



Hiroshi Yokota

The President and Executive Officer

Tokuyama Corporation (4043)



Company Information

Exchange	TSE 1st Section
Industry	Chemicals
The President and Executive Officer	Hiroshi Yokota
Address	FRONT PLACE AKIHABARA, 1-7-5, Sotokanda, Chiyoda-ku, Tokyo
Year-end	End of March
URL	http://www.tokuyama.co.jp/

Stock Information

Share Price	Number of shares issued		Total market cap	ROE(Actual)	Trading Unit
¥3,060	69,934,375 shares		¥213,999 million	24.6%	100 shares
DPS (Est.)	Dividend yield (Est.)	EPS (Est.)	PER (Est.)	BPS (Actual)	PBR (Actual)
¥70.00	2.3%	¥374.35	8.2 times	¥2,305.30	1.3x

*The share price is the closing price on November 5th. The number of shares issued, DPS, EPS and BPS are values for the result of the second quarter of FY 3/20 and ROE is a value for the previous term.

Earnings Trends

Fiscal Year	Net Sales	Operating Income	Ordinary Income	Net Income	EPS	DPS
Mar. 2016 (results)	307,115	23,071	17,725	-100,563	-289.10	0.00
Mar. 2017 (results)	299,106	39,720	33,998	52,165	147.78	0.00
Mar. 2018 (results)	308,061	41,268	36,196	19,698	259.81	30.00
Mar. 2019 (results)	324,661	35,262	33,400	34,279	493.26	50.00
Mar. 2020 (estimates)	322,000	35,000	34,000	26,000	374.35	70.00

*Unit: Yen, one million yen

*The forecast is from the company. Net income is profit attributable to owners of the parent. Hereinafter the same applies.

On Oct. 1, 2017, Tokuyama Corporation changed its trading lot from 1,000 shares to 100 shares, while conducting 1-for-5 reverse split. DPS is total annual dividend taking merger in consideration. EPS as well as DPS has not been recalculated retroactively.

This report outlines the overview of Tokuyama Corporation for the first half of the Fiscal Year Mar.2020, etc.

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Key Points

- The sales for the second quarter of the term ending March 2020 were 152.7 billion yen, unchanged from the same period of the previous year. Sales of the company’s main products (chemical products, specialty products, and cement) declined. Operating income fell 14.1% year on year to 14.6 billion yen. Lower costs of raw materials, such as domestically produced naphtha, and increased sales of plastic lens-related materials, dental materials, and electric power contributed to income, but prices of caustic soda exports and petrochemical products sagged, and depreciation, R&D, and advertising expenses increased.
- The full-year forecast has been revised downward. The global economy is expected to remain uncertain. The recovery of the semiconductor market is expected to take longer than initial estimates, and sales volumes for semiconductor-related products are forecasted to remain lower than first predicted. Sales are expected to be 322 billion yen, down 0.8% from the previous term. Operating income is forecasted to be 35 billion yen, down 0.7% from the previous term. The assumed foreign exchange rate for the second half is 105 yen/USD (109 yen for the first half) and 40,000 yen/kl for domestically produced naphtha (42,700 yen for the first half). There is no change to the dividend forecast. The full-year dividend is forecasted to be 70.00 yen/share, with a payout ratio of 18.7%.
- The semiconductor market is breaking out of its plateau, but how much it recovers is dependent on customers. Full-scale recovery will begin in the next term or later. For raw material and fuel costs, coal price will remain low, but full cost benefits are expected to be seen from the second half.
- Unfortunately, the full-year forecast was revised downward, but the company completed its main task of improving the financial structure ahead of schedule. Although sales were sluggish for the company’s main products, this was partly unavoidable due to the external environment. In addition, in the growing business field, dental devices and other products have been performing well, and can be seen as proof that investments are steadily paying off. While it is unlikely that there will be a major improvement in the external environment, we would like to focus on how much sales and profits can grow toward the full-year forecast.

1. Company Overview

Tokuyama Corporation is a chemical manufacturer, which produces basic chemicals used for a variety of applications, including soda ash and caustic soda; semiconductor-related products, including polycrystalline silicon; cement, whose production volume is the 4th largest in Japan; materials for eye glasses, generic medicine ingredients, etc. It was founded in 1918. Its major strengths include cutting-edge products created with a wide array of unique technologies and the competitiveness of Tokuyama Factory, which has accumulated and integrated technologies in an advanced manner.

【1-1 Corporate history】

In 1918, the founder Katsujiro Iwai established “Nippon Soda Industry Co., Ltd.” with the aim of producing soda ash (sodium carbonate), which is a raw material for glass, inside Japan. The company is still the only Japanese manufacturer that keeps manufacturing soda ash.

In 1938, it started producing cement with the wet method from the byproducts in the soda ash manufacturing.

After the Second World War, it grew the inorganic business, and during the rapid economic growth period, it expanded the petrochemical business handling vinyl chloride, polypropylene, etc.

After the two oil shocks, it entered the high added value field, including electronic materials and fine chemicals. In 1984, the company launched the polycrystalline silicon business, which is now ranked in the top 3 in the world. In 1985, it started producing aluminum nitride powder, which is used for cooling down electronic parts, with its original reduction-nitridation method.

Since then, the company has expanded its business domains, including the fields of living and medicine handling materials for eye glasses, dental apparatus, etc., and environment and energy.

The revenue of the polycrystalline silicon business of “Tokuyama Malaysia,” which is a consolidated subsidiary established in Malaysia in 2009, dropped considerably due to the market downturn. Then, significant impairment losses were posted in the term ended Mar. 2015 and the term ended Mar. 2016, and no dividends were paid.

To cope with that situation, the company procured funds by issuing class shares in May 2016, for the purpose of “reconstructing its financial base.”

Under the vision of “new foundation,” the company produced and announced the 5-year Medium-Term Management Plan “Cornerstone of the Group's Revitalization,” and is working on important projects for reforming its corporate culture, redeveloping business strategies, etc. In the term ending Mar. 2018, it paid a dividend for the first time in 4 terms.

【1-2 Corporate ethos, etc.】

Tokuyama Corporation thoroughly revised its “corporate ethos” and “course of action,” which were enacted in 1989, and set the “Tokuyama’s vision” for new foundation, composed of “mission,” “aspirations,” and “values,” when designing the Medium-Term Management Plan “Cornerstone of the Group's Revitalization” in 2016. In order for Tokuyama Corporation, which commemorated the 100th anniversary of establishment in 2018, to build the “Cornerstone of the Group’s Revitalization” and achieve sustainable growth for the coming 100 years, it is necessary to clarify its missions and aims.

Corporate activities, ranging from business strategies, are mostly linked to this vision.

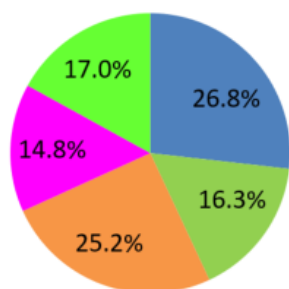
Tokuyama’s vision

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 (Fiscal 2025) *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

【1-3 Business Description】

The business segments are “chemicals,” “specialty products,” “cement,” “life & amenity,” and “others.” (The first four segments are to be reported.)

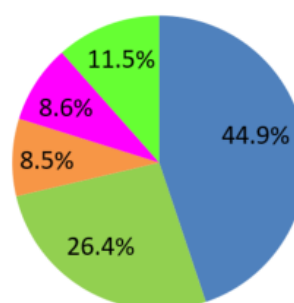
Sales composition
(term ended Mar. 2019)



■ Chemicals ■ Specialty products ■ Cement
■ Life & Amenity ■ Others

*Ratio to the total amount before adjustments

Operating income composition
(term ended Mar. 2019)



■ Chemicals ■ Specialty products ■ Cement
■ Life & Amenity ■ Others

*Ratio to the total amount before adjustments

◎ Chemicals

<Outline and major products>

Tokuyama Corporation handles basic chemicals that are indispensable for a broad range of applications in each industry, such as soda ash, caustic soda, and calcium chloride.

The company also operates business efficiently, for example, by using the chlorine and hydrogen produced during the process of manufacturing caustic soda for producing polycrystalline silicon.

With the goal of “becoming a company that will be chosen by customers forever,” the company strives to offer products and services that satisfy the needs of individual customers in a stable and timely manner.

Business	Characteristics	Major products
Soda and calcium chloride	Since competition is fierce due to the sluggish domestic demand and the increase of imported products, the business environment is severe, and so Tokuyama Corporation is the only manufacturer of soda ash in Japan. Its missions and responsibility as a Japanese manufacturer are more significant than before, and it aims to maintain or enhance its competitiveness and establish a firm position in the domestic market based on its technologies and trusting relationships with customers, which have been nurtured since the establishment of the company. For silicate soda cullet, the company boasts the lion’s share in Japan, by taking advantage of the competitiveness in producing the cullet from soda ash and caustic soda and high production capacity.	Soda ash, calcium chloride, silicate soda, and sodium bicarbonate
Chlor-alkali and vinyl chloride	The company produces 490,000 tons of caustic soda per year, which is the third largest in Japan. In addition, it manufactures a wide array of products by using chlorine, which is generated as a byproduct. This backs up its competitiveness. As another characteristic, its business performance is hardly affected by the consumption trend in a specific field, because its products are diverse. Vinyl chloride resin is derived 40% from petroleum and 60% from salt. From the viewpoint of the dependence on petroleum, vinyl chloride resin is a plastic that can save natural resources. Multilayered glass sashes made from vinyl chloride excel at keeping housing warm, and are effective for reducing the emissions of greenhouse gases by saving the energy for air-conditioning.	Caustic soda, vinyl chloride monomer, propylene oxide, methylene chloride

BRIDGE REPORT



New organic chemicals	<p>The industrial isopropyl alcohol (IPA) of Tokuyama Corporation can be characterized by its pollution-free manufacturing process, which does not emit air pollutants or industrial wastes.</p> <p>Its original direct hydration method for propylene received the Technological Advance Award of the Japan Petroleum Institute in 1974, the Mainichi Industrial Technology Award in 1975, and the Chemical Technology Award of the Chemical Society of Japan in 1976. In addition to energy-saving and low-cost features, the company can supply high-purity products, and so the quality of its products is highly evaluated.</p>	Industrial isopropyl alcohol (IPA)
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Major products	Purposes of use
Soda ash	Materials for glass, glass wool, soap and detergent; brine water; water treatment agents, etc.
Calcium chloride	Anti-freezing agents, dust control, dehumidifying agents, waste liquid treatment, food additives



(Provided by Tokuyama Corporation)

<Basic policy and measures>

By offering basic chemical materials and services that have high quality and cost competitiveness and satisfy the needs of customers, the company aims to contribute to the business growth of each customer and the stable, continuous increase in revenue for its core business.

Business	Primary measures
Soda and calcium chloride	<p>*To maintain stable supply and quality as the only manufacturer in Japan</p> <p>*To increase the production amount of granular calcium chloride for melting snow</p>
Chlor-alkali and vinyl chloride	<p>*To enhance in-house power generation and quality of electrolysis for further reducing costs for caustic soda and chlorine</p> <p>*To expand the export of vinyl chloride monomer, and keep operating plants fully</p> <p>*To increase the profitability of chlorine-induced substances, such as vinyl chloride, propylene oxide, and chloromethane</p>

◎ Specialty products

<Outline and major products>

Tokuyama Corporation handles products in a broad range of fields, including energy, electronics, and the environment. For high-purity polycrystalline silicon used for semiconductors, the company has a remarkable share in the world. In addition, fumed silica, which is produced from byproducts, is used for silicone rubber, copier's toner, etc. Aluminum nitride, which is excellent in heat release, is used for energy-saving products, such as inverters and LEDs, in addition to semiconductor manufacturing equipment, and high-purity chemicals for the electronic industry are used for producing semiconductors, liquid crystal panels, etc.

Business	Characteristics	Major products
Electronic materials	Tokuyama Factory can produce 8,500 tons of polycrystalline silicon per year. This output is the highest in Japan.	Polycrystalline silicon
Fumed silica	REOLOSIL, which was developed with the original technology of Tokuyama, is manufactured by hydrolyzing refined gases in oxyhydrogen flame at high temperatures under thoroughgoing management with a fully closed system for all processes from reactions to packaging. Accordingly, it is characterized by high purity, high dispersibility, and high-specific surface area, and used for various applications of use. The company has production facilities in not only Japan, but also China, strives to supply its products stably and continuously while optimizing its business, and aims to expand its business further while considering the global market.	Fumed silica
Thermal management material	Tokuyama Corporation handles products for each purpose of use, which includes ceramics made by sintering granules and powder from aluminum nitride powder. With its original manufacturing and reduction-nitration methods, the company produces high-quality products with few impurities, and manufactures 600 tons of aluminum nitride products, the largest in the world. For aluminum nitride powder, it has a 70% global share.	Aluminum nitride
IC chemicals/cleaning system	The company operates manufacturing and sales footholds for supplying products with higher purity to growing markets in Asia.	High-purity chemicals for the electronic industry, and positive photoresist developer

Major products	Purposes of use
Polycrystalline silicon	Semiconductors and wafer
Fumed silica	Elastomers, sealants, liquid resin products, powder products
Aluminum nitride	Heat dissipating materials for electronic parts
High-purity chemicals for the electronic industry	Precise cleaning and drying for wafers, electronic devices, etc.

(Polycrystalline silicon)



(Ceramics "SHAPAL")



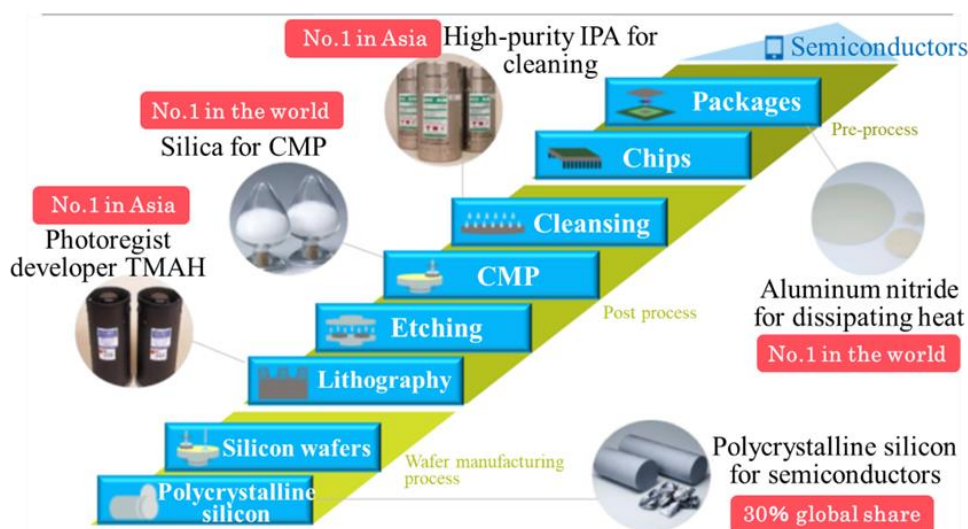
(Provided by the company)

<Basic policy and measures>

To expand its business and revenue by supplying products that will be chosen by customers forever and proposing newly developed products.

Business	Primary measures
Polycrystalline silicon	*To achieve the world’s highest quality and minimize cost by accurately grasping the most advanced products and the quality demanded by customers
Fumed silica	*To enrich highly functional products following those for silicone and CMP *To reduce cost and add high value to products at Tokuyama Chemicals
IC chemicals	*To pursue the better quality of products for cutting-edge semiconductors, and promote sales
Thermal management material	*To enhance the output of aluminum nitride powder (from 480 tons/year to 600 tons/year; operation has started in Apr. 2018) *To commercialize boron nitride and aluminum nitride fillers

A wide array of semiconductor-related products that are indispensable for manufacturing semiconductors, such as polycrystalline silicon, for which the company has a 30% global share, and aluminum nitride for dissipating heat, are the cutting-edge materials created by combining a variety of element technologies, which have been developed and accumulated by the company for many years, and all of them are outstandingly competitive in the world.



(Taken from the reference materials of the company)

In the semiconductor manufacturing field, more miniaturized and three-dimensional semiconductors are being developed rapidly, as the capacity of semiconductors is increasing and their size is shrinking.

The “high-purity polycrystalline silicon for semiconductors” and “high-purity chemicals for the electronic industry” of Tokuyama Corporation are ultrahigh-purity materials for which impurities and residues, which would worsen yield, have been reduced to the maximum degree, and highly evaluated by semiconductor manufacturers, which are developing more miniaturized and three-dimensional products.

In addition, Tokuyama’s heat dissipating materials, which are indispensable for the stable operation of semiconductors, are highly evaluated.

As the power devices for in-vehicle apparatus, industrial equipment, and electric railways are having higher output and smaller size, the demand for heat-dissipating materials is growing rapidly. Tokuyama Corporation supplies heat-dissipating materials with high thermal conductivity and an extremely small amount of impurities developed with its original reduction-nitridation method, such as aluminum nitride powder and ceramics, and boron nitride.

As shown in the above figure, the company plans to create larger business opportunities and meet demand by supplying a wide array of cutting-edge products rather than only specific products, which are used in the process of manufacturing semiconductors from raw materials.

◎ Cement

<Outline and major products>

In 1938, Tokuyama Corporation started this business for the purpose of utilizing the byproducts generated at Tokuyama Factory. The cement and related products, such as cement solidifying agents, produced at Nanyo Plant of Tokuyama Factory are used as ready-mixed concrete and secondary concrete products for constructing structures, ports, bridges, roads, etc. that support housing, buildings, and lifelines for the living of people.

The company receives a large amount of wastes, including waste plastics and ash from the combustion of household garbage, from the inside and outside of the company, and uses them as raw materials and thermal energy for manufacturing cement, contributing to the development of a resources recycling society.

Business	Characteristics	Major products
Cement	<p>Nanyo Plant of Tokuyama Factory has the largest scale as an independent factory in Japan.</p> <p>The cement business is the 4th largest in Japan, and community-based sales activities are conducted mainly in Tokyo, Osaka, Hiroshima, Takamatsu, and Fukuoka. The company built a cement testing laboratory in Tokyo, Osaka, Hiroshima, and Fukuoka. For the use of cement and cement solidifying agents, the company gives meticulous support to users by conducting a blending test before work and a management test after work.</p> <p>In addition, Tokuyama M Tech Corp. manufactures and sells building materials made of cement and mortar. Tokuyama Corporation offers “Shikkui Lemarge,” an interior material produced with the original technology for producing a plaster sheet, “Fresco Graph,” the latest fresco technique developed by combining the classical fresco painting technique and the three-dimensional shaping technique with plaster, and so on. The company is pursuing new business opportunities with its technologies nurtured in the cement and building material fields.</p>	Portland cement, blast furnace slag cement, cement solidifying agents
Recycling and environment	A variety of recycling facilities, including low and high-water-content sludge and jagged waste treatment facilities, accept a broad range of wastes, including waste plastics, sludge, and glass wastes.	Waste treatment

<Basic policy and measures>

The company will develop optimal systems for manufacturing, selling, and distributing products while flexibly responding to the changes in the business environment. It aims to enhance its competitiveness by maximizing the revenue from waste treatment by expanding export and reducing costs.

Business	Primary measures
Cement	<ul style="list-style-type: none"> *To reduce costs by streamlining production processes, improving basic units, and increasing the capacity of receiving wastes *To secure revenue by expanding export while taking full advantage of Kiln No.4 (used for sintering cement) *Tokuyama M Tech will improve the infrastructure repair and reinforcement business
Recycling and environment	<ul style="list-style-type: none"> *To use the most appropriate raw materials, promote the use of combustible wastes, and optimize the fuel plant business *To stably operate the existing business of recycling waste plasterboards, and create a new recycling business

Tokuyama New Caledonia, which was acquired in Jun. 2013, has recorded substantial positive operating income and cash flow for 4th consecutive year. It also serves as an exporter of clinker (chunks generated during the cement manufacturing process, from which cement is produced through pulverization), contributing to the increase in the revenue of the cement section.

In the mid to long-term, domestic demand will inevitably shrink due to the decline in population. Accordingly, the company will increase sales amounts by securing stable importers, improve the operation rate of cement factories, and accept more wastes, while discussing and proceeding with the operation of overseas pulverization plants following those of Tokuyama New Caledonia.



Clinker ship loader (Tokuyama Factory)



Tokuyama New Caledonia

(Taken from the reference material of the company)

◎ Life & amenity

<Outline and major products>

This segment is constituted by the fine chemical and NF businesses operated by Tokuyama Corporation, and ion exchange membranes, dental materials, clinical testing systems, polyolefin films, resin sashes, etc. developed, manufactured, and sold by group companies.

In the fine chemical business, the company handles mainly materials for eye glasses, generic medicine ingredients and intermediates, which were developed with its organic synthesis technology. In the NF business, the company manufactures and sells films that block water, but allow air and moisture to penetrate.

Its overseas group companies include Shanghai Tokuyama Plastics, which manufactures and sells breathable films for disposable diapers, whose demand is growing rapidly in emerging countries, including China.

Business	Major products
Fine chemicals	Medicine ingredients and intermediates (amino group protection agents and condensation agents), plastic lens-related materials (photochromic dye materials and hard coating agents)
NF	Microporous films
Tokuyama Dental Corporation	Manufacturing, import, export, and sale of dental devices
A&T Corporation	Development, manufacturing, and sale of clinical testing reagents, devices, and systems
SunTox Co., Ltd.	Manufacturing and sale of polyolefin films
ASTOM Corporation	Manufacturing and sale of ion exchange membranes for desalination and concentration and electro-dialysis
EXCEL SHANON Corporation	Manufacturing and sale of resin sashes, related products, and building materials for housing

(Pharmaceutical products)



(Provided by the company)

<Basic policy and measures>

The company will secure an advantageous position inside and outside Japan, by establishing and fortifying customer-oriented development, manufacturing, and sales systems. It aims to expand its business, to contribute to the improvement of the living and health (quality of life) of people.

Business	Primary measures
Fine chemicals	To expand the company's share for photochromic dye materials for eye glasses, and cultivate the applications of use
NF	To revitalize the Chinese business
Dental device business	To accelerate the overseas business expansion mainly for esthetic restorative filling
Medical diagnosis system business	To fortify the production system by enlarging Esashi Factory (from Sep. 2017)
Polyolefin film business	To improve productivity by dismantling decrepit production equipment and constructing new equipment (from Oct. 2017)
Ion exchange membranes	To deal with large-scale projects outside Japan
Resin sashes	To promote the sales of zero energy houses

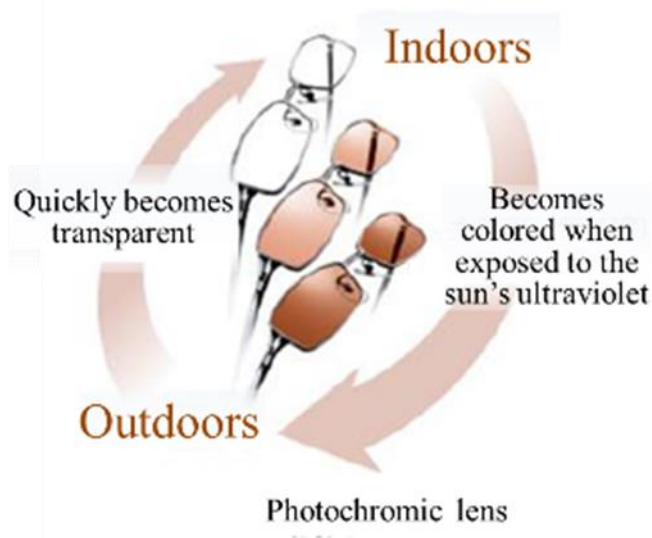
In this segment, the company concentrates on the development of photochromic dye materials.

Photochromic dye materials are resin materials that change colors from colorless to gray, brown, etc., when illuminated by sunlight (ultraviolet rays), and return to the colorless state when the illumination stops.

Recently, the usage for sports-wear and driving wear has spread, the awareness of harmful ultraviolet rays has grown, and the cases of eye diseases, such as glaucoma, have increased due to aging population. In these circumstances, the use of photochromic dye materials is increasing.

The products of Tokuyama Corporation are characterized by “plenty of color variation based on the three primary colors: red, blue, and yellow,” “rapid coloration and de-coloration speeds,” “sufficient coloration performance even at high temperatures in the summer,” “excellent durability,” and “the capability of blocking over 99% of ultraviolet rays.”

The company will advertise these characteristics, aim to expand its share by meticulously meeting customer needs about product specifications and enriching its product lineup, improve visibility, and cultivate new applications of use by utilizing its product features, such as the blocking of ultraviolet rays.



(Taken from the reference material of the company)

© Others

This is the segment other than the segments to be reported: “chemicals,” “specialty products,” “cement,” and “life & amenity,” and includes overseas distributors, transportation business, and real estate business.

【1-4 Research and development】

Under the R&D slogan of “creating helpful value for living with chemical technology,” the company engages in R&D with the aim of (1) conducting R&D for customer-oriented business, (2) creating an only-one, No.1 technology by improving unique technologies and fusing them with new technologies, and (3) creating original products while emphasizing customer needs based on its technologies.

Tokuyama Corporation aims to carry out R&D for cutting-edge materials by utilizing its unique technologies for synthesizing inorganic and organic materials, increasing purity, inducing crystallization and deposition, controlling powder, and sintering materials, which have been nurtured by the company as a chemical manufacturer while expecting the aging of society and the drastic growth and diffusion of environmentally friendly and ICT technologies, and by fusing these technologies with new technologies.

As R&D facilities in western and eastern Japan, the company has a “Corporate Development Department (Tsukuba Research Laboratory)” in Tsukuba City, Ibaraki Prefecture, and an “Analytical Science Department (Tokuyama Research Laboratory)” in Shunan City, Yamaguchi Prefecture.

The Corporate Development Department in Tsukuba Research Laboratory is developing cutting-edge technologies from the medium to long-term viewpoint and analysis technologies as basic technologies, conducting R&D in the dental material field, which is characterized by composite materials, and the organic fine chemical field, which is targeted at high value-added products.

The Analytical Science Department (Tokuyama Research Laboratory) located in Tokuyama Factory is a foothold for R&D in the Tokuyama district.

There are some significant merits, such as the synergy of the development group in the Tokuyama district and various R&D teams and the easy exchange of information with the manufacturing section.

【1-5 Competitors】

Code	Corporate name	Sales	Growth rate	Operating income	Growth rate	Operating margin	ROE	ROA	Market cap	PER	PBR
4005	Sumitomo Chemical	2,330,000	0.5	160,000	-21.7	6.9%	12.3	6.0	845,932	16.7	0.8
4042	Tosoh	800,000	-7.1	84,000	-20.6	10.5%	15.1	13.1	512,327	9.0	0.9
4043	Tokuyama	322,000	-0.8	35,000	-0.7	10.9%	24.6	9.0	213,999	8.2	1.3
4063	Shin-etsu Chemical	1,550,000	-2.8	405,000	+0.3	26.1%	12.8	14.0	5,289,494	16.4	2.0
4118	Kaneka	650,000	4.7	40,000	+11.0	6.2%	6.7	4.8	259,420	10.8	0.1
4183	Mitsui Chemicals	1,365,000	-8.0	84,000	-10.1	6.2%	14.3	7.0	536,818	12.2	0.9
4185	JSR	483,000	-2.8	40,000	-7.0	8.3%	7.8	6.4	483,231	16.4	1.2
4205	Zeon	330,000	-2.2	30,000	-9.5	9.1%	7.2	8.4	326,215	13.7	1.2
5711	Mitsubishi Materials	1,700,000	2.2	51,000	+38.4	3.0%	0.2	2.6	414,849	13.8	0.7

*Sales and operating income are the estimates for this term. The unit for them is million yen. ROE and ROA are the results for the previous term in units of %. The market cap, PER (forecast), and PBR (results) are the closing values on November 5. The unit is in millions of yen and the unit is two-fold.

Compared with competitors, sales are small, but it boasts high profitability and asset efficiency with double-digit operating margin and high ROE ranking first, and its shares are evaluated at medium level.

【1-6 Characteristics and strengths】

①Cutting-edge products created with a variety of unique technologies

By fusing new technologies with unique technologies for synthesizing organic and inorganic materials, increasing purity, controlling powder, inducing crystallization and deposition, sintering, electrolysis, refining, reprocessing resources, and so on, which have been accumulated and polished for many years, Tokuyama Corporation has developed cutting-edge products, including inorganic chemicals, cement, silica, silicon, aluminum nitride, high-purity chemicals for semiconductors, lens materials, ion exchange membranes, films, resin, sensor materials, and dental materials.

For example, the company possesses an original reduction-nitridation technology for producing aluminum nitride powder, which is broadly used as a heat-dissipating agent.

Its aluminum nitride powder, which has an extremely low amount of impurities, boasts a 70% global share because of its high competitiveness.

At present, its purity is at the world's highest level. The company started producing polycrystalline silicon for the purpose of utilizing the hydrogen and chlorine generated at its electrolysis plant, and it is now ranked in the world's top three. It can be said that its broad, profound technological base helped realize these achievements.

②Competitiveness of Tokuyama Factory, which has integrated and accumulated technologies in an advanced manner

Tokuyama Factory is indispensable for manufacturing products with its unique technologies at low cost and supplying them to customers around the world. It has one of the greatest port infrastructures in Japan and an in-house generation plant, with the following characteristics:

- With the in-house power generation plant, whose output is the 8th largest in Japan, it can use electric power at competitive cost.
- Factories for producing inorganic and organic chemicals, cement, electronic materials, etc. are integrated, so as to utilize raw materials, products, by-products, and wastes mutually.
- The company has achieved zero emissions by using its wastes at a cement kiln (used for sintering cement). It also receives wastes from external enterprises in the Shunan industrial complex, making a social contribution for the environment.

Strengths since the establishment of the company



(Taken from the reference material of the company)

Since it has a natural harbor with a water depth of over 10 m, where large shipping vessels can be docked, it is possible to carry in and out large amounts of raw materials and products.

The highly efficient production and supply systems integrated and accumulated sophisticatedly at Tokuyama Factory boost the competitive advantage of Tokuyama Corporation.

2. First Half of the Fiscal Year March 2020 Earnings Results

(1) Overview of consolidated results

	1H of FY 3/19	Ratio to sales	1H of FY 3/20	Ratio to sales	YoY
Sales	152,699	100.0%	152,749	100.0%	+0.0%
Gross profit	47,495	31.1%	46,488	30.4%	-2.1%
SGA	30,476	20.0%	31,876	20.9%	+4.6%
Operating income	17,019	11.1%	14,612	9.6%	-14.1%
Ordinary profit	15,470	10.1%	13,643	8.9%	-11.8%
Net income	12,833	8.4%	10,400	6.8%	-19.0%

* Unit: million yen. Net income belonging to its parent company. The same applies hereafter.

Sales and profits declined due to the sluggish sales of the company's main products.

Sales were 152.7 billion yen, unchanged from the same period of the previous year. Sales of chemical products, special products, and cement declined.

Operating income fell 14.1% year on year to 14.6 billion yen. Lower costs of raw materials, such as domestically produced naphtha, and increased sales of plastic lens-related materials, dental materials, and electric power contributed to income, but prices of caustic soda exports and petrochemical products sagged, and depreciation, R&D, and advertising expenses increased.

BRIDGE REPORT



(2) Trend in each segment

Sales	1H of FY3/19	Composition ratio	1H of FY3/20	Composition ratio	YoY
Chemicals	481	31.5%	463	30.3%	-3.8%
Specialty products	268	17.6%	246	16.1%	-8.3%
Cement	439	28.8%	427	28.0%	-2.7%
Life & amenity	261	17.1%	277	18.1%	+6.2%
Others	281	18.5%	322	21.1%	+14.5%
Adjustment	-205	-	-209	-	-
Total	1,526	100.0%	1,527	100.0%	+0.0%
Operating income					
Chemicals	87	18.3%	75	16.2%	-14.6%
Specialty products	43	16.0%	28	11.4%	-34.6%
Cement	14	3.2%	11	2.8%	-15.7%
Life & amenity	16	6.5%	15	5.6%	-7.7%
Others	17	6.2%	24	7.6%	+41.0%
Adjustment	-9	-	-9	-	-
Total	170	11.1%	146	9.6%	-14.1%

* Unit: 100 million yen. The composition ratio for profit means profit rate. The business categories of several subsidiaries were changed in the first quarter of the term ending March 2020, and those changes are reflected in the above chart.

* Chemicals

Sales and profits declined.

Caustic soda	Sales volume was steady, but profits fell due to rising raw material prices and a decline in overseas market conditions.
Vinyl chloride resin	Profit increased due to maintaining the spread between the price of raw materials and sales prices.
Calcium chloride	Profit fell due to lower sales volumes and increased logistics costs.

* Specialty products

Sales and profits declined.

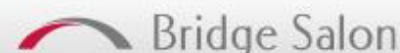
Polycrystalline silicon	The recovery of the semiconductor market is taking longer than expected, and as a result, profits fell due to lower sales volumes.
High purity chemicals for electronics industry	Sales volume recovered, particularly in overseas markets, and was unchanged from the same period of the previous term.

* Cement

Sales and profits declined.

Cement	Despite seeing positive effects from price revisions, profits declined due to a decrease in sales volume and an increase in fixed costs (repairs, etc.).
Resources and environmental business	Sales unchanged from the previous term.

BRIDGE REPORT



* Life & amenity

Sales increased, and profit decreased.

Plastic lens-related materials	Profit rose due to increased sales volume of photochromic materials for eyeglass lenses.
Dental devices	Sales volume increased, particularly overseas. Profit declined due to an increase in advertising expenses accompanying the launch of new products.
Medical diagnostic system	Profit rose thanks to the acquisition of a large-scale project in Japan for an automatic clinical testing system.
Ion-exchange membranes	Profit fell due to a decrease of large-scale orders.

(3) Financial standing and cash flows

◎Primary balance sheet

	End of Mar. 2019	End of Sep. 2019		End of Mar. 2019	End of Sep. 2019
Current assets	202,936	193,409	Current liabilities	93,248	84,312
Cash and deposits	68,613	77,832	Trade payables	47,268	41,708
Trade receivables	80,358	67,000	Noncurrent liabilities	122,856	117,856
Inventories	43,474	43,578	Total liabilities	216,104	202,169
Noncurrent assets	176,693	179,772	Net assets	163,525	171,012
Property, plant and equipment	116,104	118,145	Shareholders' capital	150,095	158,775
Intangible assets	1,973	1,696	Retained earnings	121,901	130,563
Investments and other assets	58,614	59,931	Total liabilities and net assets	379,630	373,181
Total assets	379,630	373,181	Balance of interest-bearing debts	128,964	122,454

*Unit: one million yen. Interest-bearing debts include lease obligations.

Total assets fell 6.4 billion yen year on year to 373.1 billion yen due to a decrease in accounts receivable.

Total liabilities were 202.1 billion yen, down 13.9 billion yen from the end of the previous term, due to a decrease in interest-bearing debts.

Net assets rose 7.4 billion yen year on year to 171 billion yen due to an increase in retained earnings.

As a result, equity ratio rose 2.7 points from the end of the previous term to 42.9%.

DE ratio fell from 0.84 at the end of the previous term to 0.76.

By the end of March 2021, the final year of the medium-term management plan, the company aims to have an “interest-bearing debt of 120 billion yen, an equity capital of 140 billion yen, cash and deposits of 80 billion yen, and a DE ratio of 0.9,” most of which they successfully reached in the first half.

◎ Cash Flow

	1H of FY3/19	1H of FY3/20	Increase/decrease
Operating CF	22,359	29,256	+6,897
Investing CF	-7,604	-10,728	-3,124
Free CF	14,755	18,528	+3,773
Financing CF	-10,954	-8,549	+2,405
Cash and equivalents	70,724	77,331	+6,607

*Unit: million yen

The surplus of operating CF grew due to a decrease in accounts receivable.

The deficit of investing CF grew due to an increase in purchases of plant, property and equipment. The surplus of free CF increased.

The balance of long-term borrowings decreased, and the deficit of financing CF shrank.

The cash position improved.

3. Fiscal Year March 2020 Earnings Estimates

(1) Full-year earnings estimates

	FY 3/19	Ratio to sales	FY 3/20 (Forecast)	Ratio to sales	YOY	Difference from initial estimates	Progress rate
Sales	324,661	100.0%	322,000	100.0%	-0.8%	-6.1%	47.4%
Operating income	35,262	10.9%	35,000	10.9%	-0.7%	-10.3%	41.7%
Ordinary income	33,400	10.3%	34,000	10.6%	+1.8%	-12.8%	40.1%
Net income	34,279	10.6%	26,000	8.1%	-24.2%	-14.8%	40.0%

*Unit: million yen

*The forecasts were announced by the company.

The earnings forecast has been revised. Sales and profits are unchanged from the previous term.

The full-year forecast has been revised downward. The global economy is expected to remain uncertain. The recovery of the semiconductor market is expected to take longer than initial estimates.

Sales volumes for semiconductor-related products are forecasted to remain lower than first predicted.

Sales are expected to be 322 billion yen, down 0.8% from the previous term. Operating income is forecasted to be 35 billion yen, down 0.7% from the previous term.

The assumed foreign exchange rate for the second half is 105 yen/USD (109 yen for the first half) and 40,000 yen/kl for domestically produced naphtha (42,700 yen for the first half).

There is no change to the dividend forecast. The full-year dividend is forecasted to be 70.00 yen/share, with a payout ratio of 18.7%.

The semiconductor market is breaking out of its plateau, but how much it recovers is dependent on customers. Full-scale recovery will begin in the next term or later.

For raw material and fuel costs, coal prices remain low, but full cost benefits are expected to be seen from the second half.

(2) Trend in each segment

Sales	FY 3/19	Composition ratio	FY 3/20 (Forecast)	Composition ratio	YOY	Difference from initial estimates	Progress rate
Chemicals	983	30.3%	960	29.8%	-2.3%	-6.8%	48.2%
Specialty products	596	18.4%	570	17.7%	-4.4%	-14.9%	43.2%
Cement	923	28.4%	900	28.0%	-2.5%	-4.3%	47.4%
Life & amenity	543	16.7%	580	18.0%	+6.8%	0.0%	47.8%
Others	623	19.2%	630	19.6%	+1.1%	-1.6%	51.1%
Adjustment	-425	-	-420	-	-	-	-
Total	3,246	100.0%	3,220	100.0%	-0.8%	-6.1%	47.4%
Operating income							
Chemicals	168	17.1%	165	17.2%	-1.8%	-10.8%	45.5%
Specialty products	99	16.6%	75	13.2%	-24.2%	-31.8%	37.3%
Cement	32	3.5%	40	4.4%	+25.0%	+14.3%	27.5%
Life & amenity	32	5.9%	40	6.9%	+25.0%	+0.0%	37.5%
Others	43	6.9%	50	7.9%	+16.3%	+11.1%	48.0%
Adjustment	-23	-	-20	-	-	-	-
Total	352	10.8%	350	10.9%	-0.7%	-10.3%	41.7%

*Unit: 100million yen

(Outlook for each segment)

Field	Business environment	Initiatives
Chemicals	As the demand is strong in Asia, the sales amounts of mainly caustic soda and vinyl chloride resin are estimated to be steady.	To promote sales of major products, strengthen cost competitiveness by reducing cost per product, fixed expenses, etc. and secure stable revenues.
Specialty products	The semiconductor market is temporarily stagnant, due to the downturn of the Chinese economy, etc., but it is expected to grow in the long term. As the downsizing of semiconductors for IoT and 5G is progressing, there is growing demand for high quality and stable supply.	To pursue better quality of polycrystalline silicon for semiconductors and promote the sales of products with high added value differentiated from competitors' products, to grow revenues. As for high-purity chemicals for the electronic industry, the company will enhance production capacity in Japan, Taiwan, and China, and establish a supply system for meeting demand in Asia. As for heat dissipating materials, the company will enhance production capacity and concentrate on development for increasing the product lineup.
Cement	The demand from the private sector in Japan will remain steady due to the redevelopment in Tokyo, etc. The demand from the government and other public agencies is estimated to grow somewhat through the progress of the national resilience plan, and total demand is projected to rise slightly.	The company will make efforts to secure revenues by passing on the augmentation of material cost to selling prices, increasing the export amount and accepting capacity of waste, reducing the manufacturing cost thoroughly, and so on.
Life & amenity	The domestic market is forecasted to keep recovering gently, but overseas markets are faced growing uncertainties about international affairs and the trade policy of each country. Especially, there is concern over the slowdown of the economies of China and emerging countries.	The company will concentrate on the development of new products and sales activities to meet the customer needs and market changes regarding healthcare-related products, to expand revenues.

4. Topics: Efforts to reduce CO₂ emissions, progress of the medium-term management plan, etc.

(1) Efforts to reduce CO₂ emissions

Tokuyama considers coal-fired power to be its biggest risk, and is committed to reducing and effectively utilizing CO₂ emissions. The company set a target for reducing energy-derived CO₂ emissions, and aims to reduce greenhouse gas emissions by 15% (relative to when no measures are taken) by FY2030.

Specifically, efforts include the following:

- * Establish an organization to promote the reduction of CO₂ emissions (completed).
- * Review the system for evaluating investments, and promote investment for reducing CO₂ emissions.
- * Promote the reduction of CO₂ emissions, with a focus on solving the following three issues:
 - “Develop new technology: Capture and utilize CO₂ emissions”
 - “Introduce renewable energy: biomass mixed-firing, energy mix”
 - “Optimize energy efficiency at the Tokuyama Factory”

(2) The progress of the medium-term management plan

① Growth Business

<ICT-related products>

Polycrystalline silicon for semiconductors	* Invested for improving quality
High-purity chemicals for the electronic industry (TMAH, IPA)	* Strengthened the supply structure by establishing the second factory in Taiwan (Began shipping in February 2019) * Increased production capacity (TMAH). Plan to increase it 50% by April 2020. * Established a supply base in mainland China
Heat dissipation material	* Increased production capacity: Annual production (currently 600 tons) will be increased to 840 tons by April 2020. * Increase in whiteboard production capacity: plan to increase 20% by mid-2020.

Although the business is experiencing a temporary pause in growth, it is certain that demand will grow in the medium to long term. The company aims to differentiate their polycrystalline silicon for semiconductors from other companies' products by further improving quality.

They aim to expand the business for high-purity chemicals for electronic industries (TMAH, IPA) and heat dissipation materials by acquiring a wide range of customers through increased production capacity and an improved supply structure.

<Health care-related products>

Dental devices	* Full-scale launch of a new large product (composite resin) in Europe (sale in North America is already under way)
Eyeglass-related materials	* Increase sales by working in tandem with customers * Introduce special technologies in other fields

Dental devices have been well-received, and its sales in the United States are exceeding the plan. As such, the company aims to increase its market share and expand the business with new products in the North American and European markets.

They also plan to increase their global market share of eyeglass-related materials.

② Improvement of the financial structure

As stated above, the targets for the final year of the medium-term management plan (FY3/21) are “interest-bearing debt of 120 billion yen, an equity capital of 140 billion yen, cash and deposits of 80 billion yen, and a DE ratio of 0.9.” The company achieved most of these targets in this term’s first half.

③ Cost reductions for BRIGHT-II

In the first half, the company achieved cost reductions of 2.5 billion yen, significantly higher than that of the previous term’s first half (1.7 billion yen).

Cost reductions are expected to reach 4.9 billion yen for the full year, which means that the company’s medium-term target (FY 3/21) of 4 billion yen would be achieved one year ahead of schedule.

5. Conclusions

Unfortunately, the full-year forecast was revised downward, but the company completed its main task of improving the financial structure ahead of schedule. Although sales were sluggish for the company’s main products, this was partly unavoidable due to the external environment. In addition, in the growing business field, dental devices and other products have been performing well, and can be seen as proof that investments are steadily paying off. While it is unlikely that there will be a major improvement in the external environment, we would like to focus on how much sales and profits can grow toward the full-year forecast.

<Reference1: the Medium-Term Management Plan “Cornerstone of the Group’s Revitalization”>

The company was forced to pass its dividend as it recorded heavy impairment losses in the terms ended Mar. 2015 and Mar. 2016. Needing a new driver for profit growth, the company drew up the 5-year Medium-Term Management Plan entitled “Cornerstone of the Group’s Revitalization” in May 2016 under the vision of “New foundation.”

With this plan, the company is tackling various important issues such as reforming its corporate culture and reconstructing business strategies.

(1) Outline of the Medium-Term Management Plan: “Cornerstone of the Group’s Revitalization”

① Assessment of the present state

- ◇ The company has its business base in nonorganic and organic chemistry. Having endured the oil crisis of the 1970s, it has since been constantly growing its businesses by expanding into the field of specialty chemicals and overseas expansion.
- ◇ While the profitability of specialty product business increased during the second half of the 2000s, its general-purpose product business centered on chemicals and cement suffered a profitability decrease due to the shrinking domestic market.
- ◇ Since its founding, the company has always enjoyed its high-efficiency factories and one of the best in-house power generation capacities in Japan. On the back of these qualities, it has built a business based on chemicals and cement, and also been nurturing new fortes in the field of specialty chemicals such as high-purification, powder control, organic and nonorganic synthesis, crystal precipitation, and sintering.
- ◇ On the other hand, the company was not able to successfully relay its technological prowess built up through the specialty chemicals business onto business expansion, apart from the polycrystalline silicon for semiconductors. Therefore, there was a blank period in its creation of new businesses.
- ◇ In 2009, its net interest-bearing debts practically decreased to the no-debt level; however, it swelled rapidly due to the fundraising for its massive investment into its Malaysian business and its financial structure deteriorated drastically, marking a D/E ratio of 4.7 in FY2015.

Assessing its present state like this, and with the shrinking of domestic general-purpose product market for its traditional businesses and slowdown of growth rate of its electronic materials business forecast, the company believes it is essential to create a new driver for profit growth by overcoming the points listed below.

“Overconfidence and dependence on Tokuyama Factory”

“Inward and passive posture spread among employees”

“Corporate governance”

“Uncertainty surrounding the strategic direction of the Group and each department”

② Management policies

With the “Tokuyama’s vision” below, the company will place changing its business culture and a fundamental overhaul of business operations as its core business strategies, and aim to achieve these by FY 2025.

(Tokuyama’s 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 (Fiscal 2025) <ul style="list-style-type: none"> ▪ Global leader in advanced materials ▪ Leader in its traditional businesses in Japan
Values	<ul style="list-style-type: none"> ▪ 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

(Medium to Long Term Business Strategies)

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

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

(Restructuring business strategies)

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

(Drivers for growing businesses)

In the growing businesses, the company endeavors to utilize its unique technologies nurtured in the cutting-edge areas to develop products to respond to the society's needs.

ICT and healthcare are the prospective fields.

In the ICT field, the company will expand the production line of aluminum nitride for heat-dissipating materials, put boron nitride production into operation, and increase production of polycrystalline silicon.

In the healthcare field, the dental equipment and diagnostic medicines will occupy the company's core business, while seeking further growths and not ruling out the possible M&A.

(Cross-departmental cost reduction activities)

The company will perform non-conventional, cross-departmental approaches and strategic capital investments to reduce the costs of principal items such as raw material and fuel, repair costs and logistics costs.

The company aims to reduce company-wide cost by 4 billion yen by 2020.

(Research & development)

To achieve the expansion of existing businesses and expand into the new business fields to utilize its unique technologies, the company will change its R&D structure so it is more in line with the general customer needs.

Also, it will embrace a more outward-looking R&D, involving a higher ratio of R&D personnel from operations department and group companies rather than from within.

(Capital investment plan and setting strategic investments)

The company plans to spend a cumulative total of 96 billion yen on capital investments from 2016 to 2020 (5 years). Of the total, 26% will be earmarked for new business extensions such as responding to demands for refinement of polycrystalline silicon and enhancing the heat-dissipating materials, to lay down a stronger foothold.

At the same time, the 20 billion yen strategic investment will be set aside to expand the growth businesses and strengthen the competitiveness of traditional businesses, with the breakdown of 65% towards the traditional businesses and 35% for the growing businesses.

③Key challenges and countermeasures

The company identifies the following 4 key challenges and the measures.

Key challenges	Measures
1. Change the Group's organizational culture and structure	Steps will be taken to review personnel evaluation systems, actively promote the exchange of human resources between Group companies, and drastically reform structures and systems through a variety of initiatives including the vigorous introduction of outside personnel.
2. Rebuild the Group's business strategies	The Group will strictly adhere to a customer-oriented approach on the conduct of its business activities. At the same time, the Group will transition to a research and development structure that is in tune with customers' needs. Through these means, energies will be channeled toward cultivating new business domains that employ unique technologies. The Group will reinforce management resources including personnel and information through alliance with other companies.
3. Strengthen Group management	Each company of the Tokuyama Group will once again clarify its role and position. Seeking to contribute to the Group's growth strategy as well as the reduction of costs, particular emphasis will be placed on further strengthening the management of the Group as a whole.
4. Improve the Company's financial position	Every effort will be made to restore the Company's shareholders' equity by steadily building up profits. Tokuyama will issue classified stock (preferred stock) to quickly stabilize the Company's financial position, thereby ensuring that the Group is well positioned to flexibly pursue opportunities including M&As that are designed to accelerate the pace of growth.

④Targets for Final Business Year (FY2020)

Items	Targets	Themes
Sales	335 billion yen	Emphasize quality over quantity
Operating income	36 billion yen	Shift toward high-value-added products and reduce costs
ROA*	10%	Realize Tokuyama Factory's potential
Operating margin	10%	Pursue a thirst for increased efficiency
Total asset turnover	1.0	Promote improvements through various measures including efforts to shorten the periods of periodic maintenance
CCC	55 days	Reduce inventories, improve trading terms and conditions
D/E ratio	1	Promote improvement by building up profits and utilizing external capital

*ROA = operating income ÷ total assets

<Reference2: Regarding Corporate Governance>

◎ Organization type and the composition of directors and auditors

Organization type	Company with audits committee
Directors	8directors, including 3 outside ones

◎ Corporate Governance Report

Last update date: Jun. 24, 2019

<Basic approach>

Under “Tokuyama’s Vision” set in 2016, our company defined the mission of the Tokuyama Group as “Centered on the field of chemistry, the Tokuyama Group will continue to create value that enhances people’s lives.” With the chemical technology that has been nurtured by the Tokuyama Group, we will create new value and keep offering it, to contribute to the happiness of people and the growth of society. We can create new value and keep offering it, only when we have trust and cooperation from stakeholders, including shareholders, customers, business partners, employees, and local communities, and this will lead to sustainable growth and the mid/long-term improvement in corporate value. To do so, it is necessary to constantly enrich corporate governance, which is an important managerial issue. This is our basic policy.

As a basic policy, the company follows the corporate governance code, respects the rights and equality of shareholders, cooperates with stakeholders in an appropriate manner, discloses information properly, secures transparency, ensures the independence of the board of directors, upgrades the supervisory function, streamlines the decision making process, clarifies responsibilities, conducts constructive dialogue with shareholders, and so on.

<Reasons for Non-compliance with the Principles of the Corporate Governance Code >

Principles	Main reasons for not implementing
Supplementary Principle 4-1-3 【Succession plan for a chief executive officer】	We carefully select a chief executive officer (president / executive officer), based on our corporate ethos and managerial strategies, but we think it is necessary to adopt a succession program for developing successors in a planned manner, and we will keep discussing it. As for the procedures, in order to secure fairness and transparency, the personnel committee first conducts deliberations carefully, submits proposals to the board of directors, and then the board of directors makes a resolution.
Supplementary Principle 4-11-1 【Policy for the diversity of members of the board of directors】	As mentioned in “Principle 3-1 (iv) Policy and procedures for selecting and dismissing executives and appointing directors,” we care for the balance and diversity of members of the board of directors, but consider that it is necessary to secure diversity with respect to gender and internationality. We will keep discussing this matter.

<Disclosure Based on the Principles of the Corporate Governance Code (Excerpts)>

Principles	Disclosure contents
Principle 1-4 【the so-called strategically held shares】	As part of its management strategy, the Company may strategically hold shares in listed companies according to its needs for maintenance and development of business relations, funding, and stable procurement of raw materials on business activities. As for these strategically held shares, we will reduce as many shares as possible with the aim of achieving efficient business administration. Every year, the board of directors examines economic rationality by comparing capital cost including risks and benefits, and checks whether it is appropriate to hold such shares, while considering the future outlook. Our company will exercise voting rights, while considering the contribution to corporate value of our company and invested enterprises.

Principle 5-1

【Policy for the constructive dialogue with shareholders】

Our company makes efforts to disclose not only the managerial and financial information of our company, but also non-financial information, such as our products and services, their environmental and social aspects, timely, appropriately, and understandably, in order to win the understanding and trust of shareholders and investors. For our basic stance for disclosing information and timely disclosure system, please see “V-2. Other items regarding the corporate governance system, etc. (Outline of the timely disclosure system)” of this report.

The section chief of the Publicity and IR Group will take the role of promoting and managing the constructive dialogue with shareholders and investors.

Talks are planned and carried out by the Public Relations and IR Div., which work closely with other internal departments such as the Corporate Planning Div., the Finance and Accounting Div., the Corporate Social Responsibility Div., the General Affairs Div., the Research and Development Div., and the Sales Div.

As IR activities in which executives communicate with shareholders and investors directly, we hold a result briefing session for analysts and institutional investors 4 times a year, and participate in the conferences and small meetings held by securities firms when necessary. The Publicity and IR Group, which is in charge of IR activities, holds the interviews with institutional investors inside and outside Japan, a session for introducing our company to individual investors, and so on. For the details of other IR activities, please see “III-2. Situation of IR-related activities of this report.

The opinions, etc. of shareholders and investors received through dialogue are checked and shared at our IR meetings, which are attended by executives and relevant section chiefs, and distributed to each section of our company in the form of IR reports, to improve our corporate value by referring to them when designing our managerial and business strategies and adjusting our course of business operation.

Concerning management of insider information, the Company has established company regulations with the aim of thoroughly managing information through non-disclosure agreement, etc.

As for the management of insider information, we set in-company rules and manage such information thoroughly by producing a confidentiality pledge, etc.

This report is intended solely for information purposes, and is not intended as a solicitation to invest in the shares of this company. The information and opinions contained within this report are based on data made publicly available by the Company, and comes from sources that we judge to be reliable. However, we cannot guarantee the accuracy or completeness of the data. This report is not a guarantee of the accuracy, completeness or validity of said information and or opinions, nor do we bear any responsibility for the same. All rights pertaining to this report belong to Investment Bridge Co., Ltd., which may change the contents thereof at any time without prior notice. All investment decisions are the responsibility of the individual and should be made only after proper consideration.

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