



EST. 1957

*Ideas & Chemistry*



# TOYOBO REPORT 2019

Year Ended March 31, 2019

# TOYOBO REPORT 2019

Reporting Period:  
This report covers Fiscal 2019,  
from April 1, 2018 to March 31, 2019.

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## Disclaimer

This report contains statements related to the future performance of the TOYOBO Group. The reader should bear in mind that these statements are not guarantees of future performance, as they assume various risks and uncertainties. Furthermore, the purpose of this report is to provide information, and while such information could be referred to when making investment decisions, the report is not intended to encourage investment in the Company.

( 順理則裕 )

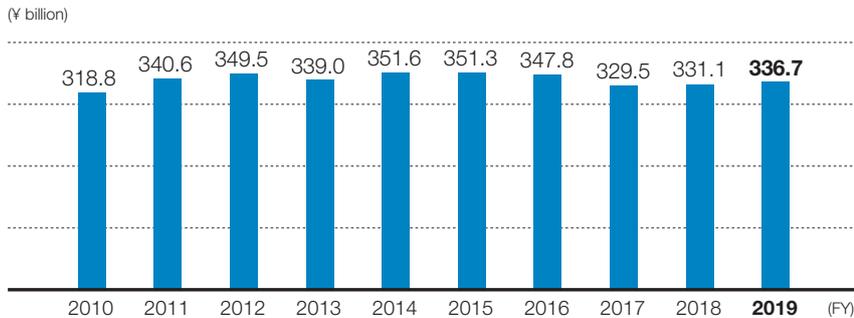
# *Jun-Ri-Soku-Yu*

**We will keep reforming, in order to realize a sustainable society and achieve long-term growth.**

Ever since our founding in 1882, we have cherished our philosophy of *Jun-Ri-Soku-Yu*—do the right thing, in a rational manner, to realize prosperity for society, while also growing ourselves—and we will continue to create products and services that meet the needs of the time, through a never-ending process of innovation.

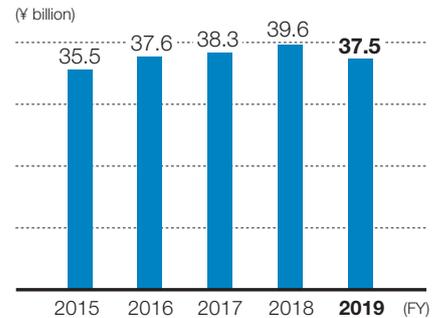
# Financial & Non-Financial Highlights

## Net Sales



In fiscal 2019, sales increased by 1.7% year on year due to significant growth in sales of COSMOSHINE SRF™ polarizer protective film for liquid crystal displays and mold releasing film for MLCC.

## EBITDA



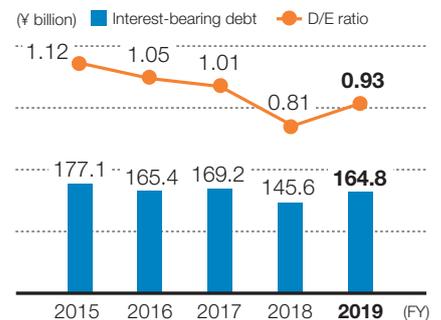
In fiscal 2019, operating profit fell by 9.2% and there was a 1.0% increase in depreciation and amortization, leading to a 5.2% fall in EBITDA.

## Operating Profit and Operating Profit Margin



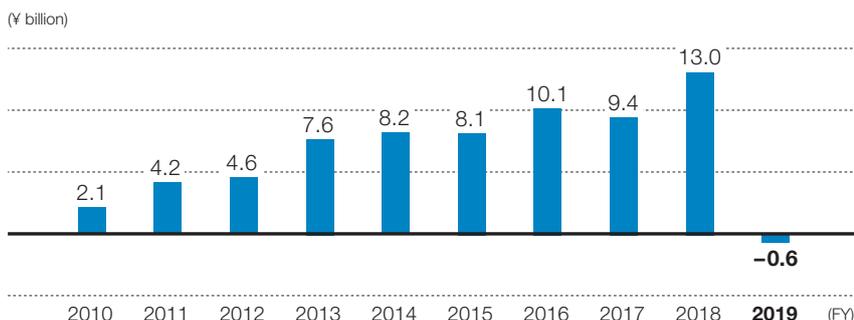
In fiscal 2019, there were strong sales of industrial films. However, products including packaging films, engineering plastics and airbag fabrics were significantly impacted by fluctuation in raw material and fuel prices. The effect of higher logistics costs was also felt. As a result, profits fell by 9.2% year on year.

## Interest-Bearing Debt and D/E Ratio



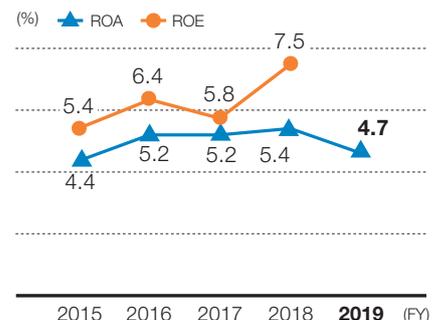
In fiscal 2019, interest-bearing debt increased by ¥19.2 billion year on year. Meanwhile, shareholders' equity decreased by ¥4.0 billion, leading to a 0.12 points deterioration in the D/E ratio. However, the ratio remains under 1.0 times.

## Profit (Loss) Attributable to Owners of Parent



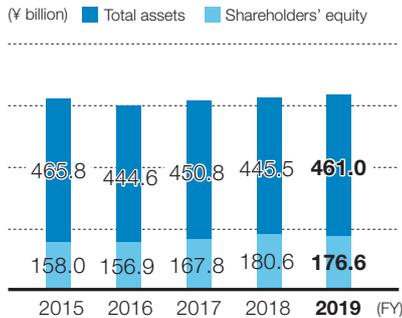
In fiscal 2019, there was a net loss of ¥0.6 billion. A fire that broke out in September 2018 damaged facilities including those for airbag yarn production, and an extraordinary loss of ¥13.8 billion was booked due to factors including the cost of procuring substitute yarn.

## ROA and ROE



In fiscal 2019, ROA (return on assets) decreased by 0.7 points year on year. ROE (return on equity) was negative due to the net loss recorded for the year.

## Total Assets and Shareholders' Equity



Total assets in fiscal 2019 increased by ¥15.6 billion due to increases in inventory assets and fixed assets. Shareholders' equity decreased by ¥4.0 billion, as despite an increase in the valuation difference on available-for-sale securities, there was a ¥4.3 billion decrease in retained earnings.

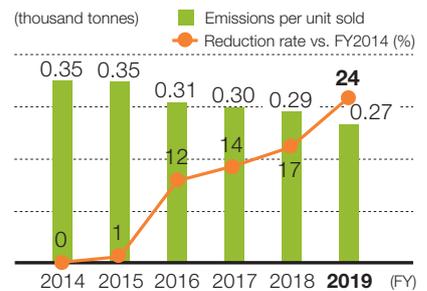
Since fiscal 2018, the Group has applied the "Partial Amendments to Standard for Tax Effect Accounting" (ASBJ Statement No. 28, February 16, 2018) and relevant Guidances.

## CO<sub>2</sub> Emissions

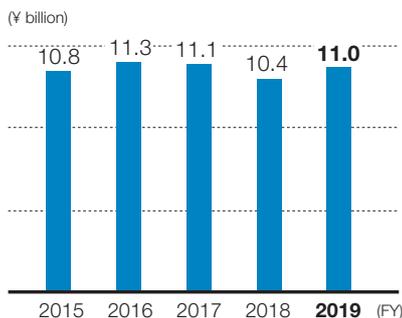


Taking fiscal 2014 as the base year, we aim to achieve a 17% reduction in both the total emissions volume and emissions per unit sold by 2030. Through measures such as upgrading to equipment with high energy efficiency and installing gas cogeneration facilities, we have made reductions in emissions and achieved our targets. In fiscal 2019, we achieved a 27% reduction in the total emissions volume and a 24% reduction in emissions per unit sold (total CO<sub>2</sub> emissions divided by net sales). ▶P.42

## Emissions per unit sold

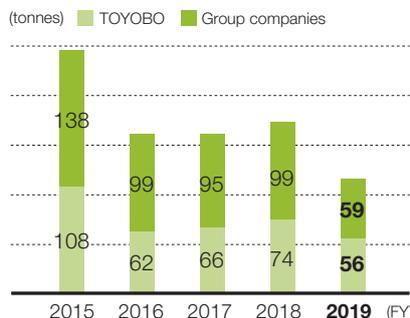


## R&D Expenses



In fiscal 2019, we continued to invest strategically in research and development, leading to a ¥0.6 billion year-on-year increase in R&D expenses.

## PRTR Substances Emissions



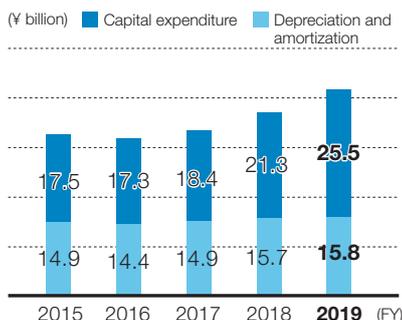
In fiscal 2019, TOYOBO Group emissions fell by 34% year on year. We continue implementing activities to cut emissions, including improving our manufacturing facilities/equipment and installing equipment that eliminates the applicable substances. ▶P.43

## Industrial Waste Landfill Rate



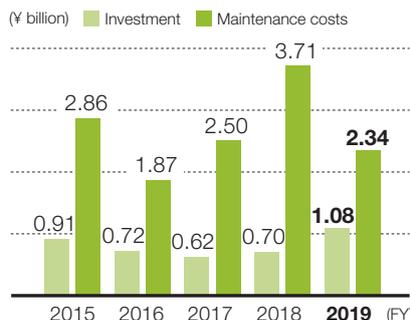
In fiscal 2019, the landfill rate at Group companies worsened by 0.29 points, but improved by 0.06 points at TOYOBO, resulting in a 0.03-point improvement for the TOYOBO Group overall. ▶P.44

## Capital Expenditure and Depreciation and Amortization



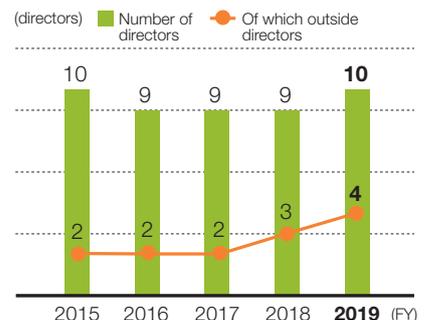
In fiscal 2019, capital expenditure increased by ¥4.3 billion year on year due to factors including investment projects in the film business, while depreciation and amortization rose by ¥0.2 billion.

## Environmental Protection costs



This comprises capital investment for the purpose of environmental protection and the cost of maintaining facilities. In fiscal 2018, odor suppression measures were implemented to tackle pollution, leading to an increase in maintenance expenses. ▶P.44

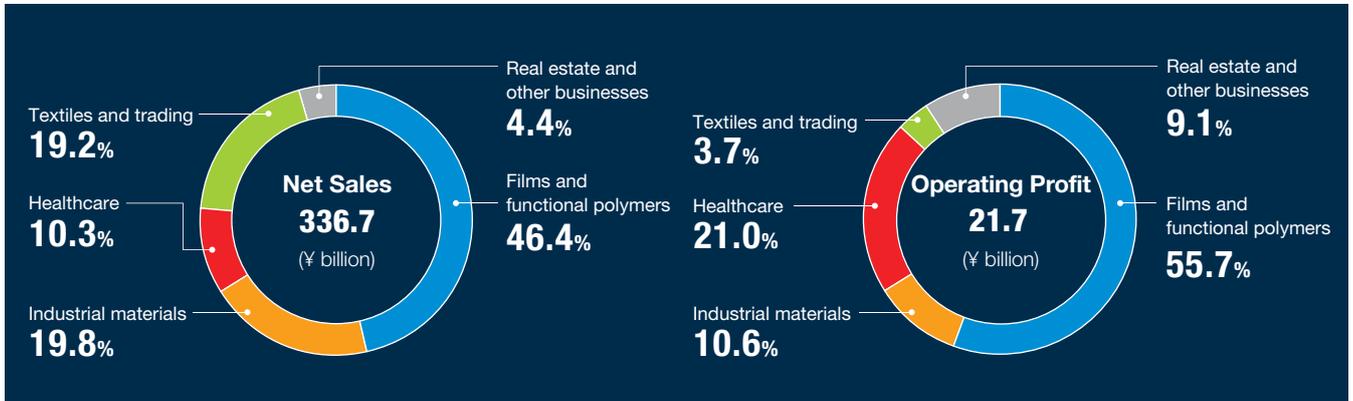
## Number of Directors



We increased the number of outside directors in order to improve diversity and strengthen the supervisory function. The first female director was appointed at the General Shareholders' Meeting in June 2019. ▶P.53

# Overview by Business and Region

## Overview by Business



### Overview of Fiscal 2019

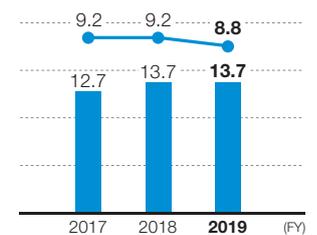
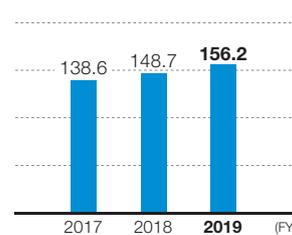
### Net Sales (¥ billion)

### Operating Profit (¥ billion) / Operating Profit Margin (%)

#### Films and Functional Polymers



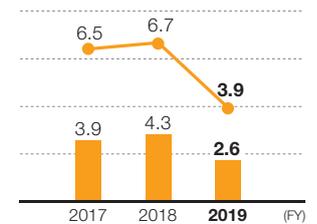
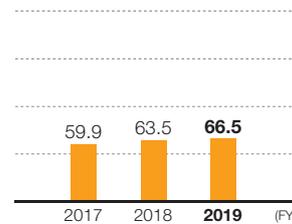
Both the films and functional polymers businesses were affected by fluctuation in raw materials prices, but both sales and operating profit rose due to a strong performance in industrial films.



#### Industrial Materials



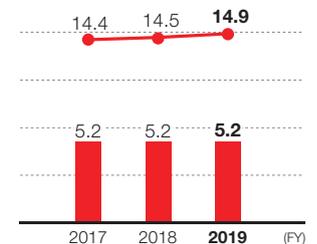
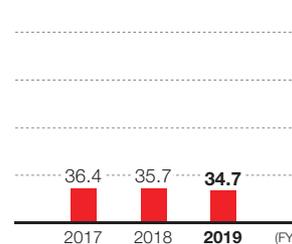
Sales to overseas customers increased in the airbag fabrics and life and industrial materials business, resulting in higher sales in this segment overall. However, fluctuation in raw materials prices and the impact of a fire led to a fall in operating profit.



#### Healthcare



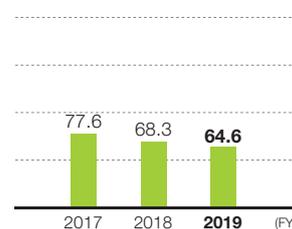
There were strong sales of enzymes for diagnostic reagents to overseas customers, but the pharmaceutical contract manufacturing business faced challenging conditions, while orders for RO membranes for desalination were also at a standstill. As a result, both sales and operating profit fell.



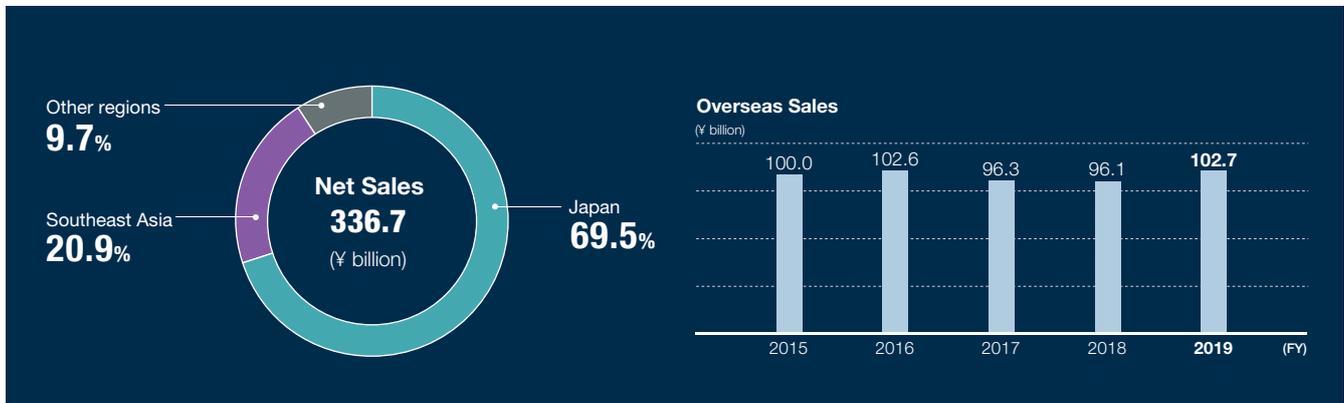
#### Textiles and Trading



There were weak sales of products for uniforms, and fabrics for traditional Arabic menswear saw a downturn in market conditions, leading to lower sales volumes. On the other hand, sports clothing products recovered, resulting in lower sales but higher operating profit.



## Overview by Region



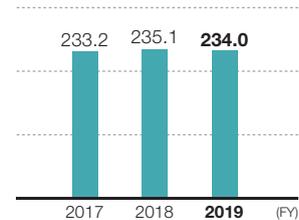
### Overview of Fiscal 2019

### Net Sales (¥ billion)

#### Japan



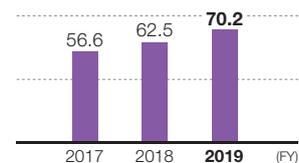
Sales of packaging films were supported by firm domestic demand, including from convenience stores. We also increased sales of mold releasing film for high-end MLCC, as well as automotive engineering plastics.



#### Southeast Asia



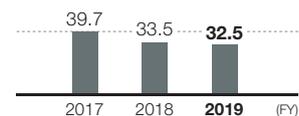
Sales of COSMOSHINE SRF™ polarizer protective film for liquid crystal displays grew in the Asia region. Volatile organic compounds (VOC) treatment systems and elements for recovering solvents performed well in markets such as China, owing to increased environmental-related investment. In addition, there were strong exports of enzymes for diagnostic reagents, especially to China.



#### Other regions



In the Middle East, sales of RO membranes for desalination and fabrics for traditional Arabic menswear were sluggish. In Europe, we began validation testing of an osmotic power plant with a view to practical application of hollow fiber forward osmosis (FO) membranes.



### TOYOBO Group's Business Locations around the Globe



# Key Events in Fiscal 2019

## Strong sales of COSMOSHINE SRF™ for LCD TV

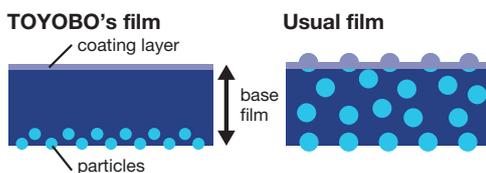
COSMOSHINE SRF™ polarizer protective film for liquid crystal displays (LCDs) is a super retarder film that eliminates the coloration caused by birefringence seen in conventional polyester films. With the increasing size of LCD TVs, as well as the shift to bezel-less screens and open-cell panels\*, the superiority of polyester film has become clear, due to its excellent low moisture permeability and durability. In fiscal 2019, sales grew by about 65% and our market share was 30%.

\* Sales of semi-finished products without the LCD's backlight component



## Robust sales of mold releasing film for MLCC

Demand for MLCC has been growing year on year along with the spread of IoT. Mold releasing film is indispensable in the production of ultra-small MLCC, which are positioned as high-end products. TOYOBO Group is the only manufacturer that can handle the integrated production of this mold releasing film, from base film to releasing layer coating. Sales for automotive use grew especially strongly in fiscal 2019. Moreover, we have invested ¥3 billion in expanding our processing facilities to meet further growth in demand. Our goal is to further accelerate and double sales by fiscal 2022.



## “MIRAI JINZAI JUKU” for nurturing talent and creating new business

TOYOBO has launched a new “MIRAI JINZAI JUKU” incubator project for nurturing talented human resources of the future. Young staff members, who are selected through an internal recruitment process, plan and develop products by raising funds through the “Makuake” crowdfunding service, and then sell them. In the first phase, they tackled the development of dog clothing employing functional materials and technology. Going forward, we will explore full-scale commercialization based on the results and feedback.





## FO membranes adopted at Danish osmotic power plant

Hollow fiber forward osmosis (FO) membranes manufactured by TOYOBO have been adopted at a first-of-its-kind osmotic power plant in Denmark, which is operated jointly by TOYOBO Group and three Danish firms. Osmotic power using geothermal water is attracting attention as a renewable energy that is unaffected by weather conditions. The plant (picture on the left) is the largest of its kind in the sector, and the first time in the world that a full-scale osmotic power plant has operated. We intend to further expand the applications for FO membranes in future, aiming for sales of ¥2 billion by fiscal 2021.



## Establishment of manufacturer/distributor for XENOMAX™

XENOMAX™ is a high heat-resistant polyimide film with world-leading dimensional stability. New production facilities have been built following the establishment of the new company Xenomax – Japan Co., Ltd. As well as meeting increased demand as the base material in TFTs for electronic paper (e-paper) displays, TOYOBO is now aiming to expand sales for a wide range of applications.

## Fire at the Tsuruga Research and Production Center

On September 6, 2018, a large fire broke out at TOYOBO's Tsuruga Research and Production Center. Although no-one was hurt, production facilities for airbag yarns, the three-dimensional cushion material BREATHAIR™ and nylon yarn for clothing were damaged. We apologize sincerely for the inconvenience and worry caused to all related parties.

We have now completed identification of the causes and are implementing preventive measures at the Group level.

For details of the causes of the fire and future countermeasures, see p.49-50.

# We have reformed our business portfolio while creating shared value for society.

In recent years, TOYOBO Group has focused on developing high-functional products, such as high value-added films, in order to create shared value (CSV). As a result, our portfolio has also evolved to have a focus on specialty businesses, and profitability has vastly improved.

## 1882 Foundation



Osaka Boseki spinning mill

## 1931

Rapid advance to become one of the world's largest spinning companies

## 1948

Start of research into pulp fluid waste disposal



## 1956

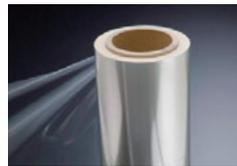
Entry into the synthetic fibers business



Production of polyester staple fibers started in 1964

## 1963

Entry into the films business



## 1982

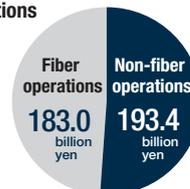
Approaching the TOYOBO Centennial



The TOYOBO Building was completed in 1980

## 2002

Consolidated Sales from Non-Fiber Operations Exceed Sales from Fiber Operations



## 2010

Establishment of a joint venture for manufacturing and selling RO membrane elements for desalination for the first time in Saudi Arabia



## 2012

Development of COSMOSHINE SRF™ polarizer protective film for liquid crystal displays (LCDs), which eliminates the coloration caused by birefringence



Left: Standard film Right: COSMOSHINE SRF™

## 2014

Acquisition of world's second largest airbag yarn manufacturer



## Jun-Ri-Soku-Yu

(順理則裕)

### Our founding spirit, a forerunner of CSV

*Jun-Ri-Soku-Yu* (realizing prosperity by acting rationally) was a personal maxim of our founder Eiichi Shibusawa, an industrialist who contributed greatly to Japan's modernization. It has been the foundation of TOYOBO Group's business ever since. These words imply that by meeting the needs of society and realizing prosperity, we ourselves also grow, and they demonstrate a pioneering approach to "CSV" more than 140 years ago.

TOYOBO Group has continually reformed its business portfolio in order to meet the social needs of the times and realize prosperity, based on *Jun-Ri-Soku-Yu* (realizing prosperity by acting rationally). Now, TOYOBO Group is focused on the Sustainable Development Goals (SDGs), providing solutions for social issues through "materials + science\*."

\* Science: Newly created value through ingenuity and ideas

## Specialty Business Sales Ratio

FY1996

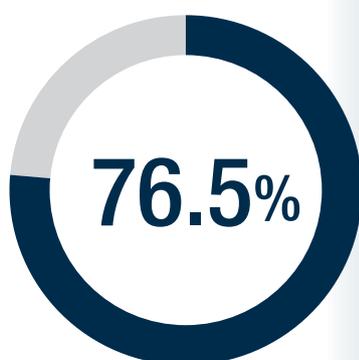


Operating Profit Margin

1.4%

<b>Net Sales</b>	<b>Operating Profit</b>
<b>461.0</b> billion yen	<b>6.3</b> billion yen

FY2019



Operating Profit Margin

6.5%

<b>Net Sales</b>	<b>Operating Profit</b>
<b>336.7</b> billion yen	<b>21.7</b> billion yen

### Specialty Businesses

**Films and Functional Polymers**



Packaging films, industrial films, industrial adhesives, engineering plastics, photo functional materials, etc.

**Industrial Materials**



Automotive fiber materials, high-strength fibers, cushion materials, non-woven fabrics, etc.

**Healthcare**



Bio products including enzymes for diagnostic reagents, medical membranes, medical equipment, desalination membranes, functional filters, etc.

**Textiles and Trading**



Clothing for sports, fabrics for inner wear and uniforms, fabrics for traditional Arabic menswear, etc.

## Improving profitability through portfolio reform

Since the late-1990s, TOYOBO Group has focused on expanding its specialty businesses. This includes the development of environmentally friendly packaging films and engineering plastics, fiber materials to enhance safety in automobiles, non-woven fabrics, and bio products and medical equipment to maintain and improve people's health. TOYOBO has continually supplied high value-added products to society in a

variety of fields where we have the potential to be the category leader.

As a result of these portfolio reforms, the share of specialty businesses within TOYOBO Group's total sales has risen dramatically, from 30% in fiscal 1996 to 76.5% in fiscal 2019. Our operating profit margin has also risen accordingly, to 6.5%.

# We promote value creation in four fields, responding to the needs of the new era.

To achieve long-term growth, TOYOBO Group will accelerate innovation in a manner that connects technology with the market, while promoting value creation in line with the expectations of society and the marketplace.

## Value Creation Strategy

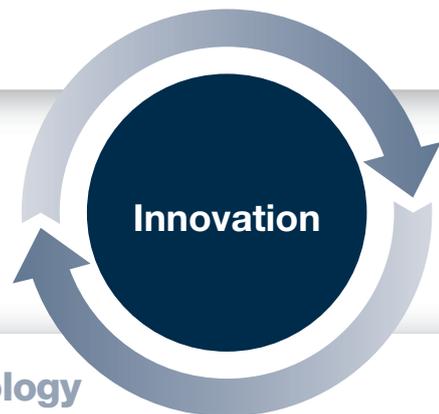
### Social Demands



**Market**

## Demand for “Products”

Supplying “soft” services and solutions while delivering product performance, thereby creating customer value



### Core Technology

- Polymerization
- Modification
- Processing
- Biotechnology

**Technology**

## Provision of “Manufacturing”

Providing optimal value throughout the value chain, in terms of quality, cost, and lead time

## Contribution to SDGs

The SDGs are global Agenda for Sustainable Development adopted by the United Nations General Assembly in 2015, to be achieved by 2030.

TOYOBO Group aims to make a proactive contribution to resolving the social challenges set out in the SDGs, including poverty, hunger and climate change.



## Current Focus Fields



### Films & Coatings

We will support smart living to meet a wide range of needs, including food safety/security and preservation of the global environment.



### Mobility

We will contribute to enhancing the safety and environmental performance of all kinds of vehicle, focused on automobiles in the 5G era.



### Healthcare & Wellness

In Japan, over one third of the population will be aged 65 or over by the year 2035, and we will respond to the growing demands of longevity and health.



### Environment

We will help to resolve challenges such as climate change and water shortages – global issues that demand action.

## Value Brought to Society

### Resolving food challenges

#### Food packaging film

Our food packaging film is ideal for food storage and helps to ensure food safety and security, while also reducing food loss.

▶P.25

### Reducing waste

#### Film that supports recycling

We supply products including film that uses 80% recycled PET bottle resin. This helps to cut waste volumes.

▶P.27

### Reducing CO<sub>2</sub>

#### Materials that make vehicles lighter

The use of lightweight materials instead of metal helps to improve vehicles' fuel economy and reduce CO<sub>2</sub> emissions.

▶P.29

### Mitigating the impact of accidents

#### Airbag fabrics

Integrated production of airbag yarn and fabrics with outstanding durability and heat resistance. TOYOBO has production sites consisting of five bases worldwide.

▶P.31

### Improving diabetes patients' QOL

#### Enzyme for blood glucose measurement

We have developed an enzyme that is used in the sensors of equipment for self-monitoring of blood glucose. Accurate measurements are given in a short time.

▶P.33

### Supporting the lives of dialysis patients

#### Hollow fiber membranes for artificial kidneys

Hollow membranes formed with fine perforations using our proprietary technology support the lives of dialysis patients.

▶P.35

### Eliminating water shortages

#### Desalination membranes

TOYOBO supplies the membranes used in seawater desalination equipment. These are being employed in locations including the Middle East.

▶P.37

### Reducing atmospheric pollution

#### VOC recovery systems

TOYOBO's unique adsorbents eliminate VOCs and recover organic solvents.

▶P.39

## Rigorously managing our impact on the environment and society

Through our operations, TOYOBO Group aims to help realize a sustainable society while resolving social issues, and to achieve long-term growth.

To do this, we have identified important environmental and social themes, and are striving to mitigate any adverse effects of our operations while augmenting the positive benefits.

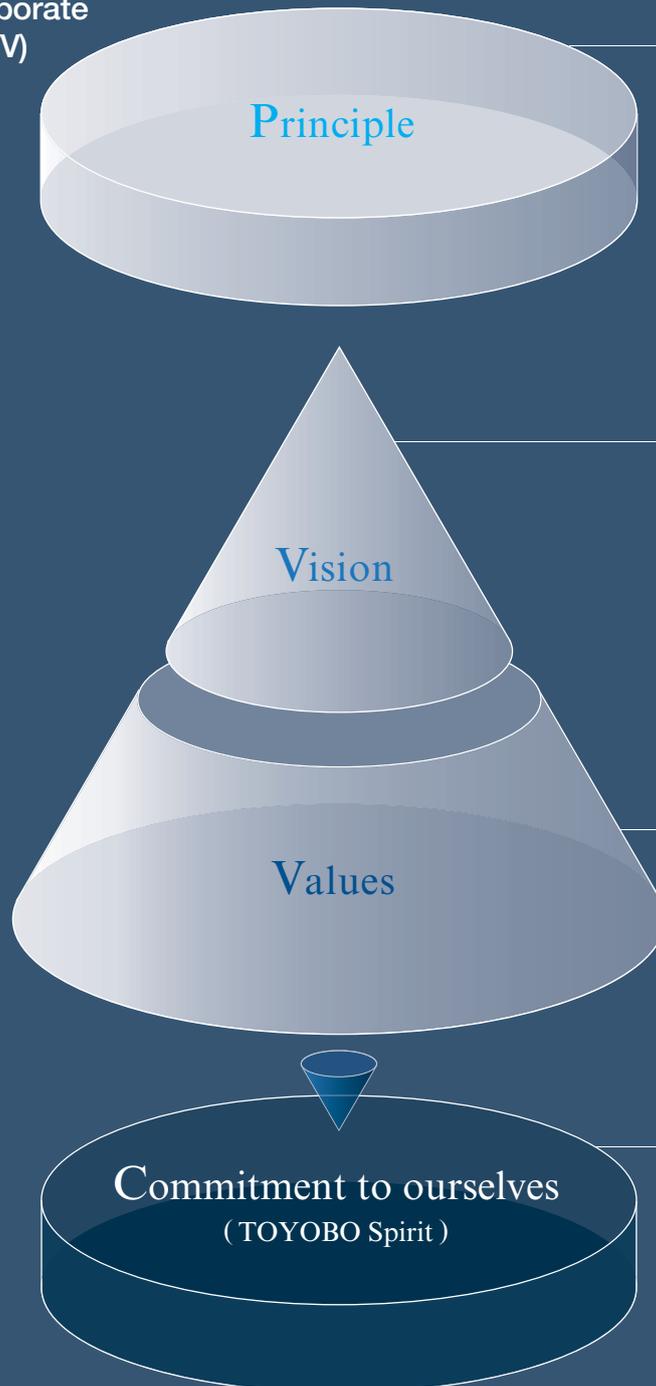
### Key management themes

Preventing global warming	Management of chemical substances	Resource circulation	Safety and disaster prevention
Respecting diversity	Securing and nurturing human resources	Quality management	Supply chain management

# We continue to create shared value, based on our founding spirit of *Jun-Ri-Soku-Yu*.

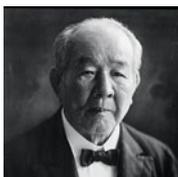
In March 2019, TOYOBO Group systematized our *Jun-Ri-Soku-Yu* corporate philosophy in order to revise and instill its meaning in all TOYOBO executives and employees, so that we actively build a prosperous society while also growing ourselves as a company.

## TOYOBO Group's Corporate Philosophy System (PVV)



## Our approach to CSV, handed down over 140 years

*Jun-Ri-Soku-Yu* (realizing prosperity by acting rationally) was a personal maxim of our founder Eiichi Shibusawa (1840–1931). He was an industrialist who believed in working for the public good and contributed greatly to Japan’s modernization.



He became known as the “father of Japanese capitalism” after establishing and managing over 500 companies and organizations in a variety of fields.

## ● Principle TOYOBO’s founding spirit and beliefs

*Jun-Ri-Soku-Yu* (realizing prosperity by acting rationally)

Prosperity = TOYOBO CSV

**“Jun-Ri”**  
Do the right thing  
= **Proactive**  
Never do wrong  
= **Vigilant**

**“Soku-Yu”**  
By adhering to “Jun-Ri”, bring prosperity to society while also realizing self-growth.

- Contribution to **society**
- The Company’s** earnings
- Our employees’** job motivation

## ● Vision As a company, what kind of added value should we provide to society?

We will continue to be a Group that creates the solutions demanded by people and the global environment, through **Materials + Science**

- We pursue Science, rather than simply manufacturing products (providing materials)
- “Science” means the new value we create through ideas and ingenuity
- We are committed to being a Group that provides unique solutions through the fusion of Materials and Science

## ● Values The things that all TOYOBO Group employees value

We do not fear **change**; rather, we relish and create **change**

### Challenge

We value the courage to create new things beyond conventional limits

### Reliability

We build a safe and secure workplace, and place importance on providing solutions that surpass our customers’ expectations

### Collaboration

We value a diversity of characteristics and opinions

## ● Commitment to ourselves (TOYOBO Spirit) Daily code of conduct

- We will establish the conditions in our respective workplaces that enable each and every one of us to work with joy and a sense of pride. Through the efforts of everyone, we will build a company in which we grow as flourishing members of society
- In order to achieve this, we make this commitment to ourselves (TOYOBO Spirit)

Values	Commitment to ourselves
<b>Challenge</b>	Act Swiftly Create Execute
<b>Reliability</b>	Safety First Customer Satisfaction Factual Basis
<b>Collaboration</b>	Mutual Communication Diversity Providing Opportunities



**Seiji Narahara**

Representative Director,  
President and Chief Operating Officer

# We will maintain sustainable growth while proactively investing in businesses that bring prosperity to society.

## **Our corporate philosophy** ***Jun-Ri-Soku-Yu* (realizing prosperity by acting rationally)**

**Companies have a duty to help their communities prosper.**

The TOYOBO Group's corporate philosophy is rooted in a motto of the Company's founder, Eiichi Shibusawa. About 100 years ago, he wrote his favorite motto, *Jun-Ri-Soku-Yu* (realizing prosperity by acting rationally), on a plaque when giving a speech to employees about the compatibility of morality and business. For Shibusawa, morality not only meant refraining from doing what is wrong; more proactively, it also meant taking a leading role in eliminating social problems and poverty by helping bring prosperity to people. Based on the motto, he called on employees to make the company grow while creating prosperity for society by adhering to the fundamental principles of morality: doing what is right, and refraining from doing what is wrong.

Shibusawa's approach long predated the management concept of "creating shared value," which has been widely adopted by companies in recent years. Both are premised on the idea that a company can grow sustainably and help communities thrive by consistently ensuring that its business activities are beneficial for solving the issues that people face. Based on that approach, we have maintained a commitment to passing down the founder's original vision to all members of the

TOYOBO Group so that our businesses can contribute even more to the communities they serve.

## **Enhancing the Group's business portfolio**

### **We are proactively investing in businesses that contribute to society.**

To continue putting our corporate philosophy into practice in our business activities, we recognize the importance of always considering how our businesses can benefit society. That means identifying which businesses and product categories can be beneficial, and then allocating operational resources accordingly.

Over many years, the TOYOBO Group distinguished such beneficial businesses and products as part of the reorganization of its business portfolio. Consequently, the Group's operations gradually evolved as it selected and invested in businesses that contribute to solving the issues of the day. The company originally started out in the cotton spinning business, and expanded into the synthetic fibers business in the 1960s. Eventually, after accumulating technologies, know-how, and expert personnel in the synthetic fibers business, the TOYOBO Group developed its current business pillars of films and engineering plastics.

To make inroads in new markets, however, forward-looking investments are necessary. In the past, our investment decisions were mainly based on quantitative



## Message from the President

analyses of the earnings and profitability of our businesses. Since I was appointed as president, however, management has been placing much more importance than before on qualitative analyses of the operating environment with respect to customers in the market, our competitors, and the Group, itself, because earnings and profitability are highly affected by changes in the market and competitive environment. Specifically, we examine market research and information on our competitors obtained from external research organizations, analyze the Group's competitive advantages, and then proactively move forward with investments in businesses that have the potential to contribute positively to society.

Qualitative analyses are beneficial because they can provide useful information even when business conditions are challenging. For instance, if a business is having trouble generating profits, we can qualitatively demonstrate that its products are sellable by looking at the market, the advantages of our products, our manufacturing capabilities, and methods for marketing the products to customers. The results of such an analysis provide a basis for motivating employees as we work to expand new businesses as the business pillars of tomorrow.

### Overview of results in fiscal 2019, ended March 31, 2019

#### Our past efforts have laid a surefooted path to growth.

In fiscal 2019, the first year of our 2018 Medium-Term Management Plan, net sales were up but operating profit decreased year on year, largely due to the impact of fluctuating prices for raw materials and fuel. Regrettably, the Company posted a net loss for the first time in 10 years, mainly as a result of extraordinary losses incurred following a fire at its Tsuruga Research and Production Center in September 2018.

Despite these disappointing financial results, the TOYOBO Group has been making excellent progress in other respects. Its businesses are now seeing steady returns on a series of growth-oriented investments that were implemented after shifting to growth strategies following a decade of business restructuring.

Consequently, we succeeded in turning the industrial films business into a major earnings driver on the back of highly successful products, including the Cosmoshine SRF polarizer protective films for LCDs, as well as our lineup of mold releasing films for multilayer ceramic capacitors. We also developed the airbags business into a highly competitive global player in partnership with PHP Fibers

GmbH, a Germany-based manufacturer jointly acquired by TOYOBO in February 2014.

Moreover, the Company's financial structure has substantially improved over the past decade following the business restructuring. We reduced the debt-to-equity ratio from 1.82 times in fiscal 2009 to 0.81 times in fiscal 2018, and gained A ratings from credit rating agencies for the first time in 20 years. Now that the Company's financial position is sound, we are aiming to expand the Group's film-related businesses by investing even more aggressively going forward. In fiscal 2019, capital investment amounted to ¥25.5 billion.

### Progress under our Medium-Term Management Plan and future outlook

#### We are targeting operating profit of ¥30 billion by fiscal 2022 on the back of steady returns on growth investments.

Under our 2018 Medium-Term Management Plan, we have positioned the Films & Coatings business as a top of growth driver. Among the products in this business, Cosmoshine SRF in particular sold well in fiscal 2019, with sales increasing 65% year on year. As a result, its share of the global market quickly grew to about 30%. To meet brisk demand, we are proceeding with capital investment to boost production capacity, and plan to begin operating a third production line in fiscal 2021. That will increase production capacity by around 1.5 times, enabling the Group to gain a 40% share of the global market. Another

#### Financial results, forecast, and targets

(¥ billion)

	FY2019 Results	FY2020 Forecast	FY2022 Targets
Net sales	336.7	350.0	<b>375.0</b>
Overseas sales ratio	30.5%	–	<b>35.0%</b>
Operating profit	21.7	22.0	<b>30.0</b>
Operating profit margin	6.5%	6.3%	<b>8.0%</b>
Extraordinary income (loss)	(17.7)	7.0	–
Profit (loss) attributable to owners of parent	(0.6)	17.0	<b>16.0</b>
Capital expenditure	25.5	36.5	–
Return on equity	–	–	<b>Min. 8%</b>
Debt-to-equity ratio	0.93	–	<b>Under 1.0</b>

key product in this business is mold releasing film for multilayer ceramic capacitors. Sales increased by approximately 30% compared with the previous fiscal year, and its share of the high-end market has grown to 25%. With high expectations for this product, we are aiming to raise that share to 30% by fiscal 2022. In the future, we intend to further strengthen our production development and supply network for high-performance films.

In the Mobility business, we are focusing on airbag fabrics in particular. The global airbag market is expanding at a faster pace than the automobile market and demand is projected to grow in the future. We are also marketing engineering plastics in markets around the world with a view to achieve even more growth.

In the Healthcare & Wellness business, we have been focusing on enzymes for genetic testing and hollow fiber membranes for artificial kidneys. Internationally, the Group is promoting sales of enzymes for diagnostic reagents, including enzymes used in sensors for self-monitoring of blood glucose. In addition, we have been working tirelessly to help protect the global environment through this business, including efforts to sell equipment for treating VOCs in emerging countries such as China.

In fiscal 2020, the second year of our management plan, we foresee year-on-year growth in consolidated sales and profits, despite the lingering impact of the aforementioned fire that damaged the Tsuruga facility. Over the next two years of the plan, although growth could slow down due to proactive investment in new equipment and facility expansion, we can look forward to substantial returns on

investments in the new facilities when they commence full production of big-selling products like Cosmoshine SRF and mold releasing films for multilayer ceramic capacitors. Taking these factors into consideration, we are targeting operating profit of ¥30 billion by fiscal 2022, the final year of the management plan.

### Three Part Harmony

**We need to fully consider not only our current performance but also our future growth and corporate culture.**

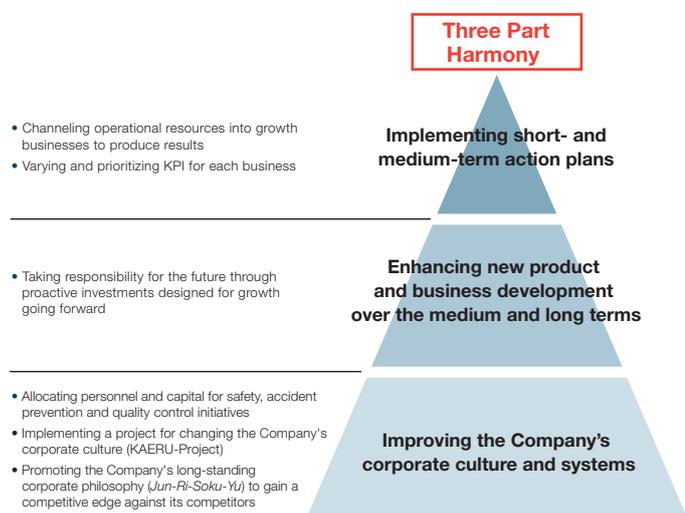
Over the past few years, I have been calling on employees to give equal priority to three aspects of the TOYOBO Group: its current performance, future growth, and corporate culture.

During the years when business restructuring was an urgent task, we gave the highest priority to our immediate work and performance. Focusing on the present remains important, of course, but the Group will not be able to grow if we only think about securing earnings in the short term.

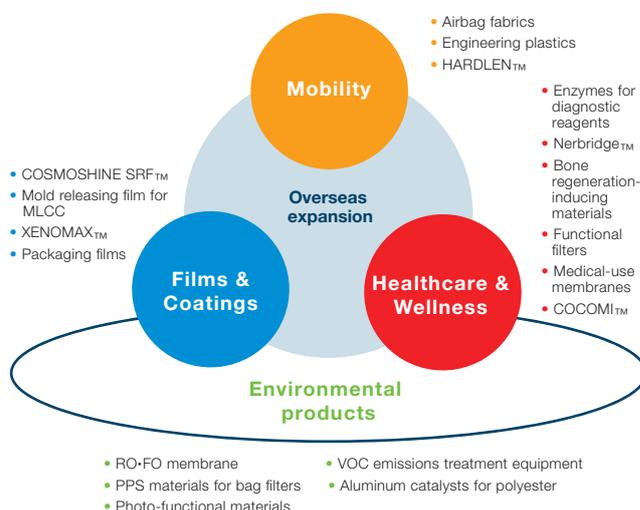
Therefore, I asked employees to consider what they can independently do to help our business expand while making society prosper—in other words, our future growth. Furthermore, I have repeatedly encouraged employees to reflect on our corporate culture in light of the fire disaster in September 2018, specifically issues concerning safety, disaster prevention, the environment, quality control, and more employee-friendly workplaces.

As part of these efforts to change the way we think

#### Main measures of the Medium-Term Management Plan



#### Main products promoted under the Medium-Term Management Plan



## Message from the President

within the Company, we initiated a special project involving all managers and employees in fiscal 2019 called the KAERU Project. Together, we have been exploring ways of changing the Company with respect to various aspects related to work, systems, and awareness through participation in working groups tasked with each of those respective topics.

### Towards sustainable growth

**We have set growth targets and laid a roadmap up to fiscal 2026.**

Future growth is one of the three areas we are focusing

on (Three Part Harmony), and our 2018 Medium-Term Management Plan is a means for achieving it. Nevertheless, in fiscal 2020, we envisioned beyond the period of the plan and set growth targets and objectives up to fiscal 2026. For the TOYOBO Group, a considerable amount of time is needed to get a business up and running, as that involves investing in product manufacturing facilities, starting up production, and establishing a presence in the market. Indeed, over a decade is often required from the initial period of basic research and product development to the full-fledged operations of a business.

At present, the Group's businesses operate while looking ahead three or four years into the future, but we

#### Growth target

Consolidated net sales of **¥500** billion in fiscal 2026

#### Basic approaches

##### 1. Expand the scope of businesses and develop solutions

###### Product fields that will provide solutions

- Films, adhesives, and coatings
- Lifestyle and environmental products
- Mobility-related products
- Life science-related products

##### 2. Strengthen group-wide capabilities

- Contribute to achieving SDGs through measures for addressing global warming, environmental issues, and food crisis, etc.
- Bolster ability to operate businesses sustainably
- Foster leadership capabilities for overseeing business development and expansion

#### Future vision of each business domain

Films, adhesives, and coatings	<p><b>Become a leading global provider of environmentally friendly products and solutions</b></p> <p>Offer new value and total solutions</p>	<ul style="list-style-type: none"> <li>■ No. 1 global manufacturer of eco-friendly films</li> <li>■ Comprehensive provider of resins</li> </ul>
Lifestyle and environmental businesses	<p><b>Become a solutions business that contributes to creating comfortable and healthy living environments</b></p>	<ul style="list-style-type: none"> <li>■ Global-leading non-woven fabrics manufacturer</li> <li>■ Environmental solutions provider</li> <li>■ Industrial and consumer materials provider with functional textiles and trading expertise</li> </ul>
Mobility-related businesses	<p><b>Be a unique company that provides solutions for safe, reliable, and comfortable vehicle interiors</b></p>	<ul style="list-style-type: none"> <li>■ No. 1 global airbag fabric manufacturer</li> <li>■ Top-tier engineering plastics manufacturer</li> <li>■ Partnerships with global automakers</li> </ul>
Life science-related businesses	<p><b>Become a developer of products and services for providing quality healthcare and ensuring healthy communities</b></p>	<ul style="list-style-type: none"> <li>■ Top domestic provider of solutions for genetic diagnoses of infectious diseases</li> <li>■ Global-leading medical membrane manufacturer</li> </ul>

are taking steps to create new growth businesses from a longer perspective of eight years. That means expanding and reorganizing the scope of our businesses, exploring ways for each of those businesses to help people solve issues, and then accelerating the pace of offering solutions. Through this process, we will strive to achieve our target of ¥500 billion in net sales in fiscal 2026.

## ESG initiatives

### The Company is actively investing in initiatives that strengthen its business foundations.

Environmental, social and corporate governance (ESG) initiatives are at the heart of our business. Accordingly, we recognize them as integral to our corporate culture, one of the three areas we are focusing on (Three Part Harmony), and are enhancing these initiatives as essential investments for the Group.

We are also promoting diversity and work-life balance for the Company's human resources, which underpin all business activities, so that each employee can demonstrate his or her abilities. At the same time, we are focusing on fostering managers and globally competent personnel who can respond to the needs of communities anywhere in the world. With a serious commitment to compliance and quality control, we are working to make the Company's internal systems better than ever. Disaster prevention and safety measures, especially, are being improved in the aftermath of the fire accident in September 2018.

Meanwhile, we have been taking steps to improve the Company's corporate governance. In an effort to raise the efficacy and diversity of the Board of Directors, we increased the number of outside directors from three to four (and the total number of directors from nine to ten) with the appointment of a female outside director in June 2019.

Looking ahead, we intend to step up our ESG initiatives while raising awareness of the United Nations' Sustainable Development Goals (SDGs).

## Closing message to shareholders and investors

### With a roadmap for the future, we look forward to meeting the expectations of shareholders for future growth.

Based on our approach to creating shared value, the TOYOBOKU Group will strive to raise its corporate value while helping communities overcome challenges thrive

economically. Concretely, we will maintain our focus on the Group's current performance, future growth, and corporate culture as we work to achieve the goals of our 2018 Medium-Term Management Plan. I am confident this approach will create a foundation for attaining growth in the years ahead.

I regard the return of profits to shareholders as one of the most important issues for management. As a basic policy, the Company ensures continuous payments of stable dividends with a target of total return ratio of 30% to shareholders, including through acquisitions of treasury stock.

In closing, we look forward to the ongoing support from the Company's shareholders.

Representative Director,  
President and Chief Operating Officer



# Aiming to maintain a solid financial status as we advance toward our ideal vision for the Company.



**Masaru Watanabe**

Representative Director and  
Corporate Senior Executive Officer

## **Preserved a sub-1.0 debt-to-equity ratio even while reporting a net loss**

The TOYOBO Group posted a net loss of ¥0.6 billion in fiscal 2019, largely owing to the major fire at the Tsuruga Research and Production Center. Our financial performance declined somewhat from the previous fiscal year, including interest-bearing debt rising ¥19.2 billion to ¥164.8 billion and shareholders' equity ratio declining from 40.5% to 38.3%. Despite this adverse development, our financial position remained sound as we maintained our debt-to-equity ratio at 0.93 and remained within our target to hold the ratio at a healthy level of less than 1.0.

As the chief financial officer, I know very well that unexpected occurrences should always be expected and that this makes it all the more important to ensure the company has a sound financial footing. Although the conditions for procuring funds in the financial markets are presently favorable under the current financial policies, we cannot expect these conditions to continue. We believe we need to be prepared for the possibility that somewhere in the world something could happen that will drastically change the market environment. The current situation very much reminds me of a challenging period I faced around 2000 when I was a manager in charge of financing. When the market environment deteriorated, the fundamental importance of a stable earning base and sound financial standing became starkly clear. With that understanding, we set and have consistently maintained for many years a standard to maintain the debt-to-equity ratio below 1.0. The same is true for our business operations. We do our best to prepare for the unexpected by taking a risk management view of our operations so we know how to respond to an event to minimize the damage and prevent any potential lasting impact.

Another issue we are addressing is the need to further strengthen our financial standing. We raised and held our operating profit margin above 7.0% for two straight years only to see it drop to 6.5% in fiscal 2019. We are targeting raising the operating profit margin to 8% in fiscal 2022 on the way to eventually lifting it above 10%. These targets give us additional motivation to constantly reform our business portfolio, fortify our revenue structure, and strengthen our earning power. I believe we must do all of these to maintain a solid financial position.

It is my responsibility to be a sort of guardian of our corporate value, and to do this by being open to new ways of thinking about preserving and building that value and by

creating a strong financial position that is resilient to the rapidly changing environment.

### Steering the best investments for our growth strategy

Sustained growth is another key element to corporate value. The Company's sales and operating profit have remained relatively unchanging for several years now. That is a reminder that a sound financial position is an essential foundation but only one of the necessary elements to achieve sustained growth. It's our duty as managers to effectively use the funds provide to us by our shareholders to generate profits and to invest for future expansion. We do this by actively acquiring equipment to increase our production capacity, providing funds for R&D from which will emerge the new businesses and products that will become future earnings drivers, and actively forming alliances and seeking M&A to accelerate our growth.

There are three key points in behind decisions made for the purpose of business growth. Is this investment consistent with our direction for future growth? Will this investment provided sufficient growth potential? And, what would be the potential impact if the investment does not pan out as expected? It's also important that we look ahead to where we want to be in five and ten years, and then work backward to see where an investment will place us on the path toward fulfilling our objective. After examining a potential investment target, we then have to determine if we will need to procure funds to execute the investment. While dedicated to maintaining a debt-to-equity ratio below 1.0, we recognize that this is a numerical benchmark, and we need to be flexible to make the decisions that are best for the long term. Yet, even if we decide an investment is worth a drop in the D/E ratio, we will not allow it significantly compromise the soundness of our financial position. The 2018 Medium-Term Management Plan sets Films & Coatings, Mobility, and Healthcare & Wellness as our future growth fields, and we are preparing to strategically invest to fulfill our clear objectives for expanding our business in each of these fields.

### Reform for the future

The KAERU Project is absolutely essential to fulfilling our vision of the company in the future. Launched in April 2018, the project is to transform the company by changing (*kaeru* in Japanese) the way we work by "creating a strong corporate

culture and workforce that remains constant through changing times." All executives and employees are participating in working groups covering each of the areas where we seek to change and improve the company. The project's first stage is the four-year period from 2018 to April 2022, when we will celebrate the 140th anniversary of the company's founding and move into a new headquarters building. In fiscal 2019, we clarified our corporate philosophy system, which is based on our corporate philosophy of *Jun-Ri-Soku-Yu* (realizing prosperity by acting rationally). We are also framing our long-term vision for what we want the company to be in fiscal 2026 and will determine a clear direction for the Company's transformation.

The transformation is taking place at all levels of the company. We are revamping the human resources system and remaking work environment to ensure it is universally comfortable and encourages employees to grow through their work. Operating efficiency is being improved by revising each department's workflow, including incorporating robotic process automation (RPA) and using business process outsourcing (BPO) for some routine operations. Our world is rapidly evolving and computer technologies are constantly becoming more advanced and powerful. So, we must always open to new approaches and new ways of thinking about our business and our company. We view change as opportunity and seek to be a company that is constantly changing (*kaeru*) to remain the best that it can be.

We are mobilizing all Group companies in a concerted effort to realize a transformation to fulfill the expectations of our shareholders and investors, and look forward to your support and encouragement as we create a new TOYOBO.

Representative Director and  
Corporate Senior Executive Officer

*Masaru Watanabe*

#### The latest technology for the greatest value

We incorporate the latest information technology to give our businesses the best tools to succeed in the current conditions. We are presently digitalizing our business processes and creating data infrastructure in all areas, including updating manufacturing processes to incorporate machine learning, adding sensing equipment with IoT technology in our quality control management, and increasing productivity by including RPA in our back office operations.

Constructing the system infrastructure to cover our expanding value chain and using digital technology to transfigure how we do business will not only transform our company internally, it will give us greater ability to provide value to our customers and society.



## Today's R&D is the foundation for tomorrow's TOYOBO.

Yasuo Ota

Corporate Executive Officer

### **Restructure for more effective strategic R&D activities**

R&D is the wellspring of the TOYOBO Group's competitiveness and bolstering our R&D capabilities is essential to achieving sustained growth. Although the Company frames its medium-term management plans for four-year periods, the R&D department necessarily takes a longer view because of the time it takes to discover and develop the seeds of ideas in basic technologies into viable commercial products. Accordingly, from fiscal 2019 we initiated an R&D strategy for an eight-year period to fiscal 2026.

When we adopted this new approach, we also reorganized the R&D structure. The Group has a Business Research Department for each division and a Corporate Research Department responsible for research and commercial development of core technologies and projects. The Corporate R&D Planning Department that I am in charge of oversees the two departments and guides the R&D strategy for the Group. In October 2018, we merged part of the Divisional R&D Departments into the Corporate R&D Department with the aim of strengthening the capabilities of both departments. We also restructured the Corporate Research Department to make our development operations more efficient. Previously oriented to product applications and target markets, and we reorganized the department into three general sectors of Chemical Research Unit, Processing Research Unit, and

Bio-Science & Medical Research Unit.

The reorganization's main objective is to stimulate dialogue between the business and R&D strategies. We are also looking for ways to better facilitate exchange of knowledge between the business and corporate research divisions, which together guide the Company's overall business ideas and operations. The reorganization creates a structure that puts strategic R&D as the leading driver for the Company so instead of pursuing short-term goals of meeting customers' immediate needs, we will be more focused on objectives needed for business growth in the long term.

### **Actively pursuing new ideas with a philosophy of "Try many, Fail quickly"**

In recent years, the Group has been investing about 3%, or roughly ¥10 billion, of its annual sales revenue in R&D. The 2018 Medium-Term Management Plan provides an optional budget of an additional ¥2 billion annually for R&D. These funds are available for M&A or forward investment in new research ideas and will give us the flexibility to quickly and aggressively pursue and develop ideas proposed by the R&D department. In fiscal 2019, we applied some of these funds for venture capital and partnership plans we are pursuing in Japan, the United States, and Europe. We will continue

responding quickly to any information that presents promise for the Company and are constantly monitoring for new technologies and alliances that can contribute to our growth.

The decision to invest in an R&D idea is made when an idea starts to show commercial potential and after thorough qualitative analysis. However, since the majority of our R&D activities are geared to a long-term horizon, committing significant funds and effort to new ideas has always been problematic. For example, after entering a joint research contract with a partner company in the United States, it took 15 years to develop the heat-resistant polyimide film Xenomax from idea to commercial production in April 2019. In the R&D department, we had a chronic problem of losing too much time deciding whether an idea is worthy of pursuing, and if an idea we had started pursuing was determined to be a dead end, it was just as difficult to stop the development process. This was undermining our R&D efficiency, so a few years ago, I instituted a policy of “Try Many, Fail Quickly” to encourage the department to try as many ideas as possible and to not hesitate to drop an idea that is found to be fruitless. Quick decisions and action are critical, and if something isn’t going to work then we need to be able to drop it and move on to other promising ideas.

This approach is only possible if we understand the value of failing. I tell our R&D department staff that recognizing that something will not work is also a learning experience. Failure is a result that can be built on. I want them to bring in and try as many new ideas as possible.

### **Intellectual property value is a combination of business strategy and R&D strategy**

Intellectual property strategy has two aspects: proactive and vigilant. On the defensive side, the main purpose is to protect our technological domain and fend off rival companies from entering our markets. We defend our technologies by holding numerous patents designed to protect against other companies’ patent applications compromising our technological domains. This seems to be an effective strategy because a 2018 survey by Patent Result of patent infringement in the fiber, paper, and pulp industry found that infringement on TOYOBO patents was the second most common reason stipulated for our competitors’ patent applications being rejected.

The offensive aspect of our intellectual property strategy is to use our unique intellectual properties to create value.

These offensive and defensive strategies can only be

effective if our business, R&D, and intellectual property strategies are consistent and fully integrated. In each business department, we have appointed staff to be the department’s “intellectual property liaison person” to increase communications with the Intellectual Property Department. This increases staff literacy about intellectual property and avoids intellectual property risk at our operating sites.

TOYOBO’s expanding overseas business in recent years has been accompanied by the Company submitting a growing number of patent applications and patent assessments overseas. We submitted roughly 15% more patent applications overseas in fiscal 2019 over the previous year, and we expect the pace to accelerate as we expand our operations overseas. Collecting information is also important for effective and efficient intellectual property activities overseas. This is particularly true in China where the frequent changes in systems related to intellectual property can have major impacts on our business. For that reason, we have set up staff in China to focus specifically on intellectual property issues. We are also improving the efficiency of our patent assessments and other operations overseas by introducing new digital technologies, such as AI and robotic process automation (RPA), in the Intellectual Property Department.

We will continue to advance our R&D activities and intellectual property management with a long-term perspective for accelerating the Company’s business growth.

Corporate Executive Officer  
Controlling Supervisor of Intellectual Property Department,  
and Corporate R&D Planning Department  
Controlling Supervisor of Research Center

## Films & Coatings

# Reducing food loss with food packaging film

Currently, around 30% of the world's food is thrown away without being eaten. But many people are still faced with starvation. TOYOBO Group provides films that enhance the shelf life of food, which in turn helps to reduce the volume of discarded food.

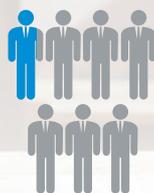
There's not enough food, but it's still thrown away...

One third of food produced for human consumption is thrown away.



Source: Food loss reduction data published by the Consumer Affairs Agency

Among the global population of approx. 7 billion people, around 800 million are suffering from severe hunger or malnutrition



Source: Japan Association for International Collaboration of Agriculture and Forestry "Current State of Food Security & Nutrition, 2017"

### Related SDGs

1 NO POVERTY



12 RESPONSIBLE CONSUMPTION AND PRODUCTION



2 ZERO HUNGER



14 LIFE BELOW WATER



9 INDUSTRY, INNOVATION AND INFRASTRUCTURE

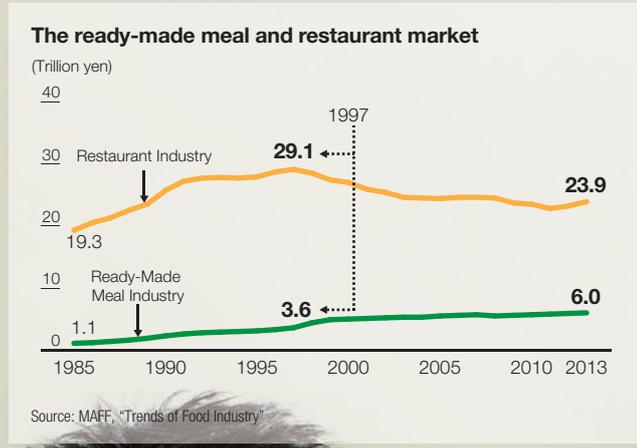


15 LIFE ON LAND



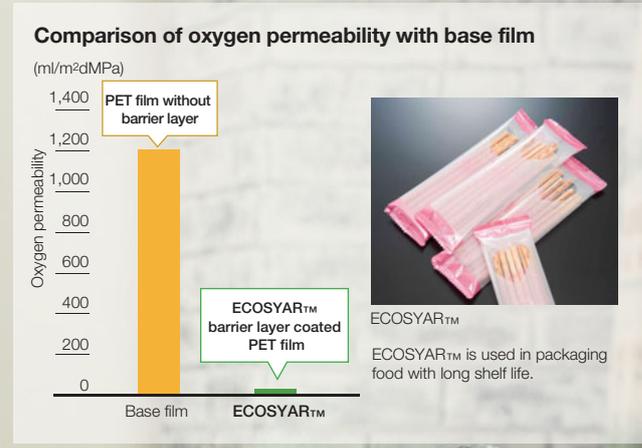
## Expansion of ready-made meal market underpins growth in film demand

In recent years, the ready-made meal market has grown along with an increase in single-person and elderly households, as well as women's increased participation in the workforce. Against this backdrop, demand for food packaging film has also increased, especially for microwave oven-compatible products and products that can be stored for a prolonged period.

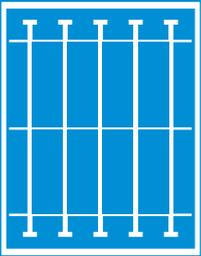


## TOYOBO film proves highly effective for food storage

TOYOBO Group's transparent vapor-deposited barrier film ECOSYAR™ demonstrates outstanding gas barrier characteristics, making it ideal for food storage. As no metals are vapor deposited, the film is also suitable for heating in microwave ovens.



**Huge volume of waste, but only finite resources**



Each year, a volume of waste equivalent to 420,000 25m swimming pools is discarded.

# 420,000

Source: Japan Environmental Management Association for Industry (JEMA), Resource Recycling Promotion Center website <http://www.cjc.or.jp/j-school/a/a-2-2.html>

Related SDGs



## Films & Coatings

# Using recycled materials to reduce waste

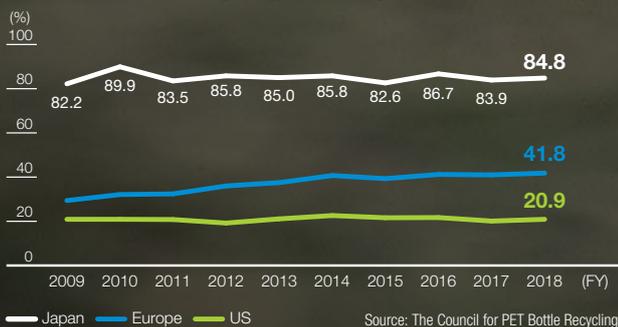
In Japan, more than 400 million tons of waste is discarded annually. In order to help reduce this large volume of waste, TOYOBO Group is promoting 3R initiatives\*, including providing films that use recycled materials.

\* The reduction of waste through the "3 Rs" of recycling – Reduce, Reuse, Recycle.

### Recycling of PET bottles at high level

Japan has a much higher recycling ratio for PET bottles (bottles made of polyethylene terephthalate) than the United States and Europe. This trend looks set to continue in future, and demand for the recycling of PET bottles is forecast to remain high.

Trend in PET bottle recycling ratio in Japan, the US and Europe



### Film that uses 80% recycled resins

TOYOBO Group sells products employing recycled materials, including Crisper®, a PET based synthetic paper, and CYCLE CLEAN™, a film of recycled PET resin. Notably, CYCLE CLEAN™ uses 80% recycled PET bottle resin.

CYCLE CLEAN™ recycled material ratio

Ratio of recycled resin is world's highest, at

# 80%





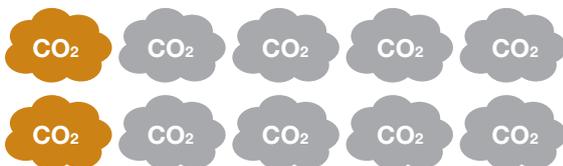
## Mobility

# Supplying plastics to reduce vehicle weight and cut CO<sub>2</sub> emissions

CO<sub>2</sub> emissions have given rise to a multitude of issues, including climate change, and emissions regulations are becoming more stringent year on year. TOYOBO Group supplies engineering plastics, which help to make vehicles more lightweight and reduce their CO<sub>2</sub> emissions.

Cars are convenient, but the cost of this is global warming

Around **20%** of CO<sub>2</sub> emissions are produced by the transportation sector.



Source: Japan Automobile Manufacturers Association report on global warming countermeasures in the transportation sector

### Related SDGs

**7** AFFORDABLE AND CLEAN ENERGY



**9** INDUSTRY, INNOVATION AND INFRASTRUCTURE



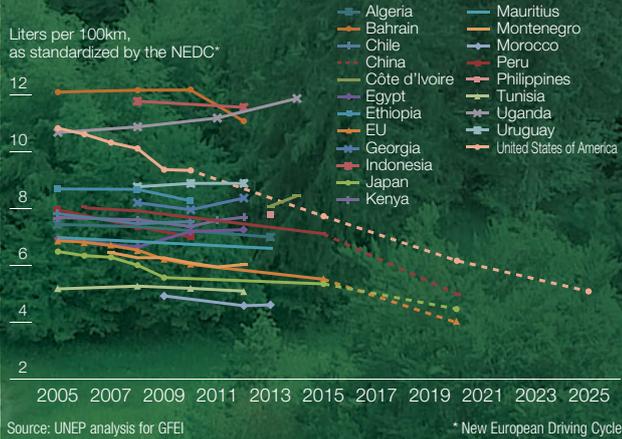
**12** RESPONSIBLE CONSUMPTION AND PRODUCTION



## Automotive fuel economy regulations are being tightened around the world

Climate change is a critical issue facing society, which the countries of the world need to tackle together. Regulations governing the fuel efficiency of automobiles are becoming increasingly stringent in countries and regions worldwide, as a means of promoting the reduction of CO<sub>2</sub> emissions – the underlying cause of global warming.

### Fuel economy trends in compact cars around the world



## Engineering plastics contribute to vehicle weight reduction

Replacing automotive components with plastics that are lighter than metal leads to enhanced fuel economy and cuts CO<sub>2</sub> emissions. TOYOBO is contributing to the realization of lighter vehicles through products including high-strength Quick Form<sup>®</sup> and the thermoplastic polyester elastomer PELPRENE<sup>™</sup>.

### Engineering plastics used in TOYOBO's concept car



- ① Multi-functional nylon resin GLAMIDE<sup>®</sup>
- ② High-performance, thermoplastic stampable sheet Quick Form<sup>®</sup>
- ③ Thermoplastic polyester elastomer PELPRENE<sup>™</sup>
- ④ Molding polyester resin VYLOPET<sup>™</sup>

## Mobility

# Supplying fabrics for life-saving airbags

Automobiles are found in every part of the globe, supporting the lives of a large number of people as well as industry. However, with the spread of automobiles, the risk of traffic accidents has increased. TOYOB0 Group supplies high-performance airbag yarn and fabrics, helping to ensure passenger safety.

### Traffic accidents cost lives

Traffic accidents are still common worldwide.

No. of accidents: approx.

3 million



No. of deaths/injuries: approx.

4.08 million



Source: Cabinet Office website  
[https://www8.cao.go.jp/koutu/taisaku/h29kou\\_haku/zenbun/keikaku/sanko/sanko02.html](https://www8.cao.go.jp/koutu/taisaku/h29kou_haku/zenbun/keikaku/sanko/sanko02.html)  
Compiled by TOYOB0 from 2015 data for the United States, Germany, United Kingdom, France, Sweden, Italy, Japan

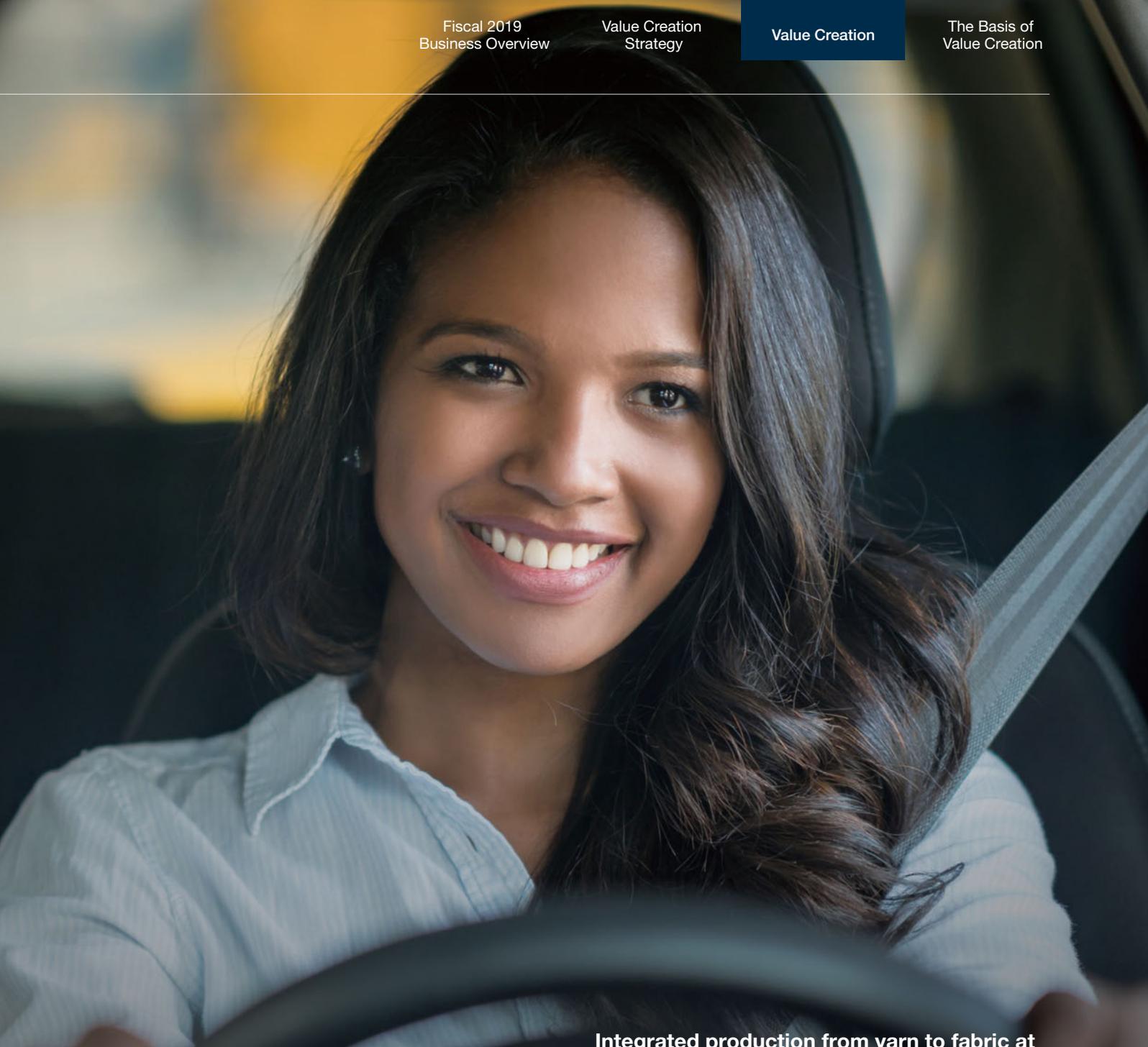
#### Related SDGs

3 GOOD HEALTH AND WELL-BEING



12 RESPONSIBLE CONSUMPTION AND PRODUCTION

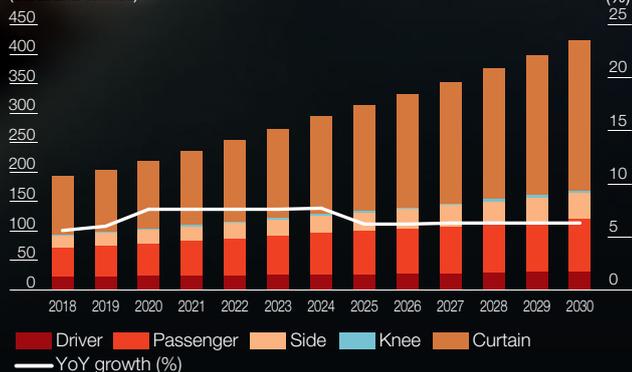




### Airbag demand is steadily growing

The airbag market has been expanding in recent years, including the continued adoption of side airbags and curtain airbags. In future, annual growth in the market is estimated at 6–7% owing to rising safety awareness, including the mandatory installation of airbags, and the shift to electric and self-driving vehicles.

Trend and forecast for the airbag yarn market (TOYOBO estimate)  
(thousand tonnes)



### Integrated production from yarn to fabric at five global bases

TOYOBO and PHP Group carry out integrated production of airbag yarn and airbag fabric. Our supply structure extends from Asia to North America and Europe, and we have established ourselves as a global player in this field, being manufacturer to integrate the production of yarn and fabric.

TOYOBO and PHP Group global bases

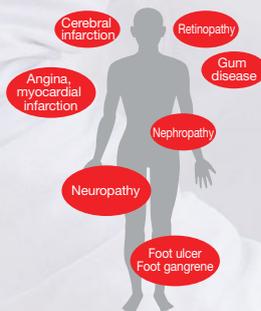


## Healthcare & Wellness

# Supply of enzyme gives reassurance to diabetic patients

The number of diabetic patients is increasing each year, and the number of patients who measure their own blood sugar level under their physician's guidance is also increasing. Against this backdrop, TOYOBO Group has developed a new enzyme that is used in the sensors of equipment for self-monitoring blood glucose, which excels in both accuracy and stability.

### Diabetes increases the risk of other diseases



Diabetes carries the risk of various other diseases arising concurrently.

Source: Japan Association for Diabetes Education and Care website (in Japanese): [https://www.nittokyo.or.jp/modules/beginner/index.php?content\\_id=4](https://www.nittokyo.or.jp/modules/beginner/index.php?content_id=4)

#### Related SDGs

3 GOOD HEALTH AND WELL-BEING



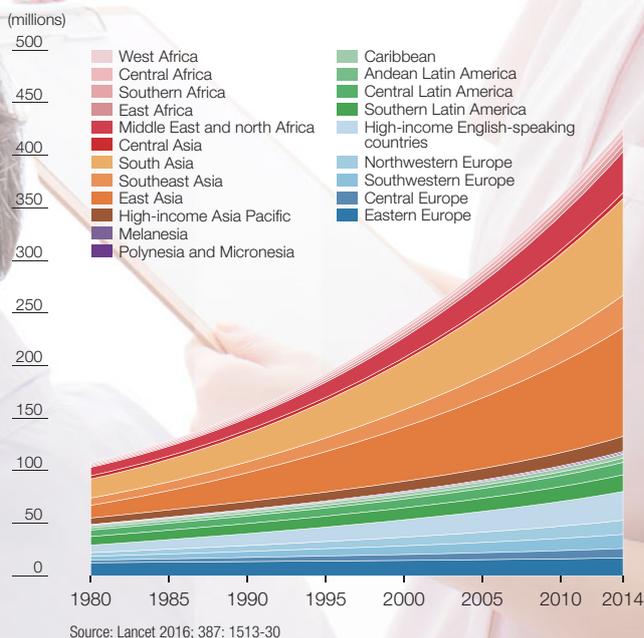
12 RESPONSIBLE CONSUMPTION AND PRODUCTION



## Number of diabetic patients tops 400 million worldwide

According to a WHO survey carried out in 2014, the number of diabetes patients exceeds 400 million worldwide, and will increase to 600 million by 2040. As a consequence, the market in products for the self-monitoring of blood glucose is also expected to grow.

Number of adults with diabetes



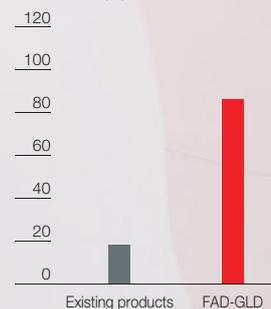
## Enzyme excelling in accuracy and stability

TOYOBO Group has developed the FAD-GLD enzyme for use in blood glucose self-monitoring sensors, and has obtained numerous patents in Japan and overseas. It is a raw material for sensors that enable diabetic patients to measure their blood sugar levels in medical institutions or at home. It has greater accuracy and stability than conventional enzymes.



### Comparison of heat stability with existing products

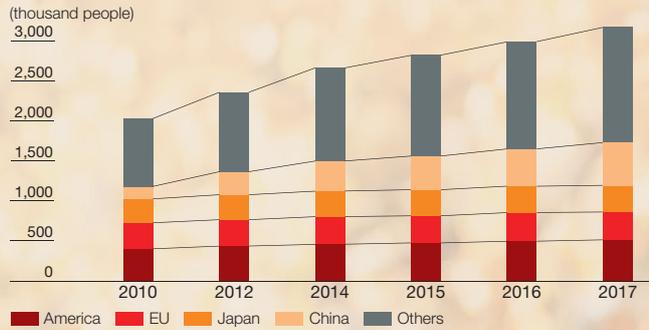
(processed at 50°C for 15 min.)  
Survival rate (%)



### Number of dialysis patients is increasing year on year

The number of dialysis patients worldwide is increasing with each passing year. Whereas the number of patients was 2.0 million in 2010, this had risen to 3.2 million by 2017. The increase has been especially marked in emerging countries, which account for almost 50% of the total.

Number of dialysis patients (TOYOBO estimate)



### Playing our part in dialysis treatment with safe and trusted quality

TOYOBO continues to supply dialysis membranes with outstanding filtering performance, using advanced membrane production technology that generates micropores. In doing so, our aim is to realize a better daily life for dialysis patients. Waste is removed more efficiently by using thinner membranes, which also allows the equipment to be more compact.

Hollow fiber membrane for artificial kidneys



## Healthcare & Wellness

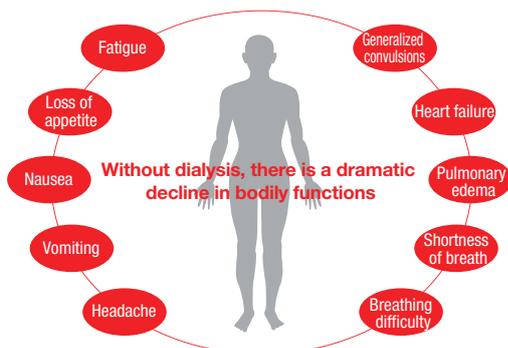
# Artificial kidney hollow fiber supporting dialysis patients

In the event of a decline in kidney function and chronic renal failure, artificial dialysis is carried out to filter the blood by means of an artificial kidney. TOYOBO Group manufactures the hollow fiber membranes used in these artificial kidneys, supporting the lives of dialysis patients.

#### Related SDGs



### The physical burden of chronic kidney disease



Source: Japan Association of Kidney Disease Patients website (in Japanese): <https://www.zjk.or.jp/kidney-disease/symptom/>





## Usable water and freshwater is a rare resource

The volume of freshwater found in ground water, rivers, lakes and marshes amounts to

Just 0.8%

of all the water on the earth.



Source: Ministry of Land, Infrastructure, Transport and Tourism website (in Japanese): [http://www.mlit.go.jp/mizukokudo/mizsei/mizukokudo\\_mizsei\\_tk2\\_000020.html](http://www.mlit.go.jp/mizukokudo/mizsei/mizukokudo_mizsei_tk2_000020.html)

### Related SDGs

6 CLEAN WATER AND SANITATION



9 INDUSTRY, INNOVATION AND INFRASTRUCTURE



7 AFFORDABLE AND CLEAN ENERGY



13 CLIMATE ACTION



8 DECENT WORK AND ECONOMIC GROWTH



14 LIFE BELOW WATER



## Environment

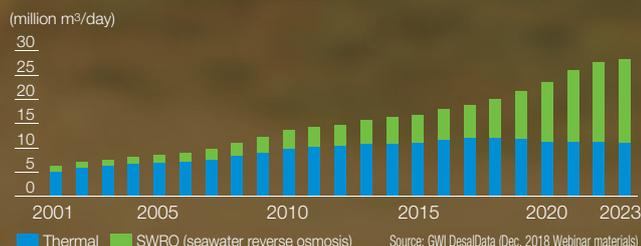
# Seawater desalination membranes help to eliminate water shortages

Almost all of the water covering the globe is seawater. As a result, regions where freshwater is difficult to use are exposed to water shortages. TOYOBO Group supplies the membranes used in seawater desalination facilities, thereby helping to eliminate water shortages in these regions.

### Increased adoption of seawater desalination facilities in the Middle East

The Persian Gulf region continues to see remarkable economic development and rising living standards. The population is also growing. As a result, securing drinking water as well as water for industrial use is becoming an important issue, and the deployment of seawater desalination facilities is ongoing.

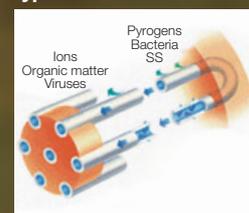
#### Seawater desalination capacity in the Middle East



### Supply of proprietary high-performance material gives TOYOBO a large market share

TOYOBO Group's hollow fiber type reverse-osmosis (RO) membrane element HOLLOSEP™ performs desalination based on the principle of reverse osmosis. By using cellulose triacetate – which excels in chlorine resistance – as the membrane material, the proliferation of microorganisms can be inhibited through chlorine sterilization. In the Gulf states, TOYOBO commands a market share of large-scale desalination facilities exceeding 30%.

#### The principle of hollow fiber type reverse osmosis



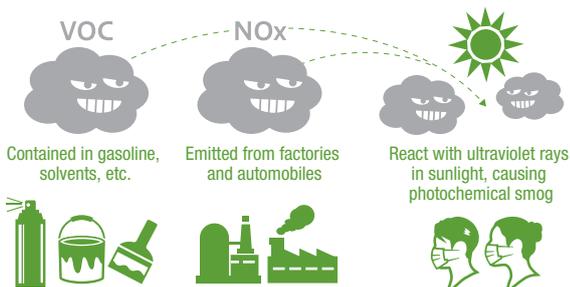
## Environment

# Recovering VOCs from emissions to prevent environmental pollution

VOCs are found widely in places such as chemicals plants and painting/cleaning facilities. If they are discharged untreated into the environment, they contaminate the air, water and earth, threatening our health. TOYOBO Group provides systems that recover VOCs from emissions and wastewater and treat them by a process of concentration, thereby helping to prevent environmental pollution and save resources. We have supplied more than 1,300 units over the past 30 years.

### VOCs contaminate the environment and threaten our health

VOCs, and photochemical smog caused in part by VOCs, are harmful for humans.



#### Related SDGs

**3** GOOD HEALTH AND WELL-BEING



**6** CLEAN WATER AND SANITATION



**11** SUSTAINABLE CITIES AND COMMUNITIES



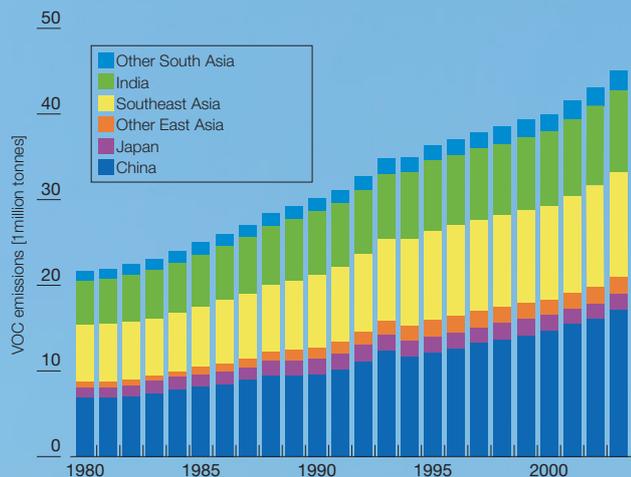
## Growing demand for VOC treatment around the world

Regions with high emissions of VOCs include the United States, Australia and Russia, but volumes are decreasing in those and other countries. In recent years, environmental regulations have been tightened in markets where VOC emissions are on the rise, including in China and Southeast Asia. This has led to demand for high-quality VOC treatment technology.

## Saving of resources as well as prevention of environmental pollution

VOC recovery systems employing the activated carbon fiber K-FILTER™ surpass existing equipment in terms of their VOC adsorption/desorption performance. These systems facilitate solvent re-use by recovering high-quality solvents. The HONEYROTOR™ apparatus operates by concentrating VOCs, thereby reducing the fuels required for incineration and helping to save resources.

Change in VOC emissions by region, 1980 to 2003



Source: National Institute for Environmental Studies

K-FILTER™ VOC recovery system



# ESG Management

## ESG Management as a Support for Business Activities

TOYOBO Group’s philosophy of *Jun-Ri-Soku-Yu* is the starting point for our CSR activities. With this philosophy as the foundation of our operations, we strive to provide products and services that are beneficial for society, and to enhance both our corporate and social value.

We have established the CSR Committee, chaired by the President, as the structure for promoting CSR activities. This committee handles the integrated understanding and oversight of our CSR initiatives in relation to all stakeholders.

TOYOBO Group will continue to actively fulfill its social responsibility and remain a company that people trust, while helping to build a sound and sustainable society.

### TOYOBO Group’s Corporate Philosophy System

● Principle

*Jun-Ri-Soku-Yu* (realizing prosperity by acting rationally)

● Vision

We will continue to be a Group that creates the solutions demanded by people and the global environment, through **Materials + Science**

● Values

We do not fear **change**; rather, we relish and create **change**

**Challenge Reliability Collaboration**

● Commitment to ourselves (TOYOBO Spirit)

**Challenge** : Act Swiftly, Create, Execute

**Reliability** : Safety First, Customer Satisfaction, Factual Basis

**Collaboration** : Mutual Communication, Diversity, Providing Opportunities

### The TOYOBO Group’s Charter of Corporate Behavior

The TOYOBO Group announced to the public our code of conduct in the form of the TOYOBO Group’s Charter of Corporate Behavior, which aims to help achieve the UN’s SDGs.

At the TOYOBO Group, we contribute to the realization of a sustainable society through the provision of products and services that will create an affluent future.

And to continue being a corporation that people trust, we will act with high ethical standards and social common sense based on ten principles.

- |   |  |
|---|--|
| 1. Contribution to a sustainable society  | 6. Active employee participation       |
| 2. Fair business practices                | 7. Engagement in environmental issues  |
| 3. Communication with stakeholders        | 8. Social contribution                 |
| 4. Respect for human rights               | 9. Thorough crisis management          |
| 5. Earn customers’ trust and satisfaction | 10. Responsibilities of the management |

## Identifying Material Topics

Companies need to tackle a great number of social issues, including environmental problems such as climate change and resource recycling, as well as labor and human rights issues. In the past, TOYOBO Group has examined these social issues from the perspectives of “opportunity” (how they contribute to

our business growth) and “risk” (how they affect the continuity of our business).

In future, we will identify the priority issues based on a systematic appraisal of these social issues, opportunities and risks (materiality), and incorporate this in our business planning.

### Step 1

Consideration of opportunities and risks

### Step 2

Verification by experts and stakeholders

### Step 3

Incorporation in business plans (KPIs, etc.)

**Establish ESG management underpinning the basis for long-term value creation**

**E**nvironmental Policy & Activities

# Preventing Global Warming

## Basic Approach

The impact of climate change associated with global warming has become apparent with an increase of natural disasters such as typhoons and localized torrential rainfall, as well as changes in the ecosystem due to “subtropicalization” of the climate.

TOYOBO Group recognizes the serious risk posed by climate change to the continuation of business activities, and we are endeavoring to cut greenhouse gases. As activities aimed at saving energy during production have a significant benefit, we are promoting measures from a medium-to-long term perspective.

## Activities to cut greenhouse gases during production

We are aiming for a 17% reduction in emissions of greenhouse gases during production by fiscal 2031 compared with fiscal 2014.

We are promoting energy saving by switching to highly efficient equipment and introducing energy recovery systems, and aim to reduce emissions of greenhouse gases. We also continue to install gas cogeneration facilities\*, with Group companies Toyoshina Film Co., Ltd. and Japan Exlan Co., Ltd. introducing these facilities in fiscal 2019.

As a result of these initiatives, we have already achieved

our fiscal 2031 targets, but we are setting new targets to make further reductions.

\* Using clean city gas as the fuel, a system that generates steam and hot water with the waste heat produced during electricity generation, and uses this for manufacturing processes, hot water supply and heating/cooling, etc.



Gas cogeneration facilities at Japan Exlan Co., Ltd.

## Activities to cut greenhouse gases during logistics

We are aiming for a 1% year-on-year reduction in emissions of greenhouse gases during logistics each year.

To achieve this, we are taking measures such as shortening the transportation distance by using the ports closest to our business sites and factories, and reducing the number of running vehicles through efficient loading of cargo and bulk transportation. For materials shipped from overseas, in fiscal 2019 our Inuyama plant in Aichi Prefecture switched from using Kobe port to Nagoya port, the closest port to the plant.

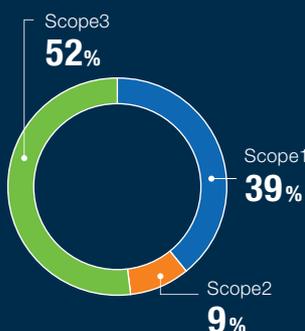
## Important initiatives and results

### 27% reduction in greenhouse gas emissions during production activities

Fiscal 2019 emissions of greenhouse gases during production activities were about 900,000 tonnes, 27% lower than the reference fiscal year (fiscal 2014). As well as day-to-day energy-saving activities, there has been a significant contribution from upgrading to high energy efficiency equipment and installing gas cogeneration facilities.

In fiscal 2019, we completed calculation of the emissions volume in the supply chain (Scope3 emissions), with the support of the Ministry of the Environment.

### Supply chain emissions volume and ratio (Scope1-3)



Scope1: Direct greenhouse gas emissions by the reporting company itself  
Scope2: Indirect emissions from the use of electricity, heat, or steam supplied by others  
Scope3: All other indirect emissions

### Emissions ratio (Scope3 categories 1-15)

Category	Emissions ratio (%)
1 Purchased products and services	55
2 Capital goods	7
3 Fuel and energy-related activities not included in Scope1 or 2	3
4 Transportation, shipping (upstream)	4
5 Waste generated from operations	1
6 Business trips	0
7 Employee commuting	0
11 Use of sold products	30

# Management of Chemical Substances

## Basic approach

TOYBO Group endeavors to manage chemical substances appropriately throughout the product lifecycle (research, development, design, manufacturing, sale, use, disposal), in order to protect the global environment, prevent accidents, ensure workers' health and safety, and ensure product safety.

## Chemical substance management structure

For appropriate management of chemical substances, TOYBO Group has established a management system at each business site. Each division supervises the activities of the business sites and group companies under their jurisdiction.

In addition, we have established a "TOYBO Chemical Substance Management Classification" based on legal regulations inside and outside Japan as well as our customers' requests. This classifies the chemical substances we handle into five levels, and the management procedures are specified for each level or "rank".

Substances in rank A and B are examined based on a risk assessment, risk avoidance measures are enacted, and if the risk is deemed tolerable, the substance can be handled. We continue to implement efficient use and replacement of the rank A and B substances we are currently using, and are working to reduce the overall usage volumes of the relevant chemical substances.

### TOYBO Chemical Substance Management Classification

Rank	Management Category	Governing Legislation, etc.
A	Substances requiring particularly strict management	Chemical Substances Control Act*1, Industrial Safety and Health Act, Poisonous and Deleterious Substances Control Act, Act on the Protection of the Ozone Layer, Act on the Prohibition of Chemical Weapons, POPs*2, PIC*3, etc.
B	Substances requiring strict management	Chemical Substances Control Act, PRTR*4, Industrial Safety and Health Act, Poisonous and Deleterious Substances Control Act, etc.
C	Substances requiring strict exposure prevention measures	Chemical Substances Control Act, PRTR, Industrial Safety and Health Act, Poisonous and Deleterious Substances Control Act, Fire Service Act, etc.
D	Substances requiring exposure prevention measures	PRTR, Industrial Safety and Health Act, etc.
E	Others	Other than A-D

\*1 Chemical Substances Control Act: Act on the Evaluation of Chemical Substances and Regulation of Their Manufacture, etc.

\*2 POPs (treaty): Prevention and reduction of Persistent Organic Pollutants (POPs)

\*3 PIC (treaty): The Prior Informed Consent Regulation (trade)

\*4 PRTR: Pollutant Release and Transfer Register

## Chemical substance management activities

Supply chain management, which started with the European Union's legislation on chemical substances, has also come to be required in Japan following the Act on the Evaluation of Chemical Substances and Regulation of Their Manufacture, etc. (Chemical Substances Control Act), as well as other regulations relating to the management of chemical substances. Additionally, the Globally Harmonized System of Classification and Labeling of Chemicals (GHS) has been created by the United Nations.

In view of this situation, TOYBO has introduced a chemical substance management system covering procurement through to product manufacture and sale, in order to realize green procurement while providing accurate and rapid support to our customers. We employ this system to investigate the usage status of regulated substances and survey the chemical substances contained in products. The system also supports the creation of safety data sheets (SDS) for chemical substances.

Given the global nature of TOYBO Group's operations, we have created a database of chemical substance-related legislation in Asia, Europe, North and South America. Furthermore, in order to identify and mitigate chemical substance risk, we have established rules concerning matters including the replacement/reduction of hazardous chemical substances, maintenance of the work and surrounding environments, and the management of chemical substances in products. In this way, we are striving to ensure proper management.

## Reducing emissions of substances covered by the Pollutant Release and Transfer Register (PRTR)

TOYBO calculates and reports the release and transfer volumes of the applicable chemical substances for each business site, and analyzes the overall results published each year. We use this information to reduce our own release and transfer volumes.

We are reducing our release volumes through measures including the following: improving and updating manufacturing facilities and systems, improving operating conditions, installing equipment to remove the applicable substances, replacing raw materials and auxiliary raw materials. We will continue to implement activities aimed at reducing release volumes.

# Resource Circulation

## Reducing the industrial waste landfill rate

TOYOBO Group defines zero emissions as “a volume of landfill waste that is less than 1% of the total waste volume”, and we continue working to realize effective use and circulation of resources.

The three R's (Reduce, Reuse, Recycle) are the basis for the effective use of resources. TOYOBO Group is engaged in initiatives such as melting down film scrap at the site of production for re-use as raw material (depending on the brand of film). Even if “3R” processing is not possible and material is incinerated, we select and appoint a contractor to recover the incineration heat and realize its effective use.

Through such initiatives, TOYOBO Group continues to achieve zero emissions. However, the landfill rate at Group companies has worsened over the past 2–3 years. This is because it is becoming difficult to use certain industrial waste products effectively at some Group companies. Therefore, we are working to make improvements by learning from other Group companies where similar waste products arise and are used effectively.

# Green Products

## Mechanism for certification of green products

As clearly stated in our Charter of Corporate Behavior, TOYOBO Group strives to save energy as well as reduce and re-use resources, and to develop products and technologies that help mitigate our environmental impact. The mechanism for defining and evaluating these “products and technologies that help mitigate our environmental impact” is the ECO-PARTNER SYSTEM™. Under this system, assessments are made based on an Eco-Review System in relation to our products and technologies, for every stage from raw material through to disposal. Areas covered by the assessments are “prevention of global warming,” “reduction in harmful chemical substances,” “conservation of materials,” “reduction in waste,” and “other environmental contribution”. Those products certified as having an assessment above a certain level are designated as ECO-PARTNER SYSTEM™ green products.

As the Eco-Review is carried out at each stage from R&D through to commercialization, issues identified at the R&D stage as requiring improvement from an environmental protection perspective are improved at the subsequent Eco-Review implementation stage. Consequently, this system allows for environmentally friendly improvements to be made while developing products and technologies.

## Important initiatives and results

### Ratio of ECO-PARTNER SYSTEM™ product sales increases to 27.7%

Since fiscal 2007, TOYOBO CO., LTD has implemented an Eco-Review System. As of March 31, 2019, there were 428 products and technologies certified and registered as ECO-PARTNER SYSTEM™ products under this system (including products subject to non-disclosure agreements).

Our goal is to increase the ratio of ECO-PARTNER SYSTEM™ product sales to 30% of total sales by fiscal 2031. In fiscal 2019, the ratio was 27.7%.

Going forward, we will roll out this system to our Group companies as well.

ECO-PARTNER SYSTEM™ product sales



# Human Resource Management

## Basic approach to developing human resources

TOYOBO Group considers human resources to be our most important asset. We support the growth of each and every one of our employees, who have a diversity of characteristics and opinions. We believe that the continuation and development of the Group as a whole can be achieved by building an environment in which they can flourish within the company and realize their own potential.

## Nurturing candidates for executive management

To nurture the next generation of managers, TOYOBO strives to ensure that our employees acquire a broad knowledge and enhance their skill set through rotation, including overseas assignments, from an early stage. During that process, we single out candidates for executive management and hone their managerial skills. In accordance with a succession plan, they assume positions as managers in the business units and in the planning and development departments as well.

In this way, we aim to continually develop our business by nurturing human resources with a long-term view to the future.

## Developing global human resources

TOYOBO Group implements “Short-term Overseas Business Training” in which around 10 employees in Japan – mainly in the 30-39 age group – are sent overseas for training each year, split into two separate groups (first and second half of the year). This motivates younger and mid-career employees to participate in TOYOBO’s global business, and represents a major opportunity for them to further their careers.

In addition, local candidates for management of overseas business from overseas offices are selected to undergo training in Japan twice each year. This aims to enhance their understanding of TOYOBO and deepen interaction with Japanese employees.



Training for local employees from overseas offices

## Message from HR Development Officer

**People are our most important asset.  
We develop personnel who can practice  
“Creating Shared Value” (CSV).**

TOYOBO develops human resources based on a training system categorized by job level, job type and objective, from new hires through to executives. Over our long history, we have fostered an approach of valuing “people” – our most important asset – and this is an approach that is now shared throughout the Group.

Now, we are putting our maximum effort into nurturing the next generation of managers, who will help to realize our growth strategy. Selected personnel from throughout the company are sent to business schools or undergo internal training programs. At the same time, we are actively engaged in initiatives to train mid-career hires and promote the participation of women in the workforce, focused on encouraging diversity. Extensive educational and training activities are also carried out at domestic Group companies, and Japan-based training for local employees is held for select personnel from overseas business sites. Through these initiatives, we develop personnel who can put into practice TOYOBO’s corporate philosophy of *Jun-Ri-Soku-Yu* (realizing prosperity by acting rationally); or to use a more contemporary expression, people who can create shared value.



**Masakatsu Shirai**  
General Manager, Supervisor of Human Resources Department

## Basic approach to diversity

TOYOBO Group believes that personal and organizational growth is achieved through a process of mutual respect among our employees, with their differing work styles, careers, gender, nationality, race, and beliefs, and through cooperation to achieve our shared objectives.

We respect different opinions and a wide range of values, and cooperate to achieve ambitious goals together.

## Promotion of work-life balance

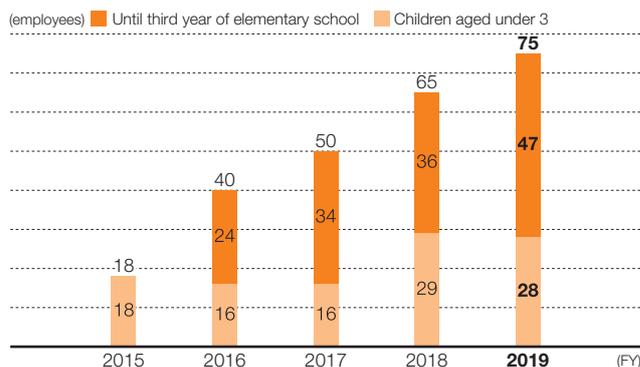
TOYOBO has introduced schemes that go above and beyond the legal requirements, including the Childcare Shortened Work Hour Program and Nursing Care Leave, and we also provide a Flextime system. From fiscal 2020, Childcare Leave offers five days of paid leave, and we are also encouraging male employees to take childcare leave.

We are also engaged in work style reform, so that our employees can work with renewed efficiency and achieve a good balance between work and personal life (synergistic effect). Initially, we introduced a 15-Minute Shortened Work Hour Program at head and branch offices in fiscal 2018, and at the Research Center in fiscal 2019, and at other offices we

have implemented a program to increase the number of days of leave. In addition, we hold a No Overtime Day at least once a month, so that employees can spend quality personal time together with family and friends, and we also view this as an opportunity to enhance creativity.

In fiscal 2020, we introduced a Teleworking scheme at head and branch offices, which provides for a more flexible work style according to each employee's life stage.

### Employees Taking Childcare Shortened Work Hour Program



## Initiatives to promote women in the workforce, and results

As the first step to employing a greater diversity of human resources, TOYOBO established the Female Empowerment Promotion Group within the Human Resources Department in 2015. The Group has been promoting the employment of women and their career development. We have held seminars for managers, vision creation seminars, female leader development seminars, etc., on a continuous basis, in order to realize a change of mentality among our employees. In April 2019, we launched a trial Mentor Program for women, which further supports them in developing their career concept.

### Proportion of Female Employees with Manager-Level Qualifications



TOYOBO has introduced a babysitter support system to assist with childcare, which provides the full cost of babysitting when an employee is on a business trip. The number of users has steadily increased.

In April 2018, we established a nursery inside the Research Center (Otsu City, Shiga Pref.) for employees with children. The nursery not only enables employees to return to work early from childcare leave and make their return to work easier, but also lays the platform for women to feel more comfortable with planning a family.



TOYOBO Nursery School

# Quality Management

## Basic approach

TOYOBO Group conducts all of its business activities based on our corporate philosophy of *Jun-Ri-Soku-Yu* (realizing prosperity by acting rationally), and we approach quality management in the same way.

We implement quality management activities under the motto “TOYOBO’s way of manufacturing,” based on always taking the customer’s standpoint, accurately identifying the customer’s needs, and providing satisfaction to the customer.

## Quality assurance activities

The basis of “TOYOBO’s way of manufacturing” is to consistently put ourselves in the customer’s position and supply only what they really want. Besides products, this includes the provision of incidental services and solutions, and we aim to help customers resolve difficulties and issues, and realize their wishes.

To achieve this, all staff have shared access to the Quality Assurance Manual, which describes the basic approach and code of conduct for all employees when implementing TOYOBO Group development, production and sales activities. In addition, the Quality Assurance Guidelines describe activities with the aim of developing a system that guarantees quality. A Quality Assurance (QA) system is established for each product and service, so that quality and product safety can always be guaranteed at each stage. Additionally, checks are repeatedly carried out by business supervisors, related internal and external parties, and experts, from their individual perspectives, to ensure that no incidents occur in the market.

## Product safety promotion activities

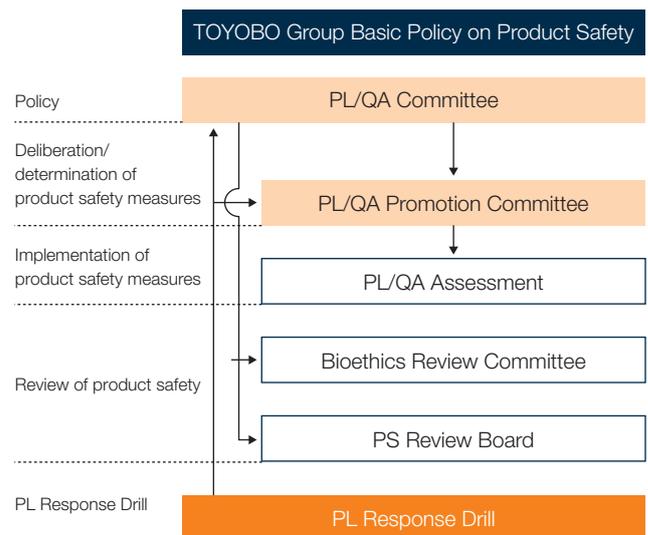
TOYOBO Group has established a “PL/QA Committee” as a standing committee with overall responsibility for product liability (PL) and QA. This committee puts in place systems to ensure product safety in relation to products and technology, and to facilitate appropriate responses to PL or other quality-related incidents. As well as efficient corporate activity and maintaining/enhancing the Group’s standing in society, the committee strives to increase customers’ trust and confidence in the TOYOBO Group, while making sure that its activities are in keeping with the times. It also conducts PL/QA assessments to verify and improve Product Safety (PS) activities in each department and group company. Moreover, the committee establishes criteria for assessing PS and PL risk, and based on these criteria, it carries out

inspections at each stage, from product development through to sale. By addressing risk in advance, the committee works to mitigate risks pertaining to customers and employees.

All possible measures are taken to ensure product safety, and training drills are also performed based on PL incident scenarios.

Product safety remains a crucial theme throughout the whole of TOYOBO Group, and we will continue to mitigate risk as much as possible and fulfill our social responsibility.

## TOYOBO Group PL Response System



# Supply Chain Management

## Basic approach

TOYOBO Group has established an appropriate trading policy and conducts procurement/logistics responsibly, so as to support the development of a sustainable society.

In October 2018, we revised our CSR Procurement Guidelines in order to achieve the SDGs within the supply chain, including legal compliance, fair trading, respect for human rights, and consideration for the environment.

### CSR Procurement Guidelines

1. Promote CSR and engage proactively in social contribution
2. Maintain and strengthen compliance (including with laws and regulations), fair trading, corporate ethics
3. Maintain and strengthen environmental activities
4. Guarantee quality and safety in the supply of products
5. Respect human rights
6. Disclose information to stakeholders and engage with them in a timely and appropriate manner, and maintain and strengthen information security measures

## CSR questionnaire

We conduct a questionnaire among our key business partners, based on the CSR Procurement Guidelines. This allows us to verify the status of their CSR activities, while enabling them to deepen their understanding of CSR activities.

## Trading fairness and transparency

We take a rigorous approach to ensuring fairness and transparency, based on sound trading. We do not give or accept gifts or hospitality in order to secure unjust profit or preferential treatment from our business partners, and have strengthened our checking system to ensure that actions that raise suspicion do not occur.

## Response to natural disasters

In recent years, various areas of Japan have experienced significant damage from earthquakes, typhoons and sudden localized rainstorms. We have gained knowledge in the process of responding to these events, and aim to realize even more stable procurement and logistics.

As part of our Business Continuity Plan (BCP), we are working to identify and manage risk throughout the supply chain. For procurement, we are looking to procure raw

materials from multiple regions, and for logistics, we are establishing alternative transportation means and routes in collaboration with logistics operators.

## Green procurement

We prioritize procurement of raw materials with a low environmental impact, and work with business partners who take a proactive approach to protecting the environment. At the same time, we are promoting green procurement to help build a sustainable society. We ask our business partners to provide information about the chemical substances contained in products, as follows.

- (1) That the material does not contain any of the prohibited substances specified by TOYOBO.
- (2) That the content of hazardous substances specified by TOYOBO has been identified.

In fiscal 2019, we revised our “Chemical Content Information Sheet” based on the information sharing scheme “chemSHERPA”, developed by Japan’s Ministry of Economy, Trade and Industry (METI), and asked our business partners to carry out a survey. For general purchased goods, we are promoting green purchasing with the use of environmental labels.

## Resolving social issues in logistics

To resolve social issues in logistics, we are pushing forward with initiatives to reduce our environmental impact and reform the logistics work style.

To reduce our environmental impact, we are shortening the transportation distance by using the ports closest to our business sites, actively using sea and rail transport due to their lower CO<sub>2</sub> emissions (modal shift), and improving loading efficiency. We are also working to share logistics and storage with other companies (including joint shipment, making use of returning trucks, securing joint storage space), and are encouraging the introduction of systems that enable visualization of the logistics situation.

Concerning work style reform, we conducted a survey of the state of unloading for each delivery destination, in order to improve the working environment of truck drivers and cargo handlers. This revealed issues including long waiting times and manual handling of heavy cargo loads. We are currently working to make improvements here, by shortening waiting times and eliminating manual cargo handling (lightening the burden of unloading by switching from bulk loading to use of pallets).

# Disaster Prevention & Safety

## Basic approach

TOYOBO Group is striving to achieve zero accidents based on the principles and activities set out in the “TOYOBO Group Basic Policy on Health & Safety.”

### Health & Safety Philosophy

Based on the principle that ensuring health and safety is an important prerequisite of corporate activities, we are working hard to ensure the safety of our employees and improve hygiene, in accordance with a spirit of respect for human dignity, while also actively promoting better health. In this way, we aim to create a bright and happy workplace and a prosperous society.

### Basic Policy on Health & Safety

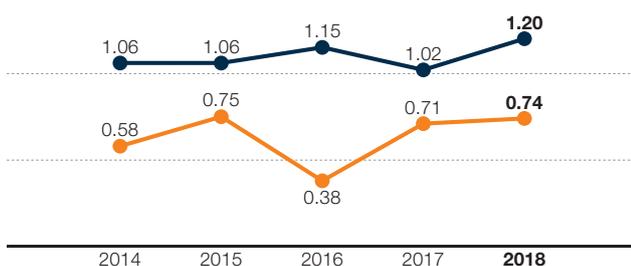
- We will work to achieve zero accidents by improving safety and security in the workplace
- We will work to realize a comfortable, employee-friendly workplace by enhancing hygiene and promoting the health of our employees
- We will work to realize a prosperous community and society with which we can coexist, by observing social rules and norms

## Safety management system

TOYOBO has established a Safety Promotion Committee under the Global Environment and Safety Committee to promote safety and disaster prevention activities. The committee members conduct safety and environment assessment of our business sites and plants as well as Group companies, in order to check the status of local activities. In addition, affiliated businesses at the same business site are promoting safety and disaster prevention activities together with our employees.

### Frequency Rate of Injuries

Frequency rate of lost workday injuries — TOYOBO Group — Manufacturing industry average



This refers to the number of accidents resulting in lost workday injuries per one million hours worked. It includes employees of affiliated companies at the same business site. The frequency rate of lost workday injuries is calculated annually on a calendar year basis (Jan-Dec).



Disaster Prevention Lecture

## Disaster prevention initiatives

Following the fire at TOYOBO’s Tsuruga Research and Production Center, which broke out on September 6, 2018, we reviewed our security and disaster prevention activities, and the whole Group is making concerted efforts to regain the trust of society.

Our main plants have undergone an assessment of disaster prevention equipment by a third-party expert, and we received advice concerning early discovery of fires and firefighting equipment aimed at more effective initial-stage firefighting. Based on this advice, we have enacted the “Firefighting Equipment Guidelines.”

Going forward, we aim to enhance the functionality of firefighting equipment at our main plants based on these Guidelines. We will also revise the content of our training drills so that they are more practical and enable us to protect our workplaces in the event of a fire.

We have designated September 6 each year as TOYOBO Group Disaster Preparedness Day so that the lessons learned from this fire are not forgotten, and we will hold disaster prevention rallies at each plant to educate our staff about disaster prevention.



Third party assessment of disaster prevention equipment

## About the fire at the Tsuruga Research and Production Center

On September 6, 2018, a large fire broke out at TOYOBO's Tsuruga Research and Production Center, in which production facilities for airbag yarns, the three-dimensional cushion material BREATHAIR™ and nylon for clothing were damaged. We apologize sincerely for the inconvenience and worry caused to all related parties.

Learning the lessons of this disaster, we will promote further disaster prevention activities and make concerted efforts as a Group to ensure early restoration of the facilities.

### Overview of the fire

Around 1:10 p.m. on September 6, 2018, a fire broke out on airbag yarn production facilities at the TOYOBO's Tsuruga Research and Production Center in Fukui Prefecture. Following discovery of the fire, a call for firefighting was immediately put out and initial-stage firefighting was undertaken. However, all personnel were evacuated due to dangerous levels of smoke. Firefighting by the public fire service then commenced, but the flames were fierce and it was not until 1:53 p.m. on September 7, the following day, that they were finally brought under control. The fire was extinguished at 5:30 p.m. the same day.

Although the fire caused no injuries to local residents, employees or related parties, black smoke and an unpleasant odor spread throughout the local area, causing much concern and inconvenience. In addition, production facilities for airbag yarns, BREATHAIR™ and nylon for clothing were damaged. The area destroyed by the fire totaled around 19,000m<sup>2</sup>.

The cause of the fire is believed to be as follows: a spark resulting from a short-circuit in wiring at the airbag yarn production facilities caused nearby combustible material to catch fire, and the fire then spread through exhaust ducts.



Aerial view of Tsuruga Research and Production Center  
(Source: Geospatial Information Authority of Japan; compiled by TOYOBO)

### Recovery and reconstruction

TOYOBO provided explanations about the disaster to the authorities and the local community, and also worked to restore operation of those facilities that escaped the fire. Since the fire was triggered by a short-circuit in wiring, we have installed wiring that prevents sparks in the event of a short-circuit, as well as fire alarms in exhaust ducts and a fire extinguishing system for duct.

In November 2018, we held a briefing for the local communities, and in December restored operation at the polymerization plant. In January 2019, we were able to resume production of the PBO fiber ZYLON™. In February, we held a briefing for local residents, at which we explained the circumstances of the fire and the countermeasures we have taken. At the briefing, we gained residents' understanding regarding the resumption of all remaining facilities, and resumed operation in April.

We are currently removing the damaged facilities. We will learn the lessons of this fire and work hard to reconstruct a safe plant.



Enhanced disaster prevention training drill

# Management



## Directors

### Ryuzo Sakamoto ①

Director\* and Chairman

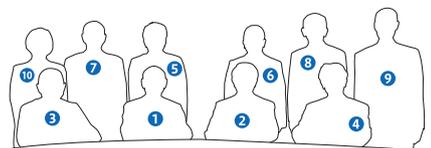
- Apr. 1972 Joined TOYOBO
- Apr. 2002 Deputy Director and General Manager, Textile No. 2 Department, and Textiles Technology and Procurement Department
- Jun. 2002 Director
- Jun. 2005 Director, President and Chief Operating Officer
- Apr. 2014 Director and Chairman (to present)

### Seiji Narahara ②

Director\*, President and Chief Operating Officer  
Controlling Supervisor of Internal Audit Department and KAERU Project

- Jan. 1988 Joined TOYOBO
- Apr. 2009 Deputy Director and General Manager, Finance Department
- Apr. 2010 Corporate Officer
- Jun. 2011 Director and Corporate Officer
- Apr. 2014 Director, President and Chief Operating Officer (to present)

\*Representative Director



### Masaru Watanabe ③

Director\* and Corporate Senior Executive Officer  
Controlling Supervisor of Environment & Safety, Quality Assurance Operating Department, Finance Department, Accounting and Control Department, Procurement & Logistics Department, and Human Resources Department; Supervisor of KAERU Project

- Apr. 1979 Joined TOYOBO
- Oct. 2009 Deputy Director, General Manager of Plastics Operation Planning Office, and General Manager of Plastics Management Office
- Apr. 2014 Corporate Officer
- Jun. 2016 Director and Corporate Officer
- Apr. 2017 Director and Corporate Executive Officer
- Apr. 2018 Director and Corporate Senior Executive Officer (to present)

### Shigeo Takenaka ④

Director and Corporate Executive Officer  
Head of Plastics Division; Head of Specialty Chemical Division; Controlling Supervisor of Tsuruga Research and Production Center

- Apr. 1981 Joined TOYOBO
- Apr. 2012 Deputy Director, General Manager of Functional Polymers Operating Department, and General Manager of Functional Polymers Technology & Development Department
- Apr. 2013 Corporate Officer
- Apr. 2017 Corporate Executive Officer
- Jun. 2017 Director and Corporate Executive Officer (to present)

### Hitoshi Ueno ⑤

Director and Corporate Executive Officer  
Head of Healthcare Division, Head of Bio-Science & Medical Division

- Jun. 1989 Joined TOYOBO
- Oct. 2009 Deputy Director, Head of Corporate Research Center, and Deputy General Manager of Business Development Planning Office
- Apr. 2013 Corporate Officer
- Apr. 2017 Corporate Executive Officer
- Jun. 2018 Director and Corporate Executive Officer (to present)

### Shigeo Nishiyama ⑥

Director and Corporate Executive Officer  
Head of Fibers, Textiles & Functional Products Division; Controlling Supervisor of Iwakuni Production Center

- Apr. 1983 Joined TOYOBO
- Apr. 2014 Deputy Director, General Manager of Textile Production & Development Operating Department, General Manager of Textile Production Technology and Development Department, and seconded to TOYOBO STC CO., LTD.
- Apr. 2017 Corporate Officer
- Jun. 2018 Director and Corporate Officer
- Apr. 2019 Director and Corporate Executive Officer (to present)

**Taketoshi Oka** 7

Outside Director

Apr. 1974 Registered as an attorney at law  
 Apr. 1996 Vice Chairman of Osaka Bar Association  
 Jul. 2003 Established Kinki Chuou Law Office;  
 Representative Partner (to present)  
 Jun. 2015 Director of the Company (to present)

**Masaru Nakamura** 8

Outside Director

Apr. 1977 Joined Sumitomo Corporation  
 Apr. 2006 Corporate Officer  
 Apr. 2008 Executive Officer  
 Apr. 2010 Managing Executive Officer  
 Apr. 2012 Senior Managing Executive Officer  
 Apr. 2016 Adviser  
 Jun. 2017 Director of the Company (to present)

**Takafumi Isogai** 9

Outside Director

Jan. 1987 Assistant Professor of Faculty of Liberal Arts,  
 Osaka University  
 Apr. 1996 Assistant Professor of Graduate School of  
 Engineering Science, Osaka University  
 Apr. 2002 Professor of Faculty of Mercantile Marine, Kobe  
 University of Mercantile Marine  
 Oct. 2003 Professor of Faculty of Maritime Sciences, Kobe  
 University  
 Apr. 2013 Professor of School of Commerce, University of  
 Marketing and Distribution Sciences  
 Apr. 2018 Part Time Lecturer at University of Marketing  
 and Distribution Sciences (to present)  
 Jun. 2018 Director of the Company (to present)

**Kimie Sakuragi** 10

Outside Director

Mar. 1981 Joined Fukutake Publishing Co., Ltd. (current  
 Benesse Holdings, Inc.)  
 Apr. 1995 Supervisor of Book Businesses in Publishing  
 Division  
 Nov. 1998 Chief of Business Ethics and Compliance Office  
 Jan. 2003 Manager of Business Ethics and Compliance  
 Office  
 Jun. 2003 Standing Audit & Supervisory Board Member of  
 Benesse Corporation (current Benesse Holdings,  
 Inc.)  
 Apr. 2007 Adjunct Professor of the University of Aizu  
 Graduate School (to present)  
 Oct. 2009 Audit & Supervisory Board Member of Benesse  
 Corporation  
 Jun. 2019 Director of the Company (to present)

**Corporate Auditors**

Corporate Auditors

**Taneaki Nagata**

Corporate Auditors

**Yasuhiro Iizuka**

Outside Corporate Auditors

**Shiro Takenaka**

Outside Corporate Auditors

**Hiroyuki Sugimoto****Corporate Executive Officers****Yasuo Ota****Chikao Morishige****Corporate Officers****Takayuki Tabo****Hiroshi Otsuki****Takeo Kashima****Yoshio Araki****Ichiro Takai****Kenjiro Ogami****Ikuyo Takeuchi****Masakatsu Shirai****Nobuya Fujiwara****Kazuhiko Katayama****Seiji Yamazoe****Atsuhiko Otsuka**

# Corporate Governance

## Basic approach

The TOYOBO Group, to respond to the changing times and continuously enhance corporate value, has established the following three policies: (1) Ensure timeliness in decision-making, (2) Ensure transparency in management, and (3) Emphasize fairness. Based on these principles, we are working to create and strengthen our corporate governance structure.

## Board of directors and corporate officers

TOYOBO is a company with auditors and, under this governance system, has adopted the corporate officer system.

In this system, which is clearly defined by our management regulations, the Board of Directors oversees the business execution of Corporate Officers. The system is also clearly defined in the Corporate Officer regulations, which state that Corporate Officers have an obligation to comply with all laws

and the Articles of Incorporation.

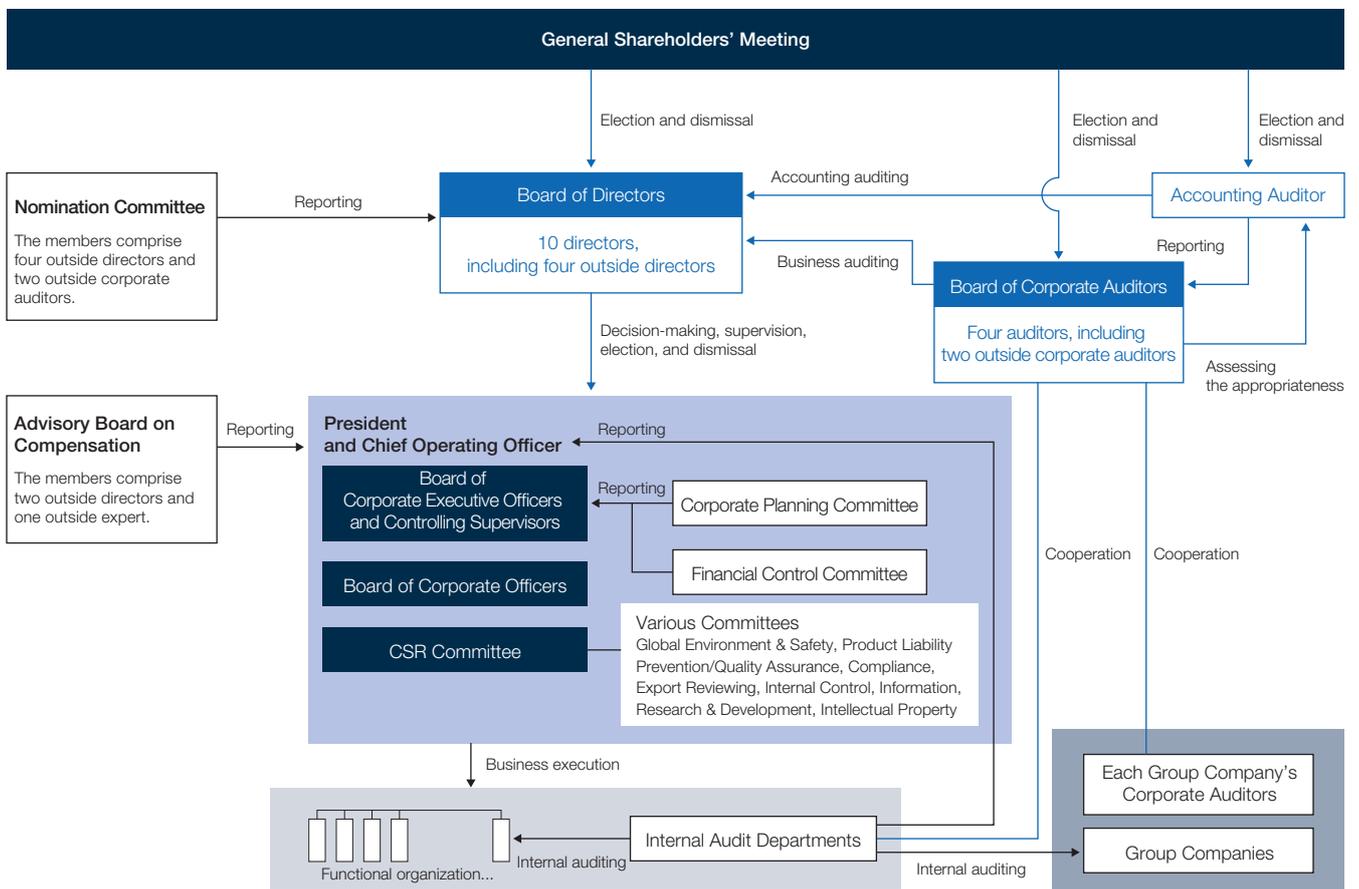
Under TOYOBO's governance framework, a clear distinction is made between the role of the Board of Directors—who concentrate on decision-making and perform management oversight—and the Corporate Officers who are in charge of business execution. This system enables rapid decision-making and efficient business execution.

## Board of directors

The Board of Directors has 10 directors, including four outside directors. At the General Shareholders' Meeting held in June 2019, one additional outside director was appointed in order to increase diversity and strengthen the supervisory function.

The term of office of a director is set at one year to ensure a swift response to changes in the business environment and to clarify the responsibilities of the directors. In view of the diverse and specialized nature of TOYOBO's business, five directors, excluding the Chairman and outside directors, serve

## Corporate Governance Structure



concurrently as Corporate Officers to support rapid, accurate decision-making. Regular Board of Directors meetings are held once a month, with extraordinary meetings being held as necessary.

In order to further optimize the functions of outside officers (both directors and auditors), prior explanations are made regarding important issues. In addition, TOYOBO periodically holds outside officer liaison meetings that consist solely of outside officers, who share their viewpoints and exchange information.

### Business execution

There are 19 corporate officers, including some who serve concurrently as directors. The President and Chief Operating Officer, as the head of business execution, acts as Chair of the Board of Corporate Executive Officers and Controlling Supervisors, and convenes the Board of Corporate Officers. The Board of Corporate Executive Officers and Controlling Supervisors deliberates in advance on matters to be resolved by the Board of Directors, and determines matters related to business execution, which it has been entrusted by the Board of Directors. The Board of Corporate Officers communicates management policy and reports on the progress of cross-organizational, companywide issues.

The Corporate Planning Committee and the Financial Control Committee are established under the Board of Corporate Officers. They deliberate on important investments and new projects, important investment and lending projects, etc. from their respective expert standpoints, thereby managing business risk.

### Corporate auditor system

The Board of Corporate Auditors has four members, two of whom are outside corporate auditors. Their responsibilities include attending meetings of the Board of Directors and other important meetings, stating their opinions when necessary, and auditing the performance of duties by directors based on audits of operations in the various divisions.

KPMG AZSA LLC has been appointed to conduct the independent audits required under Japan's Companies Act. The Board of Corporate Auditors receives plans for auditing and audit reports from the independent auditor and meets with the independent auditor periodically to exchange information.

The Internal Audit Department monitors the effectiveness of internal governance. The staff of this department report the results of internal audits to the President and exchange information with corporate auditors.

### Initiatives to Strengthen Corporate Governance

(Year)	Initiative & Objective
1998	<ul style="list-style-type: none"> <li>Established the Ethics Committee (the current CSR Committee) To promote companywide compliance activities as a key element of management</li> </ul>
2004	<ul style="list-style-type: none"> <li>Appointed one outside director, shortened the term of office for directors to one year To clarify management accountability by strengthening the supervisory function and shortening the term of office</li> <li>Established an Advisory Board on Officer Provisions, etc. (the current Advisory Board on Compensation) To ensure transparency and fairness in procedures for determining officer compensation</li> </ul>
2005	<ul style="list-style-type: none"> <li>Introduced a corporate officer system, reduced the number of directors To split the decision-making/supervisory and executive functions</li> </ul>
2015	<ul style="list-style-type: none"> <li>Increased number of outside directors to two To strengthen the supervisory function by multiple appointments</li> <li>Established an outside officer liaison meeting To hold regular information exchange meetings to optimize the functions of outside officers</li> <li>Established the Nomination Committee To ensure transparency and fairness in procedures for nominating/dismissing directors</li> </ul>
2016	<ul style="list-style-type: none"> <li>Made an analysis/evaluation of the overall effectiveness of the Board of Directors To continue to identify issues and make improvements, will carry out once a year in future</li> </ul>
2018	<ul style="list-style-type: none"> <li>Increased number of outside directors to three, raising their ratio to one third of all directors To ensure diversity among members of the Board of Directors</li> </ul>
2019	<ul style="list-style-type: none"> <li>Increased number of outside directors to four (adding a female director) To further promote diversity among members of the Board of Directors</li> <li>Revised the officer compensation system (introduced compensation in the form of restricted stock units) To offer longer term incentives and realize greater sharing of value with shareholders</li> </ul>

## Procedures for Nominating Directors and Determining Compensation

In order to ensure transparency and fairness when determining the nomination of directors and their compensation, deliberations are conducted by the Nomination Committee (whose members include outside officers) and the Advisory Board on Compensation (whose members include outside directors and outside committee members), and reports are made to the Board of Directors and President.

## Officer Compensation

TOYOBO's system of officer compensation is designed in line with the following basic policy, within the monetary amount of officer compensation resolved at the General Shareholders' Meeting: (1) provide incentives that lead to TOYOBO Group's sustained growth and enhance corporate value over the longer term; (2) secure highly talented management personnel; (3) set determination procedures that are objective and highly transparent.

In order to ensure transparency in determining officer compensation, a Advisory Board on Compensation has been established as an advisory body to the President, in which at least half of the committee members are outside directors and outside experts. The Advisory Board on Compensation conducts objective and fair deliberation/verification with regard to matters including the system, level, and calculation method of officer compensation, while also incorporating surveys by external organizations. The President makes a proposal to the Board of Directors based on the report submitted by the Advisory Board on Compensation, and a decision is then made.

### Details of Officer Compensation (Fiscal 2019)

Classification	Total compensation, etc. (millions of yen)	Total compensation, etc. by type (millions of yen)		Number of officers
		Regular compensation	Stock compensation	
Directors (excluding outside directors)	322	322	-	9
Corporate auditors (excluding outside corporate auditors)	51	51	-	3
Outside officers	44	44	-	3

Note 1: The above includes three directors and one corporate auditor who retired as of the close of the 160th Ordinary General Shareholders' Meeting held on June 27, 2018.

Note 2: From July 2019, compensation includes non-performance-based restricted stock units.

## Evaluating the Effectiveness of the Board of Directors

From January to March 2019, in order to further enhance the functions of the Board of Directors, an overall analysis and evaluation of the effectiveness of the Board in fiscal 2019 was carried out with the support of an external organization.

### Method of Analysis and Evaluation of Effectiveness

A survey of directors and corporate auditors was conducted. The responses to this survey were made directly to the external organization. Analysis and evaluation were carried out by the Board of Directors and outside officer liaison meeting based on the aggregate results reported by the external organization.

### Summary of Evaluation Results

- (1) The survey results gave a broadly positive assessment regarding matters including the number of Board members, the ratio of internal and outside officers, and management of the proceedings of meetings, and confirmed the overall effectiveness of the Board of Directors.
- (2) The Board of Directors is comprised of appropriate members equipped with the qualities, knowledge and experience required to fulfill their roles and functions. At the same time, ongoing efforts will be made to achieve greater diversity of members in line with the business environment surrounding the Company.
- (3) As well as continuing last fiscal year's initiatives, we aim to further enhance discussion concerning business strategy over the medium-to-long term.

## Training of Officers

As well as giving explanations to newly appointed directors and corporate auditors concerning their roles and duties, they undergo an external training program upon their appointment, in order to acquire the necessary knowledge.

In addition, newly appointed outside directors and outside corporate auditors are given explanations concerning the Company's operations, finances and organization, etc. They are also encouraged to continue participating in external training programs after assuming office, lectures are given by external speakers, and each individual strives to continually improve their management literacy.

# Message from an Outside Director



**Takafumi Isogai**  
Outside Director

## Initial thoughts upon my appointment of outside director

When I was appointed outside director about one year ago, a major theme in the corporate world in Japan at the time was the view that a company would not survive if it were solely focused on making profits. TOYOBO's *Jun-Ri-Soku-Yu* (realizing prosperity by acting rationally) corporate philosophy centered the Company squarely on the idea that its fundamental purpose was for the mutual benefit of itself and others. I thought this was a company that was a leading proponent of that philosophy.

In our modern era, we now have the wealth and technology to help people around the world, yet civilization has lost its balance and is facing serious issues, not the least of which is poverty. I saw TOYOBO as a marvelous company for conducting its business with a mission to help all of society, and I wanted to help TOYOBO succeed.

## The Status of Quality Control and Quality Assurance

Over its long history, TOYOBO has evolved and developed a wide variety of operations. I believe that, over time, the Company's organization has become compartmentalized. My area of expertise is quality control, and I am very conscious of issues that arise from the flow of information related to quality control and assurance.

TOYOBO's manufacturing divisions try to deal with their quality control and assurance issues solely within their own division. While this enables quick response, the countermeasures they apply are not fully communicated throughout the company, so there are times when the company's overall response is inadequate. I submitted to the Board of Directors that the Company could truly benefit from creating an organizational structure that facilitated information flow from the manufacturing divisions to the quality assurance departments of every other division. I believe the manufacturing

quality control and assurance departments now have seamless connections to the Company's central Environment & Safety, Quality Assurance Operating Department.

## Harnessing Artificial Intelligence

A database is essential for quality control, but it is just as important in other areas. A growing database can be used for AI-generated predictions that can make operations more efficient. Of course, AI will almost certainly raise some issues.

TOYOBO can use AI rooted in a database of information on rival companies and customers to predict the best way to market its numerous products. AI can improve research and development efficiency by replacing the conventional hypothesize and test method with virtual models where you input parameters and AI predicts the outcome.

The company should mobilize to move ahead of its competitors by exploring a wide variety of ideas and using the predictive capabilities of AI to find the most efficient way to execute its business.

## Formulate a Long-term Vision

TOYOBO has revamped its business portfolio and made clear progress establishing its specialty businesses. From this point, management will seek to further strengthen the business portfolio. In doing so, clear and thorough medium- and long-term objectives will be key, and a long-term vision especially critical. Management has assembled a two-dimensional portfolio, but I have recommended it consider adding another axis to form a three-dimensional long-term plan. I recommend this because the ability to easily replace a portfolio's axis will make it easier to orient the portfolio toward fulfilling a future vision and the way the axes are increased and weaved together will project a long-term vision.

In our times, management decisions are measured in global terms. With eyes currently cast on the accumulating plastic pollution in our oceans, TOYOBO management must be prepared to show it should offer environmentally friendly products and will construct production systems that do not burden future generations. I believe this also warrants deep consideration as management forms its long-term vision for the Company.

# Compliance/Risk Management

## Basic approach to compliance

Our Group's corporate philosophy, *Jun-Ri-Soku-Yu* (realizing prosperity by acting rationally), forms the basis of our compliance activities, in particular the idea of "thinking rationally and logically, as well as respecting ethics and morals, the fundamental nature of being human."

## Compliance promotion structure

A Compliance Committee has been established, comprising members of the Board of Corporate Executive Officers and Controlling Supervisors. This promotes Group-wide compliance from a management perspective. A Compliance Promotion Committee has also been established as a sub-body to this committee, which considers and promotes specific initiatives.

In fiscal 2019, the Compliance Committee convened twice, and the Compliance Promotion Committee convened four times. Under the motto "instilling an awareness of compliance and sharing compliance values", the committees clarified policy and standards, and worked to enhance the effectiveness of education, training and preventive measures.

## Initiatives to enhance awareness of compliance

In fiscal 2019, we significantly revised the TOYOBO Group's Charter of Corporate Behavior and the TOYOBO Group Employees' Code of Conduct, in order to realize a sustainable society and raise awareness of compliance. As well as incorporating these in the TOYOBO Group Compliance Manual and distributing it to Group employees, staff read through the texts together in each workplace to ensure thorough familiarization with the rules.

Members of the Compliance Department held compliance briefings on 38 occasions for TOYOBO and Group company management personnel, covering quality breaches and information security. In addition, case studies detailing cases of legal violation were issued monthly, as well as heads-up reports (occasional publication), to enhance awareness.

In the November Compliance Enforcement Month, a compliance survey was carried out to identify issues related to the status of compliance and promotion activities, and initiatives were undertaken to make improvements.



TOYOBO Group Compliance Manual

## Main compliance activities in fiscal 2019

### Clarification of policy and standards

Revision of TOYOBO Group's Charter of Corporate Behavior and the TOYOBO Group Employees' Code of Conduct  
Improvement of the internal rules system

### Enhancing the effectiveness of education, training and preventive measures

Holding of compliance briefings, training by job level, etc.  
Compliance Enforcement Month initiatives  
Issuing of compliance mini-study, heads-up reports  
Training in individual topics such as the Subcontract Act, bribery/gifts/hospitality, and improvement

### Responding to incidents

Strengthening ability to respond to incidents

## Compliance consultation centers

TOYOBO has established an internal reporting service for all Group employees and compliance consultation centers both inside and outside the Company. This enables legal violations and other wrongdoing in the workplace to be addressed as Company issues, taking swift, appropriate action and preventing any recurrences.

## Number of consultation cases

FY2015	FY2016	FY2017	FY2018	FY2019
20	12	20	15	32

## Compliance education

As well as training by job level, such as for new employees and staff who have been promoted, seminars are held on specific key topics such as information security and bribery/gifts/hospitality.



Seminar on bribery/gifts/hospitality

## Basic approach to risk management

We envisage the various types of risk that could pose a threat across the entire range of our business activities, and manage risk appropriately according to the characteristics of each risk.

In an emergency situation, we immediately set up a task force under the instruction of the relevant corporate officer, and bring the crisis under control through a swift response. By putting these systems in place and conducting the aforementioned initiatives, we work hard to earn the trust of our customers, the local community, and our shareholders and other stakeholders.

## Business risk

With regard to specific risks in our business activities, we have established the CSR Committee as the body for overseeing Group-wide risk, headed by the President as chair of the Committee. Under the auspices of this Committee, there are eight further committees including global environment and safety committee, which manage the various types of business risk at the Group level. We have also established the Corporate Planning Committee and Financial Control Committee under the Board of Corporate Executive Officers and Controlling Supervisors. Specialist committee members selected from each department deliberate on proposals for new projects or important investment and lending projects, and control business risk from a multi-faceted perspective.

## Business continuity planning (BCP)

TOYOBO Group has drawn up a BCP focused on combining both “fulfillment of our responsibility to supply products as a manufacturer” and “coexistence with the global environment and society,” and we make continual improvements.

The BCP clarifies the chronological sequence of the roles and functions of each department when a crisis occurs, through to its resolution. It also contains specific details of preparations during normal times.

## Cyber security

TOYOBO Group is working to strengthen cyber security as one element of our digital strategy. In April 2018, we set up a Cyber Security Committee as a sub-body of the Information Committee. The President of TOYOBO System Create Co., Ltd., a Group company that develops, operates and maintains

information systems, serves as the committee chair, and TOYOBO’s Corporate Planning Department serves as the secretariat. Cyber security measures are implemented by four teams: Maintenance/Operation/Surveillance Team, Education/Training Team, Policy/Rules Team, and Incident Response Team.

In fiscal 2019, the committee drew up the TOYOBO Group Information Security Policy, strengthened the security of networks and information equipment, and drew up the training curriculum.

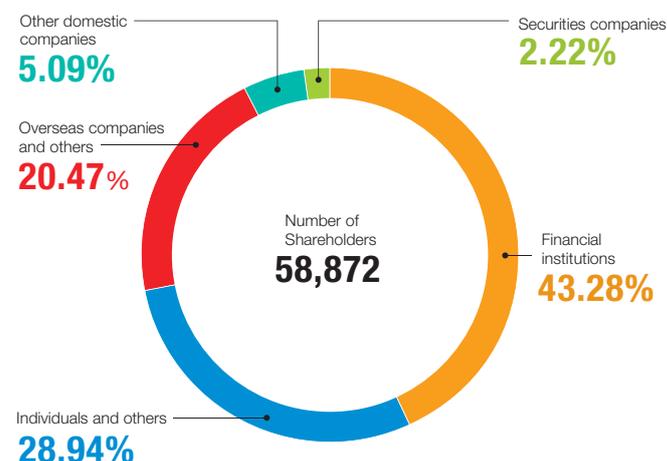
TOYOBO Group has established a Cyber Security Committee as a sub-body of the Information Committee to promote information security measures. This committee monitors conditions pertaining to the Group’s information security, formulates basic policy, maintains the management structure, implements and supervises measures.

### TOYOBO Group Information Security Management Structure

Person in Charge / Title of Organization	Role
Chief Information Security Officer (CISO)	<ul style="list-style-type: none"> <li>The person with ultimate responsibility for information security management and for maintaining the structure</li> <li>Formulating basic policy and plans, establishing and maintaining the management structure</li> <li>Providing the necessary management resources</li> <li>Making activity reports to management</li> </ul>
Information Security Officer	<ul style="list-style-type: none"> <li>Maintaining information security management within their area of responsibility</li> <li>Familiarization of personnel with basic policy, education/training, enforcement</li> <li>Appointing responsible personnel and giving instructions on implementing measures</li> </ul>
Legal Compliance & Internal Rules Officer	<ul style="list-style-type: none"> <li>Developing and maintaining the system of rules based on information security policy</li> </ul>
Personal Information Management Officer	<ul style="list-style-type: none"> <li>Developing and maintaining policy and rules, etc. concerning personal information protection</li> </ul>
Education & Training Officer	<ul style="list-style-type: none"> <li>Education and training for persons who use TOYOBO Group’s information assets</li> </ul>
Information Systems Operation Officer	<ul style="list-style-type: none"> <li>Implementing all technical matters pertaining to information systems operation</li> </ul>
Incident External Response Officer	<ul style="list-style-type: none"> <li>Public relations contact point (internal and external) in the event of a major incident, incident response training</li> </ul>
Cyber Security Committee	<ul style="list-style-type: none"> <li>Coordinating with the relevant departments to provide support for rules, education/training, security measures, and incident response</li> <li>Making activity reports to the Information Committee</li> </ul>
Computer Security Incident Response Team (CSIRT)	<ul style="list-style-type: none"> <li>Receipt of information security incident reports and initial response</li> <li>Convening of related parties, recovery response and reporting of results</li> </ul>

<b>Stock Listing</b>	Tokyo
<b>Stock Code</b>	3101
<b>Transfer Agent</b>	Sumitomo Mitsui Trust Bank, Ltd. 1-4-1, Marunouchi, Chiyoda-ku, Tokyo 100-8233, Japan
<b>Independent Auditors</b>	KPMG AZSA LLC 3-6-5, Kawara-machi, Chuo-ku, Osaka 541-0048, Japan
<b>Common Stock</b>	Authorized: 200,000,000 shares Issued: 89,048,792 shares
<b>Paid-in Capital</b>	¥51,730 million
<b>Number of Shareholders</b>	58,872
<b>General Shareholders' Meeting</b>	Held in June every year
<b>Number of Shares Constituting One Unit</b>	100

### Composition of Shareholders



### Major Shareholders

	Number of shares held (thousands)	Percentage of voting rights (%)
The Master Trust Bank of Japan, Ltd. (Trust Account)	8,286	9.34
Japan Trustee Services Bank, Ltd. (Trust Account)	5,396	6.08
National Mutual Insurance Federation of Agricultural Cooperatives	3,308	3.73
Nippon Life Insurance Company	1,750	1.97
Toyukai (Contractor Share Holding)	1,667	1.88
Japan Trustee Services Bank, Ltd. (Trust Account 9)	1,638	1.85
Japan Trustee Services Bank, Ltd. (Trust Account 5)	1,624	1.83
TOYOBO Employee Stockholders' Association	1,531	1.73
Meiji Yasuda Life Insurance Company	1,402	1.58
JP MORGAN CHASE BANK 385151	1,392	1.57

### Stock Prices

Highest/lowest stock prices for the past five years

FY	2015	2016	2017	2018	2019
Highest (yen)	¥180	¥216	¥211	¥2,249(218)	¥2,164
Lowest (yen)	¥145	¥140	¥155	¥1,900(184)	¥1,386

1. Stock price quotations are from the Tokyo Stock Exchange (First Section).

2. The highest and lowest stock prices shown for fiscal 2018 are figures following the share consolidation. Figures in parentheses show pre-share consolidation amounts.

**Head Office** 2-8, Dojima Hama 2-chome, Kita-ku, Osaka 530-8230, Japan  
Telephone: +81-6-6348-3111

**Established** May 1882

**Number of Employees** 3,108 (Nonconsolidated) / 9,572 (Consolidated)

**Branches**

- Tokyo Branch
- Nagoya Branch
- Tsuruga Research and Production Center
- Iwakuni Production Center
- Toyama Center
- Research Center
- Takasago Plants
- Inuyama Plant



**Overseas**

- TOYOBO (SHANGHAI) CO., LTD.
- TOYOBO U.S.A., INC.
- TOYOBO (THAILAND) CO., LTD.
- TOYOBO CHEMICALS EUROPE GmbH
- TOYOBO DO BRAZIL PARTICIPACOES LTDA.

**TOYOBO Group’s Business Locations around the Globe**



**External Recognition** TOYOBO is listed on the following SRI indices, as of March 2019.

- MSCI Japan Empowering Women Index (WIN)
- SNAM Sustainability Index



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*Ideas & Chemistry*

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TOYOBO REPORT 2019

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