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GS Yuasa Corporation GS Yuasa Report 2017

For the fiscal year ended March 31, 2017

Fostering Innovation in Battery Technology for 100 Years

the world.

Thanks to all stakeholders past and present, GS Yuasa is celebrating the 100th anniversary. With a mission to bring satisfaction to customers, to support progress in communities worldwide and to help pave the way for new generations, GS Yuasa will forge ahead with a spirit of challenge and gratitude.

On the Road

Automotive electrical equipment such as lights and air conditioners would not work without batteries. Without them, most vehicles whether fueled by electricity, gasoline, or diesel—would not work at all. Batteries are vital to support the many functions of cars and motorcycles. With the coming shift to eco-cars and the rising use of electronics, the role of batteries will only grow in importance.

For non-road transportation, vehicles that carry people and goods must consider the environment and the driver's needs. Vehicles that

run on electricity are better than those with engines at limiting air pollution and noise. For this reason, battery-powered vehicles are used in factories, warehouses, and entertainment facilities all over

Work Site

Daily Life

City and Industry

High-Tech Frontier

attract much attention, but they make many facets of everyday life more secure and comfortable. Their reliability is most evident at a time of need or emergency. They power the lights that illuminate dark roads and parks, and they store electricity so that solar power systems can continue working in times of disaster. GS Yuasa's products are working right next to you.

Batteries and other products made by GS Yuasa do not normally

Given that modern society is knitted together by sophisticated networks, power supply disruptions caused by natural disasters can lead to social turmoil and enormous financial loss. Even short blackouts can have a major effect. Backup power supplies are becoming increasingly important to safeguard social infrastructure and keep lifelines working. Hopes are also running high that high-capacity, highly efficient power supply systems will be a key to more effective use of renewable energy.

From the deep sea to the upper atmosphere, and from there into outer space, the work of batteries is to support exploration into the future. In environments where it is difficult for power sources to operate, batteries do more than just keep equipment working. They also sustain the lives of the crew. GS Yuasa's lithium-ion batteries can tolerate extreme temperatures and pressure changes and continue performing reliably under the most severe conditions.









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Scope of this report

Period and content covered

Results for fiscal 2016 (April 1, 2016 – March 31, 2017) Certain sections of the report include activities after fiscal 2016.

Companies covered

This report covers the GS Yuasa Group, comprised of GS Yuasa Corporation and its consolidated subsidiaries. Notes are included for data that fall outside the scope of the companies covered.

Disclaimer

This report contains earnings forecasts and other financial information pertaining to future business performance. These items are judgments made by the managers of GS Yuasa Corporation based on currently available information and they include an element of latent risk and uncertainty related to economic trends, demand, the forex rate, the tax system and other systems. For this reason, actual earnings could diverge greatly from those presented here. GS Yuasa does not take responsibility for the accuracy of information on financial or business forecasts presented in this report.

Overview

Business Domains

Breakdown of Net Sales by Business



Automotive batteries

Japan

We manufacture and market domestic automotive and motorcycle lead-acid batteries. Technology to reduce fuel consumption has made great strides in start and stop and hybrid vehicles. We are developing high-performance, high-quality batteries for these vehicles and launching them in the market.

Main Products



Overseas

GS Yuasa has 37 overseas bases in 17 countries around the world, with an especially large presence in China and Southeast Asia (mainly in Thailand and Indonesia). We use these bases to manufacture and market automotive, motorcycle and industrial lead-acid batteries.

Main Products



Industrial batteries and power supplies

In addition to lead-acid batteries for electric-powered vehicles such as forklifts and wheelchairs, this business segment covers backup-use industrial batteries and power supplies for social infrastructure such as mobile phone base stations, office buildings, water and sewer systems and power plants, thus supporting our advanced information-based society. We also contribute to environmental protection by supplying power conditioners for photovoltaic power generation, lighting equipment for roads and tunnels, and membrane systems for the effective use of water resources.

Main Products



Automotive lithium-ion batteries

We manufacture and market automotive lithium-ion batteries for eco-friendly vehicles such as electric vehicles, hybrids and plug-in hybrids.

Main Products



Other

We manufacture and market lithium-ion batteries for a wide range of applications, from the deep sea (manned research submersibles) to outer space (satellites and rockets). This segment also includes the development, production and distribution of batteries and power supplies for other specialized uses.

Main Products









"Into the future, GS Yuasa aims to become an energy device company by developing leading-edge technologies focused on quality, while maintaining an untiring commitment to dependability and safety."

GS Yuasa is able to celebrate the 100th anniversary thanks to all stakeholders, both past and present. On behalf of the Company, I would like to express my sincere appreciation to our stakeholders for their enthusiastic support over so many years.

Since beginning as a dedicated manufacturer of industrial lead-acid batteries, GS Yuasa helped establish batteries as essential devices as business evolved over 100 years. Formed through the merger of two companies, Japan Storage Battery Co., Ltd., and Yuasa Corporation, GS Yuasa has been transforming into an energy device company, expanded business beyond batteries to power supplies and lighting as well as specialty equipment and other electrical equipment.

Amid this transformation, maintaining a commitment to dependability and safety is essential for the GS Yuasa brand. Both of the Company's founders were dedicated to contributing to society by developing high-quality products with an inventor's passion and to pioneering new businesses ahead of their times with the spirit of challenge. These ideals have been passed down to all employees of the GS Yuasa Group-right up to today. I am certain that this corporate culture is vital for delivering the highest quality to customers as their company of choice.

Looking ahead, we will continue exploring ways of using energy effectively while maintaining our commitment to quality, as well as striving to develop the

battery businesses as an energy device company that benefits the environment and people around the world We regard that as our key mission over the next 100 years. At the same time, we will do our upmost to realize the newly established GS Yuasa CSR Policy and Code of Conduct so that we can further contribute to making communities more sustainable through the Group's business activities.

We sincerely appreciate the understanding of all stakeholders and their continuing support.

We are committed to people, society and the global environment through innovation and growth of our employees and business entities.

We are committed to delivering security and comfort to our customers around the globe through advanced technologies developed in the field of stored energy solutions.

the world. 3

Philosophy

Innovation and Growth

Management Vision

Management policy

GS Yuasa will become the "first call" company based on our "customer first" policy.

GS Yuasa considers *quality* and *safety* as most important, and supplies environmentally conscious products all over

GS Yuasa will comply with all laws and operate using clear and fair management.



muras

Osamu Murao President GS Yuasa Corporation

Corporate History

GS (Japan Storage Battery) History







batteries begins







Production of alkaline batteries begins

- 1938 -



1895 — 1908 — 1912 — 1913 — 1915 — 1917 — 1918 — 1919 — 1920 — 1933 -

2004



Yuasa Storage Battery Co., Ltd. established

2005

Yuasa Battery Manufacturing established within the Yuasa Iron Works in Sakai City, Osaka Prefecture; production starts on storage batteries



Production starts on automotive batteries; Tudor plating for stationary batteries completed

2009

Blue Energy Co., Ltd. established with Honda Motor Co., Ltd.



1935 -

Production of glass mercury rectifiers begins



1940

New plant completed for production of alkaline battery; begins





GS Yuasa Corporation History



GS Yuasa Corporation established



2007



Tata AutoComp GY Batteries Pvt. Ltd. established, the first overseas affiliate of GS Yuasa in India (currently Tata AutoComp GY Batteries Private Limited)



Lithium Energy and Power GmbH & Co. KG (Germany) established with Robert Bosch GmbH and Mitsubishi Corporation



GS Yuasa Asia Technical Center Ltd. (Thailand) established





Tianjin Tong Yee Industrial Co., Ltd. (currently Tianjin GS Battery Co., Ltd.) established

Prismatic Lithium-ion batteries developed

C S

YUASA REPORT 2017

— 1963) **19**93 1966 1991

Dry and charged batteries go on sale Japan for the first tin

Tianjin Yuasa Batteries Co., Ltd. established

Yuasa Battery (Thailand) Pub. Co., Ltd. established

2015



Completed the transfer of Panasonic Corporation's lead-acid battery business and was renamed GS Yuasa Energy Co., Ltd.

Inci GS Yuasa Aku Sanayi ve Ticaret Anonim Sirketi (Turkey) established with Inci Holding A.S.

Consolidated Financial and Nonfinancial Highlights

Consolidated Financial Highlights



Net income attributable to owners of the parent --- Earnings per share







Total assets --- ROA (Millions of yen) 400,000 12 370,509 359,523 346,523 340,463 300,000 290,369 .3 200.000 100.000 . 3 FYE Mar. 2014 FYE Mar. 2016 FYE Mar. 2017 FYE Mar. FYE Mar. 2013 2015



Consolidated Nonfinancial Highlights

CO₂ emissions from production plants in Japan (t-CO2)



--- Product defect rate for operations in Japan compared with fiscal 2013



Average number of fixed hours worked annually by employees in Japan Average number of overtime hours worked by employees in Japan

(Hours) 2,400



utside Japan. outside Japan. The average number of fixed hours was calculated as fixed working hours minus hours absent from work due to days off, arriving late to work or leaving work early, etc. Period: January to December



CO2 emissions from distribution facilities in Japan

Notes: Figures are based on data covering all of GS Yuasa International Ltd.'s distribution facilities in Japan. Period: April to March of the following year



primarily employs people with disabilities. Period: April to March of the following year



Notes: Employees do not include personnel on leave or those transferred to workplaces outside Japan. The years shown in this chart refer to September in the specified year to August of the following year, based on a calculation method set by Japan's Ministry of Health, Labour and Welfare.

Value Creation Process

The GS Yuasa Group's business activities and products help solve global issues and bring value to people all over the world. That is how the Group increases corporate value. By continuing to pursue leading-edge technologies that pave the way for a brighter future, the GS Yuasa Group is aiming to create value that contributes to making a more sustainable world.

Global trends	bal issues related to GS Yuasa's businesses	Impact of products and business activities
Climate change and global warming Depletion of natural resources	Climate change and global warmingCarbon dioxide (CO2) emissions from over 1.2 billion automobiles worldwide are having a serious impact on global warming. With the shift to eco-friendly cars and the growing popularity of electric vehicles, the GS Yuasa Group's products will play an important role in the future.	Positive
Changes in population (demographic changes) Water and food shortages Intensifying disaster	Depletion of natural resourcesIncreased use of renewable energy is needed as a replacement for limited fossil fuels, such as oil and coal. In that context, the GS Yuasa Group's batteries are raising expectations as products that enable more effective energy use from photovoltaic and wind power plants.	Benefits of products Better mileage for automobiles Longer distances travelled by electric vehicles and plug-in hybrids
Economic growth in emerging countries Adoption of the United Nations Sustainable Development Goals (SDGs) SUSTAINABLE DEVELOPMENT GCALS	Intensifying disasters Since the supply of electricity is often interrupted during disasters, such as floods or earthquakes, the importance of backup power supplies is growing. The GS Yuasa Group's products help keep the infrastructure functioning dependably and at a high level of quality. Backup power also enables buildings, factories and other facilities to continue operating during disasters.	 Greater use of battery-powered forklifts, reducing exhaust gases Stable use of renewable energy Secure power supply for infrastructure, buildings, factories, etc.

INPUT A stable financial foundation bolstered by the Group's mainstay lead-acid battery business

Solid strengths for developing technologies and cultivating markets built on an outstanding track record and customer trust Advanced technological capabilities bolstering the lithium-ion batteries business Strong competitiveness and brand power supported by business partnerships A workforce that maintains and

passes down technologies with an understanding of the Company's corporate philosophy CSR-conscious business activities

Operational processes OUTPUT Development Manufacturing Maintenance Sales Automotive Batteries (see page 25) Automotive Lithium-ion Batteries (see page 31) Other businesses (see page 33) Mid-term management plan (see page 23) CSR Activities (see page 42) Materiality (see page 44)

lead-acid battery plants in Automotive lithium-ion batteries business made profitable Increased use of lead, the main material in lead-acid batteries, harms the environment and people Strengthen environmental management

Benefits of business activities Acquisition and absorption of Panasonic Corporation's lead-acid battery business • Establishing new automotive

• The rare metals that are the

main materials used in lithium-ion batteries are being depleted

Create industry-led recycling initiatives

Value for society

Popularization of eco-friendly cars

Efficient use of electricity

Greater use of renewable

energy More dependable social

infrastructure Contribution to business continuity plans (BCPs)

Value for GS Yuasa

Maximization of profits

Enhanced technological capabilities

Maximization of returns to shareholders through efficient use of assets

Stable or growing number of employees

Stronger relations with suppliers

GS Yuasa products that help solve global issues

Automotive lead-acid batteries



• The Company has secured the second largest global market share for these products. Product development

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The Company established a mass production system ahead of competitors. • These batteries have been widely adopted by

automakers worldwide.





• These batteries are installed in all kinds of electric vehicles, including forklifts, compact electric vehicles, AGVs and electric wheelchairs.

Industrial lithium-ion batteries



• Customers can choose from among high-capacity or fast-charging or more powerful batteries.The Company created a lineup of highly competitive products using the automotive lithium-ion batteries

Power conditioners for photovoltaic power plants



- With a product lineup from 4.5 to 250 kilowatts, these power conditioners are used in plants of all sizes, including small-scale facilities and mega solar plants.
- By combining solar panels and storage batteries, plant operators can build storage systems for onsite power use.





Contributes to sustainable development

Solutions to global issues drives business growth

Backup power supplies



- Ranging from general purpose to specialized power supplies, the product lineup meets all kinds of demand from customers.
- GS Yuasa's network of over 100 service centers across Japan provides unmatched customer support.



VISION & STRATEGY

Interview with the President

In this interview, President Osamu Murao spoke about GS Yuasa's 100th anniversary, business reforms and innovations developed from the Company's founding up to today, as well as management's growth strategies for the future.

"While leveraging advanced manufacturing capabilities that focus on dependability and safety, we are striving to enable GS Yuasa to grow the battery business over the next 100 years, becoming an energy device company that benefits the environment and people around the world."



Please tell us about the GS Yuasa Group's performance in fiscal 2016 and its activities in global markets.

In fiscal 2016, the fiscal year ended March 31, 2017, net sales decreased year on year, but that was largely due to the impact of exchange rates; temporary increases in the value of the yen led to exchange losses in the Overseas Operations segment, negatively impacting net sales by about ¥26 billion. Nevertheless, on a local currency basis, both sales and income increased compared with the previous fiscal year. Moreover, the Company posted record-high levels of operating income and net income attributable to owners of the parent. So, we do not regard the decline in net sales as a serious issue for the GS Yuasa Group as a whole.

The Company has now posted four consecutive years of record-high operating income. There were three main reasons for this. First, sales of automotive lead-acid batteries equipped with start and stop systems increased during the fiscal year. These highadded-value products are manufactured using cutting-edge technologies and represent the Group's leading edge in automotive lead-acid batteries. In fact, the number of start and stop vehicles has been increasing in Japan since 2012, and from that year onward, GS Yuasa has maintained the top market share for lead-acid batteries for new vehicles equipped with these systems. In addition, demand for maintenance has been on the rise over the past four or five years, enabling the Group to boost earnings. The second factor is related to the Company's acquisition of Panasonic Corporation's lead-acid battery business at the end of the second quarter of the fiscal year under review. After integrating this business into a consolidated subsidiary, operating income in the Domestic Automotive Batteries segment rose 1.5 times. Finally, the third factor was the Company's success in making the new lithium-ion batteries business profitable for the first time.

The GS Yuasa Group has been expanding operations outside Japan, mainly by manufacturing products in the regions where they are consumed. With a view to securing GS Yuasa's presence in the vast Chinese market, we are building a new factory in Tianjin with the capacity to produce eight million automotive lead-acid batteries annually. Demand for GS YUASA REPORT 2017

lead-acid batteries for start and stop vehicles is projected to grow in China in the future, so we want to boost earnings by manufacturing these products for which the Group has a competitive advantage—at the new factory in Tianjin, along with the existing factory in Guangzhou.

In Europe, we are working to expand and fully equip Inci GS Yuasa Aku Sanayi ve Ticaret Anonim Sirketi, a Turkish company that was brought into the Group in October 2015. We have been stepping up sales promotions for GS Yuasa brand storage batteries in regions where the GS Yuasa Group had yet to make inroads, such as countries of the former Soviet Union, as well as in the Middle East and North Africa. For that reason, we are opening sales offices in Kiev in the Ukraine, Dubai in the United Arab Emirates and Cairo, Egypt, as well as hiring and training more personnel.

At the same time, we have been working to bolster product development and our ability to respond to customers in the ASEAN market, including setting up a technical center in Thailand in 2014. In the past, testing the performance and specifications of storage batteries destined for international markets was done completely in Japan, placing a major burden on the main Japanese factories. Now that those responsibilities have been transferred to the technical center, the main factories have more time and resources so that engineers in Japan can focus on developing advanced technologies, like next-generation batteries. In addition, we plan to gradually transfer other operations from Japan, particularly global product design and manufacturing-related technical training.

The Group's other businesses mostly handle specialized batteries, including storage batteries for submarines, aircraft, satellites and rockets. We have continually signed contracts with customers, so we expect sales to increase going forward. The Group has extensive expertise in these specialized batteries and places high importance on research and development. The technologies we accumulated through R&D have led to the development of products that are expected to generate earnings, such as automotive lithium-ion batteries. Looking ahead, we intend to step up the pace of product development.

VISION & STRATEGY

Interview with the President

What progress has been made under the Fourth Mid-Term Management Plan?

The first fiscal year of our Fourth Mid-Term Management Plan has been completed. By the final year of the plan, fiscal 2018, we are aiming for consolidated net sales of ¥480 billion, an operating

income ratio of 8%, return on equity (ROE) of 10% and a payout ratio of 30%. While the scope of our management plans had been comparatively broad in the past, in the fourth plan we chose to focus particularly on improving profitability and the efficiency of asset utilization, as indicated by the operating income ratio and ROE.

Financial targets under the Fourth Mid-Term Management Plan

	FY 2018
Consolidated net sales	¥480.0 billion
Operating income ratio	8%
ROE	10%
Payout ratio	30%

Notes: 1. The target for the operating income ratio in fiscal 2018 is before the amortization of goodwill. 2. The above figures take into account the impact of the acquisition of Panasonic's lead-acid battery business, assuming approval by the competition law authorities of concerned countries



Notes: 1. The figures for the operating income ratio and operating income in FYE Mar. 2017 and FYE Mar. 2019 are before the amortization of goodwill 2. The above figures take into account the impact of the acquisition of Panasonic's lead-acid battery business, assuming approval by the competition law authorities in the countries concerned

Mid-Term Management Objectives

Build a foundation for sustainable growth over the long term with the aim of renewing GS Yuasa as an energy device company.

New businesses	Maintain profitability in the lithium-ion batteries business and put the business on a stable growth track.
Growth businesses	Further expand businesses outside Japan and improve their profitability.
Established businesses	Increase and maintain cash flow from the automotive batteries business and industrial batteries and power supplies business, and invest for future growth.

Progress of new businesses

We have been channeling the Company's resources into automotive lithium-ion batteries. We view this business from a long-term perspective and expect to begin releasing new products that are currently under development onto the market from 2020. GS Yuasa is also jointly conducting research and development with Robert Bosch GmbH on lithium-ion batteries for nextgeneration electric vehicles, for which we have the highest expectations. At the same time, we are closely monitoring the market for 12-volt lithium-ion batteries for engine starting in Europe. Given the relatively high environmental awareness in that region, demand for these products is projected to grow.

Progress of growth businesses

In China and Southeast Asia, where most of the Group's overseas operations are based, we have been expanding production capacity for automotive leadacid batteries and bolstering our sales network to enable those operations to meet growing demand. At the same time, the Group is manufacturing lead-acid batteries for industrial backup power supplies in Taiwan and the southern Chinese city of Guangzhou. We are also preparing to integrate the operations of Panasonic Storage Battery (Shenyang) Co., Ltd., which we plan to re-establish as a Group company following the acquisition of Panasonic Corporation's lead-acid battery business in the third quarter of the fiscal year under review. This company has a new factory in Shenyang, in northern China, and an extensive lineup of products that we will position as complementary to GS Yuasa's product lineup.

It has now been 13 years since GS Yuasa was established through a merger, and at this stage, we are striving to optimize product manufacturing and sales operations at all locations. At present, the Group has factories that manufacture lead-acid batteries for either automobiles or motorcycles, and some sales operations are competing within the same region. If, however, every location can focus on its particular expertise, together they will have synergistic effects within the Group in ways that go beyond the optimization of production, such as joint procurement of parts.

Progress of existing businesses

In the market for lead-acid batteries for start and stop vehicles, the GS Yuasa Group has been positioned

ahead of competitors not only for market share but for performance. Furthermore, by integrating Panasonic Corporation's lead-acid battery business with Group companies, we expect to effectively combine our R&D strengths with those of Panasonic going forward. We will also focus more on lithium-ion batteries for industrial applications. We modified the production process for automotive lithium-ion batteries, for which we began mass production early on and ahead of our rivals, so we can also manufacture the industrial high-capacity lithium-ion batteries sold by the Group on the same production lines. For that reason, it is possible to provide these products while achieving outstanding cost performance, which is a major competitive advantage. At present, the GS Yuasa Group supplies products for a wide range of industrial applications, including for electric power generators, construction machinery, and railway equipment, as well as for residential use. Looking ahead, we will work to broaden the range of these applications even further.



Interview with the President

What were the reasons for reorganizing the Group's business segments?

Today, we are reorganizing the GS Yuasa Group while working to overcome the challenges faced by individual businesses. For automotive lead-acid batteries, for example, even when the same customer made a request about these products, our responses came from two different businesses within the Group: the domestic automotive batteries business handled discussions in Japan, while the overseas operations business took care of discussions outside Japan. Therefore, we reorganized, shifting the importance to more swiftly responding to the needs of customers globally. We felt that it was necessary to combine these businesses into one business segment in order to establish an organization that was easier to understand and better suited to handling customers.

The Group's business segments had been organized according to product groups: automotive batteries, industrial batteries and power supplies, and automotive lithium-ion batteries, as well as by geographic region, specifically the Overseas Operations segment. After holding discussions with institutional investors, however, we realized that the kind of business conducted by the Overseas Operations segment was unclear, so we thought it



would be better to reorganize the business segments based solely on product groups. In addition, when manufacturing equipment was installed at factories outside Japan, and if there were any problems at those locations, requests were sent to the Company's engineering departments in Japan. That system, however, was not speedy enough, so we reorganized based on the need for making improvements. To resolve all of these issues, we have combined the Domestic Automotive Battery Business Unit and the Overseas Operations Business Unit into a single business segment, effective from the current fiscal year. Nevertheless, that does not mean the reorganization of the GS Yuasa Group is finished. In the future, we will continue to reorganize the Group with the goal of establishing an organizational structure that is optimally suited to the times.

Please tell us about the Group's approach and recent initiatives to corporate social responsibility (CSR).

For the GS Yuasa Group, CSR is the most important factor for ensuring sustainable growth. With that in mind, on September 1, 2016, we appointed an executive officer in charge of CSR and established a dedicated department for promoting CSR. This department is responsible for determining the Group's main tasks for CSR, and for devising and carrying out Group-wide CSR strategies. In May 2017, we established the GS Yuasa CSR Policy, which will enhance the Company's management policies, and the GS Yuasa CSR Code of Conduct, a set of standards for behavior that the Group's employees are expected to be keenly aware of and put into practice. We are working to ensure that both the policy and code of conduct are followed across the entire GS Yuasa Group.

We recognize that GS Yuasa has a responsibility, as a manufacturer, to carry out a wide range of social contribution activities. Accordingly, the GS Yuasa Group works to contribute to community development through business activities, while ensuring fair business practices based on a sound corporate governance system, while at the same time considering a broad range of human rights issues. Moreover, we strive to raise the quality of products and services, reduce the environmental burden of our products over their entire life cycle, as well as develop and sell products that help solve global issues.

At present, the GS Yuasa Group is operating from 37 locations in 17 countries around the world. Although environmental laws and regulations and related issues differ in each country, we try to manage operations based on generally accepted international standards. Moreover, the scope of our CSR activities covers all issues that the Group and our suppliers are involved in.

In conclusion, what message would you like to convey to stakeholders?

GS Yuasa has a century-long history of doing business, and that was made possible because our predecessors listened to people of every generation, responded flexibly to changes in the operating environment, and they remained committed to creating new value. Developing new products comes with risks, but by applying leadingedge technologies, the GS Yuasa Group will strive to respond quickly to market needs and will offer dependability and safety to communities worldwide in the same pioneering spirit and with the same strong ambition as our two founders. Our aim is to develop and grow as a group of companies that is essential for people and their communities around the world for another 100 years, and all members of the GS Yuasa Group are committed to that vision. On behalf of all of them, I would like to express my appreciation to the Group's stakeholders for their unwavering support and understanding over so many years.

VISION & STRATEGY

Interview with the CFO

In fiscal 2016, the fiscal year ended March 31, 2017, GS Yuasa Corporation posted record-high operating income for the fourth consecutive year, as well as recordbreaking levels of net income attributable to owners of the parent. In this section, we talk with Chief Financial Officer Toshiyuki Nakagawa about the Company's results Toshiyuki Nakagawa and future outlook.



Chief Financial Officer and Director GS Yuasa Corporation

Please tell us about the Company's consolidated financial results in fiscal 2016.

Overall, fiscal 2016 was a challenging year for the GS Yuasa Group. Looking back on our operating environment, the global economy remained in a slump. In Japan, despite sluggish consumer spending due to unseasonable summer weather and other factors, the economy picked up moderately as employment conditions improved. Nevertheless, prices of resources jumped sharply across the board around the fiscal year-end, and the price of lead, the principle raw material of the Group's products, shot up and remained at high levels. In China, though the economy stopped slowing down as exports and investment in fixed assets bottomed out, large-scale labor market adjustments held back economic growth. In the United States, the economy continued to recover as improvements in the labor market drove up consumer spending. In Europe, however, exchange rates began fluctuating dramatically amid concerns surrounding the United Kingdom's exit from the European Union and fears of a subsequent economic slowdown.

Against that backdrop, GS Yuasa Corporation posted consolidated net sales of ¥359,606 million, down ¥6,005 million, or 1.6%, compared with the previous fiscal year. Sales increased in the Domestic Automotive Batteries segment as a result of bringing Panasonic Corporation's domestic lead-acid batteries business into the scope of consolidation at the end of the second quarter of the fiscal year under review. Nevertheless, that was not enough to offset a decrease in sales in the Overseas Operations segment caused by the impact of the appreciation of the yen on exchange rates.

On the income side, consolidated operating income reached a record high for the fourth consecutive year, increasing ¥1,197 million, or 5.5% year on year, to ¥23,107 million (¥24,185 million before the amortization of goodwill). Despite the impact of the appreciating yen on exchange rates, rising demand for automotive lead-acid batteries and reduced cost prices contributed to the increase. Meanwhile, net income attributable to owners of the parent jumped ¥3,198 million year on year, or 35.4%, to ¥12,229 million (¥13,699 million before the amortization of goodwill). This increase was mainly the result of the absence of a loss on the liquidation of an affiliated company recorded in the previous fiscal year and

a substantially lower loss on impairment of long-lived assets compared with the previous fiscal year. Net income attributable to owners of the parent reached an all-time high in the fiscal year under review.

Fiscal 2016 Consolidated Financial Results and Year-on-Year Change		
Net sales	¥359,606 million	-1.6%
Operating income	¥23,107 million	5.5%
Net income attributable to owners of the parent	¥12,229 million	35.4%

Analysis of Factors Underlying the Increases in Income

Factor 1 Panasonic Corporation's domestic lead-acid battery business was consolidated at the end of the second guarter of the fiscal year under review, allowing earnings from this business to contribute to consolidated results in the second half of the fiscal year under review. Although goodwill associated with this business acquisition was recorded, income was secured even after the amortization of goodwill. Factor 2 In fiscal 2016, the Company succeeded in making the automotive lithium-ion batteries business profitable for the first time. We made a full-fledged launch of this business in 2007 and spent over ¥100 billion on capital investment, including facilities, primarily over the three years from 2010 to 2012. After 10 years of hard work, this business is now in the black, and although it has generated a surplus of only around ¥45 million, I think that is still impressive given that we built it up from scratch. We have high expectations for the business to grow in the future, and while it has not performed as originally expected, production has been sluggish mainly because the widespread adoption of electric vehicles has been slower than anticipated. Although depreciation expenses were incurred when setting up production facilities, since production volume has not risen, diluting fixed costs cannot go ahead. Therefore, over the past five years or so, we have been focusing on improving profitability by steadily increasing productivity while maintaining a certain level of production volume, without making additional investments to boost production capacity. We are now completing the stage

of establishing a solid manufacturing platform, and as long as we maintain our approach over the next one or two years, I feel we have realistic prospects for growth in the future.

Which objectives and growth strategies is management pursuing?

GS Yuasa is a specialized manufacturer of rechargeable batteries, which are storage batteries that can be recharged many times. The Company has manufactured various kinds of rechargeable batteries, such as alkaline batteries, nickel-metal hydride batteries, and nickel-cadmium batteries, but lead-acid batteries have continued to be the main business pillar since being founded 100 years ago. Raw material costs account for a comparatively high proportion of the total cost of manufacturing lead-acid batteries, so fluctuations in market prices for those materials have a considerable impact on profitability. Therefore, it is important for us to have a higher proportion of high-added-value products in our product lineup. Furthermore, when we envision the next 100 years, depending on a single business pillar will make it difficult for the Company to maintain stable operations and secure future prospects. With that in mind, we are now focusing on establishing lithium-ion batteries as a new business, with the intention of building it up as a second business pillar in the future, along with lead-acid batteries. Although our lithium-ion batteries business does not have the same 100-year history of success as lead-acid batteries, we foresee tremendous opportunities for innovation going forward.

Engine start-up lead-acid batteries are usually expected to last three to five years and then be replaced, so there are two markets for these products: one for new vehicles and another for replacement batteries, which is often highly profitable. In contrast, automotive lithium-ion batteries are expected to have a service life of over 10 years, which is similar to an automobile's life cycle, so there are no real prospects for a replacement market. While the Company will, as a matter of course, take these circumstances into account in negotiations with automakers, we understand the necessity of establishing a diversified business model for automotive lithium-ion batteries. Therefore, we intend to speed up the development of industrial applications for these batteries, among other initiatives.

How would you describe the Company's financial position as of March 31, 2017?

As of the fiscal year-end on March 31, 2017, total assets stood at ¥370,509 million, an increase of ¥23,986 million compared with the previous fiscal year-end and total equity came to ¥188,156 million, a considerable increase of ¥10,364 million year on year. The main reason for the increase in total assets was the addition of about ¥23 billion in assets from Panasonic Corporation's domestic lead-acid battery business when it was consolidated as a new subsidiary at the end of the second quarter of the fiscal year under review. Total equity was up mainly due to the

increase in net income attributable to owners of the parent to a record-high level and an increase in noncontrolling interests due to steady growth in the contribution from a joint venture in automotive lithium-ion batteries.

For intangible assets, to date the Company recorded expenses for the amortization of goodwill in excess of ¥10 billion. Nonetheless, we want to bring goodwill amortization to an end while the Company's performance remains solid, so we plan to amortize goodwill by about ¥2 billion annually over a five-year period. Since those expenses are accounting-based rather than cash outflows, we will present results for both operating income and net income attributable to owners of the parent before the amortization of goodwill.

What were the targets for capital investment and R&D expenses in fiscal 2016?

Capital investment totaled ¥19.9 billion in fiscal 2016, with almost half being invested in the business for lithium-ion batteries for submarines, part of the Other Businesses segment. Furthermore, a subsidiary's production plant in Tianjin, China, had aged and lacked enough space, so we have been building a new factory nearby. In the future, investment will be aimed at increasing the production capacity of automotive and motorcycle lead-acid battery factories in China, Thailand, Indonesia and Taiwan, the countries where the Group's manufacturing operations are mainly concentrated outside Japan. We also intend to invest in equity-method affiliated companies in strategically important regions. In India, we are focusing on motorcycle lead-acid batteries, the production of which is projected to grow substantially, while forming business partnerships with Japanese motorcycle manufacturers operating in that country. Another important country for the Group in the future is Turkey, given its close proximity and geopolitical ties to Europe, North Africa and the Russian Commonwealth. Accordingly, we intend to expand sales channels in Turkey while continually investing in industrialuse batteries for automobiles, forklifts and other vehicles.

Research and development expenses came to about ¥9.5 billion in fiscal 2016, marking a rapid increase of about ¥2.5 billion over the previous two fiscal years. Most of the increased expenses were for R&D on nextgeneration automotive lithium-ion batteries. Basic research on these batteries is conducted at GS Yuasa International's R&D Center, while product development closer to the commercialization stage is handled by our joint venture, Lithium Energy Japan, as well as by Blue Energy Co., Ltd., and other companies in the GS Yuasa Group. Development of next-generation lithium-ion batteries for electric vehicles is carried out jointly with Germany-based Robert Bosch GmbH, and GS Yuasa's development expenses are in proportion to its ownership share in this joint venture.

VISION & STRATEGY

Interview with the CFO

Please tell us about cash flow results in fiscal 2016.

As of March 31, 2017, cash and cash equivalents amounted to \pm 24,673 million, down \pm 3,114 million, or 11.2%, compared with the previous fiscal year-end.

I will discuss results for each category of cash flows in fiscal 2016 and the main factors that contributed to those results.

Net cash provided by operating activities totaled ¥34,846 million, mainly due to higher year-on-year inflows of income before income taxes and depreciation, which offset an increase in income taxes paid. The amount follows ¥30,215 million in fiscal 2015 and ¥19,730 million in fiscal 2014, indicating that the Company's operations are steadily gaining strength. Under our Fourth Mid-Term Management Plan, currently underway, we are aiming for a cumulative total of ¥130 billion in net cash from operating activities over three years, and we have gotten off to a solid start in the first year of the plan.

Net cash used in investing activities came to ¥32,913 million, compared with ¥17,311 million in the previous fiscal year. In addition to capital investment, the largest factor was the purchase of shares in connection with the acquisition of Panasonic Corporation's domestic lead-acid battery business. Continuing on from fiscal 2016, we have earmarked investment funds for expenses related to the integration of Panasonic's lead-acid battery business outside Japan.

Net cash used in financing activities totaled ¥3,716 million, compared with ¥9,686 million in the previous fiscal year. One of the main factors for this was dividends paid.

Under the Fourth Mid-Term Management Plan, we are aiming for ¥10,000 million in free cash flow, which is the difference between our targets of ¥130,000 million in net cash provided by operating activities and ¥120,000 million in net cash used in investing activities, all cumulative over the three years of the plan. I believe we are making steady progress toward reaching these targets.

What is the Company's financial forecast for fiscal 2017?

In fiscal 2017, our target for consolidated net sales is ¥400 billion. Although that target is about ¥40.4 billion more than the result of ¥359.6 billion achieved in fiscal 2016, it is based on several highly credible factors. First, Panasonic Corporation's domestic lead-acid battery business, which was acquired in fiscal 2016, contributed to consolidated results only for the second half of that fiscal year, but it will make a full-year contribution in fiscal 2017. Second, Panasonic's international lead-acid battery business is scheduled to contribute to consolidated results from the second half of the current fiscal year. Third, following proactive capital investment prior to fiscal 2017, the submarine-use lithium-ion batteries business has been operating smoothly since the end of March 2017, and will make a genuine contribution to net sales from the start of



the current fiscal year. In addition, while GS Yuasa has a dominant share of the Japanese market for lead-acid batteries that meet European Norm standards, sales of these products are expected to increase substantially. All of these factors were taken into account when setting the net sales target for the current fiscal year.

Our outlook for income is also favorable, since we expect the consolidation of Panasonic's lead-acid battery business to benefit the automotive batteries business both in Japan and overseas, and we believe that earnings will improve for automotive lithium-ion batteries.

The underlying assumptions of our fiscal 2017 forecast of financial results are fairly conservative. Starting with exchange rates, although the US dollar traded at ¥111 to ¥112 as of June of this year, our forecast for the full fiscal year assumes an exchange rate of ¥105 to the dollar. The price of lead, the main raw material of the Group's products, averaged ¥275,000 per ton in fiscal 2016, but we assume it will be ¥25,000 higher in fiscal 2017, at ¥300,000 per ton.

Taking all of these factors into account, our forecast of consolidated financial results in fiscal 2017 includes ¥400,000 million in net sales (¥40,400 million above the result in fiscal 2016), ¥24,000 million in operating income (¥900 million more than the fiscal 2016 result), ¥26,500 million in operating income before amortization of goodwill (¥2,300 million above the fiscal 2016 result), ¥12,500 million in net income attributable to owners of the parent (¥300 million above the fiscal 2016 result), and ¥15,500 million in net income attributable to owners of the parent before the amortization of goodwill (¥1,800 million above the fiscal 2016 result).

Fiscal 2017 Forecast of Consolidated Financial Results		
Net sales	¥400,000 million	
Operating income	¥24,000 million (¥26,500 million before amortization of goodwill)	
Net income attributable to owners of the parent	¥12,500 million (¥15,500 million before amortization of goodwill)	

What is the Company's dividend policy?

As a matter of policy, management had set targets based on the dividend amount in the previous mid-term management plans. Under our latest plan, however, while taking into account the Company's recent performance and financial position, our goal is to attain a payout ratio of at least 30%, based on net income attributable to owners of the parent before the amortization of goodwill as the source of dividends. Recognizing that the payment of dividends to shareholders is one of the most important policies for management, we believe that this dividend policy benefits all shareholders. Our basic policy on internal reserves is to appropriate those funds for investment in future business expansion, maintaining and enhancing competitiveness, and ensuring continual growth going forward, while securing enough for stable payments of dividends to shareholders over the long term.

In fiscal 2016, having achieved the target for net income attributable to owners of the parent, the Company paid an annual dividend of ¥10 per share, made up of an interim

Business and Other Risks

(1) Economic Conditions

Demand for the GS Yuasa Group's products is influenced by economic conditions in the markets where products are sold. Therefore, in the Group's main markets, which include Japan, the rest of Asia, North America, and Europe, economic setbacks and accompanying demand contractions, could adversely affect the Group's earnings and financial standing.

(2) Intensification of Price Competition

The GS Yuasa Group is exposed to intense price competition in each of the markets where it conducts business, and setting prices at advantageous levels has become difficult. Particularly in the automotive battery field (replacement), we not only face the same competitors as in Japan but also must deal with lowcost products supplied by overseas companies, which make competition more intense. The GS Yuasa Group is cutting costs and implementing measures to strengthen marketing power, but it may not be easy to maintain and expand market share and secure profitability in the future.

(3) Foreign Exchange Rate Fluctuations

The GS Yuasa Group conducts business in Japan, the rest of Asia, North America, and Europe. Financial statement items that are denominated in local currencies outside of Japan, such as sales, expenses, and assets, are converted into yen for consolidated financial statements. The yen value of these amounts can change depending on the exchange rate, even if the amounts have not changed in local currencies. When local currencies appreciate in areas where the Group carries out overseas production, manufacturing and procurement costs can rise in these areas. The Group conducts forex-hedged transactions in an effort to hold the ill effects of short-term foreign exchange rate fluctuations to a minimum, but mediumto long-term currency fluctuations may impede the Group's ability to procure, manufacture, distribute, and sell goods according to plan. Therefore, it is possible for foreign exchange rate fluctuations to influence the Group's earnings and financial standing

(4) Risks Related to International Activities and Overseas Expansion

The GS Yuasa Group manufactures and markets products in Japan, the rest of Asia, North America, Europe, and elsewhere. The following risks are intrinsic to these markets, and they could affect the Group's earnings and financial standing. (a) Unforeseen changes to laws or regulations (b) Difficulty in hiring and keeping human resources dividend of ¥3 per share and a year-end dividend of ¥7 per share. As a result, the payout ratio came to 37.4% on the basis of net income attributable to owners of the parent before the amortization of goodwill. Further, because net income attributable to owners of the parent before the amortization of goodwill exceeded a certain level, the Company plans to buy back approximately ¥1 billion in shares as part of an effort to return wealth to shareholders.

In fiscal 2017, based on the assumption that the Company will achieve the income targets, management plans to pay an annual dividend of ¥10 per share, made up of an interim dividend of ¥3 per share and a year-end dividend of ¥7 per share.

- (c) The possibility that inadequate technology infrastructure will affect the Group's manufacturing and other activities, or lower the reputation of GS Yuasa products among customers
- (d) Social disturbances caused by terrorism or war. (5) Risks Related to M&A

The GS Yuasa Group considers M&A to be a useful and effective tool for business expansion. When the Group carries out M&A, the transaction is considered from a range of viewpoints, including the target company's financial standing and potential synergy with the Group's businesses. Due to drastic changes in the business environment or other factors, however, an acquired business might not perform as planned. If invested funds cannot be recovered or a loss on goodwill is recorded, the GS Yuasa Group's earnings and financial standing could be affected.

- (6) Risks Related to Raw Material Markets Fluctuations Lead is a key material used in lead-acid batteries, the GS Yuasa Group's main product. However, changes in the market price of lead cannot be reflected immediately in our product prices, so the Group's earnings and financial standing could be affected.
- (7) Effect of Seasonal Factors on Automotive Battery (Replacement) Sales Volume The sales volume of the GS Yuasa Group's main product,

automotive batteries (replacement) is affected by seasonal factors, particularly the weather. For example, cool summers and warm winters result in a narrower temperature range, which is favorable for maintaining battery performance, so replacement demand and thus sales volume declines under these conditions. These seasonal factors cannot be accurately forecast, making it difficult to take adequate countermeasures in advance, so seasonal factors could affect the Group's earnings and financial standing.

(8) Interest Rate Fluctuations
 The GS Yuasa Group's interest-bearing debt burden includes some debt with variable interest rates. Therefore, if interest rates rise, the Group's cost for procuring funds could increase.

 (9) Lawsuits and Other Legal Proceedings

In carrying out business, the GS Yuasa Group may be sued by suppliers or third parties, and there is a risk that regulatory authorities could take legal action against the Group.

(10) Environmental Regulations

In China, the central government shows signs of strengthening environmental regulations on lead-acid battery manufacturers and lead smelters. Some manufacturing activities at GS Yuasa Group companies could be affected.

Progress under the Mid-Term Management Plan

Overview of the Fourth Mid-Term Management Plan covering April 2016 to March 2019

Mid-Term Management Policies

With the aim of becoming the "new GS Yuasa," an energy device company, we will ensure long-term, sustainable growth.

Ensure profit in new business (lithium-ion batteries) and firmly put this business on a stable growth track Further expand the business domain of growth business (overseas operations) and raise its profitability Expand and stabilize the cash flow from existing businesses (automotive batteries business and industrial batteries and power supplies business) and make investments for future growth

Key Mid-Term Strategic Tasks

Stabilize and expand new business by enhancing the management foundation and earnings power of existing and growth businesses and grow it into the second pillar of the corporate foundation following the lead-acid batteries business.

Ensure the achievement of the fourth quality improvement plan over the next three years, based on the GS YUASA **Basic Quality Policy**

Reorganize the business structure in response to markets and customers

Management Goals

In the three years of the plan, from April 2016 to March 2019, we will emphasize profitability and asset efficiency in our management.

Mid-Term Basic Strat

Financial Policies

We focus on ROE as a management index, and we will promote more efficient use of invested capital. By achieving a payout ratio of at least 30% before amortization of goodwill, we will attain stable dividends for shareholders and promote efficient use of capital.

Capital Policy

We will enhance corporate value through a well-balanced allocation of funds for investment to facilitate medium- to longterm growth, to reinforce the financial foundation and support growth, and for an appropriate return to shareholders.

Targets for FY 2018 (April 2018–March 2019)

Net sales	¥480.0 billion	
Operating income ratio	8%	
ROE	10%	
Payout ratio	30%	
	C Lall at a la state	

Notes: 1. The above benchmark is equivalent to the profit before goodwill amortization (operating income and net income attributable to owners of the parent). 2. The above figures take into account the impact of the transfer of Panasonic's business on the

premise of approval from competition law authorities of concerned countries

	FY 2016 results (April 2016 to March 2017)	FY 2018 targets (April 2018 to March 2019)
Interest-bearing debt	¥73.6 billion	¥80.0 billion or less
Ratio of interest-bearing debt to cash flow*	2.2 years	2.0 years or less
Payout ratio (total return) 37.4% (¥4.1 billion) 30% (approx. ¥7.0 billion)		
*Interest-bearing debt (including lease obligations)/Net cash provided by operating activities		

	Third Mid-Term Management Plan Three year total	Fourth Mid-Term Management Plan Three year total
Net cash provided by operating activities	¥69.6 billion	¥130.0 billion
Net cash used in investing activities	(¥42.6) billion	(¥120.0) billion
Free cash flow	¥27.0 billion	¥ 10.0 billion

Notes: 1. Payout ratio for FY 2018 is the payout ratio before goodwill amortization. 2. The above figures take into account the impact of the transfer of Panasonic's business on the premise of approval from competition law authorities of concerned countries



Notes: 1. Payout ratio for FY 2018 is the payout ratio before goodwill amortization. The above figures take into account the impact of the transfer of Panasonic's business on the premise of approval from competition law authorities of concerned countries. Basic Management Objectives and Areas of Focus in Fiscal 2017

Basic Management Objectives

- Maintain the trust of customers by providing consistent quality to ensure that quality is given the highest priority
- Broaden the scope of established businesses and growth businesses, while maintaining stable cash flows
- Make new businesses profitable as a way to achieve stable growth going forward

Areas of Management Focus

1 Quality of products and services

Products and services are offered with attention paid to the new value expected by customers in order to continue meeting their expectations and earning their trust.

2 Promotion of CSR and strict enforcement of compliance

The GS Yuasa CSR Policy and Code of Conduct were established to enable systemic initiatives, and will be integrated into all business activities covering global operations. Efforts are being made to ensure compliance with social norms and in-house rules, and to practice highly transparent, fair management.

Human resource training and allocation

Employees are being systematically transferred and assigned to the most suitable positions and workplaces to enable more capable, efficient operations.

4 Occupational health and safety management **5** Information management

Reorganization of the Group's businesses based on market trends and customer needs Effective from April 1, 2017 **Automotive batteries** Industrial batteries and power supplies Automotive lithium-ion batteries Other businesses

	Before	
Domest	ic automotive batteries	
Overseas	Lead-acid batteries	
operations	Lithium-ion batteries	
Domestic industr	ial batteries and power supplies	
Automot	ive Lithium-ion batteries	
(Other businesses	

Key tasks for each business

Automotive batteries

- \diamond Find out how to optimize the organizational structure of the business so this is clear to customers and so we can quickly respond to their requests
- \diamond Integrate manufacturing and sales strengths without distinguishing between operations in Japan and overseas to boost earnings and respond to global market demand
- \diamond Optimize the network of factories worldwide and reduce costs

Industrial batteries and power supplies

- \diamond Improve earnings by revamping cost structures and optimizing organizations
- ♦ Pursue new product strategies by implementing ambitious sales strategies and manufacturing innovations
- \diamond Accelerate the development of lithium-related products and their release to the market, while working to cultivate markets with a global outlook

Automotive lithium-ion batteries

- ♦ Ensure stable profitability by reducing costs and improving performance, while giving the highest priority to quality \diamond Promote collaboration between all business divisions and examine product marketing strategies for the automotive and industrial market with a global outlook
- ♦ Step up development for commercializing products made by Lithium Energy and Power GmbH & Co. KG

Other businesses

 \diamond Establish a manufacturing system that can ensure a high level of quality for lithium-ion batteries for submarines

Automotive Batteries

In the Automotive Batteries business segment, we manufacture and sell automotive, motorcycle and industrial lead-acid batteries. We operate in 37 locations in 17 countries worldwide, particularly in Asia, including Japan, China, Thailand and Indonesia. With the rapid adoption of fuel-efficiency technologies for eco-friendly cars, such as start and stop cars and hybrid vehicles, this segment is working to develop high-performance, high-quality batteries for these vehicles and to release them into the market.

Japan



Overseas



Financial results and key initiatives in fiscal 2016

In Japan, the Automotive Batteries segment performed extremely well overall in fiscal 2016, ended March 31, 2017, with both sales and income increasing year on year. Net sales rose ¥16,612 million to ¥67,599 million, while operating income before the amortization of goodwill jumped ¥2,385 million to ¥5,677 million. The main reason for the increase in net sales was the substantial contribution of growing sales of batteries for new

vehicles that are compliant with the European Norm (EN). In the past, we mainly manufactured and sold batteries that were compliant with Japanese Industrial Standards, but sales of EN-compliant batteries have increased markedly in recent years, since we began supplying them to Toyota Motor Corporation. We were able to respond to this new demand ahead of our competitors in Japan because the Group's operations overseas had already been manufacturing and selling EN-compliant batteries. Another factor underlying the sales increase was growth in sales of new and replacement lead-acid batteries for start and stop vehicles. Sales also

SWOT analysis

Strenath

Advanced development supported by collaboration with automakers Technologies accumulated over 100 years Full lineup of products, ranging from general to high-performance batteries of all sizes Disaster-ready production and supply system Strong presence in growing markets in Asia

Weakness Lower cost competitiveness

Weak footing in North American and European markets

Opportunity

Increasing number of vehicles in Japan equipped with European Norm-compliant batteries Growing demand for start and stop vehicles in Japan and other countrie Motorization underway in ASEAN countries Growing demand for motorcycles

in India

Threat

- Falling demand for automobiles in Japan due to demographic shift Entry of overseas battery manufacturers into the Japanese market
- Failing sales prices due to price
- competition Stricter regulations for lead in
- Europe and North America

increased due to the contribution from Panasonic Corporation's domestic lead-acid batteries business, which was acquired at the end of the second guarter of the fiscal year under review.

The primary reason for the increase in operating income in Japan was the contribution from start and stop vehicle leadacid batteries, which are comparatively more profitable than other products. These batteries sold well on the back of strong demand. Although there was a steep increase in the price of lead, the main raw material for lead-acid batteries, we were able to offset this impact by rationalizing product design and manufacturing operations, enabling segment income to increase substantially over the previous fiscal year.

Outside of Japan, the Automotive Batteries segment posted year-on-year decreases in both sales and income. Net sales fell ¥20,788 million to ¥170,613

Fiscal 2016 Highlights

Panasonic Corporation's lead-acid battery business acquired through a share purchase

In fiscal 2016, GS Yuasa International Ltd. purchased 85.1% of the outstanding shares of Panasonic Storage Battery Co., Ltd., based on a share transfer agreement concluded with Panasonic Corporation for acquiring their lead-acid battery business. GS Yuasa International made Panasonic Storage Battery a consolidated subsidiary (now renamed GS Yuasa Energy Co., Ltd.).

With the acquisition of this business, as soon as possible GS Yuasa International will strive to increase the global market share for lead-acid batteries through synergistic effects. This synergy will include rationalizing manufacturing operations by using production technologies across the Group and restructuring operations to speed up development in response to diverse requests for product development. GS Yuasa Energy will continue to manufacture Panasonic brand lead-acid batteries, and Panasonic will sell these products through the same sales channels as before.

Panasonic has developed advanced technologies for lead-acid battery business, particularly for technical development, as well as manufacturing technology and quality control. The GS Yuasa Group will use these outstanding capabilities throughout global operations to ensure steady growth by boosting earnings in established businesses and by cultivating new businesses.



Managing Director and General Manager, Automotive Battery

million and operating income declined ¥898 million to ¥10,460 million.

Although sales of automotive lead-acid batteries were up in China and Southeast Asia, sales in this segment decreased overall mainly due to the considerable impact of the yen's depreciation on exchange rates. Similarly, operating income declined because of exchange rates. If we examine the results on a local currency basis, however, both sales and income actually increased compared with the previous fiscal year.



GS Yuasa Energy's headquarters building

Outlook for fiscal 2017

In fiscal 2017, we do not foresee any major changes in the Automotive Batteries segment in Japan compared with fiscal 2016. We expect sales volume to reach record-high levels due to growing sales of EN-compliant batteries for new vehicles as well as new and replacement lead-acid batteries for start and stop vehicles, which are highly profitable products. Therefore, segment sales and income are forecast to continue increasing from the levels recorded in fiscal 2016.

At the same time, segment sales and income are forecast to increase substantially outside Japan. Having secured the number one market share for automotive lead-acid batteries in Asia, we intend to promote sales of these products in particular in the Middle East, North Africa and Europe. Sales campaigns will be carried out by the Turkish company Inci GS Yuasa Akü Sanayi ve Ticaret Anonim Sirketi, in which GS Yuasa International acquired a stake in 2015, along with three sales offices being set up in the United Arab Emirates, Ukraine and Egypt. We have already transferred three employees to Inci GS Yuasa and will send more to provide sales and technical support so that the company can quickly begin supplying products to Japanese automakers operating in the region.

Similarly, with the acquisition of Panasonic's international lead-acid battery business, we will conclude agreements for taking over their industrial lead-acid battery factory in China in the third quarter of the current fiscal year as well as their automotive lead-acid battery factory in Thailand as soon as all procedures are completed.

In addition, the GS Yuasa Group was reorganized, effective from April 1, 2017. Our goal is to create a "one stop" organization for customers doing business globally. By applying the expertise we have gained in Japan to operations around the world, we anticipate positive effects, including higher quality and a stronger potential for earnings.

Taking all of these factors into consideration for our fiscal 2017 forecasts for the Automotive Batteries segment, we forecast that net sales will increase by ¥17.4 billion year on year to ¥85 billion in Japan and by ¥17.4 billion to ¥188 billion overseas. Operating income is forecast to remain at the ¥5.7 billion level in Japan and increase ¥0.8 billion to ¥11.3 billion overseas.

Progress under the Fourth Mid-Term Management Plan

By the final fiscal year of the Fourth Mid-Term Management Plan, we are aiming for net sales of ¥86 billion in Japan and ¥230 billion overseas as well as an operating income ratio of 10% in Japan and 7% overseas.

In Japan, we expect the price of lead, the main raw material for lead-acid batteries, to remain higher than the assumed amount in the plan: ¥270,000 per ton. Although higher lead prices can be reflected in the selling prices of batteries for new vehicles, that cannot be done for replacement batteries, so we announced an increase in sales prices of 10%, effective from June 2017. At the same time, achieving an operating income ratio of 10% will not be easy, but in order to reach that target we will work to make highperformance, high-quality, low-cost products while increasing our market share for high-added-value batteries.

Outside Japan, our target for net sales by the final year of the plan has become challenging because the initially forecasted exchange rates have been revised. Specifically, an exchange rate of ¥115 to the US dollar was assumed under the

plan, but we now expect the rate to be around ¥105 to the dollar in the current fiscal year. The impact of that revision on financial results would be around 10% in strictly yen to dollar terms (which we recognize cannot be calculated simply since the Group's global operations are concentrated in Asia). Despite the revision, however, what we need to do going forward has not changed, so we intend to steadily implement the strategies set at the time of formulating the Fourth Mid-Term Management Plan. Accordingly, we will investigate business growth initiatives after preparing to integrate Panasonic's international leadacid batteries business, promote business in untapped markets to increase our global market share, take steps to boost earnings and strengthen the foundations of established operations, and pursue

opportunities for mergers and acquisitions as a way to increase the scale of the Group's operations.

Message to stakeholders

I want the GS Yuasa Group to be a group of companies that amazes and impresses customers. I also want our customers to feel confident that their problems can be solved by us. Therefore, we are developing the human resources needed for such a group of companies. Our employees will be able to

Fiscal 2016 Highlights

New production plant under construction in Tianjin will boost production capacity for automotive lead-acid batteries

In fiscal 2016, GS Yuasa is building a new production plant for the Tianjin GS Battery Co., Ltd. subsidiary to manufacture automotive lead-acid batteries in China. Scheduled to begin operations in the summer of 2018, the new plant is being built in Tianjin's Nangang Industrial Zone. With an area of 180,000 square meters, the plant site will be the largest in the GS Yuasa Group.

In China's steadily growing automobile industry, demand for start and Artist's rendition of the new plan stop vehicles and fuel-efficient cars is projected to increase sharply due to the adoption of stricter exhaust gas emission regulations. In response, the production of high-performance lead-acid batteries for eco-friendly vehicles will be increased at the new plant, which will be equipped with the GS Yuasa Group's latest technologies and production equipment. In addition, manufacturing at Tianjin GS Battery's existing plant in Tianjin will be transferred and centralized at the new plant to streamline and increase efficiency. Consequently, the new plant will have an annual maximum production capacity of eight million units, allowing Tianjin GS Battery to eventually double the latest net sales. The total investment in the plant is approximately ¥17.5 billion.

In China, the GS Yuasa Group will continue working to promptly respond to customers' needs, while bolstering the system for supplying automotive lead-acid batteries in anticipation of growing demand.

Overview of Tianjin GS Battery Co., Ltd.

Company name	Tianjin GS Battery Co., Ltd.
Date of establishment	November 11, 1991
Capital	US\$ 54.6 million
Quanti share	GS Yuasa International Ltd.
Ownership share	Tianjin BENEFO Machinery E
Business activities	Manufacture and sale of auto
	Existing plant
Location	Huanghai Road, Tianjin Econo Technological Development A China
Annual production capacity	Up to 4 million units



contribute to community development through our business activities, which, in turn, will lead to their own personal development and the growth of the Group. I believe we should constantly try to create that cycle. Moreover, I will work to ensure that the automotive batteries business reflects the needs of customers promptly with new product development ahead of our rivals and to establish an organization that can supply products to customers all over the world.



	80%	
quipment Group Co., Ltd. 20%		
motive lead-acid batteries		
	New plant	
omic- Area, Tianjin,	Gangda Road, Nangang Industrial Zone, Tianjin Economic-Technological Development Area, Tianjin, China	
	Up to 8 million units	

Industrial Batteries and Power Supplies

The Industrial Batteries and Power Supplies business segment helps ensure the safety of advanced information-based societies by providing power supplies and industrial batteries for backup electrical power supplies used in buildings and other parts of the infrastructure, including mobile phone base stations, water and sewage plants and power plants. This business segment also helps protect the global environment by supplying industrial lithium-ion batteries, storage batteries for forklifts and other electrically powered vehicles, as well as power conditioners for photovoltaic power generation and energy-saving lighting equipment for roads and tunnels.



Financial results and key initiatives in fiscal 2016

In fiscal 2016, ended March 31, 2017, the Industrial Batteries and Power Supplies segment posted a decrease in sales and an increase in income compared with the previous fiscal year. Specifically, net sales were ¥72,765 million, a slight decrease of ¥2,039 million, while operating income was ¥8,702 million, up ¥641 million year on year.

SWOT analysis

Strength

 High share of the industrial battery and power supply markets in Japan
 Stable brand awareness in Japan

 Strong reputation for reliability and a broad product lineup
 Extensive sales and service network

Weakness

Comparative slowness responding to global market trends Insufficient inter-group communication due to organizing divisional headquarters according to product lines **Opportunity** Growing use of renewable energy as society shifts to low-carbon power sources Increasing number of electric vehicles due to environmental regulations Advances in services from using the Internet of Things

Threat

 Intensifying competition, especially for industrial lithium-ion batteries
 Rising prices for raw materials
 Fluctuations in exchange rates The dip in net sales was mainly due to a year-on-year decrease in sales of power conditioners of about ¥2,000 million, which reflected a slowdown in the construction of small-scale photovoltaic power plants due to declining rates set in Japan's feed-in tariff system for promoting investment in renewable energy. Based on this tariff schedule, although the incentive for investing in photovoltaic power plants has mostly run its course, construction of large-scale wind power plants is projected to increase.

Despite the impact of slower sales of power conditioners, segment income increased year on year due to favorable conditions for established product lineups, including backup batteries and power supplies, and lead-acid batteries for forklifts.

Demand for industrial lithium-ion batteries first began in the electric power industry and has been gradually spreading to other infrastructure-related industries. In the railway industry, in particular, customers have been requesting batteries for a broad range of applications, including powering hybrid railcars, providing emergency power for driving railcars to the next station during power outages and controlling voltage drops in the overhead wires that supply the cars with electricity. In response, we are working to offer solutions to all railway operators in Japan.

Outlook for fiscal 2017

In fiscal 2017, our main goal is to maintain the momentum of the segment's financial results from fiscal 2016. While it is essential to achieve this goal in the short run, the current fiscal year is an important time for laying the groundwork for cultivating new markets for industrial lithium-ion batteries and for launching full-fledged initiatives for growth as we work toward achieving our targets in fiscal 2018, the final fiscal year of the Fourth Mid-Term Management Plan. We are improving cooperation between divisions to share the know-how we have developed in the automotive lithium-ion batteries business and to expand operations worldwide.

Progress under the Fourth Mid-Term Management Plan

By the final fiscal year of the Fourth Mid-Term Management Plan, we are aiming for net sales of ¥90 billion and an operating income ratio of 13%. As I explained in connection with our outlook for fiscal 2017, we are carrying out a number of initiatives for achieving these targets.

The GS Yuasa Group has world-leading development strengths and product lineups in the industrial lithium-ion battery industry. Nevertheless, unlike our rivals in the lead-acid battery industry, our competitors in this industry are major international electrical device manufacturers. Therefore, we are currently focusing on improving our cost competitiveness in particular. It will be important to reduce costs while also increasing sales volume, and I believe that implementing a plan-docheck-act (PDCA) cycle will be necessary for finding a good balance between those objectives.

In the global market, we are working to expand business for both lead-acid batteries and industrial lithium-ion batteries. Since industrial products need after-sales service, we will strive to broaden our service capabilities in the future, particularly at the Group's production plants, sales offices and service centers in Southeast Asia, Europe and the United States.

Message to stakeholders

As the director in charge of this segment, I place the utmost importance on two main missions. The first is ensuring quality. The importance of quality is not simply limited to the quality of products. Instead, I consider five aspects of quality: product quality, including our workmanship and servicing; the quality of our sales when we deliver products to customers; perceived quality, meaning how our products are judged by consumers in

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Masaru Sawada Director and General Manager, Industrial Batteries & Power Sources Business Unit, GS Yuasa International Ltd.

the marketplace; environmental quality, which we pursue with environmentally friendly products and manufacturing processes; and social quality, meaning our corporate social responsibility, as well as compliance and adherence to public expectations of fundamental business norms.

The second mission is to bolster competitiveness. While always comparing GS Yuasa with competitors and keeping in mind the perspective of customers, I intend to raise the visibility of our improvement initiatives aimed at realizing sustainable growth and to make our organizations more responsive and proactive.

Looking ahead, although we can expect the market to change and competition to heat up, we will work to expand business by doing our best to systematically ensure quality and by bolstering our competitiveness.

Automotive Lithium-ion Batteries

The Automotive Lithium-ion Batteries business segment manufactures and sells lithium-ion batteries for electric cars as well as hybrid and plug-in hybrid vehicles. All of these are attracting attention as environmentally friendly automobiles.



Financial results and key initiatives in fiscal 2016

In fiscal 2016, ended March 31, 2017, the Automotive Lithium-ion Batteries segment posted net sales of ¥39,305 million, up ¥992 million year on year. This segment became profitable for the first time, with operating income rising ¥612 million from a loss in the previous fiscal year to ¥46 million.

For a new business like lithium-ion batteries, securing profits after operations have reached a certain scale is seen as a sound approach. Nevertheless, in fiscal 2014, we set the goal of making the business

SWOT analysis

Strength

- Cutting-edge research and development Technologies for ensuring the safe design of high-capacity lithium-ion batteries Skilled human resources and business partners
- A 100-year history as a specialized manufacturer of storage batteries

and acturer of storage bar

Business partners are needed for

- expanding operations due to insufficient capital Lack of technologies for mass
- production Weak footing in North America
- Vleak footing in North America
- rising prices
 Effective material development required ahead of competitors

Opportunity

Widespread adoption of

consumption regulations

Growing market for industrial

Possibility of accidents at the

production stage and accidents

caused by unsafe or defective

Depletion of raw materials and

eco-friendly vehicles

applications

products

Increasingly strict fuel

profitable within two years and implemented measures for achieving that objective. Those actions were based on the idea that if profits could be generated from the current scale of the business, when operations expanded beyond that point, the business would continue to contribute profits. Therefore, during those two years, we focused on rationalizing the purchase of raw materials, reducing other outlays, improving yields to boost productivity, centralizing operations of production lines and ensuring that the production lines could operate flexibly. As a result, we were able to achieve profitability based on that plan. At the same time, Lithium Energy Japan worked to increase sales in Europe, while Blue Energy Co., Ltd. boosted sales by winning contracts for batteries to be installed in new car models, including the Honda Freed hybrid minivan and the Honda Accord Hybrid. As a result, both companies contributed to segment sales.

Achieving profitability in this segment had an enormously positive effect: it significantly boosted the morale of all employees and motivated everyone to pursue further growth and success throughout our operations.

Outlook for fiscal 2017

In fiscal 2017, we have already completed plans for supplying batteries to automakers for various vehicle models. Therefore, while winning new orders contributes substantially to sales, manufacturing and supplying products according to those plans will be more important in terms of our outlook for net sales in the Automotive Lithium-ion Batteries segment. Therefore, we intend to closely monitor our plans every month to make sure that no serious deviations occur.

Our target for operating income in fiscal 2017 is ¥1.0 billion. Recognizing that there is still room for cutting costs, we have been continually making improvements, while pushing ahead with measures for achieving this target.

Given the strong interest today in industrial applications of lithium-ion batteries, the operating environment for this business is promising. Therefore, to explore how the highly competitive lithium-ion batteries that we have developed for vehicles can be used in industrial applications, we are conducting studies in close cooperation with the GS Yuasa International Ltd.'s Industrial Batteries & Power Sources Business Unit, which has an excellent track record and experience spanning many years.

Progress under the Fourth Mid-Term Management Plan

Our target for the operating income ratio is 5% by the fiscal year ending March 31, 2019, the final fiscal year of our Fourth Mid-Term Management Plan. In addition to cutting costs, we are implementing aggressive sales programs, including price negotiations with customers, to achieve that target. To reach our target for net sales by the final fiscal year of the plan, we are striving to increase orders not only for automotive products but also industrial products. At present, we are researching and developing high-energy-density products, while seeking orders starting from 2021 and later, when the use of electric vehicles is projected to be in full swing.

Automotive lithium-ion batteries have a very long service life, retaining about 80% of their capacity even after 10 years. Therefore, in cooperation with automakers, it is essential to study ways to reuse these batteries for other applications after they are no longer in vehicles. Although recycling lithium-ion batteries is now regarded as difficult, we believe it will be necessary to establish recycling methods by the time electric vehicles are widespread.

Message to stakeholders

The GS Yuasa Group has mainly handled lead-acid batteries up to now, but to continue growing sustainably over the long term, we will need to expand the lithium-ion batteries business to a similar scale as the lead-acid batteries business, establishing it as a

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Kei Nishida

Representative Director, GS Yuasa Corporation Representative Director and Senior Managing Director in charge of procurement and the lithium-ion batteries business, GS Yuasa International Ltd.

second pillar of our business. As the director in charge, my biggest role is to move forward with the plan we formulated for that purpose.

Just as the lead-acid batteries business set up a global network of production plants concentrated in Japan and other Asian countries, the automotive lithium-ion batteries business will also look to establish plants in regions where demand is high. Furthermore, since profits are generated differently from lead-acid batteries, we will create a new model for securing income and expanding the business so that we can contribute to consolidated results.

Other Businesses

In the Other Businesses segment, the Company develops, manufactures and sells specialized batteries and power supplies for extreme environments ranging from deep sea to space, including lithium-ion batteries for submarines, aircraft, satellites and rockets.



Financial results and key initiatives in fiscal 2016

In fiscal 2016, ended March 31, 2017, the Other Businesses segment posted a decrease in sales and a more substantial operating loss than the previous fiscal year. The main factors underlying the decrease in sales were the absence of shipments of batteries for manned submersible vessels and submarines in the fiscal year, and a temporary drop in sales of batteries for aircraft, satellites, rockets, and military equipment as development projects came to an end, putting mass production on hold. The operating loss worsened mainly

SWOT analysis

Strength

 Advanced capabilities in and close cooperation between manufacturing, development, engineering, and sales operations
 Safe, reliable and high-quality products
 Group-wide use of the latest technologies that have high barriers to entry
 Extensive experience in specialized applications

Weakness

 Weak brand presence outside Japan
 Large investments needed for R&D and facilities Construction Growing requirement for high-capacity lithium-ion batteries Ongoing demand for lithium-ion batteries for submarine Increasing demand for aircraft lithium-ion batteries Japan's easing of restrictions on exporting arms

Threat

 Depletion and rising prices for raw materials
 Intensifying competition with rival companies due to the decrease in sales and increased company-wide expenses resulting from higher costs for the research and development of next-generation batteries. The segment results include sales from GS Yuasa Technology Ltd.'s specialized battery business and corporate expenses that are not allocated in all segments.

As a result of the factors above, net sales were ¥9,324 million, down ¥781 million compared with the previous fiscal year. Further, the operating loss after adjustments of corporate expenses and other items posted in the previous fiscal year fell a further ¥463 million to ¥700 million.

Outlook for fiscal 2017

In fiscal 2017, we expect net sales to increase and the operating loss to improve in the Other Businesses segment. The main reason for this forecast is a sales contribution for lithium-ion batteries for submarines, for which production began in March 2017. The Company began developing these batteries in the 1990s and concluded a contract in fiscal 2015 with the Acquisition, Technology & Logistics Agency of Japan's Ministry of Defense to supply products to the first submarine equipped with lithium-ion batteries. In October 2016, we built a specialized production plant in Kusatsu, Shiga Prefecture, and began manufacturing these batteries in March 2017.

Considering all the factors above, we are forecasting net sales of ¥16,000 million in fiscal 2017, a year-on-year increase of ¥670 million. We also expect the operating loss to move toward profitability.

Progress under the Fourth Mid-Term Management Plan

Under the Fourth Mid-Term Management Plan, our goals for this segment are to expand the scale of the specialized battery business as well as provide the best performing, highest quality products that can withstand harsh environments, ranging from deep sea to space. Now, in the second year of the plan, we are going ahead as planned with manufacturing lithium-ion submarine batteries, and working to expand this business segment internationally by taking advantage of the Japanese government's recent policy of easing restrictions on exporting arms, after a long period of banning weapon exports. We are striving to reach our target of ¥18 billion in net sales by the final fiscal year of the plan.

Message to stakeholders

The Company now organizes businesses based on three product groups—automotive batteries, industrial batteries and power supplies, and automotive lithium-ion batteries—while specialized batteries for submarines, aircraft, satellites, rockets, and other types of equipment are categorized as Other Businesses. In the future, I hope to increase total sales of batteries for aircraft, satellites, rockets, and military equipment to the ¥50 billion mark and establish an independent business separate from the Other Businesses segment. One plan for achieving that goal involves a shift to electric aircraft. Changing from

Fiscal 2016 Highlights

GS Yuasa's lithium-ion cells installed in the International Space Station following shipments from December 2016

The high-performance lithium-ion cells for use in space that are developed and manufactured by GS Yuasa Technology Ltd., a subsidiary of GS Yuasa International, have been adopted for the batteries in the International Space Station (ISS). The cells were first delivered to the ISS in December 2016. Featuring high energy density and a long service life, these cells are optimally designed for the space station, which requires highly efficient charging and discharging. Compared with the cells previously installed in the ISS, GS Yuasa Technology's cells have about three times more energy density per unit of mass, allowing the same performance as the 48 batteries previously used to be achieved by 24 batteries—half the number. The new batteries are being delivered to the ISS in four shipments by the Kounotori H-II Transfer Vehicle operated by the Japan Aerospace Exploration Agency. (More information is available on the agency's website: http://iss.jaxa.jp/en/htv/news/batteries_loaded.html)

GS Yuasa Technology develops, manufactures and sells battery cells and power sources for specialized applications, and has been supplying high-performance, high-quality batteries for sea, land, air and space, environments ranging from ocean depths of 6,500 meters to 36,000 kilometers above the earth. Into the future, the company intends to continue developing projects for space by developing and manufacturing high-performance lithium-ion cells.



Hiroaki Yoshida Director in charge of R&D and Intellectual Property, as well as head of the Research and Development Center, GS Yuasa International Ltd.

the current system of engines powered by fossil fuels to batteries and electric motors would dramatically increase demand for batteries. Therefore, we will work to release even higher performance and higher quality products so that customers come to recognize GS Yuasa batteries as key components of aircraft.



A lithium-ion cell made by GS Yuasa Technology for the International Space Station, with a cargo pallet holding the station's new batteries in the background

Research and Development

Overview of Fiscal 2016

In fiscal 2016, ended March 31, 2017, the Company carried out proactive research and development covering basic research through to the development of products and manufacturing technologies for every business segment: Automotive Batteries (Japan), Automotive Batteries (Overseas), Industrial



- Automotive Lithium-ion Batteries
- Other Businesses



Batteries and Power Supplies, Automotive Lithiumion Batteries, and Other Businesses. Among these products, the Company focused on developing nextgeneration automotive lithium-ion batteries in particular. R&D was also done on post-lithium-ion batteries by studying battery materials for the future as well as increasing the number of people involved in basic research.

After general development is done by the Company's R&D departments, product development tailoring to automotive batteries for specific vehicle models is handled by Group companies, including Lithium Energy Japan and Blue Energy Co., Ltd.

Automotive Batteries (Japan)

R&D costs for this business segment came to ¥1,230 million in fiscal 2016, mainly for R&D on automotive and motorcycle lead-acid batteries.

As part of the R&D for automotive lead-acid batteries, we developed a technology for substantially reducing sulfation (the build-up of lead sulfate crystals), the primary cause of deterioration in leadacid batteries for start and stop vehicles. Moreover, we developed the ECO.R ENJ series of European Norm (EN) compliant batteries with Japanese specifications. Compliant with Japanese Industrial Standards for safety, these products are suitable for Japan's warm climate, while meeting engine start-up performance requirements during cold weather.

> In addition, we made progress in developing new lead-acid battery technologies for all types of motorcycles, including touring, standard and commuting models.

Automotive Batteries (Overseas)

R&D costs in this segment totaled ¥498 million in fiscal 2016, mainly for R&D related to automotive, motorcycle, and industrial lead-acid batteries that were manufactured and used outside Japan.

As part of the R&D for automotive lead-acid batteries, we developed production technologies and products especially for start and stop vehicles as well as vehicles that use charge controllers. In Turkey, progress was made in developing lead-acid batteries for start and stop vehicles for the European market.

Also, we developed medium-capacity valveregulated lead-acid batteries for mid-sized motorcycles, and began manufacturing them at the Group's production plants in Southeast Asia. We also developed valve-regulated lead-acid batteries for commuter and start and stop motorcycles in the Indian market, which is expected to grow substantially.

Demand for battery-powered forklifts is increasing worldwide, especially in Asia. In response, we have been developing lead-acid batteries for forklifts tailored to the needs of different regions at our R&D facilities in China and Thailand.

Industrial Batteries and Power Supplies

In fiscal 2016, R&D costs came to ¥2,288 million in this segment for R&D related to industrial lead-acid batteries, power supplies, power conditioners for photovoltaic power plants, industrial lithium-ion batteries, specialized devices, lighting and environment-related equipment.

As part of our R&D for industrial lead-acid batteries, we expanded our SLR line of batteries for high-capacity storage systems. These products feature the world's longest life cycle. We also developed a new additive that greatly improves the performance of lead-acid batteries for forklifts.

At the same time, we developed the LINE BACK Meister single-phase interconnected power storage system, featuring outputs of either 10 or 20 kilovolt amperes. This system is not only suitable for emergency response and peak cut systems, but also for advanced self-consumption and energy management systems.

We also conducted R&D on specialty equipment, including compact power supplies, battery chargers and testers, and other devices designed to be compatible with many kinds of batteries. In addition, we worked to develop oxygen sensors and hydrogen generators with the aim of expanding the markets for these devices.

Automotive Lithium-ion Batteries

R&D costs were ¥5,200 million in fiscal 2016, largely for basic research on lithium-ion batteries and R&D related to automotive lithium-ion batteries.

The basic research on lithium-ion batteries included studies aimed at increasing the reliability, safety and energy density of medium and large-sized batteries. To improve the performance of lithium-ion batteries, we explored materials for next-generation positive and negative electrodes and improved their capabilities. We also conducted research on postlithium-ion batteries.

In addition, we developed several kinds of lithiumion batteries for electric, hybrid and plug-in hybrid vehicles, and worked to make improvements and increase their reliability and safety in anticipation of increased production in the future.

Other Businesses

R&D costs were ¥316 million in fiscal 2016, mainly for R&D related to lithium-ion batteries for use in space. We also developed new cells for satellite-use lithiumion batteries with capacities of 110 and 190 ampere hours (Ah), supplementing our previously developed 42Ah, 55Ah and 150Ah cells.

Initiatives in fiscal 2017

Total R&D costs came to ¥9,533 million in fiscal 2016, up ¥2,535 million year on year. In fiscal 2017, we expect R&D costs to reach ¥12,000 million, a year-on-year increase of ¥2,467 million. That increase in costs, the second consecutive year in the ¥2.5 billion range, was mainly for R&D on next-generation automotive lithiumion batteries.

The entire GS Yuasa Group is focusing on developing automotive lithium-ion batteries in the current fiscal year. Currently in the R&D phase, we are aiming to produce major results so that we can take the lead against our competitors in Japan and around the world. An automotive lithium-ion battery must have a high degree of quality and energy density, which enables a large amount of electricity to be stored in a small space; a long life cycle, over which electricity capacity does not change significantly, even though it is repeatedly charged and discharged; and, most importantly, safety and reliability. For all of these factors, we are striving to achieve the highest levels of quality through our research and development.

Directors and Auditors



Directors

Osamu Murao President and Representative Director

Born on January 15, 1960

April 1982	Joined Japan Storage Battery Co., Ltd. (currently GS
	Yuasa International Ltd.)
June 2011	Officer, GS Yuasa International Ltd.
June 2012	Director, Head of Quality Control (current position) and
	Deputy Head of Technology of the Company; Director
	of GS Yuasa International Ltd.; Director of GS Yuasa
	Technology Ltd.
June 2014	Deputy Head of Industrial Batteries & Power Sources
	Business of the Company
June 2015	President and Chief Executive Officer (CEO) of the
	Company (current position); President, GS Yuasa
	International Ltd. (current position)

3 Toshiyuki Nakagawa Director

Born on April 12, 1957

Dom on April	12, 1937
April 1981	Joined Japan Storage Battery Co., Ltd. (currently GS
	Yuasa International Ltd.)
April 2009	Director, Blue Energy Co., Ltd. (current position)
June 2009	Corporate Officer of the Company
June 2010	Director and Head of Corporate Strategy and Public
	Relations (current position) of the Company; Head of
	Corporate Office of the Company (current position);
	Director, GS Yuasa International Ltd.
June 2012	Head of Finance and Accounting, and Information
	Systems of the Company (current position); President,
	GS Yuasa Accounting Service Ltd. (current position)
June 2014	Managing Director of the Company (current position);
	Managing Director, GS Yuasa International Ltd.
September 2016	Head of IR and CSR of the Company (current position)
June 2017	Director of the Company (current position)

2 Kei Nishida Representative Director

Born on July 8, 1954		
April 1977	Joined Japan Storage Battery Co., Ltd. (currently GS	
	Yuasa International Ltd.)	
June 2008	Corporate Officer of the Company	
June 2009	Director, Head of Procurement (current position) and	
	Head of Lead-Acid Battery Recycling of the Company;	
	Director, Lithium Energy Japan (current position)	
April 2010	Director, GS Yuasa International Ltd.	
June 2010	Head of Lithium-ion Batteries Business of the Company	
	(current position)	
June 2012	Managing Director of the Company; Managing	
	Director, GS Yuasa International Ltd.	
June 2015	Senior Managing Director of the Company; Senior	
	Managing Director, GS Yuasa International Ltd.	
	(current position)	
June 2017	Director of the Company (current position)	
222 2017		

4 Toru Bomoto Director

Born on October 31, 1952

- April 1975Joined Yuasa Battery Co., Ltd. (currently GS Yuasa
International Ltd.)June 2007Corporate Officer, GS Yuasa Power Supply, Ltd.
(currently GS Yuasa International Ltd.)
- (currently GS Yuasa International Ltd.) June 2012 Director and Deputy Head of Overseas Operations of the Company; Director of GS Yuasa International Ltd.
- June 2014 Head of Overseas Operations of the Company (current position)
- June 2016 Managing Director of the Company; Managing Director, GS Yuasa International Ltd. (current position) April 2017 General Manager, Automotive Battery Business Unit of
- the Company (current position)
- June 2017 Director of the Company (current position)



Directors

5 Masahide Kuragaki Director

Born on Mar	
April 1979	Joined Japan Storage Battery Co., Ltd. (currently GS Yuasa International Ltd.)
June 2007	President, GS Yuasa Business Support Ltd. (currently GS Yuasa International Ltd.)
June 2009	Director and Head of Internal Control, Human Resources, General Affairs and Risk Management of the Company (current position); Director of GS Yuasa Power Supply, Ltd. (currently GS Yuasa International Ltd.)
June 2015	Outside Audit and Supervisory Board Member, Mitsubishi Logisnext Co., Ltd. (current position)
June 2017	Managing Director, GS Yuasa International Ltd. (current position)

6 Hirofumi Onishi Outside Director

Porn on long	and 1 1044
Born on Janua	
November 19/1	Joined Tohmatsu Aoki & Co. (currently Deloitte Touche Tohmatsu LLC)
March 1975	Registered as certified public accountant
May 1993	Representative Partner (currently Partner) of Tohmatsu & Co. (currently Deloitte Touche Tohmatsu LLC)
June 2001	Chairman of the Kinki Chapter of the Japanese Institute of Certified Public Accountants
July 2001	Deputy Chairman of the Japanese Institute of Certified Public Accountants Headquarters
July 2004	Auditor of the Japanese Institute of Certified Public Accountants Headquarters
April 2006	Professor of Ritsumeikan University Graduate School of Management
June 2011	Outside Corporate Auditor of SEKISUI CHEMICAL CO., LTD.
October 2014	Audit Commissioner of Osaka Prefecture (current position)
June 2015 June 2016	Director of the Company (current position) Outside Corporate Auditor, NCS&A Co., Ltd. (current position)

7 Ikuo Otani Outside Director

Born on November 20, 1953			
March 1976	Joined Wacoal Corp. (currently Wacoal Holdings Corporation)		
June 2004	Corporate Officer and General Manager of Corporate Management Division, Wacoal Corp.		
June 2006	Director and Corporate Officer in charge of Corporate Management, Wacoal Corp.		
April 2008	Director, Corporate Officer and General Manager of		
April 2010	General Planning Division, Wacoal Corp. Director and Corporate Officer in charge of Accounting, Wacoal Corp.; General Manager of Corporate Planning Division, Wacoal Holdings Corporation		
June 2010	Director and General Manager of Corporate Planning Division, Wacoal Holdings Corporation		
June 2011 June 2012	Managing Director, Wacoal Holdings Corporation Senior Managing Director, Wacoal Holdings Corporation		
June 2017	Director of the Company (current position)		

Corporate Auditors

Shinji Ochiai Full-time Corporate Auditor

Born on January 1, 1956

Doni on Janua	
April 1978	Joined Mitsui Trust and Banking Company, Limited
	(currently Sumitomo Mitsui Trust Bank, Limited)
July 2006	Executive Officer and General Manger of Operations
July 2006	
	Administration Department, Chuo Mitsui Trust and Banking
	Company Limited (currently Sumitomo Mitsui Trust Bank, Limited)
April 2007	Executive Officer and General Manger of Risk Management
, ibili 2001	Department, Chuo Mitsui Trust and Banking Company Limited
March 2008	Executive Officer and General Manger of Internal Audit
	Department, Chuo Mitsui Trust and Banking Company Limited;
	General Manager, Internal Audit Department, Chuo Mitsui Trust
	Holdings, Inc. (currently Sumitomo Mitsui Trust Holdings, Inc.)
June 2010	Managing Director and General Manager of Internal
June 2010	
	Audit Department, Chuo Mitsui Trust Holdings, Inc.
	(currently Sumitomo Mitsui Trust Holdings, Inc.)
April 2011	Director and Managing Executive Officer of Sumitomo
, ibiii 7011	Mitsui Trust Holdings, Inc.
A	
April 2013	Director of Sumitomo Mitsui Trust Holdings, Inc.
June 2013	Full-time Corporate Auditor of the Company (current
	position); Corporate Auditor of GS Yuasa International
	Ltd. (current position); Corporate Auditor of GS Yuasa
	Accounting Service Ltd. (current position)

S Katsuya Ohara Outside Full-time Auditor

Born on June 21, 1958			
April 1981	Joined the Bank of Tokyo, Ltd. (currently the Bank of Tokyo-Mitsubishi UFJ, Ltd.)		
January 2006 May 2008	General Manager of Milano Branch, the Bank of Tokyo-Mitsubishi UFJ, Ltd. President, Managing Director & General Manager of Bank of Tokyo-Mitsubishi UFJ (Holland) N.V. (currently MUFG Bank (Europe) N.V.)		
June 2011	Managing Executive Officer, Deputy General Manager of Global Business Unit, and General Manager of International Business Consulting Office, Mitsubishi UFJ Research and Consulting Co., Ltd.		
June 2013	Managing Executive Officer, General Manager, International Department, Consulting and Global Business Unit, Mitsubishi UFJ Research and Consulting Co., Ltd.		
June 2016	Corporate Auditor of the Company (current position); Corporate Auditor of GS Yuasa International Ltd. (current position); Corporate Auditor of GS Yuasa Technology Ltd. (current position); Corporate Auditor of Blue Energy Co., Ltd. (current position)		

10 Hideaki Yamada Full-time Corporate Auditor

Born on May 1	9 1956
April 1980	Joined Japan Storage Battery Co., Ltd. (currently GS
Contombor 200E	Yuasa International Ltd.) Head of Auditing Office of the Company
April 2008	General Manager, General Affairs Division of the Company
June 2009	Corporate Officer, GS Yuasa Power Supply, Ltd.
1 2010	(currently GS Yuasa International Ltd.)
June 2010	General Manager in charge of Corporate Strategy, Corporate Office of the Company (current position);
	Head of Corporate Strategic Planning Office of GS
	Yuasa International Ltd. (current position)
	Corporate Auditor of GS Yuasa Energy Co., Ltd. (current position)
June 2017	Full-time Corporate Auditor of the Company (current
June 2014 October 2016 June 2017	Executive Officer of GS Yuasa International Ltd. (current position) Corporate Auditor of GS Yuasa Energy Co., Ltd. (current position) Full-time Corporate Auditor of the Company (current position); Full-time Corporate Auditor of GS Yuasa International Ltd. (current position)

111 Tsukasa Fujii Outside Part-time Auditor

Born on August 16, 1957		
April 1986	Registered as an attorney at law; Joined Keiichi Uehara Law Office	
April 1991	Established Tatsuno, Ozaki & Fujii Law Office, Partner of the office (current position)	
April 2007	Part-time lecturer of Kwansei Gakuin University Law	
	School (current position)	
September 2014	Chairman of Hirakata City Building Examination	
	Committee (current position)	
January 2017	Member of Committee of Experts of Osaka District	
	Court (related to non-contentious landlord and tenant	
	matters; current position)	
June 2017	Corporate Auditor of the Company (current position)	

We are focused on strengthening our corporate governance to enhance our sustainable growth and improve our medium- and long-term corporate value.

Approach to Corporate Governance and Our Governance System

To drive sustainable growth and enhance corporate value over the medium and long terms, the GS Yuasa Group is committed to establishing an organization and systems that enable fast, efficient responses to a changing business environment. At the same time, our basic policy on corporate governance is to make every effort to thoroughly implement and strengthen compliance and improve the soundness and transparency of management.

the Group's businesses, as well as management for the entire Group and oversight of the Group's business execution. GS Yuasa International Ltd., the Group's core operating company, is the key decision-making body for business execution, consolidating and strengthening business execution and making swift business-related decisions.

A new governance structure began in fiscal 2017 based on this philosophy. GS Yuasa Corporation, the holding company, is responsible for formulating management strategies for all of

The Board of Directors makes quick, effective decisions by prioritizing strategic decision-making and supervisory functions for management policy. In addition, increasing the number of independent outside directors helps reinforce monitorina.





GS Yuasa is continuing to strengthen and enrich corporate governance based on this new structure.

*For details, see Notice Regarding Governance Structure Reforms and Representative Director Replacement (released on May 9, 2017) (https://www.gs-yuasa.com/en/ir/ pdf/170509_1_e.pdf)

Evaluating the Effectiveness of the Board of Directors

The effectiveness of the Board of Directors was evaluated between January and February 2016. All directors and corporate auditors filled out a guestionnaire and were interviewed on the structure, management, agenda and duties of the Board. After analyzing and evaluating the results, the Board of Directors was found to be running effectively. However, certain opinions held that some areas required

Reasons for Appointing Internal Directors

GS Yuasa Corporation, to provide control over the Group as the holding company, applies a balanced approach to appointing directors with knowledge and experience that

Policy on the Independence of Outside Directors

Candidates selected as outside directors must meet the requirements for independence set out in the Companies Act and possess the experience and insight to objectively and fairly judge the legality and appropriateness of the execution of the company's duties from the shareholders'

reconsideration, notably the further deepening of discussions regarding medium/long-term strategic management as well as the decision-making process and the structure of the business group. In light of these findings, the Group resolved to reform the governance structure. Going forward, we will continue to assess the effectiveness of the Board of Directors and make further improvements.

covers the business and functions of the entire Group and that have the necessary aptitude and competence to ensure fast decision-making.

perspective without being limited by being in charge of business implementation. Also, we believe in the importance of employing people who are outwardly independent and use the Tokyo Stock Exchange's independence standards as their reference.

We are committed to promoting sound corporate management and daily company-wide risk management.

Internal Control System

To strengthen the management foundation, the GS Yuasa Group has improved the system and relevant rules to ensure the maintenance of ethical business practices based on the Companies Act. This system includes mechanisms to ensure effective auditing, information management, and risk management throughout the Group.

To comply with the internal control reporting system

Risk Management

Risk Management Based on Risk Management Sheets

The GS Yuasa Group has adopted risk management rules intended to avoid or reduce exposure to business risk and to minimize potential corporate losses. Every department assesses risk each month using a risk management sheet. On this form, the department first fills in the measures it is taking as a basic response to mitigate the risks it has identified and to avoid any critical events as well as the policies to minimize loss if a critical event does occur. Every department confirms the status of implementation of these measures and related polices each month. The department also fills in the details of any critical events that occurred, as well as a summary of the response and the investigation into

Risk Management Sheet



System for Dealing with Crises

To prepare for the possibility that a risk materializes, we have Committee are appointed to organize a crisis management established a system that includes an emergency contact headquarters, under the president, to minimize corporate network to swiftly implement crisis management. When a losses. The system we have set up enables us to implement an serious crisis occurs, members of the Group Risk Management effective response swiftly and with appropriate care.

Risk Management under the Group Risk Management Committee

The Group Risk Management Committee headed by the president with the chairs of departmental Risk Management Committees holds semiannual meetings to promote Groupwide risk management and to encourage the sharing of key information related to risk management. The Risk Management Committee confirms that the appropriate risk management measures have been implemented and the committee chairs report on progress in this area. We also actively exchange opinions and share information on the different styles of risk management.



Management Committee



required under the Financial Instruments and Exchange Law, we are maintaining an internal control system and financial reporting mechanisms to meet all requirements.

Our international subsidiaries and other consolidated Group companies evaluate the status of the improvement and implementation of internal controls. Following external audits, reports on these internal controls are publicly disclosed.

the cause and measures to prevent a reoccurrence. These preventive measures are fed back into the "basic response" and the status of implementation is checked each month to provide a framework that ensures that similar events do not happen again.

The risk management sheets produced by the departments are compiled at the divisional level with the director in charge of the division verifying and assessing the status of response through a risk management committee. The deliberations by the committees are summarized and then fed back to each department as part of a mechanism to improve the effectiveness of risk management.

Risk Management Structure



Corporate Governance

Solid, multifaceted measures ensure that every person takes initiative with a strong awareness of compliance.

Compliance

Basic Philosophy on Promoting Compliance

By training our personnel according to our philosophy of "Innovation and Growth" while manifesting our commitment to society and preserving the global environment, we are ensuring that all employees are guided in their behavior focusing on compliance with laws, company regulations and ethical standards.

Multifaceted activities with innovative methods are being used to promote compliance and ensure that the different themes cover all levels of employees. When promoting compliance, it is also essential to establish rules and a

Compliance Manual

We distribute a compliance manual to all employees that includes company regulations related to compliance. The 10-item Code of Conduct includes commentary in a Q&A format, innovative ways to promote understanding with content based on actual practices, an introduction to the GS Yuasa Group corporate ethics hotline, the Group's internal

Workplace Meetings on Compliance

Workplace meetings on compliance have been conducted for five consecutive years since 2012. The purpose of these meetings is to improve employee awareness of compliance. The meetings, including active exchanges of opinion, were held at 391 workplaces in fiscal 2016 with 96% of the sites commenting that the activities were effective. Many topics were covered, including prevention of inappropriate actions, management of work hours, harassment,

GS Yuasa Group Corporate Ethics Hotline

We established GS Yuasa Group corporate ethics hotline regulations and set up a corporate ethics hotline. Accessible both internally and externally, the hotline enables employees, temporary workers, business partners and others to provide information anonymously if they become aware of behavior by a Group employee that violates the law or company regulations or is unethical or otherwise inappropriate or any matter that is at risk of becoming a violation. In fiscal 2016, five reports were made (eight in fiscal 2015), including one case of harassment. We conduct inquiries and take appropriate action, while remaining committed to protecting whistleblowers.

disadvantage the person who divulged the information and appropriate steps were taken. In addition, we will plan and implement activities to raise awareness of compliance within the Group in light of the opinions provided on topics to be addressed in the future.

2015

2016

structure to follow, as well as a strong sense of commitment. In this spirit, we adopted Compliance Promotion Regulations in

whistleblower system and an emergency contact system for use in a crisis. In addition to distributing the manual, in fiscal 2016 we began spreading awareness of the content via an boosting awareness of compliance among employees.

occupational health and safety, waste management, personal information protection, product safety, handling of confidential information and subcontracting laws. The meetings use educational materials made by the division in charge on each topic and including content related to the circumstances of the Group. We intend to continue running these meetings and upgrading the content to ensure that it is both up to date and educational.

line with the Compliance Declaration made by the president. The GS Yuasa Corporate Ethical Standards cover the 10 items that all employees must support and the corporate ethical behavior guidelines that outline responses to specific situations. Other activities are aimed at enhancing awareness, or getting every employee to think about what he or she should do for compliance.

in-house email newsletter throughout the year with the aim of

CSR Activities

CSR

and ensure long-term commerce, forms an integral part of our aim to realize our corporate philosophy.

GS Yuasa Group's CSR

"Innovation and Growth," our corporate philosophy, is the basis of the GS Yuasa Group's CSR. By reforming our business processes and by developing new technologies that go beyond a traditional approach, we aim to generate innovation, and as a result, drive growth by expanding earnings and contributing to people, society and the global environment.

Initiatives for the Fiscal 2017

Over the years, we have acted based on an awareness of our social responsibility in line with corporate rules such as our Corporate Ethical Behavior Guidelines. Given the expectations of the international community for companies, however, the GS Yuasa Group in Japan has started to undertake global CSR initiatives. We created a CSR promotion structure led by the CSR Committee, which was established through participation of members from respective divisions in November 2016. Then, in May 2017 we formulated a CSR Policy and Code of Conduct as the foundations for our CSR activities and disseminated these internally. In response to our CSR issues, we identified key CSR challenges in relation to the Mid-Term Management Plan.

During this fiscal year, we will formulate an action plan and KPIs (key performance indicators) for these important

Medium- to Long-Term Initiatives

The GS Yuasa Group is planning medium- to long-term CSR initiatives as follows and has set targets for fiscal 2019 that incorporate these CSR challenges into the business strategy.

Phase	Period	
First stage	FY 2016–2017	Create processes to dea strategy (Fourth Mid-Ter
Second stage	FY 2018	Analyze and evaluate of improvements
Third stage	FY 2019	Establish business proce strategy (Fifth Mid-Term

Number o Group c	f reports to the GS Yuasa orporate ethics hotline
2013	5
2014	3

8

5

*Period: April to March of the following year

Compliance Survey

A survey related to compliance is conducted every year for all employees in which the Company's president gathers questions on compliance in daily operations via email. In fiscal 2016, 2,936 people responded (response rate: 89%) with information on unethical or inappropriate behavior collected from 27 people. The details were carefully investigated to not

Our CSR management, in which we seek to contribute to a sustainable society

This is the basis of our CSR. Further, we aim to be a company that earns the long-term trust of society and becomes one that society wants to stay operating into the future and that responds quickly, via our main business, to worldwide social issues as well as the needs and expectations of stakeholders.

challenges and will make improvements by running a PDCA (plan-do-check-act) cycle. In addition, we intend to write CSR procurement guidelines for the Group's supply chain and promote sustainable purchasing.



Target

al with the CSR challenges in relation to our business erm Management Plan)

our performance using these processes and then make

esses that incorporate CSR challenges into our business m Management Plan)

CSR Policy and Code of Conduct

The GS YUASA CSR Policy and Code of Conduct* formulated in May 2017 are based on the President's Policy and have become the foundation of the Group's CSR. In the GS Yuasa Group, all employees understand that CSR activities are

business activities and we encourage everyone to take part based on our CSR Policy and Code of Conduct in order to ensure the sustainable development of society and business.

*Our CSR Policy and Code of Conduct are available on our website: http://www.gs-yuasa.com/en/csr/policy_e.php

GS YUASA CSR Policy

Besides legal compliance, we respect international norms, guidelines, and initiatives related to social responsibility, work on sustainable development of our business through developing energy storage technologies, and contribute to people, society, and global environment.

1 Developing fair, transparent, and sound business, and anti-corruption

GS YUASA conducts a transparent business policy which aims to earn the trust of customers, business partners, shareholders, and of local communities as a top priority. And to adhere to laws and regulations of each country and region. Furthermore, we address to prevent any kind of corruption, will not tolerate any illegal political contribution, bribery of public officials, and will not have relationships with personnel or organizations of organised crime.

Code of Conduct 1-1 Compliance 1-2 Elimination of mixing up official business with personal affairs 1-3 Fair, Transparent and free competition and trade 1-4 Management of confidential information 1-5 Respect for intellectual property 1-6 Separation from organized crime 1-7 Transparency of information disclosure 1-8 Legal compliance for political funds control 1-9 Prohibition to offer entertainment or gifts to public employee 1-10 Sound relationship with business partners

2 Respect for human rights

GS YUASA will respect all human rights and labor rights, and will not tolerate any forced labor or child labor. Diversity will be respected, without any discrimination being tolerated.

2-1 Prohibition of discrimination and respect for diversity 2-2 Respect for individual personality 2-3 Respect for labor rights Code of Conduct 2-4 Prohibition of forced labor and child labor 2-5 Avoidance of complicity in human rights abuse

3 Conservation and improvement of adequate working environment

GS YUASA will provide safe and comfortable working environments for employees. Proper management will be provided in order to promote mid to long-term development of human resources.

Code of Conduct 3-1 Conservation and improvement of safety and health in working environments 3-2 Ensuring appropriate working hours, securing minimum wages and prohibiting unreasonable wage reduction 3-3 Mid to long-term human resources development and appropriate ability assessment 3-4 Respect for individual work-life balance 3-5 Offer of equal employment and working opportunities

4 Fulfillment of our responsibilities to provide safe and secure products and services

GS YUASA ensures the safety and quality of products/services to the end of their lifecycle throughout manufacturing. Furthermore, GS YUASA honest provides clear safety information for all products/services.

Code of Conduct 4-1 Focus on safety and quality 4-2 Making Safety Information accessible 4-3 Solutions in case of Product accidents

5 Global environmental conservation

GS YUASA addresses to prevent pollution , and to mitigate climate change, and to establish a sound material-cycle society through using sustainable resources.

Code of Conduct 5-1 Promoting environmental protection 5-2 Providing environmental considerations products

6 Building better relationships with local communities

GS YUASA will contribute to sound and sustainable development of local communities through building better relationships with their local communities.

Code of Conduct) 6-1 Contribution to sustainable development of communities 6-2 Adoption of local human resources

7 Ensuring social responsibility within our supply chain

GS YUASA will promote actions to ensure social responsibility within our supply chain.

Code of Conduct 7-1 CSR procurement promotion

Materiality (Key CSR Challenges)

To reflect CSR challenges in our business strategy, the GS Yuasa Group analyzes and assesses the impact on business and the impact of our business on society and then clarifies

Materiality Specification Process

Step 1: Identify risk and opportunity in CSR

- V
- V V

Step 2: Specify significant risk and opportunity in CSR

	GS Yuasa evaluates and assigns a score to the scale o
_	opportunity identified in Step 1 in consideration of th
	(possibility of occurrence x scale of impact on busines
	specify risks and opportunities as key business challer
	Next, we evaluate the impact of GS Yuasa's busin
	relative to these core business risks and opportunities
	of related CSR themes and social importance. We the
	opportunities that will be key CSR domains.

Step 3: Specify materiality

GS Yuasa orders the core CSR risks and opportunities evaluated in Step 2 and then specifies materiality in consideration of the response method to the risks and opportunities.

Results of Specifications

CSR Policy	Materiality	CSR Policy	Materiality
1. Developing fair,	Thoroughly fulfilling our CSR and ensuring compliance	4. Fulfillment of our responsibilities to	Provision of high-quality
transparent, and sound business, and anti-	Management of confidential information	provide safe and secure products and services	products
corruption	Respect for intellectual property	5. Global environmental	Promoting environmental protection
2. Respect for human rights	Respect for individuality	conservation	Developing and popularizing environmentally considered products
3. Conservation and	Improvement of safety and health in working environments	7. Ensuring social	CSR procurement promotion
preservation of adequate working environment	Human resources development	responsibility within our supply chain	CSR procurement promotion

Going forward, we will formulate an action plan and key performance indicators (KPIs) relative to the materiality we have specified and look to make improvements via a PDCA cycle. In addition, we will clarify the correlation between materiality and sustainable development goals (SDGs).

the Group's materiality for items that need to be addressed. Next, we will explain the materiality specification process that we implemented fiscal year under review and the results.

For key challenges in the Mid-Term Management Plan, GS Yuasa identifies risk in CSR (that hinders the resolution of these challenges) and opportunity in CSR (that promotes the resolution of the challenges). When identifying these risks and opportunities, our actions are based on international guidelines related to CSR.

> of the CSR risk and he impact on business ess), which enables us to enges.

ness activities on society es based on the number en specify risks and



Impact on business

As a trusted manufacturer, GS Yuasa is constantly working to improve customer satisfaction and ensure safety.

Quality Policy

GS YUASA is committed to a diligent study of 'Monozukuri,' customer first thinking and the improvement of products and service for the realization of our Corporate Philosophy.

*'Monozukuri': Meaning 'manufacturing' is not just pointing to 'craftsmanship' in the narrow sense.

It is "the overall process of the corporation, the industry and the on-site activity, implementing the designers' determination into the products and the services for customer satisfaction, corporate profit and job security."

Ensuring Quality and Safety through Company-wide Quality Management

To remain a manufacturer trusted by customers at all times, the GS Yuasa Group approaches manufacturing activities from the customer's perspective and works relentlessly to improve the quality of products and services.

To maintain this trust, we formulated, under the leadership of top management, the GS Yuasa Quality Management System based on the ISO 9001 standard and are promoting a quality management system that crosses business divisions. The quality of our products and services is discussed company-wide every month by the Quality Management Committee, which is chaired by a director (the executive officer in charge of quality), to enable us to respond swiftly to any change. President Osamu Murao was the chairman of this committee in fiscal 2016.

As part of our approach to manufacturing, we provide qualityrelated education courses to all employees and promote *kaizen* (improvement) team activities company-wide as a way to bolster the awareness of quality among employees and to boost their understanding and skills related to quality control. Our aim here is to always enhance the quality of our products and services.

Promoting Greater Customer Satisfaction

The GS Yuasa Group values the opinions, recommendations and complaints of customers regarding our products and services as important customer feedback. We aim to improve customer satisfaction by improving our products and services after considering inquiries received by email and the opinions of customers heard at our Customer Consultation Office (for customers in Japan).

The number of complaints received through the Customer Service Center has been declining over the past five years.

Going forward, we will continue working to improve customer satisfaction by paying close attention to the opinions of our customers.



Number of inquiries to the

14.000

12,000

10.000

8,000

6,000 -

4,000

2.000

Customer Consultation Office

*Period: April to March of the following year

Hours: Weekdays 9:00 - 17:30 *Excludes Saturdays, Sundays, public holidays and Company holidays *Valid only within Japan. Attended in the Japanese language only.



Number of customer

*Period: April to March of the following year

complaints

1.200

1 000

200

Initiatives for Product Safety and Swift Dissemination of Information

Ensuring the safety of GS Yuasa Group's products has been positioned as a critical challenge because our products store, control and convert electrical energy.

The Product Safety Management Committee is responsible for guaranteeing the safety of our products across the board. We promote developments in business divisions after assessing conformity with product safety standards as well as the safety of products as they are used, age and deteriorate. For this reason, we are strengthening our product testing procedures using failure

■ GS Yuasa Product Safety Action Flow



Improving Employees' Awareness of Quality

The GS Yuasa Group educates employees about quality to instill a "culture of quality" throughout the organization based on our Basic Quality Policy.

The education is systemized. The level of quality control and type and rank of their job are considered so that employees can be taught based on the type of their work and their experience. Basic quality-related education has been compulsory for all new recruits since fiscal 2008 and their knowledge of quality control (QC) is tested with the QC examination. 191 passed from grade





*Period: April to March of the following year

45

mode and effect analysis (FMEA) and fault tree analysis (FTA). In addition, we constantly gather information on issues with product safety and provide this to top management without delay as part of a system that we have established and are operating to ensure a swift response.

Moving ahead, we aim to become a company supported by trust and quality by developing human resources capable of providing guidance on quality engineering and product safety, while internally and proactively disclosing information on product safety.

activities	Process, mechanism
ct safety activities oduct safety isis management	 Risk Management Rules GS Yuasa Quality Management System Regulations on management of product safety
uct safety in business oduct realization process	 Divisional policy book Quality-related manual for business divisions
luct safety plaints, defects and and services	 Claims information system and Customer Service Center GS Yuasa website Daily quality report
le on and implement e continual a reoccurrence) ses concerning product- ty-related claims and any additional	 Quality manual for business divisions Manual on crisis management concerning product-related accidents and quality-related claims Manual for implementing product recalls

one to four in fiscal 2016 with a cumulative total of 1,805 people passing the exam company-wide up to fiscal 2016.

GS Yuasa will continue to position the raising of qualityrelated awareness and the attainment of knowledge as important issues going forward.



■ Quality-related Education

Respect for Human Rights

The GS Yuasa Group believes that the rights of all people must be respected in order to realize our philosophy of contributing to people's lives, society and the global environment.

Providing Fair Selection and Opportunity

The GS Yuasa Group promotes fair employee selection, evaluation and training based on ability and performance. We prohibit discrimination in recruitment, personnel assessment and other employee circumstances, and we respect diversity irrespective of race, gender, sexuality,

nationality, place of birth, disability, religion or political opinion. At the same time, we conduct the necessary checks to make sure we don't hire people under the legal working age or those without qualifications.

Creating a Pleasant Workplace through Labor and Management Working as One

The GS Yuasa Group in Japan has adopted a "union shop system" and as a general rule all regular employees, aside from management, are members of the labor union. We pursue business based on mutual understanding achieved through labor union recommendations and active discussion on domestic management policies, including work conditions and benefit programs. Through this relationship between labor and management, we are improving the objectivity and transparency of company management, while increasing the effectiveness of various initiatives.

GS Yuasa Labor-Management Consultative Structure

Name of Labor-management consultative body	Meeting frequency	Content
Management council	4 times/year	Company's management policies, business conditions and status of business execution, etc.
Divisional committee	Monthly	Issues for the respective R&D and business divisions
Factory committee	Monthly	Issues in production divisions
Health and safety committee (statutory)	Monthly	Initiatives to prevent occupational accidents
Expert committee on work hours	Monthly	Checking the status of work hours and making improvements
Expert committee on future generations	Twice/year	Child-rearing and nursing care support

Basic Rules on Forced Labor and Child Labor

The GS Yuasa Group is establishing the following basic rules on forced labor and child labor at overseas Group companies, in addition to Japan. We take immediate

corrective action upon discovering forced labor or child labor by a business partner.

Prohibition of Forced Labor and Child Labor

We will neither force labor, nor employ children under the legal working age. Furthermore, we will not tolerate forced labor or child labor in any way.

Avoidance of complicity in human rights abuse

Directly or indirectly, we will not be complicit in human rights abuse.

The GS Yuasa Group respects diversity and works to maintain and improve a pleasant work environment. We are also committed to developing human resources with an emphasis on workplace conditions.

Occupational Health and Safety: Reducing the Risk of Accidents

GS Yuasa makes health and safety-related assessments based on an organizational framework led by health and safety committees in every business division and company. These assessments are guided by a health and safety management policy intended to create a corporate culture that ensures worker safety and health.

To reduce the risk of occupational accidents, we identify the root causes of danger through risk assessments and by promoting the safe operation of equipment and machinery. To develop safety-conscious employees, in addition we appoint "safety trainers" who are vital for conducting safety-related

	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016
GY missed work frequency rate*1	0.21	0.00	0.37	0.55	0.85
Average frequency rate in manufacturing industry	1.00	1.05	1.00	1.06	1.15
GY rate of intensity*2	0.00	0.00	0.00	0.01	0.01
Average rate of intensity in manufacturing industry	0.10	0.10	0.09	0.06	0.07

*1 Missed work frequency rate is the number of people missing work per 1,000,000 work hours, calculated as: Missed work frequency rate = (Number of people missing work / Total number of work hours) x 1,000,000 *2 Rate of intensity is the number of lost days due to accidents per 1,000 work hours, calculated as: Rate of intensity = (Days missed / Total number of work hours) x (300/365) x 1,000

Initiatives for Diversity (Promoting Women's Roles)

GS Yuasa is taking steps to promote women's roles with the aim of developing women who can maximize their potential in whatever they do. We believe that providing the environment and opportunity for women's roles will enable every woman to shine, which in turn will help us realize the "innovation and growth" stated in our philosophy. We aim to

Declaration

GS Yuasa will provide a diversity of roles for women that are bright, fun and affirming.

Action Plan Promoting Women's Roles (April 1, 2016 to March 31, 2019)

Objective 1	Steadily increase the percentage of women hired	20%
Objective 2	Ensure that at least one woman a year takes part in skills of female employees	next-g
Objective 3	Support the strengthening of management abilities female employees to work to their potential	for su

Initiatives for Diversity (Employment of People with Disabilities)

To promote the employment of people with disabilities, GS Yuasa offers a wide range of opportunities to people with disabilities, including in a company certified as a special subsidiary in December 2007.

We will continue to manage employment so that people with disabilities can put their skills and qualities to good use in an effort to maintain and improve a pleasant work environment.

As of June 1, 2017, 2.51% of GS Yuasa's employees were people with disabilities, which exceeds the legally mandated

programs in the workplaces, including contract employees. We are working to entrench and improve safety through education on safety procedures (danger prediction, risk assessments, etc.).

For work environment management and health management, we try to understand the workplace environment through assessments and by monitoring the impact of harmful substances on workers through special health diagnoses. The programs to make improvements are put in a PDCA cycle at major workplaces.

create a company where every female employee shines in her own unique way by enhancing the desire for personal growth and increasing the style and number of roles through the synergistic effects of what we call the "three Ls."



% in FY 2016 → **30% in FY 2018**

generation select group training in order to boost the business

upervisors in order to create an environment that encourages

employment rate of 2.0% as well as the previous fiscal year's mark of 2.47%.

Conservation and Improvement of Adequate Working Environment

Medium- to Long-Term Human Resource Development (Fostering Autonomous Acting Talent)

At GS Yuasa, front-line workplaces are the engine that generates corporate value, and the lead players in those workplaces are our employees. We believe the best training is on-the-job training, so with a strong focus on management by objective we implement

training to nurture autonomous acting talent. In off-the-job settings, employees take part in communications training and voluntary training for career development and the improvement of management skills.



Promoting Work-Life Balance (Optimizing Work Hours)

Aiming to be a workplace that protects the health of employees and enables them to work with peace of mind, GS Yuasa is striving to ensure the most appropriate work hours, based on cooperation between labor and management. An expert committee on work hours checks the condition of employees working long hours in addition to introducing and using an attendance management system and access control system to accurately understand and manage work hours.

We are taking steps to reduce labor hours for employees working long hours by providing consultation with an industrial physician in accordance with the law and through an advisory system (see "Work Style Reform" below) for supervisors. In addition, we provide compliance-related education with the themes of promoting understanding of work hour rules and appropriately managing work hours.

Work Style Reform

At GS Yuasa, labor and management are working as one to reduce long work hours and encourage employees to take annual paid leave with the aims of improving work efficiency and enhancing creativity at work by making sure employees stay physically and mentally healthy. Currently, we are strengthening initiatives to provide variation in work style by implementing the following:

Percentage of Annual Paid Leave Taken (FY 2012 to 2015)



---- Percentage of total available paid holidays taken by employees

19

Notes: Employees do not include personnel on leave or those transferred to workplaces outside Japan.

The years shown in this chart refer to September in the specified year to August of the following year, based on a calculation method set by Japan's Ministry of Health, Labour and Welfare

setting one "no overtime" day a week; making it compulsory to take at least 10 days of leave a year; prohibiting two consecutive days of work on prescribed holidays; prohibiting overtime late at night (10 pm to 5 am); introducing a system to monitor employees working in excess of the standard hours; and providing advice to supervisors on how to deal with overtime issues.

Total Annual Work Hours (FY 2012 to 2016)



Average number of overtime hours worked by employees in Japan

Notes: Employees do not include personnel on leave or those transferred to workplaces outside Japan.

The average number of fixed hours was calculated as fixed working hours minus hours absent from work due to days off, arriving late to work or leaving work early, etc. Period: January to December

TOPICS

GS Yuasa Designated as a "Company with Excellent Health Management"

GS Yuasa and four Group companies were each designated as a Company with Excellent Health Management 2017 - White 500 in a program run by the Ministry of Economy, Trade and Industry and Nippon Kenko Kaigi. The companies were recognized for (1) improving the health awareness of employees, (2) enhancing and expanding the health management system, and (3) enhancing, expanding and diversifying initiatives to promote health.

Aiming to create a corporate culture that protects people's safety and health, the GS Yuasa Group works with companies and health insurance associations to support the health of employees and their families.

Promoting Work-Life Balance (Supporting Work Alongside Childcare/Nursing Care)

GS Yuasa formulated an action plan based on the Act on and Childcare Balance where we disseminate information on Advancement of Measures to Support Raising Nextchildcare-related systems to employees. To ensure that the Generation Children as a joint labor-management program. childcare and nursing care support systems are being used, We implement activities to achieve the objectives of the plan, we are making every effort to increase awareness of the with the aim of creating an environment that makes it easy for systems through training based on levels within the Company employees to participate in childcare. We have also set up an that include managers. in-house electronic message board called Supporting a Work

. Taliina Childa

Percent	age of Emp	oloyees Ta	king Child	care Leave						Number of Empl	oyees Taking Shor	t-term Nursing Care L	eave and Total Numb	er of Days on Leave
FY		Fem	ales			Ma	les			FY		g-term care leave	Short nursing c	are leave
FT	Usage rate (%)	Birth	Users	Return-to- work rate (%)	Usage rate (%)	Birth	Users	Return-to- work rate (%)		FT	Number of users	Return-to- work rate (%)	Number of users	Days of leave
2014	100.0	5	5	100.0	0.0	99	0	-		2014	2	100.0	12	42.5
2015	100.0	9	9	100.0	1.1	87	1	100.0		2015	1	100.0	7	26.5
2016	100.0	7	7	88.9	3.0	66	2	100.0		2016	1	100.0	10	30

TOPICS

GS Yuasa Awarded Kurumin Mark

GS Yuasa attained the Kurumin Mark certification in 2017. The Kurumin Mark is a symbol granted by Japan's Ministry of Health, Labour and Welfare to organizations that meet certain standards related to formulating action plans and attaining their goals based on the Act on Advancement of Measures to Support Raising Next-Generation Children.

GS Yuasa aims to be a company that continually supports childrearing by establishing an environment where employees can strike a good balance between work and childcare, and then further enrich these results.



GS YUASA REPORT 2017

認定証 ホワイト500 (大規模法人部門) 法人名 株式会社ジーエス・ユアサコーポレーション 貴法人は、従業員の健康管理を経営的な 視点で考え、戦略的に実践する「健康経営」 の取組が母身であると認められました の原題が確反であると読められました よって、ここに「健康経営優美法人2017 (ホワイト500)」として認定します 経済産業省及び厚生労働省と共に、今後一層 取組を推進されることを期待いたします 2017年2月21日 日本健康会議 日本健康会議

Number of Employees Taking Long-term Nursing Care Leave and Return-to-Work Rate



The GS Yuasa Group, together with the supply chain, will contribute to creating a sustainable society.

Major Procurement Programs

The GS Yuasa Group provides education and guidance on compliance and CSR (corporate social responsibility) to business partners, checks the way they manage harmful substances in products, responds to conflict minerals via surveys and encourages green procurement. We also started activities to help our business partners improve results as well as study sessions and presentations on how to boost quality.

Through better partnerships in the supply chain, we are improving the results of both our business partners and the GS Yuasa Group, while decreasing business risk.

Basic Procurement Policy

We intend to boost the results of our business partners and the GS Yuasa Group by working to create better partnerships based on mutual understanding and relationships of trust.

Briefing Sessions on Production

GS Yuasa holds briefing sessions on production run by management as well as social gatherings every year to increase our major business partners' understanding of the GS Yuasa Group's management policies, annual business policy and basic procurement policy. This also deepens mutual understanding

and strengthens relationships of trust with these business partners. In addition, we give awards to business partners who have made outstanding contributions to quality, price and the supply system over the previous fiscal year.

Ensuring Quality and Health/Safety

To promote activities that raise quality and enhance health and safety, including for business partners who supply parts and raw materials, the GS Yuasa Group provides guidance on quality reflecting the needs of our business partners as well as health and safety patrols, if required. In programs that raise quality, we share with business partners the target values and the results of quality defect analysis of products supplied to the Group and work to improve the quality of these items along with our

partners. Target values for FY 2017 were 27 cases (GS Yuasa International Ltd. (GY)) and 1.17% (GS Yuasa Technology Ltd. (GYT)).

We believe that these activities create strong partnerships in the supply chain and are important to ensure the quality of products used by customers as well as the health and safety of our business partners.

Incidence of Quality Defects





Guidance on Quality for Business Partners

Response to Conflict Minerals

Every year, the GS Yuasa Group's domestic production division minerals. The Group's production division overseas also analyses how business partners deal with conflict minerals*1 continually investigates conflict minerals. In fiscal 2016, we through surveys using EICC and GeSI template forms.*2 By formulated a policy to deal with these minerals and distributed it checking throughout the supply chain, right back to refining, we to our overseas affiliates. can verify that none of our suppliers contribute to conflict

- Republic of the Congo and neighboring countries.
- conflict minerals, to check whether conflict minerals have been used or not

Policy on Conflict Minerals - Overview

- We will never procure or use conflict minerals.
- and take steps to avoid using them again.
- minerals, when information on the purchasing source has not been disclosed, we will work to clarify information on the purchasing source.

Green Procurement

The GS Yuasa Group in Japan makes the following requests of business partners based on our Green Procurement Criteria.

Requirements	for	Business	Partners
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- 1. Operation of an environmental management system
- 2. Examination of chemical substances contained in items being supplied
- 3. Checking the legality of cutting down certain trees (logging)
- 4. Programs to identify and reduce CO₂ emissions

For 2. above, we ask our business partners to examine substances using Chemical Substance Management Guidelines, which comply with international laws and regulations including EU directives (REACH, RoHS, etc.), and to test individual chemical substances as specified by customer needs.

GS Yuasa evaluates the appropriateness of stipulations to business partners concerning green procurement by checking and auditing the status of their response. By prioritizing those business partners that supply goods that conform to green procurement standards, we are reducing the environmental burden, including the burden within the supply chain.

Promoting CSR-based Procurement

The GS Yuasa Group assesses business partners using a QCDE approach (quality, cost, delivery and environment). Going forward, we will add elements of CSR to these assessments to ensure that our social responsibility is being met throughout the supply chain. To achieve this goal, we will share the GS Yuasa Group's CSR Procurement Guidelines with our business partners and work to promote CSR procurement based on mutual

*1. Conflict minerals are tantalum, tin, tungsten, gold and their derivatives used as resources by antigovernment armed groups who commit inhumane acts in the Democratic

*2. Templates issued by the Electronic Industry Citizenship Coalition (EICC) and Global e-Sustainability Initiative (GeSI), organizations working to tackling the problem of

• If it is discovered that conflict minerals have been procured or used, we will contact the overseas site and supplier

• We will continually investigate the use of conflict minerals. In cases of possible procurement and use of conflict



cooperation. For new transactions, we will prioritize business partners that understand and accept the Group's CSR Policy. In briefing sessions on production in fiscal 2017, we are asking our business partners to strengthen their CSR initiatives and to cooperate with us on CSR-based procurement, and we plan to identify CSR risk in the supply chain by analyzing survey and assessment results.

The GS Yuasa Group works to protect the environment and make constant improvements that consider the impact on the global environment of business operations, products and services.

Fundamental Environmental Policy

The Fundamental Environmental Policy of the GS Yuasa Group was established to serve as a guideline for environmental management. In our domestic offices, we developed an organizational environmental management system and have been promoting initiatives to implement our environmental policy, which is based on our overarching environmental policy.

We have developed mid-term plans for important issues related to our environmental policy in order to contribute to the emergence of a sustainable society. We continue to manage the status of implementation of these initiatives.

GS Yuasa Group Environmental Policy

Fundamental Philosophy

At the GS Yuasa Group, we set conservation of the global environment as one of our most important tasks, and we contribute to the creation of a sustainable society through the development, manufacture, and sale of batteries, which are a form of clean energy, power supply systems, and lighting equipment.

Action Agenda

- 1 We carefully evaluate the impact on the environment of our business activities, products and services, and we work to save energy, reduce resources and waste, and recycle resources as a way to protect the environment, which includes preventing pollution. By making continual improvements in these areas, we aim to improve our environmental performance.
- 2 We promote the development and design of products that protect the environment by considering how to reduce the environmental burden at every stage of the product life cycle, including acquiring raw materials, development and design, production, transportation, use and disposal.
- 3 We work to decrease environmental burdens with our business partners throughout our entire supply chain, including materials procurement and physical distribution.
- 4 We have created environmental management systems according to ISO 14001 standards and have enacted environmental policies at each of our offices based on these fundamental policies. We also advance our environmental management activities by setting related objectives.
- 5 We abide by all laws, ordinances, agreements, and regulations related to the environment, as well as other requirements agreed on by the Group. We also make voluntary management standards according to these as necessary to promote environmental conservation.
- 6 We appropriately execute revisions based on environmental audits and management reviews to maintain and improve our environmental management systems continuously.
- 7 Through education, training, and other environmental awareness efforts, we promote the environmental awareness of all Group employees, and we contribute to society through our environmental preservation activities.
- 8 We seek to achieve good communications with our stakeholders and with society as a whole by appropriately providing information related to the environment, including our fundamental environmental policy.

■ Third Five-Year Environmental Plan (FY 2014 to FY 2018) and FY 2016 Results Sites covered: GS Yuasa International Ltd. (Kyoto, Osadano, Gunma and Odawara Plants)

Key items Objectives

Energy conservation and reduction of greenhouse gases

We will reduce CO₂ emission intensity from production in fiscal 2018 by at least 5%, relative to fiscal 2013.

We will reduce energy consumption intensity in logistics in fiscal 2018 by at least 5%, relative to fiscal 2013.

We will create and operate efficient energy management systems.

Resource conservation

We will reduce the rate of production errors and defective products (consistency with ISO 9001).

We will reduce the rate of lead scrap to less than 2% in fiscal 2018. We will reduce the amount of wastewater during production in fiscal 2018 by at least 77%, relative to fiscal 2003.

In fiscal 2018, we will promote the correct ways of disposing and recycling 100% of used industrial products under a wide area certification system.

We will create a resource recycling system for next-generation lithium-ion batteries.

Environmentally considered products

We will work to popularize design for the environment (DfE) products.

Promotion of green procurement

We will support the acquisition and advancement of environmental management system certification by business partners.

Management of chemical substances

We will monitor the flow of materials subject to the GS Yuasa Group Chemical Management Guidelines.

Thorough management of environmental risk

We will comprehensively manage environmental risk with our environmental management systems throughout the entire product life cycle.

We will set voluntary management standards that are stricter than environmental laws and regulations, and we will make improvements to environmental management technologies.

Maintenance and continuous improvement of environmental management systems

We will make continual improvements to our environmental management systems with the aim of producing effective environmental management.

Social contribution

We will actively and continually take part in environmental conservation

Communication about the environment

We will expand the scope of environmental information disclosure through the Environmental & Social Report and ensure social appraisal is fed back to our environmental management activities.

FY 2016 results

- CO₂ emission intensity from production was at the same level as fiscal 2013 (13.0 g CO₂/Wh).
- Energy consumption intensity in logistics was reduced by 10% relative to fiscal 2013 (0.046 L / ton-km).
- We carried out energy conservation programs using our environmental management systems.
- The lead scrap rate was 3%.
- The amount of wastewater was reduced by 61% relative to fiscal 2003 (874,000 m³).
- The percentage of used industrial products correctly disposed of or recycled under the wide area certification system was 99.9%.
- We looked into a recovery method for lithium-ion batteries used in next-generation vehicles.
- We promoted the development and design of products using the GS Yuasa Design for the Environment (DfE) Guidelines formulated in October 2005.
- 93% of all transactions were made with business partners that have acquired environmental management system certifications.
- In coordination with green procurement, we thoroughly revamped the management of chemical substances contained in products and complied with Japanese and international regulations on the allowable amounts
- We managed environmental risk using our own environmental management systems.
- There were no instances of emergencies directly related to environmental pollution and no instances of environment-related lawsuits, punitive fines or administrative fines.
- We improved our environmental management systems by addressing the issues identified through periodic internal and external audits.
- We undertook environmental programs and initiatives, which included cleaning the areas around our offices.
- We conducted external communications to reach a wider range of stakeholders, which included publishing the Environmental & Social Report.

Flow of Materials in the Product Life Cycle

Our business operations consume energy, water, raw materials, and other resources while generating waste water, waste products, greenhouse gases, and other materials. We are well aware of the impact of our business operations on the environment. At the same time, we are striving to reduce waste discharge and to use resources efficiently.

In addition, we consider environmental impacts from the

product development and design stages through to the stages of material procurement, manufacture, transport, use, and disposal. Thus, we strive to reduce environmental burdens throughout the product life cycle by, for example, developing environmentally considered products and promoting the recycling of discarded products.



Remarks

(1) Data came from six sites in Japan in fiscal 2016: GS Yuasa International Ltd. (Kyoto, Osadano, Gunma and Odawara Plants), Lithium Energy Japan and GS Ibaraki Works, Ltd. (2) Figures for energy consumption and CO₂ emissions during transportation are solely from GS Yuasa International Ltd.

(3) Figures for the volume of used products recovered and resources recycled are solely from industrial batteries and power sources.

(4) The conversion factor for calculating CO2 emissions for power consumption uses the CO2 emissions intensity data issued by the Federation of Electric Power Companies of Japan.

Management of CO₂ Emissions at Production Sites Worldwide

The GS Yuasa Group undertakes global initiatives to identify and reduce CO₂ emissions from production around the world.

The table below shows CO₂ emissions for fiscal 2016 at major production sites worldwide. 92% of these production



Country	Production site	CO ₂ emissions	Country	Production site	CO ₂ emissions
	GS Yuasa International Ltd. (Kyoto, Osadano, Gunma and Odawara Plants)	118,244		PT. Yuasa Battery Indonesia	28,580
Japan	Lithium Energy Japan	31,416	Indonesia	PT. GS Battery	63,819
	GS Ibaraki Works, Ltd.	4,649		PT. Trimitra Baterai Prakasa	38,622
	Tianjin GS Battery Co., Ltd.	41,949		Yuasa Battery (Thailand) Pub. Co., Ltd.	12,983
	Yuasa Battery (Shunde) Co., Ltd.	28,565	Thailand	Siam GS Battery Co., Ltd.	30,014
China	Yuasa Battery (Guangdong) Co., Ltd.	20,850		GS Yuasa Siam Industry Ltd.	6,549
	GS Battery (China) Co., Ltd.	7,306	India	Tata AutoComp GY Batteries Private Limited	16,609
	Tianjin Yuasa Batteries Co., Ltd.	5,781	Pakistan	Atlas Battery Ltd.	23,533
Taiwan	Taiwan Yuasa Battery Co., Ltd.	52,061	Turkey	Inci GS Yuasa Aku Sanayi ve Ticaret Anonim Sirketi	18,297
Idiwali	GS Battery Taiwan Co., Ltd.	33,759	United Kingdom	GS Yuasa Battery Manufacturing UK Ltd.	9,398
Vietnam	GS Battery (Vietnam) Co., Ltd.	11,586	United States	Yuasa Battery, Inc.	8,269
Malaysia	GS Yuasa Battery Malaysia Sdn. Bhd.	4,443	Australia	Century Yuasa Batteries Pty. Ltd.	12,237

The CO2 conversion factor for power outside Japan uses the coefficient specified under the GHG Protocol for each country.

Response to Carbon Disclosure Project (CDP)

GS Yuasa responds to the CDP Climate Change Questionnaire, a project requesting companies to release information on their climate change strategy and greenhouse gas emissions (only information we collect in Japan is disclosed). We use the results of CDP evaluations and promote initiatives to mitigate and adapt to climate change.

sites have obtained ISO 14001 certification and, to promote reductions in CO₂ emissions, are using an environmental management system that complies with international standards and regulations.

The GS Yuasa Group, together with the supply chain, is working to lessen the Group's environmental burden not only at the manufacturing stage but also throughout the product life cycle.

Design for the Environment (DfE)

The GS Yuasa Group's products have some impact on the environment during every stage of the product life cycle, from procurement and manufacturing to transportation, use and disposal. For this reason, we are committed to designing products based on the GS Yuasa Design for the Environment Guidelines with the aim of reducing the environmental burden throughout the product life cycle, which includes the consumption of resources, the emission of greenhouse gases, and waste. The guidelines cover design that considers the materials used in the product, the 3Rs (reduce, reuse, recycle), ease of disassembly, labeling, energy conservation and packaging. The GS Yuasa Group

promotes the development and design of environmentally considered products through design for the environment (DfE) by using these guidelines while, at the same time, maintaining and improving the performance of products.

Environmental Assessment Items

- 1 Energy conservation 2 Volume reduction 3 Recyclability 4 Ease of disassembly 5 Ease of separation and processing
- 6 Safety and environmental conservation 7 Material selection 8 Ease of maintenance 9 Energy efficiency 10 Reusability (lifecycle extension)

Recycling System for Used Products (Wide Area Certification System)

A wide-area certification system aims to involve the manufacturers of a product in the product's recycling and disposal once it reaches the end of its useful life. These systems make possible more efficient recycling and provide feedback on product design leading to easier disposal and reuse, while ensuring that discarded goods are disposed of properly.

In January 2008, the GS Yuasa Group in Japan acquired wide-area certification from the Ministry of the Environment for industrial batteries and power supplies, and in January 2009 started accepting orders in earnest for a recycling system based on this certification. In FY 2010 and FY 2013 we broadened the range of eligible products, and in FY 2011 we reviewed the operating rules related to small



products, resulting in an improvement of our secure, effective disposal system for discarded goods.

In FY 2016, the amount of discarded goods we processed under the wide-area certification system reached 4,963 tons. This figure was 99.9% of the discarded products the GS Yuasa Group in Japan collected in the same period. As far as industrial batteries for the domestic Group are concerned, the wide-area certification system is now firmly established.

In the future, we will promote even more effective operation of the wide-area certification system to improve customer service as well as to recycle and properly dispose of post-use products.



We are committed to conducting management that does not expose us to environmental risk.

Environmental Education including Emergency Response Training

The GS Yuasa Group employs different types of environmental education to maintain and improve environmental management systems.

General Environmental Education

- Employee education In every division, we provide education to all employees to build awareness of their role in achieving the environmental policy.
- Education for new recruits New recruits are made aware of the GS Yuasa Group's basic philosophy on environmental management.

Preventing Exposure to Compliance Risk and Environmental Pollution Risk

In every business location, we work to prevent environmental pollution through operational management based on voluntary standards that are stricter than regulatory standards based on environmental laws, regional ordinances and agreements.

In working to mitigate the risk of environmental pollution, we take action in operations where there is the possibility of water contamination, air pollution or soil contamination. This includes tangible actions: increasing the visibility of operations and preventing spills as well as using equipment to remove noxious substances and intangible measures, such as equipment inspections, monitoring, measuring and enhancing operating procedures.

Also, we have identified the following potential emergency situations that could have a serious impact on

Comprehensive Compliance Management

The GS Yuasa Group regularly reviews the environmental laws and regulations that must be obeyed, and ensures, through monitoring, that operations are managed in a way that is legally compliant.

Further, business is conducted in compliance with environmental laws and regulations since we use hazardous

In addition, we regularly provide training to avoid exposure to environmental risk.

Specialized Environmental Education

- Training of internal environmental auditors At every business location, we train internal environmental auditors and provide them with education to boost their skills to continually improve our environmental management systems.
- Emergency response training In every division, we regularly provide training on responses to potential emergencies to all employees working in operations that have significant potential impact on the environment.

the environment, and we are taking steps to prevent these situations from occurring.

- Spills of liquid waste from outside tanks, pipelines, etc. and underground seepage that exceeds accepted standards
- Discharges into the air of soot and smoke from melting furnaces, dust collectors and dehydrators that exceeds accepted standards

To make sure we are fully prepared for an emergency, we regularly hold emergency response training to help minimize damage.

There were no instances of emergencies directly related to environmental pollution at any of our business locations in fiscal 2016.

substances, such as lead, in our products and we must obey the laws and regulations related to the operation of recycling systems for used products.

There was no litigation and there were no punitive fines or administrative fines for nonadherence to environmental laws or regulations in fiscal 2016.

We contribute to local communities through our business activities.

Stable Supply of Photovoltaic Generation Systems

A photovoltaic generation system using the GS Yuasa's lithium-ion batteries has been in operation at the Kushiro Town Toritoushi Wildland Photovoltaic Generation Plant in Hokkaido since April 2017.

When generating photovoltaic power, changes in natural conditions, such as sunshine hours and temperature, can lead to significant fluctuations in the power generated, while a major increase in the photovoltaic power load could reduce the quality of the system's power in terms of both voltage and frequency. For this reason, in Hokkaido, it is necessary to reduce output fluctuations by installing storage battery systems when connecting photovoltaic power generation to power systems. The GS Yuasa Group's lithium-ion battery system was installed at this plant as a key device to reduce power output fluctuations. The Group continues to promote the use of highperformance lithium-ion battery systems in power generation and is aiming to contribute to creating sustainable local communities using renewable energy.





Overall view of Kushiro Toritoushi

Industrial lithium-ion battery module LIM50EN series

Wildland Photovoltaic Generation Plant

GS Yuasa Eco Art Contest for Elementary School Children

Since FY 2009, GS Yuasa Battery Ltd. has sponsored the GS Yuasa Eco Art Contest for Elementary School Children to give the pupils, who will become the young citizens in the future, an opportunity to express their thoughts on the global environment.

This contest program provides the opportunity for children and their families to come together and think about the environment. We plan to continue holding this event in the future.





Regional Contributions at GS Yuasa Siam Industry Ltd.

GS Yuasa Siam Industry Ltd. (GYSI), our group companies in Thailand, promotes local activities with a focus on community interaction.

In the past, the company implemented a number of programs that contributed to the local community. These programs include cleanups and fundraising for local elementary schools and temples, running an ice cream stall at an event for children (second Saturday in January), installing lights at an elementary school after shifting to LED lighting, holding factory tours for school students and sponsoring a long-distance race at an industrial park. In 2016, the company was given the CSR-DIW Award* by the Thai government in recognition of these activities.

As a company rooted in the local community, GYSI also promotes interaction through education for local citizens that goes beyond donations and volunteering.



Plaque for the CSR-DIW Award

*The CSR-DIW Award is given by the Department of Industrial Works (DIW) in Thailand to companies that promote exceptional business activities that contribute to sustainable development and the local community.



Participating in the construction of a dam (as a measure against flash floods during the monsoon season)



GYSI factory tour for local junior high students

FINANCIAL SECTION

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10-Year Consolidated Financial Highlights Years ended March 31

	2008	2009	2010	2011
For the year:				
Net sales	303,727	283,421	247,224	272,514
Domestic automotive batteries	77,750	67,191	56,713	58,888
Domestic industrial batteries and power supplies	65,446	65,559	59,031	65,944
Overseas operations	133,807	126,189	104,706	118,197
Lithium-ion batteries	_	_	_	_
Lighting	9,293	8,941	7,037	_
Other	17,429	15,541	19,737	29,485
Operating income	11,891	14,276	11,521	17,589
Domestic automotive batteries	(25)	1,563	1,754	4,838
Domestic industrial batteries and power supplies	8,702	9,862	6,889	8,437
Overseas operations	3,782	5,112	6,905	8,593
Lithium-ion batteries	_	_	_	_
Lighting	485	24	(1,001)	_
Other	490	(615)	(1,295)	(4,279)
Elimination and/or corporate	(1,543)	(1,671)	(1,731)	_
Net income attributable to owners of the parent	1,459	4,229	6,488	11,723
Capital investment	8,937	10,775	16,911	20,005
Depreciation/amortization	7,875	8,869	8,863	10,167
Research and development expenses	4,768	5,395	4,442	5,855
Cash flows from operating activities	687	25,328	22,828	25,478
Cash flows from investing activities	(4,333)	(6,529)	(13,067)	(25,445)
Free cash flow	(3,646)	18,799	9,761	33
Cash flows from financing activities	6,841	(11,246)	285	8
At year-end:	1			
Total assets	260,392	213,585	236,804	247,447
Cash and cash equivalents	9,430	14,006	24,723	24,030
Total equity	78,119	66,049	111,860	122,311
Total debt	104,858	87,785	55,304	48,289
Total equity before noncontrolling interests	72,517	60,731	101,647	108,361
Number of employees	12,467	11,795	12,235	12,394
Per share data (yen):	I.		I	
Basic net income	3.97	11.52	16.32	28.39
Net assets	197.49	165.46	246.20	262.48
Cash dividends applicable to the year	5.00	6.00	6.00	8.00
Financial indices (%):		I	I	
Operating income margin	3.9	5.0	4.7	6.5
ROE	1.9	6.4	8.0	11.2
Shareholders' equity ratio	27.8	28.4	42.9	43.8
Ratio of interest-bearing debt to cash flow (years)	152.6	3.5	2.4	1.9
Dividend payout ratio	125.8	52.1	36.8	28.2
Overseas sales ratio	45.5	45.5	43.1	44.0

2012	2013	2014	2015	2016	2017
285,434	274,510	347,996	369,761	365,611	359,606
58,785	55,648	56,906	51,748	50,987	67,599
68,465	72,427	79,242	79,823	74,805	72,765
120,906	119,885	164,252	183,760	191,402	170,613
20,975	10,598	32,501	45,182	38,312	39,305
_	_	_	_	—	
16,303	15,952	15,095	9,248	10,105	9,324
16,031	9,775	18,198	20,914	21,910	23,107
4,266	3,931	3,310	2,397	3,291	5,677
9,640	10,814	12,199	8,658	8,061	8,702
6,007	6,381	8,996	10,786	11,359	10,460
(3,265)	(11,250)	(7,244)	(2,626)	(566)	46
_	_	_	_	_	
(617)	(101)	937	1,699	(235)	(700
_	_	_	_	_	
11,733	5,768	9,982	10,043	9,030	12,229
38,849	33,159	18,570	11,008	12,955	19,909
11,228	13,264	12,939	15,715	15,309	15,241
6,250	6,228	6,496	6,726	6,998	9,533
8,287	19,070	19,705	19,730	30,215	34,846
(28,660)	(29,249)	(9,787)	(14,520)	(17,311)	(32,913
(20,373)	(10,179)	9,918	5,210	12,904	1,933
13,153	3,839	590	(5,798)	(9,686)	(3,716
278,426	290,369	340,462	359,523	346,523	370,509
16,477	11,210	23,392	25,708	27,788	24,673
136,221	141,189	154,703	182,188	177,792	188,156
56,124	71,674	80,134	82,166	73,608	74,257
115,127	125,352	139,453	161,386	153,725	161,723
12,265	12,599	13,609	14,506	14,415	14,710
28.42	13.97	24.18	24.33	21.88	29.63
278.87	303.65	337.82	390.98	372.43	391.83
8.00	6.00	8.00	10.00	10.00	10.00
5.6	3.6	5.2	5.7	6.0	6.4
10.5	4.8	7.5	6.7	5.7	7.8
41.3	43.2	41.0	44.9	44.4	43.6
8.0	4.0	4.2	4.3	2.5	2.2
28.1	42.9	33.1	41.1	45.7	33.7
43.4	44.4	48.5	52.4	55.5	51.1

Notes: 1. Lighting net sales and operating income were included in the "other" category in the fiscal years ended March 31, 2011 to 2014, and in "domestic industrial batteries and power supplies" in the fiscal year ended March 31, 2015 and beyond.
 2. Lithium-ion batteries net sales and operating income were included in the "other" category up to the fiscal year ended March 31, 2011.

GS YUASA REPORT 2017

(Millions of yen)

Consolidated Balance Sheet

March 31, 2017

	Millions	Millions of Yen	
	2017	2016	2017
ASSETS			
CURRENT ASSETS:			
Cash and cash equivalents (Notes 8 and 14)	¥ 24,673	¥ 27,788	\$ 220,295
Time deposits (Note 14)	322	817	2,875
Receivables (Notes 8 and 14):			
Trade notes	5,489	7,234	49,009
Trade accounts	63,455	62,918	566,563
Unconsolidated subsidiaries and associated companies	3,249	2,974	29,009
Other	8,232	7,964	73,500
Allowance for doubtful receivables	(507)	(351)	(4,527)
Inventories (Notes 4 and 8)	62,840	61,131	561,071
Deferred tax assets (Note 11)	3,175	2,726	28,348
Prepaid expenses and other current assets (Note 8)	2,231	2,594	19,920
Total current assets	173,159	175,795	1,546,063
PROPERTY, PLANT AND EQUIPMENT (Notes 2.n, 7 and 8):			
Land (Note 2.j)	24,251	22,487	216,527
Buildings and structures	96,367	89,781	860,420
Machinery and equipment	147,690	132,816	1,318,661
Furniture and fixtures	30,135	25,378	269,063
Leased assets	5,834	5,334	52,089
Construction in progress	9,419	5,148	84,098
Total	313,696	280,944	2,800,858
Accumulated depreciation	(189,417)	(163,859)	(1,691,224)
Net property, plant and equipment	124,279	117,085	1,109,634
INVESTMENTS AND OTHER ASSETS:			
Investment securities (Notes 5 and 14)	20,985	17,763	187,366
Investments in unconsolidated subsidiaries and associated companies (Notes 6 and 14)	27,406	27,725	244,696
Goodwill (Note 3)	5,600	157	50,000
Asset for retirement benefits (Note 9)	6,715	332	59,955
Deferred tax assets (Note 11)	1,317	1,339	11,759
Other assets (Note 8)	11,048	6,327	98,643
Total investments and other assets	73,071	53,643	652,419
TOTAL	¥370,509	¥346,523	\$3,308,116

See notes to consolidated financial statements.

	Millions	Millions of Yen	
	2017	2016	2017
IABILITIES AND EQUITY			
CURRENT LIABILITIES:			
Short-term bank loans (Notes 8 and 14)	¥ 11,358	¥ 20,663	\$ 101,411
Current portion of long-term debt (Notes 8 and 14)	16,793	4,507	149,938
Payables (Note 14):			
Trade notes	13,433	7,101	119,938
Trade accounts	28,455	29,010	254,063
Unconsolidated subsidiaries and associated companies	2,720	2,783	24,286
Other	16,775	19,195	149,777
Income taxes payable (Note 14)	3,616	2,297	32,286
Accrued expenses	10,323	9,310	92,170
Other current liabilities (Note 11)	6,348	4,406	56,676
Total current liabilities	109,821	99,272	980,545
ONG-TERM LIABILITIES:			
Long-term debt (Notes 8 and 14)	47,887	50,470	427,562
Liability for retirement benefits (Notes 2.k and 9)	5,979	3,885	53,384
Long-term deposits received	5,187	4,988	46,313
Deferred tax liabilities (Note 11)	11,190	7,857	99,911
Deferred tax liabilities on land revaluation (Note 2.j)	1,043	1,043	9,313
Other	1,246	1,216	11,122
Total long-term liabilities	72,532	69,459	647,605
COMMITMENTS AND CONTINGENT LIABILITIES (Notes 13, 15 and 16)			
Common stock, authorized, 1,400,000,000 shares; issued 413,574,714 shares in 2017 and 2016	33,021	33,021	294,830
Capital surplus	55,293	55,293	493,688
Retained earnings	59,501	51,400	531,259
Treasury stock - at cost: 835,277 shares in 2017 and 817,203 shares in 2016	(359)	(350)	(3,205)
Accumulated other comprehensive income:			
Unrealized gain on available-for-sale securities	10,769	8,491	96,152
Deferred loss on derivatives under hedge accounting		(9)	
Land revaluation surplus (Note 2.j)	2,398	2,398	21,411
Foreign currency translation adjustments	2,331	6,943	20,813
Defined retirement benefit plans (Notes 2.k and 9)	(1,231)	(3,462)	(10,991)
Total	161,723	153,725	1,443,957
Noncontrolling interests	26,433	24,067	236,009
Total equity	188,156	177,792	1,679,966
TOTAL	¥370,509	¥346,523	\$3,308,116

Consolidated Statement of Income

Year Ended March 31, 2017

	Millions of Yen		Thousands of U.S. Dollars (Note 1)
	2017	2016	2017
NET SALES (Note 6)	¥359,606	¥365,611	\$3,210,768
COST OF SALES (Notes 6 and 12)	270,993	280,871	2,419,580
Gross profit	88,613	84,740	791,188
SELLING, GENERAL AND ADMINISTRATIVE EXPENSES (Note 12)	65,506	62,830	584,875
Operating income	23,107	21,910	206,313
OTHER INCOME (EXPENSES):			
Interest and dividend income	689	737	6,152
Interest expense	(932)	(1,106)	(8,321)
Gain on sales of property, plant and equipment	86	14	768
Loss on disposal of property, plant and equipment	(605)	(1,020)	(5,402)
Loss on impairment of long-lived assets (Note 7)	(392)	(1,591)	(3,500)
Foreign exchange loss	(920)	(2,155)	(8,214)
Equity in earnings of unconsolidated subsidiaries and associated companies	371	1,758	3,313
Gain on sales of investment securities	19	84	170
Gain resulting from step acquisitions of shares of an associate		171	
Loss on liquidation of affiliated company		(1,600)	
Other - net	101	(244)	900
Other expenses - net	(1,583)	(4,952)	(14,134)
INCOME BEFORE INCOME TAXES	21,524	16,958	192,179
INCOME TAXES (Note 11):			
Current	6,203	5,784	55,384
Deferred	349	744	3,116
Total income taxes	6,552	6,528	58,500
NET INCOME	14,972	10,430	133,679
NET INCOME ATTRIBUTABLE TO NONCONTROLLING INTERESTS	(2,743)	(1,400)	(24,491)
NET INCOME ATTRIBUTABLE TO OWNERS OF THE PARENT	¥ 12,229	¥ 9,030	\$ 109,188

	Yen		U.S. Dollars
	2017	2016	2017
PER SHARE OF COMMON STOCK (Notes 2.t and 18):			
Basic net income	¥ 29.63	¥ 21.88	\$ 0.26
Diluted net income	27.62	20.39	0.25
Cash dividends applicable to the year	10.00	10.00	0.09

See notes to consolidated financial statements.

Consolidated Statement of Comprehensive Income Year Ended March 31, 2017

	Million	Millions of Yen	
	2017	2016	2017
NET INCOME	¥14,972	¥10,430	\$133,679
OTHER COMPREHENSIVE INCOME (LOSS) (Note 17):			
Unrealized gain (loss) on available-for-sale securities	2,257	(1,105)	20,152
Deferred gain (loss) on derivatives under hedge accounting	9	(4)	80
Land revaluation surplus		68	
Foreign currency translation adjustments	(3,488)	(4,653)	(31,143)
Defined retirement benefit plans	1,334	(7,051)	11,911
Share of other comprehensive loss in associates	(1,650)	(1,278)	(14,733)
Total other comprehensive loss	(1,538)	(14,023)	(13,733)
COMPREHENSIVE INCOME (LOSS) (Note 17)	¥13,434	¥ (3,593)	\$119,946
TOTAL COMPREHENSIVE INCOME (LOSS) ATTRIBUTABLE TO:			
Owners of the parent	¥11,228	¥ (3,938)	\$100,250
Noncontrolling interests	2,206	345	19,696

See notes to consolidated financial statements.

Consolidated Statement of Changes in Equity Year Ended March 31, 2017

	Number of Shares of Common Stock Outstanding	Common Stock	Capital Surplus	Retained Earnings	Treasury Stock
BALANCE, APRIL 1, 2015	412,775,768	¥33,021	¥54,880	¥46,498	¥(341)
Net income attributable to owners of the parent				9,030	
Cash dividends, ¥10.00 per share				(4,128)	
Purchase of treasury stock	(18,257)				(9)
Changes in capital increase of consolidated subsidiaries			413		
Net change in the year					
BALANCE, MARCH 31, 2016	412,757,511	33,021	55,293	51,400	(350)
Net income attributable to owners of the parent				12,229	
Cash dividends, ¥10.00 per share				(4,128)	
Purchase of treasury stock	(18,074)				(9)
Net change in the year					
BALANCE, MARCH 31, 2017	412,739,437	¥33,021	¥55,293	¥59,501	¥(359)

	Common Stock		Retained Earnings	
BALANCE, MARCH 31, 2016	\$294,830	\$493,688	\$458,929	\$(3,125)
Net income attributable to owners of the parent			109,188	
Cash dividends, \$0.09 per share			(36,858)	
Purchase of treasury stock				(80)
Net change in the year				
BALANCE, MARCH 31, 2017	\$294,830	\$493,688	\$531,259	\$(3,205)

See notes to consolidated financial statements.

Million	s of Yen						
		ed Other Comprehen					
Unrealized Gain on Available-for- Sale Securities	Deferred Loss on Derivatives under Hedge Accounting	Land Revaluation Surplus	Foreign Currency Translation Adjustments	Defined Retirement Benefit Plans	Total	Noncontrolling Interests	Total Equity
¥ 9,619	¥(5)	¥2,330	¥11,792	¥3,592	¥161,386	¥20,802	¥182,188
					9,030		9,030
					(4,128)		(4,128)
					(9)		(9)
					413		413
(1,128)	(4)	68	(4,849)	(7,054)	(12,967)	3,265	(9,702)
8,491	(9)	2,398	6,943	(3,462)	153,725	24,067	177,792
					12,229		12,229
					(4,128)		(4,128)
					(9)		(9)
2,278	9		(4,612)	2,231	(94)	2,366	2,272
¥10,769	¥	¥2,398	¥ 2,331	¥(1,231)	¥161,723	¥26,433	¥188,156

	Accumulated Other Comprehensive Income						
Unrealized Gain on Available-for- Sale Securities	Deferred Loss on Derivatives under Hedge Accounting	Land Revaluation Surplus	Foreign Currency Translation Adjustments	Defined Retirement Benefit Plans	Total	Noncontrolling Interests	Total Equity
\$75,813	\$(80)	\$21,411	\$61,992	\$(30,911)	\$1,372,547	\$214,884	\$1,587,431
					109,188		109,188
					(36,858)		(36,858)
					(80)		(80)
20,339	80		(41,179)	19,920	(840)	21,125	20,285
\$96,152	\$	\$21,411	\$20,813	\$(10,991)	\$1,443,957	\$236,009	\$1,679,966

Consolidated Statement of Cash Flows

Year Ended March 31, 2017

	Millions of Yen		Thousands of U.S. Dollars (Note 1)	
	2017	2016	2017	
OPERATING ACTIVITIES:				
Income before income taxes	¥21,524	¥16,958	\$192,179	
Adjustments for:				
Income taxes – paid	(5,368)	(4,664)	(47,929)	
Depreciation and amortization	16,314	16,005	145,661	
Loss on impairment of long-lived assets	392	1,591	3,500	
Gain on sales of property, plant and equipment	(86)	(14)	(768)	
Loss on disposal of property, plant and equipment	605	1,020	5,402	
Gain on sales of investment securities	(19)	(84)	(170)	
Equity in earnings of unconsolidated subsidiaries and associated companies	(371)	(1,758)	(3,313)	
Loss on liquidation of affiliated company		1,600		
Changes in assets and liabilities:				
Decrease in trade receivable	1,523	4,170	13,598	
Increase in inventories	(2,817)	(2,986)	(25,152)	
Decrease in interest and dividend receivable	555	623	4,955	
Increase in trade payable	1,608	2,779	14,357	
Decrease in interest payable	(12)	(44)	(107)	
Decrease in liability for retirement benefits	(3,084)	(2,797)	(27,536)	
Other – net	4,082	(2,184)	36,448	
Net cash provided by operating activities	34,846	30,215	311,125	
INVESTING ACTIVITIES:				
Proceeds from sales of property, plant and equipment	201	105	1,795	
Purchases of property, plant and equipment	(18,375)	(10,510)	(164,063)	
Proceeds from sales of investment securities	31	806	277	
Purchases of investment securities	(1,655)	(5,030)	(14,777)	
Purchases of shares of the newly consolidated subsidiaries	(12,971)	(238)	(115,813)	
Other – net	(144)	(2,444)	(1,285)	
Net cash used in investing activities	(32,913)	(17,311)	(293,866)	
FINANCING ACTIVITIES:				
(Decrease) increase in short-term bank loans – net	(7,384)	14	(65,929)	
Proceeds from long-term bank loans	13,793	3,841	123,152	
Repayments of long-term bank loans	(3,292)	(11,265)	(29,393)	
Purchase of treasury stock	(9)	(9)	(80)	
Dividends paid	(4,127)	(4,131)	(36,848)	
Dividends paid to noncontrolling interests	(1,669)	(1,201)	(14,902)	
Proceeds from stock issuance to noncontrolling shareholders		4,112		
Other – net	(1,028)	(1,047)	(9,179)	
Net cash used in financing activities	(3,716)	(9,686)	(33,179)	
NET (DECREASE) INCREASE IN CASH AND CASH EQUIVALENTS	(1,783)	3,218	(15,920)	
FOREIGN CURRENCY TRANSLATION ADJUSTMENTS ON CASH AND CASH EQUIVALENTS	(1,332)	(1,138)	(11,892)	
CASH AND CASH EQUIVALENTS, BEGINNING OF YEAR	27,788	25,708	248,107	
CASH AND CASH EQUIVALENTS, END OF YEAR	¥24,673	¥27,788	\$220,295	

See notes to consolidated financial statements.

Notes to Consolidated Financial Statements Year Ended March 31, 2017

1. BASIS OF PRESENTATION OF CONSOLIDATED FINANCIAL STATEMENTS

The accompanying consolidated financial statements of GS Yuasa Corporation (the "Company") have been prepared in accordance with the provisions set forth in the Japanese Financial Instruments and Exchange Act and its related accounting regulations and in accordance with accounting principles generally accepted in Japan ("Japanese GAAP"), which are different in certain respects as to the application and disclosure requirements of International Financial Reporting Standards.

In preparing these consolidated financial statements, certain reclassifications and rearrangements have been made to the consolidated financial statements issued domestically in Japan in order to present them in a form which is more familiar to readers outside Japan. In addition, certain reclassifications have been made in the 2016 consolidated financial statements to conform to the classifications used in 2017.

The consolidated financial statements are stated in Japanese yen and, solely for the convenience of readers outside Japan, have been translated into U.S. dollars at the rate of ¥112 to \$1, the approximate exchange rate at March 31, 2017. The translations should not be construed as representations that the Japanese yen amounts have been, could have been, or could in the future be, converted into U.S. dollars at that or any other rate.

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

a. Consolidation — The consolidated financial statements as of March 31, 2017, include the accounts of the Company and its 55 (55 in 2016) significant subsidiaries (collectively, the "Group"). Under the control and influence concepts, those companies over whose operations the Company, directly or indirectly, is able to exercise control are fully consolidated, and those associated companies over which the Group has the ability to exercise significant influence are accounted for by the equity method. Investments in 24 (24 in 2016) associated companies are

accounted for by the equity method.

Investments in the remaining unconsolidated subsidiaries and associated companies are stated at cost. Consolidating or accounting for those companies by the equity method would not have a significant effect on the consolidated financial statements.

The excess of cost of acquisition over the fair value of the net assets of acquired subsidiaries at the date of acquisition is amortized principally over a period of five years.

All significant intercompany balances and transactions are eliminated in consolidation. All material unrealized profit included in assets resulting from transactions within the Group is also eliminated.

In 2017, GS Yuasa Logitec Co., Ltd. was excluded from the scope of consolidated subsidiaries as a result of completion of an absorption-type merger with GS Yuasa Co., Ltd.

b. Unification of Accounting Policies Applied to Foreign Subsidiaries for the Consolidated Financial Statements —

Under Accounting Standards Board of Japan ("ASBJ") Practical Issues Task Force ("PITF") No. 18, "Practical Solution on Unification of Accounting Policies Applied to Foreign Subsidiaries for the Consolidated Financial Statements," the accounting policies and procedures applied to a parent company and its subsidiaries for similar transactions and events under similar circumstances should in principle be unified for the preparation of the consolidated financial statements. However, financial statements prepared by foreign subsidiaries in accordance with either International Financial Reporting Standards or generally accepted accounting principles in the United States of America (Financial Accounting Standards Board Accounting Standards Codification—"FASB ASC") tentatively may be used for the consolidation process, except for the following items that should be adjusted in the consolidation process so that net income is accounted for in accordance with Japanese GAAP, unless they are not material: (a) amortization of goodwill; (b) scheduled amortization of actuarial gain or loss of pensions that has been recorded in equity through other comprehensive income; (c) expensing capitalized development costs of R&D; and (d) cancellation of the fair value model of accounting for property, plant and equipment and investment properties and incorporation of the cost model of accounting.

c. Unification of Accounting Policies Applied to Foreign Associated Companies for the Equity Method — ASBJ

Statement No. 16, "Accounting Standard for Equity Method of Accounting for Investments," requires adjustments to be made to conform the associate's accounting policies for similar transactions and events under similar circumstances to those of the parent company when the associate's financial statements are used in applying the equity method, unless it is impracticable to determine such adjustments. In addition, financial statements prepared by foreign associated companies in accordance with either International Financial Reporting Standards or generally accepted accounting principles in the United States of America tentatively may be used in applying the equity method if the following items are adjusted so that net income is accounted for in accordance with Japanese GAAP, unless they are not material: (a) amortization of goodwill; (b) scheduled amortization of actuarial gain or loss of pensions that has been recorded in equity through other comprehensive income; (c) expensing capitalized development costs of R&D; and (d) cancellation of the fair value model of accounting for property, plant and equipment and investment properties and incorporation of the cost model of accounting.

d. Business Combinations — Business combinations are accounted for using the purchase method. Acquisition-related costs, such as advisory fees or professional fees, are accounted for as expenses in the periods in which the costs are incurred. If the initial accounting for a business combination is incomplete by the end of the reporting period in which the business combination occurs, an acquirer shall report in its financial statements provisional amounts for the items for which the accounting is incomplete. During the measurement period, which shall not exceed one year from the acquisition, the acquirer shall retrospectively adjust the provisional amounts recognized at the acquisition date to reflect new information obtained about facts and circumstances that existed as of the acquisition date and that would have affected the measurement of the amounts recognized as of that date. Such adjustments shall be recognized as if the accounting for the business combination had been completed at the acquisition date. A parent's ownership interest in a subsidiary might change if the parent purchases or sells ownership interests in its subsidiary. The carrying amount of noncontrolling interest is adjusted to reflect the change in the parent's ownership interest in its subsidiary while the parent retains its controlling interest in its subsidiary. Any difference between the fair value of the consideration received or paid and the amount by which the noncontrolling interest is adjusted is accounted for as capital surplus as long as the parent retains control over its subsidiary.

The Company acquired 85.1% of the shares of Panasonic Storage Battery Co., Ltd. on September 30, 2016 and accounted for this acquisition by the purchase method of accounting (see Note 3).

FINANCIAL SECTION

GS Yuasa Corporation and Consolidated Subsidiaries

e. Cash Equivalents — Cash equivalents are short-term investments that are readily convertible into cash and exposed to insignificant risk of changes in value.

Cash equivalents include time deposits, all of which mature or become due within three months of the date of acquisition.

- f. Inventories Inventories are principally stated at the lower of cost, determined by the average method, or net selling value.
- *g. Investment Securities* All of the Group's marketable securities are classified as available-for-sale securities and are reported at fair value, with unrealized gains and losses, net of applicable taxes, reported as a separate component of equity. The cost of securities sold is determined based on the moving-average method.

Nonmarketable available-for-sale securities are stated at cost determined by the moving-average method. For other-thantemporary declines in fair value, investment securities are reduced to net realizable value by a charge to income.

h. Property, Plant and Equipment — Property, plant and equipment are stated at cost. Depreciation of property, plant and equipment of the Group is mainly computed by the straight-line method based on the estimated useful lives of the assets. The range of useful lives is from 7 to 50 years for buildings and structures and from 4 to 17 years for machinery and equipment.

Leased assets related to financial leases that do not transfer ownership rights are depreciated under the straight-line method based on the lease term as the useful life and assuming no residual value.

Under certain conditions such as exchanges of fixed assets of similar kinds and sales and purchases resulting from expropriation, Japanese tax laws permit companies to defer the profit arising from such transactions by reducing the cost of the assets acquired. Certain subsidiaries acquired property, plant and equipment, including buildings and structures, machinery and equipment, and funded construction in progress, through government grants. As of March 31, 2017 and 2016, the accumulated deducted cost of the assets acquired were ¥11,270 million (\$100,625 thousand) and ¥11,270 million, respectively.

- *i. Long-Lived Assets* The Group reviews its long-lived assets for impairment whenever events or changes in circumstance indicate the carrying amount of an asset or asset group may not be recoverable. An impairment loss is recognized if the carrying amount of an asset or asset group exceeds the sum of the undiscounted future cash flows expected to result from the continued use and eventual disposition of the asset or asset group. The impairment loss would be measured as the amount by which the carrying amount of the discounted cash flows from the continued use and eventual disposition of the asset or asset group. The impairment loss would be measured as the amount by which the carrying amount of the asset exceeds its recoverable amount, which is the higher of the discounted cash flows from the continued use and eventual disposition of the asset or the net selling price at disposition.
- j. Land Revaluation Under the "Law of Land Revaluation," certain domestic subsidiaries elected a one-time revaluation of its own-use land to a value based on a price which was published by national tax office as of March 31, 2002. The resulting land revaluation excess represents unrealized appreciation of land and is stated, net of income taxes, as a component of equity. There was no effect on the consolidated statement of income. Continuous readjustment is not permitted unless the land value subsequently declines significantly such that the amount of the decline in value should be removed from the land revaluation excess account and related deferred tax liabilities. As of March 31, 2017, the carrying amount of the land after the above one-time revaluation exceeded the market value by ¥1,242 million (\$11,089 thousand).

k. Retirement Benefits — Certain consolidated subsidiaries have contributory and non-contributory funded defined benefit pension plans, defined contribution pension plans and unfunded retirement benefit plans for employees.

The Group accounted for the liability for retirement benefits based on projected benefit obligations and plan assets at the balance sheet date. The projected benefit obligations are attributed to periods on a straight-line basis. Actual gains and losses are amortized on a straight-line basis over 10 to 14 years within the average remaining service period. Past service costs are amortized on a straight-line basis over 14 years within the average remaining service period.

Retirement benefits to directors, Audit & Supervisory Board members and executive officers of certain domestic subsidiaries are provided at the amount which would be required if all such persons retired at the balance sheet date.

- I. Asset Retirement Obligations An asset retirement obligation is recorded for a legal obligation imposed either by law or contract that results from the acquisition, construction, development and normal operation of a tangible fixed asset and is associated with the retirement of such tangible fixed asset. The asset retirement obligation is recognized as the sum of the discounted cash flows required for the future asset retirement and is recorded in the period in which the obligation is incurred if a reasonable estimate can be made. If a reasonable estimate of the asset retirement obligation cannot be made in the period the asset retirement obligation is incurred, the liability should be recognized when a reasonable estimate of the asset retirement obligation can be made. Upon initial recognition of a liability for an asset retirement obligation, an asset retirement cost is capitalized by increasing the carrying amount of the related fixed asset by the amount of the liability. The asset retirement cost is subsequently allocated to expense through depreciation over the remaining useful life of the asset. Over time, the liability is accreted to its present value each period. Any subsequent revisions to the timing or the amount of the original estimate of undiscounted cash flows are reflected as an adjustment to the carrying amount of the liability and the capitalized amount of the related asset retirement cost.
- m. Research and Development Costs Research and development costs are charged to income as incurred.
- **n.** Leases Finance lease transactions are capitalized by recognizing lease assets and lease obligations in the balance sheet.
- o. Construction Contracts Construction revenue and construction costs are recognized by the percentage-of-completion method if the outcome of a construction contract can be estimated reliably. When total construction revenue, total construction costs and the stage of completion of the contract at the balance sheet date can be reliably measured, the outcome of a construction contract is deemed to be estimated reliably. If the outcome of a construction contract method should be applied. When it is probable that the total construction costs will exceed total construction revenue, an estimated loss on the contract should be immediately recognized by providing for a loss on such construction contracts.
- **p. Income Taxes** The provision for income taxes is computed based on the pretax income included in the consolidated statement of income. The asset and liability approach is used to recognize deferred tax assets and liabilities for the expected future tax consequences of temporary differences between the carrying amounts and the tax bases of assets and liabilities.

Deferred taxes are measured by applying currently enacted income tax rates to the temporary differences.

The Company applied ASBJ Guidance No. 26, "Guidance on Recoverability of Deferred Tax Assets," effective April 1, 2016. There was no impact from this for the year ended March 31, 2017.

- q. Foreign Currency Transactions All short-term and long-term monetary receivables and payables denominated in foreign currencies are translated into Japanese yen at the exchange rates at the balance sheet date. The foreign exchange gains and losses from translation are recognized in the consolidated statement of income to the extent that they are not hedged by forward exchange contracts.
- r. Foreign Currency Financial Statements The balance sheet accounts of the consolidated foreign subsidiaries are translated into Japanese yen at the current exchange rate as of the balance sheet date except for equity, which is translated at the historical exchange rate. Differences arising from such translation are shown as "Foreign currency translation adjustments" under accumulated other comprehensive income in a separate component of equity. Revenue and expense accounts of the consolidated foreign subsidiaries are translated into Japanese yen at the annual average rates.
- s. Derivatives and Hedging Activities The Group uses foreign exchange forward contracts, foreign currency swaps, interest rate swaps and commodity price swaps to manage its exposures to fluctuations in foreign exchange rates, interest rates and material prices. The Group does not enter into derivatives for trading or speculative purposes.

All derivatives are recognized as either assets or liabilities and measured at fair value, and gains or losses on derivative transactions are recognized in the consolidated statement of income and for derivatives used for hedging purposes, if such derivatives qualify for hedge accounting because of high correlation and effectiveness between the hedging instruments and the hedged items, gains or losses on those derivatives are deferred until maturity of the hedged transactions.

Interest rate swaps which qualify for hedge accounting and meet specific matching criteria are not remeasured at market value but the differential paid or received under the swap agreements is recognized and included in interest expense.

t. Per Share Information — Net income per share is computed by dividing net income attributable to common shareholders by the weighted-average number of common shares outstanding for the period, retroactively adjusted for stock splits.

Diluted net income per share reflects the potential dilution that could occur if stock acquisition rights incorporated in convertible bonds were exercised or converted into common stock. Diluted net income per share of common stock assumes full conversion of the outstanding convertible bonds at the beginning of the year (or at the time of issuance) with an applicable adjustment for related interest expense, net of tax, and full exercise of outstanding stock acquisition rights.

Cash dividends per share presented in the accompanying consolidated statement of income are the amounts applicable to the respective fiscal years including dividends to be paid after the end of the fiscal year.

- u. Bond Issue Costs Bond issue costs are amortized by the straight-line method over the bond term in accordance with ASBJ PITF No. 19, "Tentative Solution on Accounting for Deferred Assets," which was issued by the ASBJ in August 2006.
- v. Accounting Changes and Error Corrections Under ASBJ Statement No. 24, "Accounting Standard for Accounting Changes

and Error Corrections," and ASBJ Guidance No. 24, "Guidance on Accounting Standard for Accounting Changes and Error Corrections, " accounting treatments are required as follows: (1) Changes in Accounting Policies—When a new accounting policy is applied following revision of an accounting standard, the new policy is applied retrospectively unless the revised accounting standard includes specific transitional provisions, in which case the entity shall comply with the specific transitional provisions. (2) Changes in Presentation—When the presentation of financial statements is changed, prior-period financial statements are reclassified in accordance with the new presentation. (3) Changes in Accounting Estimates—A change in an accounting estimate is accounted for in the period of the change if the change affects that period only, and is accounted for prospectively if the change affects both the period of the change and future periods. (4) Corrections of Prior-Period Errors—When an error in prior-period financial statements is discovered, those statements are restated.

3. BUSINESS COMBINATION

Year Ended March 31, 2017 Business Combination by Acquisition

a. Outline of the business combination

- (1)Name of acquired company and its business outline Name of the acquired company:
 - Panasonic Storage Battery Co., Ltd.

Business outline:

Manufacture and sales of lead-acid batteries for automotive use, electrically-powered vehicles and industrial use

- (2)Major reason for the business combination With the acquisition of Panasonic Storage Battery Co., Ltd., the Group will make an innovative change in its business structure such as further streamlining production by distributing production know-how through its global horizontal business network and enhance development speed in order to respond to the diversification of product development demands. The Group will also expand its global market share in the lead-acid battery business business program offect of the acquisition
- battery business by realizing the synergy effect of the acquisition at an early stage. (3)Date of business combination

September 30, 2016

(4)Legal form of business combination

Share acquisition in consideration for cash

- (5)Name of the company after the combination
- GS Yuasa Energy Co., Ltd. (6)Ratio of voting rights acquired
- 85.1%

(7)Basis for determining the acquirer It is based on the fact that the Company acquired 85.1% of voting rights by means of share acquisition in consideration for cash.

b. The period for which the operations of the acquired company are included in the consolidated financial statements

The operations of the acquired company for the six months from October 1, 2016 to March 31, 2017, were included in the consolidated statement of income for the year ended March 31, 2017.

c. Acquisition cost of the acquired company and related details of each class of consideration

	Millions of Yen	Thousands of U.S. Dollars
Consideration for acquisition - Cash	¥16,058	\$143,375
Acquisition cost	¥16,058	\$143,375

d. Major acquisition-related costs

Advisory fees and commissions to lawyers: ¥493 million (\$4,402 thousand)

e. Amount of goodwill incurred, reasons for the goodwill incurred, and the method and period of amortization (1)Amount of goodwill incurred

¥6,084 million (\$54,321 thousand)

(2)Reasons for the goodwill incurred

Goodwill is incurred from expected excess earnings power in the

future arising from further business development.

(3)Method and period of amortization

Goodwill is amortized on a straight-line basis over 5 years.

f. The assets acquired and the liabilities assumed at the acquisition date were as follows:

	Millions of Yen	Thousands of U.S. Dollars
Current assets	¥ 9,033	\$ 80,652
Non-current assets	11,193	99,937
Total assets acquired	¥20,226	\$180,589
Current liabilities	¥ 4,672	\$ 41,714
Non-current liabilities	3,834	34,232
Total liabilities assumed	¥ 8,506	\$ 75,946

g. The amounts allocated to intangible assets other than goodwill, and the amortization period were as follows:

	Amount	Amortization Period
Trademark rights	¥ 94 million (\$839 thousand)	20 years
Contract-related intangible assets	¥4,104 million (\$36,643 thousand)	5 years
Technology-related intangible assets	¥1,143 million (\$10,206 thousand)	10 years

h. Pro forma information (unaudited)

If this business combination had been completed as of April 1, 2016, the beginning of the current fiscal year, the effects on the consolidated statement of income for the year ended March 31, 2017, would be as follows:

	Millions of Yen	Thousands of U.S. Dollars
Sales	¥29,176	\$260,500
Operating income	454	4,054

Outline of the method of calculation for the effects above: The above pro forma financial information was calculated as the difference between sales and income, assuming that the business combination was completed at April 1, 2016, and the Company's sales and income reported on the consolidated statement of income.

The above pro forma financial information is unaudited.

4. INVENTORIES

Inventories at March 31, 2017 and 2016, consisted of the following:

	Millions	Thousands of U.S. Dollars	
	2017	2016	2017
Finished products	¥34,446	¥36,173	\$307,554
Work in process	15,535	13,125	138,705
Raw materials and supplies	12,859	11,833	114,812
Total	¥62,840	¥61,131	\$561,071

5. INVESTMENT SECURITIES

Investment securities as of March 31, 2017 and 2016, consisted of the following:

	Millions	Thousands of U.S. Dollars	
	2017	2017	
Non-current:			
Equity securities	¥20,956	¥17,734	\$187,107
Debt securities	29	29	259
Total	¥20,985	¥17,763	\$187,366

The costs and aggregate fair values of investment securities at March 31, 2017 and 2016, were as follows:

	Millions of Yen				
		2017			
	Cost	Unrealized Gains	Unrealized Losses	Fair Value	
Securities classified as:					
Available-for-sale:					
Equity securities	¥5,245	¥15,136	¥(12)	¥20,369	

	Millions of Yen			
	2016			
	Cost	Unrealized Gains	Unrealized Losses	Fair Value
Securities classified as:				
Available-for-sale:				
Equity securities	¥5,270	¥11,963	¥(86)	¥17,147

	Thousands of U.S. Dollars			
		20	17	
	Cost	Unrealized Gains	Unrealized Losses	Fair Value
Securities classified as:				
Available-for-sale:				
Equity securities	\$46,830	\$135,143	\$(107)	\$181,866

Available-for-sale securities whose fair value cannot be reliably determined at March 31, 2017 and 2016, were as follows:

	Millions	Thousands of U.S. Dollars	
	2017	2017	
Non-current:			
Equity securities	¥587	¥587	\$5,241
Debt securities	29	29	259
Total	¥616	¥616	\$5,500

The information of available-for-sale securities which were sold during the years ended March 31, 2017 and 2016, was as follows:

	Millions of Yen			
March 31, 2017	Proceeds	Realized Gains	Realized Loss	
Available-for-sale:				
Equity securities	¥31	¥19		
		Millions of Yen		
March 31, 2016	Proceeds	Realized Gains	Realized Loss	
Available-for-sale:				
Equity securities	¥787	¥84		
	The		II	
	Ino	usands of U.S. Do	llars	
March 31, 2017	Proceeds	Realized Gains	Realized Loss	
Available-for-sale:				
Equity securities	\$277	\$170		

6. INVESTMENTS IN UNCONSOLIDATED SUBSIDIARIES AND ASSOCIATED COMPANIES

Investments in unconsolidated subsidiaries and associated companies at March 31, 2017 and 2016, consisted of the following:

	Millions of Yen		Thousands of U.S. Dollars
	2017	2016	2017
Investments at cost	¥ 8,168	¥ 8,282	\$ 72,928
Equity in undistributed earnings	19,238	19,443	171,768
Total	¥27,406	¥27,725	\$244,696

Sales to and purchases from unconsolidated subsidiaries and associated companies for the years ended March 31, 2017 and 2016, were as follows:

	Millions of Yen		Thousands of U.S. Dollars	
	2017	2016	2017	
Sales	¥12,983	¥14,336	\$115,920	
Purchases	20,515	21,147	183,170	

7. LONG-LIVED ASSETS

The Group reviewed its long-lived assets for impairment as of March 31, 2017. As a result, the Group recognized an impairment loss of ¥392 million (\$3,500 thousand) in total for certain assets used for business. Because these assets became idle assets in the current fiscal year, the carrying amount of the assets was written down to the recoverable amount. The recoverable amount of the assets was measured at the net selling price estimated by its disposal price.

The Group reviewed its long-lived assets for impairment as of March 31, 2016. As a result, the Group recognized an impairment loss of ¥2,237 million in total for certain assets used for business. The Group recognized ¥1,591 million as loss on impairment of long-lived assets and ¥646 million including loss on liquidation of an affiliated company as other expenses. Due to a downturn in profitability of that business and preparation for the liquidation of a certain consolidated subsidiary, the carrying amount of the assets was written down to the recoverable amount. The recoverable amount of the assets was measured at the net selling price estimated by its disposal price.

8. SHORT-TERM BANK LOANS AND LONG-TERM DEBT

As is customary in Japan, the Group obtains financing by discounting trade notes receivable with banks. Such discounted notes and the related contingent liabilities are not included in the consolidated balance sheet, but are disclosed as contingent liabilities (see Note 16). At March 31, 2017, short-term bank loans of ¥92 million (\$821 thousand) were collateralized.

The weighted-average interest rates for the Group's short-term bank loans were 2.13% and 2.59% at March 31, 2017 and 2016, respectively. Long-term debt at March 31, 2017 and 2016, consisted of the following:

	Millions of Yen		Thousands of U.S. Dollars
	2017	2016	2017
Zero coupon convertible bonds due in March 2019	¥25,000	¥25,000	\$223,214
Unsecured bank loans, maturing serially through 2019 with interest rates ranging from 0.2% to 5.5% (2017) and from 0.2% to 5.5% (2016)	62,281	26,963	556,080
Collateralized	620	983	5,536
Obligations under finance leases	1,779	2,031	15,884
Total	64,680	54,977	577,500
Less current portion	16,793	4,507	149,938
Long-term debt	¥47,887	¥50,470	\$427,562

Annual maturities of long-term debt at March 31, 2016, were as follows:

Year Ending March 31	Millions of Yen	Thousands of U.S. Dollars
2018	¥16,793	\$149,938
2019	29,526	263,625
2020	1,483	13,241
2021	2,587	23,098
2022	4,108	36,679
2023 and thereafter	10,183	90,919
Total	¥64,680	\$577,500

Zero coupon convertible bonds	
Class of shares to be issued	Ordinary shares of common stock
Issue price for stock acquisition rights	_
Exercise price per share	¥851 (\$8)
Total amount of debt securities issued	¥25,000 million (\$223,214 thousand)
Total amount of shares issued by exercising stock acquisition rights	_
Percentage of shares with stock acquisition rights	100%
Exercise period	March 27, 2014 - February 27, 2019

If all the outstanding stock acquisition rights incorporated in convertible bonds had been exercised at March 31, 2017, 29,377 thousand shares of common stock would have been issued. The conversion price of the convertible bonds is subject to adjustments to reflect stock splits and certain other events.

The carrying amounts of assets pledged as collateral for short-term borrowings and long-term debt at March 31, 2017, were as follows:

	Millions of Yen	Thousands of U.S. Dollars
Cash and cash equivalents	¥ 446	\$ 3,982
Trade accounts	5,761	51,438
Inventories	4,328	38,643
Building and structures	351	3,134
Machinery and equipment	18	161
Land	1,606	14,339
Other	138	1,232
Total	¥12,648	\$112,929

9. RETIREMENT BENEFITS

Certain consolidated subsidiaries have retirement benefit plans for employees. Under most circumstances, employees terminating their employment are entitled to benefit payments determined by reference to their rate of pay at the time of termination, years of service and certain other factors. If the termination is involuntary or caused by death, the employee is usually entitled to greater payments than in the case of voluntary termination. Such retirement benefits are made in the form of a lump-sum severance payment from the Group and annuity payments from a trustee.

The portions of the liability for retirement benefits attributable to directors, Audit & Supervisory Board members and executive officers at March 31, 2017 and 2016, were ¥66 million (\$589 thousand) and ¥66 million, respectively.

(1)The changes in defined benefit obligation for the years ended March 31, 2017 and 2016, were as follows:

	Millions of Yen		Thousands of U.S. Dollars
	2017	2016	2017
Balance at beginning of year (as restated)	¥45,938	¥42,940	\$410,161
Current service cost	1,541	1,105	13,759
Interest cost	126	493	1,125
Actuarial losses	136	4,004	1,214
Benefits paid	(2,612)	(2,771)	(23,321)
Increase due to change in scope of consolidation	5,185		46,295
Others	17	167	151
Balance at end of year	¥50,331	¥45,938	\$449,384

(2)The changes in plan assets for the years ended March 31, 2017 and 2016, were as follows:

	Millions of Yen		Thousands of U.S. Dollars
	2017	2016	2017
Balance at beginning of year	¥42,451	¥46,808	\$379,027
Expected return on plan assets	674	659	6,018
Actuarial gains (losses)	3,072	(6,537)	27,429
Contributions from the employer	3,740	3,704	33,393
Benefits paid	(1,934)	(2,129)	(17,268)
Increase due to change in scope of consolidation	3,112		27,786
Others	18	(54)	160
Balance at end of year	¥51,133	¥42,451	\$456,545

(3)Reconciliation between the liability recorded in the consolidated balance sheet and the balances of defined benefit obligation and plan assets was as follows:

	Millions of Yen		Thousands of U.S. Dollars
	2017	2016	2017
Defined benefit obligation	¥47,280	¥43,018	\$422,143
Plan assets	(51,133)	(42,451)	(456,545)
Total	(3,853)	567	(34,402)
Unfunded defined benefit obligation	3,051	2,920	27,241
Net (asset) liability arising from defined benefit obligation	¥ (802)	¥ 3,487	\$ (7,161)

	Millions of Yen		Thousands of U.S. Dollars
	2017	2016	2017
Liability for retirement benefits	¥5,913	¥3,819	\$52,794
Asset for retirement benefits	(6,715)	(332)	(59,955)
Net (asset) liability arising from defined benefit obligation	¥ (802)	¥3,487	\$(7,161)

(4)The components of net periodic benefit costs for the years ended March 31, 2017 and 2016, were as follows:

	Millions of Yen		Thousands of U.S. Dollars
	2017	2016	2017
Service cost	¥1,542	¥1,105	\$13,768
Interest cost	126	493	1,125
Expected return on plan assets	(674)	(659)	(6,018)
Amortization of prior service cost	(307)	(307)	(2,741)
Recognized actuarial losses	589	550	5,259
Net periodic benefit costs	¥1,276	¥1,182	\$11,393

(5)Amounts recognized in other comprehensive income (before income tax effect) in respect of defined retirement benefit plans for the years ended March 31, 2017 and 2016, were as follows:

	Millions of Yen		Thousands of U.S. Dollars
	2017	2016	2017
Prior service cost	¥ (306)	¥ (307)	\$ (2,732)
Actuarial losses (gains)	3,525	(9,991)	31,473
Total	¥3,219	¥(10,298)	\$28,741

(6)Amounts recognized in accumulated other comprehensive income (before income tax effect) in respect of defined retirement benefit plans as of March 31, 2017 and 2016, were as follows:

	Millions of Yen		Thousands of U.S. Dollars
	2017	2016	2017
Unrecognized prior service cost	¥ 849	¥ 1,169	\$ 7,581
Unrecognized actuarial losses	(2,620)	(6,145)	(23,393)
Others	(1)		(9)
Total	¥(1,772)	¥(4,976)	\$(15,821)

(7)Plan assets

a. Components of plan assets

Plan assets as of March 31, 2017 and 2016, consisted of the following:

	2017	2016
Equity investments	45%	45%
General accounts	24	27
Debt investments	13	8
Investment trusts	9	11
Short-term assets	2	4
Others	7	5
Total	100%	100%

b. Method of determining the expected rate of return on plan assets

The expected rate of return on plan assets is determined considering the long-term rates of return which are expected currently and in the future from the various components of the plan assets.

(8)Assumptions used for the years ended March 31, 2016 and 2015, were set forth as follows:

	2017	2016
Discount rate	0.1%	0.1%
Expected rate of return on plan assets	2.0%	2.0%

The Group mainly uses a salary increase index determined in accordance with the human resources and wage policy as of the balance sheet date for the excepted future salary increase.

10. EQUITY

Japanese companies are subject to the Companies Act of Japan (the "Companies Act"). The significant provisions in the Companies Act that affect financial and accounting matters are summarized below:

a. Dividends

Under the Companies Act, companies can pay dividends at any time during the fiscal year in addition to the year-end dividend upon resolution at the shareholders' meeting. Additionally, for companies that meet certain criteria including (1) having a Board of Directors, (2) having independent auditors, (3) having an Audit & Supervisory Board, and (4) the term of service of the directors being prescribed as one year rather than the normal two-year term by its articles of incorporation, the Board of Directors may declare dividends (except for dividend-in-kind) at any time during the fiscal year if the company has prescribed so in its articles of incorporation. The Company meets all the above criteria and, accordingly, the Board of Directors may declare dividends (except for dividends-in-kind) at any time during the fiscal year.

Semiannual interim dividends may also be paid once a year upon resolution by the Board of Directors if the articles of incorporation of the company so stipulate. The Companies Act provides certain limitations on the amounts available for dividends or the purchase of treasury stock. The limitation is defined as the amount available for distribution to the shareholders, but the amount of net assets after dividends must be maintained at no less than ¥3 million.

b. Increases/Decreases and Transfer of Common Stock, Reserve and Surplus

The Companies Act requires that an amount equal to 10% of dividends must be appropriated as a legal reserve (a component of retained earnings) or as additional paid-in capital (a component of capital surplus) depending on the equity account charged upon the payment of such dividends until the aggregate amount of legal reserve and additional paid-in capital equals 25% of the common stock. Under the Companies Act, the total amount of additional paid-in capital and legal reserve may be reversed without limitation. The Companies Act also provides that common stock, legal reserve, additional paid-in capital, other capital surplus and retained earnings can be transferred among the accounts within equity under certain conditions upon resolution of the shareholders.

c. Treasury Stock and Treasury Stock Acquisition Rights

The Companies Act also provides for companies to purchase treasury stock and dispose of such treasury stock by resolution of the Board of Directors. The amount of treasury stock purchased cannot exceed the amount available for distribution to the shareholders which is determined by a specific formula.

Under the Companies Act, stock acquisition rights are presented as a separate component of equity.

The Companies Act also provides that companies can purchase both treasury stock acquisition rights and treasury stock. Such treasury stock acquisition rights are presented as a separate component of equity or deducted directly from stock acquisition rights.

11. INCOME TAXES

The Company and its domestic subsidiaries are subject to Japanese national and local income taxes which, in the aggregate, resulted in normal effective statutory tax rates of approximately 30.5% and 33.0% for the years ended March 31, 2017 and 2016, respectively.

The tax effects of significant temporary differences and loss carryforwards which resulted in deferred tax assets and liabilities at March 31, 2017 and 2016, were as follows:

	Millions	Thousands of U.S. Dollars	
	2017	2016	2017
Deferred tax assets:			
Accrued bonuses	¥ 1,351	¥ 1,205	\$ 12,063
Liability for retirement benefits	1,900	2,975	16,964
Write-down of investment securities	316	315	2,821
Unrealized profit	229	246	2,045
Tax loss carryforwards	12,516	12,529	111,750
Other	4,522	3,894	40,375
Less valuation allowance	(14,706)	(14,634)	(131,304)
Deferred tax assets	6,128	6,530	54,714
Deferred tax liabilities:			
Valuation excess of property	1,850	206	16,518
Unrealized gain on available-for-sale securities	4,379	3,416	39,098
Undistributed earnings of foreign subsidiaries	5,341	5,415	47,688
Other	1,255	1,291	11,205
Deferred tax liabilities	12,825	10,328	114,509
Net deferred tax liabilities	¥(6,697)	¥(3,798)	\$(59,795)

Reconciliation between the normal effective statutory tax rates and the actual effective tax rates reflected in the accompanying consolidated statement of income for the year ended March 31, 2016, was as follows:

	2016
Normal effective statutory tax rate	33.0%
Expenses not deductible for income tax purposes	0.5
Per capita levy	0.4
Net change in valuation allowance	4.5
Tax benefit not recognized on operating losses of foreign subsidiaries	(2.6)
Dividends of unconsolidated subsidiaries and associated companies	(0.4)
Equity in earnings of unconsolidated subsidiaries and associated companies	(1.3)
Non-taxable dividend income	1.6
Unrecognized tax effects on the eliminated intercompany unrealized profit	0.8
Foreign tax credit	3.0
Goodwill depreciation	0.0
Other - net	(1.0)
Actual effective tax rate	38.5%

Since the difference between the normal effective statutory tax rates and the actual effective tax rates for the fiscal year ended March 31, 2017 is less than 5%, a reconciliation of the differences is omitted.

At March 31, 2017, certain subsidiaries have tax loss carryforwards aggregating approximately ¥41,021 million (\$366,259 thousand) which are available to be offset against taxable income of such subsidiaries in future years. These tax loss carryforwards, if not utilized, will expire as follows:

Year Ending March 31	Millions of Yen	Thousands of U.S. Dollars
2018	¥ 247	\$ 2,205
2019	396	3,536
2020	3,688	32,929
2021	12,727	113,634
2022 and thereafter	23,963	213,955
Total	¥41,021	\$366,259

12. RESEARCH AND DEVELOPMENT COSTS

Research and development costs charged to income were ¥8,452 million (\$75,464 thousand) and ¥6,998 million for the years ended March 31, 2017 and 2016, respectively.

13. LEASES

The Group leases certain machinery, computer equipment and other assets.

Total lease payments for the years ended March 31, 2017 and 2016, were ¥1,614 million (\$14,411 thousand) and ¥1,872 million, respectively. The minimum rental commitments under noncancelable operating leases at March 31, 2017, were as follows:

	Millions of Yen	Thousands of U.S. Dollars
Due within one year	¥1,003	\$ 8,955
Due after one year	2,117	18,902
Total	¥3,120	\$27,857

14. FINANCIAL INSTRUMENTS AND RELATED DISCLOSURES (1)Group Policy for Financial Instruments

The Group uses financial instruments, mainly bank loans, based on its capital financing plan. Derivatives are not used for speculative purposes, but to manage exposure to financial risks as described in (2) below.

(2)Nature and Extent of Risks Arising from Financial Instruments Receivables such as trade notes and trade accounts are exposed to customer credit risk. Marketable and investment securities, mainly equity instruments of customers and suppliers of the Group, are exposed to the risk of market price fluctuations.

Payment terms of payables, such as trade notes and trade accounts, are less than five months.

Maturities of bank loans, principally used for the purpose of funding investments and short-term working capital, are less than five years after the balance sheet date. A part of such bank loans is exposed to market risks from changes in variable interest rates.

The purchase price of lead, which is a raw material used in production, is exposed to the risk of market price fluctuations. This risk is mitigated by using commodity price swaps.

Derivatives mainly include forward foreign currency contracts, foreign currency swaps interest rate swaps and commodity price swaps, which are used to manage exposure to market risks from changes in foreign currency exchange rates, interest rates and material prices. Please see Note 15 for more detail about derivatives.

(3)Risk Management for Financial Instruments

Credit risk is the risk of economic loss arising from a counterparty's failure to repay or service debt according to the contractual terms. The Group manages its credit risk from receivables on the basis of internal guidelines, which include monitoring of payment terms and balances of major customers by each business administration department to identify the default risk of customers at an early stage. With respect to investment securities, the Group manages its exposure to market risk by monitoring market values and financial positions of issuers on a regular basis.

Liquidity risk comprises the risk that the Group cannot meet its contractual obligations in full on their maturity dates. The Group manages its liquidity risk by the monthly management of cash positions by the corporate finance division.

Foreign currency trade receivables and payables are exposed to market risk resulting from fluctuations in foreign currency exchange rates. Such foreign currency exchange rate risk is hedged principally by forward foreign currency contracts.

Interest rate swaps are used to manage exposure to market risks from changes in interest rates of loan payables.

Commodity price swaps are used to manage exposure to market risk from changes in prices of materials.

Derivative transactions are entered into and managed by the finance division based on internal guidelines and the Business Auditing Office monitors observance of internal guidelines. The Company monitors the derivative transactions entered into by subsidiaries on a regular basis.

(4)Fair Values of Financial Instruments

Fair values of financial instruments are based on quoted prices in active markets. If the quoted price is not available, other rational valuation techniques are used instead. Also, please see Note 15 for the details of fair value for derivatives.

(a)Fair value of financial instruments

	Millions of Yen		
March 31, 2017	Carrying Amount	Fair Value	Unrealized Gain/Loss
Cash and cash equivalents	¥ 24,673	¥ 24,673	
Time deposits	321	321	
Receivables:			
Trade notes	5,489	5,489	
Trade accounts	63,455	63,455	
Unconsolidated subsidiaries and associated companies	3,249	3,249	
Investment securities	20,369	20,369	
Investments in unconsolidated subsidiaries and associated companies	12,427	8,299	¥(4,128)
Total	¥129,983	¥125,855	¥(4,128)
Short-term bank loans	¥ 27,534	¥ 27,534	
Payables:			
Trade notes	13,432	13,432	
Trade accounts	28,454	28,454	
Unconsolidated subsidiaries and associated companies	2,367	2,367	
Income taxes payable	3,616	3,616	
Long-term debt:			
Convertible bonds	25,000	25,386	¥ 386
Bank loans	21,723	21,726	3
Lease obligations	1,163	1,163	
Total	¥123,289	¥123,678	¥ 389
	Millions of Yen		n
March 31, 2016	Carrying Amount	Fair Value	Unrealized Gain/Loss
Cash and cash equivalents	¥ 27,788	¥ 27,788	
Time deposits	817	817	

Cash and cash equivalents	¥ 27,788	¥ 27,788	
Time deposits	817	817	
Receivables:			
Trade notes	7,234	7,234	
Trade accounts	62,918	62,918	
Unconsolidated subsidiaries and associated companies	2,974	2,974	
Investment securities	17,147	17,147	
Investments in unconsolidated subsidiaries and associated companies	12,277	9,398	¥(2,879)
Total	¥131,155	¥128,276	¥(2,879)

Millions			of Yen	
March 31, 2016	Carrying Amount	Fair Value	Unrealized Gain/Loss	
Short-term bank loans	¥ 24,106	¥ 24,106		
Payables:				
Trade notes	7,101	7,101		
Trade accounts	29,010	29,010		
Unconsolidated subsidiaries and associated companies	2,783	2,783		
Income taxes payable	2,297	2,297		
Long-term debt:				
Convertible bonds	25,000	25,301	¥301	
Bank loans	24,502	24,636	134	
Lease obligations	968	972	4	
Total	¥115,767	¥116,206	¥439	

	Thousands of U.S. Dollars		
March 31, 2017	Carrying Amount	Fair Value	Unrealized Gain/Loss
Cash and cash equivalents	\$ 220,295	\$ 220,295	
Time deposits	2,866	2,866	
Receivables:			
Trade notes	49,000	49,000	
Trade accounts	566,554	566,554	
Unconsolidated subsidiaries and associated companies	26,759	26,759	
Investment securities			
Investments in unconsolidated subsidiaries and associated companies	292,822	255,955	\$(36,867)
Total	\$1,158,296	\$1,121,429	\$(36,867)
Short-term bank loans	\$ 245,839	\$ 245,839	
Payables:			
Trade notes	119,929	119,929	
Trade accounts	254,054	254,054	
Unconsolidated subsidiaries and associated companies	21,134	21,134	
Income taxes payable	32,286	32,286	
Long-term debt:			
Convertible bonds	223,214	226,661	\$ 3,447
Bank loans	193,955	193,981	26
Lease obligations	10,384	10,384	
Total	\$1,100,795	\$1,104,268	\$ 3,473

Cash and cash equivalents, Time deposits and Receivables

The carrying values of cash and cash equivalents, time deposits and receivables approximate fair value because of their short maturities.

Investment securities

The fair values of investment securities are measured at the quoted market price of the stock exchange for the equity instruments, and at the quoted price obtained from the financial institution for certain debt instruments. Fair value information for the investment securities by classification is included in Note 5.

Short-term bank loans, Payables and Income taxes payable

The carrying values of short-term bank loans, payables and income taxes payable approximate fair value because of their short maturities.

Long-term debt

The fair values of bank loans and lease obligations are determined by discounting the future cash flows at the Group's assumed corporate borrowing rate.

The fair values of convertible bonds are measured at the quoted price obtained from the financial institution for certain debt instruments.

Derivatives

Fair value information for derivatives is included in Note 15.

(b)Carrying amount of financial instruments whose fair value cannot be reliably determined

	Millions of Yen		Thousands of U.S. Dollars	
	2017	2016	2017	
Investments in equity instruments that do not have a quoted market price in an active market	¥15,595	¥16,064	\$139,241	

(5)Maturity Analysis for Financial Assets and Securities with Contractual Maturities

	Millions of Yen				
	2017		20	2016	
	Due in 1 Year or Less	Due after 5 Years through 10 Years	Due in 1 Year or Less	Due after 10 Years	
Cash and cash equivalents	¥24,673		¥ 27,788		
Time deposits	321		817		
Receivables	71,939		73,126		
Investment securities:					
Available-for-sale securities with contractual maturities		¥29		¥29	
Total	¥96,933	¥29	¥101,731	¥29	

	Thousands of 20	U.S. Dollars
	Due in 1 Year or Less	Due after 5 Years through 10 Years
Cash and cash equivalents	\$220,295	
Time deposits	2,866	
Receivables	642,313	
Investment securities:		
Available-for-sale securities with contractual maturities		\$259
Total	\$865,474	\$259

Please see Note 8 for annual maturities of long-term debt.

15. DERIVATIVES

The Group enters into foreign exchange forward contracts and foreign currency swaps to hedge foreign currency exchange rate risk associated with certain assets and liabilities denominated in foreign currencies. The Group also enters into interest rate swap contracts to manage interest rate exposures on certain liabilities and it enters into commodity price swap contracts to reduce the impact of price fluctuations of lead inventories.

All derivative transactions are entered into to hedge interest foreign currency and commodity price exposures incorporated within the Group's business. Accordingly, market risk in these derivatives is generally offset by opposite movements in the value of the hedged assets or liabilities. The Group does not hold or issue derivatives for trading purposes.

FINANCIAL SECTION

GS Yuasa Corporation and Consolidated Subsidiaries

Derivatives are subject to market risk. Market risk is the exposure created by potential fluctuations in market conditions, including interest or foreign currency exchange rates.

Derivative transactions entered into by the Group have been made in accordance with internal policies which regulate the authorization of such transactions.

Derivative Transactions to Which Hedge Accounting Is Not Applied

	Millions of Yen			
At March 31, 2017	Contract Amount	Contract Amount Due after One Year	Fair Value	Unrealized Gain/Loss
Foreign currency forward contracts:				
Buying THB	¥45			
Selling EUR and GBP	2,097		¥24	¥24
THB	1,929		(14)	(14)
AUD	98			

	Millions of Yen						
At March 31, 2016	Contract Amount	Contract Amount Due after One Year	Fair Value	Unrealized Gain/Loss			
Foreign currency forward contracts:							
Buying THB	¥16						
Selling EUR and GBP	3,076		¥48	¥48			
THB	170		3	3			
AUD	581		(1)	(1)			
USD	1,159		35	35			

	Thousands of U.S. Dollars					
At March 31, 2017	Contract Amount	Contract Amount Due after One Year	Fair Value	Unrealized Gain/Loss		
Foreign currency forward contracts:						
Buying THB	\$402					
Selling EUR and GBP	18,723		\$214	\$214		
THB	17,223		(125)	(125)		
AUD	875					

Derivative Transactions to Which Hedge Accounting Is Applied

	Millions of Yen					
At March 31, 2017	Hedged Item	Contract Amount	Contract Amount Due after One Year	Fair Value		
Interest rate swaps:						
(fixed rate payment, floating rate receipt)	Long-term debt interest	¥4,652	¥1,852			

	Millions of Yen						
At March 31, 2016	Hedged Item	Contract Amount	Contract Amount Due after One Year	Fair Value			
Interest rate swaps:							
(fixed rate payment, floating rate receipt)	Long-term debt interest	¥2,800	¥2,800				
Commodity price swaps:							
(fixed material price payment, floating material price receipt)	Cost of sales	¥ 247		¥(13)			

	Thousands of U.S. Dollars				
At March 31, 2017	Hedged Item	Contract Amount	Contract Amount Due after One Year	Fair Value	
Interest rate swaps:					
(fixed rate payment, floating rate receipt)	Long-term debt interest	\$41,536	\$16,536		

The above interest rate swaps which qualify for hedge accounting and meet specific matching criteria are not remeasured at market value but the differential paid or received under the swap agreements is recognized and included in interest expense or income. In addition, the fair value of such interest rate swaps in Note 14 is included in that of the hedged items (i.e., long-term debt).

The fair value of derivatives is measured at the quoted prices obtained from financial institutions.

The contract or notional amounts of derivatives which are shown in the above table do not represent the amounts exchanged by the parties and do not measure the Group's exposure to credit or market risk.

16. CONTINGENT LIABILITIES

At March 31, 2017, the Group had the following contingent liabilities:

	Millions of Yen	Thousands of U.S. Dollars
Endorsed notes	¥314	\$2,804
Guarantees of bank loans of certain associated companies	32	286

17. OTHER COMPREHENSIVE INCOME (LOSS)

The components of other comprehensive income (loss) for the years ended March 31, 2017 and 2016, were as follows:

	Millions	Thousands of U.S. Dollars	
	2017	2016	2017
Unrealized gain (loss) on available-for-sale securities:			
Gains (losses) arising during the year	¥ 3,232	¥ (1,850)	\$ 28,857
Reclassification adjustments to profit or loss	(18)	(84)	(161)
Amount before income tax effect	3,214	(1,934)	28,696
Income tax effect	(957)	829	(8,544)
Total	¥ 2,257	¥ (1,105)	\$ 20,152
Deferred gain (loss) on derivatives under hedge accounting:			
Gains (losses) arising during the year	¥ 32	¥ (109)	\$ 286
Reclassification adjustments to profit or loss	(19)	103	(170)
Amount before income tax effect	13	(6)	116
Income tax effect	(4)	2	(36)
Total	¥ 9	¥ (4)	\$ 80
Land revaluation surplus:			
Income tax effect	¥	¥ 68	\$
Foreign currency translation adjustments:			
Adjustments arising during the year	¥(3,488)	¥ (4,721)	\$(31,143)
Reclassification adjustments to profit or loss		68	
Amount before income tax effect	(3,488)	(4,653)	(31,143)
Income tax effect			
Total	¥(3,488)	¥ (4,653)	\$(31,143)
Defined retirement benefit plans:			
Adjustments arising during the year	¥ 2,936	¥(10,541)	\$ 26,214
Reclassification adjustments to profit or loss	283	243	2,527
Amount before income tax effect	3,219	(10,298)	28,741
Income tax effect	(1,885)	3,247	(16,830)
Total	¥ 1,334	¥ (7,051)	\$ 11,911
Share of other comprehensive income in associates:			
Gains arising during the year	¥(1,650)	¥ (1,278)	\$(14,733)
Total other comprehensive loss	¥(1,538)	¥(14,023)	\$(13,733)

18. NET INCOME PER SHARE

Reconciliation of the differences between basic and diluted net income per share ("EPS") for the years ended March 31, 2017 and 2016, was as follows:

	Millions of Yen Net Income Attributable to Owners of	Thousands of Shares Weighted- Average	Yen	U.S. Dollars
Year Ended March 31, 2017	the Parent	Shares	El	PS
Basic EPS - Net income attributable to common shareholders	¥12,229	412,752	¥29.63	\$0.26
Effect of dilutive securities:				
Convertible bonds	(17)	29,377		
Diluted EPS - Net income for computation	¥12,212	442,129	¥27.62	\$0.25
Year Ended March 31, 2016				
Basic EPS - Net income attributable to common shareholders	¥9,030	412,767	¥21.88	
Effect of dilutive securities:				
Convertible bonds	(16)	29,377		
Diluted EPS - Net income for computation	¥9,014	442,144	¥20.39	

19. SEGMENT INFORMATION

Under the ASBJ Statement No. 17, "Accounting Standard for Segment Information Disclosures" and ASBJ Guidance No. 20, "Guidance on Accounting Standard for Segment Information Disclosures," an entity is required to report financial and descriptive information about its reportable segments. Reportable segments are operating segments or aggregations of operating segments that meet specified criteria. Operating segments are components of an entity about which separate financial information is available and such information is evaluated regularly by the chief operating decision maker in deciding how to allocate resources and in assessing performance. Generally, segment information is required to be reported on the same basis as is used internally for evaluating operating segment performance and deciding how to allocate resources to operating segments.

(1)Description of Reportable Segments

The Group's reportable segments are those for which separate financial information is available and regular evaluation by the Company's management is being performed in order to decide how resources are allocated among the Group. As such, the Group's reportable segments are as follows:

"Domestic Automotive Batteries," consisting of manufacturing and marketing of lead-acid batteries for automotive.

"Domestic Industrial Batteries and Power Supplies," consisting of manufacturing and marketing of industrial batteries and power supplies.

"Overseas Operations," consisting of manufacturing and marketing of batteries overseas.

"Lithium-ion Batteries," consisting of manufacturing and marketing of lithium-ion batteries for vehicles.

(2)Methods of Measurement for the Amounts of Sales, Profit (Loss), Assets and Other Items for Each Reportable Segment The accounting policies of each reportable segment are consistent with those disclosed in Note 2, "Summary of Significant Accounting Policies."

The profit (loss) of each reportable segment is an operating profit (loss) before amortization of goodwill. The prices of the goods traded among the segments are mainly determined considering market prices or manufacturing costs.

The Group changed the method of determining segment profit from operating profit to operating profit before amortization of goodwill in the fiscal year ended March 31, 2017. This change enables the Company to measure the operating results of its main business by separating income/loss that is generated or incurred outside of the Group's main business activities.

This change had no material impact on the financial statements for the fiscal year ended March 31, 2016.

(3)Information about Sales, Profit (Loss), Assets and Other Items

	Millions of Yen							
		2017						
			eportable Segme					
	Domestic Automotive Batteries	Domestic Industrial Batteries and Power Supplies	Overseas Operations	Automotive Lithium-ion Batteries	Total	Other	Consolidated	
Sales:								
Sales to external customers	¥67,599	¥72,765	¥170,613	¥39,305	¥350,282	¥ 9,324	¥359,606	
Intersegment sales of transfers	1,498	3,151	1,097	878	6,624	(6,624)		
Total	¥69,097	¥75,916	¥171,710	¥40,183	¥356,906	¥ 2,700	¥359,606	
Segment profit (loss)	¥ 5,677	¥ 8,702	¥ 10,460	¥ 46	¥ 24,885	¥ (700)	¥ 24,185	
Segment assets	52,522	41,355	145,082	40,481	279,440	91,069	370,509	
Other:								
Depreciation	1,340	1,225	4,205	5,555	12,325	3,989	16,314	
Investment in equity method	936	120	26,275	986	28,317		28,317	
Increase in property, plant and equipment and intangible assets	1,917	1,254	3,788	1,839	8,798	11,863	20,661	
Impairment losses of assets		52		340	392		392	
Amortization of goodwill	608		33		641		641	
Goodwill - net	5,476		124		5,600		5,600	

		Millions of Yen						
		2016 Reportable Segment						
	Domestic Automotive Batteries	Domestic Industrial Batteries and Power Supplies	Overseas Operations	Automotive Lithium-ion Batteries	Total	Other		
Sales:								
Sales to external customers	¥50,987	¥74,805	¥191,402	¥38,312	¥355,506	¥10,105	¥365,611	
Intersegment sales of transfers	1,309	2,979	1,358	927	6,573	(6,573)		
Total	¥52,296	¥77,784	¥192,760	¥39,239	¥362,079	¥ 3,532	¥365,611	
Segment profit (loss)	¥ 3,291	¥ 8,061	¥ 11,359	¥ (566)	¥ 22,145	¥ (235)	¥ 21,910	
Segment assets	22,399	59,513	156,985	45,310	284,207	62,316	346,523	
Other:								
Depreciation	816	1,125	5,336	5,299	12,576	3,429	16,005	
Investment in equity method	833	91	26,984	515	28,473		28,473	
Increase in property, plant and equipment and intangible assets	1,495	1,400	4,182	2,754	9,831	5,140	14,971	
Impairment losses of assets			2,237		2,237		2,237	
Amortization of goodwill			8		8		8	
Goodwill - net			157		157		157	

		Thousands of U.S. Dollars						
		2017						
			e Segment					
	Domestic Automotive Batteries	Domestic Industrial Batteries and Power Supplies	Overseas Operations	Automotive Lithium-ion Batteries	Total	Other	Consolidated	
Sales:								
Sales to external customers	\$603,563	\$649,688	\$1,523,330	\$350,938	\$3,127,519	\$ 83,250	\$3,210,769	
Intersegment sales of transfers	13,375	28,134	9,795	7,839	59,143	(59,143)		
Total	\$616,938	\$677,822	\$1,533,125	\$358,777	\$3,186,662	\$ 24,107	\$3,210,769	
Segment profit (loss)	\$ 50,688	\$ 77,696	\$ 93,393	\$ 411	\$ 222,188	\$ (6,250)	\$ 215,938	
Segment assets	468,946	369,241	1,295,375	361,438	2,495,000	813,116	3,308,116	
Other:								
Depreciation	11,964	10,938	37,545	49,598	110,045	35,625	145,670	
Investment in equity method	8,357	1,071	234,598	8,804	252,830		252,830	
Increase in property, plant and equipment and intangible assets	17,116	11,196	33,821	16,420	78,553	105,920	184,473	
Impairment losses of assets		464		3,036	3,500		3,500	
Amortization of goodwill	5,429		295		5,724		5,724	
Goodwill - net	48,893		1,107		50,000		50,000	

Notes:

1."Other" consists of business activities, such as special batteries that are not included as a reportable segment, or adjustments of segment profit (loss). 2.The main details of adjustments were as follows: (1)Adjustments of segment profit for the years ended March 31, 2017 and 2016, were ¥2,449 million (\$21,866 thousand) and ¥2,427 million,

respectively. The details of the adjustments were as follows:

	Millions	Thousands of U.S. Dollars	
	2017	2016	2017
Elimination of intersegment transactions	¥1,434	¥1,456	\$12,804
Company-wide expenses	1,015	971	9,062
Total	¥2,449	¥2,427	\$21,866

Company-wide expenses mainly consist of general administrative expenses not attributable to any reportable segments.

(2)Adjustments of segment assets for the years ended March 31, 2017 and 2016, were ¥90,081 million (\$804,295 thousand) and ¥52,538 million, respectively. The details of the adjustments were as follows:

	Millions	s of Yen	-
	2017	2016	
Elimination of intersegment transactions	¥ (69,198)	¥ (90,360)	
Company-wide assets	159,279	142,898	
Total	¥ 90,081	¥ 52,538	

Company-wide assets mainly consist of the managing cash surplus, assets of administrative departments, and certain equipment of a research institute.

(3) Adjustments of depreciation for the years ended March 31, 2017 and 2016, were ¥3,591 million (\$32,063 thousand) and ¥3,124 million, respectively. The adjustments consisted of depreciation of company-wide assets.

(4)Adjustments of "Increase in property, plant and equipment and intangible assets" for the years ended March 31, 2017 and 2016, were ¥5,156 million (\$46,036 thousand) and ¥4,393 million, respectively. The adjustments consisted of the purchase amount of property, plant and equipment and intangible assets classified as company-wide assets.

Thousands of U.S. Dollars
2017
\$ (617,839)
1,422,134
\$ 804,295

FINANCIAL SECTION

GS Yuasa Corporation and Consolidated Subsidiaries

- 3. The difference between the segment profit listed above and operating income in the consolidated statement of income, ¥24,185 million (\$215,938 thousand) and ¥23,107 million (\$206,313 thousand), respectively, resulted from the amortization of goodwill and other intangible assets of ¥1,078 million (\$9,625 thousand). The goodwill and other intangible assets include identifiable assets acquired on the effective date of the business combination
- 4. At March 31, 2017, the Group recognized an impairment loss of ¥392 million (\$3,500 thousand) in total as loss on impairment of long-lived assets.
- 5. In the domestic automotive batteries segment, Panasonic Storage Battery Co., Ltd. (currently: GS Yuasa Energy Co., Ltd.) was included in the scope of consolidation in the fiscal year ended March 31, 2017 as GS Yuasa Corporation acquired its shares. With the acquisition, goodwill for the fiscal year ended March 31, 2017 increased by ¥6,084 million (\$54,321 thousand).

(4)Information about Geographical Areas

(a)Sales

Millions of Yen									
2017				2016					
Japan	Asia	Europe and America	Other	Total	Japan	Asia	Europe and America	Other	Total
¥176,003	¥100,013	¥58,888	¥24,702	¥359,606	¥162,587	¥113,646	¥61,906	¥27,472	¥365,611

Thousands of U.S. Dollars					
	2017				
Japan	Asia	Europe and America	Other	Total	
\$1,571,455	\$892,973	\$525,786	\$220,554	\$3,210,768	

Note: Sales are classified by country or region based on the location of customers.

(b)Property, plant and equipment

	Millions of Yen									
2017			2016							
		Asia	Europe and America	Other		Japan		Europe and America	Other	
Γ	¥94,141	¥25,976	¥2,189	¥1,973	¥124,279	¥84,668	¥27,832	¥2,569	¥2,016	¥117,085

Thousands of U.S. Dollars					
	2017				
Japan	Asia	Europe and America	Other	Total	
\$840,545	\$231,929	\$19,545	\$17,616	\$1,109,635	

Independent Auditor's Report

Deloitte.

INDEPENDENT AUDITOR'S REPORT

To the Board of Directors of GS Yuasa Corporation:

We have audited the accompanying consolidated balance sheet of GS Yuasa Corporation and its consolidated subsidiaries as of March 31, 2017, and the related consolidated statements of income, comprehensive income, changes in equity, and cash flows for the year then ended, and a summary of significant accounting policies and other explanatory information, all expressed in Japanese yen.

Management's Responsibility for the Consolidated Financial Statements

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

Auditor's Responsibility

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

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

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

Opinion

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the consolidated financial position of GS Yuasa Corporation and its consolidated subsidiaries as of March 31, 2017, and the consolidated results of their operations and their cash flows for the year then ended in accordance with accounting principles generally accepted in Japan.

Convenience Translation

Our audit also comprehended the translation of Japanese yen amounts into U.S. dollar amounts and, in our opinion; such translation has been made in accordance with the basis stated in Note 1 to the consolidated financial statements. Such U.S. dollar amounts are presented solely for the convenience of readers outside Japan.

Deloitte Touche Tohmatan LLC

June 29, 2017

Deloitte Touche Tohmatsu I I C Shinagawa Intercity 2-15-3 Konan Minato-ku, Tokyo 108-6221

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Member of Deloitte Touche Tohmatsu Limited

Corporate Information (As of March 31, 2017)

Corporate Profile				
Corporate Name	GS Yuasa Corporation			
Business	Formulating management plans and strategies for the GS Yuasa Group and administering Group companies to enhance the total value of the Group			
Establishment	April 1, 2004			
Offices	Head Office 1, Inobanba-cho, Nishinosho, Kisshoin, Minami-ku, Kyoto 601-8520, Japan Tel: +81-75-312-1211 Tokyo Office 1-7-13, Shiba-koen, Minato-ku, Tokyo 105-0011, Japan Tel: +81-3-5402-5800			
Capital Stock	¥33.0 billion			
Number of Employees	Consolidated: 14,710			

Group Companies

Japan

- GS Yuasa International Ltd.
- GS Yuasa Battery Ltd.
- GS Yuasa Technology Ltd.
- GS Yuasa Accounting Service Ltd.
- GS Yuasa Energy Co., Ltd.
- Lithium Energy Japan
- Blue Energy Co., Ltd.
- GS Yuasa Power Fieldings Ltd.
- Hokkaido GS Yuasa Service Ltd.
- GS Yuasa Innovation Co., Ltd.

Overseas

USA

- GS Battery (U.S.A.) Inc.
- GS Yuasa Lithium Power, Inc.
- Yuasa Battery, Inc.

UK

• Yuasa Battery Europe Limited

TURKEY

- Inci GS Yuasa Aku Sanayi ve Ticaret Anonim Sirketi CHINA
- Yuasa Battery (Guangdong) Co., Ltd.
- Yuasa Battery (Shunde) Co., Ltd.
- Tianjin Yuasa Batteries Co., Ltd.
- Tianjin GS Battery Co., Ltd.
- Yuasa (Tianjin) Technology Ltd.
- Tianjin Toho Lead Recycling Co., Ltd.
- GS Battery (China) Co., Ltd.
- Shanghai GS Toptiger Motive Power Co., Ltd. TAIWAN

- Taiwan Yuasa Battery Co., Ltd.
- GS Battery Taiwan Co., Ltd.

- GS Yuasa Lighting Service Co., Ltd.
- GS Yuasa Wing Ltd.
- GS KASEI KOGYO Co., Ltd.
- GS Ibaraki Works, Ltd.
- GS Environmental Science Laboratories Co., Ltd.
- Yuasa Membrane Systems Co., Ltd.
- Iwaki Yuasa Ltd.
- Yuasa Chemical Co., Ltd.
- YUASA ELECTRIC CO., LTD.

THAILAND

- Yuasa Battery (Thailand) Pub. Co., Ltd.
- Siam GS Battery Co., Ltd.
- GS Yuasa Siam Industry Ltd.
- GS Yuasa Siam Sales Ltd.

MALAYSIA

• GS Yuasa Battery Malaysia Sdn. Bhd.

VIETNAM

• GS Battery Vietnam Co., Ltd.

INDONESIA

- PT. Yuasa Battery Indonesia
- PT. GS Battery
- PT. Trimitra Baterai Prakasa

PAKISTAN

• Atlas Battery Ltd.

INDIA

• Tata AutoComp GY Batteries Private Limited

AUSTRALIA

• Century Yuasa Batteries Pty Limited

Stock Information (As of March 31, 2017)

Fiscal Year-End	March 31
Number of Shares Authorized	1,400,000,000
Number of Shares Issued	413,574,714
Shares per Trading Unit	1,000
Number of Shareholders	37,505
Transfer Agent	Sumitomo Mitsui Trust Bank Limited
Listed Securities Exchange	First Section of the Tokyo Stock Exchange
Method of Public Notice	Notification is given electronically on the Company's website. However, if a public announcement cannot be made electronically, it will be placed in the Nihon Keiza Shimbun newspaper.

Number of shares held (thousands)	As a proportion of shares issued (%)
32,415	7.85
26,444	6.41
14,000	3.39
11,180	2.71
9,327	2.26
8,945	2.17
7,740	1.88
7,354	1.78
7,108	1.72
7,077	1.71
	(thousands) 32,415 26,444 14,000 11,180 9,327 8,945 7,740 7,354 7,108





