Chemistry with a heart
TOKUYAMA

# TOKUYAMA CORPORATION

## Annual Report 2019

Year ended March 31, 2019

# Our 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 its traditional businesses in Japan

## 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

# Contents

# Profile

Tokuyama Corporation was founded in 1918 to begin production in Japan of soda ash, also known as sodium carbonate, which was being imported at that time. As a fundamental material for industry, soda ash was indispensable for facilitating the country's industrial development in the early 20th century.

The company has gone on to produce and supply a wide range of chemical products. Building on this foundation, Tokuyama is currently expanding its main businesses globally, with a special focus on its information and electronics business, which markets semiconductor-related products, the life and healthcare business, which includes eyeglass lens materials, dental materials and other products, as well as cement, recycling and environment-related businesses.

On February 16, 2018, Tokuyama celebrated the 100th anniversary of its foundation. We at the Tokuyama Group are committed to creating new value centered on the field of chemistry. In creating a constant stream of new value, we will contribute to people’s happiness as well as the growth and development of society.

# Company History


The Factory as it was established


1960’s Cement kiln (length: 185m)


Tokuyama Factory (Current)

### 1918～1944 Establishment and specialization in soda production

1918 Nihon Soda Kogyo Co., Ltd. (currently Tokuyama Corporation) was established to produce soda ash
1938 Commenced cement business
1940 Expansion of inorganic chemicals business

### 1945～1960 Further expansion of inorganic chemicals business

1952 Commenced electrolytic chlor-alkali business

### 1961～1974 Entry into petrochemicals business

1964 Commenced petrochemicals business
1966 Commenced polyvinyl chloride business
1967 Commenced ion exchange membrane business
1970 Commenced polypropylene business

### 1975～1989 Entry into specialty and processing business

1976 Commenced polyolefin film business
1978 Commenced dental materials and equipment business
1981 Commenced building materials business
1982 Commenced life-related business
Commenced fine chemicals business
1983 Commenced IC chemicals business (high-purity chemicals for electronics manufacturing)
Commenced medical diagnosis systems business
1984 Commenced electronic materials business (polycrystalline silicon)
1985 Commenced aluminum nitride business
Commenced gas sensors business

### 1990～2004 Strengthening and restructuring of business

1992 Established Sun • Tox Co., Ltd. as a joint venture for manufacture and sale of polyolefin film
1995 Established Shin Dai-ichi Vinyl Corporation as a joint concern for manufacture and sale of polyvinyl chloride
2000 Commenced recycling & environment-related business

### 2005～ Accelerating overseas business expansion

2005 Established Tokuyama Chemicals (Zhejiang) Co., Ltd. in Zhejiang, China as a manufacturing and sales company of fumed silica
Established Tokuyama Trading (Shanghai) Co., Ltd., as a China-based local subsidiary.
2013 Established Tokuyama Nouvelle Calédonie S.A., in New Caledonia, as a manufacturing and sales company of cement.

### 2016～ Re- Foundation

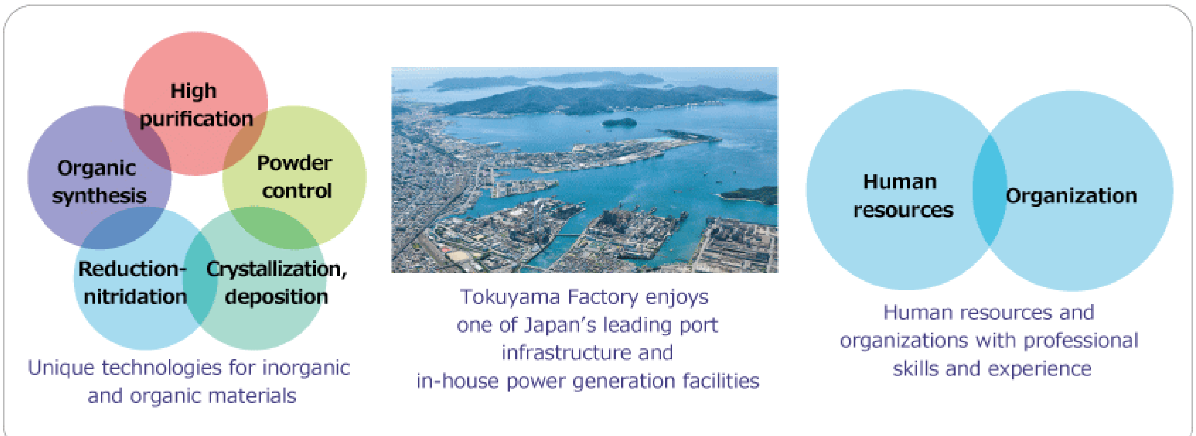
2017 Transferred all of the shares of Tokuyama Malaysia Sdn. Bhd.
2018 Acquire all shares of TOKUYAMA KAIRIKU UNSO K.K.

# A Value Creation Cycle that Spans Close to a Century

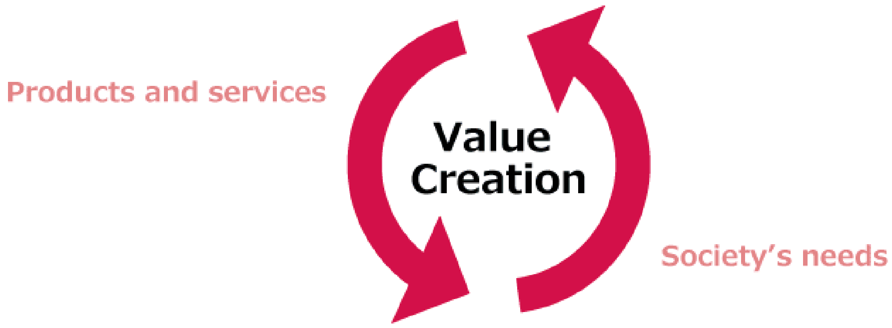
Drawing on its unique technologies in the manufacture and development of inorganic and organic chemicals, Tokuyama has continued to refine its capabilities as the driving force behind its value creation endeavors for just short of a century.

As a platform for the manufacture and seamless delivery of products that employ these technologies to reduce costs to an unprecedented level, the Company also makes full use of the industry-leading port infrastructure and in-house power generation facilities owned and operated by Tokuyama Factory. Located in the Shunan Industrial Complex, Tokuyama Factory works diligently to deepen ties with neighboring companies. In addition to the supply of electric power and raw materials, Tokuyama Factory actively engages in the collection of waste. As the Group's main manufacturing facility, Tokuyama Factory boasts a highly efficient production structure and systems that link several plants and operational units to ensure the integrated and effective use of raw materials, products, byproducts, and waste.

Taking full advantage of its tangible and intangible asset including unique technologies, competitive manufacturing facilities as well as human resources and organizations with professional skills and experience, the Tokuyama Group provides products and services that match the needs of the market. With a proven track record of creating value with our customers for a century, we will continue to fine tune our business model as a core and inherent strength.




## Source of Value Creation

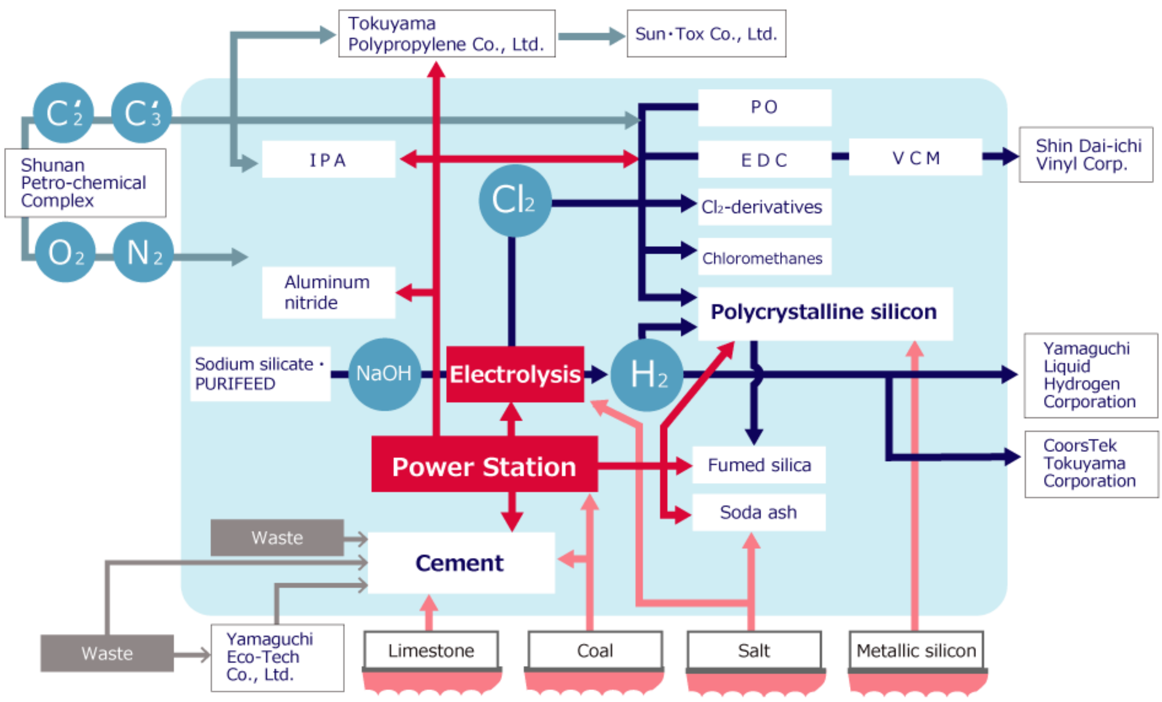



## Business Field

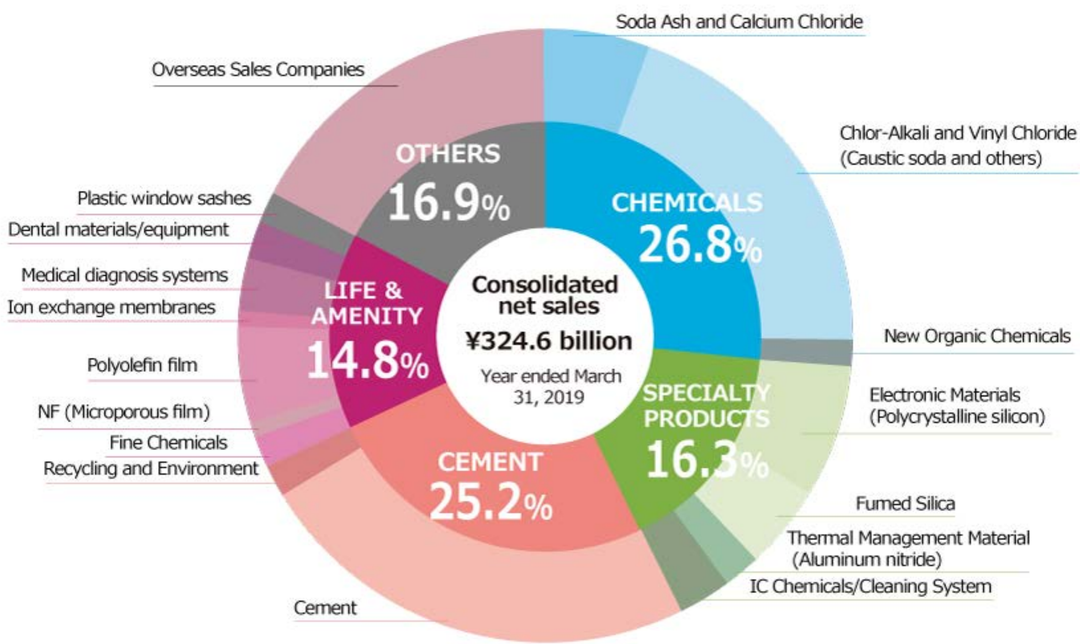
Customers

| | | |
|---|---|---|
| Information and electronics | High-purity polycrystalline silicon<br>High-purity chemicals for electronics manufacturing | Fumed silica<br>Thermal Management Material |
| Environment and energy | Recycling and environment-related business<br>Plastic window sashes<br>Ion exchange membranes | |
| Life and healthcare | Caustic soda<br>Chlorine derivatives<br>Polyvinyl chloride<br>Soda ash<br>Cement<br>Polyolefin film | Plastic lens-related materials<br>Bulk pharmaceutical ingredients/intermediates<br>Microporous film<br>Dental materials/equipment<br>Medical diagnosis systems |

## Open Integration in the Tokuyama Factory




## Our Business Portfolio

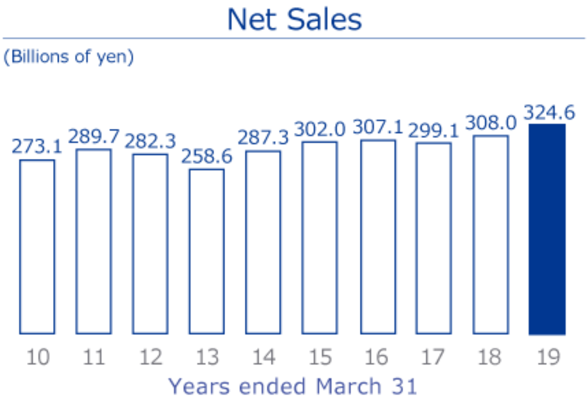


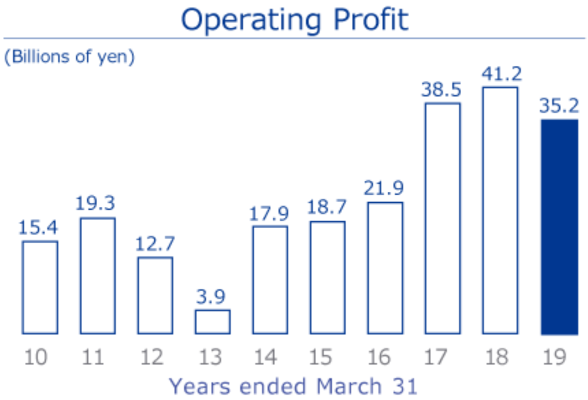
# Consolidated Financial Highlights

Tokuyama Corporation and Consolidated Subsidiaries Years ended March 31

| | Millions of yen | | | | |
|---|---|---|---|---|---|
| | 2010 | 2011 | 2012 | 2013 | 2014 |
| Net sales | 273,154 | 289,786 | 282,381 | 258,632 | 287,330 |
| Operating profit (Note 1) | 15,486 | 19,313 | 12,721 | 3,993 | 17,960 |
| Profit (loss) attributable to owners of parent | 7,458 | 9,765 | 9,351 | (37,916) | 10,218 |
| Per share amounts (in yen) (Note 2,3) | | | | | |
| Basic earnings (loss) | 117.58 | 140.32 | 134.37 | (544.88) | 146.86 |
| Cash dividends | 6.00 | 6.00 | 6.00 | 3.00 | 6.00 |
| Net assets | 3,410.17 | 3,465.91 | 3,581.95 | 3,126.42 | 3,300.88 |
| Total assets | 452,893 | 474,708 | 501,181 | 518,251 | 576,315 |
| Net assets | 243,606 | 247,656 | 255,460 | 223,871 | 236,453 |
| Cash flows from operating activities | 29,380 | 37,043 | 27,060 | 17,071 | 34,105 |
| Cash flows from investing activities | (36,468) | (88,508) | (57,666) | (60,673) | (64,402) |
| Cash flows from financing activities | 46,990 | 23,994 | 20,791 | 36,465 | 45,939 |
| Cash and cash equivalents at end of the year | 95,945 | 68,624 | 58,476 | 52,431 | 69,973 |
| Capital expenditures | 26,557 | 35,807 | 77,602 | 97,549 | 61,051 |
| Depreciation and amortization (Note 4) | 37,688 | 31,476 | 28,492 | 23,242 | 16,770 |
| R&D expenses | 11,817 | 11,469 | 11,704 | 10,076 | 8,709 |
| Shareholders' equity ratio (%) | 52.4 | 50.8 | 49.7 | 42.0 | 39.9 |
| Return on equity (%) | 3.5 | 4.1 | 3.8 | (16.2) | 4.6 |
| Number of employees | 5,444 | 5,493 | 5,506 | 5,651 | 5,756 |
| Consolidated subsidiaries | 49 | 50 | 48 | 49 | 53 |

(Note 1):Net sales doesn't include consumption tax ,etc.
(Note 2): 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 ending March 31, 2010. The cash dividends per share for the fiscal year ending March 31, 2018 is the total after the share consolidation. The cash dividends per share before the fiscal year ended March 31, 2017 are not re-calculated retrospectively.
(Note 3): On September 3, 2018, the Company established a Director Remuneration BIP (Board Incentive Plan) Trust (hereinafter referred to as "the BIP Trust") with the Company's stock held by the BIP Trust recorded as treasury stock. In addition, this treasury stock is included in the treasury stock that is 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 the treasury stock that is deducted when computing the average number of shares over the period in calculations for net income per share.
(Note 4): Depreciation and amortization includes amortization of long-term prepaid expenses.
(Note 5): Effective from the fiscal year ended March,31 2019 under review, 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).
(Note 6):U.S. dollar amounts above and elsewhere in this annual report are converted from Japanese yen, for convenience only, at the rate of ¥111＝US$1.



| | Millions of yen | | | | | Thousands of U.S. dollars (Note 6) |
|---|---|---|---|---|---|---|
| | 2015 | 2016 | 2017 | 2018 | 2019 | 2019 |
| Net sales | 302,085 | 307,115 | 299,106 | 308,061 | 324,661 | 2,924,874 |
| Operating profit (Note 1) | 18,705 | 21,936 | 38,533 | 41,268 | 35,262 | 317,682 |
| Profit (loss) attributable to owners of parent | (65,349) | (100,563) | 52,165 | 19,698 | 34,279 | 308,820 |
| Per share amounts (in yen, U.S. dollars) ( Note 2,3) | | | | | | |
| Basic earnings (loss) | (939.26) | (1,445.49) | 738.92 | 259.81 | 493.26 | 4.44 |
| Cash dividends | - | - | - | 30.00 | 50.00 | 0.45 |
| Net assets | 2,336.78 | 739.90 | 1,527.42 | 1,806.56 | 2,199.83 | 19.82 |
| Total assets | 554,527 | 401,342 | 424,433 | 361,949 | 379,630 | 3,420,091 |
| Net assets | 169,445 | 60,205 | 135,976 | 136,591 | 163,525 | 1,473,200 |
| Cash flows from operating activities | 30,772 | 30,098 | 20,012 | 61,885 | 38,531 | 347,132 |
| Cash flows from investing activities | (25,519) | 13,400 | (10,089) | (12,665) | (16,174) | (145,716) |
| Cash flows from financing activities | 40,502 | (37,689) | (11,911) | (101,209) | (21,104) | (190,130) |
| Cash and cash equivalents at end of the year | 116,122 | 121,166 | 118,819 | 66,807 | 67,991 | 612,537 |
| Capital expenditures | 25,345 | 13,945 | 17,360 | 15,941 | 18,581 | 167,402 |
| Depreciation and amortization (Note 4) | 18,845 | 20,084 | 14,215 | 13,985 | 15,093 | 135,976 |
| R&D expenses | 10,156 | 8,522 | 7,508 | 7,903 | 8,052 | 72,543 |
| Shareholders' equity ratio (%) | 29.3 | 12.8 | 29.9 | 34.7 | 40.2 | - |
| Return on equity (%) | (33.3) | (94.0) | 58.5 | 15.6 | 24.6 | - |
| Number of employees | 5,852 | 5,759 | 5,406 | 4,889 | 5,471 | - |
| Consolidated subsidiaries | 54 | 55 | 51 | 49 | 52 | - |

(Note 1):Net sales doesn't include consumption tax ,etc.
(Note 2): 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 ending March 31, 2010. The cash dividends per share for the fiscal year ending March 31, 2018 is the total after the share consolidation. The cash dividends per share before the fiscal year ended March 31, 2017 are not re-calculated retrospectively.
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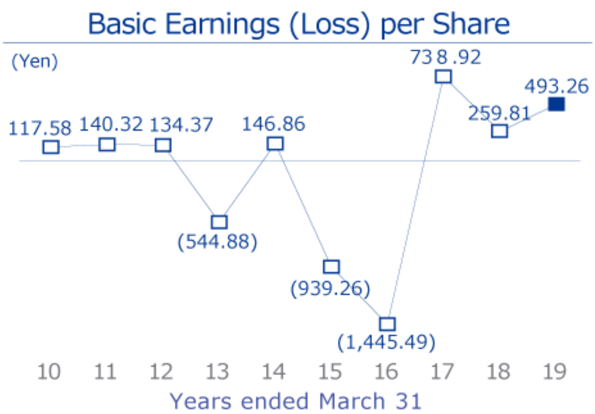
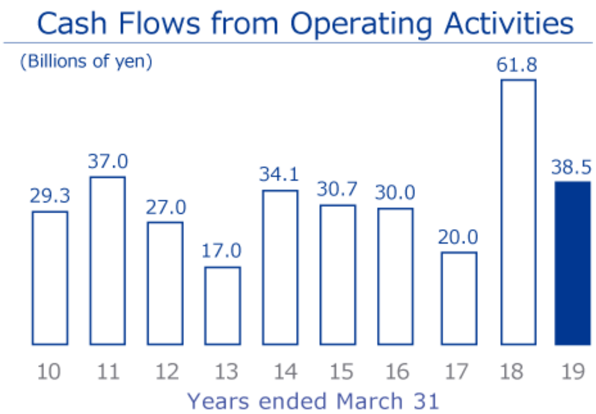


# Segment Information

## CHEMICALS

Tokuyama's Chemicals segment handles basic chemicals used as raw materials for an array of products that are essential for people's livelihoods. Among these are soda ash, which Tokuyama has been producing since its founding in 1918, and caustic soda, a material which is said to be “essential for the manufacture of products in factories.” These and other chlorine derivatives are used in a very wide range of applications and are essential for all kinds of industries. The caustic soda business also plays an additional role in Tokuyama's earnings platform, as its manufacturing process generates chlorine and hydrogen that are used in processes for producing the Company's polycrystalline silicon. In addition, Yamaguchi Liquid Hydrogen Corporation, a joint venture for liquid hydrogen production, commenced operations in 2013. Through these operations, the Company’s hydrogen is also used for rocket fuel at the Tanegashima Space Center of Japan Aerospace Exploration Agency (JAXA). In this way, the segment is contributing to the development of space exploration.

With the goal to continue ensuring that Tokuyama is the preferred choice of customers, the Chemicals segment oversees three business units and Group companies while working to provide a stable supply of products and services that meet the expectations and needs of customers in a timely manner.

| Business Unit | Major Products |
|---|---|
| Soda Ash and Calcium Chloride | Soda ash, Calcium chloride and Sodium silicate |
| Chlor-Alkali and Vinyl Chloride | Caustic soda, Vinyl chloride monomer (VCM), Propylene oxide and Chlorinated solvents |
| New Organic Chemicals | Isopropyl alcohol (IPA) |
| Group Companies | Soda ash and Calcium chloride [Tokuyama Soda Trading Co., Ltd.]<br>Polyvinyl chloride (PVC) [Shin Dai-ichi Vinyl Corp.] |

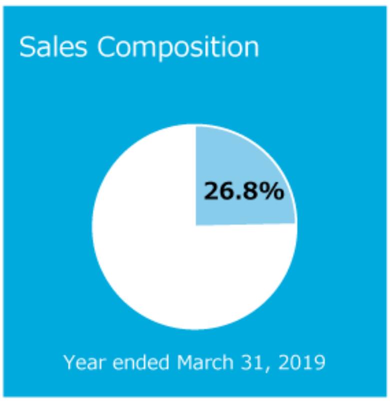
### Operating Results for the Fiscal Year ended March 31, 2019

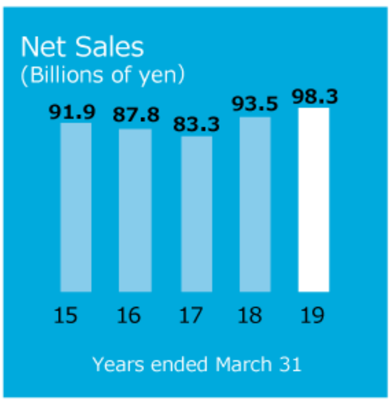
With regard to caustic soda, the revision of selling prices was progressed. As a result, its operating profit increased greatly.

Sales volume of vinyl chloride resin was steady. Meanwhile, manufacturing costs increased due to a rise in raw material prices such as domestic naphtha. As a result, its operating profit decreased.

Calcium chloride sales volume decreased and operating profit was down due to the effects of a warm winter.

As a result of the above, segment net sales increased 5.2% compared with the previous fiscal year, to ¥98,380 million and operating profit increased 4.2% to ¥16,850 million. The segment reported higher earnings on higher sales.




## Strategies Going Forward

Tokuyama will contribute to the development of customers' businesses and the creation of a healthy and safe society by delivering high-quality, cost-competitive basic chemical materials and services that properly and promptly reflect customers' needs. At the same time, we will help to ensure the Company' stable and continuous earnings growth, all through our activities as the core business of the Group. Guided by this basic policy, we will push forward the following priority measures.

■ Soda Ash and Calcium Chloride Business

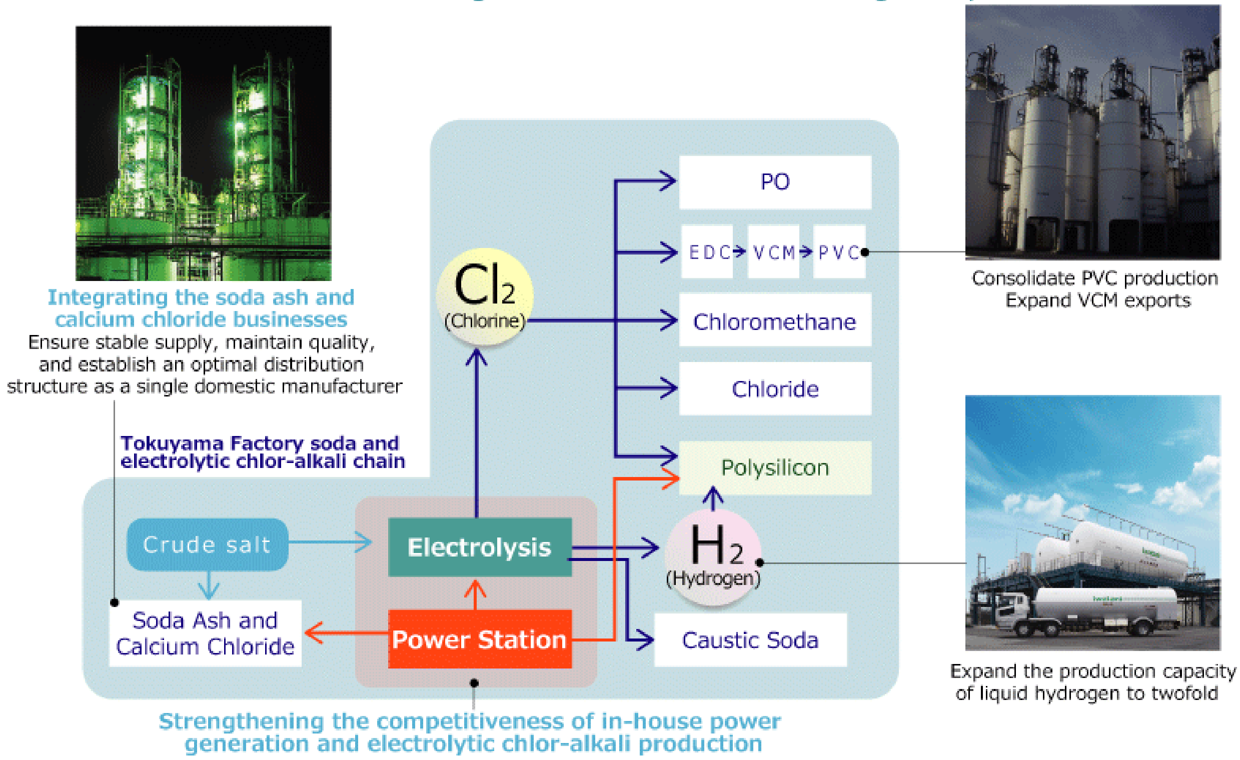
We will ensure the stable supply of products while maintaining quality as a sole domestic manufacturer.

■ Chlor-Alkali and Vinyl Chloride Business

From a manufacturing cost competitiveness perspective, we will work to secure a leading position by engaging in thoroughgoing cost reduction activities while further enhancing our high technological skills and improving our manufacturing process capabilities.

Moreover, we will strengthen our caustic soda and vinyl chloride monomer (VCM) export structure and systems while maintaining plant operations at full capacity.

### Activities Aimed at Reconstructing Businesses and Reinforcing Competitiveness



# SPECIALTY PRODUCTS

The Specialty Products segment offers products for a wide range of fields including energy, electronics and the environment. Our high-purity polycrystalline silicon is used for semiconductors and solar cells. Tokuyama is one of the leading companies in the world's polycrystalline silicon market. Fumed silica, which is produced from a by-product of polycrystalline silicon manufacture, is used for silicone rubber, polishing material for semiconductors manufacturing, copier toner and other applications. Aluminum nitride, which boasts excellent heat dissipation properties, is used for semiconductor production equipment and energy-saving applications such as inverters and LEDs. Our high-purity chemicals for electronics manufacturing are used chiefly for production of semiconductors and LCD panels.

The Specialty Products segment will continue to build on its advanced chemical technologies such as high purification, powder control and others, to create unique products that are useful to society.

| Business Unit | Major Products |
|---|---|
| Electronic Materials | High-purity Polycrystalline silicon |
| Fumed Silica | Fumed silica and Tetrachlorosilane |
| Thermal Management Material | Aluminum nitride |
| IC Chemicals | High-purity chemicals for electronics manufacturing and photoresist developer |
| Cleaning System | Methylene chloride for metal cleaning |
| Group Companies | Fumed silica [Tokuyama Chemicals (Zhejiang) Co., Ltd.]<br>Aluminum nitride substrate [Tokuyama-Dowa Power Materials Co., Ltd.]<br>High-purity chemicals for electronics manufacturing [Taiwan Tokuyama Corporation] |

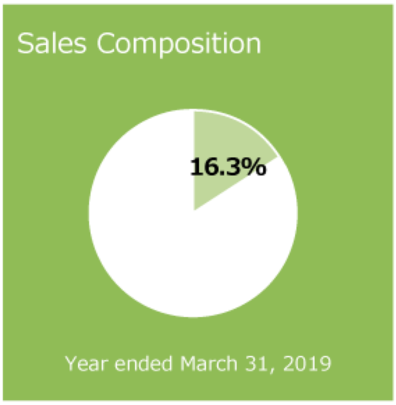
## Operating Results for the Fiscal Year ended March 31, 2019

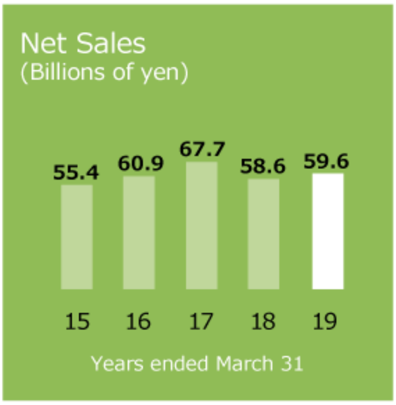
Sales volume of semiconductor-grade polycrystalline silicon was steady. Meanwhile, manufacturing costs increased due to an upturn in fuel and raw material costs. As a result, its operating profit decreased.

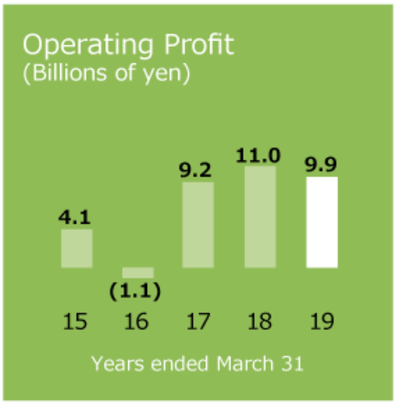
With regard to high-purity chemicals for electronics manufacturing, sales volume was steady. Meanwhile, manufacturing costs increased due to a rise in raw material prices such as domestic naphtha. As a result, its operating profit decreased.

With regard to thermal management material, sales volume in such applications used for semiconductor manufacturing equipment increased and the business did well.

As a result of the above, segment net sales increased 1.7% compared with the previous fiscal year, to ¥59,668 million and operating profit decreased 9.7% to ¥9,934 million. The segment reported lower earnings on higher sales.



## Strategies Going Forward

We will work to expand our business and earnings by supporting those industries that enrich people's lives through the provision of providing high-performance materials in the telecommunications and electronics, environment and energy, and other fields while at the same time putting forward next-generation product proposals. Guided by this basic policy, we will push forward the following priority measures.

■ Semiconductor-grade Polycrystalline Silicon Business

We will accurately grasp customers' product quality needs encompassing their most recent requirements; achieve world-leading quality while minimizing costs.

■ Fumed Silica Business

In addition to upgrading and expanding highly functional products as well as CMP- and silicone-related products, we will reduce production costs and promote high added value at Tokuyama Chemicals (Zhejiang) Co., Ltd.

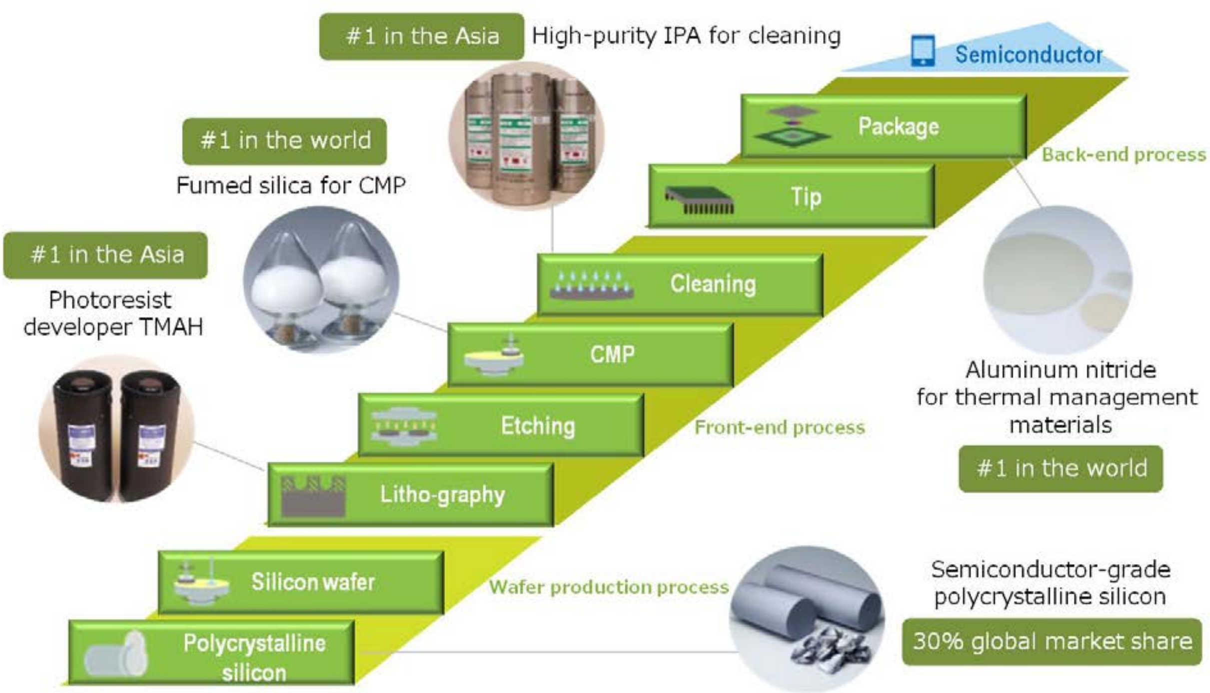
■ IC Chemicals Business

In addition to expanding sales and improving the quality of advanced semiconductor-grade products, we will work to boost production capacity in Japan, Taiwan, and China while establishing a supply structure and systems that address demand in the Asia region.

■ Thermal Management Material Business

We will increase the annual production capacity of high-purity aluminum nitride powder from 600 tonnes to 840 tonnes in April 2020 and establish a stable supply structure and systems.
We will promote efforts aimed at expanding our lineup of boron nitride, aluminum nitride filler, and other products.

### Tokuyama's Semiconductor-Related Products that Underpin Advances in ICT



# CEMENT

Tokuyama launched its cement business in 1938 out of a desire to efficiently make use of by-products produced at the Tokuyama Factory, an environmental approach that was ahead of its time in Japan. The segment produces cement and such related products as cement-type soil solidifiers at the Nanyo Plant of the Tokuyama Factory. These products are used for ready-mixed concrete and secondary concrete items, which in turn are used to help build infrastructure essential for people's lives, including residences, buildings, structures which support essential utilities, and transportation facilities such as ports, bridges, and roads.

In the cement production process, we accept a large volume of waste matter, including waste plastic and household garbage incineration ash from outside the Company as well as inside the Company, and utilize it as raw materials or fuel sources. In this way, the segment is promoting a recycling approach that is responsive to the needs of society, thereby helping promote a recycling-oriented society that effectively makes use of resources as much as possible.

Tokuyama Mtech Corporation manufactures and sells various types of building materials products including cement- and mortar-type products. Moreover, the Cement segment strives to develop products that can create new business possibilities by employing the technologies it has developed in the cement and building material fields. For example, steps are being taken to roll out Fresco Graph and other cutting-edge techniques that incorporate 3-D modeling technologies using Shikkui Lemarge interior design materials and other classic style fresco painting plaster techniques.

| Business Unit | Major Products and Services |
|---|---|
| Cement | Cement, Ready-mixed concrete and Cement-type soil solidifier |
| Recycling and Environment | Resource recycling business |
| Group Companies | Cement and Ready-mixed concrete [Hiroshima Ready Mixed Concrete Co., Ltd and Tokuyama Tsusho Trading Co., Ltd., etc.] |

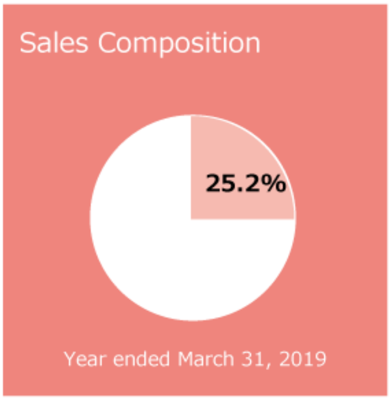
## Operating Results for the Fiscal Year ended March 31, 2019

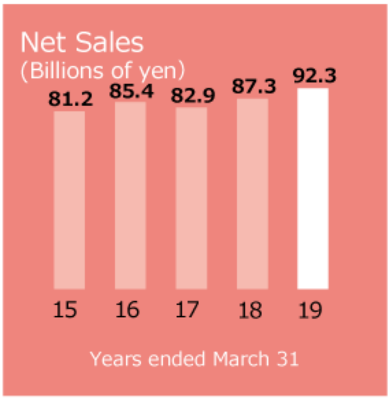
With regard to cement, domestic sales volume was weak and manufacturing costs increased due to a rise in raw material prices such as coal. As a result, its operating profit decreased.

In the resource recycling business, its business result was almost same as the previous fiscal year.

Consolidated subsidiary net sales increased. This mainly reflected the robust shipping trends of cement-related products.

As a result of the above, segment net sales increased 5.7% compared with the previous fiscal year, to ¥92,366 million and operating profit decreased 29.9% to ¥3,204 million. The segment reported lower earnings on higher sales.




## Strategies Going Forward

We will work to reduce environment impact and help realize a sustainable society by ensuring the supply of high-quality basic construction materials including cement, contributing to the creation of a strong and rich nation, and promoting the treatment and recycling of certain waste difficult to dispose by utilizing chemical technologies. Guided by this basic policy, we will push forward the following priority measures.

■ Cement Business

Tokuyama will improve production efficiency as well as unit consumption and reduce costs focusing mainly on efforts to increase the use/intake of waste while improving energy efficiency.
We will foster the building materials business focusing mainly on infrastructure maintenance and reinforcement activities into the next earnings pillar.

■ Recycling and Environment Business

We will ensure the stable treatment of waste generated within the Company and assume responsibility for the Group's competitiveness while rolling out new environmental businesses using proprietary technologies.

### Expand Cement Clinker Exports

Clinker ship loader (Tokuyama Factory)

Tokuyama Nouvelle Calédonie S.A.

# LIFE & AMENITY


The Life & Amenity Division consists of Group companies that handle such wide-ranging products as polyolefin films, medical diagnosis systems, dental materials, ion exchange membranes and plastic window sashes. The Division is also in charge of the Tokuyama's Bulk pharmaceutical ingredients / intermediates (MA) business, Plastic lens-related materials for glasses (TS) business and Microporous film (NF) business.

MA business and TS business, utilizing our organic synthetic technology to advantage, we are expanding this business with eyeglass lens materials, active pharmaceutical ingredients for generic pharmaceuticals, and intermediates as our main products. NF business, we manufacture and sell air-permeable films (microporous films) that repel water but allow air and moisture to penetrate.

Shanghai Tokuyama Plastics Co., Ltd., one of the Group companies we are responsible for, manufactures and sells air-permeable films used for disposable diapers.

| Business Unit | Major Products |
|---|---|
| Bulk pharmaceutical ingredients / intermediates (MA) | Bulk pharmaceutical ingredients/intermediates |
| Plastic lens-related materials for glasses (TS) | Photochromic dye materials |
| Microporous film (NF) | Porum, NF Sheet |
| Group Companies | Polyolefin film [Sun•Tox Co., Ltd.]<br>Medical diagnosis systems [A&T Corp.]<br>Dental materials [Tokuyama Dental Corp.]<br>Ion exchange membranes [ASTOM Corp.]<br>Plastic window sashes [Excel Shanon Corp.] |

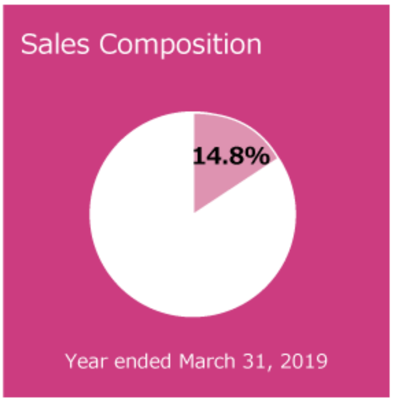
## Operating Results for the Fiscal Year ended March 31, 2019

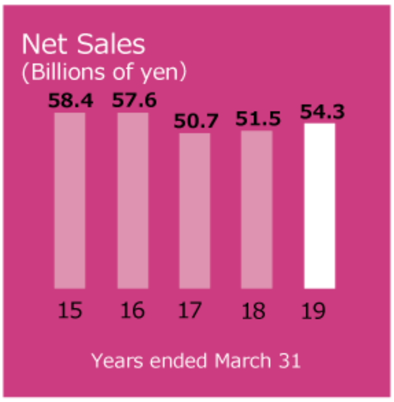
With regard to plastic lens-related materials, sales volume of photochromic dye materials for eyeglass lenses increased.

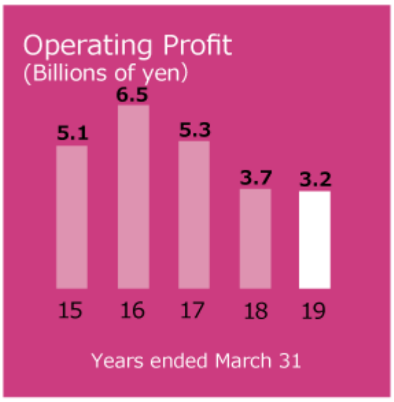
With regard to ion exchange membranes, despite sales volume was steady, its operating profit decreased due to large-scale project recorded in the previous fiscal year.

With regard to active pharmaceutical ingredients and intermediates as well as dental materials, the sales volume of each increased, and business performance was robust.

As a result of the above, segment net sales increased 5.4% compared with the previous fiscal year, to ¥54,380 million and operating profit decreased 13.1% to ¥3,238 million. The segment reported lower earnings on higher sales.



## Strategies Going Forward

Tokuyama is securing a position of advantage in markets both in Japan and overseas, pursuing business expansion, and contributing to the improvement of people's quality of life by establishing and strengthening its customer-oriented development, manufacturing, and sales structure. Driven by this policy, we will advance the following priority measures.

■ MA Business

In addition to upgrading and expanding the development pipeline and strengthening the profitability of existing products, we will accelerate the pace of pharmaceutical peripheral business (cosmetics, supplements, and veterinary products) roll out.

■ TS Business

We will expand market share and cultivate new applications in photochromic dye materials for use in eyeglass lenses.

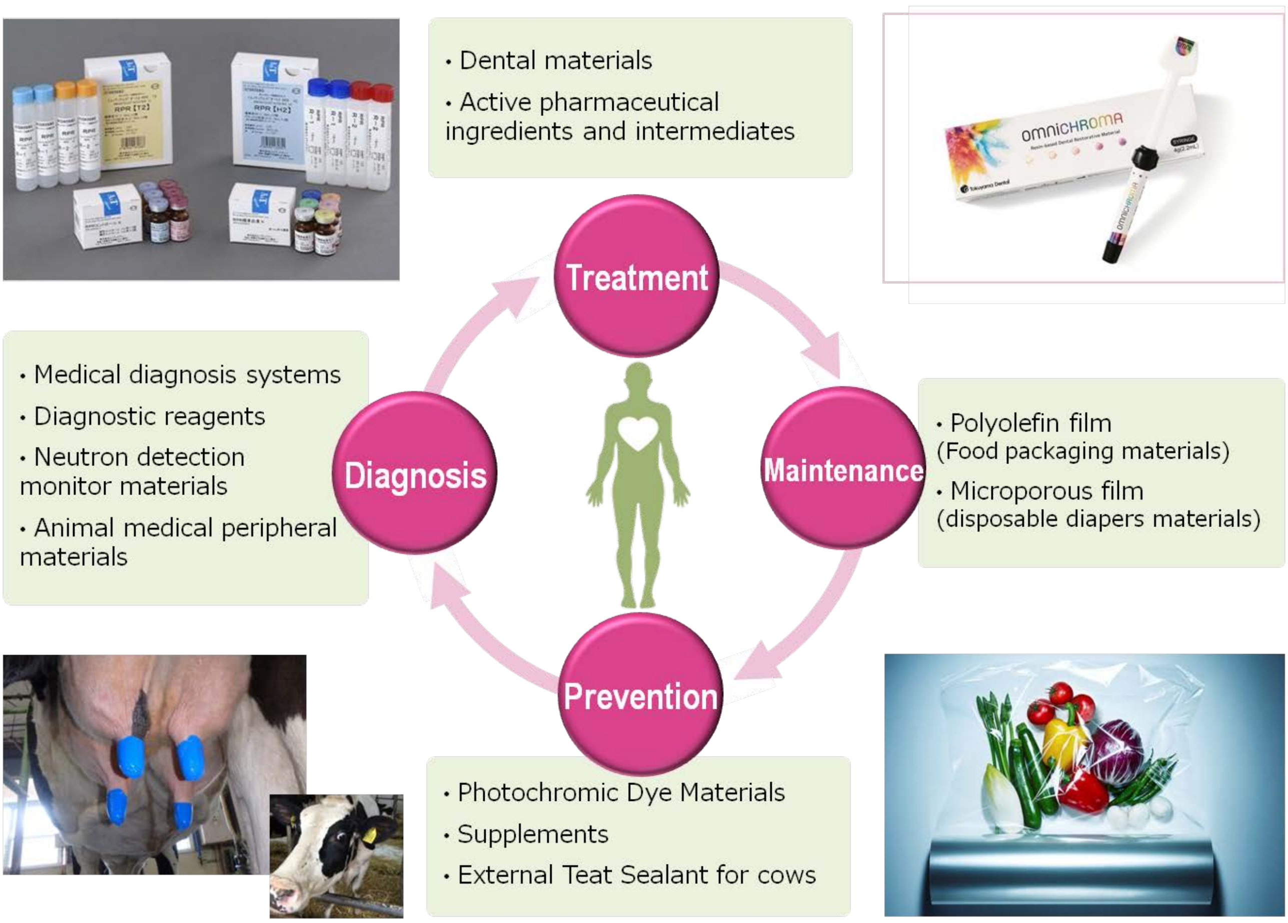
■ Dental Materials Business (Tokuyama Dental Corporation)

Focusing mainly on aesthetic filling materials (composite resins), we will work to expand the business by rolling out products in existing fields globally. In addition, we will strengthen the development structure and systems as well as marketing of next-generation businesses.

■ Medical diagnosis systems Business (A&T Corporation)

We will strengthen global business development and expand sales markets.

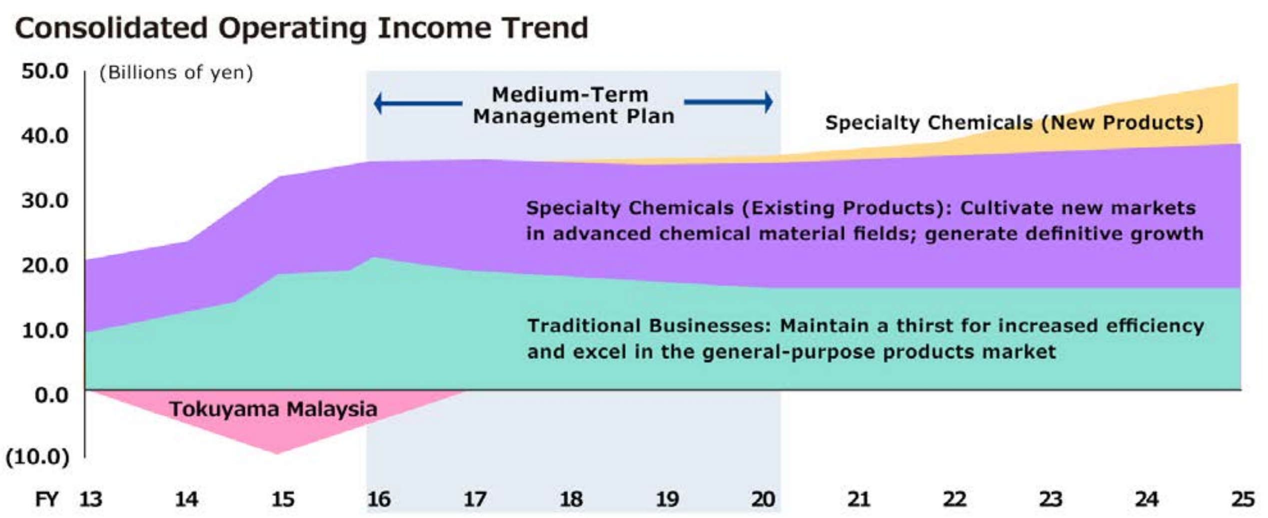
### Healthcare-Related Products



# Medium-Term Management Plan

## Outline

Looking ahead, forecasts for certain existing businesses indicate that the general-purpose product market in Japan will contract. At the same time, a slowdown in electronic materials business growth is also expected. Under these circumstances, Tokuyama recognized the need to create the necessary driving force to propel new profit growth. Guided by the overarching vision toward “New Foundation” in May 2016, the Company put in place a five-year medium-term management plan, commencing from fiscal 2016, as the “cornerstone of the Group’s revitalization.”




Going forward, Tokuyama is committed to carrying out the following two priority management strategies by fiscal 2025, the fiscal year ending March 31, 2026.

**1. Transition toward a robust business structure that is resilient against changes in the Company’s operating environment and is capable of sustainable growth**

The Tokuyama Group has set the goal of becoming a global leader in advanced materials through unique technologies across growth businesses including the Specialty Products as well as Life & Amenity segments together with the development of new products. In such traditional businesses as the Cement and Chemicals segments, the Group will work to become a leader in Japan through strengthening competitiveness.

**2. Transition to a Group-wide low-cost structure by undertaking a comprehensive review of existing work practices**

The Tokuyama Group will reduce costs by adopting a cross-departmental approach that differs from conventional methods and undertaking strategic capital expenditures as a part of efforts to cut back principal costs including raw material, fuel, repairs and maintenance, and distribution expenses.

As the current fiscal year is the middle year of the Medium-Term Management Plan, we have taken stock of the Plan based on the progress made and the management environment. With a view to realizing its fiscal 2025 aspirations of becoming “a global leader in growth businesses” and “a leader in Japan in traditional businesses,” the Company will formulate clear management strategies while accelerating efforts to prioritize issues to change to a corporate structure capable of regrowth.

Contributing to sustainable development goals (SDGs) is also essential to enable the Group to aim for sustainable growth over the long term. Accurately identifying the environmental and social issues, the Company would like to aim to realize both improvements in the corporate value of the entire Group and a sustainable society.

1. Change the Group’s organizational culture and structure

Based on the recognition that changing the organizational climate is of the utmost importance in achieving the Medium-Term Management Plan, the Company is reforming its personnel systems while focusing on human resource development. Following on from the revision of the personnel evaluation system for managers and employees over the age of 60, we will revise the general personnel systems for union members and aim for the introduction of the new system in fiscal 2020. The Company expects that the training of human resources and in-house revitalization will be brought about by the appointment of talented employees at an early stage.

By holding roundtable discussions between the president and some employees and through direct dialog with top management, the Company will instill its management philosophy while promoting changes in its organizational culture and structure.

2. Rebuild the Group’s business strategies

To strengthen its presence in ICT-related fields, which are its growth businesses, the Company decided to increase production plant for photoresist developer and high-purity aluminum nitride powder. By further expanding the supply system, the Company will aim for more stable supply and promote the development of a wide range of applications.

The Company also established a research laboratory in Taiwan as a new overseas base to expand and improve the competitiveness of its semiconductor-related products business. As a result of miniaturized and highly integrate semiconductors, this laboratory will operate as an information gathering and marketing base for new product creation in order to respond to the demand for high purification of chemical and materials received from semiconductor manufacturers. this laboratory will also play a role as a development base that will conduct joint development with semiconductor manufacturers and research institutes.

3. Strengthen Group management

Having acquired all its shares, the Company made Tokuyama Kairiku Unso K.K. , which handles general logistics, a wholly owned subsidiary. Through this move, the company will cooperate with an existing Group company, Tokuyama Logistics Co., Ltd., to expand the logistics network, and it is expected that the stable supply of products to customers across the Group will be realized.

4. Improve the Company’s financial position

Having made progress in reducing its interest-bearing debt, the Company achieved a D/E ratio of 1.0 times or less, one of the goals of the Medium-Term Management Plan, two years ahead of schedule. Subordinated loan refinancing was conducted with the objective of enhancing the flexibility of the Company’s financial strategy by further diversifying refinancing methods and reducing financial expenses.

To achieve its financial targets, the Company will promote management efficiency and the reduction of its interest-bearing debt, while continue its efforts to build a sound financial position.

5. Initiatives toward SDGs

To realize a sustainable society, we extracted the social issues relevant to the Tokuyama Group and identified them as materiality (important issues to be addressed). Addressing these important issues is linked to the Company’s mission of “Centered on the field of chemistry, the Tokuyama Group will continue to create value that enhances people’s lives.”

Based on this mission, the Company will contribute to the improvement of society and the Group’s value and to sustainable development by resolving materiality.

## Progress

| | | FY2015 | FY2018 | FY2020 Target | Progress evaluation |
|---|---|---|---|---|---|
| Net sales | | ¥307.1 billion | ¥324.6 billion | ¥335.0 billion | On track |
| Operating profit | | ¥23.0 billion | ¥35.2 billion | ¥36.0 billion | Unable to absorb the rise in raw material and fuel costs, profit decreased, target not achieved |
| ROA | | 5.7% | 9.5 % | 10% | Although total asset turnover was improved, operating margin decreased due to the increase of input cost and target of ROA was not achieved. |
| | Operating margin | 7.5% | 10.9 % | 10% | |
| | Total asset turnover | 0.77 times | 0.88 times | 1.0 times | |
| Financial indicators | CCC | 69 days | 60 days | 55 days | On track |
| | D/E ratio | 4.7 | 0.8 | 1.0 | Target achieved, continued |
| Exchange rate (¥/US$) | | 120 | 111 | 110 | |
| Domestic naphtha price (¥/kl) | | 42,800 | 49,500 | 58,000 | |

*Note : Cash Conversion Cycle (CCC): Accounts receivable turnover period + Inventory turnover period – Accounts payable turnover period;*
*ROA: Operating income / Total assets*

Compared with the previous fiscal year ROA deteriorated by 0.99 of a percentage point to 9.5% due to the decrease in operating profit brought about by increased manufacturing costs, including the prices of raw materials, the inclusion of a subsidiary in the Company’s scope of consolidation, the recording of a claim for damages under current assets, other, and increased total assets due to an increase in deferred tax assets. Despite an increase in inventories, cash conversion cycle (CCC) improved by two days compared with the previous fiscal year to 60 days, due to changes in the transaction conditions of partially purchased items. The D/E ratio was 0.84 times, an improvement of 0.27 compared with the previous fiscal year, due to the accumulation of profit, the reduction of interest-bearing debt and other factors, and thus the Company was able to achieve the Medium-Term Management Plan target value of 1.0 times or less ahead of time.

# Message from the President

Hiroshi Yokota, President

## Looking Back, Up Until Fiscal 2018

Looking back, my first year as the Company's president started with the posting of a huge impairment loss related to our solar-grade polycrystalline silicon business. Given this situation, we took decisive action, implementing various reform measures that placed priority on rebuilding our financial platform to ensure the revitalization of the Tokuyama Group.

In fiscal 2016, my second year, we formulated a medium-term management plan as the "cornerstone of the Group's revitalization." Despite difficult management conditions, operating income substantially exceeded forecasts at the beginning of the fiscal year owing to the fair winds of falling raw material and fuel costs, among other factors. In addition, we decided to transfer shares of our consolidated subsidiary for solar-grade polycrystalline silicon, Tokuyama Malaysia Sdn. Bhd., which had been the cause of considerable concern.

Notwithstanding signs of a surge in raw material and fuel prices, a reversal from the previous fiscal year, we achieved record high earnings in my third year, fiscal 2017. At the same time, positive steps were taken to complete the transfer of Tokuyama Malaysia shares to a Korean firm and to acquire in exchange for cash and cancel all Class A shares totaling ¥20 billion issued by the Company in fiscal 2016.

As was the case in the previous fiscal year, raw material and fuel prices continued to soar in my fourth year, fiscal 2018. Despite efforts to reduce costs against these difficult headwinds, earnings declined on an operating income basis for the first time since assuming the position of Tokuyama president. In addition to sluggish semiconductor demand, this downturn in earnings largely reflects cutbacks in production attributable to issues with the Group's in-house power plant and the external procurement of electricity. Under these circumstances, we addressed concerns regarding the stability of our financial position by refinancing an existing subordinated loan. Focusing largely on the healthcare domain, businesses that we expect will serve as future earnings pillars also began to bear fruit. This included the robust start of new products in the dental materials field.

## Entering the Fourth Year of the Medium-Term Management Plan:“Change the Group’s Organizational Culture and Structure”

In order to achieve our Medium-Term Management Plan targets, we have positioned “changes to the Group’s organizational culture and structure” as a priority theme. As a result, we are placing equal emphasis on maximizing the use of external human resources while developing the Group’s in-house employees. By actively recruiting outside personnel, who have excelled in a wide range of industries, we are bringing to the Group new perspectives and ideas. Their subsequent appointment to the positions of general manager and director is also generating considerable excitement in the Company’s approach toward work and the manner in which business is conducted. As far as the development in in-house employees is concerned, we have commenced training programs for employees in their 30s and 40s selected from Group’s various workplaces. These programs are designed to cultivate a management mindset at an early age. With an eye toward vigorously promoting diversity, two female employees were appointed to the position of president at Group companies in fiscal 2018.

Drawing from the Group’s growth businesses, we will continue to invest in ICT, a field that is expected to expand over the medium to long term. Recognizing that the healthcare domain is an area that requires considerable time from the development of products to their market release, we will work to definitively clarify an exit vision. As one specific initiative, we are strengthening our relationships with leading companies in cutting edge ICT fields. Little by little, steady results are beginning to emerge in connection with the development of new products. As far as our healthcare endeavors are concerned, we will consistently launch new products while investing in dental materials, plastic lens-related materials, active pharmaceutical ingredients and intermediates as well as diagnostic reagents and clinical systems in a timely manner.

## The Importance of Addressing ESG Concerns

There is a strong sense that environmental, social, and governance (ESG) concerns will play an increasingly important role in the management of companies going forward. Historically, the Company’s low-cost, coal-fired thermal power in-house power generation capabilities were recognized as an inherent strength. However, as a source of greenhouse gas emissions, this strength has transitioned into a significant risk. In order to mitigate this risk, we are undertaking a variety of measures. In addition to reducing the level of CO2 emissions by partially shifting from coal to biomass materials, we are endeavoring to increase production efficiency and cutback power consumption. At the same time, we are actively working to develop and commercialize new CO2 technologies with the help of our Research & Development Division.

Rather than work on our own, we recognize the critical need to further advance these initiatives by involving public and local authorities. As one example, we are supplying the Company’s surplus power to public facilities in the vicinity of Tokuyama Factory, located in Shunan City, Yamaguchi Prefecture. In addition to supporting the finances of local government authorities, this initiative is also contributing to an improvement in energy efficiency across the region as a whole. In this manner, we plan to actively engage in a wide range of activities including steps that help enrich local communities.

From a management organization perspective, we are strengthening corporate governance as a matter of course. In order to enhance the Company’s overall decision-making process while increasing the pace of implementation, we intend to change our organizational structure with a view to positioning the decision-making process closer to the frontline. For this to occur, we understand that the development of human resources is an issue of the utmost importance.

## Fiscal 2019, the Fourth Year of the Medium-Term Management Plan

I am convinced that our actions over the two-year period, from fiscal 2019 to fiscal 2020, are vital to realizing our 2025 vision and will provide the steppingstone for our next leap forward. In this sense, we must position the next two years as a preparatory period. During fiscal 2019 and fiscal 2020, we must uncover new pillars of expansion while reforming our organizational culture with a greater sense of urgency. In this manner, we will reap the benefits of the seeds that we have sown and firmly secure genuine growth over the five years from fiscal 2021. Taking the aforementioned into consideration, we will undertake annual investments of around ¥30 billion for the foreseeable future.

While efforts to reform the Company remain underway, we are seeing a definitive improvement in business profitability and the emergence of a number of growth businesses. We kindly request the continued support of shareholders and investors as we continue to take up each new challenge.

Hiroshi Yokota

Hiroshi Yokota, President

June 2019

# Research and Development

## Research and Development Principles and Policies

Contributing to the world by applying chemistry-based technologies lies at the heart of Tokuyama's research and development philosophy. Guided by this philosophy, the Company adheres strictly to a process of internal and external collaboration in a bid to promote a customer-focused approach. At the same time, we endeavor to integrate new technologies drawing on the strengths of our inherently unique and specialist capabilities and engage in research and development activities with the aim of producing advanced materials that lead the world.

In order to take another step toward a research and development promotion structure that is committed to producing technologies and materials with genuine commercial application, we organized the research and development activities of the Research and Development Division into three broad groups, the Tsukuba Research Laboratory, the Tokuyama Research Laboratory and the New Business Promotion Dept., and two survey and inspection organizations, the Intellectual Property Dept. and Analytical Science Dept. from July 2017. At each laboratory, we undertake development with our eyes fixed firmly on end results (a genuine commercial outcome) in collaboration with business segments in the medical and healthcare- as well as ICT-related domains. The New Business Promotion Dept. manages market information on a centralized basis. This information is then used to uncover and anticipate customers' needs and the underlying platform to put forward new proposals. In addition, we recognize the need to help prevent global warming as an important issue. With this in mind, we will work to better coordinate related departments and division within the Company and pursue the development of new technologies.

## Research and Development Bases

Tokuyama's two-pronged R&D structure comprises Tsukuba Research Laboratory in Tsukuba City, Ibaraki Prefecture, in Eastern Japan, and Tokuyama Research Laboratory in Shunan City, Yamaguchi Prefecture, in Western Japan.

### Tsukuba Research Laboratory

The Tsukuba Research Laboratory is a development base that focuses on the medical and healthcare-related domain. The lab pursues leading-edge technologies from a medium- to long-term perspective, conducting research and development of analysis techniques as platform technologies, composite materials used especially in the field of dentistry, and high-value-added products targeting the organic fine chemicals field.

Tsukuba Research Laboratory

Tokuyama Research Laboratory

### Tokuyama Research Laboratory

The Tokuyama Research Laboratory is a development base that focuses on the ICT-related domain. Spanning a wide variety of fields from basic chemicals to cement, the Laboratory engages in a broad array of research and development activities including basic research, application research, and the development of processes.

## R&D Activities in Fiscal 2018

Based on our basic philosophy of "Centered on the field of chemistry, the Tokuyama Group will continue to create value that enhances people's lives ", Tokuyama is doing Research and Development with aiming to expand and develop each business based on chemistry, with priority areas being "Specialty Chemicals for ICT and Healthcare".

The Research and Development Division comprises a five-department system of the Tsukuba and Tokuyama research laboratories, the New Business Promotion Department, Analytical Science Department and Intellectual Property Department. In collaboration with business division development groups attached to each segment, the Research and Development Division is developing technologies for next-generation themes and themes related to existing businesses in the development portfolios of business divisions and Group companies.

From April 2018, the development of silica-related products and chloride-related products as well as semiconductor peripheral materials, which had been dispersed among multiple business division development groups, was concentrated in the Research and Development Division. At the same time, to strengthen the quality control of developed products, we established the Research & Development Quality Assurance Sect. within the Research and

Development Division. We also actively promoted collaborative research with universities and research institutes. In March 2019, the Taiwan Research Laboratory opened within the Industrial Technology Research Institute of Taiwan for the purposes of collecting information on IoT-related technologies and developing measurement technologies.

The main themes at the Tsukuba and Tokuyama research laboratories are the development of single crystal aluminum nitride substrates, semiconductor peripheral materials, organic and inorganic composite materials, nanoparticles materials, chlorine compound materials, medical materials, and veterinary peripheral materials.

The New Business Promotion Department engages in marketing in cooperation with internal and external organizations, fine-tuning its business strategies and proprietary technologies starting with customers, and is tasked with creating new themes in the fields of IoT and life sciences. The Intellectual Property Department contributes to the creation of new products and businesses and the expansion of group profits through its strategic intellectual property management capabilities, and the Analytical Science Department aims to contribute to the semiconductor peripheral materials business by advancing analysis and analysis technologies.

In fiscal year ended March 31, 2019, the Tokuyama Group’s R&D spending totaled ¥8,052 million, including ¥1,962 million for basic research expenditures that are not allocable to a specific segment.

Below is a description of R&D projects underway and spending by segment.

**Chemicals Segment**
Tokuyama develops technologies to cope with needs of environmental load reduction of chlorine-related products, reduce costs by improving production efficiency, and maintain and improve product quality. With vinyl chloride resin, Tokuyama also strengthened its technical services to supply products according to customers' requests, and actively worked on developing new grades that make use of the findings acquired from technical service. In developing inorganic chemicals, Tokuyama focused on investigating marketability based on customer evaluation, improvement of physical properties and manufacturing process. The Company is also working on technological developments to produce hydrogen from renewable energy.

R&D expenditures totaled ¥ 279 million in the Chemicals segment.

**Specialty Products Segment**
With regards to silica, Tokuyama has upgraded its existing fumed silica products and developed new conformal silica, undertaken capital investment for developed products approved by customers, and accelerated efforts toward their commercialization. As for heat dissipating materials, in addition to aluminum nitride filler used in heat dissipation materials, such as power semiconductors and LEDs, Tokuyama has made preparations for the trial manufacture of boron nitride fillers and silicon nitride powder and made progress with customer evaluations. With regard to its high-purity chemicals for the electronics industry, Tokuyama enhanced its development system to meet the high purification needs associated with the miniaturization and three-dimensional process of semiconductor devices.

R&D expenditures came to ¥ 1,993 million in the Specialty Products segment.

**Cement Segment**
Tokuyama focused on the development of a variety of cement-based products. Wit regard to cement-based soil solidifiers, we actively worked on the development and improvement of various grades. In the case of building materials, we focused on developing products that have applications in the repair and reinforcement of concrete structures field, such as in cross-section repairing materials and in repair and reinforcement materials for road slabs. Focusing on applications outside of cement manufacturing processes, Tokuyama has concentrated on developing technologies to effectively use coal ash and waste gypsum boards. As basic research on cement, Tokuyama continued to examine the reduction of burning temperature of cement clinker from the viewpoint of energy saving.

R&D expenditures were ¥755 million in the Cement segment.

**Life & Amenity Segment**
We made progress developing next-generation photochromic dye materials for lenses-related materials. We also worked on the development of manufacturing processes for active pharmaceutical ingredients. In the healthcare and clinical testing fields, marked progress was made on the integrated development of products including diagnostic reagents and laboratory information systems, clinical analyzers, and laboratory automation systems. In the dental care field, continued steps were taken to develop products such as restorative composite resins, dental adhesives and dental resin composite block. In ion exchange membranes, progress was made on the development of high-efficiency bipolar membrane electrodialysis technology, highly functional ion exchange membranes, and other products.
R&D expenditures totaled ¥3,062 million in the Life & Amenity segment.

# CSR Initiatives

As part of our vision established in May 2016, Tokuyama chose the mission of contributing to the world by applying chemistry-based technologies, and interprets the pursuit of this mission as a CSR activity.
Similarly, we are aspiring to shift from quantity to quality under this vision and are expanding business in pursuit of this goal. When aiming for growth that does not focus solely on expanding scale, but that coincides with quality, CSR-oriented management becomes essential. Tokuyama reviewed its basic philosophy of CSR-oriented management in March 2018, at which time we set out to contribute to solving social issues through activities that co-create a sustainable future with society.

As Tokuyama's mission (CSR), contributing to the world has two facets, namely creating products that help solve social issues and fulfilling the social responsibilities that are part of our business process. We place equal weight on risk management and compliance through research and development in terms of the former and by positioning internal control as the heart of our CSR activities in terms of the latter. As a chemical manufacturer, Tokuyama gives utmost priority to exercising Responsible Care through the consistent operation and enhancement of management systems for safety, the environment, and quality.

## Involvement in the Environment

One of our most important corporate social responsibilities is to actively protect the global environment. Tokuyama practices environmental management with an emphasis on environmental perspectives in all of its business activities

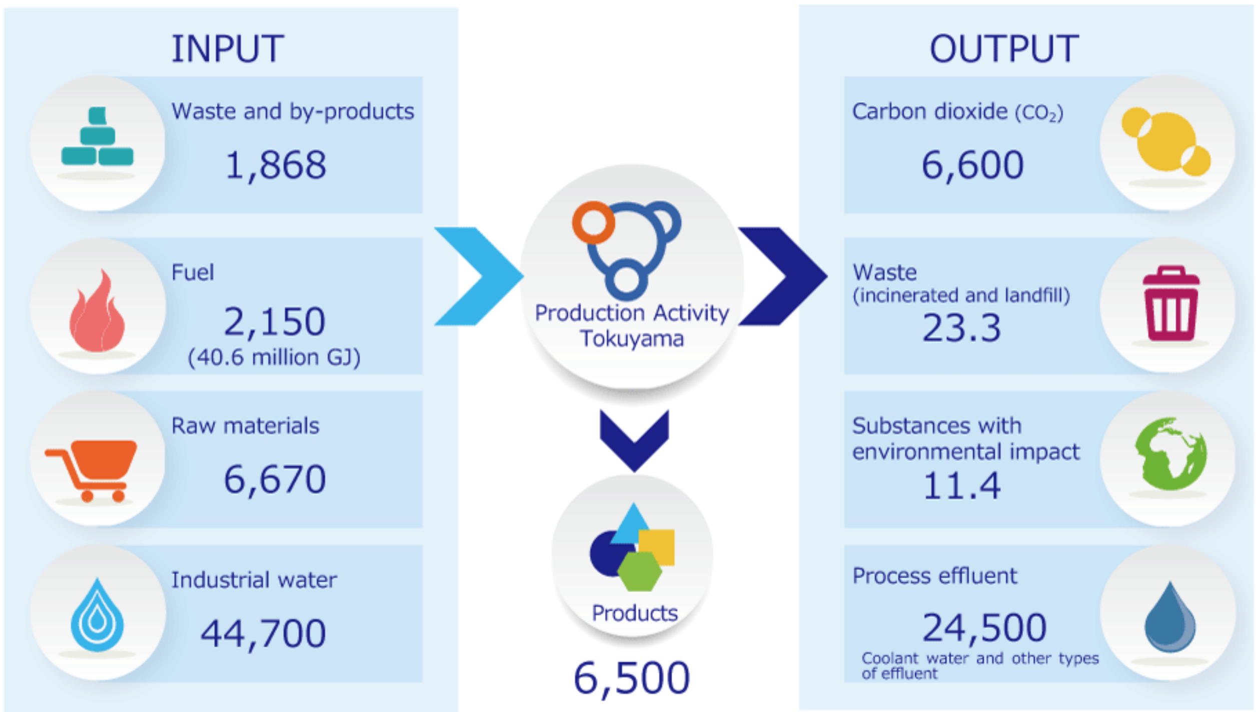
## Tokuyama’s Environmental Performance for Fiscal 2018

Tokuyama strives to obtain accurate data on the input and output of materials and substances in its business activities and reduce the environmental impact of these activities to meet its environmental targets.

In fiscal 2018, Tokuyama achieved its goals for unit energy consumption, recycling and zero emissions. Regarding other performance data, Tokuyama has set a separate numerical management target for each department to maintain the current low-impact situation.

## Involvement in Society

### Flow of Materials in Business Activities (Unit: 1,000 tonnes)




* Result for Fiscal 2018 (Non-consolidated)

Tokuyama values communication with diverse stakeholders as the key to working with the broader society to build a sustainable future.

## Social Contribution Activities

As a company deemed essential by society, Tokuyama carries out various activities to forge strong ties with local communities. Both the Company, as a matter of course, and its employees take the initiative in deepening interaction with everyone in the community.

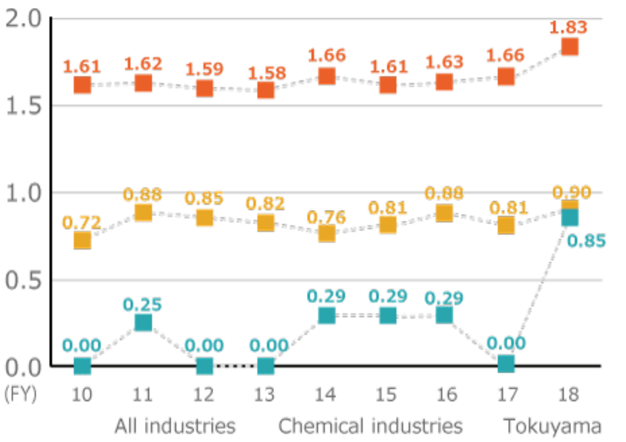
### Supporting the growth of children through the ACS Kids private-sector after-school care facility

Shunan Swimming Club, which operates a swimming and fitness club that uses the exhaust heat from the Tokuyama Factory, runs a private-sector after-school care facility established to support play and learning among children during the first three years of elementary school. Until 7:00 pm on weekdays, children can attend swimming, tennis, dance, and other activity classes that foster basic athletic abilities, as well as participate in a wide range of programs that include homework and learning support, pen calligraphy, and English conversation. As an after-school care facility where children learn well, play well, and grow strong, ACS Kids is helping to expand the potential of the children who will be responsible for future generations.

## Process Safety, Disaster Prevention and Occupational Health and Safety

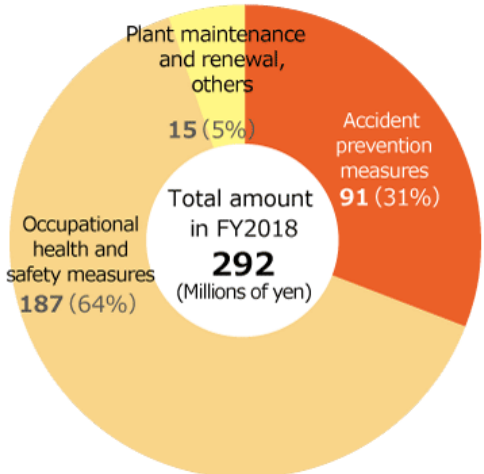
Tokuyama believes that safety is an essential part of business activities and that ensuring safety is the first step in achieving coexistence with society. In taking this stance on safety, Tokuyama thoroughly conducts process safety and disaster prevention activities as well as occupational health and safety efforts. By doing so, the Company endeavors to prevent accidents and disasters while striving to provide a favorable working environment.

### Trend in the Accident Frequency Rate*1




*1 The accident frequency rate refers to the number of workers forced into absence through industrial accidents per one million cumulative working hours. This reflects the frequency at which industrial accidents occur.

### Expenditures for accident prevention and occupational health and safety




Note: Figures do not add precisely to total due to rounding.

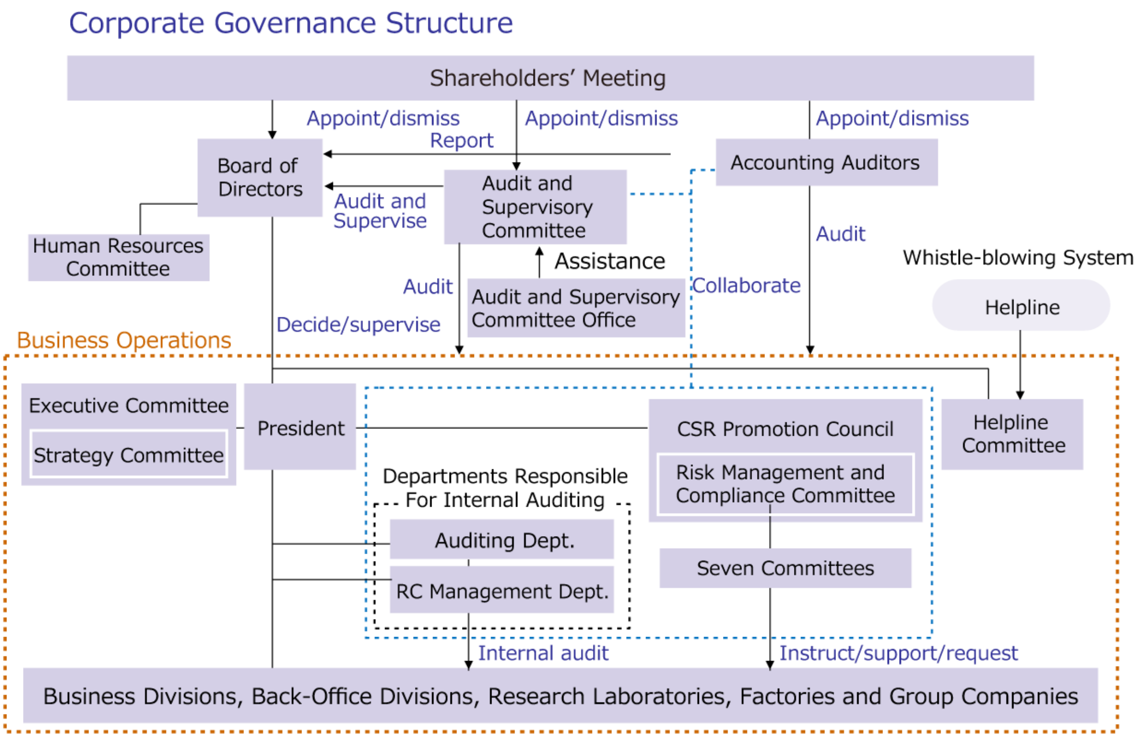
For more information on Tokuyama's CSR initiatives, see the Company's *CSR Report* or the Company's website: https://www.tokuyama.co.jp/eng/csr/index.html

# Corporate Governance

Tokuyama strongly believes creating and continuously providing new value is made possible through the trust of and cooperation with its stakeholders, which include shareholders, customers, trading partners, employees and local communities. This in turn enables the Company to grow on a sustainable basis and to increase its corporate value over the medium to long term. In order to make this a reality, Tokuyama has positioned corporate governance as a key management priority. Tokuyama has always been working to improve corporate governance. Taking into consideration the introduction of the Corporate Governance Code in Japan, the Company places the utmost emphasis on ensuring the rights and equality of its shareholders 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 shareholders.

## Corporate Governance Structure

The Company introduced an executive officer system to separate the supervision and execution functions in April 2011, assigning external directors in June of the said year. The number of external directors was subsequently increased in stages. On June, 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 selects three external directors from four Committee members and endeavors to ensure management transparency and fairness. By doing so, it strives to maintain management soundness. As a company with an Audit and Supervisory Committee, the Company seeks to enhance corporate governance at all times by making the best of its rapid decision-making functions and effective supervising/auditing functions.




## Board of Directors and Executive Officer System

In addition to deliberating and making resolutions on important matters relating to the activities of the Company, the Board of Directors supervises business operations. During fiscal 2018, the Board of Directors met on 17 occasions.

As of June 24, 2019, Tokuyama's Board of Directors comprised 8 members. The Company appointed three external directors thereby bolstering the supervisory function of the Board of Directors. Meanwhile, the term of office of directors (excluding directors who are Audit and Supervisory Committee members) is set at one year in order to ensure clear accountability as well as the ability to swiftly address changes in the operating environment.

Tokuyama adopted an executive officer system in April 2011 with the aim of separating the executive and supervisory functions for business operations. As of June 24, 2019, the Company had 11 executive officers.

Based on the rules for approval determined by the Board of Directors, authority is delegated to the business executive system.

## Audit and Supervisory Committee

Directors who are Audit and Supervisory Committee members attend meetings of the Board of Directors and other important internal meetings for purposes such as gathering information on the status of the execution of businesses, and conduct audits of how the executive officers are executing their duties. During fiscal 2018, Audit and Supervisory Committee met on 25 occasions, making reports, consultations and resolutions on important matters. As of June 24, 2019, the Audit and Supervisory Committee consists of four directors who are the members of the Committee, including three external directors who are Audit and Supervisory Committee members.

## Human Resources Committee

The Human Resources Committee consists of representative directors and external directors. This committee holds discussions on such matters as the remuneration for directors and executive officers and the selection of director and executive officer candidates before Board of Directors meetings take place.

## Executive Committee

Members of the Executive Committee are selected by the president and executive officer from among the Company's executive officers. The Executive Committee serves as the Company's decision-making body with respect to the execution of business operations. In principle, the committee meets two times each month. Based on the approval rules and regulations determined by the Board of Directors, the Executive Committee deliberates and makes decisions on strategies and other important matters.

## Strategy Committee

Members of the Strategy Committee are selected by the president from among the Company's executive officers. The committee meets once a month and serves as an advisory body to the president. In addition to deliberating on the direction of business execution, the Committee takes steps to confirm the allocation of management resources aimed at evaluating conditions relating to the execution of business with respect to important matters requiring approval while setting the direction of policies relating to the execution of business with respect to specific projects.

## CSR Promotion Council

Chaired by the president, the CSR Promotion Council is comprised of all executive officers working in Japan. The Council sets policies on CSR and lays out the goals of our CSR activities, facilitating the execution and attainment of all such activities and goals. The Council focuses on maintaining appropriate corporate governance and internal control, which together are the foundations of CSR. It also discusses important matters regarding internal control.

## Risk Management and Compliance Committee

Tokuyama's Risk Management and Compliance Committee, chaired by the director supervising the Corporate Social Responsibility Division, operates under the CSR Promotion Council. The Committee takes the initiative in promoting risk management and compliance, which are central to effective internal control.

## Seven Committees of Experts

With regard to areas requiring specialist expertise and of great importance from the viewpoint of risk management and compliance, the Company has set up and is developing the activities of seven committees of experts—covering accounting, antitrust law and competition law compliance, trade control, information security, environmental measures, safety measures, product safety and quality—under the CSR Promotion Committee and separate from the Risk and Compliance Committee.

## Helpline Committee

The Helpline Committee is responsible for the administration of Tokuyama's helpline (whistle-blowing) system, which has been established for the purpose of enabling the internal reporting of legally questionable actions and behavior by Group executives and employees.

## Departments Responsible for Internal Auditing

Tokuyama has established the Auditing Department and the RC Management Department, which are responsible for internal auditing. These departments perform internal audits of individual divisions and departments of the Company as well as of Group companies.

## 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 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 members candidates, the Board of Directors makes its decisions having received the assent of the Audit and Supervisory Committee.

## Policies and Procedures for Determining the Company's Executives Remuneration

Matters Concerning Policy with Regard to Amount of Executive Remuneration and Methods Used for Calculation

1. 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.

(a) In 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.

(b) 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 income 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.

(c) 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.

2. 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.

3. 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 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.

In fiscal 2018, a total of ¥262 million and ¥50 million was paid to seven directors (excluding external directors) and two Audit and Supervisory Board members (excluding external directors), respectively. In addition to the aforementioned compensation, a total of ¥40 million was paid to three external officers.

In addition to the aforementioned compensation, an amount of ¥48 million was paid as salaries to four employees, who hold the concurrent position of director.

## Anti-takeover Measures

Tokuyama recognizes the need to put in place appropriate countermeasures to protect both the interests of the Company's shareholders and the Company's corporate value from large-scale purchases of its shares (hereinafter referred to as a "Large-Scale Purchase") by another party (hereinafter referred to as a "Large-Scale Purchaser") in cases where the Large-Scale Purchase is judged to significantly damage the common interests of Tokuyama's shareholders and Tokuyama's corporate value.

The decision of whether to accept a Large-Scale Purchase is ultimately left to the discretion of Tokuyama's shareholders. Consequently, in cases where a Large-Scale Purchase is being attempted, we believe that the Large-Scale Purchaser's provision of an adequate amount of information is necessary. In addition, we believe that the appraisal and opinions of Tokuyama's Board of Directors, as well as the provision of information and the like based on the business features pertaining to any Large-Scale Purchase, are critical for the shareholders to make a decision of whether to accept said Large-Scale Purchase, and contribute to the common interests of Tokuyama's shareholders.

Accordingly, the Company established a set of large-scale purchase rules to ensure that these interests and the Company's corporate value are preserved. Under these rules, each Large-Scale Purchaser is required to provide an adequate amount of information to Tokuyama's Board of Directors prior to undertaking a Large-Scale Purchase. Moreover, an appropriate amount of time must be set aside to allow the Company's Board of Directors to assess and consider the terms and conditions of the Large-Scale Purchase and to put forward its opinion as well as alternative proposals.

In cases where a Large-Scale Purchaser fails to comply with the large-scale purchase rules, or when a Large-Scale Purchaser complies with the large-scale purchase rules, but is deemed to significantly damage the common interests of the Company's shareholders and the Company's corporate value, Tokuyama's Board of Directors may take such measures as the allotment of share options without contribution as stipulated under Article 277 and the following provisions of Japan's Companies Act and oppose the Large-Scale Purchase on the condition that the Company obtains approval at the Ordinary General Meeting of Shareholders concerning.

Specific details outlined above were collated into the Company's "Policy regarding Large-scale Purchases of Tokuyama Corporation's Company Shares (Anti-Takeover Measures)." This policy was approved by the Company's shareholders at the 154th Ordinary General Meeting of Shareholders held on June 22, 2018.

Details of the Policy have been posted on the Company's website:
URL: https://www.tokuyama.co.jp/eng/ir/stock/anti_takeover.html

# Business and Other Risks

Set out below are those matters relevant to the Tokuyama Group's business status and financial conditions that could potentially have a significant influence on investor decisions. Please note that the matters listed do not cover all risks relevant to the Tokuyama Group, and it is thought that there are risks other than those matters listed that could potentially influence investor decisions.

The matters listed are those regarded as relevant as at June 24, 2019.

## (1) Procurement/Market Conditions of Raw Materials and Fuels, etc.

Tokuyama Group procures the raw materials and fuels essential to conduct production operations from various area in the world. Also, for some of its products, Tokuyama Group uses special raw materials and materials which have a limited number of suppliers. With regard to the procurement of raw materials and fuels, Tokuyama Group engages in long-term, stable, low-cost procurement by combining, for example, medium- to long-term contracts and purchases on spot markets. However, in the event that a soaring market or resource nationalism causes the tight supply of raw materials and fuels or delays in delivery hinders Tokuyama Group's production operations causing manufacturing costs to rise drastically, there is the possibility that any such situation greatly affects Tokuyama Group's business performance and financial condition.

## (2) Electronic Materials Business Market Environment

While the Electronic Materials Business is one of Tokuyama Group's main businesses, in the event that the economical trough in the information and electronics industry leads to a deterioration of the earnings from Electronics Materials Business, there is the possibility that any such situation greatly affects Tokuyama Group's business performance and financial condition.

## (3) Environmental Regulations, etc.

Tokuyama Group operates a range of businesses that use natural resources and energy in large quantities. Tokuyama Group enhances the investment in resource recycling systems and the facility designed to reduce its environmental impact and accepts waste as an alternative fuel and raw materials. At the same time, Tokuyama Group also works to reduce its environmental impact by, for example, promoting Zero Emission initiatives and improving its unit energy consumption. However, in the event that more stringent environment-related regulation is approved or a new social responsibility for environmental protection becomes required, there is the possibility that any such situation greatly affects Tokuyama Group's business performance and financial condition.

## (4) Contractual Disputes/Litigation

The Legal & Credit Management Department and the Intellectual Property Department of Tokuyama Groups take lead in day-to-day precaution against patent or contract disputes and litigation. However, in both its domestic and overseas businesses, there exists the possibility that Tokuyama Group becomes the subject of a legal dispute or litigation. In the event that a major lawsuit is filed, there is the possibility that such a situation greatly affects Tokuyama Group's business performance and financial condition.

## (5) Effect of Disasters/Accidents

Tokuyama Group performs day-to-day and periodic facility maintenance to minimize the adverse effects from any disruption to its production operations. Such maintenance, however, is unable to completely prevent or may not effectively reduce the adverse effects on production facilities from disasters or accidents (including earthquakes and other natural disasters). Also, while Tokuyama Group manufactures products for which alternative production arrangements could not immediately be made, should events lead to a significant decrease in production volume or, in the worst case, Tokuyama Group be forced to discontinue production for a protracted period, there is the possibility that any such situation greatly affects Tokuyama Group's business performance and financial condition.

## (6) Product Liability

Tokuyama Group makes an honest effort to ensure the proper quality in accordance with product characteristics. However, in the event that, due to unexpected circumstances, a quality problem leads to a product recall or a product safety-related product liability (PL) issue arises, there is the possibility that any such situation greatly affects Tokuyama Group's business performance and financial condition.

## (7) Market Economic Trends/Conditions

The supply of and demand for Tokuyama Group products are subject to the trends of their respective markets, which are primarily the chemical industries, the construction and construction material industries as well as the information and electronic industries. The products from Tokuyama Group are sold mainly in Japan, the United States, Asia, and Europe, and the economic conditions in such country could exert a great influence on the sales. Tokuyama Group targets production improvements and higher quality and also promotes cost reductions however a fall in demand in the market and industries or an economic slowdown in the sales area may greatly affect Tokuyama Group’s business performance and financial condition.

## (8) Price Competitiveness

In each of the business that Tokuyama Group conducts, similar products may be available from competitors. Tokuyama Group supplies products to customers maintaining a competitive advantage in terms of quality and price. However, in the event that low-cost imported products flood the market or a price war breaks out between rival companies due to unforeseen circumstances, and that the situation continues for a prolonged period of time deteriorating Tokuyama Group’s profitability, there is the possibility that any such situation greatly affects Tokuyama Group’s business performance and financial condition.

## (9) Overseas Business Development

The polycrystalline silicon factory that Tokuyama Group built in the Malaysian state of Sarawak is comparatively larger in scale than Tokuyama Group’s other existing overseas facilities. In the event that the stable operation or sales is disturbed, unexpected changes are made to the society system, laws and regulations or labor-management problems arise, there is the possibility that any such situation greatly affects Tokuyama Group’s business performance and financial condition.

## (10) Financing Arrangements

Tokuyama Group arranges financing through loans or issuance of unsecured bonds, and in preparation for changes in the market environment such as interest rates, in principle, measures to mitigate risks by hedging transactions such as fixed rate contracts or fixed interest rate swaps, however, there is a possibility that with some borrowing, cost of financing arrangements could increase due to changes in the market environment such as interest rate, which may have a significant impact on the performance and financial contents of the Tokuyama Group. In addition to changes in the market environment such as interest rates, depending on the credit ratings or other conditions, there is no guarantee that the financing is always available under same conditions in arranging financing through a new loan from a financial institution or the issuance of unsecured bonds.

## (11) Fluctuation of Exchange Rate

Tokuyama Group exports products and imports raw materials, fuels, etc in foreign currencies. Although Tokuyama Group has taken measures to reduce risks by currency exposure management by balancing assets and liabilities denominated in foreign currencies or hedging transactions such as forward exchange contracts, there is a possibility that performance and financial content of the Tokuyama Group will be greatly affected by fluctuations in exchange rates. There is also the possibility that it will adversely affect the yen converted value of the financial statements of overseas consolidated subsidiaries when preparing consolidated financial statements.

## (12) Impairment of Fixed Assets

Tokuyama Group adopts the accounting standard for impairment of fixed assets. In the event that there is a significant deterioration in the business environment or a decline in real estate prices, etc, there is a possibility that performance and financial content of the Tokuyama Group will be greatly affected by the recognition of impairment loss.

# Corporate Officers

(As of June 24, 2019)

**Hiroshi Yokota**
Representative Director
President and Executive Officer

**Hideki Adachi**
Representative Director
Senior Managing Executive Officer

**Hideo Sugimura**
Director
Managing Executive Officer

**Hiroshi Nomura**
Director
Managing Executive Officer

**Youji Miyamoto**
Director, Audit &
Supervisory Committee
Chair

**Shin Kato**
Director, Audit &
Supervisory Committee
Member
（External Director）

**Yuzo Kawamori**
Director, Audit &
Supervisory Committee
Member
（External Director）

**Naoki Matsumoto**
Director, Audit &
Supervisory Committee
Member
（External Director）

## Executive Officers

| | | |
|---|---|---|
| **President and Executive Officer** | Hiroshi Yokota | |
| **Senior Managing Executive Officer** | Hideki Adachi | General Manager, Tokuyama Factory |
| **Managing Executive Officer** | Toshihiko Annaka | General Manager, Procurement & Logistics Div. |
| | Ryo Sugiyama | General Manager, Life & Amenity Business Div. |
| | Hideo Sugimura | General Manager, Corporate Planning Div. |
| | Hiroshi Nomura | General Manager, Specialty Products Business Div. |
| **Executive Officer** | Kazuo Matsuya | General Manager, Social Responsibility Div. |
| | Fumiaki Iwasaki | General Manager, Research & Development Div. and Tsukuba Research Laboratory |
| | Takahide Taniguchi | General Manager, Cement Business Div. |
| | Yutaka Tarutani | General Manager, Chemicals Business Div. |
| | Hiroshi Fujimoto | General Manager, General & Personnel Affairs Div. |

# Financial Section

**Income Analysis**

In fiscal 2018 (April 1, 2018 to March 31, 2019), the Japanese economy initially recorded high growth, mainly due to increases in personal consumption and capital investment. From summer onwards, however, consumption decreased against a backdrop of delays in production and logistics due to the effects of a series of natural disasters and a decrease in customers. In addition, IT-related exports stagnated due to the sense of a lull in demand for smartphones and data centers, which had previously been expected to remain robust, and the onset of bearish stock market conditions due to the recovery in the Chinese economy being seen as having stalled.

Under these circumstances, the Tokuyama Group continued to implement the priority measures identified in its Medium-Term Management Plan.

As a result, sales increased due to efforts to increase sales volumes and revise sales prices, but operating profit decreased due to increases in raw material and fuel costs brought about by rising prices for coal and domestic naphtha.

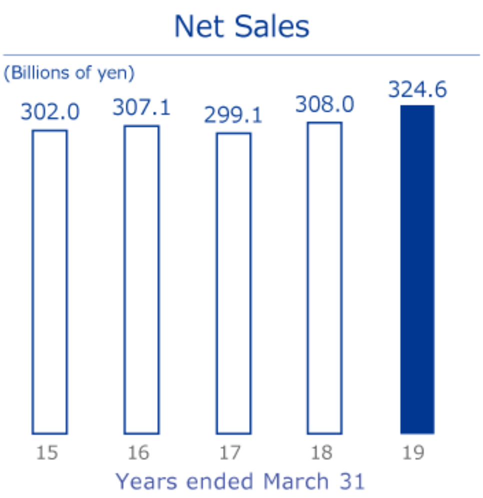
Consolidated net sales increased 5.4%, or ¥16,599 million compared with the previous fiscal year, to ¥324,661 million (US$2,924 million). This was largely attributable to an increased sales volume in products such as semiconductor-related products and revision in selling prices of products such as caustic soda.

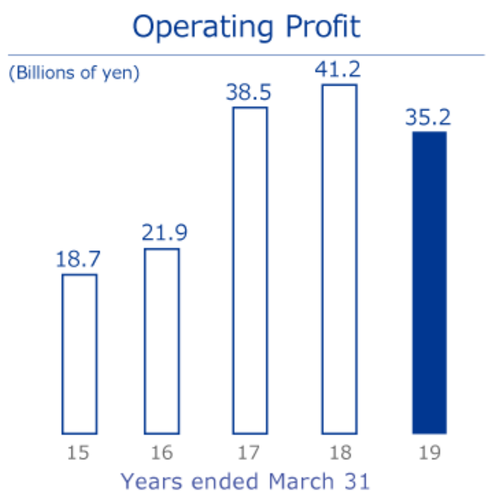
Cost of sales increased 9.1%, or ¥18,949 million compared with the previous fiscal year, to ¥226,664 million (US$2,042 million). This was due mainly to an upturn in raw material and fuel costs as a result of the increase in coal prices and domestic naphtha.

SG&A expenses increased 6.2%, or ¥3,655 million compared with the previous fiscal year, to ¥62,733 million (US$565 million). This was largely attributable to the increase in logistics costs.

Operating profit decreased 14.6%, or ¥6,005 million compared with the previous fiscal year, to ¥35,262 million (US$317 million). Despite sales in each business remained steady, the increase in manufacturing costs including the rise in raw material and fuel costs affected the operating profit of each segment.

The operating margin (the ratio of operating profit to net sales) was 10.9 %, a decrease of 2.5 percentage points compared with the figure of 13.4% recorded in the previous fiscal year.



Non-operating income/expenses deteriorated ¥3,209 million compared with the previous fiscal year.

As a result of the above, ordinary profit decreased 7.7%, or ¥2,795 million compared with the previous fiscal year, to ¥33,400 million (US$300 million).

Extraordinary income/losses improved by ¥7,917 million compared with the previous fiscal year.

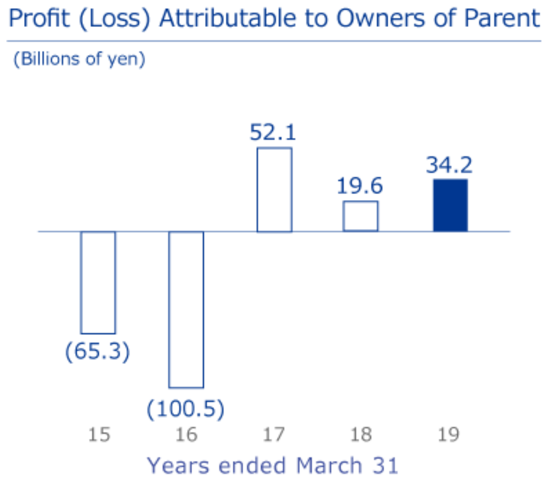
As a result of the above, profit before income taxes increased 15.6%, or ¥5,122 million compared with the previous fiscal year, to ¥38,017 million (US$342 million).

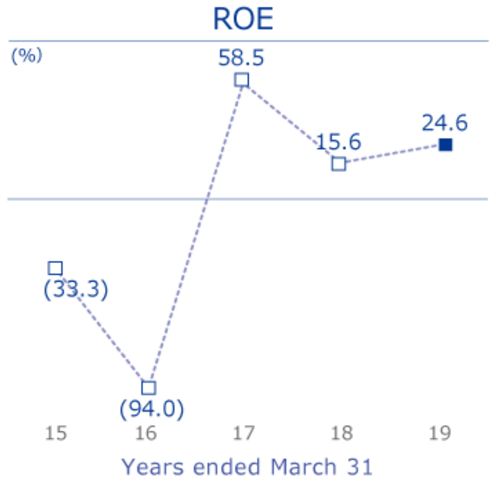
Profit after deducting income taxes calculated in an appropriate way increased 38.0%, or ¥9,648 million compared with the previous fiscal year, to ¥35,029 million (US$315 million).

Profit attributable to owners of parent increased 74.0%, or ¥14,580 million compared with the previous fiscal year, to ¥34,279 million (US$308 million).

Basic earnings per share was profit of ¥493.26 (US$4.444), up from ¥259.81 in the previous fiscal year. Dividends per share were ¥50.00 (US$0.450).

Return on equity (ROE) and return on assets (ROA: operating profit /total assets) were24.6% and 9.5%, respectively, compared with 15.6% and 10.5% in the previous fiscal year.



**Segment Information**

The Tokuyama Group is composed of the parent company, Tokuyama Corporation ("the Company"), 52 subsidiaries and 30 affiliated companies. The Group's operations are divided into the four business segments of Chemicals, Specialty Products, Cement, and Life & Amenity. For accounting purposes, 52 of the Company's subsidiaries are consolidated, while 9 affiliates are accounted for using the equity method.

***Chemicals***

The Chemicals segment includes the operations of the Company and three consolidated subsidiaries.

With regard to caustic soda, the revision of selling prices was progressed. As a result, its operating profit increased greatly.

Sales volume of vinyl chloride resin was steady. Meanwhile, manufacturing costs increased due to a rise in raw material prices such as domestic naphtha. As a result, its operating profit decreased.

Calcium chloride sales volume decreased and operating profit was down due to the effects of a warm winter.

As a result of the above, segment net sales increased 5.2% compared with the previous fiscal year, to ¥98,380 million (US$886 million) and operating profit increased 4.2% to ¥16,850 million (US$151 million). The segment reported higher earnings on higher sales.

***Specialty Products***

The Specialty Products segment includes the operations of the Company, five consolidated subsidiaries and one equity-method affiliate.

Sales volume of semiconductor-grade polycrystalline silicon was steady. Meanwhile, manufacturing costs increased due to an upturn in fuel and raw material costs. As a result, its operating profit decreased.

With regard to high-purity chemicals for electronics manufacturing, sales volume was steady. Meanwhile, manufacturing costs increased due to a rise in raw material prices such as domestic naphtha. As a result, its operating profit decreased.

With regard to thermal management material, sales volume in such applications used for semiconductor manufacturing equipment increased and the business did well.

As a result of the above, segment net sales increased 1.7% compared with the previous fiscal year, to ¥59,668 million (US$537 million) and operating profit decreased 9.7% to ¥9,934 million (US$89 million). The segment reported lower earnings on higher sales.

***Cement***

The Cement segment comprises the operations of the Company, 17 consolidated subsidiaries and four equity-method affiliates.

With regard to cement, domestic sales volume was weak and manufacturing costs increased due to a rise in raw material prices such as coal. As a result, its operating profit decreased.

In the resource recycling business, its business result was almost same as the previous fiscal year.

Consolidated subsidiary net sales increased. This mainly reflected the robust shipping trends of cement-related products.

As a result of the above, segment net sales increased 5.7% compared with the previous fiscal year, to ¥92,366 million (US$832 million) and operating profit decreased 29.9% to ¥3,204 million (US$28 million). The segment reported lower earnings on higher sales.

***Life & Amenity***

The Life & Amenity segment includes the operations of the Company, 11 consolidated subsidiaries and one equity-method affiliate.

With regard to plastic lens-related materials, sales volume of photochromic dye materials for eyeglass lenses increased.

With regard to ion exchange membranes, despite sales volume was steady, its operating profit decreased due to large-scale project recorded in the previous fiscal year.

With regard to active pharmaceutical ingredients and intermediates as well as dental materials, the sales volume of each increased, and business performance was robust.

As a result of the above, segment net sales increased 5.4% compared with the previous fiscal year, to ¥ 54,380 million (US$489 million) and operating profit decreased 13.1% to ¥ 3,238 million (US$29 million). The segment reported lower earnings on higher sales.

**Financial Position and Liquidity**

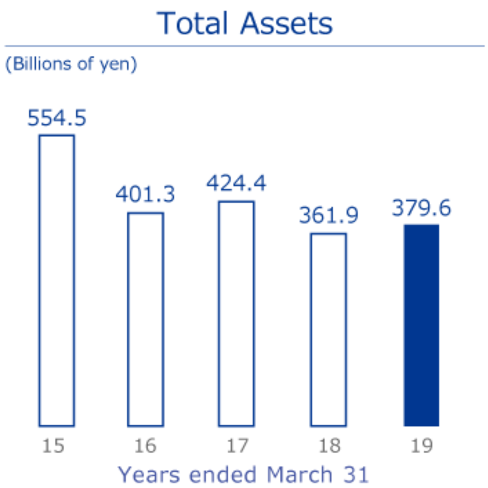
As of March 31, 2019, total assets amounted to ¥379,630 million (US$3,420 million), an increase of ¥17,680 million compared with the previous fiscal year-end.

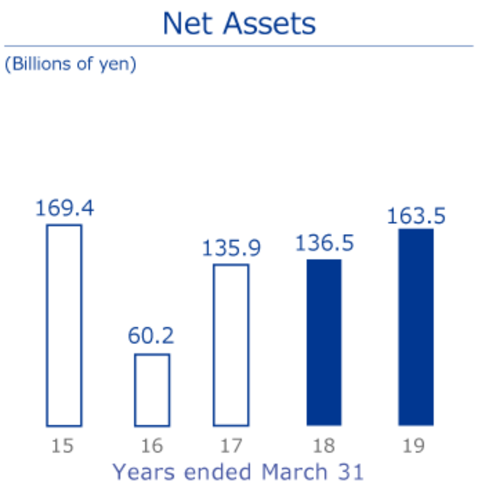
Current assets increased 6.2% compared with the previous fiscal year-end to ¥202,936 million (US$1,828 million). This was due primarily to an increase in cash and cash equivalents. Current liabilities increased 0.2% to ¥93,248 million (US$840 million). This mainly reflected an increase in short-term loans payable. As a result, the current ratio was up to 2.18 times, from 2.05 times as of the previous fiscal year-end.

Property, plant and equipment increased 5.3% in comparison with the previous fiscal year-end to ¥116,104 million (US$1,045 million). This was primarily due to the inclusion of a new subsidiary in the Company's scope of consolidation. Intangible assets and investments and other assets decreased 0.1% over the previous fiscal year-end to ¥60,588 million (US$545 million). This was primarily due to the securities.

As of March 31, 2019, total liabilities amounted to ¥216,104 million (US$1,946 million), a decrease of 4.1% compared with the previous fiscal year-end figure of ¥225,357 million. The main contributory factor was a decrease in long-term loans payable and current portion of long-term loans payable. Interest-bearing debt decreased 7.8% from ¥ 139,917 million as of the previous fiscal year-end to ¥128,966 million (US$1,161 million).

Non-controlling interests decreased 1.8% from ¥10,935 million as of the previous fiscal year-end to ¥10,743 million (US$96 million). Net assets increased 19.7% compared with the previous fiscal year-end, from ¥136,591 million to ¥ 163,525 million (US$1,473 million). The ratio of shareholders' equity to total assets was 40.2%, up from 34.7% as of the previous fiscal year-end. The amount of net assets per share was ¥2,199.83 (US$19.818), up from ¥1,806.56 as of the previous fiscal year-end.



**Capital Expenditures**

Capital expenditures totaled ¥18,581 million (US$167 million), an increase of 16.6% compared with the previous fiscal year's figure of ¥15,941 million.

**Cash Flows**

Net cash provided by operating activities totaled ¥38,531 million (US$347 million). Principal items included profit before income tax of ¥38,017 million (US$342 million) (¥32,895 million in the previous fiscal year).

Net cash used by investing activities totaled ¥16,174 million (US$145 million). Major contributory factors were payments for purchases of property, plant and equipment of ¥16,765 million (US$151 million) (¥15,526 million in the previous fiscal year).

Net cash used in financing activities came to ¥21,104 million (US$190 million). This was primarily attributable to Proceeds from long-term loans payable of ¥59,713 million (US$537 million) (¥10,120 million in the previous fiscal year), Repayments of long-term loans payable of ¥76,512 (US$689 million) (¥50,384 million in the previous fiscal year).

As a result of the above, cash and cash equivalents increased by ¥1,184 million (US$10 million) compared with the previous fiscal year-end, to ¥67,991 million (US$612 million).

# Consolidated Balance Sheets

Tokuyama Corporation and Consolidated Subsidiaries Years ended March 31, 2019 and 2018

| | Millions of yen | | Thousands of U.S. dollars (Note 2) |
|---|---|---|---|
| | **2019** | 2018 | **2019** |
| **Assets :** | | | |
| **Current assets :** | | | |
| Cash and deposits *Note(2) | 68,613 | 57,229 | 618,136 |
| Notes and accounts receivable - trade *Note(8) | 80,358 | 79,660 | 723,946 |
| Lease receivables | 30 | 28 | 271 |
| Securities | - | 10,000 | - |
| Merchandise and finished goods | 16,458 | 14,028 | 148,275 |
| Work in process | 9,554 | 10,075 | 86,075 |
| Raw materials and supplies | 17,462 | 15,327 | 157,317 |
| Other | 10,554 | 4,809 | 95,085 |
| Allowance for doubtful accounts | (94) | (127) | (853) |
| **Total current assets** | 202,936 | 191,031 | 1,828,256 |
| | | | |
| **Noncurrent assets :** | | | |
| **Property, plant and equipment :** | | | |
| Buildings and structures *Note(2), (3) | 106,214 | 102,761 | 956,888 |
| Accumulated depreciation | (76,233) | (73,455) | (686,785) |
| Buildings and structures, net | 29,981 | 29,305 | 270,102 |
| Machinery, equipment and vehicles *Note(2), (3) | 459,535 | 446,278 | 4,139,960 |
| Accumulated depreciation | (414,813) | (404,441) | (3,737,061) |
| Machinery, equipment and vehicles, net | 44,721 | 41,836 | 402,898 |
| Tools, furniture and fixtures *Note(3) | 22,106 | 21,887 | 199,154 |
| Accumulated depreciation | (19,905) | (19,748) | (179,324) |
| Tools, furniture and fixtures, net | 2,201 | 2,138 | 19,829 |
| Land *Note(2) | 32,296 | 30,995 | 290,963 |
| Leased assets | 4,548 | 3,760 | 40,980 |
| Accumulated depreciation | (2,237) | (1,753) | (20,159) |
| Leased assets, net | 2,311 | 2,007 | 20,820 |
| Construction in progress | 4,592 | 3,959 | 41,374 |
| **Total property, plant and equipment** | 116,104 | 110,242 | 1,045,989 |
| | | | |
| **Intangible assets** | | | |
| Goodwill | 208 | 1,158 | 1,876 |
| Leased assets | 71 | 51 | 647 |
| Other *Note(3) | 1,693 | 1,556 | 15,259 |
| **Total intangible assets** | 1,973 | 2,766 | 17,783 |
| | | | |
| **Investments and other assets** | | | |
| Investment securities *Note(1), (2) | 21,718 | 24,302 | 195,659 |
| Long-term loans receivable | 2,444 | 2,627 | 22,019 |
| Deferred tax assets | 21,091 | 18,300 | 190,014 |
| Net defined benefit asset | 9,796 | 9,657 | 88,258 |
| Other | 3,621 | 3,162 | 32,624 |
| Allowance for doubtful accounts | (57) | (141) | (513) |
| **Total investments and other assets** | 58,614 | 57,908 | 528,061 |
| **Total noncurrent assets** | 176,693 | 170,917 | 1,591,834 |
| **Total assets** | 379,630 | 361,949 | 3,420,091 |

*See notes to consolidated financial statements*

## Consolidated Balance Sheets

Tokuyama Corporation and Consolidated Subsidiaries Years ended March 31, 2019 and 2018

| | Millions of yen | | Thousands of U.S. dollars (Note 2) |
|---|---|---|---|
| | **2019** | 2018 | **2019** |
| **Liabilities :** | | | |
| **Current liabilities :** | | | |
| Notes and accounts payable - trade *Note(2) | 47,268 | 47,610 | 425,841 |
| Short-term loans payable *Note(2) | 4,361 | 2,549 | 39,296 |
| Current portion of long-term loans payable *Note(2) | 12,667 | 15,684 | 114,120 |
| Lease obligations | 758 | 641 | 6,831 |
| Income taxes payable | 3,816 | 3,688 | 34,380 |
| Provision for bonuses | 2,664 | 2,557 | 24,007 |
| Provision for repairs | 3,569 | 4,332 | 32,159 |
| Provision for product warranties | 137 | 98 | 1,235 |
| Provision for loss on compensation for damage | 91 | - | 820 |
| Provision for restructuring | 233 | - | 2,099 |
| Other *Note(2) | 17,680 | 15,870 | 159,282 |
| **Total current liabilities** | 93,248 | 93,032 | 840,076 |
| **Noncurrent liabilities :** | | | |
| Long-term loans payable *Note(2) | 109,411 | 119,521 | 985,687 |
| Lease obligations | 1,767 | 1,521 | 15,925 |
| Deferred tax liabilities | 220 | 298 | 1,982 |
| Provision for directors' retirement benefits | 224 | 143 | 2,024 |
| Provision for share benefits | 48 | - | 434 |
| Provision for repairs | 1,546 | 1,594 | 13,932 |
| Allowance for loss on compensation for building materials | 260 | 261 | 2,349 |
| Provision for environmental measures | 222 | 253 | 2,004 |
| Net defined benefit liability | 2,149 | 1,527 | 19,361 |
| Asset retirement obligations | 6 | 5 | 54 |
| Other | 6,999 | 7,197 | 63,056 |
| **Total noncurrent liabilities** | 122,856 | 132,325 | 1,106,814 |
| **Total liabilities** | 216,104 | 225,357 | 1,946,891 |
| **Net assets :** | | | |
| **Shareholders' equity :** | | | |
| Capital stock | | | |
| Authorized : 200,000,000 shares | | | |
| Issued : 69,934,375 shares | 10,000 | 10,000 | 90,090 |
| Capital surplus | 20,018 | 20,008 | 180,343 |
| Retained earnings | 121,901 | 90,752 | 1,098,213 |
| Treasury stock | | | |
| 2018 : 378,378 shares | | | |
| 2019 : 482,765 shares | (1,823) | (1,472) | (16,432) |
| **Total shareholders' equity** | 150,095 | 119,288 | 1,352,214 |
| **Accumulated other comprehensive income :** | | | |
| Valuation difference on available-for-sale securities | (1,566) | 1,352 | (14,113) |
| Deferred gains or losses on hedges | (61) | (151) | (551) |
| Foreign currency translation adjustment | 1,672 | 2,093 | 15,071 |
| Remeasurements of defined benefit plans | 2,640 | 3,074 | 23,791 |
| **Total accumulated other comprehensive income** | 2,685 | 6,368 | 24,197 |
| **Non-controlling interests** | 10,743 | 10,935 | 96,788 |
| **Total net assets** | 163,525 | 136,591 | 1,473,200 |
| **Total liabilities and net assets** | 379,630 | 361,949 | 3,420,091 |

*See notes to consolidated financial statements*

## Consolidated Statements of Income

Tokuyama Corporation and Consolidated Subsidiaries  Years ended March 31, 2019 and 2018

| | Millions of yen | | Thousands of U.S. dollars (Note 2) |
|---|---|---|---|
| | **2019** | 2018 | **2019** |
| **Net sales** | 324,661 | 308,061 | 2,924,874 |
| **Cost of sales *Note(1),(4)** | 226,664 | 207,715 | 2,042,026 |
| **Gross profit** | 97,996 | 100,346 | 882,847 |
| **Selling, general and administrative expenses** | | | |
| Selling expenses *Note(2) | 41,524 | 39,268 | 374,099 |
| General and administrative expenses *Note(3),(4) | 21,208 | 19,809 | 191,066 |
| **Total selling, general and administrative expenses** | 62,733 | 59,077 | 565,165 |
| **Operating income** | 35,262 | 41,268 | 317,682 |
| **Non-operating income :** | | | |
| Interest income | 123 | 210 | 1,113 |
| Dividend income | 390 | 272 | 3,522 |
| Share of profit of entities accounted for using equity method | 921 | 957 | 8,304 |
| Fiduciary obligation fee | 716 | 878 | 6,452 |
| Trial products income | 666 | 540 | 6,005 |
| Rent income on non-current assets | 649 | 450 | 5,851 |
| Other | 1,333 | 1,335 | 12,012 |
| **Total non-operating income** | 4,802 | 4,645 | 43,262 |
| **Non-operating expenses :** | | | |
| Interest expenses | 2,453 | 3,714 | 22,102 |
| Cost of loans payable | 884 | - | 7,971 |
| Loss on bond retirement | - | 1,604 | - |
| Fiduciary obligation expenses | 685 | 856 | 6,177 |
| Other | 2,640 | 3,541 | 23,788 |
| **Total non-operating expenses** | 6,664 | 9,717 | 60,038 |
| **Ordinary income** | 33,400 | 36,196 | 300,905 |
| **Extraordinary income :** | | | |
| Gain on sales of noncurrent assets *Note(5) | 47 | 528 | 431 |
| Gain on bargain purchase | 964 | - | 8,692 |
| Gain on sales of investment securities | 1 | 6 | 11 |
| Compensation for damage income | 6,006 | - | 54,113 |
| Compensation income for damage | - | 7,705 | - |
| Subsidy income | 133 | 144 | 1,201 |
| Gain on insurance claim | 169 | 145 | 1,523 |
| Other | 27 | - | 249 |
| **Total extraordinary income** | 7,351 | 8,529 | 66,225 |
| **Extraordinary loss :** | | | |
| Loss on sales of non-current assets *Note(6) | 10 | 5 | 98 |
| Impairment loss *Note(7) | 363 | 1,098 | 3,277 |
| Loss on disaster | 30 | 4 | 276 |
| Loss on reduction of noncurrent assets | 100 | 110 | 902 |
| Loss on disposal of noncurrent assets | 807 | 715 | 7,273 |
| Loss on sales of investment securities | - | 6 | - |
| Compensation for damage | 851 | - | 7,670 |
| Loss on transfer of business | - | 8,059 | - |
| Loss on contract cancellation | - | 1,431 | - |
| Other | 569 | 398 | 5,128 |
| **Total extraordinary losses** | 2,733 | 11,830 | 24,628 |
| **Profit before income taxes** | 38,017 | 32,895 | 342,503 |
| **Income taxes** | | | |
| Current | 5,074 | 4,777 | 45,712 |
| Deferred | (2,085) | 2,736 | (18,791) |
| **Total income taxes** | 2,988 | 7,514 | 26,920 |
| **Profit** | 35,029 | 25,381 | 315,582 |
| **Profit attributable to non-controlling interests** | 750 | 5,682 | 6,761 |
| **Profit attributable to owners of parent** | 34,279 | 19,698 | 308,820 |

| | Yen | | U.S. dollars (Note 2) |
|---|---|---|---|
| | **2019** | 2018 | **2019** |
| **Per share amounts :** | | | |
| Net income | 493.26 | 259.81 | 4.444 |
| Cash dividends | 50.00 | 30.00 | 0.45 |

*See notes to consolidated financial statements*

# Consolidated Statements of Comprehensive Income

Tokuyama Corporation and Consolidated Subsidiaries  Years ended March 31, 2019 and 2018

| | Millions of yen | | Thousands of U.S. dollars (Note 2) |
|---|---|---|---|
| | **2019** | 2018 | **2019** |
| **Profit** | 35,029 | 25,381 | 315,582 |
| **Other comprehensive income** | | | |
| Valuation difference on available-for-sale securities | (2,919) | 1,039 | (26,301) |
| Deferred gains or losses on hedges | 90 | 178 | 816 |
| Foreign currency translation adjustment | (304) | 425 | (2,743) |
| Remeasurements of defined benefit plans, net of tax | (434) | 241 | (3,913) |
| Share of other comprehensive income of entities accounted for using equity method | (139) | 170 | (1,260) |
| **Total other comprehensive income *Note(1)** | (3,707) | 2,055 | (33,402) |
| **Total comprehensive income** | 31,321 | 27,436 | 282,179 |
| Attributable to: | | | |
| Owners of parent | 30,596 | 21,660 | 275,644 |
| Non-controling interests | 725 | 5,775 | 6,535 |

*See notes to consolidated financial statements*

# Consolidated Statements of Changes in Net Assets

Tokuyama Corporation and Consolidated Subsidiaries    Years ended March 31, 2019 and 2018

**[2019]**

| | Millions of yen | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Shareholders' equity | | | | | Accumulated other comprehensive income | | | | | | |
| | Capital stock | Capital surplus | Retained earnings | Treasury stock | 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 stock | | | | (351) | (351) | | | | | | | (351) |
| Retirement of treasury shares | | 9 | | 0 | 9 | | | | | | | 9 |
| Disposal of treasury stock | | | 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 |

**[2018]**

| | Millions of yen | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Shareholders' equity | | | | | Accumulated other comprehensive income | | | | | | |
| | Capital stock | Capital surplus | Retained earnings | Treasury stock | 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 | 41,545 | 72,511 | (1,446) | 122,609 | 319 | (274) | 1,528 | 2,833 | 4,406 | 8,960 | 135,976 |
| **Changes during the fiscal year** | | | | | | | | | | | | |
| Profit attributable to owners of parent | | | 19,698 | | 19,698 | | | | | | | 19,698 |
| Dividends of surplus | | | (1,457) | | (1,457) | | | | | | | (1,457) |
| Purchase of treasury stock | | | | (21,651) | (21,651) | | | | | | | (21,651) |
| Retirement of treasury shares | | (21,626) | | 21,626 | - | | | | | | | - |
| Disposal of treasury stock | | (0) | | 0 | 0 | | | | | | | 0 |
| Purchase of shares of consolidated subsidiaries | | 89 | | | 89 | | | | | | | 89 |
| Net changes of items other than shareholders' equity | | | | | | 1,032 | 122 | 564 | 241 | 1,962 | 1,974 | 3,936 |
| Total changes of items during the period | - | (21,536) | 18,241 | (25) | (3,321) | 1,032 | 122 | 564 | 241 | 1,962 | 1,974 | 615 |
| **Balance at end 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 |

**[2019]**

| | Thousands of U.S. dollars | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Shareholders' equity | | | | | Accumulated other comprehensive income | | | | | | |
| | Capital stock | Capital surplus | Retained earnings | Treasury stock | 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** | 90,090 | 180,255 | 817,587 | (13,263) | 1,074,669 | 12,182 | (1,368) | 18,857 | 27,702 | 57,373 | 98,513 | 1,230,556 |
| **Changes during the fiscal year** | | | | | | | | | | | | |
| Profit attributable to owners of parent | | | 308,820 | | 308,820 | | | | | | | 308,820 |
| Dividends of surplus | | | (28,197) | | (28,197) | | | | | | | (28,197) |
| Purchase of treasury stock | | | | (3,168) | (3,168) | | | | | | | (3,168) |
| Retirement of treasury shares | | 87 | | 0 | 88 | | | | | | | 88 |
| Disposal of treasury stock | | | 3 | | 3 | | | | | | | 3 |
| Purchase of shares of consolidated subsidiaries | | (0) | | | (0) | | | | | | | (0) |
| Net changes of items other than shareholders' equity | | | | | | (26,295) | 816 | (3,786) | (3,910) | (33,176) | (1,725) | (34,901) |
| Total changes of items during the period | - | 87 | 280,625 | (3,168) | 277,545 | (26,295) | 816 | (3,786) | (3,910) | (33,176) | (1,725) | 242,643 |
| **Balance at end of year** | 90,090 | 180,343 | 1,098,213 | (16,432) | 1,352,214 | (14,113) | (551) | 15,071 | 23,791 | 24,197 | 96,788 | 1,473,200 |

*See notes to consolidated financial statements*

# Consolidated Statements of Cash Flows

Tokuyama Corporation and Consolidated Subsidiaries　　Years ended March 31, 2019 and 2018

| | Millions of yen | | Thousands of U.S. dollars (Note 2) |
|---|---|---|---|
| | **2019** | 2018 | **2019** |
| **Cash flows from operating activities** | | | |
| Profit before income taxes | 38,017 | 32,895 | 342,503 |
| Depreciation and amortization | 15,093 | 13,985 | 135,976 |
| Increase (decrease) in provision | (693) | 1,433 | (6,248) |
| Increase(decrease) in net defined benefit liability | 58 | 95 | 525 |
| Increase(decrease) in net defined benefit asset | (761) | (485) | (6,863) |
| Interest and dividends income | (514) | (483) | (4,635) |
| Foreign exchange losses (gains) | 8 | (56) | 78 |
| Loss (gain) on sales of property, plant and equipment | (36) | (522) | (332) |
| Loss (gain) on sales of investment securities | (1) | (0) | (11) |
| Share of profit of entities accounted for using equity method | (921) | (957) | (8,304) |
| Gain on bargain purchase | (964) | - | (8,692) |
| Subsidy income | (133) | (144) | (1,201) |
| Interest expenses | 2,453 | 3,714 | 22,102 |
| Cost of loans payable | 884 | - | 7,971 |
| Loss on reduction of noncurrent assets | 100 | 110 | 902 |
| Impairment loss | 363 | 1,098 | 3,277 |
| Loss (gain) on disposal of noncurrent assets | 807 | 715 | 7,273 |
| Gain on insurance claim | (169) | (145) | (1,523) |
| Loss on transfer of business | - | 8,059 | - |
| Compensation for damage income | (6,006) | - | (54,113) |
| Compensation income for damage | - | (7,705) | - |
| Compensation for damage | 851 | - | 7,670 |
| Loss on contract cancellation | - | 1,431 | - |
| Loss on redemption of bonds | - | 1,604 | - |
| Decrease (increase) in notes and accounts receivable - trade | 928 | (5,857) | 8,364 |
| Decrease (increase) in inventories | (4,071) | (6,463) | (36,680) |
| Decrease (increase) in other current assets | 335 | (414) | 3,025 |
| Increase (decrease) in notes and accounts payable - trade | (1,090) | 11,344 | (9,825) |
| Increase (decrease) in other current liabilities | (403) | 1,673 | (3,633) |
| Other, net | 943 | 972 | 8,498 |
| **Subtotal** | 45,077 | 55,899 | 406,102 |
| Interest and dividends income received | 938 | 805 | 8,454 |
| Interest expenses paid | (2,529) | (3,775) | (22,789) |
| Proceeds from insurance income | 169 | 145 | 1,523 |
| Proceeds from conpensation income | - | 7,705 | - |
| Payments for contract cancellation | - | (959) | - |
| Income taxes paid | (5,123) | 2,064 | (46,160) |
| **Net cash provided by (used in) operating activities** | 38,531 | 61,885 | 347,132 |
| **Cash flows from investing activities** | | | |
| Payments into time deposits | (269) | (288) | (2,427) |
| Proceeds from withdrawal of time deposits | 498 | 161 | 4,488 |
| Purchase of property, plant and equipment | (16,765) | (15,526) | (151,044) |
| Proceeds from sales of property, plant and equipment | 219 | 1,618 | 1,976 |
| Purchase of investment securities | (22) | (3,359) | (205) |
| Proceeds from sales of investment securities | 3 | 76 | 30 |
| Proceeds from purchase of shares of subsidiaries resulting in change in scope of consolidation | 583 | - | 5,255 |
| Proceeds from sales of shares of subsidiaries resulting in change in scope of consolidation | - | 5,362 | - |
| Payments of long-term loans receivable | (3) | (7) | (34) |
| Collection of long-term loans receivable | 214 | 234 | 1,936 |
| Proceeds from subsidy income | 133 | 144 | 1,201 |
| Other, net | (765) | (1,081) | (6,893) |
| **Net cash provided by (used in) investing activities** | (16,174) | (12,665) | (145,716) |
| **Cash flows from financing activities** | | | |
| Increase (decrease) in short-term loans payable | 247 | 2 | 2,226 |
| Proceeds of long-term loans payable | 59,713 | 10,120 | 537,956 |
| Repayment of long-term loans payable | (76,512) | (50,384) | (689,297) |
| Redemption of bonds | - | (36,014) | - |
| Proceeds from issuance of common shares | - | 78 | - |
| Cash dividends paid | (3,122) | (1,454) | (28,129) |
| Cash dividends paid to non-controlling interests | (357) | (406) | (3,219) |
| Decrease (increase) in treasury stock | (308) | (21,650) | (2,776) |
| Other, net | (764) | (1,500) | (6,890) |
| **Net cash provided by (used in) financing activities** | (21,104) | (101,209) | (190,130) |
| **Effect of exchange rate change on cash and cash equivalents** | (49) | (23) | (450) |
| **Net increase (decrease) in cash and cash equivalents** | 1,202 | (52,012) | 10,835 |
| **Cash and cash equivalents at beginning of period** | 66,807 | 118,819 | 601,865 |
| **Decrease in cash and cash equivalents resulting from exclusion of subsidiaries from consolidation** | (18) | - | (163) |
| **Cash and cash equivalents at end of period *Note(1)** | 67,991 | 66,807 | 612,537 |

*See notes to consolidated financial statements*

# Notes to Consolidated Financial Statements

Tokuyama Corporation and Consolidated Subsidiaries

**1. BASIS OF CONSOLIDATED FINANCIAL STATEMENTS**

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. U.S. DOLLAR AMOUNTS**

The U.S. dollar amounts included in the consolidated financial statements and notes represent the arithmetic results of translating Japanese yen to U.S. dollars at the rate of ¥111=US$1, the approximate exchange rate on March 31, 2019. The U.S. dollar amounts are included solely for the convenience of readers outside Japan, and are not intended to imply that the assets and liabilities that originated in yen have been or could be readily converted, realized, or settled in U.S. dollars at this or at any other rate.

**3. SCOPE OF CONSOLIDATION**

The consolidated financial statements include the accounts of the Company and its 52 significant subsidiaries (49 in 2018). 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
- Excel Shanon Corporation
- Tokuyama Dental Corporation
- Tokuyama Mtech Corporation
- Hiroshima Tokuyama Ready Mixed Concrete Co., Ltd.
- Sun Arrow Chemical Co.,Ltd.
- Tokuyama Chemicals (Zhejiang) Co., Ltd.
- Taiwan Tokuyama Corporation

Tokuyama Kairiku Corporation, Kyouei Sekiyu Corporation, Shuunan Kairiku Corporation, and Yamaguchi Kisen Corporation (for all of which the Company has acquired shares) have been included into the scope of consolidation from the consolidated fiscal year under review.

Kyosei Kaiun Ltd., Co., which had been a consolidated subsidiary until the previous consolidated fiscal year, has been removed from the scope of consolidation from the consolidated fiscal year under review due to being liquidated.

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 9 affiliates (10 in 2018) 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.
Oita Bayside Ready Mixed Concrete Co., Ltd., which had been an equity-method affiliate until the previous consolidated fiscal year, has been removed from the scope of consolidation from the consolidated fiscal year under review due to being liquidated.
Major affiliate that are not accounted for by the equity is Oita Mining Co., Ltd.
The equity method does not apply to them because they have little impact on the consolidated financial statements 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**
(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 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 restructuring
The Company records estimated amounts in order to prepare for business restructuring-related expenditures.
(vii) Provision for directors' retirement benefits
At certain consolidated subsidiaries, the amount to be required at the end of the fiscal year under review in accordance with internal rules is recorded to prepare for payment of directors' retirement benefits.
(ⅷ) Provision for share benefits
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.
(ⅸ) 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).
(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 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 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 fiscal year when they are incurred.
(iii) Application of simplified accounting method used by small companies
In calculating net defined 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 fiscal year-end is deemed as retirement benefit obligations.

(5)Application of the consolidated corporate-tax system
The Company adopts consolidated corporate-tax system from current consolidated fiscal year.

(6) Accounting method for deferred assets
All deferred assets are charged to expenses when incurred.

(7) 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 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 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.

(8) 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 denominated in foreign currencies and loans payable |

(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.

(9) Amortization method and amortization period of goodwill
Goodwill is equally amortized over five years.

(10) 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.

(11) 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 fiscal year under review.

**5. CHANGES IN ACCOUNTING POLICY**
Not applicable.

**6. NEW ACCOUNTING STANDARDS NOT YET APPLIED**
· "Accounting Standard for Revenue Recognition ," (ASBJ Corporate Accounting Standard No. 29, March 30, 2018)
· "Implementation Guidance on Accounting Standard for Revenue Recognition," (ASBJ Corporate Accounting Standard Implementation Guidance No. 30, March 30, 2018)

1. Summary
Having jointly developed comprehensive accounting standards pertaining to revenue recognition, the International Accounting Standards Board (IASB) and the U.S. Financial Accounting Standards Board (FASB) officially announced Revenue from Contracts with Customers (issued as International Financial Reporting Standards (IFRS) 15 by the IASB, as Topic 606 by the FASB) in May 2014. On the basis of IFRS 15 being applied from the fiscal year beginning on or after January 1, 2018, and Topic 606 being applied from the fiscal year beginning after December 15, 2017, a comprehensive accounting standard on revenue recognition was developed by the ASBJ Committee and officially announced in conjunction with the implementation guidance.
As a basic policy in developing the ASBJ's accounting standards pertaining to revenue recognition from the viewpoint of the comparability between financial statements, which is one of the benefits of conformity with IFRS 15, accounting standards were formulated for which it was decided to incorporate the basic principles of IFRS 15 as the starting point. In addition, in the event of there being items that should be taken into consideration, such as any practical work that has previously been conducted in Japan, alternative treatments will be added to the extent needed for comparability not be compromised.

2. Planned date for implementation
The Company will implement this accounting standard 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.

**7. CHANGES IN PRESENTATION**
(Changes in Accordance with Application of Partial Amendments to Accounting Standard for Tax Effect Accounting)
Effective from the beginning of the fiscal year under review, the Company 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). In addition to having reclassified deferred tax assets in the investment and other assets section of the Company’s balance sheet, and having changed to the method by which deferred tax liabilities are included in the non-current liabilities section, changes have been made to the notes relating to tax effect accounting.

As a result, in the consolidated balance sheet for the previous consolidated fiscal year, the deferred tax assets of ¥6,620 million under current assets are included in the deferred tax assets of ¥18,300 million under investments and other assets, and the deferred tax liabilities of ¥0 million under current liabilities included in the deferred tax liabilities of ¥298 million under non-current liabilities.

Also, in the note on tax effect accounting, the added content is that stated in Note 8 (excluding the total of the valuation allowance) and Note 9 of the Accounting Standard for Tax Effect Accounting explanatory notes, as defined in Paragraphs 3 to 5 of the Partial Amendments to Tax Effect Accounting Standard. However, the content pertaining to the previous consolidated fiscal year among the said content is not described in accordance with the transitional treatment prescribed in the Partial Amendments to Tax Effect Accounting Standard, Paragraph 7.

(Consolidated Statements of Income)

In the fiscal year under review, “Rent income on non-current assets” in “Non-operating income” is separately presented due to its increased significance. Items in the consolidated financial statements for the previous fiscal year have been reclassified to reflect this change in the presentation.

Consequently, ¥450 million that was presented in “Other” under “Non-operating income” in the previous fiscal year has been reclassified to “Rent income on non-current assets.”

In the fiscal year under review, “Fiduciary obligation expenses” in “Non-operating expenses” is separately presented due to its increased significance. Items in the consolidated financial statements for the previous fiscal year have been reclassified to reflect this change in the presentation.

Consequently, ¥ 856 million that was presented in “Other” under “Non-operating expenses” in the previous fiscal year has been reclassified to “Fiduciary obligation expenses.”

**8. CHANGES IN ACCOUNTING ESTIMATES**

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 stock that remains in trust

The Company’s stock that remains in trust is recorded as treasury stock 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 stock are ¥340 million (US$3 million) and 100,800 shares.

## 10. CONSOLIDATED BALANCE SHEETS

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

| | Millions of yen | | Thousands of U.S. Dollars |
|---|---|---|---|
| | **2019** | 2018 | **2019** |
| Investment securities | 8,086 | 7,803 | 72,852 |

(2) Assets pledged as collateral and liabilities for which collateral is pledged
Assets pledged as collateral are as follows:

| | Millions of yen | | Thousands of U.S. Dollars |
|---|---|---|---|
| | **2019** | 2018 | **2019** |
| **Pledged Assets** | | | |
| Cash and deposits | - | 1 | - |
| Buildings and structures | 69 | 73 | 622 |
| Machinery, equipment and vehicles | 1,094 | - | 9,858 |
| Land | 562 | 562 | 5,066 |
| Investment securities | 25 | 26 | 225 |
| **Total** | 1,750 | 663 | 15,773 |

Liabilities for which collateral is pledged are as follows:

| | Millions of yen | | Thousands of U.S. Dollars |
|---|---|---|---|
| | **2019** | 2018 | **2019** |
| **Pledged Debts** | | | |
| Notes and accounts payable - trade | - | 1 | - |
| Short-term loans payable | 135 | 351 | 1,220 |
| Curent portion of long-term loans payable | 34 | 33 | 313 |
| Long-term loans payable | 1,185 | 117 | 10,676 |
| Other | 19 | 19 | 176 |
| **Total** | 1,375 | 522 | 12,388 |

(3) Reduction entry
In the fiscal year under review, reduction entries of ¥13million (US$0 million) for buildings and structures, ¥86 million (US$0 million) for machinery, equipment and vehicles were made due to receipt of subsidies, etc.
In addition, as a result of the retirement of machinery, equipment and vehicles that were subject to the reduction entry, cumulative reduction entries decreased by ¥111 million (US$ 1million), and as a result of the retirement of tools, furniture and fixtures that were subject to the reduction entry, cumulative reduction entries decreased by ¥19 million (US$0 million).
The cumulative reduction entries due to the receipt of subsidies, etc. in association with fixed assets are as follows:

| | Millions of yen | | Thousands of U.S. Dollars |
|---|---|---|---|
| | **2019** | 2018 | **2019** |
| Buildings and structures | 1,455 | 1,441 | 13,111 |
| Machinery, equipment and vehicles | 2,759 | 2,784 | 24,856 |
| Tools, furniture and fixtures | 164 | 183 | 1,478 |
| Intangible assets Other | 4 | 4 | 36 |
| **Total** | 4,382 | 4,412 | 39,483 |

(4) Guarantee obligation

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

| | Millions of yen | | Thousands of U.S. Dollars |
|---|---|---|---|
| | **2019** | 2018 | **2019** |
| Employee | 99 | 90 | 897 |

(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 | | Thousands of U.S. Dollars |
|---|---|---|---|
| | **2019** | 2018 | **2019** |
| 20th unsecured bonds without collateral | 10,000 | 10,000 | 90,090 |
| 22nd unsecured bonds without collateral | 15,000 | 15,000 | 135,135 |
| 24th unsecured bonds without collateral | 9,400 | 9,400 | 84,684 |
| **Total** | 34,400 | 34,400 | 309,909 |

(6) Repurchase obligation due to liquidation of notes receivable

| | Millions of yen | | Thousands of U.S. Dollars |
|---|---|---|---|
| | **2019** | 2018 | **2019** |
| Repurchase obligation due to liquidation of notes receivable | 1,867 | - | 16,826 |

(7) Notes receivable endorsed

| | Millions of yen | | Thousands of U.S. Dollars |
|---|---|---|---|
| | **2019** | 2018 | **2019** |
| Notes receivable endorsed | 822 | 480 | 7,414 |

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

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

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

| | Millions of yen | | Thousands of U.S. Dollars |
|---|---|---|---|
| | **2019** | 2018 | **2019** |
| Notes receivable - trade | 1,540 | 1,055 | 13,876 |

## 11. CONSOLIDATED STATEMENTS OF INCOME

(1) Inventories at the 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 | | Thousands of U.S. Dollars |
|---|---|---|---|
| | **2019** | 2018 | **2019** |
| Loss on valuation of inventories | 269 | 185 | 2,424 |

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

| | Millions of yen | | Thousands of U.S. Dollars |
|---|---|---|---|
| | **2019** | 2018 | **2019** |
| **Selling expenses :** | | | |
| Freight-out expenses | 23,111 | 22,276 | 208,215 |
| Shipping charges | 5,889 | 5,582 | 53,059 |
| Salaries and bonuses | 5,230 | 5,066 | 47,125 |
| Provision for bonuses | 399 | 360 | 3,598 |
| Retirement benefit expenses | 50 | 53 | 457 |
| Provision for repairs | 39 | 14 | 359 |
| Provision of allowance for doubtful accounts | (49) | (6) | (441) |

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

| | Millions of yen | | Thousands of U.S. Dollars |
|---|---|---|---|
| | **2019** | 2018 | **2019** |
| **General and administrative expenses :** | | | |
| Technical research expenses | 7,077 | 6,798 | 63,762 |
| Salaries and bonuses | 4,282 | 3,663 | 38,580 |
| Provision for bonuses | 333 | 326 | 3,005 |
| Provision for directors' retirement benefits | 50 | 56 | 451 |
| Retirement benefit expenses | 48 | 33 | 437 |

(Note) Technical research expenses for the previous fiscal year include provision for bonuses of ¥272 million and retirement benefit expenses of ¥22 million.

Technical research expenses for the fiscal year under review include provision for bonuses of ¥268 million (US$2 million) and retirement benefit expenses of ¥23 million (US$0 million).

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

| | Millions of yen | | Thousands of U.S. Dollars |
|---|---|---|---|
| | **2019** | 2018 | **2019** |
| Research and development expenses | 8,052 | 7,903 | 72,543 |

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

| | Millions of yen | | Thousands of U.S. Dollars |
|---|---|---|---|
| | **2019** | 2018 | **2019** |
| Buildings and structures | 6 | - | 61 |
| Machinery, equipment and vehicles | 22 | 13 | 200 |
| Tools, furniture and fixtures | 3 | 5 | 33 |
| Land | 13 | 68 | 118 |
| Construction in progress | - | 440 | - |
| Other | 2 | - | 18 |
| **Total** | 47 | 528 | 431 |

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

| | Millions of yen | | Thousands of U.S. Dollars |
|---|---|---|---|
| | **2019** | 2018 | **2019** |
| Buildings and structures | 0 | - | 5 |
| Machinery, equipment and vehicles | 8 | 3 | 80 |
| Tools, furniture and fixtures | 1 | 1 | 9 |
| Land | 0 | 0 | 2 |
| **Total** | 10 | 5 | 98 |

(7) Impairment loss

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 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.

Fiscal year ended March 31, 2018

The Group groups its assets mainly according to the smallest units independently generating cash flows based on business categories. During the fiscal year ended March 31, 2018, the Group recorded impairment losses for the following asset groups.

Details of the Company's impairment loss have been omitted due to the low level of importance except for those items, which are presented briefly as follows.

Millions of yen

| Use | Location | Asset category | 2018 |
|---|---|---|---|
| Manufacturing facilities for microporous film | Shnghai,China | Buildings and structures | 152 |
| | | Machinery, equipment and vehicles | 480 |
| | | Tools, furniture and fixtures | 4 |
| | | Intangible assets-other | 37 |
| | | **Total** | 674 |

Shanghai Tokuyama Plastics Co., Ltd. decided to write down the book value of the above asset to its recoverable amount and to post the amount of write-down as an impairment loss in extraordinary losses due to deterioration in market conditions for microporous film.

The recoverable amount has been determined using value in use and a discount rate of 11.72% for calculating the value in use based on future cash flows.

## 12. CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME

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

| | Millions of yen | | Thousands of U.S. Dollars |
|---|---|---|---|
| | **2019** | 2018 | **2019** |
| **Valuation difference on available-for-sale securities :** | | | |
| Gains arising during the year | (3,487) | 1,499 | (31,417) |
| Reclassification adjustment to profit or loss | (1) | - | (11) |
| Amount before income tax effect | (3,488) | 1,499 | (31,428) |
| Income tax effect | 569 | (460) | 5,127 |
| **Total valuation difference on available-for-sale securities** | (2,919) | 1,039 | (26,301) |
| **Deferred gains or losses on hedges :** | | | |
| Gains arising during the year | 130 | 168 | 1,173 |
| Amount before income tax effect | 130 | 168 | 1,173 |
| Income tax effect | (39) | 9 | (357) |
| **Total deferred gains or losses on hedges** | 90 | 178 | 816 |
| **Foreign currency translation adjustment :** | | | |
| Gains arising during the year | (304) | 425 | (2,743) |
| **Total Foreign currency translation adjustment** | (304) | 425 | (2,743) |
| **Remeasurements of defined benefit plans, net of tax :** | | | |
| Gains arising during the year | (201) | 417 | (1,817) |
| Reclassification adjustment to profit or loss | (422) | (183) | (3,809) |
| Amount before income tax effect | (624) | 233 | (5,627) |
| Income tax effect | 190 | 7 | 1,714 |
| **Total remeasurements of defined benefit plans, net of tax** | (434) | 241 | (3,913) |
| **Share of other comprehensive income of entities accounted for using equity :** | | | |
| Gains arising during the year | (139) | 170 | (1,260) |
| **Total Share of other comprehensive income of entities accounted for using equity method** | (139) | 170 | (1,260) |
| **Total other comprehensive income** | (3,707) | 2,055 | (33,402) |

## 13. CONSOLIDATED STATEMENTS OF CHANGES IN NET ASSETS

Fiscal year ended March 31, 2019

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

| **[2019]** | Thousand shares | | | |
|---|---|---|---|---|
| | **Beginning of year** | **Increase during the fiscal year** | **Decrease during the fiscal year** | **End of year** |
| Issuanced shares | | | | |
| Common shares | 69,934 | - | - | 69,934 |
| **Total** | 69,934 | - | - | 69,934 |
| Treasury shares | | | | |
| Common shares (Note 1,2,3) | 378 | 104 | 0 | 482 |
| **Total** | 378 | 104 | 0 | 482 |

(Note 1) The increase in the number of treasury stock of common stock 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 (Board Incentive Plan) Trust.

(Note 2) The decrease of 0 thousand shares in the number of treasury stock of common stock 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 stock of common stock is 100 thousand shares held by The Master Trust Bank of Japan, Ltd. (executive compensation BIP (Board Incentive Plan) 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 |

| Resolution | Class of shares | Dividend (Thousands of U.S. Dollars) | Dividend per shares (U.S. Dollars) | Reference date | Effective date | Source of dividends |
|---|---|---|---|---|---|---|
| Ordinary General Meeting of Shareholders (June 22, 2018) | Common shares | 12,532 | 0.18 | March 31, 2018 | June 25, 2018 | Retained earnings |
| Board of Directors (October 31, 2018) | Common shares | 15,665 | 0.22 | 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 stock) held in the executive compensation BIP trust account.

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

| Resolution | Class of shares | Dividend (Thousands of U.S. Dollars) | Dividend per shares (U.S. Dollars) | Reference date | Effective date | Source of dividends |
|---|---|---|---|---|---|---|
| Ordinary General Meeting of Shareholders (June 21, 2019) | Common shares | 15,664 | 0.22 | 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 stock) held in the executive compensation BIP trust account.

Fiscal year ended March 31, 2018

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

| [2018] | Thousand shares | | | |
|---|---|---|---|---|
| | **Beginning of year** | **Increase during the fiscal year** | **Decrease during the fiscal year** | **End of year** |
| Issuanced shares | | | | |
| Common shares (Note 1,2) | 349,671 | - | 279,737 | 69,934 |
| Class A shares (Note 3) | 20 | - | 20 | - |
| **Total** | 349,691 | - | 279,757 | 69,934 |
| Treasury shares | | | | |
| Common shares (Note 1,4,5) | 1,850 | 15 | 1,488 | 378 |
| **Total** | 1,850 | 15 | 1,488 | 378 |

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

(Note 2) The 279,737 thousand decrease in the total number of common shares outstanding is due to consolidation of shares.

(Note 3) The 20 thousand decrease in issued and outstanding Class A shares is due to cancellation.

(Note 4) The 15 thousand increase in the number of treasury stock of common stock is due to an increase of 1 thousand shares due to purchase of fractional shares in accordance with the consolidation of shares and an increase of 13 thousand shares purchased in less than a share-trading unit (9 thousand shares before, 4 thousand shares after consolidation of shares).

(Note 5) The 1,488 thousand decrease in the number of treasury stock of common stock is due to a decrease of 1,488 thousand shares following the consolidation of shares and a decrease of 0 thousand shares (0 thousand shares after the consolidation of shares) due to requests for the sale of shares constituting less than one unit.

(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 23, 2017) | Class A shares | 761 | 38,082.20 | March 31, 2017 | June 26, 2017 | Retained earnings |
| Board of Directors (October 27, 2017) | Common shares | 695 | 2.00 | September 30, 2017 | November 30, 2017 | Retained earnings |

(Note) The Company consolidated its common shares at a ratio of one share for each five shares effective as of October 1, 2017. The amount of dividend for the end of the fiscal year ending March 31, 2018 is presented as the amount of dividend prior to share consolidation.

(ii) Dividends whose record date is within the fiscal year and whose effective date is in the following 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 22, 2018) | Common shares | 1,391 | 20.00 | March 31, 2018 | June 25, 2018 | Retained earnings |

(Note) The Company consolidated its common shares at a ratio of one share for each five shares effective as of October 1, 2017. The amount of dividend for the end of the fiscal year ending March 31, 2018 is presented as the amount of dividend after share consolidation and includes a 100th anniversary commemorative dividend of 10.00 per share.

**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 | | Thousands of U.S. Dollars |
|---|---|---|---|
| | **2019** | 2018 | **2019** |
| Cash and deposits | 68,613 | 57,229 | 618,136 |
| Securities (negotiable certificate of deposit) | - | 10,000 | - |
| Time deposit whose deposit period exceeds 3 months | (621) | (422) | (5,598) |
| Cash and cash equivalents | 67,991 | 66,807 | 612,537 |

**15. LEASE TRANSACTIONS**

(Lessee)

(1) Operating Lease transactions

Future lease payments related to noncancelable operating lease transactions

| | Millions of yen | | Thousands of U.S. Dollars |
|---|---|---|---|
| | **2019** | 2018 | **2019** |
| Due within one year | 529 | 472 | 4,771 |
| Due beyond one year | 972 | 1,450 | 8,764 |
| **Total** | 1,502 | 1,922 | 13,535 |

(Lessor)

(1) Operating Lease transactions

Future lease income related to noncancelable operating lease transactions

| | Millions of yen | | Thousands of U.S. Dollars |
|---|---|---|---|
| | **2019** | 2018 | **2019** |
| Due within one year | 129 | 129 | 1,168 |
| Due beyond one year | 1,008 | 1,121 | 9,081 |
| **Total** | 1,137 | 1,251 | 10,250 |

**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.

Loans payable and bonds payable are principally for raising funds necessary for capital investments, and the repayment date comes up to 59 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 “(8) Method of significant hedge accounting” described in “4.SIGNIFICANT ACCOUNTING POLICIES” above.

(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.

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 and Accounting 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 & Accounting 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 & Accounting 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, 2019

Fiscal year ended 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 | - |
| **Total assets** | 163,164 | 163,164 | - |
| | | | |
| Notes and accounts payable - trade | 47,268 | 47,268 | - |
| Short-term loans payable | 4,361 | 4,361 | - |
| Long-term loans payable *1 | 122,078 | 122,956 | 878 |
| **Total liabilities** | 173,709 | 174,587 | 878 |
| | | | |
| Derivative financial instruments *2 | | | |
| In which hedge accounting is not applied | (8) | (8) | - |
| In which hedge accounting is applied | (88) | (92) | (4) |
| **Total derivative financial instruments** | (96) | (101) | (4) |

| [2019] | Thousands of U.S. Dollars | | |
|---|---|---|---|
| | Book value | Fair value | Difference |
| Cash and deposits | 618,136 | 618,136 | - |
| Notes and accounts receivable - trade | 723,946 | 723,946 | - |
| Securities and Investment securities | | | |
| Available-for-sale securities | 105,846 | 105,846 | - |
| Long-term loans receivable | 22,019 | 22,019 | - |
| **Total assets** | 1,469,949 | 1,469,949 | - |
| | | | |
| Notes and accounts payable - trade | 425,841 | 425,841 | - |
| Short-term loans payable | 39,296 | 39,296 | - |
| Long-term loans payable *1 | 1,099,807 | 1,107,720 | 7,912 |
| **Total liabilities** | 1,564,946 | 1,572,858 | 7,912 |
| | | | |
| Derivative financial instruments *2 | | | |
| In which hedge accounting is not applied | (75) | (75) | - |
| In which hedge accounting is applied | (793) | (835) | (41) |
| **Total derivative financial instruments** | (868) | (910) | (41) |

(*1) The book value and fair value of long-term loans payable include current portion of long-term loans payable.

(*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, 2018

| [2018] | Millions of yen | | |
|---|---|---|---|
| | **Book value** | **Fair value** | **Difference** |
| Cash and deposits | 57,229 | 57,229 | - |
| Notes and accounts receivable - trade | 79,660 | 79,660 | - |
| Securities and Investment securities | | | |
| Securities | 10,000 | 10,000 | - |
| Available-for-sale securities | 14,635 | 14,635 | - |
| Long-term loans receivable | 2,627 | 2,627 | - |
| **Total assets** | 164,152 | 164,152 | - |
| | | | |
| Notes and accounts payable - trade | 47,610 | 47,610 | - |
| Short-term loans payable | 2,549 | 2,549 | - |
| Long-term loans payable *1 | 135,205 | 136,052 | 846 |
| **Total liabilities** | 185,365 | 186,212 | 846 |
| | | | |
| Derivative financial instruments *2 | | | |
| In which hedge accounting is applied | (218) | (225) | (7) |
| **Total derivative financial instruments** | (218) | (225) | (7) |

(*1) The book value and fair value of long-term loans payable include current portion of long-term loans payable.
(*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.

(Note 1) 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 loans payable
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 loans payable
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."

(Note 2) Financial instruments whose fair value is extremely difficult to determine

| | Millions of yen | | Thousands of U.S. Dollars |
|---|---|---|---|
| | **2019** | 2018 | **2019** |
| Unlisted shares | 1,882 | 1,863 | 16,959 |
| Shares of associates | 7,006 | 6,723 | 63,122 |
| Bonds of associates | 1,080 | 1,080 | 9,729 |
| **Total** | 9,969 | 9,667 | 89,812 |

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."

(Note 3) Redemption schedule for monetary receivables and securities with maturities after the consolidated balance sheet date

As of March 31, 2019

**[2019]** Millions of yen

| | **Within 1 year** | **More than 1 year, within 5 years** | **More than 5 year, within 10 years** | **More than 10 years** |
|---|---|---|---|---|
| Cash and deposits | 68,613 | - | - | - |
| Notes and accounts receivable - trade | 80,358 | - | - | - |
| Long-term loans receivable | 179 | 695 | 848 | 899 |
| **Total** | 149,151 | 695 | 848 | 899 |

**[2019]** Thousands of U.S. Dollars

| | **Within 1 year** | **More than 1 year, within 5 years** | **More than 5 year, within 10 years** | **More than 10 years** |
|---|---|---|---|---|
| Cash and deposits | 618,136 | - | - | - |
| Notes and accounts receivable - trade | 723,946 | - | - | - |
| Long-term loans receivable | 1,620 | 6,270 | 7,644 | 8,105 |
| **Total** | 1,343,704 | 6,270 | 7,644 | 8,105 |

As of March 31, 2018

[2018] Millions of yen

| | **Within 1 year** | **More than 1 year, within 5 years** | **More than 5 year, within 10 years** | **More than 10 years** |
|---|---|---|---|---|
| Cash and deposits | 57,229 | - | - | - |
| Notes and accounts receivable - trade | 79,660 | - | - | - |
| Securities and Investment securities | | | | |
| Securities | 10,000 | - | - | - |
| Long-term loans receivable | 208 | 708 | 849 | 1,069 |
| **Total** | 147,098 | 708 | 849 | 1,069 |

(Note 4) Repayment schedule by term for bonds payable, long-term loans payable, and other interest-bearing debt after the consolidated balance sheet date

As of March 31, 2019

**[2019]** Millions of yen

| | **Within 1 year** | **More than 1 year, within 2 years** | **More than 2 year, within 3 years** | **More than 3 year, within 4 years** | **More than 4 year, within 5 years** | **More than 5 years** |
|---|---|---|---|---|---|---|
| Short-term loans payable | 4,361 | - | - | - | - | - |
| Bonds payable(*1) | - | - | - | - | - | - |
| Long-term loans payable | 12,667 | 15,994 | 9,770 | 21,837 | 1,000 | 60,807 |
| **Total** | 17,029 | 15,994 | 9,770 | 21,837 | 1,000 | 60,807 |

**[2019]** Thousands of U.S. Dollars

| | **Within 1 year** | **More than 1 year, within 2 years** | **More than 2 year, within 3 years** | **More than 3 year, within 4 years** | **More than 4 year, within 5 years** | **More than 5 years** |
|---|---|---|---|---|---|---|
| Short-term loans payable | 39,296 | - | - | - | - | - |
| Bonds payable(*1) | - | - | - | - | - | - |
| Long-term loans payable | 114,120 | 144,096 | 88,022 | 196,735 | 9,012 | 547,818 |
| **Total** | 153,417 | 144,096 | 88,022 | 196,735 | 9,012 | 547,818 |

(*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.

As of March 31, 2018

[2018] Millions of yen

| | **Within 1 year** | **More than 1 year, within 2 years** | **More than 2 year, within 3 years** | **More than 3 year, within 4 years** | **More than 4 year, within 5 years** | **More than 5 years** |
|---|---|---|---|---|---|---|
| Short-term loans payable | 2,549 | - | - | - | - | - |
| Bonds payable(*1) | - | - | - | - | - | - |
| Long-term loans payable | 15,684 | 12,076 | 15,434 | 9,419 | 21,589 | 61,001 |
| **Total** | 18,233 | 12,076 | 15,434 | 9,419 | 21,589 | 61,001 |

(*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, 2019

**[2019]**

| | Millions of yen | | |
|---|---|---|---|
| | **Book value** | **Acquisition cost** | **Unrealized gain** |
| **Available-for-sale securities:** | | | |
| 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) |
| **Total** | 11,748 | 12,951 | (1,202) |

| | Thousands of U.S. Dollars | | |
|---|---|---|---|
| | **Book value** | **Acquisition cost** | **Unrealized gain** |
| **Available-for-sale securities:** | | | |
| Securities with book values exceeding acquisition costs | | | |
| Equity securities | 41,934 | 25,194 | 16,739 |
| Debt securities | - | - | - |
| Other | - | - | - |
| Subtotal | 41,934 | 25,194 | 16,739 |
| Securities with book values not exceeding acquisition costs | | | |
| Equity securities | 63,912 | 91,487 | (27,574) |
| Debt securities | - | - | - |
| Other | - | - | - |
| Subtotal | 63,912 | 91,487 | (27,574) |
| **Total** | 105,846 | 116,682 | (10,835) |

As of March 31, 2018

[2018]

| | Millions of yen | | |
|---|---|---|---|
| | **Book value** | **Acquisition cost** | **Unrealized gain** |
| **Available-for-sale securities:** | | | |
| Securities with book values exceeding acquisition costs | | | |
| Equity securities | 6,980 | 3,965 | 3,015 |
| Debt securities | - | - | - |
| Other | - | - | - |
| Subtotal | 6,980 | 3,965 | 3,015 |
| Securities with book values not exceeding acquisition costs | | | |
| Equity securities | 7,654 | 8,679 | (1,024) |
| Debt securities | - | - | - |
| Other | 10,000 | 10,000 | - |
| Subtotal | 17,654 | 18,679 | (1,024) |
| **Total** | 24,635 | 22,644 | 1,990 |

(4)Available-for-sale securities sold

As of March 31, 2019

**[2019]**

| | Millions of yen | | |
|---|---|---|---|
| | **Proceeds** | **Gain on sales** | **Loss on sales** |
| **Available-for-sale securities sold during 2019 :** | | | |
| Equity securities | 46 | 1 | - |
| Debt securities | | | |
| Government and municipal bonds | - | - | - |
| Corporate bonds | - | - | - |
| Other | - | - | - |
| Other | - | - | - |
| **Total** | 46 | 1 | - |

| | Thousands of U.S. Dollars | | |
|---|---|---|---|
| | **Proceeds** | **Gain on sales** | **Loss on sales** |
| **Available-for-sale securities sold during 2019 :** | | | |
| Equity securities | 415 | 11 | - |
| Debt securities | | | |
| Government and municipal bonds | - | - | - |
| Corporate bonds | - | - | - |
| Other | - | - | - |
| Other | - | - | - |
| **Total** | 415 | 11 | - |

As of March 31, 2018

[2018]

| | Millions of yen | | |
|---|---|---|---|
| | **Proceeds** | **Gain on sales** | **Loss on sales** |
| **Available-for-sale securities sold during 2018 :** | | | |
| Equity securities | 38 | 6 | 6 |
| Debt securities | | | |
| Government and municipal bonds | - | - | - |
| Corporate bonds | - | - | - |
| Other | - | - | - |
| Other | - | - | - |
| **Total** | 38 | 6 | 6 |

**18. DERIVATIVES**

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

(i)Currency-related derivatives

As of March 31, 2019

**[2019]**

| | | Millions of yen | | |
|---|---|---|---|---|
| | **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 loans payable | 400 | 400 | (8) |
| **Total** | | 400 | 400 | (8) |

**[2019]**

| | | Thousands of U.S. Dollars | | |
|---|---|---|---|---|
| | **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 loans payable | 3,603 | 3,603 | (75) |
| **Total** | | 3,603 | 3,603 | (75) |

(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, 2018

Not applicable.

(ii) Interest

Not applicable.

(2) Derivative transactions to which hedge accounting is applied

(i)Currency-related derivatives

As of March 31, 2019

**[2019]**

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

**[2019]**

| | Main hedged items | Thousands of U.S. Dollars<br>Notional value | Maturing after one year | Fair value |
|---|---|---|---|---|
| Hedge accounting method | | | | |
| Principle-based accounting | | | | |
| Forward exchange agreements | | | | |
| Call | | | | |
| Korean Won | Forecast transaction in foreign currencies | 384 | - | (5) |
| **Total** | | 384 | - | (5) |

(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, 2018
Not applicable.

(ii) Interest
As of March 31, 2019

**[2019]**

| | Main hedged items | Millions of yen<br>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 loans payable | 5,400 | 3,800 | (87) |
| **Subtotal** | | 5,400 | 3,800 | (87) |
| Special accounting procedures for interest rate swaps | | | | |
| Interest rate swaps | | | | |
| Pay fixed rate, receive floating rate | Long-term loans payable | 630 | 450 | (4) |
| **Subtotal** | | 630 | 450 | (4) |
| **Total** | | 6,030 | 4,250 | (92) |

**[2019]**

| | Main hedged items | Thousands of U.S. Dollars<br>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 loans payable | 48,648 | 34,234 | (788) |
| **Subtotal** | | 48,648 | 34,234 | (788) |
| Special accounting procedures for interest rate swaps | | | | |
| Interest rate swaps | | | | |
| Pay fixed rate, receive floating rate | Long-term loans payable | 5,675 | 4,054 | (41) |
| **Subtotal** | | 5,675 | 4,054 | (41) |
| **Total** | | 54,324 | 38,288 | (830) |

(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, 2018

[2018]

| | | Millions of yen | | |
|---|---|---|---|---|
| | **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 loans payable | 67,000 | 5,400 | (218) |
| **Subtotal** | | 67,000 | 5,400 | (218) |
| Special accounting procedures for interest rate swaps | | | | |
| Interest rate swaps | | | | |
| Pay fixed rate, receive floating rate | Long-term loans payable | 810 | 630 | (7) |
| **Subtotal** | | 810 | 630 | (7) |
| **Total** | | 67,810 | 6,030 | (225) |

(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 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 | | Thousands of U.S. Dollars |
|---|---|---|---|
| | **2019** | 2018 | **2019** |
| Balance of defined benefit obligations at beginning of year | 16,952 | 17,286 | 152,728 |
| Service cost | 843 | 850 | 7,601 |
| Interest cost | 125 | 128 | 1,129 |
| Occurrence of actuarial gain and loss | 95 | (417) | 863 |
| Payments of retirement benefits | (1,292) | (903) | (11,642) |
| Other | 553 | 8 | 4,988 |
| Balance of defined benefit obligations at end of year | 17,279 | 16,952 | 155,668 |

(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 | | Thousands of U.S. Dollars |
|---|---|---|---|
| | **2019** | 2018 | **2019** |
| Balance of pension assets at beginning of year | 25,082 | 24,792 | 225,969 |
| Expected return on pension assets | 473 | 467 | 4,269 |
| Occurrence of actuarial gain and loss | (105) | 0 | (954) |
| Corporation's contributions | 575 | 582 | 5,180 |
| Payments of retirement benefits | (1,098) | (761) | (9,899) |
| Balance of pension assets at end of year | 24,926 | 25,082 | 224,564 |

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

| | Millions of yen | | Thousands of U.S. Dollars |
|---|---|---|---|
| | **2019** | 2018 | **2019** |
| Funded defined benefit obligations | 15,289 | 15,567 | 137,746 |
| Pension assets | (24,926) | (25,082) | (224,564) |
| | (9,636) | (9,514) | (86,818) |
| Unfunded defined benefit obligations | 1,989 | 1,384 | 17,921 |
| Net amount shown on balance sheets | (7,647) | (8,129) | (68,896) |
| Net defined benefit liability | 2,149 | 1,527 | 19,361 |
| Net defined benefit asset | (9,796) | (9,657) | (88,258) |
| Net amount shown on balance sheets | (7,647) | (8,129) | (68,896) |

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

| | Millions of yen | | Thousands of U.S. Dollars |
|---|---|---|---|
| | **2019** | 2018 | **2019** |
| Service cost (Note) | 843 | 850 | 7,601 |
| Interest cost | 125 | 128 | 1,129 |
| Expected return on pension assets | (473) | (467) | (4,269) |
| Expensed actuarial gain and loss | (422) | (183) | (3,809) |
| Retirement benefit expenses regarding to vested benefits system | 72 | 327 | 651 |

(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 | | Thousands of U.S. Dollars |
|---|---|---|---|
| | **2019** | 2018 | **2019** |
| Actuarial gain and loss | (624) | 233 | (5,627) |
| **Total** | (624) | 233 | (5,627) |

(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 | | Thousands of U.S. Dollars |
|---|---|---|---|
| | **2019** | 2018 | **2019** |
| Unrecognized actuarial gain and loss | 3,787 | 4,412 | 34,121 |
| **Total** | 3,787 | 4,412 | 34,121 |

(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:

| | % | |
|---|---|---|
| | **2019** | 2018 |
| Domestic stocks | 10 | 10 |
| Foreign stocks | 7 | 7 |
| Domestic bonds | 28 | 27 |
| Foreign bonds | 13 | 12 |
| Insurance product (General account) | 16 | 16 |
| Deposits | 11 | 21 |
| Other | 15 | 7 |
| **Total** | 100 | 100 |

(Note 1) Total of pension assets as of March 31, 2018 and March 31, 2019 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)

| | **2019** | 2018 |
|---|---|---|
| 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 ¥527 million for the previous fiscal year and ¥507 million (US$4 million) for the fiscal year under review.

**20. STOCK OPTION**

Not applicable.

**21. TAX EFFECT ACCOUNTING**

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

| | Millions of yen | | Thousands of U.S. Dollars |
|---|---|---|---|
| | **2019** | 2018 | **2019** |
| Deferred tax assets： | | | |
| Deficits (Note 2) | 56,371 | 60,832 | 507,855 |
| Excess depreciation and amortization | 2,698 | 3,308 | 24,310 |
| Provision for repairs | 1,447 | 1,656 | 13,039 |
| Amount carried forward tax credit limit excess | 1,186 | 1,022 | 10,690 |
| Provision for bonuses | 832 | 792 | 7,502 |
| Provision for retirement benefits | 785 | 500 | 7,077 |
| Inventories | 532 | 578 | 4,795 |
| Other | 2,883 | 2,176 | 25,979 |
| Subtotal | 66,738 | 70,868 | 601,252 |
| Valuation allowance（Deficits）(Note 2) | (37,464) | - | (337,515) |
| Valuation allowance（Temporary difference） | (3,075) | - | (27,710) |
| Less valuation allowance (Note 1) | (40,540) | (47,563) | (365,226) |
| Total deferred tax assets | 26,198 | 23,305 | 236,025 |
| | | | |
| Deferred tax liabilities： | | | |
| Prepaid benefit cost | (2,795) | (2,751) | (25,184) |
| Reserve for reduction entry | (1,235) | (1,154) | (11,133) |
| Retained earnings of subsidiaries and affiliates | (646) | (576) | (5,824) |
| Other | (650) | (820) | (5,858) |
| Subtotal | (5,328) | (5,302) | (48,001) |
| Valuation allowance | 0 | - | 7 |
| Total deferred tax liabilities (Note 3) | (5,327) | (5,302) | (47,994) |
| Net deferred tax assets | 20,871 | 18,002 | 188,031 |

(Note 1) Valuation allowance decreased by ¥7,023 million (US$63 million). This decline is primarily due to ¥6,673 million (US$60 million) in valuation allowance related to consolidated loss carry-forwards no longer being recognized following an increase in future taxable income forecasts for the consolidated tax group compared with the end of the previous fiscal year.

(Note 2) Amounts of deficits and related differed tax assets by tax loss carry-forwards for the year ended March 31, 2019, were as follows.

As of March 31,2019

Millions of yen

| | Within 1 year | More than 1 year, within 2 years | More than 2 year, within 3 years | More than 3 year, within 4 years | More than 4 year, within 5 years | More than 5 years | Total |
|---|---|---|---|---|---|---|---|
| Deficits (*1) | 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 | (*2) 18,907 |

Thousands of U.S. dollars

| | Within 1 year | More than 1 year, within 2 years | More than 2 year, within 3 years | More than 3 year, within 4 years | More than 4 year, within 5 years | More than 5 years | Total |
|---|---|---|---|---|---|---|---|
| Deficits (*1) | 4,942 | 548 | 3,457 | 5,113 | 2,973 | 490,820 | 507,855 |
| Valuation allowance | 3,760 | 512 | 3,308 | 4,924 | 2,950 | 322,058 | 337,515 |
| Deferred tax assets | 1,181 | 36 | 148 | 189 | 23 | 168,762 | (*2) 170,340 |

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

(*2) Regarding deficits of ¥56,371 million (US$507 million) (amount after multiplying the statutory tax rate), the Company records deferred tax assets of ¥18,907 million (US$170 million). Regarding deficits, valuation allowance related to the portion deemed to be recoverable based on future taxable income forecasts is not recognized.

(Note 3) The net amount of deferred tax assets for the previous fiscal year and the fiscal year under review is included in the following items under Consolidated Balance Sheets.

| | Millions of yen | | Thousands of U.S. Dollars |
|---|---|---|---|
| | **2019** | 2018 | **2019** |
| Deferred tax assets | 21,091 | 18,300 | 190,014 |
| Deferred tax liabilities | (220) | (298) | (1,982) |

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

| | **2019** | 2018 |
|---|---|---|
| Statutory tax rate | 30.5 % | 30.7 % |
| Increase (decrease) in income taxes resulting from : | | |
| Change in valuation allowance allocated to income tax expenses | (19.3) | (13.2) |
| Effect of tax credits | (3.4) | (0.6) |
| Dividend and other items excluded permanently from taxable income | (1.9) | (1.8) |
| Inter-company eliminations of dividends income | 1.4 | 1.5 |
| Inter-company eliminations of allowance for investment loss | (1.1) | - |
| Other | 1.7 | 6.2 |
| Effective income tax rate | 7.9 % | 22.8 % |

**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 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 an 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 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

### 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 and Chlorinated solvents

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 Resourece 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) 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.

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

Fiscal year ended March 31, 2019

**[2019]**

Millions of yen

| | Chemicals | Specialty Products | Cement | Life & Amenity | Others (Note 1) | Total | Adjustment (Note 2) | Consolidated (Note 3) |
|---|---|---|---|---|---|---|---|---|
| **Sales** | | | | | | | | |
| Sales to customers | 97,471 | 47,193 | 91,491 | 52,338 | 36,165 | 324,661 | - | 324,661 |
| Inter-segment sales/transfer | 908 | 12,474 | 874 | 2,041 | 26,211 | 42,511 | (42,511) | - |
| **Total sales** | 98,380 | 59,668 | 92,366 | 54,380 | 62,377 | 367,172 | (42,511) | 324,661 |
| **Segment income** | 16,850 | 9,934 | 3,204 | 3,238 | 4,335 | 37,564 | (2,301) | 35,262 |
| **Segment assets** | 53,995 | 62,916 | 55,427 | 58,352 | 52,180 | 282,872 | 96,757 | 379,630 |
| **Other items** | | | | | | | | |
| Depreciation and amortization (Note 4) | 2,582 | 2,533 | 3,359 | 2,370 | 3,470 | 14,315 | 777 | 15,093 |
| Increase in property, plant and equipment and intangible assets(Note 5) | 3,375 | 5,404 | 3,507 | 2,053 | 2,757 | 17,098 | 1,970 | 19,069 |

**[2019]**

Thousands of U.S. Dollars

| | Chemicals | Specialty Products | Cement | Life & Amenity | Others (Note 1) | Total | Adjustment (Note 2) | Consolidated (Note 3) |
|---|---|---|---|---|---|---|---|---|
| **Sales** | | | | | | | | |
| Sales to customers | 878,122 | 425,169 | 824,250 | 471,518 | 325,813 | 2,924,874 | - | 2,924,874 |
| Inter-segment sales/transfer | 8,186 | 112,386 | 7,878 | 18,392 | 236,142 | 382,986 | (382,986) | - |
| **Total sales** | 886,309 | 537,555 | 832,129 | 489,910 | 561,956 | 3,307,861 | (382,986) | 2,924,874 |
| **Segment income** | 151,810 | 89,501 | 28,866 | 29,178 | 39,057 | 338,414 | (20,732) | 317,682 |
| **Segment assets** | 486,442 | 566,817 | 499,346 | 525,702 | 470,091 | 2,548,399 | 871,691 | 3,420,091 |
| **Other items** | | | | | | | | |
| Depreciation and amortization (Note 4) | 23,261 | 22,828 | 30,265 | 21,355 | 31,261 | 128,972 | 7,004 | 135,976 |
| Increase in property, plant and equipment and intangible assets(Note 5) | 30,407 | 48,692 | 31,600 | 18,495 | 24,842 | 154,039 | 17,756 | 171,795 |

(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 (¥123,133 million / US$1,109 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, 2018

[2018]

| | Millions of yen | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | **Chemicals** | **Specialty Products** | **Cement** | **Life & Amenity** | **Others (Note 1)** | **Total** | **Adjustment (Note 2)** | **Consolidated (Note 3)** |
| **Sales** | | | | | | | | |
| Sales to customers | 92,512 | 47,640 | 87,058 | 49,586 | 31,263 | 308,061 | - | 308,061 |
| Inter-segment sales/transfer | 1,034 | 11,038 | 286 | 1,993 | 23,262 | 37,615 | (37,615) | - |
| **Total sales** | 93,546 | 58,678 | 87,345 | 51,579 | 54,526 | 345,676 | (37,615) | 308,061 |
| **Segment income** | 16,175 | 11,003 | 4,568 | 3,728 | 6,214 | 41,691 | (422) | 41,268 |
| **Segment assets** | 53,981 | 52,471 | 53,835 | 57,577 | 46,862 | 264,728 | 97,221 | 361,949 |
| **Other items** | | | | | | | | |
| Depreciation and amortization (Note 4) | 2,244 | 2,445 | 3,195 | 2,086 | 3,159 | 13,131 | 854 | 13,985 |
| Increase in property, plant and equipment and intangible assets(Note 5) | 2,753 | 3,386 | 3,059 | 4,857 | 1,813 | 15,871 | 424 | 16,295 |

(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 (¥124,248 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, 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 | Thousands of U.S. Dollars |
|---|---|---|
| | **2019** | **2019** |
| Japan | 263,449 | 2,373,423 |
| Asia | 49,292 | 444,072 |
| Others | 11,919 | 107,379 |
| **Total** | 324,661 | 2,924,874 |

(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, 2018

(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 |
|---|---|
| | 2018 |
| Japan | 244,135 |
| Asia | 53,032 |
| Others | 10,892 |
| **Total** | 308,061 |

(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, 2019

**[2019]**

Millions of yen

| | Chemicals | Specialty Products | Cement | Life & Amenity | Others | Adjustment | Total |
|---|---|---|---|---|---|---|---|
| Impairment loss | - | - | - | 363 | - | - | 363 |

**[2019]**

Thousands of U.S. Dollars

| | Chemicals | Specialty Products | Cement | Life & Amenity | Others | Adjustment | Total |
|---|---|---|---|---|---|---|---|
| Impairment loss | - | - | - | 3,277 | - | - | 3,277 |

Fiscal year ended March 31, 2018

[2018]

Millions of yen

| | Chemicals | Specialty Products | Cement | Life & Amenity | Others | Adjustment | Total |
|---|---|---|---|---|---|---|---|
| Impairment loss | - | 22 | - | 1,076 | - | - | 1,098 |

**[INFORMATION ON AMORTIZATION OF GOODWILL AND UNAMORTIZED BALANCE BY REPORTABLE SEGMENT]**

Fiscal year ended March 31, 2019

**[2019]**

Millions of yen

| | Chemicals | Specialty Products | Cement | Life & Amenity | Others | Adjustment | Total |
|---|---|---|---|---|---|---|---|
| Amortization of goodwill | - | 7 | 937 | - | - | - | 944 |
| Unamortized balance | - | 10 | 197 | - | - | - | 208 |

**[2019]**

Thousands of U.S. Dollars

| | Chemicals | Specialty Products | Cement | Life & Amenity | Others | Adjustment | Total |
|---|---|---|---|---|---|---|---|
| Amortization of goodwill | - | 63 | 8,441 | - | - | - | 8,504 |
| Unamortized balance | - | 94 | 1,781 | - | - | - | 1,876 |

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, 2018

[2018]

Millions of yen

| | Chemicals | Specialty Products | Cement | Life & Amenity | Others | Adjustment | Total |
|---|---|---|---|---|---|---|---|
| Amortization of goodwill | - | 7 | 1,282 | - | - | - | 1,289 |
| Unamortized balance | - | 17 | 1,140 | - | - | - | 1,158 |

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, 2019
In the fiscal year under review, the Company records gain on bargain purchase of ¥964 million under “Others” segment.

Fiscal year ended March 31, 2018
Not applicable.

## 26. INFORMATION ON RELATED PARTIES

Fiscal years ended March 31, 2019 and 2018
Not applicable.

## 27. PER SHARE INFORMATION

| | yen | | U.S.Dollars |
|---|---|---|---|
| | **2019** | 2018 | **2019** |
| Net assets per share | 2,199.83 | 1,806.56 | 19.81 |
| Earnings per share | 493.26 | 259.81 | 4.44 |
| Diluted earnings per share | - | - | - |

(Note 1) The basis for calculation

1 Net assets per share

| | Millions of yen | | Thousands of U.S. Dollars |
|---|---|---|---|
| | **2019** | 2018 | **2019** |
| Total net assets on Blance Sheets | 163,525 | 136,591 | 1,473,200 |
| Net assets related to common shares | 152,781 | 125,656 | 1,376,411 |
| Major breakdown of difference<br>Non-controling interests | 10,743 | 10,935 | 96,788 |

| | Thousand shares | |
|---|---|---|
| | **2019** | 2018 |
| Number of shares outstanding of common shares | 69,934 | 69,934 |
| Number of treasury shares of common shares | 482 | 378 |
| Number of common shares used to calculate net assets per share | 69,451 | 69,555 |

2 Earnings per share

| | Millions of yen | | Thousands of U.S. Dollars |
|---|---|---|---|
| | **2019** | 2018 | **2019** |
| Profit attributable to owners of parent | 34,279 | 19,698 | 308,820 |
| Amount not attributable to common shareholders<br>(Of the above, the difference between the issue price and repurchase price related to A class shares) | -<br>(-) | 1,626<br>(1,626) | -<br>(-) |
| Profit related to common shares attributable to owners of parent | 34,279 | 18,072 | 308,820 |

| | Thousand shares | |
|---|---|---|
| | **2019** | 2018 |
| Average number of common shares during the period | 69,495 | 69,560 |

(Note 2) 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, net assets per share and earnings per share data are calculated on the assumption that the consolidation of shares was conducted as of the beginning of the preceding fiscal year.
(Note 3) Company shares held in the executive compensation BIP (Board Incentive Plan) trust are included in treasury stock deducted when calculating the average number of common stock for the 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 58,000 (previous fiscal year not applicable).
(Note 4) Diluted net income per share is not listed due to the absence of diluted shares.

**28. SIGNIFICANT SUBSEQUENT EVENTS**

Not applicable.

**29. ANNEXED CONSOLIDATED DETAILED SCHEDULES**

(1) Schedule of bonds payable

| | | | | | | Millions of yen | | Thousands of U.S. Dollars |
|---|---|---|---|---|---|---|---|---|
| **Company** | **Issue** | **Date of Issuance** | **Interest rate** | **collateral** | **the term of redemption** | **2019** | 2018 | **2019** |
| Tokuyama | 20th unsecured bonds without collateral | March 10, 2010 | 1.760% | No | March 10, 2020 | 10,000 | 10,000 | 90,090 |
| | | | | | The amounts to be redeemed within 1 year | 10,000 | - | 90,090 |
| Tokuyama | 22nd unsecured bonds without collateral | September 9, 2010 | 1.478% | No | September 9, 2020 | 15,000 | 15,000 | 135,135 |
| Tokuyama | 24th unsecured bonds without collateral | September 8, 2011 | 1.371% | No | September 8, 2021 | 9,400 | 9,400 | 84,684 |
| **Total** | | — | — | — | — | 34,400 | 34,400 | 309,909 |
| **The amounts to be redeemed within 1 year** | | | | | | 10,000 | - | 90,090 |

(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 | Thousands of U.S. Dollars |
|---|---|---|
| **Year ending March 31** | | |
| 2020 | 10,000 | 90,090 |
| 2021 | 15,000 | 135,135 |
| 2022 | 9,400 | 84,684 |
| 2023 | - | - |
| 2024 | - | - |

(2) Schedule of loans payable

| | Millions of yen | | Thousands of U.S. Dollars |
|---|---|---|---|
| | **2019** | 2018 | **2019** |
| Short-term loans payable (0.63%) | 4,361 | 2,549 | 39,296 |
| Current portion of long-term loans payable (0.86%) | 12,667 | 15,684 | 114,120 |
| Current portion of lease obligations | 758 | 641 | 6,831 |
| Long-term loans payable, due in 2020-2078 (1.32%) | 109,411 | 119,521 | 985,687 |
| Lease obligations, due in 2020-2027 | 1,767 | 1,521 | 15,925 |
| **Total** | 128,966 | 139,917 | 1,161,861 |

(Note 1) "Average interest rate" shows the weighted average interest rate on the ending balance of loans payable, 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 loans payable and lease obligations (excluding current portion of them) to be repaid within five years after the consolidated balance sheet date are as follows:

| **Lomg-term loans payable** | Millions of yen | Thousands of U.S. Dollars |
|---|---|---|
| **Year ending March 31** | | |
| 2021 | 15,994 | 144,096 |
| 2022 | 9,770 | 88,022 |
| 2023 | 21,837 | 196,735 |
| 2024 | 1,000 | 9,012 |

| **Lease liabilities** | Millions of yen | Thousands of U.S. Dollars |
|---|---|---|
| **Year ending March 31** | | |
| 2021 | 642 | 5,792 |
| 2022 | 532 | 4,798 |
| 2023 | 357 | 3,224 |
| 2024 | 179 | 1,621 |

(3) Schedule of asset retirement obligations

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

(4) Others

Quarterly information for the fiscal year ended March 31, 2019

**【Millions of yen】**

| Accumulated period | **1Q** | **2Q** | **3Q** | **Current consolidated fiscal year** |
|---|---|---|---|---|
| Net sales (Millions of yen) | 75,825 | 152,699 | 238,289 | 324,661 |
| Profit before income taxes (Millions of yen) | 8,446 | 15,905 | 23,808 | 38,017 |
| Profit attributable to owners of parent (Millions of yen) | 6,658 | 12,833 | 19,570 | 34,279 |
| Net income per share (yen) | 95.73 | 184.55 | 281.56 | 493.26 |

| Accounting period | **1Q** | **2Q** | **3Q** | **4Q** |
|---|---|---|---|---|
| Net income per share (yen) | 95.73 | 88.83 | 97.00 | 211.78 |

**【Thousands of U.S. Dollars】**

| Accumulated period | **1Q** | **2Q** | **3Q** | **Current consolidated fiscal year** |
|---|---|---|---|---|
| Net sales (Thousands of U.S. Dollars) | 683,108 | 1,375,667 | 2,146,750 | 2,924,874 |
| Profit before income taxes (Thousands of U.S. Dollars) | 76,094 | 143,291 | 214,493 | 342,503 |
| Profit attributable to owners of parent (Thousands of U.S. Dollars) | 59,985 | 115,617 | 176,313 | 308,820 |
| Net income per share (U.S. Dollars) | 0.86 | 1.66 | 2.53 | 4.44 |

| Accounting period | **1Q** | **2Q** | **3Q** | **4Q** |
|---|---|---|---|---|
| Net income per share (U.S. Dollars) | 0.86 | 0.80 | 0.87 | 1.90 |

(Note) The Company has introduced an executive compensation BIP (Board Incentive Plan) trust from September 3, 2018 and records Stocks of the Company held in said trust as treasury stock. In addition, said shares are included in treasury stock deducted when calculating the average number of shares for the fiscal year based on calculations of net income per share.

Grant Thornton

# INDEPENDENT AUDITOR'S REPORT

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**To the Board of Directors of**
**Tokuyama Corporation**

We have audited the accompanying consolidated financial statements of Tokuayma Corporation and its consolidated subsidiaries, which comprise the consolidated balance sheet as at March 31, 2019, and the consolidated statements of operations, comprehensive income, changes in net assets, and cash flows for the year then ended, and a summary of significant accounting policies and other explanatory information, all expressed in Japanese yen.

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

Management is responsible for the preparation and fair presentation of these consolidated financial statements in accordance with accounting principles generally accepted in Japan, and for 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.

**Auditor's Responsibility**

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

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

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

**Opinion**

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the consolidated financial position of Tokuyama Corporation and its consolidated subsidiaries as at March 31, 2019, and their consolidated financial performance and their cash flows for the year then ended in accordance with accounting principles generally accepted in Japan.

**Convenience Translation**

The United States dollar amounts in the accompanying consolidated financial statements with respect to the year ended March 31, 2019 are presented solely for the convenience. Our audit also included the translation of Japanese yen amounts into United States dollar amounts and, in our opinion, such translation has been made on the basis described in Note 2 to the consolidated financial statements.

Grant Thornton Taiyo LLC

July 11, 2019
Osaka, Japan

# Major Subsidiaries and Affiliates

(As of March 31, 2019)

| Company | Capital (millions of yen) | Ownership (%) | Scope |
|---|---|---|---|
| **Chemicals** | | | |
| Tokuyama Soda Trading Co., Ltd. | 10 | 100 | Sale of soda ash and calcium chloride |
| Shin Dai-ichi Vinyl Corporation | 2,000 | 85.5 | Production and sale of polyvinyl chloride |
| Sun Arrow Kasei Co., Ltd. | 98 | 100 | Production and sale of polyvinyl chloride compounds |
| Category also includes another 4 affiliates | | | |
| **Specialty Products** | | | |
| Tokuyama Chemicals (Zhejiang) Co., Ltd. | CNY 433 million | 100 | Production and sale of fumed silica |
| Tokuyama-Dowa Power Materials Co., Ltd. | 250 | 65.0 | Production and sale of aluminum nitride |
| Tokuyama Electronic Chemicals Pte. Ltd. | SGD 11,000 thousand | 100 | Production and sale of high purity chemicals for electronics manufacturing |
| Taiwan Tokuyama Corporation | TWD 200 million | 100 | Production and sale of high purity chemicals for electronics manufacturing |
| *Hantok Chemicals Co., Ltd. | KRW 4,500 million | 50.0 | Production and sale of photoresist developer |
| Category also includes another 1 consolidated subsidiary | | | |
| **Cement** | | | |
| Hiroshima Ready Mixed Concrete Co., Ltd | 100 | 67.2 | Production and sale of ready-mixed concrete |
| Tokuyama Nouvelle Calédonie S.A. | XPF 210 million | 75.6 | Production and sale of cement |
| Tokyo Tokuyama Concrete Co., Ltd. | 80 | 99.9 | Production and sale of ready-mixed concrete and concrete products |
| Seibu Tokuyama Ready Mixed Concrete Co., Ltd. | 100 | 100 | Production and sale of ready-mixed concrete |
| Kawasaki Tokuyama Ready Mixed Concrete Co., Ltd. | 40 | 100 | Production and sale of ready-mixed concrete |
| Kyushu Tokuyama Ready Mixed Concrete Co., Ltd. | 50 | 100 | Production and sale of ready-mixed concrete |
| Chugoku Ready Mixed Concrete Co., Ltd. | 80 | 52.3 | Production and sale of ready-mixed concrete |
| Notsuharu Co., Ltd | 3 | 100 | Production and sale of ready-mixed concrete |
| Tokuyama Tsusho Trading Co., Ltd. | 95 | 100 | Sale of cement and ready-mixed concrete |
| Kansai Tokuyama Trading Co., Ltd. | 80 | 100 | Sale of cement and ready-mixed concrete |
| Tokusho Co., Ltd. | 40 | 100 | Sale of cement and ready-mixed concrete |
| Tokushin Co., Ltd. | 40 | 100 | Sale of cement and ready-mixed concrete |
| Tokuyama Mtech Corporation | 50 | 100 | Processing and sale of building materials |
| *Yamaguchi Eco-tech Corporation | 90 | 50.0 | Recycling business of incinerated ash of wastes |
| Category also includes another 4 consolidated subsidiaries, 4 equity method affiliates and 13 affiliates | | | |
| **Life & Amenity** | | | |
| Shanghai Tokuyama Plastics Co., Ltd. | CNY 85 million | 100 | Production and sale of microporous film |
| Sun•Tox Co., Ltd. | 300 | 80.0 | Production and sale of polyolefin films |
| A&T Corporation | 577 | 40.2 | Production and sale of diagnostic reagents, analyzers and systems |
| Tokuyama Dental Corporation | 100 | 100 | Production and sale of dental and medical materials |
| ASTOM Corporation | 450 | 55.0 | Production, sale and maintenance of ion-exchange membranes and related equipment |

| Company | Capital (millions of yen) | Ownership (%) | Scope |
|---|---|---|---|
| Excel Shanon Corporation | 495 | 100 | Production and sale of plastic window sashes |
| Tohoku Shanon Co., Ltd. | 300 | 72.0 | Production of plastic window sashes |
| * Figaro Engineering Inc. | 99 | 33.4 | Production and sale of sensor devices |
| Category also includes another 4 consolidated subsidiary | | | |
| **Others** | | | |
| Tokuyama Asia Pacific Pte. Ltd. | SGD 800 thousand | 100 | Sale of Tokuyama's products |
| Tokuyama Europe GmbH | EUR 255 thousand | 100 | Sale of Tokuyama's products |
| Tokuyama Trading (Shanghai) Co., Ltd. | CNY 5 million | 100 | Sale of Tokuyama's products |
| Tokuyama Korea Co., Ltd. | KRW 500 million | 100 | Sale of Tokuyama's products |
| Tokuyama (Shanghai) Co., Ltd. | CNY 12 million | 100 | Management company to provide services for other group companies in China |
| Tomitec Co., Ltd. | 100 | 60.0 | Production and sale of plastic molded products |
| Shunan System Sangyo Co., Ltd. | 100 | 100 | Real estate, civil engineering, construction |
| Tokuyama Logistics Corporation | 100 | 100 | Transportation and warehousing |
| TOKUYAMA KAIRIKU UNSO K.K. | 63 | 100 | Transportation, warehousing and port cargo handling |
| Tokuyama Information Service Corporation | 20 | 100 | Information processing services |
| Shunan Bulk Terminal Co., Ltd. | 150 | 83.3 | Warehouse operations for bulk cargoes of coal etc. |
| * CoorsTek Tokuyama Corporation | 100 | 30.0 | Production and sale of ceramics and electrochemical products |
| * Tokuyama Polypropylene Co., Ltd. | 100 | 50.0 | Production and sale of polypropylene |
| * Nishinihon Resicoat Co., Ltd. | 50 | 50.0 | Production of metal parts and anti-rust surface coating materials |
| Category also includes another 5 consolidated subsidiaries and 4 affiliates | | | |

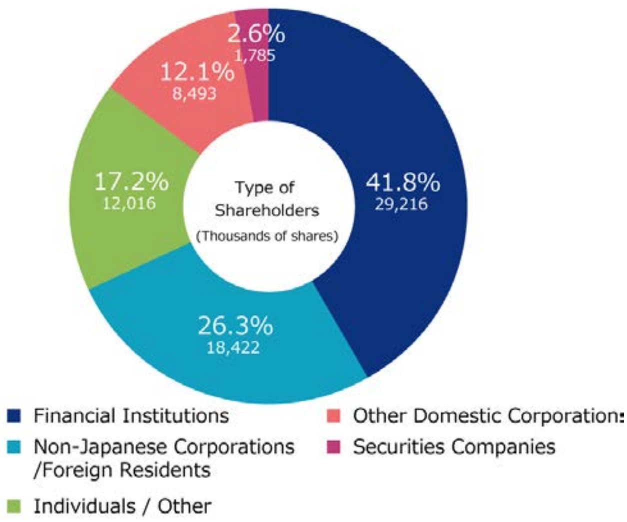
*Equity method affiliates

# Corporate Data and Stock Information

(As of March 31, 2019)

| | |
|---|---|
| Company Name: | Tokuyama Corporation |
| Established: | February 16, 1918 |
| Capital: | ¥10,000 million |
| Employees: | 5,471 (Consolidated) |
| Fiscal Year: | From April 1 to March 31 |
| General Meeting of Shareholders: | June |
| Stock Listing: | Tokyo |
| Minimum Number of Shares per Trade: | 100 shares |
| Stock: | 4043 |

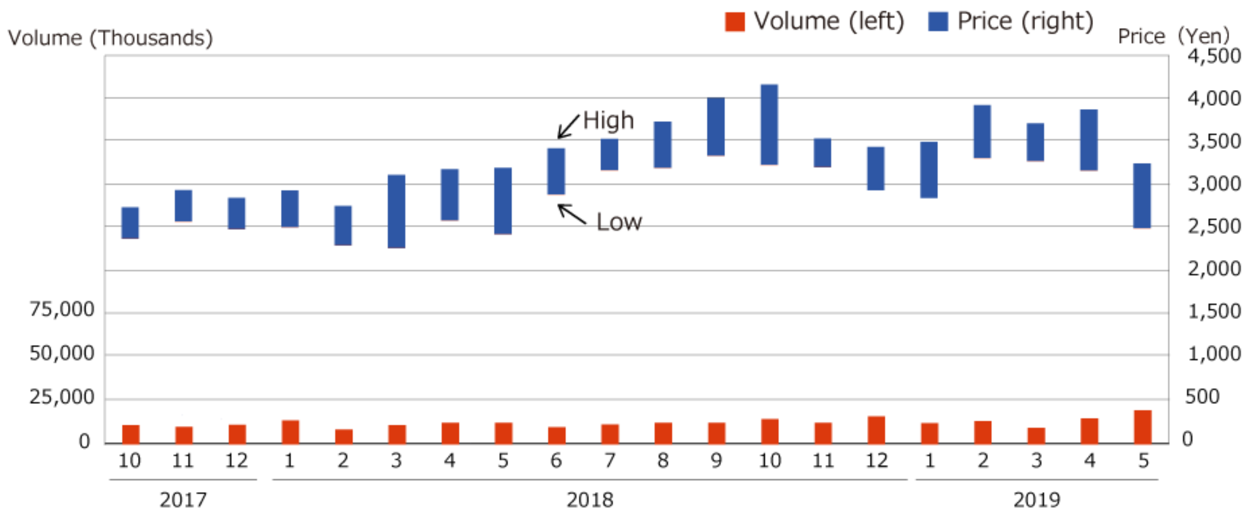
Composition of Shareholders




## Major Shareholders

| Name | Number of Shares Held (Thousands) | Percentage of Total Shares |
|---|---|---|
| The Master Trust Bank of Japan, Ltd. (trust account) | 7,786 | 11.20 |
| Japan Trustee Services Bank, Ltd. (trust account) | 6,710 | 9.65 |
| 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 |
| BNY GCM CLIENT ACCOUNT JPRD AC ISG (FE-AC) | 1,288 | 1.85 |
| Sumitomo Metal Mining Co., Ltd. | 1,180 | 1.70 |
| Japan Trustee Services Bank, Ltd. (trust account 5) | 1,109 | 1.59 |
| Tokio Marine & Nichido Fire Insurance Co., Ltd. | 1,104 | 1.59 |

## Stock Chart



Tokuyama Corporation

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