFJ, Ltd.  
Jun. 2007 Representative Director, Senior Executive  
Officer, JCB Co., Ltd.  
Apr. 2011 Representative Director, Vice President and  
Executive Officer  
Jun. 2012 President and Director, Toyo Carmax  
Corporation  
Jun. 2016 President and CEO, MST Insurance Service  
Co., Ltd.  
Jun. 2019 Director (Audit and Supervisory Committee  
Member) of the Company (To present)



## Executive Officers

President and Executive Officer	<b>Hiroshi Yokota</b>	
Senior Managing Executive Officer	<b>Hideki Adachi</b>	General Manager, Tokuyama Factory
Managing Executive Officer	<b>Ryo Sugiyama</b>	General Manager, Life & Amenity Business Division
	<b>Hideo Sugimura</b>	General Manager, Corporate Planning Division and Procurement & Logistics Division
	<b>Hiroshi Nomura</b>	General Manager, Specialty Products Business Division
	<b>Fumiaki Iwasaki</b>	General Manager, Research & Development Division and Tsukuba Research Laboratory
Executive Officer	<b>Kazuo Matsuya</b>	General Manager, Corporate Social Responsibility Division
	<b>Takahide Taniguchi</b>	General Manager, Cement Business Division
	<b>Yutaka Tarutani</b>	General Manager, Chemicals Business Division
	<b>Hiroshi Fujimoto</b>	General Manager, General Affairs & Human Resources Division
	<b>Naoki Tamura</b>	Deputy General Manager, Life & Amenity Business Division

## Reason for Selection of Directors

Name	Reason for Selection
Hiroshi Yokota	Mr. Hiroshi Yokota is responsible for the management of the Company as Representative Director and President. He has experience in sales, personnel and labor issues, and information systems operations, as well as in serving as General Manager of the Specialty Products Business Division. Based on this abundant operational experience and his track record in bringing to a close the rebuilding of the deteriorated financial base, actively reforming the Tokuyama Group's organizational culture and structure and rebuilding the Group's business strategies to achieve growth, we have determined that he is the right person to play a part in increasing the corporate value of the Tokuyama Group. Therefore, he has been reappointed as a Director.
Hideki Adachi	Mr. Hideki Adachi is responsible for the management of the Company as Representative Director. He has operational experience at the Cement Manufacturing Department, etc., and has been serving as General Manager of the Tokuyama Factory, our main production base, since 2013. Based on his abundant operational experience to date in the areas of manufacturing and production technology, and track record of increasing the competitiveness of the entire plant as well as promoting safety and disaster management, we have determined that he is the right person to play a part in increasing the corporate value of the Tokuyama Group. Therefore, he has been reappointed as a Director.
Hideo Sugimura	Mr. Hideo Sugimura is responsible for the management of the Company as a Director. He has worked to promote an information system, managed an overseas subsidiary and reconstructed a domestic subsidiary. Based on this abundant operational experience and his track record in promoting growth as a general manager with responsibility for corporate business management in his capacity as General Manager of the Corporate Planning Division from 2015 and as General Manager of the Corporate Planning Division from 2019, we have determined that he is the right person to play a part in increasing the corporate value of the Tokuyama Group. Therefore, he has been reappointed as a Director.
Hiroshi Nomura	Mr. Hiroshi Nomura is responsible for the management of the Company as a Director. He previously gained operational experience in the areas of polysilicon manufacturing, specialty products planning and management of overseas subsidiaries, and has been involved in running the specialty products business as General Manager of the Specialty Products Business Division since 2015. Based on his wide-ranging operational experience to date and his track record of furthering the business, including undertaking overseas business development, we have determined that he is the right person to play a part in increasing the corporate value of the Tokuyama Group. Therefore, he has been reappointed as a Director.
Fumiaki Iwasaki	Mr. Fumiaki Iwasaki provides overall supervision for the field of research and development at the Company and for the development of its pharmaceutical ingredients business as Managing Executive Officer and General Manager of the Research & Development Division and of the Tsukuba Research Laboratory. Based on the wealth of knowledge he has gained from his experience to date in research and development and in manufacturing technology, and his track record of furthering the business, we have determined that he is the right person to play a part in increasing the corporate value of the Tokuyama Group. Therefore, he has been appointed as a Director for the first time.
Youji Miyamoto	Mr. Youji Miyamoto is supervising the management properly as a Director who is an Audit and Supervisory Committee Member. He has high degree of expertise in finance and accounting gained through his years of accounting operation at the Company, and served as an Audit and Supervisory Board Member from 2013 to 2017, when the Company became a company with an Audit and Supervisory Committee. For this reason, he has been appointed as a Director who is an Audit and Supervisory Committee Member.
Shin Kato	Mr. Shin Kato has actively expressed opinions and given advice at meetings of the Board of Directors and the Audit and Supervisory Committee because he has a wealth of experience and broad and deep insight in addition to his technical perceptive as an attorney at law. For this reason, he has been appointed as an External Director who is an Audit and Supervisory Committee Member.
Yuzo Kawamori	Mr. Yuzo Kawamori has abundant experience in overseas businesses and as a corporate manager. For this reason, he has been appointed as an External Director who is an Audit and Supervisory Committee Member as we expect him to offer appropriate supervision on the management and provide invaluable advice.
Naoki Matsumoto	Mr. Naoki Matsumoto has abundant experience as a corporate manager in the financial industry. For this reason, he was appointed as an External Director who is an Audit and Supervisory Committee Member as we expect him to offer appropriate supervision on the management and provide invaluable advice.

# Financial Highlights

		Fiscal 2010	Fiscal 2011	Fiscal 2012
● Fiscal year				
Net sales	(Millions of yen)	289,786	282,381	258,632
Operating profit	(Millions of yen)	19,313	12,721	3,993
Ordinary profit	(Millions of yen)	17,341	11,524	3,232
Profit (loss) attributable to owners of parent	(Millions of yen)	9,765	9,351	(37,916)
Cash flows from operating activities	(Millions of yen)	37,043	27,060	17,071
Cash flows from investing activities	(Millions of yen)	(88,508)	(57,666)	(60,673)
Cash flows from financing activities	(Millions of yen)	23,994	20,791	36,465
Capital expenditures	(Millions of yen)	35,807	77,602	97,549
Depreciation and amortization	(Millions of yen)	31,476	28,492	23,242
R&D expenses	(Millions of yen)	11,469	11,704	10,076
● At year end				
Total assets	(Millions of yen)	474,708	501,181	518,251
Net assets	(Millions of yen)	247,656	255,460	223,871
Interest-bearing debt	(Millions of yen)	126,219	148,667	187,706
● Per share information				
Basic earnings per share	(Yen)	140.32	134.37	(544.88)
Net assets per share	(Yen)	3,465.91	3,581.95	3,126.42
Cash dividends per share	(Yen)	6.00	6.00	3.00
● Major indicators				
Shareholders' equity ratio	(%)	50.8	49.7	42.0
Return on equity (ROE)	(%)	4.1	3.8	(16.2)
D/E ratio		0.52	0.60	0.86
Price earnings ratio (PER)		15.82	9.56	—

(Notes) 1. Net sales do not include consumption tax, etc.

2. Depreciation and amortization includes amortization of long-term prepaid expenses.

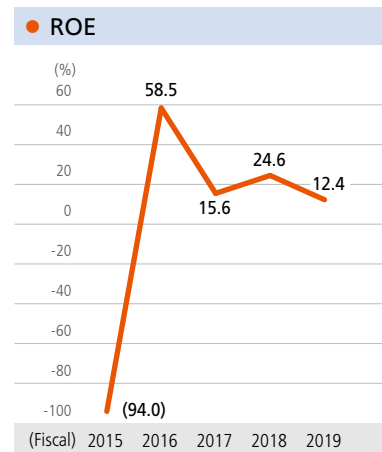
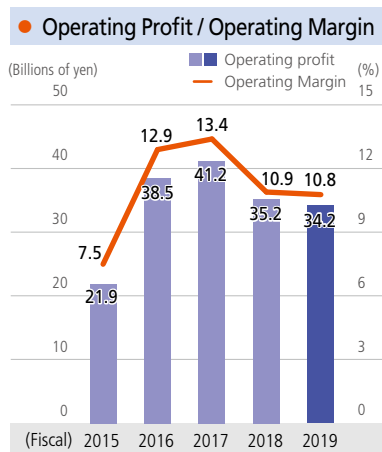
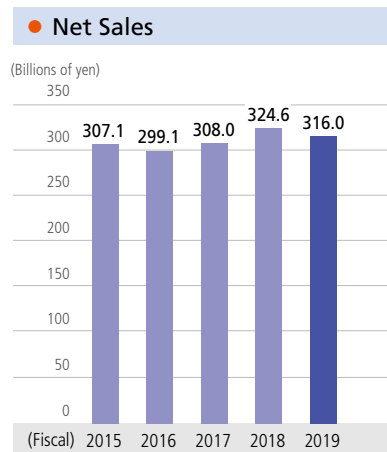
3. The Company consolidated its common shares at a ratio of one share for each five shares effective as of October 1, 2017.

On this basis, basic earnings (loss) per share and net assets per share are calculated on the assumption that the consolidation of shares was conducted as of the beginning fiscal year ended March 31, 2011.

4. The Company's shares held in the Director Remuneration BIP (Board Incentive Plan) Trust are included in the treasury shares deducted from the number of shares issued and outstanding as of the end of the period used to calculate net assets per share, as well as in the treasury shares deducted in the calculation of the average number of shares for the period used in the calculation of earnings per share.

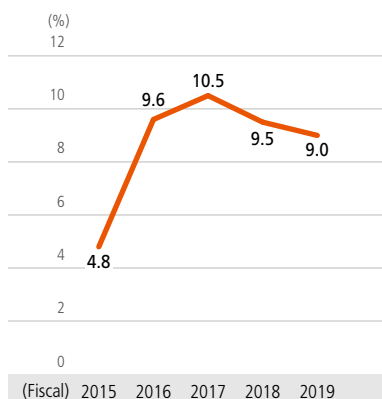
5. The price earnings ratios in fiscal 2012, fiscal 2014 and fiscal 2015 are not stated because a loss was posted in those fiscal periods.

6. Effective from the fiscal year ended March 31, 2019, Tokuyama has applied the Partial Amendments to Accounting Standard for Tax Effect Accounting (hereinafter "Partial Amendments to Tax Effect Accounting Standard," Accounting Standards Board of Japan (ASBJ) Statement No. 28, issued on February 16, 2018).



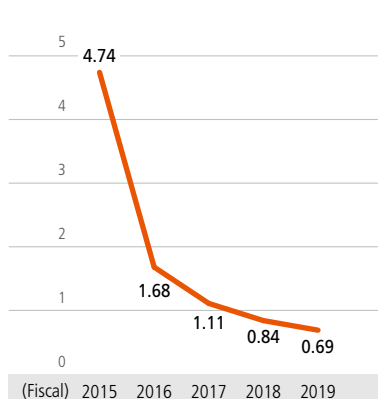
	Fiscal 2013	Fiscal 2014	Fiscal 2015	Fiscal 2016	Fiscal 2017	Fiscal 2018	Fiscal 2019
	287,330	302,085	307,115	299,106	308,061	324,661	<b>316,096</b>
	17,960	18,705	21,936	38,533	41,268	35,262	<b>34,281</b>
	14,965	12,920	17,725	33,998	36,196	33,400	<b>32,837</b>
	10,218	(65,349)	(100,563)	52,165	19,698	34,279	<b>19,937</b>
	34,105	30,772	30,098	20,012	61,885	38,531	<b>52,364</b>
	(64,402)	(25,519)	13,400	(10,089)	(12,665)	(16,174)	<b>(20,548)</b>
	45,939	40,502	(37,689)	(11,911)	(101,209)	(21,104)	<b>(18,348)</b>
	61,051	25,345	13,945	17,360	15,941	18,581	<b>23,768</b>
	16,770	18,845	20,084	14,215	13,985	15,093	<b>16,122</b>
	8,709	10,156	8,522	7,508	7,903	8,052	<b>9,193</b>
	576,315	554,527	401,342	424,433	361,949	379,630	<b>383,447</b>
	236,453	169,445	60,205	135,976	136,591	163,525	<b>180,429</b>
	240,767	283,196	244,152	213,955	139,917	128,966	<b>116,344</b>
	146.86	(939.26)	(1,445.49)	738.92	259.81	493.26	<b>287.05</b>
	3,300.88	2,336.78	739.90	1,527.42	1,806.56	2,199.83	<b>2,431.21</b>
	6.00	—	—	—	30.00	50.00	<b>70.00</b>
	39.9	29.3	12.8	29.9	34.7	40.2	<b>44.0</b>
	4.6	(33.3)	(94.0)	58.5	15.6	24.6	<b>12.4</b>
	1.05	1.74	4.74	1.68	1.11	0.84	<b>0.69</b>
	11.51	—	—	3.64	13.03	5.30	<b>7.29</b>

#### ● ROA

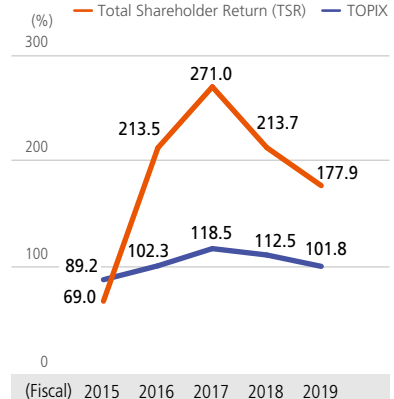


(Note) ROA = Operating profit / Total assets

#### ● D/E Ratio



#### ● Total Shareholder Return (TSR)/TOPIX





# Business Sites and Group Companies (as of March 31, 2020)

## Business Sites

■ Business Sites in Japan	
Tokyo Head Office	FRONT PLACE AKIHABARA 7-5 Sotokanda 1-chome, Chiyoda-ku, Tokyo 101-8618, Japan TEL: +81-3-5207-2500 FAX: +81-3-5207-2580
Osaka Office	Nakanoshima Central Tower 2-7 Nakanoshima 2-chome, Kita-ku, Osaka-shi, Osaka 530-0005, Japan TEL: +81-6-6201-7200 FAX: +81-6-6201-7220
Hiroshima Branch	Hiroshima Nissay Green Bldg. 8-18 Teppocho, Naka-ku, Hiroshima-shi, Hiroshima 730-0017, Japan TEL: +81-82-221-9431 FAX: +81-82-223-2347
Takamatsu Branch	New Annex, Takamatsu Dai-ichi Seimei Building 2-1-1 Kotobuki-cho, Takamatsu-shi, Kagawa 760-0023, Japan TEL: +81-87-822-0063 FAX: +81-87-822-3627
Fukuoka Branch	Kyowa Building 8-38 Tenjin 2-chome, Chuo-ku, Fukuoka-shi, Fukuoka 810-0001, Japan TEL: +81-92-751-6566 FAX: +81-92-711-1089
Sendai Branch	Dai 6 Doya Building 17-20 Kamisugi 1-chome, Aoba-ku, Sendai-shi, Miyagi 980-0011, Japan TEL: +81-22-262-2431 FAX: +81-22-262-4087
Shunan Sales Branch	1-1 Mikage-cho, Shunan-shi, Yamaguchi 745-8648, Japan TEL: +81-834-34-2009 FAX: +81-834-33-3580
Tokuyama Factory	1-1 Mikage-cho, Shunan-shi, Yamaguchi 745-8648, Japan TEL: +81-834-34-2000 FAX: +81-834-33-3790
Kashima Factory	26 Sunayama, Kamisu-shi, Ibaraki 314-0255, Japan TEL: +81-479-46-4700 FAX: +81-479-46-1933
Tsukuba Research Laboratory	40 Wadai, Tsukuba-shi, Ibaraki 300-4247, Japan TEL: +81-29-864-6000 FAX: +81-29-864-6050
■ Global Network	
[U.S.A.] Tokuyama America Inc.	3655 Torrance Blvd., 3rd Floor, Torrance, CA 90503, U.S.A TEL: +1-424-247-1142 FAX: +1-424-247-1143
[Germany] Tokuyama Europe GmbH	Am Gierath 20A 40885 Ratingen, Germany TEL: +49-2102-56-50-66-0 FAX: +49-2102-56-50-66-90
[Singapore] Tokuyama Asia Pacific Pte. Ltd.	61 Robinson Road, #14-02 Robinson Centre, Singapore 068893 TEL: +65-6533-5258 FAX: +65-6533-5256
[China] Tokuyama (Shanghai) Co., Ltd. Tokuyama Trading (Shanghai) Co., Ltd.	1003, Shanghai International Group Mansion, 511 WeiHai Road, Shanghai, China 200041 TEL: +86-21-6218-1177 FAX: +86-21-5382-2894
[Korea] Tokuyama Korea Co., Ltd.	#415, Korea Air City Terminal Bldg. 22, Teheran-ro 87-gil, Gangnam-gu, Seoul 06164, Korea TEL: +82-2-517-3851 FAX: +82-2-517-3856

## Group Companies

Company	Capital (millions of yen)	Scope	Ownership (%)
<b>Chemicals</b>			
Tokuyama Soda Trading Co., Ltd.	10	Sale of soda ash and calcium chloride	100.0
Shin Dai-ichi Vinyl Corporation (Note 1)	2,000	Production and sale of polyvinyl chloride	85.5
Sun Arrow Kasei Co., Ltd.	98	Production and sale of polyvinyl chloride compounds	100.0
Category also includes another 4 companies			
<b>Specialty Products</b>			
Tokuyama Chemicals (Zhejiang) Co., Ltd. (Note 1)	CNY 433 million	Production and sale of fumed silica	100.0
Tokuyama-Dowa Power Materials Co., Ltd.	250	Production and sale of aluminum nitride	65.0
Tokuyama Electronic Chemicals Pte. Ltd.	SGD 11,000 thousand	Production and sale of high-purity chemicals for electronics manufacturing	100.0
Taiwan Tokuyama Corporation	TWD 200 million	Production and sale of high-purity chemicals for electronics manufacturing	100.0
Hantok Chemicals Co., Ltd.*	KRW 4,500 million	Production and sale of photoresist developer	50.0
Category also includes another 1 company			

Company	Capital (millions of yen)	Scope	Ownership (%)
<b>Cement</b>			
Hiroshima Tokuyama Ready Mixed Concrete Co., Ltd. (Note 2)	100	Production and sale of ready-mixed concrete	67.2 (17.2)
Tokuyama Nouvelle Calédonie S.A.	XPF 210 million	Production and sale of cement	75.6
Tokyo Tokuyama Concrete Co., Ltd.	80	Production and sale of ready-mixed concrete and concrete products	99.9
Seibu Tokuyama Ready Mixed Concrete Co., Ltd.	100	Production and sale of ready-mixed concrete	100.0
Kawasaki Tokuyama Ready Mixed Concrete Co., Ltd. (Note 2)	40	Production and sale of ready-mixed concrete	100.0 (100.0)
Chugoku Ready Mixed Concrete Co., Ltd.	80	Production and sale of ready-mixed concrete	52.3
Tokuyama Tsusho Trading Co., Ltd.	95	Sale of cement and ready-mixed concrete	100.0
Kansai Tokuyama Trading Co., Ltd.	80	Sale of cement and ready-mixed concrete	100.0
Tokushou Co., Ltd.	40	Sale of cement and ready-mixed concrete	100.0
Tokushin Co., Ltd.	40	Sale of cement and ready-mixed concrete	100.0
Tokuyama Mtech Corporation	50	Processing and sale of building materials	100.0
Yamaguchi Eco-tech Corporation*	90	Recycling business of incinerated ash of wastes	50.0
Category also includes another 24 companies			

<b>Life &amp; Amenity</b>			
Shanghai Tokuyama Plastics Co., Ltd. (Note 2)	CNY 85 million	Production and sale of microporous film	100.0
Sun•Tox Co., Ltd.	300	Production and sale of polyolefin films	80.0
A&T Corporation (Notes 3, 4)	577	Production and sale of diagnostic reagents, analyzers and systems	40.2
Tokuyama Dental Corporation	100	Production and sale of dental and medical materials	100.0
Tokuyama Dental Italy S.r.l. (Note 2)	EUR 99 thousand	Sale of dental and medical materials	51.0 (51.0)
ASTOM Corporation	450	Production, sale and maintenance of ion-exchange membranes and related equipment	55.0
Excel Shanon Corporation	495	Production and sale of plastic window sashes	100.0
Tohoku Shanon Co., Ltd. (Note 2)	300	Production and sale of plastic window sashes	72.0 (72.0)
Tomitec Co., Ltd.	100	Production and sale of plastic molded products	60.0
Figaro Engineering Inc. *	99	Production and sale of sensor devices	33.4
Category also includes another 5 companies			

<b>Others</b>			
Tokuyama Asia Pacific Pte. Ltd.	SGD 800 thousand	Sale of Tokuyama's products	100.0
Tokuyama Trading (Shanghai) Co., Ltd.	CNY 5 million	Sale of Tokuyama's products	100.0
Tokuyama Korea Co., Ltd.	KRW 500 million	Sale of Tokuyama's products	100.0
Tokuyama (Shanghai) Co., Ltd.	CNY 12 million	Management company to provide services for other group companies in China	100.0
Shunan System Sangyo Co., Ltd.	100	Real estate, civil engineering, construction	100.0
TOKUYAMA KAIRIKU UNSO K.K.	63	Transportation and warehousing	100.0
Kyoei Sekiyu Corporation (Note 2)	20	Sale of petroleum products	100.0 (100.0)
Tokuyama Information Service Corporation	20	Information processing services	100.0
Shunan Bulk Terminal Co., Ltd. (Note 2)	150	Warehouse operations for bulk cargoes of coal, etc.	83.3 (11.1)
CoorsTek Tokuyama Corporation*	100	Production and sale of ceramics and electrochemical products	30.0
Tokuyama Polypropylene Co., Ltd. *	100	Production and sale of polypropylene	50.0
Nishinihon Resicoat Co., Ltd. *	50	Production of metal parts and anti-rust surface coating materials	50.0
Category also includes another 10 companies			

\*Equity method affiliates

(Notes) 1. The company is a specified subsidiary.

2. The percentage of voting rights held by the Company in parentheses includes indirect holdings.

3. The company submits annual securities reports.

4. Although the Company's holdings are 50% or less, the company is a subsidiary because the Company effectively controls it.

# Corporate Data (as of March 31, 2020)

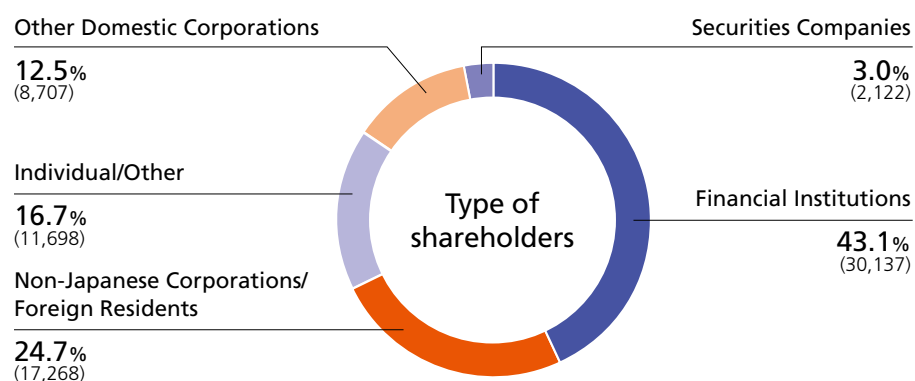
## Corporate Data

Corporate name:	Tokuyama Corporation
Established	February 16, 1918
Location	<p>Tokyo Head Office  FRONT PLACE AKIHABARA, 7-5, Sotokanda 1-chome, Chiyoda-ku, Tokyo 101-8618, Japan  Tel: +81-3-5207-2500 Fax: +81-3-5207-2580</p> <p>Tokuyama Factory  1-1, Mikage-cho, Shunan-shi, Yamaguchi 745-8648, Japan (Registered address)  Tel: +81-834-34-2000 Fax: +81-834-33-3790</p> <p>Other Facilities in Japan  Kashima Factory, Tsukuba Research Laboratory, Osaka Office, Hiroshima Branch,  Takamatsu Branch, Fukuoka Branch, Sendai Branch, Shunan Sales Branch</p>
Capital	¥10,000 million
Number of employees	5,679 (consolidated basis; 540 working overseas); 2,063 (non-consolidated basis)

## Stock Information

Total number of shares authorized to be issued	Common shares: 200,000,000 shares
Number of shares issued	Common shares: 69,934,375 shares (Treasury shares: 384,146 shares)
Number of shareholders	19,334
Fiscal year	From April 1 to March 31
General shareholders' meeting	June
Stock listing	Tokyo Stock Exchange
Number of shares per unit	100 shares
Securities code	4043
Shareholder registry administrator	Mitsubishi UFJ Trust and Banking Corporation

## Composition of Shareholders (Thousands of shares)





## Major Shareholders

Name	Number of Shares Held (Thousands)	Percentage of Shares Held (%)
The Master Trust Bank of Japan, Ltd. (trust account)	8,048	11.57
Japan Trustee Services Bank, Ltd. (trust account)	6,625	9.53
Nippon Life Insurance Company	2,174	3.13
The Yamaguchi Bank, Ltd.	1,649	2.37
Meiji Yasuda Life Insurance Company	1,488	2.14
Sojitz Corporation	1,296	1.86
JP MORGAN CHASE BANK 385151	1,223	1.76
Sumitomo Metal Mining Co., Ltd.	1,180	1.70
Japan Trustee Services Bank, Ltd. (trust account 5)	1,148	1.65
Tokio Marine & Nichido Fire Insurance Co., Ltd.	1,104	1.59

Note: The percentage of shares held is calculated after deducting the shares held by the Company as treasury share (384,146 shares).

## Website

For detailed information about the Company, please visit the Company's website.

Corporate information: <https://www.tokuyama.co.jp/eng/>



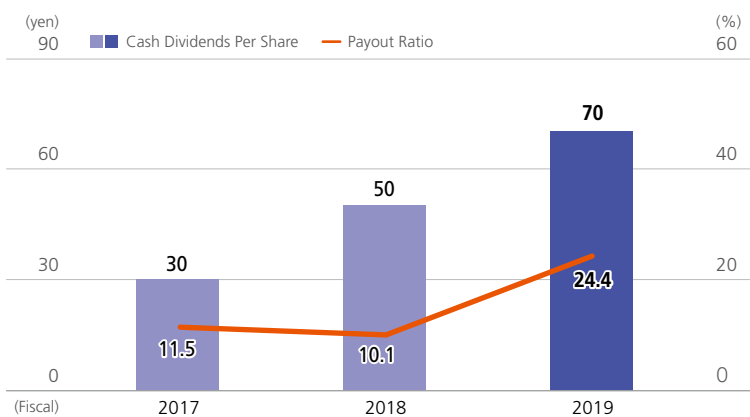
Shareholder and investor information: <https://www.tokuyama.co.jp/eng/ir/>



## Dividend Policy

Dividends will be paid to the shareholders stated in the final version of the register of shareholders on March 31 and September 30. As far as the distribution of profits is concerned, Tokuyama's basic policy is to ensure the continuous and stable payment of dividends to its shareholders. In carrying out this policy, the Company takes into consideration performance trends and the roadmap established under its Medium-Term Management Plan.

## Dividends / Payout Ratio



\*1 A 1-for-5 reverse split of the common share was conducted on October 1, 2017.

\*2 The year-end dividend per share for fiscal 2017 included a commemorative dividend of ¥10 to celebrate the Company's 100th anniversary.



# Financial Section

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# Financial Review

## Operating Environment

Against the backdrop of trade friction between the United States and China, which put the brakes on trade and investment activities, the pace of global economic growth declined in fiscal 2019 (April 1, 2019 to March 31, 2020) due to increased uncertainty over the future. From the beginning of 2020, the Japanese economy was affected by the spread of COVID-19 and subsequently experienced a major downturn due to a decline in exports and drop in consumer spending.

## Net Sales and Operating Profit

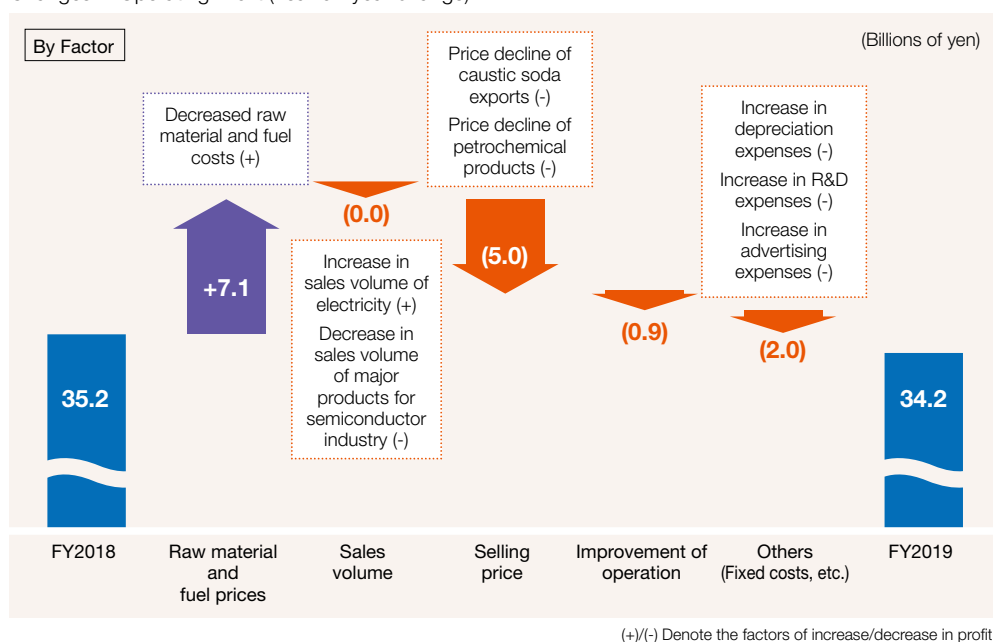
Even though the impact of the spread of COVID-19 on the Group was minimal, consolidated net sales decreased 2.6%, or ¥8,564 million compared with the previous fiscal year, to ¥316,096 million due mainly to weak sales of major products.

Cost of sales decreased 4.1%, or ¥9,218 million compared the previous fiscal year, to ¥217,446 million. This decrease largely reflected the downswing in raw material and fuel costs as a result of the decrease in domestic naphtha and coal prices. SG&A expenses increased 2.6%, or ¥1,636 million compared with the previous fiscal year, to ¥64,369 million. In addition to the increase in advertising expenses associated with the release of new products to the market, this increase largely reflected R&D expenses of thermal management materials.

As a result of the above, operating profit decreased 2.8%, or ¥981 million compared with the previous fiscal year, to ¥34,281 million.

Net sales	Operating profit
¥324.6 billion	¥35.2 billion
▼	▼
¥316.0 billion	¥34.2 billion
(Year-on-year change minus ¥8.5 billion)	(Year-on-year change minus ¥0.9 billion)

#### Changes in Operating Profit (Year-on-year change)



## Financial Position

Net assets at the end of fiscal 2019 totaled ¥180,429 million, an increase of ¥16,904 million compared with those as of March 31, 2019. The shareholders' equity ratio was 44.0% (40.2% at the end of the previous fiscal year), and the D/E ratio improved by 0.16 from the end of the previous fiscal year to 0.69.

The Group is endeavoring to acquire a "single A" rating from relevant agencies by the end of the Medium-Term Management Plan. Under this policy, the Group acquired a "single A-" rating from relevant agencies on July 19, 2019. The Group will continue to improve its financial position.

D/E ratio	Rating
0.84 ▶ 0.69 (-0.16)	BBB+ ▶ A-

## Cash Flows

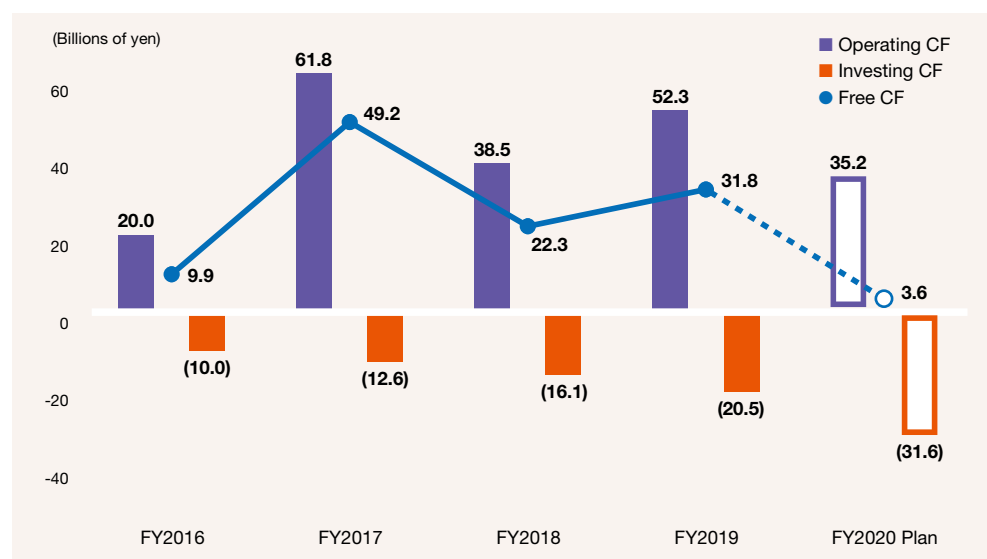
Net cash provided by operating activities totaled ¥52,364 million, an increase ¥13,833 million compared with the previous fiscal year. Principal items included profit before income taxes of ¥27,917 million and depreciation and amortization of ¥16,122 million.

Net cash used in investing activities totaled ¥20,548 million, an increase of ¥4,374 million compared with the previous fiscal year. Major contributory factors were payments for purchases of property, plant and equipment of ¥19,706 million.

Net cash used in financing activities amounted to ¥18,348 million, a decrease of ¥2,756 million compared with the previous fiscal year. This was primarily attributed to an outflow due to repayments of long-term borrowings of ¥12,739 million.

In fiscal 2020, the Company expects that net cash used in investing activities will increase as a result of an increase in investments in growth.

Cash Flow Plan



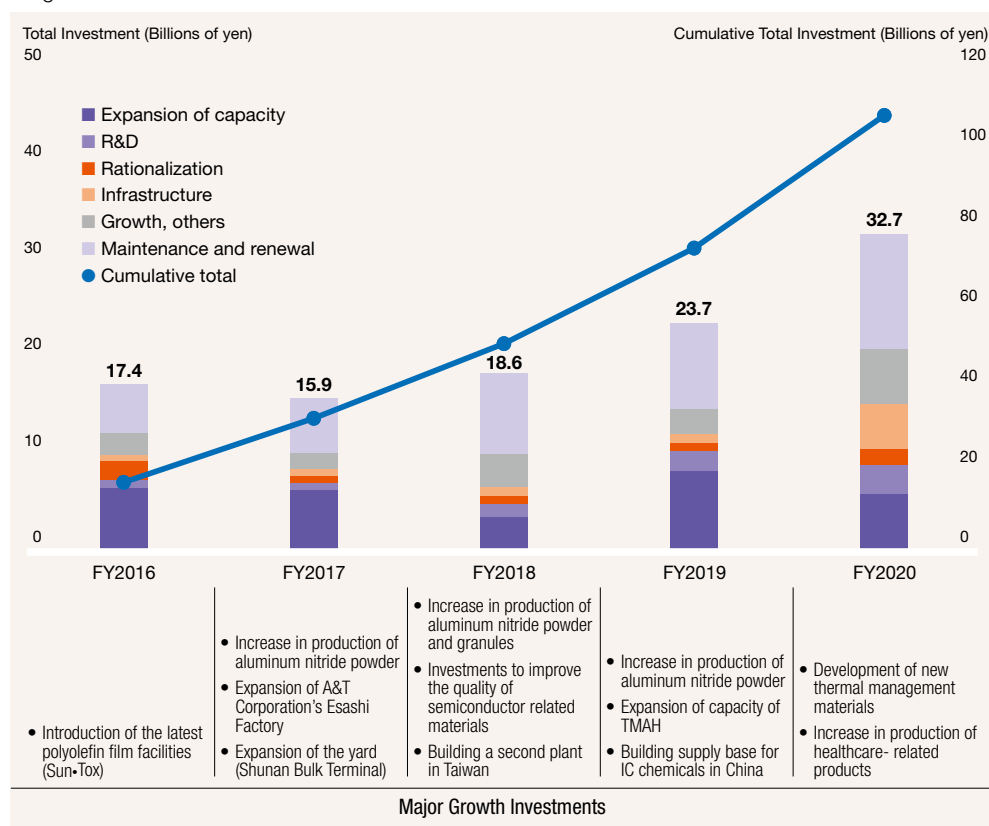


## Capital Expenditures, Depreciation and Amortization and R&D Expenses

In fiscal 2020, we plan capital expenditures of ¥32.7 billion. Depreciation and amortization is planned at ¥18.4 billion, which reflects increased investment over the past several years.

Although R&D expenses decreased briefly when we streamlined our development themes, we plan R&D expenses of ¥11.3 billion because we will accelerate R&D that meets customer needs such as in the Specialty Products and Life & Amenity segments.

### Progress in Investment Plan



# Consolidated Balance Sheets

Tokuyama Corporation and Consolidated Subsidiaries  
Years ended March 31, 2020 and 2019

	Millions of yen	
	2020	2019
<b>Assets:</b>		
<b>Current assets:</b>		
Cash and deposits	81,524	68,613
Notes and accounts receivable - trade (Note 8)	72,929	80,358
Lease receivables	34	30
Merchandise and finished goods	18,506	16,458
Work in process	10,051	9,554
Raw materials and supplies	16,088	17,462
Other	4,823	10,554
Allowance for doubtful accounts	(108)	(94)
<b>Total current assets</b>	<b>203,849</b>	<b>202,936</b>
<b>Non-current assets:</b>		
<b>Property, plant and equipment:</b>		
Buildings and structures (Notes 2, 3)	108,636	106,214
Accumulated depreciation	(78,109)	(76,233)
Buildings and structures, net	30,526	29,981
Machinery, equipment and vehicles (Notes 2, 3)	465,761	459,535
Accumulated depreciation	(420,631)	(414,813)
Machinery, equipment and vehicles, net	45,129	44,721
Tools, furniture and fixtures (Note 3)	22,488	22,106
Accumulated depreciation	(20,024)	(19,905)
Tools, furniture and fixtures, net	2,463	2,201
Land (Note 2)	33,363	32,296
Leased assets	5,011	4,548
Accumulated depreciation	(2,370)	(2,237)
Leased assets, net	2,641	2,311
Construction in progress	9,067	4,592
<b>Total property, plant and equipment</b>	<b>123,192</b>	<b>116,104</b>
<b>Intangible assets:</b>		
Goodwill	3	208
Leased assets	59	71
Other (Note 3)	1,594	1,693
<b>Total intangible assets</b>	<b>1,657</b>	<b>1,973</b>
<b>Investments and other assets:</b>		
Investment securities (Notes 1, 2)	19,385	21,718
Long-term loans receivable	2,302	2,444
Deferred tax assets	19,164	21,091
Retirement benefit asset	9,569	9,796
Other	4,382	3,621
Allowance for doubtful accounts	(56)	(57)
<b>Total investments and other assets</b>	<b>54,747</b>	<b>58,614</b>
<b>Total non-current assets</b>	<b>179,597</b>	<b>176,693</b>
<b>Total assets</b>	<b>383,447</b>	<b>379,630</b>

See notes to consolidated financial statements.

# Consolidated Balance Sheets

Tokuyama Corporation and Consolidated Subsidiaries  
Years ended March 31, 2020 and 2019

	Millions of yen	
	2020	2019
<b>Liabilities:</b>		
<b>Current liabilities:</b>		
Notes and accounts payable - trade	42,795	47,268
Short-term borrowings (Note 2)	3,082	4,361
Current portion of long-term borrowings (Note 2)	16,106	12,667
Lease obligations	870	758
Income taxes payable	2,896	3,816
Provision for bonuses	3,175	2,664
Provision for repairs	5,159	3,569
Provision for decommissioning and removal	439	—
Provision for product warranties	84	137
Provision for loss on compensation for damage	84	91
Provision for restructuring	—	233
Other (Note 2)	20,545	17,680
<b>Total current liabilities</b>	<b>95,241</b>	<b>93,248</b>
<b>Non-current liabilities:</b>		
Long-term borrowings (Note 2)	94,255	109,411
Lease obligations	2,028	1,767
Deferred tax liabilities	204	220
Provision for retirement benefits for directors (and other officers)	239	224
Provision for share-based remuneration	86	48
Provision for repairs	944	1,546
Provision for decommissioning and removal	529	—
Allowance for loss on compensation for building materials	158	260
Provision for environmental measures	196	222
Retirement benefit liability	2,277	2,149
Asset retirement obligations	6	6
Other	6,848	6,999
<b>Total non-current liabilities</b>	<b>107,775</b>	<b>122,856</b>
<b>Total liabilities</b>	<b>203,017</b>	<b>216,104</b>
<b>Net assets:</b>		
<b>Shareholders' equity:</b>		
Share capital		
Authorized: 200,000,000 shares		
Issued: 69,934,375 shares	10,000	10,000
Capital surplus	20,018	20,018
Retained earnings	137,665	121,901
Treasury shares		
2019: 482,765 shares		
2020: 478,862 shares	(1,809)	(1,823)
<b>Total shareholders' equity</b>	<b>165,874</b>	<b>150,095</b>
<b>Accumulated other comprehensive income:</b>		
Valuation difference on available-for-sale securities	332	(1,566)
Deferred gains or losses on hedges	(35)	(61)
Foreign currency translation adjustment	703	1,672
Remeasurements of defined benefit plans	1,986	2,640
<b>Total accumulated other comprehensive income</b>	<b>2,986</b>	<b>2,685</b>
<b>Non-controlling interests</b>	<b>11,568</b>	<b>10,743</b>
<b>Total net assets</b>	<b>180,429</b>	<b>163,525</b>
<b>Total liabilities and net assets</b>	<b>383,447</b>	<b>379,630</b>

See notes to consolidated financial statements.

# Consolidated Statements of Income

Tokuyama Corporation and Consolidated Subsidiaries  
Years ended March 31, 2020 and 2019

	Millions of yen	
	2020	2019
Net sales	316,096	324,661
Cost of sales (Notes 1, 4)	217,446	226,664
Gross profit	98,650	97,996
<b>Selling, general and administrative expenses:</b>		
Selling expenses (Note 2)	42,265	41,524
General and administrative expenses (Notes 3, 4)	22,104	21,208
Total selling, general and administrative expenses	64,369	62,733
Operating profit	34,281	35,262
<b>Non-operating income:</b>		
Interest income	145	123
Dividend income	352	390
Share of profit of entities accounted for using equity method	756	921
Outsourcing service income	650	716
Rental income from non-current assets	531	649
Other	1,669	2,000
Total non-operating income	4,105	4,802
<b>Non-operating expenses:</b>		
Interest expenses	1,689	2,453
Provision for decommissioning and removals	985	—
Fiduciary obligation expenses	676	685
Cost of loans payable	—	884
Other	2,198	2,640
Total non-operating expenses	5,549	6,664
Ordinary profit	32,837	33,400
<b>Extraordinary income:</b>		
Gain on sales of non-current assets (Note 5)	23	47
Gain on bargain purchase	157	964
Gain on sales of investment securities	8	1
Subsidy income	144	133
Gain on insurance claims	470	169
Gain on step acquisitions	56	—
Compensation for damage income	—	6,006
Other	—	27
Total extraordinary income	861	7,351
<b>Extraordinary losses:</b>		
Loss on sales of non-current assets (Note 6)	19	10
Impairment loss (Note 7)	34	363
Loss on disaster	82	30
Loss on tax purpose reduction entry of non-current assets	191	100
Loss on disposal of non-current assets	685	807
Loss on sales of investment securities	1	—
Loss on valuation of investment securities	4,531	—
Compensation for damage	—	851
Other	234	569
Total extraordinary losses	5,781	2,733
Profit before income taxes	27,917	38,017
Income taxes		
Current	4,898	5,074
Deferred	2,026	(2,085)
Total income taxes	6,924	2,988
Profit	20,992	35,029
Profit attributable to non-controlling interests	1,055	750
Profit attributable to owners of parent	19,937	34,279
	Yen	
<b>Per share amounts:</b>	2020	2019
Net profit	287.05	493.26
Cash dividends	70.00	50.00

See notes to consolidated financial statements.



# Consolidated Statements of Comprehensive Income

Tokuyama Corporation and Consolidated Subsidiaries  
Years ended March 31, 2020 and 2019

	Millions of yen	
	2020	2019
<b>Profit</b>	<b>20,992</b>	<b>35,029</b>
<b>Other comprehensive income:</b>		
Valuation difference on available-for-sale securities	1,921	(2,919)
Deferred gains or losses on hedges	25	90
Foreign currency translation adjustment	(891)	(304)
Remeasurements of defined benefit plans, net of tax	(654)	(434)
Share of other comprehensive income of entities accounted for using equity method	(100)	(139)
<b>Total other comprehensive income (Note 1)</b>	<b>300</b>	<b>(3,707)</b>
<b>Total comprehensive income</b>	<b>21,293</b>	<b>31,321</b>
Attributable to:		
Owners of parent	20,237	30,596
Non-controlling interests	1,055	725

See notes to consolidated financial statements.

# Consolidated Statements of Changes in Net Assets

Tokuyama Corporation and Consolidated Subsidiaries  
Years ended March 31, 2020 and 2019

[2020]

	Millions of yen											
	Shareholders' equity					Accumulated other comprehensive income						
	Share capital	Capital surplus	Retained earnings	Treasury shares	Total	Valuation difference on available-for-sale securities	Deferred gains or losses on hedges	Foreign currency translation adjustment	Remeasurements of defined benefit plans	Total	Non-controlling interests	Total net assets
Balance at beginning of year	10,000	20,018	121,901	(1,823)	150,095	(1,566)	(61)	1,672	2,640	2,685	10,743	163,525
Changes during the fiscal year												
Profit attributable to owners of parent			19,937		19,937							19,937
Dividends of surplus			(4,173)		(4,173)							(4,173)
Purchase of treasury shares				(5)	(5)							(5)
Disposal of treasury shares		(0)		20	20							20
Net changes of items other than shareholders' equity						1,898	25	(969)	(654)	300	825	1,125
Total changes of items during the period	—	(0)	15,764	14	15,779	1,898	25	(969)	(654)	300	825	16,904
Balance at end of year	10,000	20,018	137,665	(1,809)	165,874	332	(35)	703	1,986	2,986	11,568	180,429

[2019]

	Millions of yen											
	Shareholders' equity					Accumulated other comprehensive income						
	Share capital	Capital surplus	Retained earnings	Treasury shares	Total	Valuation difference on available-for-sale securities	Deferred gains or losses on hedges	Foreign currency translation adjustment	Remeasurements of defined benefit plans	Total	Non-controlling interests	Total net assets
Balance at beginning of year	10,000	20,008	90,752	(1,472)	119,288	1,352	(151)	2,093	3,074	6,368	10,935	136,591
Changes during the fiscal year												
Profit attributable to owners of parent			34,279		34,279							34,279
Dividends of surplus			(3,129)		(3,129)							(3,129)
Purchase of treasury shares				(351)	(351)							(351)
Disposal of treasury shares		9		0	9							9
Change in scope of consolidation			0		0							0
Purchase of shares of consolidated subsidiaries		(0)			(0)							(0)
Net changes of items other than shareholders' equity						(2,918)	90	(420)	(434)	(3,682)	(191)	(3,874)
Total changes of items during the period	—	9	31,149	(351)	30,807	(2,918)	90	(420)	(434)	(3,682)	(191)	26,933
Balance at end of year	10,000	20,018	121,901	(1,823)	150,095	(1,566)	(61)	1,672	2,640	2,685	10,743	163,525

# Consolidated Statements of Cash Flows

Tokuyama Corporation and Consolidated Subsidiaries  
Years ended March 31, 2020 and 2019

	Millions of yen	
	2020	2019
<b>Cash flows from operating activities</b>		
Profit before income taxes	27,917	38,017
Depreciation and amortization	16,122	15,093
Increase (decrease) in provisions	2,118	(693)
Increase (decrease) in retirement benefit liability	129	58
Decrease (increase) in retirement benefit asset	(709)	(761)
Interest and dividend income	(497)	(514)
Foreign exchange losses (gains)	321	8
Loss (gain) on sales of property, plant and equipment	(4)	(36)
Loss (gain) on sales of investment securities	(6)	(1)
Share of loss (profit) of entities accounted for using equity method	(756)	(921)
Gain on bargain purchase	(157)	(964)
Loss (gain) on step acquisitions	(56)	—
Subsidy income	(144)	(133)
Interest expenses	1,689	2,453
Cost of loans payable	—	884
Loss on tax purpose reduction entry of non-current assets	191	100
Impairment loss	34	363
Loss (gain) on disposal of non-current assets	685	807
Gain on insurance claims	(470)	(169)
Loss (gain) on valuation of investment securities	4,531	—
Compensation for damage income	—	(6,006)
Compensation for damage	—	851
Decrease (increase) in trade receivables	7,343	928
Decrease (increase) in inventories	(1,268)	(4,071)
Decrease (increase) in other current assets	(323)	335
Increase (decrease) in trade payables	(4,385)	(1,090)
Increase (decrease) in other current liabilities	752	(403)
Other, net	(74)	943
<b>Subtotal</b>	<b>52,981</b>	<b>45,077</b>
Interest and dividends received	1,041	938
Interest paid	(1,709)	(2,529)
Proceeds from insurance income	470	169
Compensation for damage received	5,865	—
Compensation for damage paid	(832)	—
Income taxes (paid) refund	(5,451)	(5,123)
<b>Net cash provided by (used in) operating activities</b>	<b>52,364</b>	<b>38,531</b>
<b>Cash flows from investing activities</b>		
Payments into time deposits	(52)	(269)
Proceeds from withdrawal of time deposits	174	498
Purchase of property, plant and equipment	(19,706)	(16,765)
Proceeds from sales of property, plant and equipment	68	219
Purchase of investment securities	(24)	(22)
Proceeds from sales of investment securities	21	3
Proceeds from purchase of shares of subsidiaries resulting in change in scope of consolidation	137	583
Purchase of shares of subsidiaries resulting in change in scope of consolidation	(110)	—
Long-term loan advances	(5)	(3)
Collection of long-term loans receivable	181	214
Subsidies received	144	133
Other, net	(1,376)	(765)
<b>Net cash provided by (used in) investing activities</b>	<b>(20,548)</b>	<b>(16,174)</b>
<b>Cash flows from financing activities</b>		
Increase (decrease) in short-term borrowings	(1,403)	247
Proceeds from long-term borrowings	1,092	59,713
Repayments of long-term borrowings	(12,739)	(76,512)
Dividends paid	(4,164)	(3,122)
Dividends paid to non-controlling interests	(276)	(357)
Decrease (increase) in treasury shares	(0)	(308)
Other, net	(856)	(764)
<b>Net cash provided by (used in) financing activities</b>	<b>(18,348)</b>	<b>(21,104)</b>
<b>Effect of exchange rate change on cash and cash equivalents</b>	<b>(540)</b>	<b>(49)</b>
<b>Net increase (decrease) in cash and cash equivalents</b>	<b>12,926</b>	<b>1,202</b>
<b>Cash and cash equivalents at beginning of period</b>	<b>67,991</b>	<b>66,807</b>
<b>Decrease in cash and cash equivalents resulting from exclusion of subsidiaries from consolidation</b>	<b>—</b>	<b>(18)</b>
<b>Cash and cash equivalents at end of period (Note 1)</b>	<b>80,918</b>	<b>67,991</b>

See notes to consolidated financial statements.

# Notes to Consolidated Financial Statements

Tokuyama Corporation and Consolidated Subsidiaries

## 1. BASIS OF CONSOLIDATED FINANCIAL STATEMENTS

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The accompanying consolidated financial statements have been prepared from accounts and records maintained by Tokuyama Corporation (the “Company”) and its subsidiaries. The Company and its consolidated domestic subsidiaries have maintained their accounts and records in accordance with the provisions set forth in the Companies Act (the “Act”) and the Financial Instruments and Exchange Act and in conformity with accounting principles and practices generally accepted in Japan, which are different from the accounting and disclosure requirements of International Financial Reporting Standards.

The accounts of consolidated overseas subsidiaries are based on their accounting records maintained in conformity with generally accepted accounting principles and practices prevailing in the respective countries of domicile.

The consolidated financial statements are not intended to present the consolidated financial position, results of operations and cash flows in accordance with accounting principles and practices generally accepted in countries and jurisdictions other than Japan.

## 2. GOING CONCERN ASSUMPTION

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Not applicable.

## 3. SCOPE OF CONSOLIDATION

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The consolidated financial statements include the accounts of the Company and its 54 significant subsidiaries (52 in 2019). Significant intercompany transactions and accounts have been eliminated in consolidation.

Major consolidated subsidiaries are as follows: Sun•Tox Co., Ltd.

- Shin Dai-ichi Vinyl Corporation
- A&T Corporation
- Tokuyama Dental Corporation
- Excel Shanon Corporation
- Hiroshima Tokuyama Ready Mixed Concrete Co., Ltd.
- Tokuyama Mtech Corporation
- Sun Arrow Kasei Co., Ltd.
- Taiwan Tokuyama Corporation
- Tokuyama Chemicals (Zhejiang) Co., Ltd.

Shirokawa Co., Ltd., for which the Company has acquired shares, has been included into the scope of consolidation from the consolidated fiscal year under review.

TS Fine Chemical Inc., which the Company newly established, has been included into the scope of consolidation from the consolidated fiscal year under review.

Of consolidated subsidiaries, A&T Corporation closes its accounts on December 31. Its financial statements as of December 31 are used in the preparation of consolidated financial statements, and adjustments necessary for consolidation purposes are made to material transactions arising between that date and the consolidated fiscal year-end. Of consolidated subsidiaries, Tokuyama Chemicals (Zhejiang) Co., Ltd. and other four companies whose original fiscal year-end is December 31, are consolidated by performing provisional settlement of accounts on March 31, the consolidated fiscal year-end, in compliance with the regular settlement of accounts.

Investments in 10 affiliates (9 in 2019) are accounted for by the equity method. Major equity method affiliate is Hantok Chemicals Co., Ltd.

Of equity method affiliates, with regard to the company of which the last date of its fiscal year is different from the consolidated fiscal year-end, the financial statements of its fiscal year are used in the preparation of consolidated financial statements.

During the consolidated fiscal year under review, the Company acquired the shares of Shirokawa Co., Ltd. and made this



company into a subsidiary. Accordingly, Kasuga Kawauchi Kyodo Ready Mixed Concrete Co., Ltd, an investee of Shirokawa Co., Ltd., is included in the scope of application of the equity method.

Major affiliates that are not accounted for by the equity method are Oita Mining Co., Ltd. and others because they have little impact on the consolidated financial statements in terms of profit/loss (corresponding to equity interest), retained earnings (corresponding to equity interest), etc. when they are excluded from the scope of application of the equity method, nor have any material impact on an aggregate basis.

## 4. SIGNIFICANT ACCOUNTING POLICIES

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### (1) Valuation basis and valuation methods for significant assets

#### (i) Securities

Available-for-sale securities

Securities with fair value

Stated at the fair value based on the quoted market price as of the fiscal year-end (Valuation differences are recognized in net assets; the cost of securities sold is calculated by the moving-average method).

Securities without fair value

Stated at cost by the moving-average method.

#### (ii) Derivatives

Derivatives are stated at fair value.

#### (iii) Inventories

Inventories held for sale in the ordinary course of business

Stated at cost mainly by the moving-average method. (The balance sheet value of the inventories is calculated by write-down based on the decreased profitability.)

### (2) Depreciation and amortization methods of significant depreciable and amortizable assets

#### (i) Property, plant and equipment (excluding leased assets)

Buildings and structures acquired on or after April 1, 2016: Depreciated mainly by the straight-line method.

Other than the above: Depreciated mainly by the declining-balance method.

The estimated useful lives of major items are as follows:

Buildings and structures: 2 to 75 years

Machinery, equipment and vehicles: 2 to 20 years

#### (ii) Intangible assets (excluding leased assets)

Amortized mainly by the straight-line method.

Internal use software is amortized by the straight-line method over the internally expected useful life (5 years).

#### (iii) Leased assets

Leased assets in finance lease transactions that transfer ownership

The Company uses the same depreciation method that is applied to owned fixed assets.

Leased assets in finance lease transactions that do not transfer ownership

Depreciated by the straight-line method based on the assumption that the useful life is equal to the lease term and the residual value is equal to zero.

### (3) Significant allowances and provisions

#### (i) Allowance for doubtful accounts

To cover possible bad debt expenses on notes and accounts receivable – trade, loans receivable and others, the allowance for doubtful accounts is provided at the estimated uncollectable amounts based on the historical default rate for normal receivables, or taking into account collectability on a case-by-case basis for certain receivables such as doubtful receivables with higher possibility of default.

(ii) **Provision for bonuses**

To prepare for the payment of next bonuses to employees, provision for bonuses is recorded based on the portion of the estimated amount of bonus payments attributable to the consolidated fiscal year under review.

(iii) **Provision for repairs**

Repair expenses are calculated individually and recorded to prepare for periodic repairs of manufacturing facilities.

(iv) **Provision for product warranties**

For required expenses incurred during the warranty period with free servicing (warranty expenses for free servicing) for clinical test information systems and laboratory test automation systems, the estimated amount of expenses is recorded based on the historical rate of incurrence (proportion of expenses paid to net sales).

(v) **Provision for loss on compensation for damage**

The Company records provisions based on reasonably estimated monetary amounts at the end of the consolidated fiscal year under review for loss on compensation for damages caused by customer delivery delays.

(vi) **Provision for retirement benefits for directors (and other officers)**

At certain consolidated subsidiaries, the amount to be required at the end of the consolidated fiscal year under review in accordance with internal rules is recorded to prepare for payment of directors' retirement benefits.

(vii) **Provision for share-based remuneration**

The Company records estimated amounts for share benefit obligations at the end of the consolidated fiscal year under review in order to prepare for the Company share benefits provided to directors and other executives based on the Company's share issuance rules.

(viii) **Allowance for loss on compensation for building materials**

The estimated amount of losses incurred in replacement, renovation, etc. is recorded to prepare for repairs and maintenance of plastic sashes for houses and buildings (fire protection and resistance grade).

(ix) **Provision for decommissioning and removal**

Decommissioning and removal expenses are calculated individually and recorded to prepare for decommissioning and removal of manufacturing facilities.

(x) **Provision for environmental measures**

Pursuant to the "Act on Special Measures concerning Promotion of Proper Treatment of PCB Wastes," the estimated amount at the end of the consolidated fiscal year under review is recorded to prepare for payments for disposal of PCB waste.

**(4) Accounting method of retirement benefits**

(i) **Methods of attributing estimated retirement benefits to accounting periods**

When calculating retirement benefit obligations, the benefit formula basis is used to attribute estimated retirement benefits to the period through the end of the consolidated fiscal year under review.

(ii) **Amortization of actuarial differences**

Actuarial differences are amortized by using the straight-line method over a period of time within the average remaining service period of employees (14 years) from the subsequent consolidated fiscal year when they are incurred.

(iii) **Application of simplified accounting method used by small companies**

In calculating retirement benefit liability and retirement benefit expenses, some of the consolidated subsidiaries apply a simplified accounting method in which an assumed amount of benefits to be paid for voluntary base retirement at the consolidated fiscal year-end is deemed as retirement benefit obligations.

**(5) Application of the consolidated taxation system**

The Company applies the consolidated taxation system.

**(6) Application of tax effect accounting associated with the transition from the consolidated taxation system to the group tax sharing system**

With regard to the transition to the group tax sharing system established under the “Act for Partial Amendment of the Income Tax Act, etc.” (Act No. 8 of 2020) and the items for which the nonconsolidated taxation system was revised in line with the transition to the group tax sharing system, pursuant to Paragraph 3 of the “Practical Solution on the Treatment of Tax Effect Accounting for the Transition from the Consolidated Taxation System to the Group Tax Sharing System” (ASBJ PITF No. 39, issued on March 31, 2020), the Company and certain domestic consolidated subsidiaries did not apply the provision of Paragraph 44 of the “Implementation Guidance on Tax Effect Accounting” (ASBJ Guidance No. 28, issued on February 16, 2018), and the amounts of deferred tax assets and deferred tax liabilities are based on the provisions of the tax laws before the revision.

**(7) Accounting method for deferred assets**

All deferred assets are charged to expenses when incurred.

**(8) Translation of significant assets or liabilities denominated in foreign currencies into Japanese yen**

Monetary assets and liabilities denominated in foreign currencies are translated into yen at the exchange rate in effect at the consolidated balance sheet date and the resulting exchange gains or losses are credited or charged to income as incurred.

Assets and liabilities of overseas subsidiaries and the like are translated into yen at the exchange rate in effect at the consolidated balance sheet date, while their revenues and expenses are translated into yen at the average rates of exchange prevailing during the year. The resulting translation adjustments are included in “Foreign currency translation adjustment” and “Non-controlling interests” in net assets.

**(9) Method of significant hedge accounting**

**(i) Method of hedge accounting**

For the method of hedge accounting, in general, the deferral hedge accounting is applied. Among hedging instruments, forward exchange contracts that fulfill the requirement for allocation method are subjected to the allocation method. Interest rate swaps that fulfill the requirement for special treatment are subjected to the special treatment.

**(ii) Hedging instruments and hedged items**

Hedging instruments and hedged items to which hedge accounting has been applied in the fiscal year under review are as follows:

Hedging instruments: Forward exchange contracts, interest rate swaps

Hedged items: Forecast transactions in foreign currencies, accounts receivable borrowings denominated in foreign currencies

**(iii) Hedging policy**

Foreign exchange risk and interest rate risk of hedged items are hedged within a certain range.

**(iv) Method of assessing hedge effectiveness**

Hedge effectiveness is assessed by comparing cumulative changes in cash flows or market fluctuations of hedged items and cumulative changes in cash flows or market fluctuations of hedging instruments on a quarterly basis and based on changes in the both, etc. For interest rate swaps to which the special treatment is applied, assessment of hedge effectiveness is omitted.

**(10) Amortization method and amortization period of goodwill**

Goodwill is equally amortized over five years.

**(11) Scope of cash and cash equivalents in the consolidated statements of cash flows**

Cash and cash equivalents in the consolidated statements of cash flows consist of cash on hand, at-call deposits with banks and short-term investments that have maturities within three months from acquisition, are readily convertible to cash and are subject to an insignificant risk of changes in value.

**(12) Other significant matters forming the basis of preparing the consolidated financial statements**

*Accounting for consumption taxes*

Consumption tax and local consumption tax are accounted for using the tax-excluded method. Non-deductible consumption tax and local consumption tax are accounted for as expenses for the consolidated fiscal year under review.

## 5. CHANGES IN ACCOUNTING POLICY

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Not applicable.

## 6. NEW ACCOUNTING STANDARDS NOT YET APPLIED

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- “Accounting Standard for Revenue Recognition,” (ASBJ Corporate Accounting Standard No. 29, March 31, 2020)
- “Implementation Guidance on Accounting Standard for Revenue Recognition,” (ASBJ Corporate Accounting Standard Implementation Guidance No. 30, March 31, 2020)

**1. Summary**

This is a comprehensive accounting standard for revenue recognition. Revenue is recognized applying the following five steps.

1. Identify the contracts with customers.
2. Identify the performance obligations in the contracts.
3. Determine the transaction prices.
4. Allocate the transaction prices to the performance obligations in the contracts.
5. Recognize revenue when or as performance obligations are satisfied.

**2. Planned date for implementation**

The Company will implement these accounting standards from the beginning of the fiscal year ending March 2022.

**3. Impact of implementing said accounting standards**

The impact of implementing the “Accounting Standard for Revenue Recognition” to the consolidated financial statements is being evaluated at this time.

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

**1. Summary**

To improve comparability with international accounting standards, Accounting Standards for Fair Value Measurement and Implementation Guidance on Accounting Standard for Fair Value Measurement (hereinafter referred to as Accounting Standards for Fair Value Measurement) were developed and guidance on how to calculate fair value was prescribed. Accounting Standards for Fair Value Measurement is applied to the fair value of the following items.

- Financial instruments in Accounting Standard for Financial Instruments
- Inventories held for trading purposes in Accounting Standard for Measurement of Inventories



Additionally, Implementation Guidance on Disclosures about Fair Value of Financial Instruments was also revised and explanatory notes have been established such as the breakdown of the fair value of financial instruments at each level.

**2. Planned date for implementation**

The Company will implement this accounting standard from the beginning of the consolidated fiscal year ending March 31, 2022.

**3. Impact of implementing said accounting standard**

The amount of the impact is being evaluated at the time of preparation of the consolidated financial statements.

- **Revised Accounting Standard for Accounting Policy Disclosures, Accounting Changes and Error Corrections (ASBJ Statement No. 24, March 31, 2020)**

**1. Summary**

This standard aims to show a summary of the accounting principles and procedures adopted in the event that the establishment of relevant accounting standards is not clear.

**2. Planned date for implementation**

The Company will implement this accounting standard from the end of the fiscal year ending March 31, 2021.

- **Accounting Standard for Disclosure of Accounting Estimates (ASBJ Statement No. 31, March 31, 2020)**

**1. Summary**

This standard aims to disclose information that will help users of the financial statements understand details of the basis for accounting estimates for risk items with a material impact on the financial statements of the following fiscal year among the estimated amounts recorded on the financial statements in the current consolidated fiscal year.

**2. Planned date for implementation**

The Company will implement this accounting standard from the end of the fiscal year ending March 31, 2021.

## **7. CHANGES IN PRESENTATION**

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(Consolidated Statements of Income)

In the consolidated fiscal year under review, "Trial products income," which was in stated as a separate item in "Non-operating income" in the previous consolidated fiscal year, is now included in "Other" under in "Non-operating income" since "Trial products income" is 10% or less of the total amount of "Non-operating income". Therefore, items in the consolidated financial statements for the previous consolidated fiscal year have been reclassified to reflect this change in the presentation. Consequently, ¥666 million and ¥1,333 million that were presented in "Trial products income" and "Other" under "Non-operating income" in the previous fiscal year have been reclassified to "Other" of ¥2,000 million in "Non-operating income."

## **8. CHANGES IN ACCOUNTING ESTIMATES**

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Not applicable.

## 9. ADDITIONAL INFORMATION

(Performance-based stock remuneration program)

On September 3, 2018, the Company introduced a performance-based stock remuneration program geared for its directors (excluding directors who are Audit and Supervisory Committee members, non-executive directors, external directors and persons not resident in Japan) and executive officers (excluding persons not resident in Japan).

### 1. Transaction summary

For this program, the Company adopted a Director Remuneration BIP (Board Incentive Plan) Trust (hereinafter referred to as "the BIP Trust"). As with performance-linked stock (performance share) remuneration and transfer-limited stock (restricted stock) remuneration in the United States and Europe, the BIP Trust is a program that grants the Company's shares and benefits as well as the equivalent amount of convertible bonds of the Company's shares in accordance with business performance and the director's position.

### 2. Company's own shares that remains in trust

The Company's shares that remains in trust is recorded as treasury shares in the net assets section based on the carrying amount (excluding the amount of incidental expenses) of the trust. The book value and number of shares of treasury shares are ¥320 million and 94 thousand shares.

## 10. CONSOLIDATED BALANCE SHEETS

### (1) Items corresponding to unconsolidated subsidiaries and affiliates are as follows:

	Millions of yen	
	2020	2019
Investment securities	8,222	8,086

### (2) Assets pledged as collateral and liabilities for which collateral is pledged

Assets pledged as collateral are as follows:

	Millions of yen	
	2020	2019
Pledged assets		
Buildings and structures	64	69
Machinery, equipment and vehicles	1,684	1,094
Land	562	562
Investment securities	1,124	25
<b>Total</b>	<b>3,436</b>	<b>1,750</b>

Liabilities for which collateral is pledged are as follows:

	Millions of yen	
	2020	2019
Pledged liabilities		
Short-term borrowings	133	135
Current portion of long-term borrowings	47	34
Long-term borrowings	1,754	1,185
Other	18	19
<b>Total</b>	<b>1,954</b>	<b>1,375</b>

### (3) Reduction entry

In the consolidated fiscal year under review, reduction entries of ¥87 million for buildings and structures, ¥101 million for machinery, equipment and vehicles and ¥1 million for tools, furniture and fixtures were made due to receipt of subsidies, etc.

In addition, as a result of the retirement of buildings and structures that were subject to the reduction entry, cumulative reduction entries decreased by ¥4 million, as a result of the retirement of machinery, equipment and vehicles that were subject to the reduction entry, cumulative reduction entries decreased by ¥149 million, and as a result of the retirement of tools, furniture and fixtures that were subject to the reduction entry, cumulative reduction entries decreased by ¥1 million.

The cumulative reduction entries due to the receipt of subsidies, etc. in association with fixed assets are as follows:

	Millions of yen	
	2020	2019
Buildings and structures	1,538	1,455
Machinery, equipment and vehicles	2,710	2,759
Tools, furniture and fixtures	163	164
Intangible assets Other	4	4
<b>Total</b>	<b>4,417</b>	<b>4,382</b>

### (4) Guarantee obligation

The Company provides guarantee of obligations concerning loans from financial institutions by the employee.

	Millions of yen	
	2020	2019
Employee	104	99
Chuyo Ready-mixed Concrete Cooperative Association	50	—
Kasuga Kawauchi Kyodo Ready Mixed Concrete Co., Ltd.	11	—
<b>Total</b>	<b>166</b>	<b>99</b>

### (5) Contingent liabilities pertaining to unsecured bond debt assumption agreements

With regard to the following unsecured bonds, the Company will be delegating the performance of the obligation based on an unsecured bond trust-type debt assumption agreement that has been executed with a bank. Accordingly, although the liabilities pertaining to those unsecured bonds and the amount paid under that same contract offset each other, the obligation to redeem the Company's unsecured bonds to bondholders continue until the time of their redemption.

	Millions of yen	
	2020	2019
20th unsecured bonds without collateral	—	10,000
22nd unsecured bonds without collateral	15,000	15,000
24th unsecured bonds without collateral	9,400	9,400
<b>Total</b>	<b>24,400</b>	<b>34,400</b>

### (6) Repurchase obligation due to liquidation of notes receivable

	Millions of yen	
	2020	2019
Repurchase obligation due to liquidation of notes Receivable	1,481	1,867

### (7) Notes receivable endorsed

	Millions of yen	
	2020	2019
Notes receivable endorsed	511	822

**(8) Trade notes that mature on last day of consolidated fiscal year**

Settlement processing for trade notes that mature at the end of the consolidated fiscal year is carried out on their clearing days.

As the last day of the consolidated fiscal year under review fell on a weekend and financial institutions were closed, trade notes maturing at the end of the current consolidated fiscal year are included in the consolidated fiscal year-end balance.

	Millions of yen	
	2020	2019
Notes receivable – trade	—	1,540

## 11. CONSOLIDATED STATEMENTS OF INCOME

- (1) Inventories at the consolidated fiscal year-end represent the amount after the book value was reduced in connection with a decline in the profitability, and the following losses on valuation of inventories (the amount in parentheses represents gains on reversal) are included in cost of sales.**

	Millions of yen	
	2020	2019
Loss on valuation of inventories	(176)	269

- (2) Major items and amounts of selling expenses are as follows:**

	Millions of yen	
	2020	2019
Selling expenses:		
Freight-out expenses	23,491	23,111
Shipping charges	5,973	5,889
Salaries and bonuses	5,026	5,230
Provision for bonuses	451	399
Provision for repairs	146	39
Retirement benefit expenses	96	50
Provision of allowance for doubtful accounts	(12)	(49)

- (3) Major items and amounts of general and administrative expenses are as follows:**

	Millions of yen	
	2020	2019
General and administrative expenses:		
Technical research expenses	8,013	7,077
Salaries and bonuses	4,629	4,282
Provision for bonuses	408	333
Retirement benefit expenses	79	48
Provision for retirement benefits for directors (and other officers)	49	50

(Note) Technical research expenses for the previous consolidated fiscal year include provision for bonuses of ¥268 million and retirement benefit expenses of ¥23 million.

Technical research expenses for the consolidated fiscal year under review include provision for bonuses of ¥363 million and retirement benefit expenses of ¥30 million.

- (4) Total amount of research and development expenses included in general and administrative expenses and production cost**

	Millions of yen	
	2020	2019
Research and development expenses	9,193	8,052



**(5) The breakdown of gain on sales of non-current assets is as follows:**

Millions of yen		
	2020	2019
Buildings and structures	—	6
Machinery, equipment and vehicles	16	22
Tools, furniture and fixtures	1	3
Land	5	13
Other	—	2
<b>Total</b>	<b>23</b>	<b>47</b>

**(6) The breakdown of loss on sales of non-current assets is as follows:**

Millions of yen		
	2020	2019
Buildings and structures	0	0
Machinery, equipment and vehicles	4	8
Tools, furniture and fixtures	0	1
Land	13	0
<b>Total</b>	<b>19</b>	<b>10</b>

**(7) Impairment loss**

*Fiscal year ended March 31, 2020*

The Group groups its assets mainly according to the smallest units independently generating cash flows based on business categories. During the consolidated fiscal year ended March 31, 2020, the Group recorded impairment losses. Of note, description of content has been omitted due to the low level of importance.

*Fiscal year ended March 31, 2019*

The Group groups its assets mainly according to the smallest units independently generating cash flows based on business categories. During the consolidated fiscal year ended March 31, 2019, the Group recorded impairment losses. Of note, description of content has been omitted due to the low level of importance.

## 12. CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME

### (1) Reclassification adjustments and tax effects relating to other comprehensive income

	Millions of yen	
	2020	2019
Valuation difference on available-for-sale securities:		
Gains arising during the year	(2,475)	(3,487)
Reclassification adjustment to profit or loss	4,525	(1)
Amount before income tax effect	2,049	(3,488)
Income tax effect	(127)	569
Total valuation difference on available-for-sale securities	1,921	(2,919)
Deferred gains or losses on hedges:		
Gains arising during the year	36	130
Amount before income tax effect	36	130
Income tax effect	(11)	(39)
Total deferred gains or losses on hedges	25	90
Foreign currency translation adjustment:		
Gains arising during the year	(891)	(304)
Total foreign currency translation adjustment	(891)	(304)
Remeasurements of defined benefit plans, net of tax:		
Gains arising during the year	(553)	(201)
Reclassification adjustment to profit or loss	(383)	(422)
Amount before income tax effect	(937)	(624)
Income tax effect	282	190
Total remeasurements of defined benefit plans, net of tax	(654)	(434)
Share of other comprehensive income of entities accounted for using equity method:		
Gains arising during the year	(100)	(139)
Total share of other comprehensive income of entities accounted for using equity method	(100)	(139)
Total other comprehensive income	300	(3,707)

## 13. CONSOLIDATED STATEMENTS OF CHANGES IN NET ASSETS

### Fiscal year ended March 31, 2020

#### (1) Class and total number of shares issued and class and number of treasury shares

	Thousand shares			
	Beginning of year	Increase during the fiscal year	Decrease during the fiscal year	End of year
[2020]				
Issued shares				
Common shares	69,934	—	—	69,934
Total	69,934	—	—	69,934
Treasury shares				
Common shares (Notes 1, 2, 3)	482	2	6	478
Total	482	2	6	478

(Note 1) The increase in the number of treasury shares of common shares is due to an increase of 2 thousand shares due to purchase of less than a share-trading unit.

(Note 2) The decrease of 6 thousand shares in the number of treasury shares of common shares is a decrease due to the request for additional purchase of 0 thousand shares constituting less than one share unit and the sale of a portion of the Company's shares totaling 6 thousand shares held by Director Remuneration BIP (Board Incentive Plan) Trust.

(Note 3) Included in the aforementioned treasury shares of common shares is 94 thousand shares held by The Master Trust Bank of Japan, Ltd. (executive compensation BIP trust account; 76292 account).

## (2) Dividends

### (i) Dividend amount paid

Resolution	Class of shares	Dividend (Millions of yen)	Dividend per shares (yen)	Reference date	Effective date	Source of dividends
Ordinary General Meeting of Shareholders (June 21, 2019)	Common shares	1,738	25.00	March 31, 2019	June 24, 2019	Retained earnings
Board of Directors (October 31, 2019)	Common shares	2,434	35.00	September 30, 2019	December 2, 2019	Retained earnings

(Note) Included in the total amount of dividends decided by the Ordinary General Meeting of Shareholders on June 21, 2019 is ¥2 million worth of dividends related to 100 thousand Company shares (treasury shares) held in the executive compensation BIP trust account.

Included in the total amount of dividends decided by the Board of Directors on October 31, 2019 is ¥3 million worth of dividends related to 94 thousand Company shares (treasury shares) held in the executive compensation BIP trust account.

### (ii) Dividends whose record date is within the consolidated fiscal year and whose effective date is in the following consolidated fiscal year

Resolution	Class of shares	Dividend (Millions of yen)	Dividend per shares (yen)	Reference date	Effective date	Source of dividends
Ordinary General Meeting of Shareholders (June 24, 2020)	Common shares	2,434	35.00	March 31, 2020	June 25, 2020	Retained earnings

(Note) Included in the total amount of dividends decided by the Ordinary General Meeting of Shareholders on June 24, 2020 is ¥3 million worth of dividends related to 94 thousand Company shares (treasury shares) held in the executive compensation BIP trust account.

## Fiscal year ended March 31, 2019

### (1) Class and total number of shares issued and class and number of treasury shares

[2019]	Thousand shares			
	Beginning of year	Increase during the fiscal year	Decrease during the fiscal year	End of year
Issued shares				
Common shares	69,934	—	—	69,934
<b>Total</b>	<b>69,934</b>	<b>—</b>	<b>—</b>	<b>69,934</b>
Treasury shares				
Common shares (Notes 1, 2, 3)	378	104	0	482
<b>Total</b>	<b>378</b>	<b>104</b>	<b>0</b>	<b>482</b>

(Note 1) The increase in the number of treasury shares of common shares is due to an increase of 3 thousand shares due to purchase of less than a share-trading unit and due to an increase of 100 thousand shares due to the adoption of a Director Remuneration BIP Trust.

(Note 2) The decrease of 0 thousand shares in the number of treasury shares of common shares is a decrease due to the request for additional purchase of shares constituting less than one share unit.

(Note 3) Included in the aforementioned treasury shares of common shares is 100 thousand shares held by The Master Trust Bank of Japan, Ltd. (executive compensation BIP trust account; 76292 account).

## (2) Dividends

### (i) Dividend amount paid

Resolution	Class of shares	Dividend (Millions of yen)	Dividend per shares (yen)	Reference date	Effective date	Source of dividends
Ordinary General Meeting of Shareholders (June 22, 2018)	Common shares	1,391	20.00	March 31, 2018	June 25, 2018	Retained earnings
Board of Directors (October 31, 2018)	Common shares	1,738	25.00	September 30, 2018	December 3, 2018	Retained earnings

(Note) Included in the total amount of dividends decided by the Board of Directors on October 31, 2018 is ¥2 million worth of dividends related to 100 thousand Company shares (treasury shares) held in the executive compensation BIP trust account.

- (ii) Dividends whose record date is within the consolidated fiscal year and whose effective date is in the following consolidated fiscal year

Resolution	Class of shares	Dividend (Millions of yen)	Dividend per shares (yen)	Reference date	Effective date	Source of dividends
Ordinary General Meeting of Shareholders (June 21, 2019)	Common shares	1,738	25.00	March 31, 2019	June 24, 2019	Retained earnings

(Note) Included in the total amount of dividends decided by the Ordinary General Meeting of Shareholders on June 21, 2019 is ¥2 million worth of dividends related to 100 thousand Company shares (treasury shares) held in the executive compensation BIP trust account.

## 14. CONSOLIDATED STATEMENTS OF CASH FLOWS

- (1) Reconciliation between the balance of cash and cash equivalents at end of period and relevant amount on the consolidated balance sheets

	Millions of yen	
	2020	2019
Cash and deposits	81,524	68,613
Time deposit whose deposit period exceeds 3 months	(605)	(621)
Cash and cash equivalents	80,918	67,991

## 15. LEASE TRANSACTIONS

### (Lessee)

#### (1) Operating Lease transactions

Future lease payments related to noncancelable operating lease transactions

	Millions of yen	
	2020	2019
Due within one year	477	529
Due beyond one year	1,042	972
Total	1,520	1,502

### (Lessor)

#### (1) Operating Lease transactions

Future lease income related to noncancelable operating lease transactions

	Millions of yen	
	2020	2019
Due within one year	123	129
Due beyond one year	945	1,008
Total	1,069	1,137

## 16. FINANCIAL INSTRUMENTS

### (1) Matters Regarding Financial Instruments

#### (i) Management policy on financial instruments

The Group raises funds as required (mainly through bank loans and the issuance of corporate bonds) in line with its business investment program aimed at implementing a customer-oriented approach toward “strengthening the profitability of its businesses.” The Group invests temporary surplus funds in highly secure financial assets and raises short-term operating capital with bank loans and CP (commercial paper). We use derivatives only to hedge risks described below and have a policy of not implementing derivative transactions for speculative purposes.

**(ii) Type and risk of financial instruments**

Notes and accounts receivable – trade, which are operating receivables, are exposed to credit risks of customers. In addition, although foreign currency-denominated receivables are exposed to foreign exchange fluctuation risk, the Company takes measures to reduce that risk by managing its foreign currency exposure by letting them be equal to foreign currency-denominated debts and implementing forward exchange contracts on an as needed basis. Investment securities are mainly shares related to business or capital tie-ups with counterparties, etc., and available-for-sale securities are exposed to the risk of market price fluctuations. In addition, the Group provides long-term loans to counterparties and others.

Notes and accounts payable – trade, which are operating payables, become due within one year.

In addition, although foreign currency-denominated debts are exposed to foreign exchange fluctuation risk, the Company takes measures to reduce that risk by managing its foreign currency exposure by letting them be equal to foreign currency-denominated receivables and implementing forward exchange contracts on an as needed basis. Borrowings and bonds payable are principally for raising funds necessary for capital investments, and the repayment date comes up to 58 years after the balance sheet date. Floating rate borrowings are exposed to interest rate risk, some of which are hedged using derivative transactions (interest rate swaps).

There are three types of derivative transaction: forward exchange contracts for the purpose of curbing the foreign exchange fluctuation risks associated with foreign currency-denominated receivables and payables and forecast transactions; interest rate swap transactions for the purpose of fixing the interest rate on borrowings or reducing the interest expenses; and currency swap transactions aimed at reducing exchange rate risk in transactions between the Company and its overseas subsidiaries. With regard to hedging instruments and hedged items related to hedge accounting, hedge policies and hedge effectiveness evaluation methods, please refer to “(9) Method of significant hedge accounting” described in “4. SIGNIFICANT ACCOUNTING POLICIES.”

**(iii) Risk management system for financial instruments**

**(a) Management of credit risk (risk related to default of counterparties, etc.)**

With regard to operating receivables and loans receivable, the Company has a division in charge in each business department monitoring the status of major counterparties regularly and managing maturities and balances for each counterparty in accordance with the credit management rules and others, while making efforts to identify early and mitigate any concerns about collection arising from deterioration in the economic environment, their financial position, etc. Consolidated subsidiaries also conduct similar management as necessary in conformity with the Company's credit management rules and others.

In the use of derivative transactions, the Company conducts transactions only with financial institutions with high credit ratings to mitigate counterparty risk.

**(b) Management of market risk (fluctuation risk of foreign exchange, interest rate, etc.)**

On an as needed basis, the Company and some of its consolidated subsidiaries use forward exchange contracts with respect to the identified currency fluctuation risks of foreign currency-denominated receivables and debts. Some overseas subsidiaries also use currency swap transactions to reduce their exposure to exchange rate risk in their transactions with the parent company.

In addition, the Company and some of its consolidated subsidiaries use interest rate swaps to reduce the risk of fluctuations in interest payments on borrowings.

The Company periodically assesses the fair value of securities and investment securities as well as financial conditions of issuers (counterparty companies), etc., and continuously reviews the holding status in view of relationships with counterparty companies.

With regard to derivative transactions, the Finance & Investment Management Dept. conducts transactions based on the interest rate risk management policy and foreign exchange risk management policy approved by the Board of Directors, makes entries and collates the balances with contract partners, etc. For consolidated subsidiaries, the Finance & Investment Management Dept. also manages derivative transactions by having them report the content of derivative transactions to the center when they conduct such transactions or by other means.



(c) *Management of liquidity risk associated with financing (risk of inability to make a payment on due date)*

The Company manages liquidity risk through timely preparation and updating of the cash flow management plan by the Finance & Investment Management Dept. based on reports from each division and by maintaining liquidity on hand at a certain level and by other means.

(iv) *Supplemental remarks on fair values of financial instruments*

Fair values of financial instruments comprise values based on market prices and reasonably determined values where market prices are unavailable. Since variable factors are incorporated in calculation of the fair value, the value may vary depending on different preconditions adopted. In addition, the contract amounts of derivative transactions described in “(2) Fair values of financial instruments” should not be, in themselves, considered indicative of the market risk associated with derivative transactions.

(2) **Fair values of financial instruments**

The book value of financial instruments, their fair value, and the differences between the two were as follows. The financial instruments whose fair value is extremely difficult to determine are not given in the table below.

*As of March 31, 2020*

[2020]	Millions of yen		
	Book value	Fair value	Difference
Cash and deposits	81,524	81,524	—
Notes and accounts receivable – trade	72,929	72,929	—
Investment securities			
Available-for-sale securities	9,280	9,280	—
Long-term loans receivable	2,302	2,302	—
<b>Total assets</b>	<b>166,036</b>	<b>166,036</b>	<b>—</b>
Notes and accounts payable – trade	42,795	42,795	—
Short-term borrowings	3,082	3,082	—
Long-term borrowings (Note 1)	110,361	110,918	556
<b>Total liabilities</b>	<b>156,240</b>	<b>156,796</b>	<b>556</b>
Derivative financial instruments (Note 2)			
In which hedge accounting is not applied	(10)	(10)	—
In which hedge accounting is applied	(51)	(54)	(2)
<b>Total derivative financial instruments</b>	<b>(61)</b>	<b>(64)</b>	<b>(2)</b>

(Note 1) The book value and fair value of long-term borrowings include the current portion of long-term borrowings.

(Note 2) Receivables and payables arising from derivative transactions are presented on a net basis, and a value of a net payable after totaling receivables and payables is shown in parentheses.

**As of March 31, 2019**

[2019]	Millions of yen		
	Book value	Fair value	Difference
Cash and deposits	68,613	68,613	—
Notes and accounts receivable – trade	80,358	80,358	—
Investment securities			
Available-for-sale securities	11,748	11,748	—
Long-term loans receivable	2,444	2,444	—
<b>Total assets</b>	<b>163,164</b>	<b>163,164</b>	<b>—</b>
Notes and accounts payable – trade	47,268	47,268	—
Short-term borrowings	4,361	4,361	—
Long-term borrowings (Note 1)	122,078	122,956	878
<b>Total liabilities</b>	<b>173,709</b>	<b>174,587</b>	<b>878</b>
Derivative financial instruments (Note 2)			
In which hedge accounting is not applied	(8)	(8)	—
In which hedge accounting is applied	(88)	(92)	(4)
<b>Total derivative financial instruments</b>	<b>(96)</b>	<b>(101)</b>	<b>(4)</b>

(Note 1) The book value and fair value of long-term borrowings include the current portion of long-term borrowings.

(Note 2) Receivables and payables arising from derivative transactions are presented on a net basis, and a value of a net payable after totaling receivables and payables is shown in parentheses.

**\*Note1: Method for calculating the fair value of financial instruments, and matters regarding securities and derivative transactions**

**Assets**

- (i) Cash and deposits, (ii) Notes and accounts receivable – trade  
Because these assets are mostly settled in a short period, their fair value is nearly equal to their book value. Therefore, their fair value is based on the book value.
- (iii) Investment securities  
The fair value of available-for-sale securities is based on the price on the relevant exchange.  
For matters to be noted on securities for each holding purpose, refer to the note "17. SECURITIES."
- (iv) Long-term loans receivable  
Because all long-term loans receivable bear floating interest rates and reflect market interest rates in a short period, and credit standing of borrowers has not changed significantly since the loans were executed, their fair value is based on the book value.

**Liabilities**

- (i) Notes and accounts payable – trade, (ii) Short-term borrowings  
Because these liabilities are settled in a short period, their fair value is nearly equal to their book value. Therefore, their fair value is based on the book value.
- (iii) Long-term borrowings  
The fair value of these liabilities is determined as the present value, which is calculated by discounting the total of principal and interest using the interest rate that would be charged for a new similar loan.

**Derivatives**

Refer to the note "18. DERIVATIVES."

**\*Note2: Financial instruments whose fair value is extremely difficult to determine**

	Millions of yen	
	2020	2019
Unlisted shares	1,882	1,882
Shares of associates	7,142	7,006
Bonds of associates	1,080	1,080
<b>Total</b>	<b>10,104</b>	<b>9,969</b>

These financial instruments have no market price, and estimation of their future cash flows is expected to require excessive cost. Therefore, since it is considered extremely difficult to determine the fair value, they are not included in "Investment securities."

**\*Note3: Redemption schedule for monetary receivables and securities with maturities after the consolidated balance sheet date**

**As of March 31, 2020**

[2020]	Millions of yen			
	Within 1 year	More than 1 year, within 5 years	More than 5 years, within 10 years	More than 10 years
Cash and deposits	81,524	—	—	—
Notes and accounts receivable – trade	72,929	—	—	—
Long-term loans receivable	—	944	847	510
<b>Total</b>	<b>154,453</b>	<b>944</b>	<b>847</b>	<b>510</b>

As of March 31, 2019

	Millions of yen			
[2019]	Within 1 year	More than 1 year, within 5 years	More than 5 years, within 10 years	More than 10 years
Cash and deposits	68,613	—	—	—
Notes and accounts receivable – trade	80,358	—	—	—
Long-term loans receivable	—	695	848	899
<b>Total</b>	<b>148,971</b>	<b>695</b>	<b>848</b>	<b>899</b>

\*Note4: Repayment schedule by term for bonds payable, long-term borrowings and other interest-bearing debt after the consolidated balance sheet date

As of March 31, 2020

	Millions of yen					
[2020]	Within 1 year	More than 1 year, within 2 years	More than 2 years, within 3 years	More than 3 years, within 4 years	More than 4 years, within 5 years	More than 5 years
Short-term borrowings	3,082	—	—	—	—	—
Bonds payable (Note 1)	—	—	—	—	—	—
Long-term borrowings	16,106	9,918	21,966	1,122	536	60,711
<b>Total</b>	<b>19,189</b>	<b>9,918</b>	<b>21,966</b>	<b>1,122</b>	<b>536</b>	<b>60,711</b>

(Note 1) In the cases of the 22nd and 24th series of unsecured bonds, we delegated the performance of the obligation based on an unsecured bond trust-type debt assumption agreement that had been executed with a bank. Accordingly, although the liabilities pertaining to those unsecured bonds and the amount paid under that same contract offset each other, since the obligation to redeem the Company's unsecured bonds to bondholders continues until the time of their redemption, this is noted as a contingent liability on the consolidated balance sheets.

As of March 31, 2019

	Millions of yen					
[2019]	Within 1 year	More than 1 year, within 2 years	More than 2 years, within 3 years	More than 3 years, within 4 years	More than 4 years, within 5 years	More than 5 years
Short-term borrowings	4,361	—	—	—	—	—
Bonds payable (Note 1)	—	—	—	—	—	—
Long-term loans payable	12,667	15,994	9,770	21,837	1,000	60,807
<b>Total</b>	<b>17,029</b>	<b>15,994</b>	<b>9,770</b>	<b>21,837</b>	<b>1,000</b>	<b>60,807</b>

(Note 1) In the cases of the 20th, 22nd and 24th series of unsecured bonds, we delegated the performance of the obligation based on an unsecured bond trust-type debt assumption agreement that had been executed with a bank. Accordingly, although the liabilities pertaining to those unsecured bonds and the amount paid under that same contract offset each other, since the obligation to redeem the Company's unsecured bonds to bondholders continues until the time of their redemption, this is noted as a contingent liability on the consolidated balance sheets.

## 17. SECURITIES

### (1) Trading securities

Not applicable

### (2) Held-to-maturity debt securities

Not applicable

### (3) Available-for-sale securities

As of March 31, 2020

	Millions of yen		
[2020]	Book value	Acquisition cost	Unrealized gain
<b>Available-for-sale securities:</b>			
Securities with book values exceeding acquisition costs			
Equity securities	3,944	2,532	1,412
Debt securities	—	—	—
Other	—	—	—
Subtotal	3,944	2,532	1,412
Securities with book values not exceeding acquisition costs			
Equity securities	5,335	5,898	(562)
Debt securities	—	—	—
Other	—	—	—
Subtotal	5,335	5,898	(562)
<b>Total</b>	<b>9,280</b>	<b>8,430</b>	<b>850</b>

*As of March 31, 2019*

[2019]	Millions of yen		
	Book value	Acquisition cost	Unrealized gain
<b>Available-for-sale securities:</b>			
Securities with book values exceeding acquisition costs			
Equity securities	4,654	2,796	1,858
Debt securities	—	—	—
Other	—	—	—
Subtotal	4,654	2,796	1,858
Securities with book values not exceeding acquisition costs			
Equity securities	7,094	10,155	(3,060)
Debt securities	—	—	—
Other	—	—	—
Subtotal	7,094	10,155	(3,060)
<b>Total</b>	<b>11,748</b>	<b>12,951</b>	<b>(1,202)</b>

**(4) Available-for-sale securities sold**

*As of March 31, 2020*

[2020]	Millions of yen		
	Book value	Acquisition cost	Unrealized gain
<b>Available-for-sale securities sold during 2020 :</b>			
Equity securities	14	8	1
Debt securities			
Government and municipal bonds	—	—	—
Corporate bonds	—	—	—
Other	—	—	—
Other	—	—	—
<b>Total</b>	<b>14</b>	<b>8</b>	<b>1</b>

*As of March 31, 2019*

[2019]	Millions of yen		
	Book value	Acquisition cost	Unrealized gain
<b>Available-for-sale securities sold during 2019 :</b>			
Equity securities	46	1	—
Debt securities			
Government and municipal bonds	—	—	—
Corporate bonds	—	—	—
Other	—	—	—
Other	—	—	—
<b>Total</b>	<b>46</b>	<b>1</b>	<b>—</b>

**(5) Impairment of marketable securities**

During the consolidated fiscal year under review, an impairment of ¥4,531 million was made for securities (equity securities of available-for-sale securities). In making impairments of stocks that decline 30% to 50%, the Company makes a comprehensive assessment for each individual issue by considering the stock price movements over the past two years and quantitatively evaluating credit risk by examining various figures based on the published financial statements.

## 18 DERIVATIVES

### (1) Derivative transactions to which hedge accounting is not applied

#### (i) Currency-related derivatives

As of March 31, 2020

		Millions of yen		
[2020]	Main hedged items	Notional value	Maturing after one year	Fair value
Not applied Hedge accounting method				
Principle-based accounting				
Currency Swap				
Receiving JPY, Paying TWD	Long-term borrowings	400	220	(10)
Total		400	220	(10)

(Note) Method for calculation of fair value

Fair values are calculated based on the price presented by counterparty financial institutions, etc.

As of March 31, 2019

		Millions of yen		
[2019]	Main hedged items	Notional value	Maturing after one year	Fair value
Not applied Hedge accounting method				
Principle-based accounting				
Currency Swap				
Receiving JPY, Paying TWD	Long-term borrowings	400	400	(8)
Total		400	400	(8)

(Note) Method for calculation of fair value

Fair values are calculated based on the price presented by counterparty financial institutions, etc.

#### (ii) Interest

Not applicable

### (2) Derivative transactions to which hedge accounting is applied

#### (i) Currency-related derivatives

As of March 31, 2020

Not applicable

As of March 31, 2019

[2019]	Main hedged items	Millions of yen		
		Notional value	Maturing after one year	Fair value
Hedge accounting method				
Principle-based accounting				
Forward exchange contracts				
Call				
Korean Won	Forecast transaction in foreign currencies	42	—	(0)
Total		42	—	(0)

(Note) Method for calculation of fair value

Fair values are calculated based on the price presented by counterparty financial institutions, etc.



(ii) Interest

As of March 31, 2020

		Millions of yen		
[2020]	Main hedged items	Notional value	Maturing after one year	Fair value
Hedge accounting method				
Principle-based accounting				
Interest rate swaps				
Pay fixed rate, receive floating rate	Long-term borrowings	3,800	2,200	(51)
Subtotal		3,800	2,200	(51)
Special treatment for interest rate swaps				
Interest rate swaps				
Pay fixed rate, receive floating rate	Long-term borrowings	450	270	(2)
Subtotal		450	270	(2)
Total		4,250	2,470	(54)

(Note) Method for calculation of fair value

Fair values are calculated based on the price presented by counterparty financial institutions, etc.

As of March 31, 2019

		Millions of yen			
[2019]	Main hedged items	Notional value	Maturing after one year	Fair value	
Hedge accounting method					
Principle-based accounting					
Interest rate swaps					
	Pay fixed rate, receive floating rate	Long-term borrowings	5,400	3,800	(87)
Subtotal		5,400	3,800	(87)	
Special treatment for interest rate swaps					
Interest rate swaps					
	Pay fixed rate, receive floating rate	Long-term borrowings	630	450	(4)
Subtotal		630	450	(4)	
Total		6,030	4,250	(92)	

(Note) Method for calculation of fair value

Fair values are calculated based on the price presented by counterparty financial institutions, etc.

## 19. RETIREMENT BENEFITS

### (1) Outline of adopted retirement benefit plans

The Company and its consolidated domestic subsidiaries have lump-sum severance benefits plans and defined benefit pension plans as a vested benefits system (DB scheme). They also have defined contribution pension plans as DC scheme. The Company and its consolidated domestic subsidiaries may pay, under certain circumstances, extra retirement allowances when their employees leave the companies. The Company has a retirement benefit trust.

### (2) Defined benefit plans

#### (i) Reconciliation of beginning and ending balances of retirement benefit obligations

	Millions of yen	
	2020	2019
Balance of defined benefit obligations at beginning of year	17,279	16,952
Service cost	946	843
Interest cost	124	125
Occurrence of actuarial gain and loss	(54)	95
Payments of retirement benefits	(905)	(1,292)
Other	(23)	553
Balance of defined benefit obligations at end of year	17,367	17,279

(Note) The consolidated domestic subsidiaries, except for two companies, have adopted the simplified accounting method in calculating retirement benefit obligations.

#### (ii) Reconciliation of beginning and ending balances of pension assets

	Millions of yen	
	2020	2019
Balance of pension assets at beginning of year	24,926	25,082
Expected return on pension assets	470	473
Occurrence of actuarial gain and loss	(608)	(105)
Corporation's contributions	562	575
Payments of retirement benefits	(692)	(1,098)
Balance of pension assets at end of year	24,659	24,926

#### (iii) Reconciliation of ending balances of retirement benefit obligations and pension assets to retirement benefit liability and retirement benefit asset recorded in the consolidated balance sheets

	Millions of yen	
	2020	2019
Funded defined benefit obligations	15,343	15,289
Pension assets	(24,659)	(24,926)
	(9,315)	(9,636)
Unfunded defined benefit obligations	2,023	1,989
Net amount shown on consolidated balance sheets	(7,291)	(7,647)
Retirement benefit liability	2,277	2,149
Retirement benefit asset	(9,569)	(9,796)
Net amount shown on consolidated balance sheets	(7,291)	(7,647)

#### (iv) Retirement benefit expenses and a breakdown of the retirement benefit expenses

	Millions of yen	
	2020	2019
Service cost (Note)	946	843
Interest cost	124	125
Expected return on pension assets	(470)	(473)
Expensed actuarial gain and loss	(383)	(422)
Retirement benefit expenses regarding to vested benefits system	217	72

(Note) Retirement benefit expenses of the consolidated domestic subsidiaries that have adopted the simplified accounting method are included in "Service cost."

(v) Remeasurements of defined benefit plans

A breakdown of items recorded in adjustment of retirement benefit (before deduction of tax effects) is as follows:

Millions of yen		
	2020	2019
Actuarial gain and loss	(937)	(624)
Total	(937)	(624)

(vi) Accumulated adjustment of retirement benefits

A breakdown of items recorded in accumulated adjustment of retirement benefit plans (before deduction of tax effects) is as follows:

Millions of yen		
	2020	2019
Unrecognized actuarial gain and loss	2,850	3,787
Total	2,850	3,787

(vii) Matters relating to pension assets

(a) Principal items of pension assets

The proportion of each principal category to the total of pension assets is as follows:

	2020	2019
Domestic stocks	9%	10%
Foreign stocks	6	7
Domestic bonds	25	28
Foreign bonds	9	13
Insurance product (General account)	17	16
Deposits	12	11
Other	22	15
Total	100%	100%

(Note 1) Total of pension assets as of March 31, 2019 and March 31, 2020 included a retirement benefit trust, established for the Company's pension plans that represented 10% and 10% of the total of pension assets, respectively.

(b) Method for setting the expected long-term rate of return

The expected long-term rate of return on pension assets has been set based on the allocation of the pension assets as well as the current and expected rate of return from each category of the pension assets.

(viii) Matters relating to the basis for calculation used in the actuarial calculation

Main basis for calculation used in the actuarial calculation (principally represented by the rate used)

	2020	2019
Discount rate	0.8%	0.8%
Expected long-term return on pension assets	2.1%	2.1%

(3) Defined contribution plans

The amount which the Company and its consolidated subsidiaries were required to contribute to the defined contribution plans was ¥507 million for the previous consolidated fiscal year and ¥526 million for the consolidated fiscal year under review.

## 20. STOCK OPTIONS

Not applicable

## 21. TAX EFFECT ACCOUNTING

### (1) Breakdown of deferred tax assets and liabilities by their main occurrence causes

	Millions of yen	
	2020	2019
Deferred tax assets:		
Deficits (Note 2)	51,827	56,371
Excess depreciation and amortization	2,388	2,698
Provision for repairs	2,051	1,447
Investment securities	1,392	16
Amount carried forward tax credit limit excess	1,125	1,186
Provision for bonuses	989	832
Retirement benefit liability	832	785
Inventories	692	532
Other	2,872	2,867
Subtotal	64,173	66,738
Valuation allowance (Deficits) (Note 2)	(35,222)	(37,464)
Valuation allowance (Temporary difference)	(4,514)	(3,075)
Less valuation allowance (Note 1)	(39,736)	(40,540)
Total deferred tax assets	24,436	26,198
Deferred tax liabilities:		
Prepaid benefit cost	(2,729)	(2,795)
Reserve for reduction entry	(1,167)	(1,235)
Retained earnings of subsidiaries and affiliates	(747)	(646)
Other	(833)	(650)
Subtotal	(5,478)	(5,328)
Valuation allowance	0	0
Total deferred tax liabilities	(5,477)	(5,327)
Net deferred tax assets	18,959	20,871

(Note 1) Valuation allowance decreased by ¥804 million. This decline is primarily due to a ¥2,242 million decrease in valuation allowance (deficits) due to a decline in loss carry-forwards and a ¥1,378 million increase in valuation allowance due to the impairment of investment securities.

(Note 2) Amounts of deficits and related deferred tax assets by tax loss carry-forwards were as follows.

#### As of March 31, 2020

	Millions of yen						
[2020]	Within 1 year	More than 1 year, within 2 years	More than 2 years, within 3 years	More than 3 years, within 4 years	More than 4 years, within 5 years	More than 5 years	Total
Deficits (Note 1)	50	340	531	281	587	50,036	51,827
Valuation allowance	(41)	(202)	(530)	(245)	(587)	(33,615)	(35,222)
Deferred tax assets	9	137	1	35	—	16,421	16,605 <sup>(Note2)</sup>

(Note 1) Deficits are the amount after multiplying the statutory tax rate.

(Note 2) Regarding deficits of ¥51,827 million (amount after multiplying the statutory tax rate), the Company recorded deferred tax assets of ¥16,605 million. Regarding deficits, valuation allowance related to the portion deemed to be recoverable based on future taxable income forecasts is not recognized.

#### As of March 31, 2019

	Millions of yen						
[2019]	Within 1 year	More than 1 year, within 2 years	More than 2 years, within 3 years	More than 3 years, within 4 years	More than 4 years, within 5 years	More than 5 years	Total
Deficits (Note 3)	548	60	383	567	330	54,481	56,371
Valuation allowance	(417)	(56)	(367)	(546)	(327)	(35,748)	(37,464)
Deferred tax assets	131	4	16	21	2	18,732	18,907

(Note 3) Deficits are the amount after multiplying the statutory tax rate.

**(2) Reconciliation of significant difference between the statutory tax rate and the effective tax rate after applying tax effect accounting**

	2020	2019
Statutory tax rate	30.5%	30.5%
Increase (decrease) in income taxes resulting from:		
Change in valuation allowance allocated to income tax expenses	(4.4)	(19.3)
Effect of tax credits	(3.7)	(3.4)
Dividend and other items excluded permanently from taxable income	(3.7)	(1.9)
Entertainment expenses and other items excluded permanently from deductible expenses	2.1	0.3
Inter-company eliminations of dividends income	1.5	1.4
Inter-company eliminations of allowance for doubtful accounts	1.4	—
Elimination of tax loss carried forwards	1.1	0.5
Tax rate differential of overseas subsidiaries	(1.0)	0.1
Other	1.1	(0.2)
Effective income tax rate	24.8%	7.9%

## 22. BUSINESS COMBINATION

Description of content has been omitted due to a lack of importance.

## 23. ASSET RETIREMENT OBLIGATIONS

**(1) Asset retirement obligations included in the consolidated balance sheets**

The Group has obligations to restore a site to its original state at the time of leaving or termination of the business and after termination of mining for branches, etc., that use an office under a real estate lease agreement or certain business offices that use a plant or site for sales facilities, as well as mines. Of these obligations, for certain obligations to restore a site to its original state at the time of leaving a rental building under a building lease agreement for which the timing of performance and amount can be reasonably estimated at the present moment based on past records, asset retirement obligations have been recorded. The note on the content of asset retirement obligations is omitted because of immateriality.

**(2) Asset retirement obligations not included in the consolidated balance sheets**

Because past records other than those stated in (1) above are poor, the period of use of the leased asset related to the obligations is uncertain, and there is no plan for relocation, etc., or mine closure at the present moment, it is difficult to reasonably estimate the timing, scope and probability of execution for the obligations. Therefore, asset retirement obligations corresponding to the obligations have not been recorded.

## 24. INVESTMENT AND RENTAL PROPERTIES

Information is omitted because of immateriality of the total amount of investment and rental properties.



## 25. SEGMENT INFORMATION

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### BUSINESS SEGMENT INFORMATION

#### (1) Summary of reportable segments

The reportable segments in the Company are defined as individual units, where separate financial information is available and which are subject to regular review to evaluate their results and decide the allocation of management resources by the board of directors.

The Company has business divisions by product group, and conducts business operations through each business division devising its comprehensive product strategy for domestic and overseas markets.

The Company is, therefore, composed of reportable segments by product group based on business divisions and has four reportable segments, "Chemicals," "Specialty Products," "Cement" and "Life & Amenity."

Main products and services of each reportable segment are as follows:

Chemicals: Caustic soda, Soda ash, Calcium chloride, Sodium silicate, Vinyl chloride monomer, Polyvinyl chloride resin, Propylene oxide, Isopropyl alcohol, Chlorinated solvents and hydrogen

Specialty Products: Polycrystalline silicon, Fumed silica, Tetrachlorosilane, Aluminum nitride, High-purity chemicals for electronics manufacturing and Photoresist developer

Cement: Cement, Ready-mixed concrete, Cement-type stabilizer and Resource recycling business

Life & Amenity: Polyolefin film, Plastic window sashes, Medical diagnosis systems, Dental materials and equipment, Ion exchange membranes, Pharmaceutical ingredients and intermediates, Plastic lens-related materials for glasses and Microporous film

#### (2) Changes in reportable segments

In accordance with the change in management categorizations, a certain subsidiary previously included in the Others segment has been included in the Life & Amenity segment from this consolidated fiscal year.

Segment information for the corresponding period of the previous consolidated fiscal year has been prepared in accordance with this change.

#### (3) Calculation of sales, income (loss), assets and other items by reportable segment

The accounting methods applied to reportable segments are identical to those stated in "4. SIGNIFICANT ACCOUNTING POLICIES."

Inter-segment sales or transfer are based on market prices.

Reportable segment's profit (loss) is based on operating profit.

**(4) Information on net sales, profit (loss), assets and other items by reportable segment**

*Fiscal year ended March 31, 2020*

	Millions of yen							
[2020]	Chemicals	Specialty Products	Cement	Life & Amenity	Others (Note 1)	Total	Adjustment (Note 2)	Consolidated (Note 3)
<b>Sales</b>								
Sales to customers	92,755	43,726	86,616	54,347	38,651	316,096	—	316,096
Inter-segment sales/transfer	975	10,739	673	1,960	26,581	40,929	(40,929)	—
<b>Total sales</b>	<b>93,730</b>	<b>54,466</b>	<b>87,289</b>	<b>56,307</b>	<b>65,232</b>	<b>357,026</b>	<b>(40,929)</b>	<b>316,096</b>
<b>Segment profit</b>	<b>15,366</b>	<b>7,058</b>	<b>3,835</b>	<b>2,885</b>	<b>6,935</b>	<b>36,082</b>	<b>(1,801)</b>	<b>34,281</b>
<b>Segment assets</b>	<b>48,277</b>	<b>61,039</b>	<b>55,277</b>	<b>57,955</b>	<b>50,001</b>	<b>272,551</b>	<b>110,895</b>	<b>383,447</b>
<b>Other items</b>								
Depreciation and amortization (Note 4)	2,750	2,926	3,422	2,460	3,679	15,239	882	16,122
Increase in property, plant and equipment and intangible assets (Note 5)	3,106	8,059	4,219	2,602	3,478	21,467	3,182	24,649

(Note 1) The "Others" segment comprises businesses other than those of the reportable segments and includes overseas sales business, a distribution business, a real estate business, etc.

(Note 2) Adjustments are as follows:

(i) The segment profit adjustment amount consists mainly of basic R&D expenses that are not allocable to a specific reportable segment and the amount of inter-segment eliminations.

(ii) The segment assets adjustment amount includes corporate assets that are not allocated to a specific reportable segment (¥137,395 million).

(Note 3) Segment profit is adjusted for operating profit in the consolidated financial statements.

(Note 4) Depreciation and amortization includes amortization of long-term prepaid expenses.

(Note 5) Increase in property, plant and equipment and intangible assets includes the amount of increase in long-term prepaid expenses.

*Fiscal year ended March 31, 2019*

	Millions of yen							
[2019]	Chemicals	Specialty Products	Cement	Life & Amenity	Others (Note 1)	Total	Adjustment (Note 2)	Consolidated (Note 3)
<b>Sales</b>								
Sales to customers	97,471	47,193	91,491	53,260	35,243	324,661	—	324,661
Inter-segment sales/transfer	908	12,474	874	2,018	26,127	42,404	(42,404)	—
<b>Total sales</b>	<b>98,380</b>	<b>59,668</b>	<b>92,366</b>	<b>55,279</b>	<b>61,370</b>	<b>367,065</b>	<b>(42,404)</b>	<b>324,661</b>
<b>Segment profit</b>	<b>16,850</b>	<b>9,934</b>	<b>3,204</b>	<b>3,236</b>	<b>4,337</b>	<b>37,564</b>	<b>(2,301)</b>	<b>35,262</b>
<b>Segment assets</b>	<b>53,995</b>	<b>62,916</b>	<b>55,427</b>	<b>59,190</b>	<b>51,408</b>	<b>282,938</b>	<b>96,691</b>	<b>379,630</b>
<b>Other items</b>								
Depreciation and amortization (Note 4)	2,582	2,533	3,359	2,399	3,441	14,315	777	15,093
Increase in property, plant and equipment and intangible assets (Note 5)	3,375	5,404	3,507	2,059	2,750	17,098	1,970	19,069

(Note 1) The "Others" segment comprises businesses other than those of the reportable segments and includes overseas sales business, a distribution business, a real estate business, etc.

(Note 2) Adjustments are as follows:

(i) The segment profit adjustment amount consists mainly of basic R&D expenses that are not allocable to a specific reportable segment and the amount of inter-segment eliminations.

(ii) The segment assets adjustment amount includes corporate assets that are not allocated to a specific reportable segment (¥123,060 million).

(Note 3) Segment profit is adjusted for operating profit in the consolidated financial statements.

(Note 4) Depreciation and amortization includes amortization of long-term prepaid expenses.

(Note 5) Increase in property, plant and equipment and intangible assets includes the amount of increase in long-term prepaid expenses.

## RELATED INFORMATION

### Fiscal year ended March 31, 2020

#### (1) Information by product and service

Information is omitted as identical information is disclosed in segment information.

#### (2) Information by region

##### (i) Net sales

	Millions of yen
	2020
Japan	256,493
Asia	47,290
Others	12,312
<b>Total</b>	<b>316,096</b>

(Note) Net sales are categorized into countries or regions based on the location of customers.

##### (ii) Property, plant and equipment

The listed amount of property, plant and equipment has been omitted because over 90% of property, plant and equipment listed on consolidated balance sheets is located in Japan.

#### (3) Information by major customer

Information is omitted because no external customer accounts for 10% or more of net sales in the consolidated statements of income.

### Fiscal year ended March 31, 2019

#### (1) Information by product and service

Information is omitted as identical information is disclosed in segment information.

#### (2) Information by region

##### (i) Net sales

	Millions of yen
	2019
Japan	263,449
Asia	49,292
Others	11,919
<b>Total</b>	<b>324,661</b>

(Note) Net sales are categorized into countries or regions based on the location of customers.

##### (ii) Property, plant and equipment

The listed amount of property, plant and equipment has been omitted because over 90% of property, plant and equipment listed on consolidated balance sheets is located in Japan.

#### (3) Information by major customer

Information is omitted because no external customer accounts for 10% or more of net sales in the consolidated statements of income.

## INFORMATION ON IMPAIRMENT LOSS OF NON-CURRENT ASSETS BY REPORTABLE SEGMENT

### Fiscal year ended March 31, 2020

	Millions of yen						
[2020]	Chemicals	Specialty Products	Cement	Life & Amenity	Others	Adjustment	Total
Impairment loss	34	—	—	—	—	—	34

**Fiscal year ended March 31, 2019**

	Millions of yen						
[2019]	Chemicals	Specialty Products	Cement	Life & Amenity	Others	Adjustment	Total
Impairment loss	—	—	—	363	—	—	363

## INFORMATION ON AMORTIZATION OF GOODWILL AND UNAMORTIZED BALANCE BY REPORTABLE SEGMENT

**Fiscal year ended March 31, 2020**

	Millions of yen						
[2020]	Chemicals	Specialty Products	Cement	Life & Amenity	Others	Adjustment	Total
Amortization of goodwill	—	7	197	—	—	—	204
Unamortized balance	—	3	—	—	—	—	3

There is neither amortization of negative goodwill nor unamortized balance arising from business combinations conducted on and before April 1, 2010.

**Fiscal year ended March 31, 2019**

	Millions of yen						
[2019]	Chemicals	Specialty Products	Cement	Life & Amenity	Others	Adjustment	Total
Amortization of goodwill	—	7	937	—	—	—	944
Unamortized balance	—	10	197	—	—	—	208

There is neither amortization of negative goodwill nor unamortized balance arising from business combinations conducted on and before April 1, 2010.

## INFORMATION ON GAIN ON BARGAIN PURCHASE BY REPORTABLE SEGMENT

**Fiscal year ended March 31, 2020**

In the fiscal year under review, the Company records gain on bargain purchase of ¥157 million under “Cement” segment.

**Fiscal year ended March 31, 2019**

In the fiscal year under review, the Company records gain on bargain purchase of ¥964 million under “Others” segment.

## INFORMATION ON RELATED PARTIES

**Fiscal years ended March 31, 2020 and 2019**

Not applicable.

## 26. PER SHARE INFORMATION

	yen	
	2020	2019
Net assets per share	2,431.21	2,199.83
Earnings per share	287.05	493.26
Diluted earnings per share	—	—

(Note 1) The basis for calculation

### 1. Net assets per share

	Millions of yen	
	2020	2019
Total net assets on Balance Sheets	180,429	163,525
Net assets related to common shares	168,861	152,781
Major breakdown of difference		
Non-controlling interests	11,568	10,743

	Thousand shares	
	2020	2019
Number of shares outstanding of common shares	69,934	69,934
Number of treasury shares of common shares	478	482
Number of common shares used to calculate net assets per share	69,455	69,451

### 2. Earnings per share

	Millions of yen	
	2020	2019
Profit attributable to owners of parent	19,937	34,279
Amount not attributable to common shareholders	—	—
Profit related to common shares attributable to owners of parent	19,937	34,279

	Thousand shares	
	2020	2019
Average number of common shares during the period	69,455	69,495

(Note 2) Company shares held in the executive compensation BIP (Board Incentive Plan) trust are included in treasury shares deducted from the total number of shares issued at the end of the consolidated fiscal year in calculating "net assets per share." The number of Company shares held in the executive compensation BIP (Board Incentive Plan) trust at the end of the consolidated fiscal year under review was 94 thousand shares. (The number of Company shares at the end of the previous fiscal year was 100 thousand shares)  
 Company shares held in the executive compensation BIP trust are included in treasury shares deducted when calculating the average number of common shares for the consolidated fiscal year. Of note, the average number of Company shares for the consolidated fiscal year under review held in the executive compensation BIP trust is 96 thousand shares (the average number of Company shares for the previous consolidated fiscal year was 58 thousand shares.)

(Note 3) Diluted earnings per share is not listed due to the absence of diluted shares.

## 27. SIGNIFICANT SUBSEQUENT EVENTS

Not applicable



## 28. ANNEXED CONSOLIDATED DETAILED SCHEDULES

### (1) Schedule of bonds payable

Schedule of bonds payable						Millions of yen	
Company	Issue	Date of Issuance	Interest rate	collateral	the term of redemption	2020	2019
Tokuyama	20th unsecured bonds without collateral	March 10, 2010	1.760%	No	March 10, 2020	—	10,000
					The amounts to be redeemed within 1 year	—	10,000
Tokuyama	22nd unsecured bonds without collateral	September 9, 2010	1.478%	No	September 9, 2020	15,000	15,000
					The amounts to be redeemed within 1 year	15,000	—
Tokuyama	24th unsecured bonds without collateral	September 8, 2011	1.371%	No	September 8, 2021	9,400	9,400
					The amounts to be redeemed within 1 year	—	—
Total						24,400	34,400
The amounts to be redeemed within 1 year						15,000	10,000

(Note 1) In the cases of the 20th, 22nd and 24th series of unsecured bonds, we delegated the performance of the obligation based on an unsecured bond trust-type debt assumption agreement that had been executed with a bank. Accordingly, although the liabilities pertaining to those unsecured bonds and the amount paid under that same contract offset each other, since the obligation to redeem the Company's unsecured bonds to bondholders continued until the time of their redemption, this is noted as a contingent liability on the consolidated balance sheets.

(Note 2) Amounts of redemption within five years after the consolidated balance sheet date are as follows:

	Millions of yen
<b>Year ending March 31</b>	
2021	15,000
2022	9,400
2023	—
2024	—
2025	—

### (2) Schedule of borrowings

	Millions of yen	
	2020	2019
Short-term borrowings (0.51%)	3,082	4,361
Current portion of long-term borrowings (0.91%)	16,106	12,667
Current portion of lease obligations	870	758
Long-term borrowings due in 2021-2078 (1.36%)	94,255	109,411
Lease obligations due in 2021-2028	2,028	1,767
<b>Total</b>	<b>116,344</b>	<b>128,966</b>

(Note 1) "Average interest rate" shows the weighted average interest rate on the ending balance of borrowings, etc.

(Note 2) The average interest rate on lease obligations is not presented because lease obligations are recorded at the amount before deduction of the amount equivalent to interest included in total lease payments, in the consolidated balance sheets.

(Note 3) The amounts of long-term borrowings, and lease obligations (excluding current portion of them) to be repaid within five years after the consolidated balance sheet date are as follows:

Long-term borrowings	Millions of yen
<b>Year ending March 31</b>	
2022	9,918
2023	21,966
2024	1,122
2025	536

Lease obligations	Millions of yen
<b>Year ending March 31</b>	
2022	763
2023	591
2024	347
2025	200

### (3) Schedule of asset retirement obligations

Information is omitted since the amounts of asset retirement obligations at the beginning and end of the consolidated fiscal year under review are 1% or less of the total of liabilities and net assets at the beginning and end of the consolidated fiscal year under review.

### (4) Others

*Quarterly information for the consolidated fiscal year ended March 31, 2020*

Accumulated period	1Q	2Q	3Q	Current consolidated fiscal year
Net sales (Millions of yen)	76,465	152,749	236,543	316,096
Profit before income taxes (Millions of yen)	6,158	13,410	23,390	27,917
Profit attributable to owners of parent (Millions of yen)	4,859	10,400	18,011	19,937
Earnings per share (yen)	69.97	149.75	259.32	287.05

Accumulated period	1Q	2Q	3Q	Current consolidated fiscal year
Earnings per share (yen)	69.97	79.67	109.57	27.73

(Note) The Company records shares held in the executive compensation BIP (Board Incentive Plan) trust as treasury shares. In addition, said shares are included in treasury shares deducted when calculating the average number of shares for the fiscal year based on calculations of earnings per share.

## INDEPENDENT AUDITOR'S REPORT

To the Board of Directors of Tokuyama Corporation

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**Grant Thornton Taiyo LLC**  
Umeda Center Bldg. 25F,  
2-4-12 Nakazakinishi, Kita-ku,  
Osaka, 530-0015, Japan  
T +81 (0)6 6373 3030  
F +81 (0)6 6373 3303

### Opinion

We have audited the accompanying consolidated financial statements of Tokuyama Corporation and its consolidated subsidiaries (the Group), which comprise the consolidated balance sheets as at March 31, 2020, and the consolidated statements of income, consolidated statements of comprehensive income, consolidated statements of changes in net assets, and consolidated statements of cash flows for the year then ended, and notes to the consolidated financial statements, including a summary of significant accounting policies, all expressed in Japanese yen.

In our opinion, the accompanying consolidated financial statements present fairly, in all material respects, the consolidated statement financial position of the Group as at March 31, 2020, and its consolidated financial performance and its consolidated cash flows for the year then ended in accordance with accounting principles generally accepted in Japan.

### Basis for Opinion

We conducted our audit in accordance with auditing standards generally accepted in Japan. Our responsibilities under those standards are further described in the *Auditor's Responsibilities for the Audit of the Consolidated Financial Statements* section of our report. We are independent of the company in accordance with the ethical requirements that are relevant to our audit of the financial statements in Japan and we have fulfilled our other ethical responsibilities in accordance with these requirements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

## **Responsibilities of Management and Audit & Supervisory Committee for the Consolidated Financial Statements**

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

In preparing the consolidated financial statements, management is responsible for assessing the Group's ability to continue as a going concern, disclosing, as applicable, matters related to going concern.

Audit & Supervisory Committee is responsible for overseeing the Group's financial reporting process.

## **Auditor's Responsibilities for the Audit of the Consolidated Financial Statements**

Our objectives are to obtain reasonable assurance about whether the consolidated financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these consolidated financial statements.

As part of an audit in accordance with auditing standards generally accepted in Japan, we exercise professional judgment and maintain professional skepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the consolidated financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion.



- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.
- Conclude on the appropriateness of management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Group's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Company to cease to continue as a going concern.
- Evaluate the overall presentation, structure and content of the consolidated financial statements, including the disclosures, and whether the consolidated financial statements represent the underlying transactions and events in a manner that achieves fair presentation, as well as if the presentation and disclosures of financial statements, including related notes is prepared in accordance with generally accepted accounting standards in Japan.
- Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Group to express an opinion on the consolidated financial statements. We are responsible for the direction, supervision and performance of the group audit. We remain solely responsible for our audit opinion.

We communicate with Audit & Supervisory Committee regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.





We also provide Audit & Supervisory Committee with a statement that we have complied with relevant ethical requirements regarding independence, and to communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, related safeguards.

**Interest required to be disclosed by the Certified Public Accountants Act of Japan**

Our firm and its designated engagement partners do not have any interest in the Company which is required to be disclosed pursuant to the provisions of the Certified Public Accountants Act of Japan.

*Tomohiro Ohki* 

Tomohiro Ohki  
Designated Engagement Partner  
Certified Public Accountant  
Grant Thornton Taiyo LLC  
Osaka, Japan  
September 11, 2020

*Hideyasu Kodama* 

Hideyasu Kodama  
Designated Engagement Partner  
Certified Public Accountant



# Tokuyama Corporation

FRONT PLACE AKIHABARA,  
7-5, Sotokanda 1-chome, Chiyoda-ku, Tokyo 101-8618, Japan  
Corporate Communications & Investor Relations Department  
Corporate Social Responsibility Division  
TEL: +81-3-5207-2552 FAX: +81-3-5207-2578  
URL: <https://www.tokuyama.co.jp/eng/>