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SANKEN REPORT 2020

Creates with Society

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SANKEN ELECTRIC CO., LTD.

Sanken Electric *Creates with Society*

Power Electronics for Your Innovat!on

Slogan Meaning

Our slogan, “Power Electronics for Your Innovat!on,” expresses the essence of our expectations for the medium-term management plan, as we start Medium-Term Management Plan 2018. The slogan embodies Sanken Electric’s aspiration as a company to contribute through power electronics to the innovations of its customers, its individual employees, and society.

Profile

In 1937, the Toho Industrial Research Laboratory was established by Yasuzaemon Matsunaga, then president of the former Toho Electric Power Co., Ltd., as a 50th anniversary project of the company intended to conduct industrial development that is realistically useful to society. Tetsuji Kotani, who was chief of the semiconductor laboratory of the Toho Industrial Research Laboratory, took over the engineers and facilities of the laboratory when it was dissolved at the end of World War II, and established Toho Sanken Electric Co., Ltd. in 1946. Later, in 1962, the company adopted its current name, Sanken Electric Co., Ltd.

The Company established a dedicated semiconductor factory based on results of work on copper oxide and selenium rectifiers that had been ongoing since the research laboratory days. In 1958, we succeeded in creating a prototype for an innovative heat-dissipating silicon diode, and subsequently a silicon power transistor. Thereafter, we grew in step with the electronics industry, establishing a strong position as a power electronics manufacturer. We have kept pace with the changes in the times and provided high-quality solutions in the power supply and peripheral business fields to meet the diverse demands of society and our customers. We will continue as we have done in the past to provide original, cutting-edge products and striving to be a leading innovator in the field of power electronics.

Sanken Electric’s **Purpose**

Sanken Electric’s mission as a company is to provide optimal solutions in the broad and expansive field of electricity and electronics with semiconductors, our core business, power electronics and peripheral fields.

Electricity and electronics are indispensable to modern life. Power semiconductors are devices needed every time electricity is used. They are involved in the control and supply of power sources, adjusting voltage and converting AC to DC to drive motors and recharge batteries, for example.

Sanken Electric products are used in familiar things like cars, air conditioners and televisions and also in places that aren’t as visible like communication base stations for mobile devices and backup power sources for expressway tunnel lighting. For over 70 years, our products have supported people’s lives.

In 2020, on a global scale, addressing environmental problems and saving energy have become urgent challenges. Sanken Electric makes a major contribution to global energy conservation through power electronics like inverter products used in air conditioners.

While business opportunities will be successively generated by the new industrial revolution being driven by IoT, AI, big data, autonomous driving, and 5G, the sustainability of global society is at a major turning point, reflecting the impact of the pandemic on the economy, society and other developments.

Sanken Electric works to constantly innovate its technological capabilities and provides products of assured quality to help solve global, environmental, and social issues and further develop industry, the economy and culture.

To Our Stakeholders

Through power electronics, we will contribute to society and raise corporate value

We at Sanken Electric are working toward innovation in technology and creativity for our core business of semiconductors. Along with promoting business globally through use of our own technology, we are pushing forward with securing a firm management base to increase corporate value to the utmost extent by consistently addressing the demands of society and environmental harmony as a company should. We are currently in the midst of significant changes in the environment that surrounds our business. Awareness and regulations for the natural environment are gaining momentum in newly emerging countries achieving a high growth rate, along with the acceleration of changes due to developments in electric automobile and autonomous driving technologies and the rise of new technologies such as AI, IoT, and 5G. Society's demands for this era are also increasing, such as addressing the SDGs as the targets for sustainable growth in society, responding to diversity in the workplace, and shifting to more effective working styles.

To beat the competition in these rapidly changing times and meet the needs of society as a responsible company, we will steadily implement management in a manner that integrates CSR with business activities. In addition, as we stay abreast of the changes being wrought by the times, we will work to become a highly profitable company that grows on the performance of its unique technologies, people and organization to realize the vision we have for ourselves in 10 years. We want to be clearly recognized by stakeholders as a valuable company that contributes even more to the development of industry, the economy and culture and a company where every employee is respected and feels they are able to grow. I thank you for reading this report and would be delighted should it deepen your understanding of our operations.

Takashi Wada
Representative Director, President

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Corporate Philosophy

Our mission is to provide optimal solutions in our core semiconductor businesses for power electronics and peripheral fields, thereby contributing to the advancement of industries, economies, and cultures all over the world.

We will strive constantly to innovate our technological strengths and creative power as we pursue reliable quality. Moreover, we will share our customers' values as we develop our business globally, leveraging our proprietary technologies.

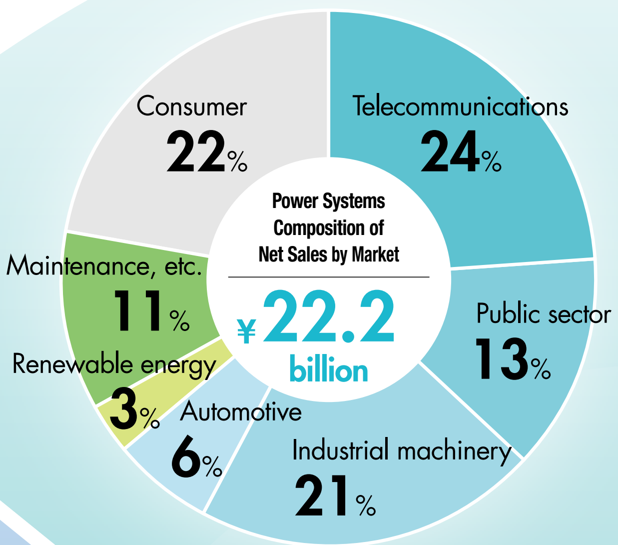
We will respect each of our employees and treat all of them fairly. Our employees will strive to grow as trustworthy individuals and as businesspeople.

We will carry out our duties with a highly ethical perspective as businesspeople who value technology and creativity. We will treat our customers and suppliers with fairness and integrity.

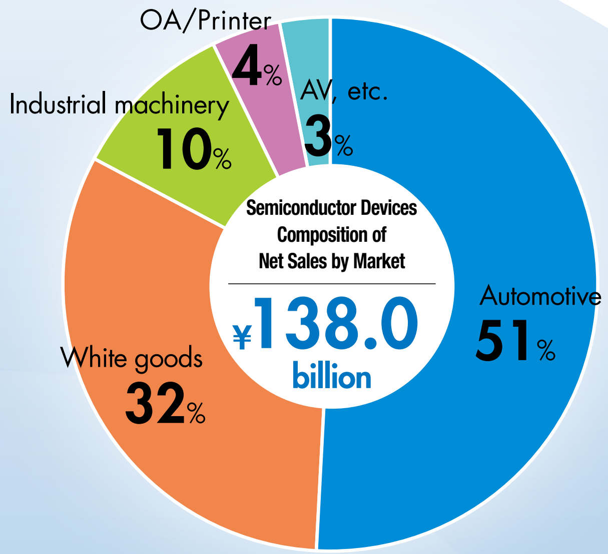
We will strive to maximize our corporate value for the sake of our shareholders, while fulfilling our social responsibilities and striving for harmony with the environment.

Business Summary — Net Sales by Segment —

Striving for innovations in our technological strengths and creative power in our core business of semiconductors while promoting global business development



Power Systems Business
13.9%



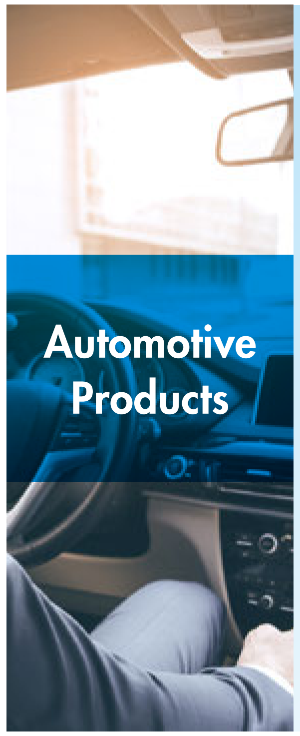
Semiconductor Devices Business
86.1%

Consolidated Net Sales for Fiscal 2019

¥160.2 billion

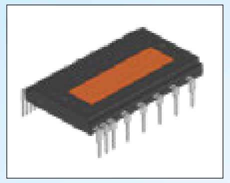
Main Product Groups

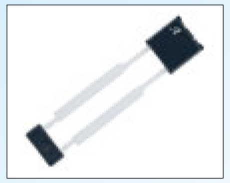
Sanken Electric's Core Products



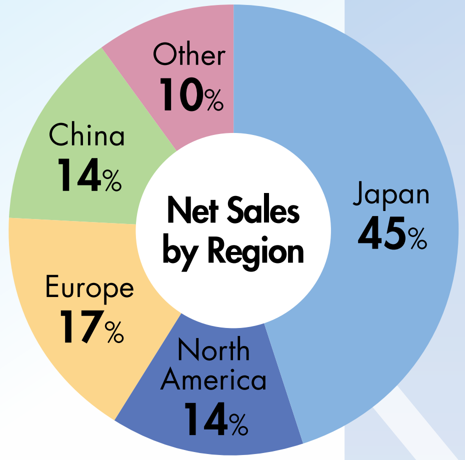
Automotive components are rapidly progressing with electrification in pursuit of comfort, safety, and driving performance. In the past few years we have been steadily adding products for hybrid vehicles and electric vehicles to our existing products, such as alternator diodes and regulator ICs, which have proven to be strong performers. We also have a leading position in the global market for magnetic sensors for automobiles.


Alternator diode

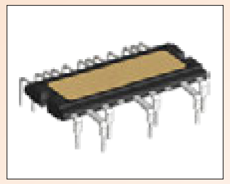

High-voltage three-phase motor driver IC

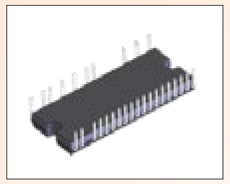

Magnetic sensor

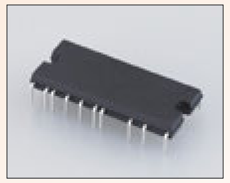
■ Net Sales of Automotive Products by Region

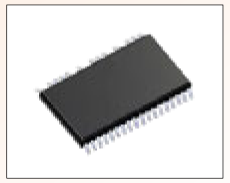


As countries around the world respond to background environmental issues by tightening CO_2 regulations and electricity supply restrictions, the move to adopt energy-saving inverters for electrical appliances such as air conditioners, washing machines, and refrigerators is accelerating. ICs known as motor driver intelligent power modules (IPMs) are used in inverter white goods, helping to reduce household power consumption from electrical appliances around the world.

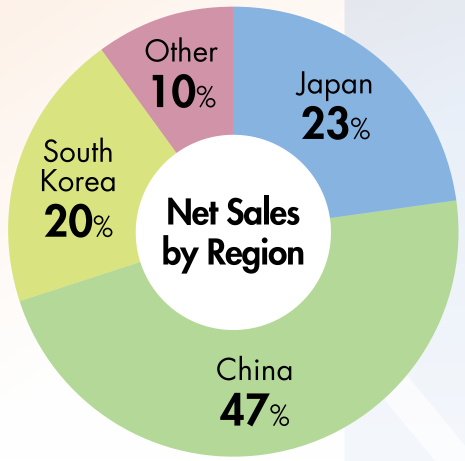

Air conditioner driver IPM


Refrigerator compressor driver IPM


Air conditioner outdoor unit fan motor driver IPM


Air conditioner indoor unit fan motor driver IPM

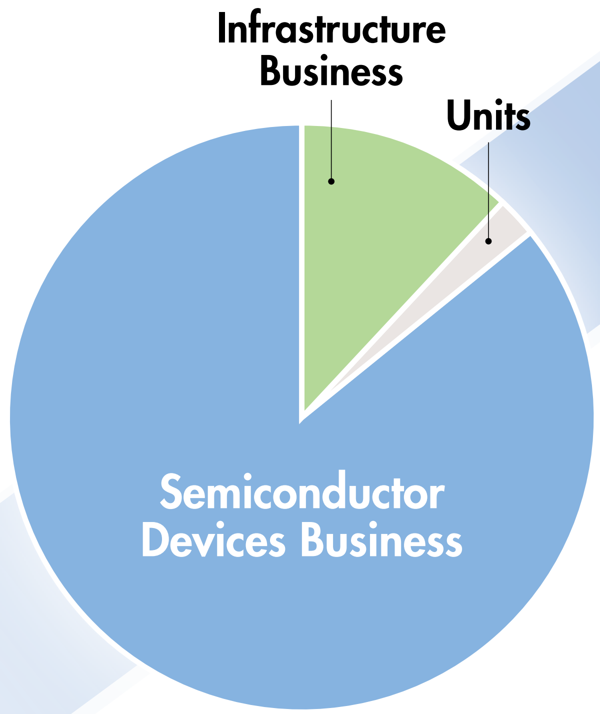
■ Net Sales of White Good IPMs by Region



Sanken Group's Future Vision — Accelerating Our Growth Strategy

Under the new business restructuring announced in November 2019, the Company decided to aim for selection and concentration of businesses focused on the semiconductor devices segment as a mainstay business. Specifically, we decided to take such measures as optimizing the production system by consolidating semiconductor device plants, examining strategic options including sale of the power systems segment, withdrawing from the LED lighting business, and selling off some bases. Thereafter, we announced detailed measures for optimizing the production system in the semiconductor devices segment in February 2020, and have been steadily executing the plan. Then, in July, we made the decision to dissolve our Korean production subsidiary and reduce the workforce at an Indonesian production site, and in August, we announced details regarding the transfer of our infrastructure business. Meanwhile as a part of these production optimization initiatives, we will enhance power module production sites for the next phase of growth, and have already begun to expand our factory buildings at Dalian Sanken Electric Co., Ltd. and converted Sanken Optoproducts Co., Ltd. into a module plant. These structural reforms represent a concrete plan to further raise corporate value and were resolved after extensive deliberations by the Structural Reform Committee made up of three internal directors, including the president, and the external directors (three since June 2019). We will continue to thoroughly execute these reforms.

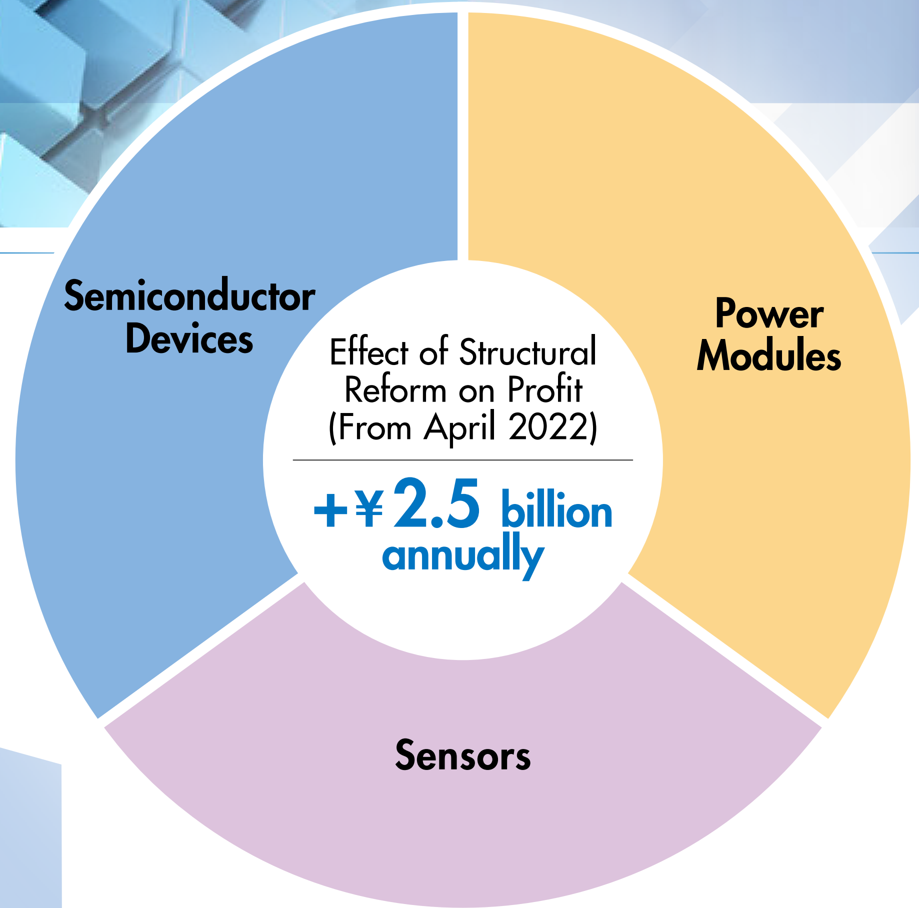
Going forward, Sanken Electric will concentrate its management resources in semiconductor devices and power modules and further strengthen competitiveness while raising management efficiency. We will establish a business foundation for growth while accommodating various paradigm shifts in the socioeconomic environment by carrying out these structural reforms with all resources—markets, customers, and technology/production/sales—making it our mission to actively promote increased corporate value through business selection and concentration. Based on our cutting-edge power conversion and motor control technologies, we will contribute to global environmental protection by providing energy-saving products and solutions, help solve social issues through the three pillars of semiconductor devices, power modules, and sensors, which have strong competitiveness in the global market, and thereby transform into a growth company.



Optimizing the production system in the Semiconductor Devices Segment

Transfer of Infrastructure Business

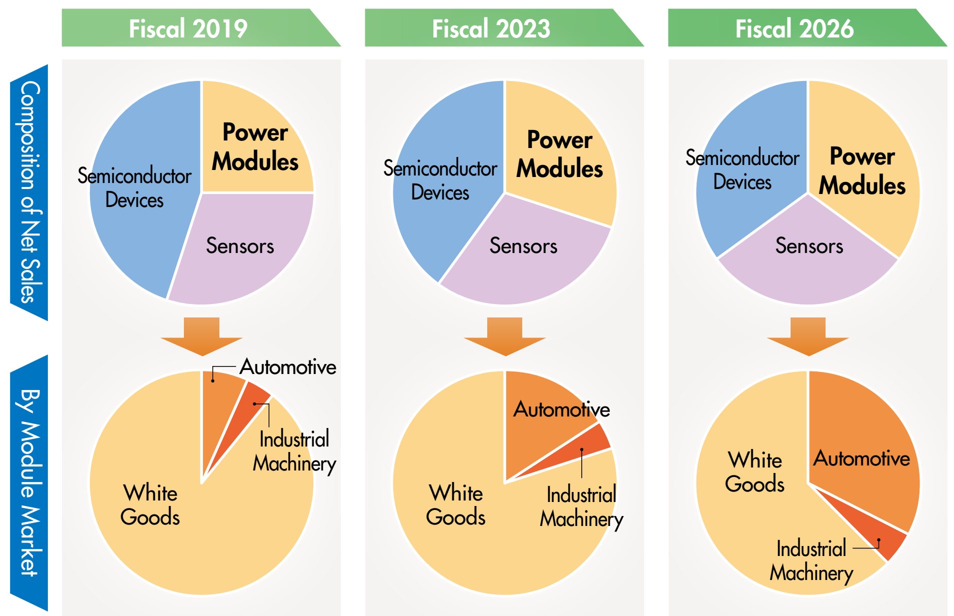
Portfolio by Product



<Measures for Structural Reform>

*Completion or Planned Completion Month

	2019	2020	2021	2022
Optimizing Production System of Semiconductor Devices Business	→	→	→	March*
Transfer of Infrastructure Business	→	→	April*	
Subcontracting Distribution and Selling Off Bases	→	March*		
Withdrawal from LED Lighting Business	→	March*		



A Message from the President

Takashi Wada
Representative Director,
President

Energy Saving on a Global Scale Aiming to be a Company with Sustainable Growth

Please review fiscal 2019.

Fiscal 2019 was substantially impacted by trade friction between the US and China and this significantly altered the landscape of the global economy. In our business, an extremely large share of our products is used in automobiles, so we were directly affected by this impact, especially US subsidiary Allegro MicroSystems, Inc. (Allegro), whose auto industry sales account for 60–70% of net sales. Thereafter, in the midst of assessing trends for fiscal 2020, from around the turn of the year, COVID-19 began to spread uncontrollably.

On the impact of this trade friction, up until the end of 2019, some analysts held the view that the situation would improve in the fourth quarter of fiscal 2019, but unfortunately that did not happen as March came and went. At the same time, during that period, COVID-19 spread in China and became a very serious problem, though it did not yet have much of a direct impact on the Company. Since the start of the fiscal year, though, the impact has been dramatic, and this has made it difficult to forecast an outlook for fiscal 2020.

How is Sanken Electric changing for the future?

Company growth strategies need to be thought out over both a short- to medium-term time horizon of one to three years and a long-term time horizon measured in decades. Over the short to medium term, it is essential that decisions be made on what to focus on and what to do away with, while naturally remaining cognizant of the numbers, and accelerate the speed of execution. At the same time, from the long-term standpoint, it is important to look at the overall trends in society and not simply consider one's own company. In fiscal 2019, it was frequently remarked that the automobile industry was experiencing a once-in-a-century transformation, but currently talk has shifted to the matter of whether cars are even going to sell much. Of course, companies aren't simply waiting out this problem with arms folded; they are doing everything they can to adapt and ride this wave of change.

The automobile industry is the Company's largest market, but major changes are also taking place in markets such as white goods and industrial equipment. On top of this, entering 2020, the spread of COVID-19 has become an enormous problem for the entire world.

There have been unexpected events in the past that caused major damage to the economy and society, including the 2008 global financial crisis and the recent US-China trade friction. But COVID-19 is a wholly unprecedented threat that is affecting everyone. Having said this though, it is important that we don't simply lament the fact that it has occurred; we all need to think about how to cope and adapt. We have taken various measures in response to COVID-19, one of which is to greatly strengthen our teleworking program and other work style reforms, which the Company actually began two years ago. Having made preparations beforehand in this way instead of waiting until after the fact has made it possible for us to fine-tune our response.

Amid this recent COVID-19 pandemic, new demand has arisen in connection with people remaining at home for long periods of time. We will identify these changes quickly and with our product capabilities determine which markets to put down roots in and which businesses to promote. There has been no change in our stance of contributing to society with power electronics, a stance encapsulated by our slogan "Power Electronics for Your Innovat!on."

What has changed during the COVID-19 pandemic?

The Company switched to telework in principle between April and May to help prevent the spread of the virus, and 70–80% of our employees worked in this style. We conducted a survey of all employees and also direct interviews, and some negative effects were identified. Unfortunately, given our current infrastructure and systems, there are jobs that cannot be performed with telework alone. At the same time, from the standpoint of employees, only a limited number have a situation at home that allows them to work stress-free, in their own home offices, for example. The questionnaire on work styles was given to 1,200 employees, and I personally read all of the comments written in the open answer section; some of the problems indicated were unexpected.

In the survey, around 40% of respondents thought that telework decreased efficiency, but there were divisions with 80% of respondents who thought efficiency didn't change or that it increased. Some employees whose jobs depend on using company facilities are not able to perform them unless they come to work at the office. Teleworking cannot be summed up in a single breath as good or bad, or as worth doing or not; it needs to be assessed with an understanding of the situation in each division and for every position, age group, gender, and home environment (whether the employee has children or family members in need of nursing care, etc.).

What's more, even employees facing the same circumstances deal with teleworking differently. I simply thought that employees living alone would be suited to working from home because they would be in a situation that allowed them to concentrate, but that's not the case; many respondents indicated that they felt isolated and stressed because there was no one to talk with while at work. Employees with small children also have a hard time working at home, which is something anyone can understand. But even in the case of employees without children or with children attending school as normal, if both spouses are working from home, it can become extremely difficult to draw the line between work and private life—I hear this said quite often as well.

In connection with this, what progress has been made in work style reforms and adapting to the new normal?

The Company created the N2 Project in June, a committee to consider how to best adapt to this new normal.

For the N2 Project, two teams have been created, a committee made up primarily of upper management and a committee made up of frontline employees, and project members are now engaged in frank discussions on problems and improvements from the perspectives of both teams.

The Company has telework and selective time (staggered hours) programs, though not flextime, and the project is discussing ways to make teleworking more efficient. It will also consider how to utilize satellite offices in a way better adapted to changes in teleworking styles.

To further promote telework, drawing on the current situation, we will consider ways to raise employee satisfaction while also increasing productivity. When the government declared a state of emergency, we switched to telework in principle and many employees realized they were able to do their work in the same way from home. Some may even have wondered why they had been spending so much time commuting. I do not necessarily think, however, that all employees will be able to do all their work at home. There are many situations on the job that require face-to-face communication. The N2 Project is an opportunity for us to completely change how we work and how we evaluate the outcomes of work. A predicament is being turned into a positive opportunity. Our activities this fiscal year will be linked with activities planned for next fiscal year as well, which will encompass IT infrastructure.

One of the major disruptions caused by the COVID-19 pandemic is how it has limited travel, regardless of the person's normal range of activity. Over half the Company's sales come from overseas, so communication with our customers overseas is indispensable. The business trips we took before as a matter of course are no longer possible. Even within Japan, our approach to acquiring new orders has changed substantially. Normally, our engineers and the customer's engineers would hold discussions and find a solution together while brainstorming in front of a whiteboard, but this has become quite difficult. The development of IT tools allows us to conduct teleconferencing and hold online meetings, but some have remarked this is not nearly as effective as direct interaction in the same physical space. With respect to these problems, going forward, we will need to improve our skills with these tools and probably change our mindset as well.

Regarding factories, we are basically considering smart factory initiatives and how to implement them. Production line automation, facility operations monitoring using IoT, and initiatives to raise productivity and yields have been ongoing irrespective of the COVID-19 pandemic, and we will continue them going forward.

What will the strategic focus of the Company's business be going forward?

Demand for power semiconductors has been down somewhat during the COVID-19 pandemic, but over the medium to long term we expect annual growth to be 7–8%. By market, growth is expected in automobiles and industrial equipment, and in white goods to a certain extent. Modules in particular, which are collections of devices, are integrated in our various technologies more so than individual devices. Modules can have 20 different chips that are connected together to perform a single function. For something that previously required a large 30 cm^2 substrate, customers can use an integrated module to reduce that amount to 4 cm^2. This is our strength, so-called function consolidation, and we have the know-how. Modules have many "analog" components, but the trend is toward mixed analog and digital, with the brain component for control using digital technology. This would mean one module would contain various digital technologies. Modules that incorporate various elemental technologies—material and production technologies—are what we define as power modules. For example, a module loaded with technology for controlling a motor would need a sensor. With respect to sensor technology, US subsidiary Allegro has a world-class share of the magnetic sensor market. Therefore we will not solely rely on the Company; we will work with our subsidiaries and other partners, and with our customers, to develop technologies and further strengthen and grow this product area.

I don't believe the prevailing business environment will change for the foreseeable future unless the concept of the automobile transforms dramatically, environmental or energy policies are altered drastically, or some inexhaustible energy source is discovered. From the standpoint of environmental contribution, the Sanken Electric product best riding the wave currently is our intelligent power module (IPM) for air conditioner inverters. Air conditioners consume more electricity than any other household product, and their market in emerging countries is growing. The percentage of air conditioners with inverters in China will continue to increase until 2022 to 2023, and the wave will then move to India, South America and other emerging countries, so it is not expected to dissipate.

As for automobiles, to further improve fuel economy, more auxiliary devices in the engine room will be driven with motors. Internal combustion engines themselves will use traction motors as their source of drive, so how to integrate our modules in with this and increase demand will be key.

In machine tools as well, robot arms and other equipment will all be driven by motors. Making sure we are involved in these components will be important for us.

Tell us about the partnership with Allegro and what synergies you expect.

The partnership between Sanken and Allegro, and the synergies between us, will be pursued over the long term. Allegro has strengths beyond us in the North American and European markets, and I think we complement each other well. If we can incorporate the digital technologies Allegro excels at and create a single package module, it will eliminate unnecessary development investment. How long a reasonable amount of development investment can continue to be made is of fundamental importance for semiconductor and other high-tech companies, so the key is the amount of development investment including IT investment that can be covered. We hope to collaborate with Allegro in this respect.

How is Sanken Electric contributing to the SDGs?

We are constantly and strongly aware of the UN's Sustainable Development Goals (SDGs) in the course of management. The annual review for our medium-term management plan incorporates into various business targets the contribution that our business makes to certain SDGs. The Executive Committee held discussions based on this, and, ultimately, we chose 6 of the 17 SDGs and specified materiality for them. Awareness is currently being raised internally through PR and training regarding SDG issues for Sanken Electric, which include the environment, energy issues, and clean water.

We in management have to be accountable to employees with respect to the actions the Company is taking. Doing so raises the motivation of employees as well, so I think we need to highlight a perspective on work in which goals are sought in a manner that effectively incorporates the SDGs concept. When a company clearly conveys the awareness underpinning its actions, employees in turn feel greater motivation toward their own work—this is the positive cycle we want to create.

Our young employees in particular have high awareness, so I think they envision a future 30 years from now, a future for their own small children. While various issues related to the global environment currently exist, the IPM modules for air conditioners that we developed are bearing fruit, and if as a result of this we could save electricity equivalent to the output of a coal-fired thermal power plant, it would be a wonderful achievement and source of motivation. You can tell people what you've done, you can tell your children, and when that's the case, work becomes enjoyable. We need to create positive cycles like this. When our employees work hard, our performance also improves, and establishing momentum in this direction is the work of management in my view.

How has your business model changed in recent years?

Sanken Electric's semiconductors were originally oriented to customization. There was a great deal of customization in line with customer needs, and this has sunk into our DNA. During the time this was functioning, it was great, but when it doesn't function, it is extremely inefficient. So we are creating a strong platform and changing our approach. On the basis of this platform, we will make individual adjustments with customers, and without changing the platform's basic aspects, we will use the method of adapting it while making only small, partial changes. If similar requirements are presented by another customer, adjustments can be made to meet that customer's needs without changing the basic platform. Previously it required 10 manufacturing steps to customize a semiconductor for a customer. With a strong platform, we would be able to alter only some of the steps to meet another customer's requirements. Doing so would reduce development lead time by half—this is the SPP (Sanken Power-electronics Platform) development reform we're aiming to accomplish (details on p. 20.)

Our mindset in carrying out these reforms is that if they are unsuccessful, we won't survive. Until now, development had been about accommodating requirements passed down to us, so if it failed a little, it was immediately reworked. Going forward, at the initial stage, all divisions will be involved, from production to purchasing. Product design will be effectively adjusted, and the product developed on the basis of a platform. I think if we do this thoroughly, all development should become platform-based. Even with custom specifications, the platform for the product's elemental technologies would be the same as others. I believe the development model could change so that 100% customization could be accomplished with 70% customization in effect.

How have you set the time schedule for SPP?

SPP began in 2018, and is meant to steadily produce results after 2021 while being established over a three-year period. In the middle of the medium-term management plan, we are still at the stage where we are examining indications of the concrete scale of growth. At present, a majority of elemental technologies are to be handled by SPP and products generated from this will be produced on a new production line, which will increase productivity. This is the basic idea. Product switchover will begin in the second half of fiscal 2020, and then the test will be how much we can raise productivity from next year into the year after that.

Further, to promote SPP, it will be necessary to incorporate new methods and introduce new human resources. It will be difficult to meet hiring requirements just in Japan, so we have established development sites in Seoul and Taiwan to conduct development with a network connecting Japan and other countries. We have many engineers in Japan involved in product design, elemental chip technology design, and assembly design, and they work with satellite development and technology centers in Seoul (South Korea), Taipei (Taiwan) and Shanghai (China). Meetings can be held by connecting the sites remotely, and CAD design data can be shared as well, so development is proceeding smoothly even without actual travel between the countries.

How is the current corporate governance system affecting the direction of management?

In November 2019, the Company established the Structural Reform Committee, and through this new committee three external directors and three internal directors are now holding discussions twice monthly. The committee was focused on structural reforms initially but currently also discusses the new growth strategy, COVID-19 pandemic and countermeasures for it, so I think the committee is playing a central role in the Company's governance system. Even with two of the external directors living in the US, one on the West Coast and one on the East Coast, the committee continues to meet twice a month, though coordinating times can be a bit of a challenge.

Apart from this, we have also established the Nomination Committee and the Compensation Committee, which are voluntary under the law, and in 2019 instituted performance-linked compensation. Moreover, from 2020, all executives and managers at the general manager level or above, which is a rank at the level of executive officer or above, receive performance-linked compensation.

For external directors, we strive to always provide detailed internal documents each time there is a meeting of the Board of Directors. We present the justification of the strategy and explain our approach, and external directors then provide various opinions and recommendations based on their respective areas of expertise. Through these discussions with external directors, we have received many fresh insights. Even with regard to a single individual investment decision, whether we decide to move forward with commercializing products while emphasizing various aspects, including relationships between Sanken Electric and its customers, or decide not to move ahead with commercialization, this input from external directors has prompted us to carefully scrutinize the situation. With one project, we made the decision to pull out, but were convinced by conventional thinking that it would take a certain amount of time to accomplish. However, when we actually initiated it, the customer immediately understood and acknowledged our position. Our external directors have helped us realize that our own internal conventional wisdom is sometimes not as rock-solid as we believed.

Since adopting our current governance system, we have been more stringent in looking at investment efficiency and cash flow at the start of projects. A majority of Sanken Electric's product development had involved derivative products, so projects were not necessarily clearly delineated. The Company's customers are not OEM manufacturers but automotive component makers (Tier 1), so the line now is whether our Tier 1 customers can receive orders for the Company.

With respect to individual projects, there were areas where we could have more rigorously calculated investment efficiency and cash flow. After development is initiated by the project leader, responsibility is also assumed at the point of no return, so making more stringent investment decisions is a major change for us.

What are your expectations for the business environment post-COVID-19?

The Company is anticipating that sales will return to fiscal 2019 levels between 2022 and 2023 at the earliest. It is already certain that the impact of the COVID-19 pandemic on the global economy will be much larger than even the global financial crisis of 2008. There is no financial insecurity, however, and the Company has been able to ensure sufficient cash flow through various means. Accordingly, with sales shrinking, how to increase profits and tie that to corporate value will be key. At the same time, for us, intensifying friction between the US and China and the shift to domestic production under the Made in China 2025 strategy is likely to have a greater impact on the Company's business environment than even the COVID-19 pandemic. With regard to the COVID-19 pandemic's impact on the global economy, including emerging economies, however, the worst is still to come. The final destinations of the Company's products are mainly the markets of Europe, North America, China and South Korea, but in the next set of promising growth markets, Brazil, India and Africa, the scale of the COVID-19 pandemic's impact remains unclear. The situation will need to be closely monitored.

What is the big picture for Sanken Electric in 5 or 10 years?

Within the major industry category of semiconductors, our main business is in the niche field of power semiconductors, and we want to be a company whose name, Sanken Electric, is virtually synonymous with power semiconductors. Customers around the world instantly think of Sanken Electric for power supply ICs. We want this for power semiconductors as well, for engineers at our customers to think first of Sanken Electric for power semiconductors, including modules, whether in the automobile, industrial equipment or white goods industries.

Corporate Governance at Allegro MicroSystems, Inc.

Yoshihiro Suzuki
Chairman of the Board of Directors
Director of the Company since 2001

Ravi Vig
President and CEO
Director of the Company since 2006

Hideo Takani
Director
Director of the Company since 2016

Andrew G. Dunn
Director
Director of the Company since 2017

Paul Chip Schorr
Director
Director of the Company since 2017

Richard R. Lury
Independent Director
Director of the Company since 2007

Joseph R. Martin
Independent Director
Director of the Company since 2017

Noriharu Fujita
Independent Director
Director of the Company since 2018

Reza Kazerounian
Independent Director
Director of the Company since 2018

As of July 1, 2020

In last year's Sanken Report, we reported on Allegro MicroSystems, Inc. ("Allegro") in the feature titled "Innovation with People: People—Our Wellspring of Value Creation," conveying how Allegro had established a global presence in magnetic sensors and detailing its history of management reforms up to its present-day success.

This year's report shines the spotlight on Allegro's corporate governance. The following provides an introduction to Allegro's Board of Directors and its governance system.

Allegro's Board of Directors consists of nine directors, four of whom are independent external directors. To speed up managerial decision-making, oversight and execution are clearly divided; the eight directors other than the CEO are not involved in business execution. The company also has a Nomination Committee, Compensation Committee and Audit Committee to ensure management transparency and fairness.

Allegro's board members include CEO of the Americas region of a major semiconductor manufacturer, a director in the technology, communications and healthcare industries, a senior managing director of a private equity firm, a certified public accountant, an attorney at law and other experienced professionals with a range of qualifications. The directors have extensive management experience and high-level expertise in business strategy, international business, finance and accounting, legal affairs and other areas. Drawing on this diverse background, Allegro's Board of Directors is able to engage in discussion and debate from a wide variety of perspectives.

Although travel between countries is currently restricted due to COVID-19, Allegro's board uses IT infrastructure, including teleconferencing, to continue its energetic discussions just as before.

Allegro will continue working to meet the expectations of shareholders and raise corporate value on a sustained basis for long-term success.

"We will promote a power module strategy to expand our business domain and further pursue sustained growth."

Masao Hoshino
Director and Executive Vice President
General Manager of Device Business
Corporate Headquarters

The Semiconductor Devices Business is the core business of the Sanken Group, with main products ranging from ICs and transistors to diodes, LEDs, and Hall-effect sensors. Most of our semiconductor device products belong to the field of power electronics and are used as key components in all kinds of fields, including automobiles, home appliances, industrial machinery, audio visual (AV) and office automation (OA) equipment, telecommunications equipment and LED lighting.

Sanken Electric and subsidiary Allegro MicroSystems, Inc. promote proprietary technology development and provide products that meet customer needs.

Fiscal 2019 Results

Net Sales ¥138.0 billion **Operating Income ¥6.8 billion**

In fiscal 2019 (the year ended March 31, 2020) net sales in the Semiconductor Devices Business were ¥137,981 million, a decrease of 6.3% compared to the previous fiscal year. In 2020, the coronavirus became a global pandemic, but its impact on our financial results for fiscal 2019 was marginal.

By market, sales of mainstay automotive market products were heavily impacted by the global decline in automotive sales connected with prolonged trade friction between the US and China and other factors. As a result, sales for the automobile market declined by 8.1% year on year to ¥70,233 million.

By contrast, in the white goods market, which includes air conditioners, washing machines and refrigerators, growth continued in products for highly energy-efficient inverter air conditioners, which leverage Sanken Electric's technological strengths, particularly in the Chinese market. As a result, products for the white goods market continued to perform well, with sales increasing 8.9% year on year to ¥44,431 million.

In the industrial equipment and consumer markets, sales declined 22.2% from the previous year to ¥23,317 million as a result of stagnation in the industrial equipment market from capital investment being reined in and demand decreasing in the OA and AV markets due to lackluster economic conditions.

With regard to profits, the Company continued to take measures to deal with unprofitable products and implemented policies to address declining sales and lower capacity utilization that included reducing fixed costs. However, operating income declined 47.8% year on year to ¥6,805 million.

Toward Medium- to Long-Term Growth

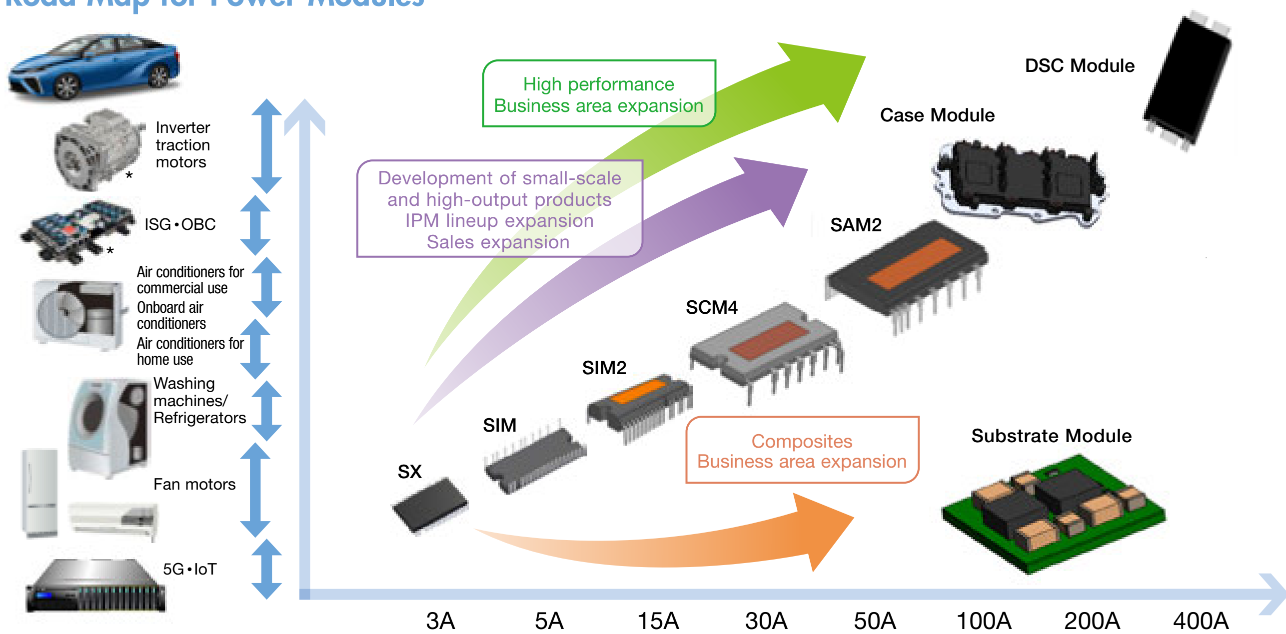
With regard to the medium- to long-term market environment for the Semiconductor Devices Business, in the area of energy-efficient eco-products, growth is expected in the white goods market where inverter products are making headway, and with safety and comfort improvements progressing, demand is expected to increase in the automotive market as well, specifically for Advanced Driver Assistance Systems (ADAS) and Electrified Vehicles (xEV). The structural reforms the Company initiated in November 2019 will seek to optimize production by integrating diode production sites and consolidating domestic power module production plants to fundamentally rebuild the Company's earnings structure and also reform development to enhance product capabilities for semiconductor devices.

Market conditions recently have been challenging, but for power modules, the core of the Company's growth strategy going forward, new products like next-generation IPMs for automobile motor compressors and power cards for EV traction motor drive inverters are set to begin mass production from 2021 to 2022, and new orders are currently being acquired. Utilizing motor control technologies cultivated with products for the white goods market, the Company will expand its IPM lineup with more compact and higher output options to further increase sales and will expand its business domain to the automobile and industrial equipment markets by enhancing product complexity and performance in order to achieve sustained growth for the Semiconductor Devices Business.

Ordered projects for new-type power module business

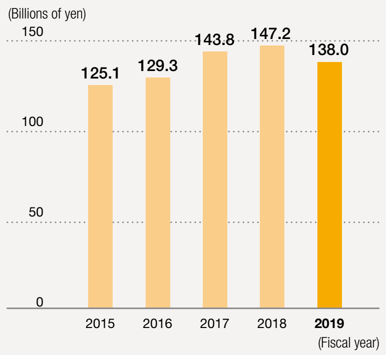
< Automobiles >	Plan to launch mass-production
• Next-generation IPM for electric compressors	2021
• Power cards for EV traction motor driver inverters	2022
• MOS modules for EPS	2022
< All-purpose >	**Plan to launch mass-production**
• Next-generation IPMs for European market	2022

Road Map for Power Modules

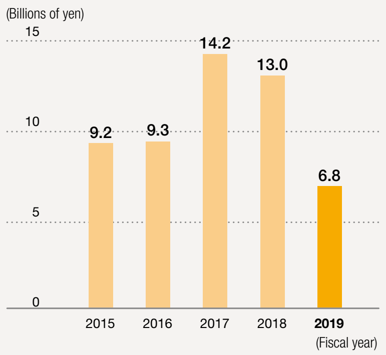


* Image source: Ministry of Economy, Trade and Industry website (https://www.meti.go.jp/policy/automobile/evphv/what/ev.html#ev02)

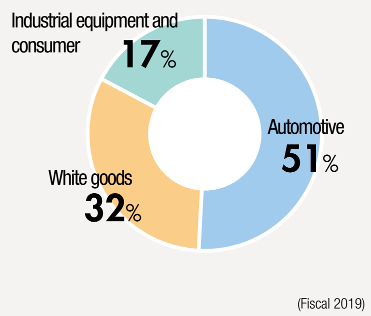
Net Sales



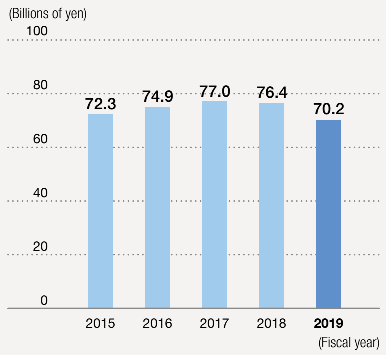
Operating Income



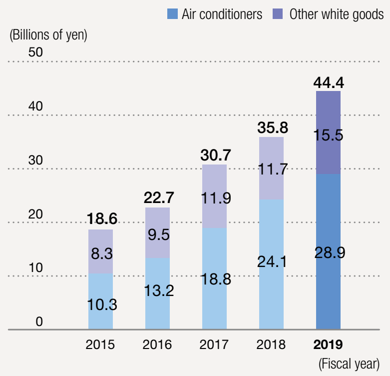
Net Sales Composition by Market



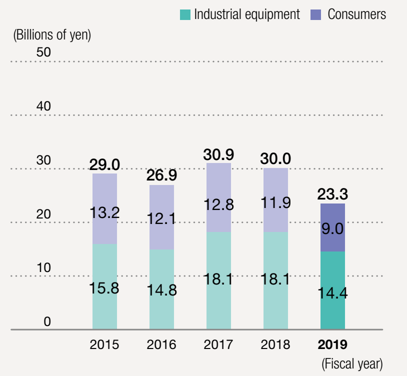
Sales of Semiconductors for Automobiles (Consolidated basis)



Sales of Semiconductors for White Goods (Non-consolidated basis)



Sales of Semiconductors for Industrial Equipment and Consumers (Consolidated basis)



Power Systems Business – Review of Operations –

“We will accurately grasp customer needs and provide timely products that support social infrastructure.”

Shigeru Ito
Senior Corporate Officer
General Manager of Power System Headquarters

The Power Systems Business is divided into “infrastructure,” which focuses on large power supply equipment, and energy “units,” which is mainly small and medium-sized power source equipment and modules.

The Company has supplied infrastructure products in the form of power supply equipment since its founding in 1946. As DC power supplies and uninterruptible power supplies (UPS), these products play an important role in infrastructure where even momentary power interruptions cannot be tolerated, such as for communication systems for mobile phone base stations, dams, power transmission substations, airport facilities, expressway facilities, and tunnels, earning the strong trust of customers.

In addition, in unit products, the Company is developing the circuit board business for automobile and industrial equipment applications.

Fiscal 2019 Results

Net Sales ¥22.2 billion

Operating Income ¥0.55 billion

In fiscal 2019 (the year ended March 31, 2020), net sales in the Power Systems Business were ¥22,235 million, a decrease of 15.9% compared to the previous fiscal year.

In infrastructure products, products for the private sector declined due to the slowdown in the Chinese economy, but sales of products for communication base stations increased as did products for the public sector, including in connection with disaster preparedness under Japan’s Fundamental Plan for National Resilience. As a result, infrastructure sales totaled ¥14,547 million, similar to the previous year’s level. Unit product sales decreased substantially, by 34.2% year on year, to ¥7,688 million, due to withdrawing products from non-strategic markets.

With regard to profits, consolidated operating income for the Power Systems Business was ¥548 million, on par with the previous year.

Fiscal 2020 Outlook and Key Measures

The environment surrounding the Power Systems Business in fiscal 2020 is expected to be impacted by delayed construction projects and restricted capital investment caused by COVID-19, but the Company will continue its growth strategy of expanding the UPS business, accommodating the infrastructure and industrial equipment markets, and responding to 5G. In terms of profits, the Company is forecasting a level on par with fiscal 2019 as a result of reducing costs and reining in fixed costs.

The market environment of the infrastructure business is expected to see increased demand for base station power stations to accommodate full-fledged adoption of 5G in the communications market and for power supplies for rivers based on the Japanese government’s national resilience policy. The Company owns products for outdoor power sources with excellent waterproof and dustproof capabilities, which it will use to strengthen sales activities against a backdrop of increasing demand for crime prevention, disaster preparedness and communications, including 5G.

Direction of the Power Systems Business

Competition on price and also performance (power conversion efficiency, etc.) is expected to increase in intensity going forward against a backdrop of overseas competitors actively entering the market in recent years. Within the Power Systems Business, for the infrastructure business in particular, the Company will seek sustained growth by transferring the business to GS Yuasa International Ltd., which has strengths in lead-acid, lithium-ion and other types of batteries, and effectively combining both companies’ resources and expertise. For the units business, the Company will continue on in the power module area, providing circuit board modules for automobiles and industrial equipment.

Development and utilization of outdoor power sources for CCTV

< Background of increased demand for outdoor power sources >

- Increase in outdoor installations such as cameras, transmitters and wireless devices
- Increase in decentralization and outdoor installation of power sources
- Demand for weatherproof (durable) type that can even withstand typhoons

< Characteristics of our company’s outdoor power sources (weatherproof type) >

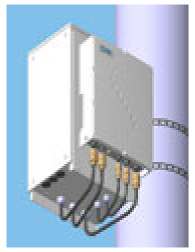
- Small-scale/lightweight/durability + long-distance monitoring/remote operation/serviceability
- Possible to make proposals in line with market needs (within specifications)

Outdoor power sources for CCTV
(crime prevention and security cameras)

Demand expansion

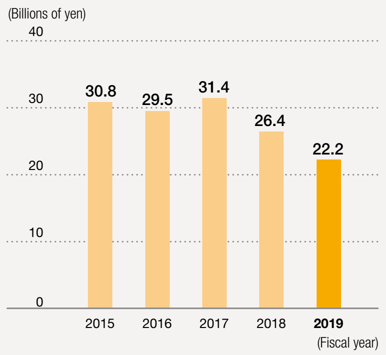
Related to roads and electric power

Related to telecommunications (5G)

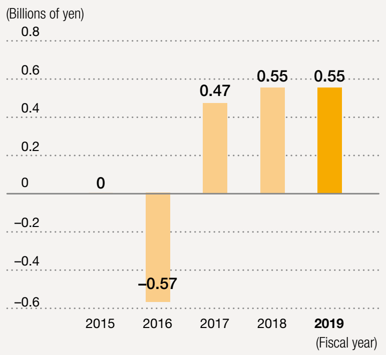


Related to crime and disaster prevention

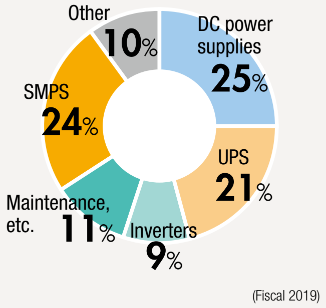
Net Sales



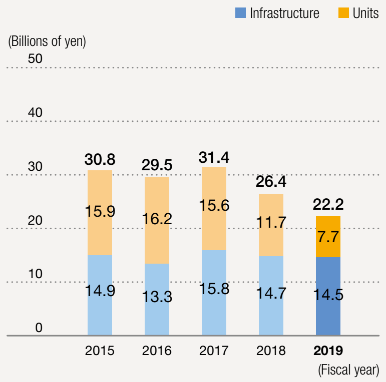
Operating Income



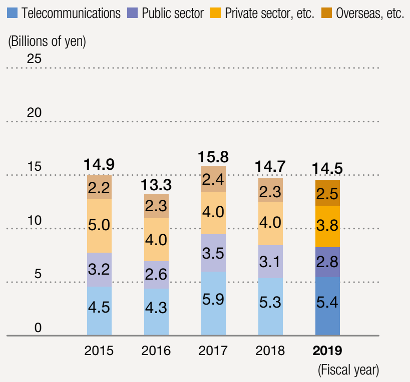
Net Sales Composition by Product



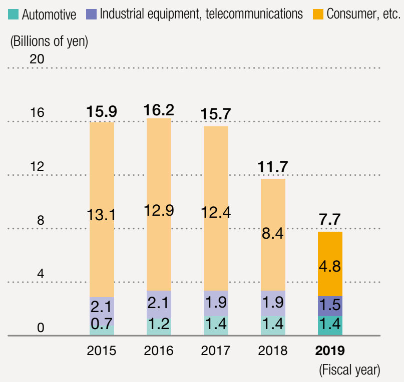
Composition of Sales



Net Sales by Infrastructure Market



Net Sales by Units Market



CTO Message

The Sanken Power-electronics Platform (SPP) discussed in last year's Sanken Report constitutes the conceptual key to the Company's development reforms and the method by which development will be carried out.
In this year's report, we provide an update on concrete progress that has been made in development with SPP and also discuss the current transformation and aims of Sanken Electric.

Hideki Nakamichi
Senior Corporate Officer
Head of Device Business Corporate Headquarters

SPP as a Platform for Information-Sharing and Discussion

Customizing technologies and products for each customer was the traditional strength of Sanken Electric, but this approach resulted in a great deal of backtracking that reduced development efficiency. In addition, products were developed independently by each business division for different customers, so technological information was scattered throughout the organization, leaving other business divisions uninformed. In response to this situation, by identifying elemental technologies the Company currently possesses and those it will need going forward, we created a matrix of development products and elemental technologies that enables everyone to see the technologies that can be used, shared or transferred at a glance. Think specifically of a matrix with product development projects plotted on the horizontal x-axis and elemental technologies on the vertical y-axis. Product development projects anticipated based on megatrend forecasts and market research are placed on the x-axis, and from combinations of the crossing points, technological ideas—call them paradigm shifts—can emerge. In this way, SPP involves developing and standardizing elemental technologies and new products with a platform awareness starting with upstream development processes. Until now, we had no foundation of shared understanding on which to base Company-wide discussions. In order to share SPP development information and promote open innovation, we have established a dedicated SPP site on SharePoint, the Company's intranet, and the development roadmap, an anticipated product portfolio (list of development projects), and progress made on developments are shared Company-wide.

Regarding the way actual development proceeds, multiple projects are established, including product development projects and elemental technology projects (chips and packages), and progress is monitored with these integrated into a single program. Once a week, the Program Management Office holds an SPP Development Project Progress Meeting (including online meetings) to bring together the managers of projects involved in the program (marketing, development, design, production technology, manufacturing and plants, materials, quality assurance, and overseas bases). By working to make the development process visible Company-wide, information and conditions will be shared on everything from the quality level and specifications required for development products to selection of the optimal materials for realizing them, the possibility of parts procurement, costs, considerations on optimal production lines, the current rate of progress achieved, and if there are any bottlenecks holding up progress. Overall promotion is conducted by the Program Management Office, which will provide instructions for formulating recovery measures if delays in one project are expected to impact the plans of another. Projects receiving instructions must immediately formulate and execute recovery measures and plans agreed to by the related projects.

Since introducing SPP, requests from each division have been incorporated at early stages, which has eliminated backtracking, and development lead times for SPP-centered elemental technology projects have been reduced substantially to one-half of previous levels. The rewards of having significantly changed our development style are being felt daily.

SPP Development Project Selection

Product development projects (anticipated development products) are selected based on research by the Marketing Division, which predicts megatrends and drafts a technology development roadmap, after discussion by members with the added perspective of customer needs derived from interviews with business divisions.

There are seven products, centering on IPM, that are currently selected for development projects as next-generation products. In particular, automotive power modules are a major theme, and next-generation IPMs for motor-driven compressors are at the top of the list. In the near future, electric vehicles (EV) and hybrid vehicles (HEV) are expected to become increasingly widespread, and their air conditioners will require motor-driven compressors that compress refrigerant without relying on the engine load. For Sanken Electric, it will be necessary to develop IPMs for motors with larger output than before, and we are considering invoking horizontal development to apply technology cultivated in outdoor unit compressors for room air conditioners to an optimally sized package which can be incorporated into next-generation automotive applications. In eco-friendly vehicles like EVs and HEVs, air conditioners run even when the engine is shut off at stops, so more stringent quality is demanded with regard to noise. To meet these needs and satisfy all elemental technology requirements, we will consider every possibility with all participating SPP members.

The above is just an example, but with a view to fiscal 2026, power modules, semiconductor devices, and sensors for automotive and industrial equipment applications, including white goods, will constitute the three pillars of our business.

Role of the Production Development Center in SPP

The Production Development Center due to start operations from April 2021 is being built at Sanken Electric Headquarters to further strengthen production technology and development. The center will accelerate elemental technology through shared materials and has the goals of mixed production lines, automation and networking.

The center will bring together the expertise of electronics designers and production technology engineers at the headquarters and integrate the latest technology into pilot lines for development products.

Production of next-generation IPMs for motor-driven compressors, an early SPP development product discussed above, will take place on a flexible line with multiple packages working together that is currently under construction. As a production site for next-generation products released via SPP, we will work to make it a smart factory that fuses production technologies and IT. Operations at the Production Development Center have significant meaning.

Promotion of Development Reforms through Collaboration with Overseas Development Centers

The elemental technologies on our platform, the key to our development revolution, cover a broad range, but among them, power chip, package and firmware development will be conducted through collaboration between Japan and new development centers in South Korea and Taiwan. Our aim is to accelerate development of exceptional technologies by securing outstanding talent and drawing on synergies produced by their differing experiences. Statistical design testing methods, quality based on advanced product quality planning (APQP), and efficient development and resource management using master plan management are eliminating inefficiencies and waste, and communication using English as the standard language is creating openness and allowing us to leverage our diversity.

Through collaboration with our three overseas development centers to realize SPP, which started under Medium-Term Management Plan 2018, different cultures and various experiences are shared and exchanged without getting hung up on past practices and customs, and we are beginning to finalize technologies at a high level while meeting the goal of reducing development lead times by half in projects selected for SPP. We intend to further accelerate development innovation through SPP to achieve the on-time release of strategic products under our medium- and long-term plans.

Myungjun Lee
Corporate Officer
Deputy Head, Engineering Headquarters,
General Manager in charge of white goods market

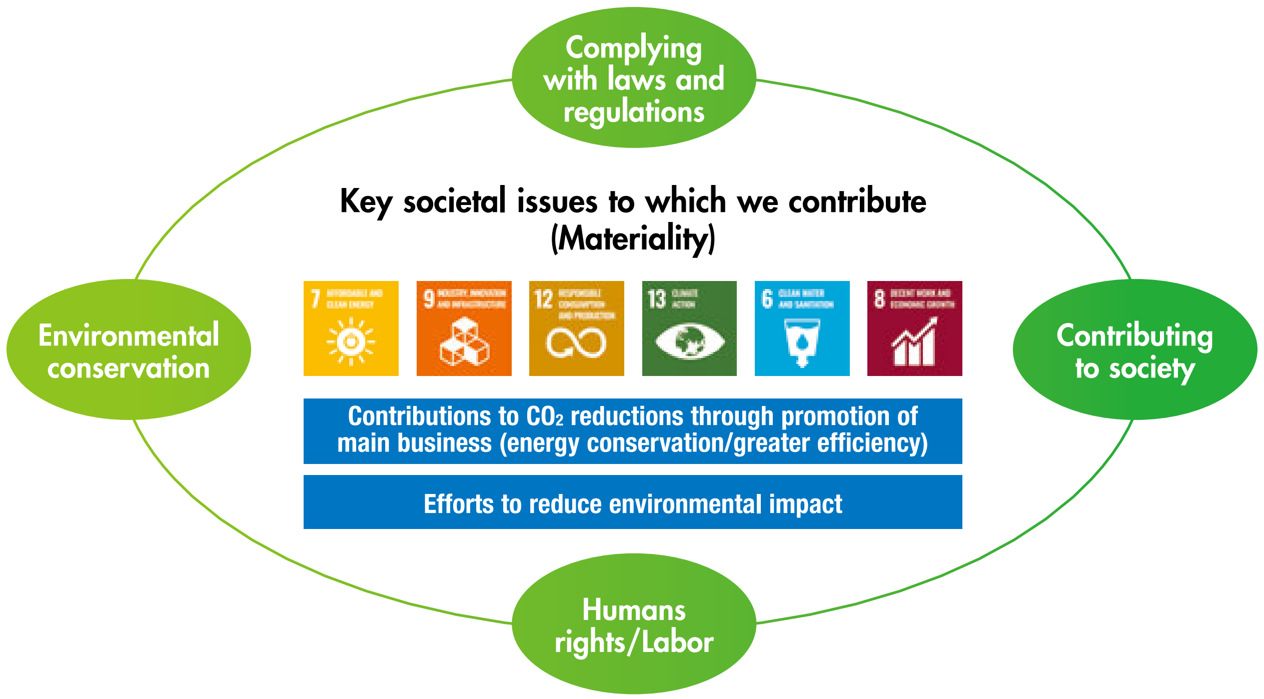
Sanken Electric Integrating SDGs to Solve Social Issues and Inspire "Creation"

Sanken Electric Integrating SDGs to Solve Social Issues and Inspire "Creation"

Sanken Electric's Basic Approach to the SDGs

Establishment of the Sanken Group's Fundamental CSR Policy

The Sanken Group's Fundamental CSR Policy lays out Sanken Electric's basic stance on the UN's Sustainable Development Goals (SDGs). It summarizes the Company's approach to legal compliance and good faith business conduct, respect for human rights and labor fundamentals, environmental conservation, and contribution to local communities. The Company works to help solve social issues in line with this policy.



Promoting Understanding of the SDGs

We have created an original educational video to deepen the understanding of all Sanken Group employees. The video explains the background and purpose of the SDGs and focuses on becoming aware of the SDGs as personally relevant.

Sanken Electric's educational video

Specific SDG Initiatives

How can Sanken Electric help solve the various issues facing society? Having discussed this question internally, the Company has determined that it will address the SDGs on the basis of two main pillars. We will help realize a sustainable society in terms of eco-friendliness, energy savings and higher efficiency through the development, production and sale of power electronics products, and we will protect the environment for future generations by reducing the environmental impact of our own business operations.

Sanken Group's Contributions (Materiality)

Contribute to the realization of a sustainable society, the aim of the SDGs, through promotion of our main business (eco-friendliness, energy savings, higher efficiency)	Measures for increasing opportunities	**Promote our main business** Contribute to CO_2 reductions (major household appliances, etc., energy savings, higher automobile efficiency)
Contribute to reducing the environmental impact of our main business Prioritize management of CO_2 (electricity), water, and waste products (plastics)	Risk reduction measures	**Measures to reduce environmental impact** Prevent global warming (factor management) / Strengthen industrial waste management

Integrating SDGs into Divisional Medium-Term Management Plans

To integrate the SDGs into operations, general managers in each division have developed strategies for how to utilize the SDGs in their business operations.

In addition, the SDGs are being incorporated into management policies by clarifying their connection with divisional medium-term management plans and divisional policies this fiscal year.

Presentation of a medium-term management plan

Sanken Electric's SDG Initiatives

Hitoshi Aoyagi

Former Head of PR Unit, United Nations Development Programme
Helped create the SDGs
Instructor featured in Sanken Electric's educational video

Representative Director
General incorporated association
SDGs Entrepreneurs

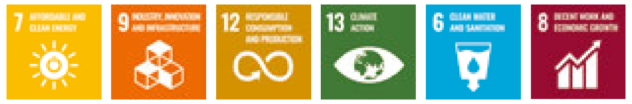
It is said that the key to realizing a sustainable world, the aim of the SDGs, is for companies that have technologies that protect the environment and increase social efficiency to engage in the effort through their main businesses. In light of this, Sanken Electric has committed to reducing environmental impact through reducing energy consumption and increasing efficiency as a major social issue via the development, production and sale of eco-friendly, energy-saving products and through its corporate activities. This expresses the Company's commitment to helping achieve the SDGs through its main business, which includes both products and production processes. Going forward, it will be important to shift the focus from declaration to execution; which is to say, what is important is how the issues identified are specifically integrated into management, business operations and the organization. In management, the key will be how to link the SDGs to the Company's strategy and value creation process; in business, it will be whether these efforts can be actualized as profit-generating activities; and in terms of the organization, it will be whether the Company can not only create goals and plans but also integrate the SDGs into the shared values and behavior patterns of its employees. Through this process, Sanken Electric can be expected to think through its business from the standpoint of the SDGs and social issues and continue growing as a company that possesses know-how and personnel with self-initiative.

Environmentally Friendly Products

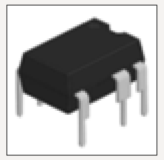
Contributing to a Sustainable Society through Promotion of the Main Business

Sanken Electric's products are used in major household appliances, automobiles, industrial equipment and a wide variety of other applications. By making these products eco-friendly, energy saving and more highly efficient, we are helping to reduce carbon dioxide emissions.

Sanken Electric Contributing to Global Society with Environmentally Friendly Products



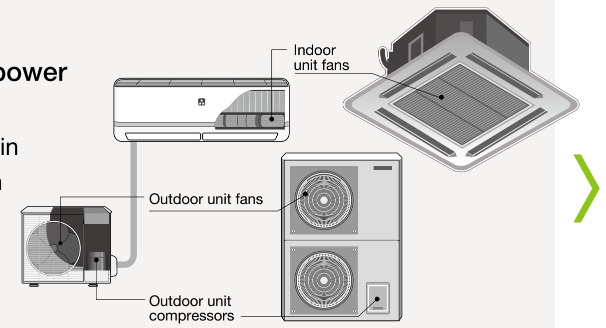
Parts	Contributions to energy-saving performance/electric power

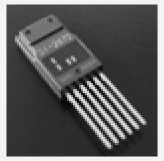


Air conditioner components

Contributing to increased power efficiency at low loads

Our components are included in inverter air conditioners, which cut CO_2 emissions by around 30% compared to conventional air conditioners.

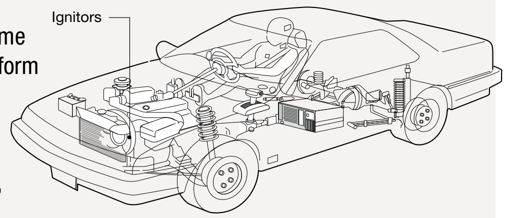




Ignition components

Contributing to increased fuel efficiency for internal combustion engines

Sanken Electric products are used by some major manufacturers domestically and conform with Japan's 2020 fuel efficiency standards. They also meet fuel efficiency standards in other countries and regions, including North America, Europe, China, India, and emerging countries.



Charge components

Contributing to increased output efficiency for charger alternators*

The efficiency of low-loss diodes for alternators has increased by 3%, and with an average of eight used in each vehicle, production has also increased, which has resulted in estimated CO_2 reductions on a cumulative basis of 0.9 tons in 2017, 4.5 tons in 2018, and 15.3 tons in 2019.

* Alternators are an important component in vehicle start-up and driving.

Contributing to a sustainable society

Environmental Performance

Being a Company that "Creates" Environmental Impact Reductions

Based on the recognition that we exert an impact on the environment in promoting our main business, we have developed measures to reduce environmental impact centering on factories and in this way are helping to protect the environment for future generations. We are particularly focused on the management of CO_2 (electricity), water, and waste products (plastic waste).

CO_2 reduction

Management of electricity usage

Management indicator
Reduce factor by 1% from previous fiscal year

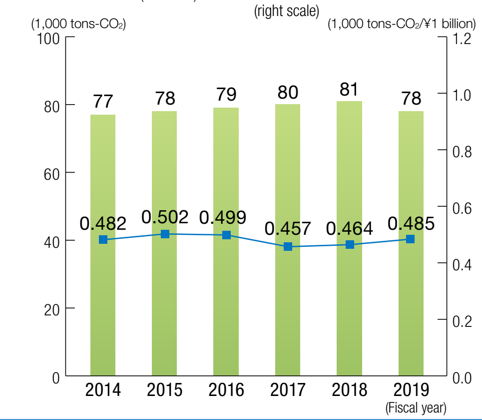
- Manage progress of electricity usage reduction measures
- Introduce energy-saving devices
- Upgrade outdated electricity facilities
- Introduce solar PV systems

3.6% reduction YOY

Fiscal 2018
80,609 t-CO_2

Fiscal 2019
77,809 t-CO_2
(96.4%)

■ Greenhouse Gas Emissions (Total for Domestic Production Bases)



Water conservation activities

Maintenance of wastewater water quality and management of water usage

Management indicator
Reduce factor by 1% from previous fiscal year

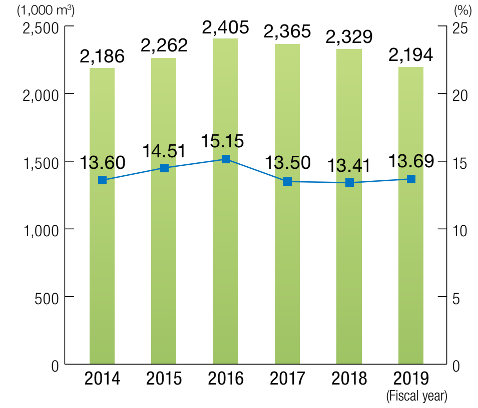
- Manage progress of water usage reduction measures
- Comply with wastewater standards and consider enhancements
- Consider recycling measures

5.8% decrease YOY

Fiscal 2018
2,328,615 m³

Fiscal 2019
2,193,787 m³
(94.2%)

■ Water Usage



Waste survey and recycling promotion

Disposal method verification and recycling promotion

- Confirm disposal methods and consider measures to raise the recycling rate
- Strengthen coordination with disposal companies
- Consider waste reductions (3R)

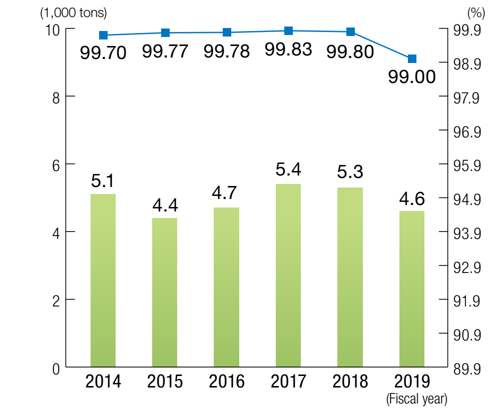
* My Cup / My Thermos Campaign to raise awareness of plastic waste

13.7% decrease YOY

Fiscal 2018
5,349 t

Fiscal 2019
4,611 t
(86.3%)

■ Waste Emissions and Recycling Rate



Value Creation for "Ease of Work"

The Company promotes diversity and work style reforms based on the idea that providing a place where diverse people can work efficiently will lead to new value creation.
In addition, measures are being steadily implemented to address new issues connected with adapting to the new normal of COVID-19.

Promoting diversity and gender equality

The Sanken Group's Fundamental CSR Policy states in the section "Respect for Human Rights and Labor Fundamentals" that "Under no circumstances will we discriminate on the basis of race, ethnicity, nationality, sex, age, religion, creed, presence or absence of impairment, sexual orientation, or gender identity," and that "We will promote diversity, inclusion and gender equality." On the basis of this commitment, the entire Group has conducted initiatives for promoting women's participation and advancement, establishing better work-life balance, and further enhancing women's professional skills and abilities.

As a result, managerial positions for women have steadily increased, and women have recorded major accomplishments, with awards and recognitions increasing Company-wide. The scope of women's participation and advancement continues to expand.

Figures related to managerial positions for women

	Number of Company employees (People)	Percentage of female employees (%)	Percentage of managerial positions for women (%)
April 1, 2016	1,370	17.0	0.5
April 1, 2017	1,352	17.2	0.9
April 1, 2018	1,228	15.8	0.9
April 1, 2019	1,213	16.1	1.3
April 1, 2020	1,226	16.4	2.3

Work style reforms and adapting to the new normal

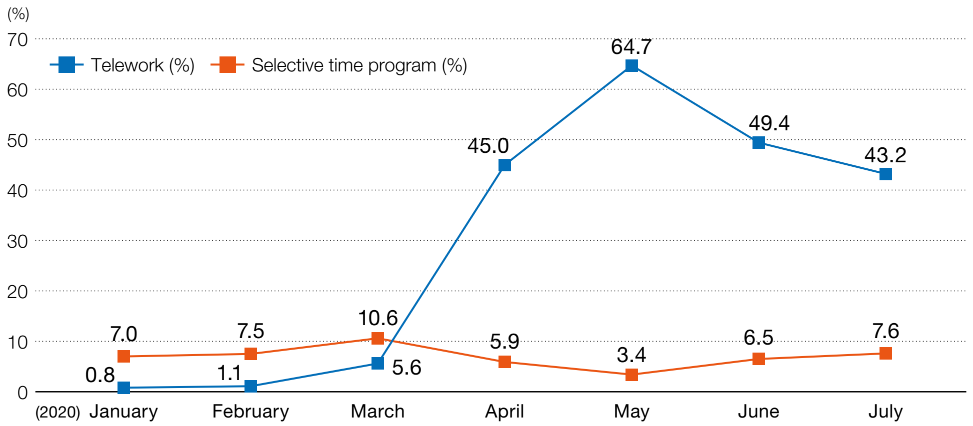
Since establishing the Work Style Innovation Promotion Headquarters in 2018, the Company has carried out work style reforms on the four pillars of business process reform, system reform, human resource development, and organizational development based on the vision of a "happy cycle," which means creating a cycle of happiness for Sanken Electric and all its stakeholders. Starting in 2019, we began utilizing telework and selective time programs from the standpoint of greater work efficiency, and these more flexible working formats continue to gain traction.

During this time, we also promoted policies to raise the quality of communication internally and reform the organizational culture. These included training programs for reforming meetings and improving communication quality, as well as holding lunchtime meetings for the president and young employees to exchange opinions over lunch.

This year, under the impact of COVID-19, however, the work style reforms we have promoted thus far have been restricted in various ways. What is needed now as a result is adaptation to this "new normal," not work styles that are simply extensions of the past. We therefore launched the New Normal Project in June of this year and have begun related considerations. This project plans to take up a wide range of issues, including management methods, performance evaluations, meetings, and benefit package reviews. The project's members are primarily younger employees. With women comprising half of the members, the project is also expected to contribute to women's participation and advancement at the Company.


Lunchtime meeting

Rate of implementation of telework and selective time program



Value Creation through Measures for Safety, Security and Business Continuity

The Company carries out various activities based on the recognition that raising responsiveness and business continuity performance with respect to extreme weather, damage from flooding and high winds, and other crises leads to the building of greater trust with stakeholders.

Frequency and severity

At the start of the fiscal year, the Occupational Safety and Health Activities Policy was communicated to all Company members and a management target was set along with an annual plan and slogan. The target is to always strive for zero occupational accidents, zero commuting accidents and zero occupational illnesses. Activities are led by the Occupational Safety and Health Committee.

*1 Frequency rate: expresses the frequency of accidents by number of injuries and fatalities in occupational accidents per 1 million working hours
*2 Severity rate: expresses the severity of accidents by number of lost workdays per 1,000 working hours

	Frequency rate*1	Severity rate*2
Fiscal 2015	0.00	0.000
Fiscal 2016	0.45	0.003
Fiscal 2017	0.00	0.000
Fiscal 2018	0.00	0.000
Fiscal 2019	0.59	0.021

Main initiatives

The Company conducts various safety and health-related activities that include initiatives stipulated by law. Particularly, as a semiconductor manufacturer, chemicals and gases not only affect the safety of employees but can cause major problems for the environment as well. Based on this recognition, we invite outside instructors and other experts to give classes at each of our factories.

In addition, to prevent workplace accidents at factories, we check for the occurrence of any accidents and conduct activities aimed at zero defects at each factory.

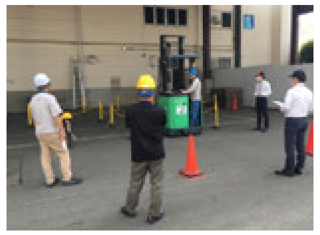
Along with this, we also conduct crisis management activities that include safety confirmation drills predicated on flooding and damage from high winds along with disaster manual reviews and updates. We also conduct disaster preparedness drills for fires and major earthquakes and general first aid training.


High Pressure Gas Safety Act (October 2019)


Workshop on handling pharmaceuticals (August 2020)


Special X-ray training course (December 2019)


Forklift safety training course (June 2020)


Forklift safety training course (practical skills) (June 2020)


General first aid training (September 2019)

News article related to COVID-19 (Ishikawa Sanken)

COVID-19 response drills

Because COVID-19 is a crisis without precedent, Sanken Electric has set up a special response headquarters led by the Crisis Management Committee and implemented measures to prevent the spread of infection. These measures have included recommending that employees work from home or make use of the selective time program as well as measures to prevent close-contact situations.

Additionally, at Ishikawa Sanken, we held a series of drills that simulated a factory worker testing positive for COVID-19.

This drill received media coverage for being uncommon even in Japan.

Social Contribution Activities

Creating Value for Society

Eco-friendly, energy-saving technologies, which are a strength of Sanken Electric, have intrinsic value, and through these technologies we have worked to convey the importance of the environment to the next generation.

The Pet Botaru® system, which uses LED lights, is easy to use and beautifully illuminates natural landscapes, making the system a tourism resource that plays an important role in various local communities.

Activities rooted in local communities

The Sanken Group has conducted various activities with the awareness that sustainable community development can lead to corporate development, and new value can be created when both communities and companies support one another.

One of the main pillars of these activities is the Children's Environmental Classroom that we hold in various communities in order to convey the need for a sustainable society and the importance of environmental protection based on our proprietary eco-friendly and energy-saving technologies.

The Children's Environmental Classroom has been held by the Group as a whole around 20 times and garnered the participation of 980 elementary school students (as of fiscal 2019).

Pet Botaru, which uses Sanken Electric LED lights, is used in community revitalization in regions around the country. The beautiful outdoor lighting displays created by the Pet Botaru system not only draw tourists, but community representatives have told us they also help foster a sense of unity within the community. Pet Botaru lights are installed in 60 sites around Japan, from Hokkaido in the north to Kyushu in the south, and are also used overseas in Micronesia.

The second main pillar is our continuing support for people with disabilities. Our aim specifically is to help people with disabilities lead independent lifestyles and engage with their communities by creating many opportunities for interaction with Sanken Group employees, and through these experiences, participate more fully in society while realizing their own potential by plying their own skills. For example, within the Company premises, people with disabilities sell cookies they baked themselves at facilities for the disabled. We also have people with disabilities gain experience by engaging in light work on Company premises. Through this assistance, we hope that people who have disabilities can experience the joys and excitement of working while engaging more fully in society.

Through these activities, the Sanken Group aims to gain recognition among local residents as a valuable company that contributes to local communities and culture.

Mask donations

The spread of COVID-19 has restricted a whole range of activities, and CSR activities are no exception. It has had a major impact on our environmental education program for elementary school students that we have conducted to date.

Putting top priority on the safety and peace of mind of employees and their families, we quickly moved to procure masks from overseas subsidiaries and sell them in-house to employees. We have also donated masks to support medical institutions, government bodies, schools, day care facilities and other organizations in need in the regions where we have offices and production plants. A total of 164,000 masks were donated primarily in Saitama, Ishikawa and Yamagata Prefectures.

❶Shikamachi's Tokimeki Sakurakai Lane event. 30 volunteers helped set up the Pet Botaru lights. ❷Okeyaki no Ie (a care facility for people with mental disabilities) cookie sale. The sale was a big success with many pre-orders. ❸Touohgakkan Junior High School internship program. Interns created a Pet Botaru display, toured a clean room, and gained firsthand experience in the mesa transistor division. ❹Humming House (a care facility for people with mental disabilities) visit and cookie sale. Cookies and other baked goods almost instantly sold out. ❺Participation in Kamisu City beach cleanup. 14 people took part in a beach cleanup before the opening of the official beach-going season (for the tenth time). ❻Children's Manufacturing Classroom. Hands-on experience creating an LED light (with an anti-crime buzzer). ❼Shiroyone Senmaida Azeno Kirameki outdoor lighting display in Wajima City. 140 volunteers participated. ❽Co-sponsorship of earthquake reconstruction event put on by Nankodai Elementary School in Fukushima City. With restrictions on events due to COVID-19, a Pet Botaru workshop was held and attended by 22 people. ❾Children's Environmental Classroom and LED workshops at Sarashino and Yawata Elementary Schools in Chikuma City. Students learned about global environmental problems and the importance of energy conservation and also participated in a Pet Botaru light-making workshop. ❿Summer Vacation Family LED Workshop. Participants created an LED light in an original color (10 students from technical high schools and 41 parents and children participated). ⓫Rikkyo University and Takata Community College. Prof. Masutani gave a talk on the SDGs and a Pet Botaru workshop was held that included decorating and turning on the lights. ⓬Resona Sanken Kids Money Academy 2019. Students learned about the flow and role of money, listened to a talk on the environment, and participated in a Pet Botaru workshop. ⓭Shiroyone Senmaida Azeno Kirameki outdoor lighting display in Wajima City. ⓮Sekimoto Memorial Hospital, Kawagoe ⓯Sogakukan High School, Yamagata ⓰Adachihigashi High School, Fukushima ⓱Murayama Clinic, Niiza ⓲Prefectural Office, Fukushima (Vice Governor Ide) ⓳Prefectural Office, Saitama (Governor Ono) ⓴Prefectural Office, Ishikawa (Governor Tanimoto)

Corporate Governance

With the objective of increasing management efficiency, improving transparency and maintaining soundness, Sanken Electric has voluntarily established the Nomination Committee and Compensation Committee and also appointed external directors and external Auditor and Supervisory Board members in order to ensure rapid and accurate decision-making by the Board of Directors while reinforcing supervisory functions for business execution.

Corporate Governance Structure

As a company with global operations, Sanken Electric believes that it should select "a corporate governance system that is best suited for the current unique nature of the Company," taking into consideration such factors as the need to open wide channels of communication with various stakeholders. Based on this thinking, we have adopted an Audit and Supervisory Board structure, with a Board of Directors composed of 9 directors, including 3 external directors, and an Audit and Supervisory Board with 4 members, including 2 external members.

We have also adopted a corporate officer system that separates management decision-making and supervision functions from business execution functions, completing a structure able to rapidly address changes in the business environment. As of July 3, 2020, Sanken Electric had 14 corporate officers, including 5 who also concurrently serve as directors.

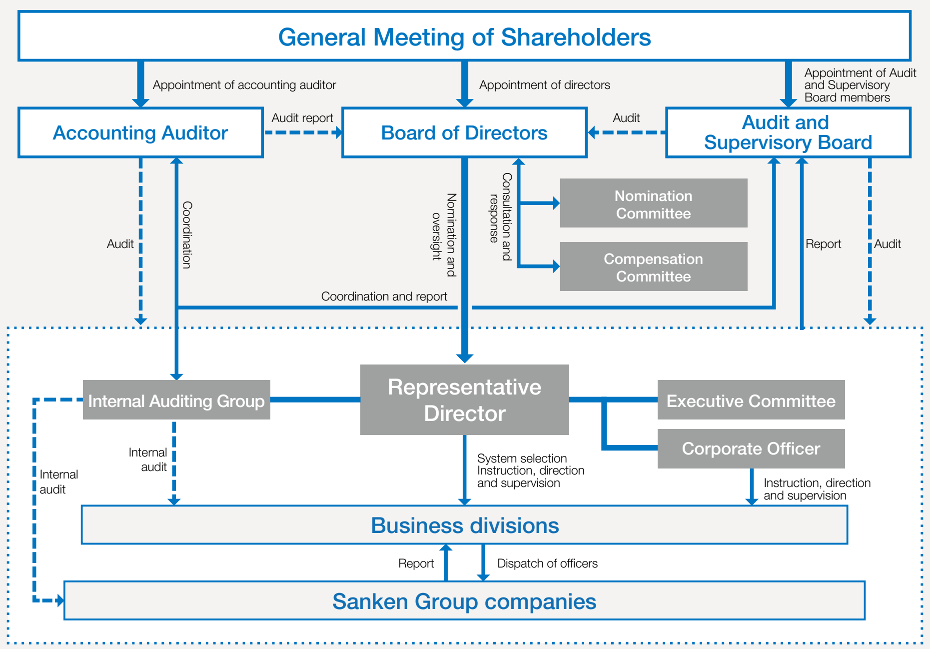
Policy and Process for Nominating Officer Candidates

We believe it is important for members of the Board of Directors to be independent and diverse from the standpoint of knowledge, experience and skills, in order to ensure the independence and objectiveness of the Board of Directors as it effectively performs its duties and responsibilities. In this context, candidates for the position of senior executive director who are well-versed in the Company's businesses and related issues are nominated in order to align management in the same strategic direction. For candidates for external director positions, individuals who are independent, have diverse knowledge and backgrounds, and are able to contribute to ensuring fairness in business execution from an objective standpoint are nominated. These candidates are expected to provide advice that will lead to improvements in corporate value. Based on these policies, the Nomination Committee, which is comprised by a majority of independent external directors, is consulted to advise on candidates for director and corporate officer positions. This committee deliberates and reports to the Board of Directors, which makes decisions while paying the utmost respect to the committee's report.

For Audit and Supervisory Board member candidates, individuals with the skills, experience and knowledge necessary for audits of the Company are nominated, and decisions are made by the Board of Directors after obtaining the agreement of the Audit and Supervisory Board.

Officer Compensation

Compensation for the Company's directors consists of basic remuneration in a fixed amount and performance-linked remuneration that changes depending on the degree of achievement of earnings targets. Performance-linked remuneration is designed to provide short-term incentives that vary based on short-term earnings and long-term incentives that vary based on longer-term earnings. The standards used to determine basic remuneration and the ratio of performance-linked remuneration for directors are determined for each rank based on standard amounts of total remuneration. To ensure market competitiveness, the adequacy of the standard amounts is verified each year using findings of a remuneration survey administered to major companies in Japan as a benchmark. In principle, performance-linked remuneration is set at about 30% of total remuneration when earnings targets are fully achieved.



Short-term incentives vary within a range of 0-150% of standard pay, in principle, and are linked to consolidated performance indicators for individual fiscal years in order to further raise the motivation of directors to achieve the Company's performance targets for that fiscal year. The performance-linked indicators for all directors have been determined through deliberations by the Compensation Committee, and consist of net sales and operating income, the Company's key performance targets. Additional individual indicators are set depending on the outcomes expected of each director.

With regard to long-term incentives, a stock remuneration plan has been introduced to enhance the incentive to contribute to medium- and long-term corporate value, align the interests of directors with those of shareholders, and raise the motivation to achieve performance targets stated in the Company's medium-term management plan. Long-term incentives vary within a range of 0-150% of standard pay, in principle, and are linked to rank and consolidated performance indicators in the medium-term management plan. The performance-linked indicators for all directors have been determined through deliberations by the Compensation Committee, and consist of operating income and ROE, which are important for raising business profitability over the medium and long terms. In addition, as an expression of the Company's commitment to raising shareholder value, which includes appropriate shareholder returns, total shareholder return (TSR) has been added as an indicator as of fiscal 2020.

Compensation for external directors consists only of basic remuneration based on the nature of responsibilities for the position, and it is not linked to performance. Also, compensation for Audit and Supervisory Board members consists solely of basic remuneration based on the nature of responsibilities for the position of auditor, and it is not linked to performance.

Based on these policies, compensation for directors is decided by the Board of Directors with due respect paid to the advice and report following deliberations by the Compensation Committee, the majority of which is independent external directors.

State of Audit and Supervisory Board Audits and Accounting Audits

Audit and Supervisory Board members share information and make decisions about auditing policy, audit plans and other legal matters. Each member is assigned duties determined by the Audit and Supervisory Board, participates in meetings of the Board of Directors, Executive Committee and other important bodies, reads important documents and reports their findings to the Audit and Supervisory Board. Periodically or when necessary, members convene meetings with directors, the head of the CSR Office and the accounting auditor to exchange information and enhance the effectiveness of audits. Moreover, the members conduct on-site audits of the business locations of Sanken Group companies inside and outside Japan, and report their findings to the Audit and Supervisory Board.

We have enlisted Ernst & Young ShinNihon as our accounting auditor based on the Companies Act and as our auditing firm to conduct audits based on the Financial Instruments and Exchange Act. Briefings are scheduled for the accounting firm and the Audit and Supervisory Board to exchange opinions and enhance collaboration. There are no particular conflicts of interest between the accounting firm or its corporate officers and the Company.

Internal Control System and Compliance System

Sanken Electric has drawn up Conduct Guidelines for adhering to ethical standards, laws and regulations, in addition to its Code of Conduct governing employee behavior. The representative director thoroughly instills within management and employees the spirit and importance of compliance. Through ongoing compliance training, we aim to thoroughly ensure adherence to laws, regulations and the Articles of Incorporation. For our internal reporting system, we have set up the Helpline System as a means for employees to report and consult about internal matters, and we make concerted efforts to improve rules and systems in order to maintain our compliance structure.

As necessary, officers are dispatched to Group companies to assume the position of director and work to instill the Sanken Group's management policies, make decisions about important business execution, and promote efficient management. The Affiliated Company Management Regulations and Management Guidelines serve to clarify the scope of responsibilities and authorities of Sanken Electric and Group companies. We determine responsible organizations at Group companies and closely share information for the purpose of providing necessary guidance for managers and business performance management at each Group company.

Risk Management System and Activities

The Sanken Group created the Risk Management Committee, directly under the control of the president, as an organization tasked with strengthening the overall risk management structure and advancing measures that address certain risks. The Risk Management Committee holds meetings on a regular basis, during which information is shared about improving emergency preparedness such as stockpiling emergency supplies, preparing various types of Disaster Countermeasure Manuals, previous responses to disasters, and effective training methods. A variety of measures are being taken, including measures to raise the entire Group's ability to respond to disasters.

Moreover, the Sanken Group issued the Disaster Countermeasure Manual and the Business Continuity Plan (BCP) that set out procedures for minimizing and recovering from damage caused by disasters, in order to address the risk of major damage that impairs business continuity, such as an earthquake or fire accident. We have also introduced an employee safety confirmation system as a means of making contact in emergency situations. Through regular training to ensure these measures are effectively implemented, we continue to engage in activities to further improve our responsiveness to major disasters.

Information Security

For information security, the Company has established the Information Management Rules to reinforce the protection and management of company secrets, including contract terms with business partners, technical information and manufacturing specifications, personal information and information assets, in addition to the introduction of systematic protection functions. The Company ensures its information management system is thorough and rigorous through such measures as training for the entire Sanken Group and audits of information management procedures and other related processes.

List of Officers

As of July 1, 2020


Takashi Wada Representative Director, President


Masao Hoshino Director


Yoshihiro Suzuki Director


Kazunori Suzuki Director

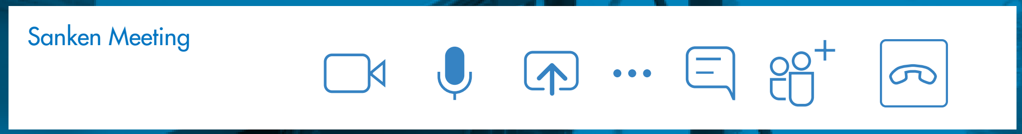

Hideo Takani Director


Hiroshi Takahashi Director


Richard R. Lury External Director


Noriharu Fujita External Director


Emiko Higashi External Director



Directors (9)

Audit and Supervisory Board Members (4)


Akira Ota Standing Audit and Supervisory Board Member


Noboru Suzuki Audit and Supervisory Board Member


Atsushi Minami External Audit and Supervisory Board Member


Hideki Hirano External Audit and Supervisory Board Member

Messages from External Directors

External directors are deeply involved in processes for solving company issues and future success.

Richard R. Lury
External Director

U.S. Lawyer in New York
External Director, Hitachi Zosen Corporation
Independent Director, Allegro MicroSystems, Inc.
Director of the Company since 2014

The 2019 fiscal year for Sanken Electric was a difficult one. With the exception of growth in its sales in China of inverters for air conditioners, Sanken Electric's business, both domestically and overseas, was either flat or declined on a year-over-year basis. Moreover, in a reversal of a pattern that had held true for many years, the level of contribution of Allegro MicroSystems to Sanken Electric's consolidated financial results also declined substantially. 2019 also was a year in which significant management time and one-time costs were incurred in beginning a process of structural reform. Finally, during the final quarter of 2019 the emergence of the COVID-19 pandemic triggered a decline in sales, initially in China, but more broadly in the automotive market worldwide, the impact of which is likely to be significant until at least 2021.

In the face of all these challenges, Sanken Electric's management continues to strive to position the Company for future success. The three external directors of Sanken have been deeply involved in this process. A Structural Reform Committee, consisting of the three external directors, along with the President, General Manager of Administration Headquarters and Head of Manufacturing was established to review, plan and implement strategies for improving the Company's manufacturing efficiency, overall cost structure, operating results and financial performance. Over the course of the past six months, this Structural Reform Committee has met biweekly. While initial steps have been taken to better position Sanken for success in the future, I anticipate that the Structural Reform Committee will recommend taking additional actions in the coming months to enable the Company to better cope with the serious challenges being faced.

Sanken Electric's three external directors have also been deeply involved in other supervisory roles as members of the Nomination Committee and Compensation Committee. In the case of the latter committee, important work has been done to link the annual compensation of Sanken Electric's internal directors, officers and senior managers to specific performance targets and measures. In addition, a long-term equity-based incentive compensation plan tied to return on equity and relative total shareholder return has been adopted. These incentive compensation programs, coupled with the structural reforms being implemented, are expected to drive significantly improved profitability and growth in future years, although it will likely take some time before these benefits are realized.

As I begin my sixth year as an external director of Sanken, I am personally committed to pursuing all avenues aimed at maximizing the returns to all of Sanken Electric's stakeholders. The challenges are great, but I am hopeful that they will be overcome.

I will help strengthen governance functions, accelerate decision-making, and support the Company's robust growth.

Noriharu Fujita
External Director

Partner, Ernst & Young, LLP New York Office (retired from the entity in June 2007)
Independent Non-Executive Director, CITIC Limited (retired from the entity in April 2018)
Independent Director, Allegro MicroSystems, Inc.
Director of the Company since 2016

I think external directors generally have two roles. The first is governance for the oversight of management, and the second is accelerating decision-making by management. To perform these roles, it is important for external directors to understand the company's business and the management team's basic way of thinking. What is particularly important in this respect is for the president and external directors to have opportunities to express their opinions openly and honestly with each other. During the last fiscal year, the number of external directors was increased to three, which makes them one-third of the Board of Directors. There were many opportunities for direct dialogue with the President, even more than previously.

With regard to governance, first of all, this was the first full fiscal year for the Nomination Committee and Compensation Committee, of which external directors make up the majority, and I think the committees functioned as expected throughout the year. Regarding compensation in particular, performance-linked pay was introduced for the first time to further enhance awareness with respect to increasing corporate value in a sustained manner.

The other role is to help accelerate management decision-making, but the external environment has become very challenging given the impact of COVID-19 and the US-China trade dispute which has no end in sight. In response to a rapidly changing management environment, the role of external directors, who generally have more contact with people and organizations outside the company, is becoming even larger and more important. During the term, we launched the Structural Reform Committee, which was originally initiated through direct talks with the President. The committee meets twice monthly to discuss and debate management strategy based on sober assessments of the environment surrounding the Company. As a result, in November of last year, a policy of business selection and concentration centered on the Semiconductor Devices Business was announced, and management began considering strategic options, including selling off the Power Systems Business. Then, in February of this year, it was announced, as a concrete measure, that domestic factories would be consolidated and eliminated to optimize the production system of the Semiconductor Devices Business. In this way, the Company is taking positive steps to create mechanisms for the active participation of external directors in managerial decisions.

For external directors to play their roles, communication is essential at all levels. The three external directors continue to conduct teleconferences in a timely fashion, featuring the participation of the two directors who live in the US but are unable to come to Japan due to COVID-19.

By fulfilling these two roles, I will continue to support the Company's healthy growth into the future.

I will deliberate and make proposals in the Structural Reform Committee in order to carry out company reform positively and actively with a sense of urgency.

Emiko Higashi
External Director

Managing Director, Tomon Partners, LLC
External Director, KLA Corporation
External Director, Takeda Pharmaceutical Company Limited
External Director, Rambus Inc.
Director of the Company since 2019

One year has come and gone since I was appointed external director in June of last year. It was a year no doubt of many first-time experiences for Sanken Electric. Looking back from the perspective of an external director, first of all, the Company announced the establishment of the Structural Reform Committee in November of last year. The committee was set up to ensure, from a governance perspective, that company reforms are carried out more actively, dynamically and expeditiously than before. The three external directors considered strategic options with President Wada and discussed business concentration and selection. The committee meets twice monthly on average and engages in lively discussion and debate. As a partial result of this process, strategic options for the Power Systems Business were considered and it was announced that the infrastructure business would be sold. In addition, we discussed factory consolidation and closure with adequate consideration given to the effect on customers and employees, and are currently making steady progress on this front as well. The Power Systems Business has been a traditional business of Sanken Electric since its founding, so even debating this decision internally was extremely difficult. From an external director's perspective, the Structural Reform Committee made its proposals and considerations after taking into account the future of all employees, the advantages to customers, and long-term returns for shareholders, and as a result I truly believe that the decisions made will create an even better future for Sanken Electric.

This year, the entire world was thrown into upheaval by COVID-19. This unprecedented situation will no doubt continue this year and could persist next year as well. To maintain and grow a business in such a nebulous environment with so many uncertainties and the future so difficult to see, companies need to have a healthy balance sheet and the ability to move with agility. I have emphasized this point on a regular basis with Sanken Electric's management team, and capital allocation will also be discussed and considered going forward. In addition, with regard to Sanken Electric's long-term strategy, we intend to further discuss and consider how to meet customer needs going forward, where the Company's true value lies, how to bolster and maintain competitiveness, the conditions for raising profitability, and what areas could be negatively affected by this.

With COVID-19, there is a great deal we cannot personally control. Companies are facing many issues as well. However, the reason I think almost every day of how I can contribute to Sanken Electric as an external director is because of the diligent, passionate management team and the spirit of all the Company's employees. I send this virtual message from San Francisco while thinking of all the faces of all the people working so hard and so sincerely every day for the sake of customers and shareholders.

Key Consolidated Financial and Non-Financial Data (11 Years)

Millions of yen

Financial data (Fiscal year)	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	**2019**
Results of operations											
Net sales	¥134,134	¥144,882	¥131,803	¥126,386	¥144,467	¥160,724	¥155,919	¥158,772	¥ 175,209	¥ 173,650	**¥ 160,217**
Operating income (loss)	(5,482)	6,149	4,048	4,625	7,777	11,199	6,803	5,930	12,026	10,531	**4,309**
Operating margin (%)	(4.1)	4.2	3.1	3.7	5.4	7.0	4.4	3.7	6.9	6.1	**2.7**
Profit (loss) before income taxes	(18,166)	1,144	2,545	4,099	5,468	11,575	2,068	4,582	(6,505)	9,028	**(1,638)**
Profit (loss) attributable to owners of parent	(18,950)	(922)	436	2,272	5,029	7,942	171	1,739	(11,421)	3,967	**(5,559)**
Cash flows											
Net cash provided by (used in) operating activities	5,105	7,392	5,345	6,339	10,658	9,973	7,799	19,237	14,521	14,604	**13,118**
Net cash provided by (used in) investing activities	(4,568)	(10,272)	(8,614)	(6,390)	(11,176)	(14,234)	(11,344)	(10,931)	(16,644)	(21,783)	**(8,311)**
Net cash provided by (used in) financing activities	(1,280)	3,728	509	1,294	2,714	5,692	5,044	(3,360)	13,233	(1,990)	**12,215**
Financial indicators											
Return on assets (ROA) (%)	(4.3)	3.8	2.2	2.8	4.8	5.8	2.0	2.7	6.4	4.9	**1.4**
Return on equity (ROE) (%)	(40.1)	(2.6)	1.3	6.3	11.4	14.3	0.3	3.2	(20.8)	7.0	**(10.3)**
Per share											
Total net assets per share* (yen)	306.54	274.05	272.21	322.92	401.75	516.22	441.96	448.87	2,283.31	2,405.01	**2,063.21**
Profit (loss) per share* (yen)	(156.05)	(7.60)	3.60	18.73	41.47	65.50	1.41	14.35	(471.22)	163.70	**(229.83)**
Cash dividends per share* (yen)	0.00	6.00	3.00	6.00	6.00	6.50	3.50	3.50	30.00	30.00	**30.00**

* Figures for the fiscal year ended March 31, 2018 onward have been adjusted to reflect a 5:1 stock consolidation implemented on October 1, 2018.

Non-financial data	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	**2019**
CO_2 emissions*[1] (t-CO_2)	80,911	71,466	80,004	77,632	77,870	77,415	78,291	79,158	80,069	80,609	**77,809**
Water usage*[1] (m^3)	2,865,649	2,585,823	2,206,556	2,190,217	2,112,286	2,186,104	2,262,152	2,405,162	2,364,990	2,328,615	**2,193,787**
Waste emissions*[1] (t)	6,249	6,462	4,871	4,508	5,295	5,146	4,417	4,687	5,496	5,349	**4,611**
Employees (people)	9,986	9,981	9,788	10,427	10,377	10,454	10,044	9,770	9,725	9,481	**9,183**
Rate of paid annual leave usage*[2] (%)	—	—	—	—	—	67.74	69.13	68.82	70.46	69.57	**62.80**
Employment rate of people with disabilities*[2] (%)	—	—	—	—	—	2.39	2.32	2.32	2.40	2.29	**2.05**
Frequency rate of workplace accidents (%)	—	—	—	—	—	—	0.00	0.45	0.00	0.00	0.59
Severity rate of workplace accidents (%)	—	—	—	—	—	—	0.000	0.003	0.000	0.000	0.021

*[1] Total for domestic manufacturing sites
*[2] Sanken Electric (non-consolidated)

Business Risks

The Sanken Group has identified the following risks that could affect its business performance and financial conditions. The forward-looking statements in this section are based on available information as of March 31, 2020. Due to uncertainties contained herein, actual results in the future may differ significantly from these statements.

1. Business Risks

(1) Infectious disease
The Sanken Group conducts production and sales in Japan and other countries and regions around the world. If an infectious disease, like the coronavirus (COVID-19), spreads in any of these regions, the economy could be negatively affected. In the case of COVID-19, greater numbers of people have been infected in Europe and North America than other regions and economic activity in these regions has slowed significantly, so it is possible that the recovery will also be slow, and this may negatively affect the Group's earnings and financial position. The Group has taken measures in response to the spread of COVID-19 that include setting up a special response headquarters, gathering information and responding to the impact on business, implementing measures to prevent infections, expanding the scope of teleworking, establishing special provisions related to paid vacation, and procuring and donating masks and other supplies.

(2) Business restructuring
The Sanken Group is carrying out business restructuring to fundamentally improve its earnings structure. This restructuring will incur a certain amount of cost and may prove difficult to carry out or not produce the benefits initially planned due to changes in the economic and business environment, future uncertainties or other unpredictable factors. Such outcomes could negatively affect the Group's earnings and financial position.

(3) New product development
The Sanken Group must develop and bring to market products that fulfill market needs in the electronics industry, which rapidly changes in terms of technological advancements and product cycles. The Sanken Group engages in R&D while constantly monitoring market trends. If the Company is unable to introduce products in a timely fashion or if markets reject its products, the Sanken Group's profitability may worsen, and its earnings and financial condition may deteriorate. To mitigate this risk, the Sanken Group is promoting across-the-board development reforms in line with the development flow—semiconductor design concept, process, packaging, software programming, production line, and quality and reliability assessment—in order to bolster its ability to create new products.

(4) Price competition
Price competition is constantly intensifying in the electronics industry. The emergence of rivals with production bases in China and Southeast Asia may have a major impact on the Company's ability to set prices for its products. As price competition is likely to grow more intense in the future, the Sanken Group will respond by working to reduce costs further and bring to market high-value-added products that feature the Company's proprietary technologies. However, in the event that rivals introduce products at prices the Company cannot match or if customer demand changes, the Sanken Group's profitability may worsen, and its earnings and financial condition may deteriorate. To mitigate this risk, the Sanken Group is reforming procurement by standardizing parts and reducing material costs starting from the design stage.

(5) Economic conditions
The semiconductor market goes through cyclical changes, and these changes have the potential to affect the Sanken Group's earnings and financial position. In addition, the Sanken Group has manufacturing bases in Japan, Asia, North America, Europe and other foreign countries and regions. On a consolidated basis, overseas production as a percentage of total output was 54.9%, 59.3%, and 55.7% for the fiscal years ended March 31, 2018, 2019 and 2020, respectively. Furthermore, the ratio of total sales accounted for by overseas sales was 63.6%, 62.5%, and 63.9% for the fiscal years ended March 31, 2018, 2019 and 2020, respectively. Accordingly, economic trends and other changes in the business environment in these regions could have an adverse impact on the Sanken Group's earnings and financial position.

(6) Foreign exchange rates
The Sanken Group's earnings include production and sales in foreign countries and regions, and its accounting practices are denoted in the local currencies of these countries and regions, or in US dollars. Accordingly, the prevailing exchange rate at the time these currencies are translated into yen could have an impact on earnings. Compared to the average rate in the previous fiscal year (¥110.93/$1), the average rate this fiscal year appreciated by ¥2.22 (¥108.71/$1), which resulted in a translation difference of ¥1,115 million on a consolidated basis. In addition, an increase in the value of currencies in countries and regions where the Sanken Group manufactures products may push up the cost of production and procurement. Higher costs could undermine the Sanken Group's profit margins and price competitiveness, and have a negative impact on earnings.

The Sanken Group's ratio of exports to net sales on a consolidated basis was 43.6%, 42.6%, and 46.7% for the fiscal years ended March 31, 2018, 2019 and 2020, respectively. Of that ratio, the percentage denominated in foreign currencies was 92.9%, 92.1%, and 94.0% for the fiscal years ended March 31, 2018, 2019 and 2020, respectively. To address the risk of fluctuations in exchange rates in business transactions, the Sanken Group takes out balance hedges for receivables, payables and other transactions in accordance with growth in products and the overseas procurement of raw materials, as well as risk hedges through forward exchange contracts. These hedges are taken in a bid to minimize any adverse impact caused by short-term fluctuations in foreign exchange rates for key currencies including the US dollar and yen.

(7) Capital procurement
The Sanken Group procures funds needed for capital investment and R&D by issuing bonds and commercial paper, taking out commitment lines, and borrowing from banks. In the event that the Company's creditworthiness worsens on the bond market or with financial institutions, it could restrict means for procuring funds or increase the cost of fund procurement, and have an adverse impact on the Company's earnings and financial position.

(8) Intellectual property
In foreign countries and regions there may be inadequate protections for intellectual property rights that make it impossible for the Company to effectively prevent a third party from using its intellectual property to manufacture similar products. In the event that a third party successfully claims intellectual property rights related to the Sanken Group's businesses or if intellectual property rights exist that the Sanken Group is unaware of, the Company may be required to pay royalties to a third party that claims their intellectual property rights were infringed upon or may be sued or enjoined from using certain intellectual property rights. In this event, costs may increase or the Company may be restricted from developing and selling products. The Sanken Group aims to differentiate its products from those of rivals through the technologies and expertise it has developed on its own. In order to protect these proprietary technologies, the Company applies for and registers intellectual property rights as needed.

(9) Laws and regulations
The Sanken Group has production and sales bases in 14 countries and regions around the world, including Japan. The Company's operations are subject to various laws, regulations and restrictions (hereinafter, "legal regulations") in effect in each country and region. Moreover, the Sanken Group imports and exports technologies, products and materials needed for production and sales around the world. These business activities are subject to legal regulations in each country and region that relate to tariffs, trade, exchange rates, strategic goods, certain technologies, anti-monopoly, patents and the environment. In the event of failure to adhere to these legal regulations, the Sanken Group's business activities may be restricted and lead to a decline in social trust. This may have an adverse impact on the Sanken Group's earnings and financial position.

2. Quality and Environmental Risk

(1) Quality problems
The Sanken Group supplies products that satisfy the quality standards of its customers and itself. In order to maintain and improve its quality management system, the Company has obtained the international standard ISO 9001 for quality management, and also obtains as necessary UL certification and other product safety certifications. However, there is no guarantee in the future that all of its products will be free from defects, which may lead to recalls or repairs of products. In the event of product defects that lead to major product recalls, repairs or responsibilities to compensate for damages, the Company may incur considerable costs or lose the trust of society. This may have an adverse impact on the earnings and financial position of the Sanken Group.

(2) Environmental problems
In addition to complying with legal regulations for preventing environmental pollution and public nuisances in countries and regions where the Sanken Group has production bases, we have also introduced and promote SDGs and implement environmental measures such as obtaining ISO 14001, an international standard for environmental protection systems. The Sanken Group endeavors to measure and reduce substances contained in its products and used in production processes that impact the environment. In the event that the Company is unable to comply with legal regulations, an accident occurs that releases a large volume of substances that impact the environment, or prohibited substances that impact the environment cannot be eliminated from products, significant costs to improve such products, suspended business activities, compensation paid to customers, or diminished social trust may have an adverse impact on the earnings and financial position of the Sanken Group.

In addition to the aforementioned items, there is the possibility that demand for the Company's products will decline as a result of technological trends in electronic products that use the Company's products or rapid changes in the market environment. Moreover, there is the risk of an increase in raw material costs, natural disasters and fires at production bases and suppliers of parts and materials, or breakdowns in social and communications infrastructures. Moreover, there are unforeseen risks in various countries and regions including major changes to laws and tax codes, wars and terrorism. Furthermore, there is a risk that product defects could lead to lawsuits or compensation for loss of life, social or environmental damage, or adverse impacts on corporate activities. There are also risks related to changes in base rates for calculating retirement benefit obligations; corporate information, including personal information, being inappropriately used as a result of expansion in information systems; or joint ventures with other companies not benefiting due to factors such as large-scale market fluctuations.

In addition, on February 6, 2020, the Company approved and disclosed the fact that its US subsidiary Allegro MicroSystems, Inc. would begin preparing for an initial public offering, but the timing, etc. of the offering could be affected by the economic environment. The Company will continue to collaborate with Allegro MicroSystems in technology and product development, sales and marketing, and other areas after the offering.

In the event that one or several of these risks materialize, it could lead to loss of social trust, suspension of business activities, or significant losses, which may have an adverse impact on the earnings and financial position of the Sanken Group.

Consolidated Balance Sheets

Sanken Electric Co., Ltd. and Consolidated Subsidiaries
As of March 31, 2020 and 2019

	Millions of yen		Thousands of U.S. dollars (Note 3)
Assets	**2020**	2019	**2020**
Current assets:			
Cash and deposits (Notes 5 and 7)	¥ 40,779	¥ 23,564	$ 374,711
Notes and accounts receivable – trade (Notes 6 and 7)	31,888	33,586	293,014
Less allowance for doubtful receivables	(114)	(65)	(1,051)
Inventories (Note 10)	41,079	42,061	377,468
Other current assets	3,741	4,757	34,376
Total current assets	117,375	103,903	1,078,519
Non-current assets:			
Property, plant and equipment (Note 11):			
Land	5,699	6,166	52,371
Buildings and structures, net	20,383	24,027	187,294
Machinery, equipment and vehicles, net	31,577	34,731	290,158
Tools, furniture and fixtures, net	1,788	2,042	16,432
Leased assets, net	74	62	686
Construction in progress	6,538	5,574	60,079
Total property, plant and equipment	66,062	72,604	607,022
Intangible assets:			
Software	2,483	2,786	22,816
Other	2,244	2,169	20,627
Total intangible assets	4,728	4,955	43,444
Investments and long-term receivables:			
Investments in other securities (Notes 7 and 8)	892	1,093	8,204
Deferred tax assets (Note 24)	1,704	1,221	15,665
Assets for retirement benefits (Note 22)	—	18	—
Other long-term receivables	3,262	4,637	29,981
Less allowance for doubtful receivables	(2)	(241)	(18)
Total investments and long-term receivables	5,858	6,729	53,833
Total assets	¥194,024	¥188,192	$1,782,820

	Millions of yen		Thousands of U.S. dollars (Note 3)
Liabilities and net assets	**2020**	2019	**2020**
Current liabilities:			
Short-term bank loans (Notes 7 and 12)	¥ 27,619	¥ 12,991	$ 253,781
Current portion of long-term debt (Notes 7 and 12)	10,133	646	93,114
Current portion of bonds	15,000	—	137,829
Commercial paper (Notes 7 and 12)	10,000	11,000	91,886
Notes and accounts payable – trade (Note 7)	17,774	18,075	163,321
Accrued expenses	10,254	11,705	94,225
Lease obligations	44	30	410
Income taxes payable	659	591	6,057
Provision for performance-linked compensation for directors	16	—	153
Provision for business structure reform	615	—	5,657
Other current liabilities	1,233	1,368	11,333
Total current liabilities	93,351	56,409	857,772
Long-term liabilities:			
Bonds payable (Notes 7 and 12)	20,000	35,000	183,772
Long-term debt (Notes 7 and 12)	1,643	11,855	15,099
Lease obligations	40	41	368
Provision for share-based compensation	8	—	76
Provision for retirement benefits for directors (and other officers)	39	33	365
Liabilities for retirement benefits (Note 22)	3,402	2,832	31,263
Deferred tax liabilities (Note 24)	975	1,508	8,966
Provision for business structure reform	1,351	—	12,421
Other long-term liabilities	1,435	1,970	13,186
Total long-term liabilities	28,896	53,242	265,521
Net assets (Note 26)**:**			
Shareholders' equity:			
Common stock:			
Authorized – 51,400,000 shares			
Issued and outstanding: 2020 – 25,098,060 shares	20,896	20,896	192,013
Capital surplus	24,465	26,214	224,804
Retained earnings	13,915	20,204	127,861
Less treasury stock, at cost: 867,503 shares in 2020	(4,159)	(4,023)	(38,217)
Total shareholders' equity (Note 30)	55,118	63,292	506,461
Accumulated other comprehensive income (loss):			
Unrealized holding gain (loss) on securities	(75)	45	(689)
Translation adjustments	(477)	212	(4,384)
Retirement benefit liability adjustments	(4,723)	(5,270)	(43,402)
Total accumulated other comprehensive income (loss)	(5,275)	(5,012)	(48,476)
Non-controlling interests	21,933	20,261	201,541
Total net assets	71,776	78,541	659,526
Total liabilities and net assets	¥194,024	¥188,192	$1,782,820

The accompanying notes are an integral part of the consolidated financial statements.

Consolidated Statements of Operations

Sanken Electric Co., Ltd. and Consolidated Subsidiaries
For the years ended March 31, 2020 and 2019

	Millions of yen		Thousands of U.S. dollars (Note 3)
	2020	2019	2020
Net sales	¥160,217	¥173,650	$1,472,182
Cost of sales (Notes 22, 26 and 28)	121,768	126,150	1,118,890
Gross profit	38,448	47,499	353,291
Selling, general and administrative expenses (Notes 14, 22, 27 and 29)	34,139	36,968	313,697
Operating income	4,309	10,531	39,594
Other income (expenses):			
Interest expense	(555)	(610)	(5,107)
Interest income	250	171	2,298
Dividend income	28	44	265
Subsidy income	—	139	—
Foreign exchange gains (losses)	(1,115)	(1,069)	(10,251)
Gain on sales of scraps	77	105	709
Reversal of product compensation costs	—	128	—
Product compensation costs	(72)	(69)	(664)
Gain on sales of fixed assets	3,952	258	36,317
Loss on disposal of fixed assets (Note 16)	(414)	(457)	(3,808)
Gain on sales of investment securities	—	297	—
Settlement received	112	—	1,035
Loss on valuation of investment securities	(26)	—	(247)
Impairment loss (Note 17)	(513)	(119)	(4,720)
Special retirement expenses	(350)	(122)	(3,219)
Loss on liquidation of subsidiaries' and associates' impairment loss	(205)	—	(1,886)
Business structure reform cost (Note 18)	(5,175)	—	(47,557)
Provision for business structure reform (Note 19)	(1,691)	—	(15,544)
Other income	221	362	2,037
Other expenses	(469)	(558)	(4,310)
	(5,947)	(1,502)	(54,650)
Profit (loss) before income taxes	(1,638)	9,028	(15,055)
Income taxes (Note 24):			
Current	2,050	2,226	18,839
Deferred	594	89	5,465
For prior periods (Note 20)	941	—	8,648
Profit (loss)	(5,224)	6,712	(48,009)
Profit (loss) attributable to non-controlling interests	334	2,745	3,074
Profit (loss) attributable to owners of parent (Note 30)	¥ (5,559)	¥ 3,967	$ (51,084)

The accompanying notes are an integral part of the consolidated financial statements.

Consolidated Statements of Comprehensive Income (Loss)

Sanken Electric Co., Ltd. and Consolidated Subsidiaries
For the years ended March 31, 2020 and 2019

	Millions of yen		Thousands of U.S. dollars (Note 3)
	2020	2019	2020
Profit (loss)	¥(5,224)	¥6,712	$(48,009)
Other comprehensive income (loss):			
Unrealized holding gain (loss) on securities	(120)	(344)	(1,108)
Translation adjustments	(1,237)	1,703	(11,374)
Retirement benefit liability adjustments	530	(1,288)	4,877
Total other comprehensive income (loss) (Note 21)	(827)	70	(7,604)
Comprehensive income (loss)	¥(6,052)	¥6,782	$(55,614)
Breakdown:			
Comprehensive income (loss) attributable to:			
Owners of parent	¥(5,822)	¥3,465	$(53,501)
Non-controlling interests	(229)	3,316	(2,112)

The accompanying notes are an integral part of the consolidated financial statements.

Consolidated Statements of Changes in Net Assets

Sanken Electric Co., Ltd. and Consolidated Subsidiaries
For the years ended March 31, 2020 and 2019

	Millions of yen				
	Shareholders' equity				
	Common stock	Capital surplus	Retained earnings	Treasury stock, at cost	Total shareholders' equity
Balance at April 1, 2019	¥20,896	¥26,214	¥20,204	¥(4,023)	¥63,292
Changes during the year:					
Cash dividends paid (other capital surplus)			(729)		(729)
Profit (loss) attributable to owners of parent			(5,559)		(5,559)
Acquisition of treasury stock				(136)	(136)
Disposal of treasury stock		(0)		0	0
Increase (decrease) in equity due to capital increase of consolidated subsidiaries		(1,905)			(1,905)
Share-based payments		156			156
Net changes in items other than shareholders' equity					—
Total changes during the year	—	(1,749)	(6,289)	(135)	(8,174)
Balance at March 31, 2020	¥20,896	¥24,465	¥13,915	¥(4,159)	¥55,118

	Millions of yen					
	Accumulated other comprehensive income (loss)					
	Unrealized holding gain (loss) on securities	Translation adjustments	Retirement benefit liability adjustments	Total accumulated other comprehensive income (loss)	Non-controlling interests	Total net assets
Balance at April 1, 2019	¥ 45	¥ 212	¥(5,270)	¥(5,012)	¥20,261	¥78,541
Changes during the year:						
Cash dividends paid (other capital surplus)				—		(729)
Profit (loss) attributable to owners of parent				—		(5,559)
Acquisition of treasury stock				—		(136)
Disposal of treasury stock				—		0
Increase (decrease) in equity due to capital increase of consolidated subsidiaries				—		(1,905)
Share-based payments				—		156
Net changes in items other than shareholders' equity	(120)	(689)	547	(263)	1,672	1,409
Total changes during the year	(120)	(689)	547	(263)	1,672	(6,765)
Balance at March 31, 2020	¥ (75)	¥(477)	¥(4,723)	¥(5,275)	¥21,933	¥71,776

	Thousands of U.S. dollars (Note 3)				
	Shareholders' equity				
	Common stock	Capital surplus	Retained earnings	Treasury stock, at cost	Total shareholders' equity
Balance at April 1, 2019	$192,013	$240,877	$185,652	$(36,970)	$581,572
Changes during the year:					
Cash dividends paid (other capital surplus)			(6,706)		(6,706)
Profit (loss) attributable to owners of parent			(51,084)		(51,084)
Acquisition of treasury stock				(1,250)	(1,250)
Disposal of treasury stock		(1)		4	2
Increase (decrease) in equity due to capital increase of consolidated subsidiaries		(17,505)			(17,505)
Share-based payments		1,433			1,433
Net changes in items other than shareholders' equity					—
Total changes during the year	—	(16,073)	(57,790)	(1,246)	(75,110)
Balance at March 31, 2020	$192,013	$224,804	$127,861	$(38,217)	$506,461

	Thousands of U.S. dollars (Note 3)					
	Accumulated other comprehensive income (loss)					
	Unrealized holding gain (loss) on securities	Translation adjustments	Retirement benefit liability adjustments	Total accumulated other comprehensive income (loss)	Non-controlling interests	Total net assets
Balance at April 1, 2019	$ 418	$ 1,954	$(48,432)	$(46,059)	$186,174	$721,687
Changes during the year:						
Cash dividends paid (other capital surplus)				—		(6,706)
Profit (loss) attributable to owners of parent				—		(51,084)
Acquisition of treasury stock				—		(1,250)
Disposal of treasury stock				—		2
Increase (decrease) in equity due to capital increase of consolidated subsidiaries				—		(17,505)
Share-based payments				—		1,433
Net changes in items other than shareholders' equity	(1,108)	(6,339)	5,030	(2,417)	15,367	12,949
Total changes during the year	(1,108)	(6,339)	5,030	(2,417)	15,367	(62,161)
Balance at March 31, 2020	$ (689)	$(4,384)	$(43,402)	$(48,476)	$201,541	$659,526

	Millions of yen				
	Shareholders' equity				
	Common stock	Capital surplus	Retained earnings	Treasury stock, at cost	Total shareholders' equity
Balance at April 1, 2018	¥20,896	¥26,003	¥16,964	¥(4,017)	¥59,846
Changes during the year:					
Cash dividends paid (other capital surplus)			(727)		(727)
Profit (loss) attributable to owners of parent			3,967		3,967
Acquisition of treasury stock				(6)	(6)
Disposal of treasury stock		(0)		0	0
Share-based payments		211			211
Net changes in items other than shareholders' equity					—
Total changes during the year	—	211	3,240	(5)	3,445
Balance at March 31, 2019	¥20,896	¥26,214	¥20,204	¥(4,023)	¥63,292

	Millions of yen					
	Accumulated other comprehensive income (loss)					
	Unrealized holding gain (loss) on securities	Translation adjustments	Retirement benefit liability adjustments	Total accumulated other comprehensive income (loss)	Non-controlling interests	Total net assets
Balance at April 1, 2018	¥ 390	¥ (909)	¥(3,991)	¥(4,510)	¥16,947	¥72,283
Changes during the year:						
Cash dividends paid (other capital surplus)				—		(727)
Profit (loss) attributable to owners of parent				—		3,967
Acquisition of treasury stock				—		(6)
Disposal of treasury stock				—		0
Share-based payments				—		211
Net changes in items other than shareholders' equity	(344)	1,121	(1,279)	(501)	3,314	2,812
Total changes during the year	(344)	1,121	(1,279)	(501)	3,314	6,258
Balance at March 31, 2019	¥ 45	¥ 212	¥(5,270)	¥(5,012)	¥20,261	¥78,541

The accompanying notes are an integral part of the consolidated financial statements.

Consolidated Statements of Cash Flows

Sanken Electric Co., Ltd. and Consolidated Subsidiaries
For the years ended March 31, 2020 and 2019

	Millions of yen		Thousands of U.S. dollars (Note 3)
	2020	2019	**2020**
Operating activities:			
Profit (loss) before income taxes	**¥ (1,638)**	¥ 9,028	**$ (15,055)**
Depreciation and amortization	**12,398**	11,975	**113,929**
Impairment loss	**513**	119	**4,720**
Business structure reform cost	**5,175**	—	**47,557**
Increase (decrease) in provision for business restructure reform cost	**1,691**	—	**15,544**
Decrease (increase) in allowance for doubtful receivables	**(189)**	4	**(1,738)**
Decrease (increase) in assets for retirement benefits	**(44)**	(537)	**(411)**
Increase (decrease) in provision for retirement benefits for employees	**(264)**	(164)	**(2,429)**
Interest and dividend income	**(279)**	(215)	**(2,564)**
Interest expense	**555**	610	**5,107**
Loss (gain) on sales of property, plant and equipment	**(3,952)**	(258)	**(36,317)**
Loss (gain) on sales of investment securities	**—**	(297)	**—**
Decrease (increase) in notes and accounts receivable	**1,219**	1,567	**11,208**
Decrease (increase) in inventories	**(259)**	(3,873)	**(2,383)**
Increase (decrease) in notes and accounts payable	**174**	(2,886)	**1,606**
Other	**672**	2,820	**6,177**
Subtotal	**15,775**	17,894	**144,951**
Interest and dividends received	**284**	210	**2,616**
Interest paid	**(559)**	(616)	**(5,142)**
Income taxes paid	**(2,381)**	(2,883)	**(21,884)**
Net cash provided by operating activities	**13,118**	14,604	**120,540**
Investing activities:			
Purchases of property, plant and equipment	**(11,114)**	(19,692)	**(102,128)**
Proceeds from sales of property, plant and equipment	**4,392**	210	**40,365**
Purchases of intangible assets	**(946)**	(1,194)	**(8,697)**
Purchases of investment securities	**—**	(333)	**—**
Proceeds from sales of investment securities	**—**	449	**—**
Proceeds from loans receivable	**0**	1	**6**
Other	**(644)**	(1,222)	**(5,921)**
Net cash used in investing activities	**(8,311)**	(21,783)	**(76,374)**
Financing activities:			
Increase (decrease) in short-term bank loans	**14,754**	(656)	**135,569**
Increase (decrease) in commercial paper	**(1,000)**	4,000	**(9,188)**
Proceeds from long-term loans payable	**—**	1,046	**—**
Repayment of long-term loans payable	**(638)**	(500)	**(5,862)**
Proceeds from issuance of corporate bonds	**—**	9,951	**—**
Redemption of corporate bonds	**—**	(15,000)	**—**
Repayment of finance lease obligations	**(36)**	(98)	**(332)**
Proceeds from sales of treasury stock	**0**	0	**2**
Purchases of treasury stock	**(136)**	(6)	**(1,250)**
Cash dividends paid	**(724)**	(727)	**(6,654)**
Dividends paid to non-controlling interests	**(4)**	(0)	**(38)**
Net cash provided by (used in) financing activities	**12,215**	(1,990)	**112,243**
Effect of exchange rate changes on cash and cash equivalents	**(408)**	(134)	**(3,750)**
Net increase (decrease) in cash and cash equivalents	**16,613**	(9,304)	**152,659**
Cash and cash equivalents at beginning of the year	**23,288**	32,593	**213,993**
Cash and cash equivalents at end of the year (Note 5)	**¥ 39,902**	¥ 23,288	**$ 366,652**

The accompanying notes are an integral part of the consolidated financial statements.

Notes to Consolidated Financial Statements

Sanken Electric Co., Ltd. and Consolidated Subsidiaries

01 Summary of Significant Accounting Policies

(a) Basis of Presentation

The accompanying consolidated financial statements of Sanken Electric Co., Ltd. (the “Company”) and consolidated subsidiaries (collectively, the “Group”) have been prepared in accordance with accounting principles generally accepted in Japan, which are different in certain respects as to the application and disclosure requirements of International Financial Reporting Standards, and are compiled from the consolidated financial statements prepared by the Company as required by the Financial Instruments and Exchange Law of Japan.

The accompanying consolidated financial statements for the year ended March 31, 2020 have been prepared by using the accounts of foreign consolidated subsidiaries prepared in accordance with either International Financial Reporting Standards (IFRS) or accounting principles generally accepted in the United States as adjusted for certain items including goodwill, actuarial differences and capitalized development costs.

As permitted by the Financial Instruments and Exchange Law, amounts of less than one million yen have been omitted. As a result, the totals shown in the accompanying consolidated financial statements (both in yen and in U.S. dollars) do not necessarily agree with the sums of the individual amounts.

(b) Principles of Consolidation

The accompanying consolidated financial statements include the accounts of the Company and all its subsidiaries. As of March 31, 2020, the number of consolidated subsidiaries was 34 (36 in 2019). Significant intercompany transactions and account balances have been eliminated in consolidation.

Sanken Power Systems (UK) Limited was excluded from the scope of consolidation due to the completion of liquidation.

One subsidiary of Allegro MicroSystems Europe Limited was excluded from the scope of consolidation due to an absorption-type merger.

(c) Securities

The accounting standard for financial instruments requires that securities be classified into three categories: trading, held-to-maturity or other securities. Trading securities are carried at fair value and held-to-maturity securities are carried at amortized cost. Marketable securities classified as other securities are carried at fair market value with any changes in unrealized gain or loss, net of the applicable income taxes, included directly in net assets. Non-marketable securities classified as other securities are carried at cost. The cost of securities sold is determined by the moving-average method.

(d) Inventories

Inventories held for sale in the ordinary course of business are stated at cost using the moving-average method. The carrying amounts in the accompanying consolidated balance sheets are written down to reflect any decreased profitability.

(e) Property, Plant and Equipment; Intangible Assets; Leased Assets; and Depreciation and Amortization

Property, plant and equipment are recorded at cost. Depreciation at the Company and its subsidiaries is computed principally by the straight-line method over the estimated useful lives of the respective assets. The estimated useful lives are as follows:

Buildings	8 – 60 years
Machinery and equipment	3 – 12 years

Intangible assets are amortized over a period of 5 or 10 years by the straight-line method.

Leased assets under finance lease transactions that stipulate the transfer of ownership of the leased assets to the lessee are depreciated principally over the estimated useful lives of similar owned assets by the straight-line method.

Leased assets under finance lease transactions that do not stipulate the transfer of ownership of the leased assets to the lessee are depreciated over their lease periods by the straight-line method with a residual value of zero.

(f) Allowance for Doubtful Receivables

Estimated uncollectible amounts are calculated using historical data for trade receivables and individually considering the probability of collection of doubtful receivables.

(g) Bond Issuance Costs

Bond issuance costs are charged to income when incurred.

(h) Provision for Performance-Linked Compensation for Directors

To prepare for the payment of performance-linked remuneration to directors, an allowance is recorded based on the estimated amount to be paid at the end of the current fiscal year.

(i) Provision for Share-Based Compensation

In order to prepare for the distribution of shares of the Company to directors in accordance with the share distribution provisions, the reserve is provided based on the estimated amount of the share benefit obligation at the end of the current fiscal year.

(j) Provision for Business Structure Reform

In order to provide for the future payment related to business restructuring, a reasonably estimated amount is recorded at year-end in consideration of events in the current fiscal year and prior periods.

(k) Employees’ Retirement Benefits

The retirement benefit obligation for employees is attributed to each period by the benefit formula method.

Prior service cost is amortized from the year in which the gain or loss is recognized primarily by the declining-balance method over various periods (principally 10 through 20 years) which are shorter than the average remaining years of service of the employees.

Net unrecognized actuarial gain or loss is amortized from the year following the year in which the gain or loss is recognized primarily by the declining-balance method over various periods (principally 10 through 18 years) which are shorter than the average remaining years of service of the employees.

Certain consolidated subsidiaries use a simplified method for calculating retirement benefit expenses and liabilities based on the assumption that the benefits payable approximates the retirement benefit obligation at year-end.

(l) Retirement Benefits for Directors

To prepare for the payment of retirement benefits to directors and corporate auditors, a reserve for retirement benefits has been provided at the estimated amounts required at the year-end based on the Company’s internal rules.

(m) Foreign Currency Translation

All monetary assets and liabilities of the Company denominated in foreign currencies are translated into yen at the exchange rates prevailing as of the fiscal year-end, and the resulting gain or loss is credited or charged to income.

Assets and liabilities of overseas consolidated subsidiaries are translated into yen at the fiscal year-end exchange rates. Income statements of overseas consolidated subsidiaries are translated into yen at average exchange rates. Differences arising from the translation are presented as translation adjustments and non-controlling interests as components of net assets in its consolidated financial statements.

(n) Derivatives

The Company has entered into various derivative transactions in order to manage its risk exposure arising from adverse fluctuations in foreign currency exchange rates and interest rates. Derivative positions are carried at fair value with any changes in unrealized gain or loss charged or credited to income.

(o) Cash Equivalents

All highly liquid investments, generally with a maturity of three months or less when purchased, which are readily convertible into known amounts of cash and are so near maturity that they represent only an insignificant risk of any change in value attributable to changes in interest rates, are considered cash equivalents.

(p) Consumption Taxes

Transactions subject to consumption taxes are recorded at amounts exclusive of consumption taxes.

(q) Consolidated Taxation System

The Company and its domestic consolidated subsidiaries have applied the consolidated taxation system.

(r) Accounting Standards Issued But Not Yet Effective

Accounting Standard and Implementation Guidance on Revenue Recognition

On March 30, 2018, the ASBJ issued “Accounting Standard for Revenue Recognition” (ASBJ Statement No. 29) and “Implementation Guidance on Accounting Standard for Revenue Recognition” (ASBJ Guidance No. 30).

(1) Overview

In May 2014, the International Accounting Standards Board (IASB) and the Financial Accounting Standards Board (FASB) issued “Revenue from Contracts with Customers,” converged guidance on recognizing revenue in contracts with customers (IFRS 15, issued by the IASB, and Topic 606, issued by the FASB). IFRS 15 applies to annual reporting periods beginning on or after January 1, 2018, and Topic 606 applies to annual reporting periods beginning after December 15, 2017. Accordingly, the ASBJ developed a comprehensive accounting standard for revenue recognition and implementation guidance.

As a basic policy with regard to the ASBJ’s development of “Accounting Standard for Revenue Recognition,” from the viewpoint of comparability between financial statements, the ASBJ incorporated the basic principles of IFRS 15, and for any items to be considered from the perspective of historical accounting practices under Japanese GAAP, the ASBJ also included alternative accounting treatments which do not impair comparability with IFRS 15.

(2) Scheduled date of adoption

The Company expects to adopt the accounting standard and implementation guidance from the beginning of the fiscal year ending March 31, 2022.

(3) Impact of the adoption of the accounting standard and implementation guidance

The Company is currently evaluating the effect of the adoption of this accounting standard and implementation guidance on its consolidated financial statements.

02 Accounting Changes

(a) Change in Presentation

There are no applicable items.

(b) Change in Accounting Policy

There are no applicable items.

03 U.S. Dollar Amounts

The translation of yen amounts into U.S. dollar amounts is included solely for convenience and has been made, as a matter of arithmetic computation only, at ¥108.83 = U.S.$1.00, the approximate exchange rate prevailing on March 31, 2020. This translation should not be construed as a representation that yen have been, could have been, or could in the future be, converted into U.S. dollars at that or any other rate.

04 Additional Information

The COVID-19 pandemic has had a broad impact on business activities. It is difficult to predict its future spread or when it will end. The Company has made accounting estimates for the recoverability of deferred tax assets and impairment of fixed assets under the assumption that the impact of COVID-19 will continue for a certain period of time in the fiscal year ending March 31, 2021 based on external information such as order information and market forecasts.

05 Supplementary Cash Flow Information

The following table represents a reconciliation of cash and deposits with cash and cash equivalents as of March 31, 2020 and 2019:

	Millions of yen		Thousands of U.S. dollars
As of March 31	**2020**	2019	**2020**
Cash and deposits	**¥40,779**	¥23,564	**$374,711**
Restricted cash	**(876)**	(275)	**(8,058)**
Cash and cash equivalents	**¥39,902**	¥23,288	**$366,652**

The following table represents significant non-cash transactions as of March 31, 2020 and 2019:

	Millions of yen		Thousands of U.S. dollars
As of March 31,	**2020**	2019	**2020**
Assets and obligations relating to finance lease transactions	**¥61**	¥6	**$568**

06 Notes and Accounts Receivable

Notes and accounts receivable maturing at the end of the year are settled on the date of clearance.

Since March 31, 2019 was a holiday for financial institutions, the following notes and accounts receivable maturing on that date are included in the corresponding balances at year-end.

	Millions of yen		Thousands of U.S. dollars
As of March 31,	**2020**	2019	**2020**
Notes and accounts receivable	**¥—**	¥107	**$—**

07 Financial Instruments

a. Summary of financial instruments

(1) Policy for financial instruments

The Group raises funds necessary for capital investments, R&D, etc. by bond issuances and bank loans. It manages temporary surplus funds through highly secure financial instruments, and also raises short-term operating funds by issuing commercial paper and obtaining bank loans. The Group follows a policy of using derivatives to hedge foreign currency exchange fluctuation risks and avoids any speculative dealings.

(2) Financial instruments and their risks

Receivables resulting from the ordinary course of business, such as notes and accounts receivable – trade, are exposed to the credit risk of customers. Receivables denominated in foreign currencies derived from global business operations are also exposed to foreign currency exchange fluctuation risks. The Group hedges these risks mainly through the use of forward exchange contracts against positions after netting payables denominated in the same foreign currencies, in principle. Investment securities are mainly composed of the shares of corporations with which the Group has business relationships and therefore are exposed to the risk of market price fluctuations.

Payables from the ordinary course of business such as notes and accounts payable – trade are mostly to be settled in one year. As some of them are denominated in foreign currencies due to importing materials and exposed to foreign currency exchange fluctuation risks, they are constantly maintained within the range of receivables in the same currencies. Short-term bank loans and commercial paper are used for financing mainly in relation to operating funds, while long-term bank loans and bonds are used for the purpose of financing capital investments. Some have floating interest rates and are therefore exposed to the risk of interest rate fluctuation.

Forward exchange contracts are derivative transactions that are entered into in order to hedge foreign currency exchange fluctuation risks associated with foreign currency-denominated receivables and payables arising from the ordinary course of business.

(3) Risk management for financial instruments

<1> Management of credit risk (risk of customer default)

The sales division of the Group regularly monitors the financial position of main customers and manages due dates and outstanding balances due from each customer in accordance with provisions of credit management regulations to minimize the risk of defaults resulting from the deterioration of a customer's financial position.

<2> Management of market risk (foreign exchange risk, interest rate risk and others)

For receivables and payables denominated in foreign currencies, the Group identifies the foreign currency exchange fluctuation risks by currency each month and enters into forward exchange contracts to hedge such risks. Regarding the market price risk of investment securities, the Group regularly monitors the fair value of such securities as well as financial positions of the issuers. The Group also continuously reviews the status of possessing such securities taking into consideration business relationships with the issuers. When borrowing a bank loan with a floating interest rate, the Group reduces the risk by limiting the loan term to within three years in principle, monitoring the remaining term until the interest rate renewal date, monitoring the interest rate fluctuation trends, and responding in consideration of the balances between short-term loans and long-term loans or between fixed interest rates and floating interest rates.

In regard to derivative transactions, the finance division enters into contracts, confirms balances and keeps accounts based on the corporate policy. The status of derivative transactions is reported monthly to the management meeting.

<3> Management of liquidity risk (risk of failure to repay obligations)

The finance division manages liquidity risk in a timely manner by updating the cash-flow budget based on reports from each business division.

(4) Supplemental explanation of the fair value of financial instruments

Fair values of financial instruments are measured based on the quoted market price, if available, or are reasonably estimated if a quoted market price is not available. The fair value of financial instruments for which a quoted market price is not available is calculated based on certain assumptions, and the fair value might differ if different assumptions are used.

In addition, the contract amounts of the derivative transactions described below in "b. Fair value of financial instruments" do not represent the market risk of the derivative transactions.

b. Fair value of financial instruments

The carrying amounts on the consolidated balance sheets, fair value, and difference as of March 31, 2020 and 2019 are as follows. Financial instruments for which it is extremely difficult to measure the fair value are not included. (Please see "Note 2: Financial instruments for which the fair value is extremely difficult to measure," below)

	Millions of yen			Thousands of U.S. dollars		
As of March 31, 2020	Carrying amount	Fair value	Difference	Carrying amount	Fair value	Difference
Assets						
(1) Cash and deposits	¥ 40,779	¥ 40,779	¥ —	$374,711	$374,711	$ —
(2) Notes and accounts receivable – trade	31,888	31,888	—	293,014	293,014	—
(3) Investment securities: Other securities	516	516	—	4,748	4,748	—
Total	¥ 73,185	¥ 73,185	¥ —	$672,474	$672,474	$ —
Liabilities						
(1) Notes and accounts payable – trade	¥ 17,774	¥ 17,774	¥ —	$163,321	$163,321	$ —
(2) Short-term bank loans	27,619	27,619	—	253,781	253,781	—
(3) Commercial paper	10,000	10,000	—	91,886	91,886	—
(4) Bonds	35,000	34,817	(183)	321,602	319,920	(1,681)
(5) Long-term debt (except for bonds)	11,776	11,924	147	108,213	109,566	1,353
(6) Lease obligations	84	83	(1)	779	768	(11)
Total	¥102,255	¥102,218	¥ (37)	$939,586	$939,246	$ (340)
Derivative transactions*	¥ (104)	¥ (104)	¥ —	$ (962)	$ (962)	$ —

* Derivative transactions are shown at the net value of the assets and liabilities arising from the transactions.

As of March 31, 2019	Millions of yen Carrying amount	 Fair value	 Difference
Assets			
(1) Cash and deposits	¥23,564	¥23,564	¥ —
(2) Notes and accounts receivable – trade	33,586	33,586	—
(3) Investment securities:			
Other securities	688	688	—
Total	¥57,839	¥57,839	¥ —
Liabilities			
(1) Notes and accounts payable – trade	¥18,075	¥18,075	¥ —
(2) Short-term bank loans and current portion of long-term debt	12,991	12,991	—
(3) Commercial paper	11,000	11,000	—
(4) Bonds	35,000	35,188	188
(5) Long-term debt (except for bonds)	12,501	12,714	212
(6) Lease obligations	71	70	(1)
Total	¥89,640	¥90,040	¥400
Derivative transactions*	¥ (250)	¥ (250)	¥ —

* Derivative transactions are shown at the net value of the assets and liabilities arising from the transactions.

Note 1: Methods to measure the fair value of financial instruments, investment securities, and derivative transactions

Assets

(1) Cash and deposits and (2) Notes and accounts receivable – trade

The carrying amount approximates fair value because of the short maturities of these instruments.

(3) Investment securities

The fair value of equity securities equals quoted market prices, if available. Information on investment securities classified by holding purpose is described in "Note 8. Securities."

Liabilities

(1) Notes and accounts payable – trade, (2) Short-term bank loans and current portion of long-term debt, and (3) Commercial paper

The carrying amount approximates fair value because of the short maturities of these instruments.

(4) Bonds

The fair value equals quoted market prices.

(5) Long-term debt (except for bonds)

The fair value of long-term debt with floating interest rates is nearly equal to the carrying value as the market rate is reflected in a short period. The fair value of long-term debt with fixed interest rates is based on the present value of the total amount of principal and interest discounted by the interest rates that would presumably apply to similar debt.

(6) Lease obligations

The fair value of lease obligations is based on the present value of the total amount of payments discounted by the interest rates that would presumably apply to similar lease contracts.

Derivative transactions

Contract amounts and estimated fair value are described in "Note 9. Derivatives."

Note 2: Financial instruments for which the fair value is extremely difficult to measure

As of March 31	Carrying amount Millions of yen 2020	 2019	 Thousands of U.S. dollars 2020
Unlisted equity securities and others	¥376	¥404	$3,456

The above are not included in "Assets (3) Investment securities" because no quoted market price is available and it is extremely difficult to measure the fair value.

Note 3: The redemption schedule for receivables and investment securities with maturities subsequent to the consolidated closing date

As of March 31, 2020	Millions of yen Within 1 year	 Over 1 year within 5 years	 Over 5 years within 10 years	 Over 10 years
Cash and deposits	¥40,779	¥—	¥—	¥—
Notes and accounts receivable – trade	31,888	—	—	—
Investment securities:				
Other securities with maturities	—	—	—	—
Total	¥72,668	¥—	¥—	¥—

As of March 31, 2020	Thousands of U.S. dollars Within 1 year	 Over 1 year within 5 years	 Over 5 years within 10 years	 Over 10 years
Cash and deposits	$374,711	$—	$—	$—
Notes and accounts receivable – trade	293,014	—	—	—
Investment securities:				
Other securities with maturities	—	—	—	—
Total	$667,726	$—	$—	$—

As of March 31, 2019	Millions of yen Within 1 year	 Over 1 year within 5 years	 Over 5 years within 10 years	 Over 10 years
Cash and deposits	¥23,564	¥—	¥—	¥—
Notes and accounts receivable – trade	33,586	—	—	—
Investment securities:				
Other securities with maturities	—	—	—	—
Total	¥57,150	¥—	¥—	¥—

Note 4: The redemption schedule for bonds, long-term debt and lease obligations and other liabilities with maturities subsequent to the consolidated closing date

As of March 31, 2020	Millions of yen Due in 1 year or less	 Due after 1 year through 2 years	 Due after 2 years through 3 years	 Due after 3 years through 4 years	 Due after 4 years through 5 years	 Due after 5 years
Short-term bank loans	¥27,619	¥ —	¥ —	¥—	¥—	¥ —
Commercial paper	10,000	—	—	—	—	—
Bonds	15,000	15,000	—	—	—	5,000
Long-term debt (except for bonds)	10,133	—	975	—	—	668
Lease obligations	44	25	9	5	—	—
Total	¥62,797	¥15,025	¥984	¥ 5	¥—	¥5,668

As of March 31, 2020	Thousands of U.S. dollars Due in 1 year or less	 Due after 1 year through 2 years	 Due after 2 years through 3 years	 Due after 3 years through 4 years	 Due after 4 years through 5 years	 Due after 5 years
Short-term bank loans	$253,781	$ —	$ —	$—	$—	$ —
Commercial paper	91,886	—	—	—	—	—
Bonds	137,829	137,829	—	—	—	45,943
Long-term debt (except for bonds)	93,114	—	8,958	—	—	6,140
Lease obligations	410	236	86	46	—	—
Total	$577,023	$138,065	$9,045	$46	$—	$52,083

As of March 31, 2019	Millions of yen Due in 1 year or less	Due after 1 year through 2 years	Due after 2 years through 3 years	Due after 3 years through 4 years	Due after 4 years through 5 years	Due after 5 years
Short-term bank loans	¥12,991	¥ —	¥ —	¥ —	¥—	¥ —
Commercial paper	11,000	—	—	—	—	—
Bonds	—	15,000	15,000	—	—	5,000
Long-term debt (except for bonds)	646	9,500	—	1,475	—	880
Lease obligations	30	20	9	7	4	—
Total	¥24,668	¥24,520	¥15,009	¥1,482	¥ 4	¥5,880

08 Securities

(1) Other securities

Marketable securities classified as other securities at March 31, 2020 and 2019 are summarized as follows:

	Millions of yen			Thousands of U.S. dollars		
As of March 31, 2020	Carrying amount	Acquisition cost	Net unrealized gain (loss)	Carrying amount	Acquisition cost	Net unrealized gain (loss)
Securities whose carrying amount exceeds their acquisition cost:						
Equity securities	¥117	¥ 83	¥ 34	$1,078	$ 765	$ 313
Securities whose acquisition cost exceeds their carrying amount:						
Equity securities	399	526	(127)	3,669	4,841	(1,172)
	¥516	¥610	¥ (93)	$4,748	$5,607	$ (858)

	Millions of yen		
As of March 31, 2019	Carrying amount	Acquisition cost	Net unrealized gain (loss)
Securities whose carrying amount exceeds their acquisition cost:			
Equity securities	¥478	¥360	¥118
Securities whose acquisition cost exceeds their carrying amount:			
Equity securities	210	250	(40)
	¥688	¥610	¥ 78

(2) Sales of securities classified as other securities and the aggregate gain and loss for the years ended March 31, 2020 and 2019 are summarized as follows:

	Millions of yen		Thousands of U.S. dollars
	2020	2019	2020
Sales proceeds:	¥—	¥449	$—
Stocks	—	449	—
Others	—	—	—
Aggregate gain:	—	297	—
Stocks	—	297	—
Others	—	—	—
Aggregate loss:	—	—	—
Stocks	—	—	—
Others	—	—	—

(3) Impairment of other securities

Impairment losses on securities classified as other securities for the year ended March 31, 2020 amounted to ¥26 million ($246 thousand).

09 Derivatives

Summarized below are the contract amounts and estimated fair values of the Company's open derivative positions at March 31, 2020 and 2019 for which deferral hedge accounting has not been applied:

	Millions of yen				Thousands of U.S. dollars	
	2020		2019		2020	
	Contract amount	Estimated fair value	Contract amount	Estimated fair value	Contract amount	Estimated fair value
Forward foreign exchange contracts:						
Sell U.S. dollars	¥16,360	¥(104)	¥23,824	¥(250)	$150,328	$(962)

10 Inventories

Inventories at March 31, 2020 and 2019 were as follows:

	Millions of yen		Thousands of U.S. dollars
	2020	2019	2020
Finished products	¥14,422	¥14,888	$132,527
Work in process	21,231	19,633	195,089
Raw materials and supplies	5,425	7,539	49,850
	¥41,079	¥42,061	$377,468

The book values of inventories were written down to reflect the decline in profitability by ¥793 million ($7,292 thousand) and ¥545 million for the years ended March 31, 2020 and 2019, respectively. The inventory write-downs were included in "Cost of sales."

11 Property, Plant and Equipment

Accumulated depreciation of property, plant and equipment for the years ended March 31, 2020 and 2019 was as follows:

	Carrying amount		
	Millions of yen		Thousands of U.S. dollars
	2020	2019	2020
Property, plant and equipment	¥156,183	¥156,580	$1,435,114

12 Short-Term Borrowings and Long-Term Debt

Short-term bank loans generally represent notes and overdrafts. The related weighted average interest rates at March 31, 2020 and 2019 were approximately 1.04% and 1.59%, respectively. The weighted average interest rate applicable to the current portion of long-term debt (excluding lease obligations) was approximately 0.48% at March 31, 2020. The weighted average interest rates applicable to commercial paper at March 31, 2020 and 2019 were approximately 0.15% and 0.15%, respectively. The weighted average interest rates applicable to the current portion of lease obligations at March 31, 2020 and 2019 were approximately 3.17% and 1.78%, respectively.

Long-term debt at March 31, 2020 and 2019 is summarized as follows:

	Millions of yen		Thousands of U.S. dollars
	2020	2019	2020
Loans payable in yen with a weighted average rate of 0.61% at March 31, 2020 and 0.64% at March 31, 2019	¥ 11,776	¥12,501	$ 108,213
0.80% bonds due 2020	15,000	15,000	137,829
0.67% bonds due 2021	10,000	10,000	91,886
0.40% bonds due 2021	5,000	5,000	45,943
0.81% bonds due 2025	5,000	5,000	45,943
Lease obligations with a weighted average rate of 2.49% at March 31, 2020 and 1.19% at March 31, 2019	84	71	779
	46,861	47,573	430,596
Less current portion	(25,178)	(677)	(231,355)
	¥ 21,683	¥46,896	$ 199,241

As is customary in Japan, both short-term and long-term bank loans are made under general agreements which provide that collateral and guarantees (or additional collateral or guarantees as appropriate) for present and future indebtedness be given at the request of the bank, and that the bank has the right, as the obligations become due, or in the event of default thereon, to offset cash deposits against any such obligations due to the bank.

At March 31, 2020 and 2019, the assets pledged as collateral for short-term bank loans were as follows:

	Millions of yen		Thousands of U.S. dollars
	2020	2019	2020
Buildings	¥45	¥53	$414
Other assets	7	7	64
	¥52	¥61	$479

At March 31, 2020 and 2019, short-term bank loans secured by collateral were as follows:

	Millions of yen		Thousands of U.S. dollars
	2020	2019	2020
Short-term bank loans	¥45	¥49	$421

13 Lines of Credit

The Company and certain overseas subsidiaries have committed line-of-credit agreements and have entered into overdraft agreements with certain financial institutions in order to raise operating funds efficiently. The balances of credit available at March 31, 2020 and 2019 are summarized as follows:

	Millions of yen		Thousands of U.S. dollars
	2020	2019	2020
Total committed lines of credit and overdraft	¥42,688	¥42,334	$392,248
Outstanding balance	22,699	8,031	208,576
	¥19,989	¥34,302	$183,672

14 Selling, General and Administrative Expenses

The principal components of selling, general and administrative expenses for the years ended March 31, 2020 and 2019 are summarized as follows:

	Millions of yen		Thousands of U.S. dollars
	2020	2019	2020
Salaries and bonuses	¥13,682	¥14,884	$125,720
Packing and shipping expenses	1,512	1,573	13,897
Outside services	4,144	3,961	38,080
Provision for doubtful receivables	84	55	778
Provision for retirement benefits for directors	11	7	110
Provision for performance-linked compensation for directors	16	—	153
Provision for share-based compensation	8	—	76
Retirement benefit expenses	266	85	2,446

15 Gain on Sales of Fixed Assets

The gain on sales of fixed assets for the years ended March 31, 2020 and 2019 is summarized as follows:

	Millions of yen		Thousands of U.S. dollars
	2020	2019	2020
Land	¥3,946	¥ —	$36,264
Machinery and equipment	4	258	42
Tools, furniture and fixtures	1	—	10

16 Loss on Disposal of Fixed Assets

The loss on disposal of fixed assets for the years ended March 31, 2020 and 2019 is summarized as follows:

	Millions of yen		Thousands of U.S. dollars
	2020	2019	2020
Buildings	¥ 26	¥ 5	$ 239
Machinery and equipment	27	30	257
Tools, furniture and fixtures	0	3	4
Dismantling and removal costs	359	418	3,307
	¥414	¥457	$3,808

17 Impairment Loss

Fixed assets are grouped by business segment with idle assets constituting a separate asset group.

Impairment loss was recognized on the following asset groups for the year ended March 31, 2020.

Use	Location	Asset category	Millions of yen	Thousands of U.S. dollars
① Product equipment	Kawagoe City, Saitama Prefecture, Japan	Buildings and structures, net	¥ 34	$ 319
		Machinery, equipment and vehicles, net	170	1,565
		Tools, furniture and fixtures, net	95	881
		Software	19	179
	Shiga Town, Hakui District, Japan	Machinery, equipment and vehicles, net	20	191
	Jiangyin City, Jiangsu Province, China	Buildings and structures, net	47	433
		Machinery, equipment and vehicles, net	33	304
		Tools, furniture and fixtures, net	43	403
		Others	9	91
			475	4,368
② Product equipment	Commonwealth of Massachusetts, USA	Buildings and structures, net	38	351
Total			¥513	$4,720

① Due to a reduction in profitability, impairment loss of ¥475 million ($4,368 thousand) was recognized on assets such as manufacturing facilities for the Power Systems Business by writing down the carrying amounts to recoverable amounts which are their memorandum value.

② Impairment loss of ¥38 million ($351 thousand) was recognized on idle assets such as manufacturing facilities for the semiconductor devices business, which are no longer being utilized, by writing down the carrying amounts to the recoverable amounts, which are their memorandum value.

Impairment loss was recognized on the following asset groups for the year ended March 31, 2019.

Use	Location	Asset category
Idle assets	Commonwealth of Minnesota, USA	Land and Buildings and structures, net

Impairment loss of ¥119 million was recognized on idle assets such as manufacturing facilities for the semiconductor devices business, which are no longer being utilized, by writing down the carrying amounts to the recoverable amounts, which are their net selling prices.

Impairment loss for the year ended March 31, 2019 is summarized as follows

	Millions of yen
	2019
Land	¥ 43
Buildings and structures, net	76
	¥119

18 Business Structure Reform Cost

The business structure reform cost for the years ended March 31, 2020 and 2019 is summarized as follows:

	Millions of yen		Thousands of U.S. dollars
	2020	2019	2020
Impairment loss*1	¥3,838	¥—	$35,266
Loss on disposal of inventories*2	801	—	7,367
Special retirement expenses*3	341	—	3,141
Termination of the qualified pension plan*4	193	—	1,781
	¥5,175	¥—	$47,557

*1 Impairment loss was recognized on the following asset groups for the year ended March 31, 2020.

Use	Location	Asset category	Millions of yen	Thousands of U.S. dollars
① Product equipment	Saraburi Province, Thailand	Buildings, structures and others	¥2,200	$20,217
	Kamisu City, Ibaraki Prefecture, Japan	Buildings and structures, net	695	6,388
		Machinery, equipment and vehicles, net	88	811
		Tools, furniture and fixtures, net	3	35
		Software	21	197
		Land	83	767
	Wajima City, Ishikawa Prefecture, Japan	Buildings and structures, net	354	3,260
		Machinery, equipment and vehicles, net	52	482
		Tools, furniture and fixtures, net	16	154
		Land	136	1,256
			3,653	33,572
② Product equipment	Changwon, Korea	Buildings and structures, net	69	634
		Others	6	60
	Niiza City, Saitama Prefecture, Japan	Buildings and structures, net	7	68
		Machinery, equipment and vehicles, net	14	133
		Others	5	47
	Shiga Town, Hakui District, Japan	Buildings and structures, net	79	726
			184	1,694
Total			¥3,838	$35,266

① Business structure reform cost of ¥3,653 million ($33,572 thousand) was recognized on assets such as manufacturing facilities for the Semiconductor Devices Business, for which it is unlikely that the investment will be recoverable because of the decision to close the factory due to restructuring, by writing down the carrying amounts to the recoverable amounts, which are their net selling prices.

② Business structure reform cost of ¥184 million ($1,694 thousand) was recognized on assets for the LED lamp business, part of the Semiconductor Devices Business and for which a business withdrawal was determined, by writing down the carrying amounts to the recoverable amounts, which are their memorandum value.

*2 Loss on disposal of inventories

Business structure reform cost of ¥381 million ($3,504 thousand) was recognized on loss on disposal of inventories of the LED lamp business because of business withdrawal, and ¥14 million ($132 thousand) was recognized as loss on disposal of inventories of the Semiconductor Devices Business due to the decision to end production.

Business structure reform cost of ¥405 million ($3,729 thousand) was recognized on loss on disposal of inventories of the Power Systems Business because of reconsideration of the sales plan.

*3 Special retirement expenses

Special retirement benefits were provided for employees of Allegro MicroSystems (Thailand) Co., Ltd.

*4 Termination of the qualified pension plan

This represents a loss on termination of the retirement benefit plan at Kashima Sanken Co., Ltd.

19 Provision for Business Structure Reform

This represents an expected amount for special retirement benefits for employees of Kashima Sanken Co., Ltd.

20 Income Taxes for Prior Periods

Allegro MicroSystems, Inc. has been investigated by the U.S. tax authorities related to the transfer pricing tax treatment. The company recorded ¥575 million ($5,284 thousand) as income taxes for prior years out of the estimated amount of additional tax to be paid, which is considered probable to be incurred at this time.

In July 2016, PT. Sanken Indonesia, a consolidated subsidiary, received a notice of reorganization from the Indonesian tax authorities regarding the amount of export transactions declared for the fiscal year ended December 31, 2014. As the content of this notification is unjustified and unacceptable, the company has challenged the directorate general of Indonesian tax and appealed to the tax court of Indonesia. However, income taxes for prior periods of ¥366 million ($3,364 thousand) were recorded because a decision was rendered in September 2019.

21 Reclassification Adjustments and Tax Effect Relating to Other Comprehensive Income

Reclassification adjustments and tax effect relating to other comprehensive income (loss) for the years ended March 31, 2020 and 2019 are summarized as follows:

	Millions of yen		Thousands of U.S. dollars
	2020	2019	2020
Net unrealized holding gain (loss) on securities			
Change during the year	¥ (146)	¥ (186)	$ (1,347)
Reclassification adjustments	(26)	(297)	(246)
Amount before tax effect	(173)	(483)	(1,594)
Tax effect	52	139	485
Net unrealized holding gain (loss) on securities	¥ (120)	¥ (344)	$ (1,108)
Translation adjustments			
Change during the year	¥(1,443)	¥ 1,703	$(13,260)
Reclassification adjustments	205	—	1,886
Translation adjustments	¥(1,237)	¥ 1,703	$(11,374)
Retirement benefit liability adjustments			
Change during the year	¥(1,588)	¥(2,040)	$(14,594)
Reclassification adjustments	965	731	8,872
Amount before tax effect	(622)	(1,309)	(5,721)
Tax effect	1,153	20	10,599
Retirement benefit liability adjustments	¥ 530	¥(1,288)	$ 4,877
Total other comprehensive gain (loss)	¥ (827)	¥ 70	$ (7,604)

22 Retirement Benefit Plans

The Company and its domestic consolidated subsidiaries have defined benefit pension plans and lump-sum payment plans, covering substantially all employees who are entitled to lump-sum or annuity payments, the amounts of which are determined by reference to their basic rates of pay, length of service, and the conditions under which termination occurs. The Company and certain domestic subsidiaries have a defined contribution plan and an advance payment plan. The Company and certain domestic subsidiaries have adopted a cash balance plan.

The overseas consolidated subsidiaries principally have defined contribution pension plans.

Certain consolidated subsidiaries use a simplified method for calculating retirement benefit expenses and liabilities.

Defined benefit plans

The changes in the retirement benefit obligation during the years ended March 31, 2020 and 2019 are as follows (excluding plans for which the simplified method is applied):

	Millions of yen		Thousands of U.S. dollars
	2020	2019	2020
Balance at the beginning of the year	¥29,358	¥28,797	$269,766
Service cost	1,210	1,167	11,124
Interest cost	229	241	2,112
Actuarial (gain) loss	(269)	695	(2,473)
Retirement benefit paid	(1,628)	(1,704)	(14,963)
Prior service costs	—	133	—
Reversal due to large-scale retirement	(1,489)	—	(13,690)
Other	105	28	969
Balance at the end of the year	¥27,517	¥29,358	$252,846

The changes in plan assets during the years ended March 31, 2020 and 2019 are as follows (excluding plans for which the simplified method is applied):

	Millions of yen		Thousands of U.S. dollars
	2020	2019	2020
Balance at the beginning of the year	¥26,677	¥26,681	$245,127
Expected return on plan assets	1,066	1,492	9,802
Actuarial loss	(1,903)	(1,197)	(17,487)
Contributions by the Company	1,238	1,216	11,378
Retirement benefit paid	(1,626)	(1,522)	(14,944)
Reversal due to large-scale retirement	(1,235)	—	(11,356)
Other	33	7	310
Balance at the end of the year	¥24,250	¥26,677	$222,830

The following table sets forth the funded and accrued status of the plans, and the amounts recognized in the accompanying consolidated balance sheets at March 31, 2020 and 2019 for the Company's and the consolidated subsidiaries' defined benefit plans:

	Millions of yen		Thousands of U.S. dollars
	2020	2019	2020
Retirement benefit obligation	¥ 27,183	¥ 29,041	$ 249,778
Plan assets at fair value	(24,250)	(26,677)	(222,830)
	2,932	2,364	26,948
Unfunded retirement benefit obligation	469	449	4,315
Net liability for retirement benefits in the consolidated balance sheets	¥ 3,402	¥ 2,814	$ 31,263
Liabilities for retirement benefits	¥ 3,402	¥ 2,832	$ 31,263
Assets for retirement benefits	—	(18)	—
Net liability for retirement benefits in the consolidated balance sheets	¥ 3,402	¥ 2,814	$ 31,263

Note: Including a system that applies the simplified method.

The components of retirement benefit expenses for the years ended March 31, 2020 and 2019 are outlined as follows:

	Millions of yen		Thousands of U.S. dollars
	2020	2019	2020
Service cost	¥ 1,210	¥ 1,167	$11,124
Interest cost	229	241	2,112
Expected return on plan assets	(1,066)	(1,492)	(9,802)
Amortization of actuarial loss	983	821	9,034
Amortization of prior service cost	(189)	(90)	(1,742)
Gain (loss) from large-scale retirement	193	—	1,781
Retirement benefit expenses calculated using simplified method	43	27	399
Retirement benefit expenses for defined benefit plans	¥ 1,404	¥ 675	$12,907

Note: In addition to the above retirement benefit expenses, "special retirement benefits" in the amount of ¥350 million ($3,219 thousand), "restructuring costs" in the amount of ¥341 million ($3,141 thousand) and "provision for business structure reform" in the amount of ¥1,691 million ($15,544 thousand) are recorded as extraordinary losses for the year ended March 31, 2020, and "special retirement benefits" in the amount of ¥122 million are recorded as extraordinary losses for the year ended March 31, 2019.

The components of retirement benefit adjustments included in other comprehensive income (before tax effect) for the years ended March 31, 2020 and 2019 are outlined as follows:

	Millions of yen		Thousands of U.S. dollars
	2020	2019	2020
Prior service cost	¥(274)	¥ (239)	$(2,518)
Actuarial gain (loss)	(348)	(1,070)	(3,203)
Total	¥(622)	¥(1,309)	$(5,721)

The components of retirement benefit adjustments included in accumulated other comprehensive income (before tax effect) as of March 31, 2020 and 2019 are outlined as follows:

	Millions of yen		Thousands of U.S. dollars
	2020	2019	2020
Unrecognized prior service cost	¥ (966)	¥(1,240)	$ (8,878)
Unrecognized actuarial gain (loss)	7,031	6,682	64,610
Total	¥6,065	¥ 5,442	$55,732

The fair values of plan assets, by major categories, as percentages of total plan assets as of March 31, 2020 and 2019 are as follows:

	2020	2019
Bonds	57%	53%
Stocks	17	22
Alternative investments	1	1
General accounts of life insurance companies	10	10
Other	15	14
Total	100%	100%

Note: Alternative investments are primarily investments in funds.

The expected return on plan assets has been estimated based on the anticipated allocation to each asset class and the expected long-term returns on assets held in each category.

The weighted average actuarial assumptions used in accounting for the above plans were as follows:

	2020	2019
Discount rate	0.8%	0.8%
Expected rate of return on plan assets	3.9	6.9

Defined benefit plans accounted for using the simplified method

The changes in the retirement benefit obligation calculated by the simplified method during the years ended March 31, 2020 and 2019 are as follows:

	Millions of yen		Thousands of U.S. dollars
	2020	2019	**2020**
Balance at the beginning of the year	**¥132**	¥116	**$1,218**
Retirement benefit expenses	**43**	27	**399**
Retirement benefit paid	**(28)**	(8)	**(262)**
Other	**(11)**	(2)	**(108)**
Balance at the end of the year	**¥135**	¥132	**$1,247**

Defined contribution plans

For the years ended March 31, 2020 and 2019, contributions to the defined contribution pension plan and the advance payment plan, which are recognized as expenses, totaled ¥961 million ($8,837 thousand) and ¥919 million, respectively.

23 Stock Options

Stock option expense included in “Costs of sales” and “Selling, general and administrative expenses” for the years ended March 31, 2020 and 2019 is summarized as follows:

	Millions of yen		Thousands of U.S. dollars
	2020	2019	**2020**
Costs of sales	**¥ 19**	¥ 20	**$ 183**
Selling, general and administrative expenses	**136**	139	**1,250**

Allegro MicroSystems, Inc., a consolidated subsidiary, has adopted a share-based compensation plan. The purpose of the plan is to raise awareness of the need to contribute to the sustainable improvement of corporate performance and corporate value and to secure talented personnel. The plan is contingent upon service for a fixed period through the vesting date. That is to say, if a grantee loses their position or retires between the grant date and the vesting date, their stock-based remuneration will expire. As of March 31, 2019, 607,620 shares were granted and during the year ended March 31, 2020, 30,300 shares were granted and 15,450 shares were forfeited, thus resulting in 622,470 shares outstanding as of March 31, 2020.

Company name	Allegro MicroSystems, Inc.
Date of resolution	July 13, 2017
Category and number of grantees	Directors and employees of Allegro MicroSystems, Inc. and their subsidiaries. (48 people in total)
Type and number of shares	Restricted voting stock 638,298 shares
Grant date	October 2, 2017
Vesting conditions	Continuous employment from the grant date (October 2, 2017) to the vesting date (October 1, 2021)
Service period	From October 2, 2017 to October 1, 2021

Share-based compensation of the consolidated subsidiary Allegro MicroSystems, Inc. is estimated based on intrinsic value as it is a privately held company. The method of estimating the intrinsic value of the shares is based on the discounted cash flow method.

As it is difficult to reasonably estimate the number of shares to be forfeited in the future, only the number of forfeited shares in the past is reflected.

24 Income Taxes

Income taxes applicable to the Company comprise corporation, enterprise and inhabitants’ taxes, which, in the aggregate, resulted in an effective statutory tax rate of approximately 30.5% for the year ended March 31, 2019.

The reconciliation between the effective tax rates reflected in the consolidated statements of operations and effective statutory tax rates for the years ended March 31, 2020 and 2019 was as follows:

	2020	2019
Effective statutory tax rate	**—%**	30.5 %
Effect of:		
Non-deductible expenses for income tax purposes	**—**	3.1
Non-taxable dividend income	**—**	(2.4)
Tax deduction	**—**	(6.7)
Inhabitants’ per capita taxes	**—**	0.3
Foreign tax rate difference	**—**	(9.3)
Changes in valuation allowance	**—**	(28.4)
Expiration of net operating loss carryforwards	**—**	39.9
Other, net	**—**	(1.3)
Effective tax rate	**—%**	25.7 %

The reconciliation for the year ended March 31, 2020 is not disclosed because the Company reported a loss before income taxes for the year.

The significant components of the Company’s deferred tax assets and liabilities as of March 31, 2020 and 2019 were as follows:

	Millions of yen		Thousands of U.S. dollars
	2020	2019	**2020**
Deferred tax assets:			
Net operating loss carryforwards	**¥ 13,826**	¥ 15,548	**$ 127,043**
Liabilities for retirement benefits	**355**	305	**3,270**
Inventories	**1,110**	151	**10,203**
Accrued bonuses	**1,486**	1,401	**13,659**
Net unrealized holding gain	**324**	353	**2,977**
Depreciation expenses	**311**	302	**2,863**
Impairment losses	**1,209**	191	**11,114**
Provision for business structure reform	**570**	—	**5,246**
Carryforward tax deduction	**718**	606	**6,599**
Other	**1,693**	1,312	**15,562**
Gross deferred tax assets:	**21,607**	20,174	**198,540**
Valuation allowance for net operating loss carryforwards (Note 1)	**(13,767)**	(15,480)	**(126,503)**
Valuation allowance for deductible temporary differences	**(5,058)**	(3,002)	**(46,480)**
Valuation allowance	**(18,825)**	(18,482)	**(172,983)**
Total deferred tax assets	**2,781**	1,692	**25,557**
Deferred tax liabilities:			
Fixed assets	**(1,541)**	(1,358)	**(14,162)**
Other	**(510)**	(621)	**(4,694)**
Total deferred tax liabilities	**(2,052)**	(1,979)	**(18,857)**
Net deferred tax assets (liabilities)	**¥ 729**	¥ (287)	**$ 6,699**

Note 1: A breakdown of net operating loss carryforwards and valuation allowance by expiry date as of March 31, 2020 is as follows:

	Millions of yen						
	Due in 1 year or less	Due after 1 year through 2 years	Due after 2 years through 3 years	Due after 3 years through 4 years	Due after 4 years through 5 years	Due after 5 years	Total
Net operating loss carryforwards*	**¥ 2,173**	**¥ 274**	**¥ 1,509**	**¥ 313**	**¥ 1,865**	**¥ 7,690**	**¥ 13,826**
Valuation allowance	**(2,173)**	**(268)**	**(1,492)**	**(289)**	**(1,865)**	**(7,679)**	**(13,767)**
Deferred tax assets	**¥ —**	**¥ 6**	**¥ 17**	**¥ 24**	**¥ —**	**¥ 11**	**¥ 58**

	Thousands of U.S. dollars						
	Due in 1 year or less	Due after 1 year through 2 years	Due after 2 years through 3 years	Due after 3 years through 4 years	Due after 4 years through 5 years	Due after 5 years	Total
Net operating loss carryforwards*	$ 19,968	$ 2,521	$ 13,871	$ 2,876	$ 17,143	$ 70,662	$ 127,043
Valuation allowance	(19,968)	(2,464)	(13,710)	(2,655)	(17,143)	(70,560)	(126,503)
Deferred tax assets	$ —	$ 56	$ 161	$ 220	$ —	$ 101	$ 540

* The amount is determined by multiplying the corresponding net operating loss carryforwards by the effective statutory tax rate.

A breakdown of net operating loss carryforwards and valuation allowance by expiry date as of March 31, 2019 is as follows:

	Millions of yen						
	Due in 1 year or less	Due after 1 year through 2 years	Due after 2 years through 3 years	Due after 3 years through 4 years	Due after 4 years through 5 years	Due after 5 years	Total
Net operating loss carryforwards*	¥ 2,405	¥ 2,209	¥ 289	¥ 1,747	¥ 338	¥ 8,558	¥ 15,548
Valuation allowance	(2,405)	(2,209)	(275)	(1,727)	(314)	(8,546)	(15,480)
Deferred tax assets	¥ —	¥ —	¥ 13	¥ 19	¥ 24	¥ 11	¥ 68

* The amount is determined by multiplying the corresponding net operating loss carryforwards by the effective statutory tax rate.

25 Business Combinations

Common control transaction

Acquisition of additional investments in securities of subsidiaries and associates

(a) Transaction summary

(1) Combined entity's name and business description

① Name of companies involved in the business combination:
Polar Semiconductor, LLC

② Business description of Polar Semiconductor, LLC:
Manufacturing of semiconductor device products

(2) Date of business combination
March 28, 2020

(3) Legal form of business combination
Acquisition of investments in other securities of subsidiaries and associates through contribution of loans in kind (debt-equity swaps)

(4) Name following business combination
The name is unchanged.

(5) Outline and purpose of the transaction
The Company underwrote a capital increase of Polar Semiconductor, LLC through a debt-equity swap with the aim of improving the financial position of Polar Semiconductor, LLC. Polar Semiconductor, LLC was a wholly owned consolidated subsidiary of Allegro MicroSystems, Inc. As a result of this investment, the Company's direct ownership ratio was 70% and indirect ownership ratio was 21%.

(b) Accounting treatment

This transaction was accounted for in accordance with "Accounting Standard for Business Combinations" and "Guidance on Accounting Standard for Business Combinations and Accounting Standard for Business Divestitures," as a transaction under common control.

(c) Additional acquisition of subsidiary's shares

Acquisition cost and breakdown are summarized as follows:

		Millions of yen	Thousands of U.S. dollars
Consideration for acquisition	(Total face value of claims subject to contribution in kind)	¥4,656	$42,786
Acquisition cost		¥4,656	$42,786

26 Shareholders' Equity

The Japanese Corporate Law ("the Law") became effective on May 1, 2006, replacing the Japanese Commercial Code ("the Code"). The Law is generally applicable to events and transactions occurring after April 30, 2006 and for fiscal years ending after that date.

Under Japanese laws and regulations, the entire amount paid for new shares is required to be designated as common stock. However, a company may, by a resolution of the Board of Directors, designate an amount not exceeding one-half of the prices of the new shares as additional paid-in capital, which is included in capital surplus.

Under the Law, in cases where a dividend distribution of surplus is made, the smaller of an amount equal to 10% of the dividend and the excess, if any, of 25% of common stock over the total of additional paid-in capital and the legal earnings reserve must be set aside as additional paid-in capital or a legal earnings reserve. The legal earnings reserve is included in retained earnings in the accompanying consolidated balance sheets.

Under the Law, companies are required to set aside an amount equal to at least 10% of the aggregate amount of cash dividends and other cash appropriations as a legal earnings reserve until the total of the legal earnings reserve and additional paid-in capital equal 25% of common stock.

Under the Law, the legal earnings reserve and additional paid-in capital could be used to eliminate or reduce a deficit by a resolution of the shareholders' meeting or could be capitalized by a resolution of the Board of Directors. Under the Law, both of these appropriations generally require a resolution of the shareholders' meeting.

Additional paid-in capital and the legal earnings reserve may not be distributed as dividends. Under the Law, however, on the condition that the total amount of the legal earnings reserve and additional paid-in capital remained equal to or exceeded 25% of common stock, they were available for distribution by resolution of the shareholders' meeting.

Under the Law, all additional paid-in capital and all legal earnings reserves may be transferred to other capital surplus and retained earnings, respectively, which are potentially available for dividends.

The maximum amount that the Company can distribute as dividends is calculated based on the non-consolidated financial statements of the Company in accordance with the Law.

(1) Dividends paid

For the year ended March 31, 2020

	Type of shares	Total dividends (Millions of yen)	Dividends per share (Yen)	Total dividends (Thousands of U.S. dollars)	Dividends per share (U.S. dollars)	Cut-off date	Effective date
Annual General Meeting of the Shareholders on June 21, 2019	Common stock	¥363	¥15.00	$3,339	$0.14	March 31, 2019	June 24, 2019
Meeting of the Board of Directors on November 6, 2019	Common stock	¥363	¥15.00	$3,339	$0.14	September 30, 2019	December 5, 2019

For the year ended March 31, 2019

	Type of shares	Total dividends (Millions of yen)	Dividends per share (Yen)	Cut-off date	Effective date
Annual General Meeting of the Shareholders on June 22, 2018	Common stock	¥363	¥3.00	March 31, 2018	June 25, 2018
Meeting of the Board of Directors on November 5, 2018	Common stock	¥363	¥3.00	September 30, 2018	December 5, 2018

(2) Dividends with the cut-off date in the year ended March 31, 2020 and the effective date in the year ending March 31, 2021

	Type of shares	Source of dividends	Total dividends (Millions of yen)	Dividends per share (Yen)	Total dividends (Thousands of U.S. dollars)	Dividends per share (U.S. dollars)	Cut-off date	Effective date
Annual General Meeting of the Shareholders on June 26, 2020	Common stock	Retained earnings	¥363	¥15.00	$3,339	$0.14	March 31, 2020	June 29, 2020

Dividends with the cut-off date in the year ended March 31, 2019 and the effective date in the year ended March 31, 2020

	Type of shares	Source of dividends	Total dividends (Millions of yen)	Dividends per share (Yen)	Cut-off date	Effective date
Annual General Meeting of the Shareholders on June 21, 2019	Common stock	Retained earnings	¥363	¥15.00	March 31, 2019	June 24, 2019

27 Research and Development Expenses

Research and development expenses for the years ended March 31, 2020 and 2019 were ¥16,948 million ($155,737 thousand) and ¥18,097 million, respectively.

28 Leases

Future minimum lease payments subsequent to March 31, 2020 and 2019 for non-cancellable operating leases are as follows:

	Millions of yen		Thousands of U.S. dollars
	2020	2019	2020
Due in 1 year or less	¥ 426	¥ 431	$ 3,917
Due after 1 year	1,429	1,601	13,138
	¥1,856	¥2,033	$17,056

29 Segment Information

a. Outline of reportable segments

The reportable segments of the Company are the business units for which the Company is able to obtain respective financial information separately in order for the Board of Directors to conduct periodic analysis to determine the distribution of management resources and evaluate their business results.

The Company classifies its business units based on their products. Each business unit plans its own comprehensive domestic and overseas strategies for its products, and conducts its business activities. Therefore, the Company consists of its business units, identified by principal products, which are the following two reportable segments: "Semiconductor Devices Business" and "Power Systems Business."

The Semiconductor Devices Business mainly manufactures and sells power module, power ICs, control ICs, Hall-effect ICs, bipolar transistors, MOSFET, IGBT, thyristors, rectifier diodes and light emitting diodes (LEDs). The Power Systems Business mainly manufactures and sells uninterruptible power supplies (UPS), inverters, DC power supplies, airway beacon systems, switching mode power supply units and transformers.

b. Calculation methods of sales, income (loss), assets, and other items for reportable segments

The accounting methods applied for reportable segments are the same as the basis of preparation for the consolidated financial statements. Intersegment sales and transfers are based on the prices in arm's-length transactions.

c. Information about sales and segment income (loss) by reportable segment

As of and for the year ended March 31, 2020

	Millions of yen				
	Reportable segments				
	Semiconductor Devices Business	Power Systems Business	Total	Adjustments	Consolidated
Sales:					
(1) Sales to external customers	¥137,981	¥22,235	¥160,217	¥ —	¥160,217
(2) Intersegment sales and transfers	444	228	672	(672)	—
Total sales	138,426	22,464	160,890	(672)	160,217
Segment income (loss)	6,805	548	7,353	(3,044)	4,309
Segment assets	158,755	12,616	171,371	22,652	194,024
Others:					
Depreciation and amortization	11,562	136	11,698	700	12,398
Impairment losses	3,876	475	4,351	—	4,351
Increase in property, plant, equipment and intangible assets	11,510	106	11,617	401	12,019

As of and for the year ended March 31, 2020

	Thousands of U.S. dollars				
	Reportable segments				
	Semiconductor Devices Business	Power Systems Business	Total	Adjustments	Consolidated
Sales:					
(1) Sales to external customers	$1,267,865	$204,317	$1,472,182	$ —	$1,472,182
(2) Intersegment sales and transfers	4,082	2,100	6,183	(6,183)	—
Total sales	1,271,947	206,418	1,478,366	(6,183)	1,472,182
Segment income (loss)	62,533	5,039	67,572	(27,978)	39,594
Segment assets	1,458,744	115,925	1,574,674	208,150	1,782,820
Others:					
Depreciation and amortization	106,240	1,250	107,490	6,439	113,929
Impairment losses	35,618	4,368	39,987	—	39,987
Increase in property, plant, equipment and intangible assets	105,769	981	106,750	3,693	110,443

Notes:
1. Adjustments for segment income (loss) of ¥(3,044) million ($(27,978) thousand) include corporate expenses. They are mainly general and administrative expenses, which are not allocable to the reportable segments.
2. Adjustments for segment assets of ¥22,652 million ($208,150 thousand) include corporate assets, which are not allocable to the reportable segments. The corporate assets are mainly surplus operating capital (cash and deposits), long-term investments (investment securities) and assets related to administrative departments of the Company.
3. Adjustments for depreciation and amortization of ¥700 million ($6,439 thousand) are mainly administrative expenses.
4. Adjustments for increase in property, plant, equipment and intangible assets of ¥401 million ($3,693 thousand) are assets related to administrative departments of the Company.
5. Segment income is measured according to operating income.

As of and for the year ended March 31, 2019

	Millions of yen				
	Reportable segments				
	Semiconductor Devices Business	Power Systems Business	Total	Adjustments	Consolidated
Sales:					
(1) Sales to external customers	¥147,211	¥26,438	¥173,650	¥ —	¥173,650
(2) Intersegment sales and transfers	602	197	799	(799)	—
Total sales	147,813	26,636	174,450	(799)	173,650
Segment income (loss)	13,025	549	13,575	(3,044)	10,531
Segment assets	155,224	15,169	170,393	17,798	188,192
Others:					
Depreciation and amortization	11,122	210	11,333	642	11,975
Impairment losses	119	—	119	—	119
Increase in property, plant, equipment and intangible assets	20,121	404	20,526	375	20,901

Notes:
1. Adjustments for segment income (loss) of ¥(3,044) million include corporate expenses. They are mainly general and administrative expenses, which are not allocable to the reportable segments.
2. Adjustments for segment assets of ¥17,798 million include corporate assets, which are not allocable to the reportable segments. The corporate assets are mainly surplus operating capital (cash and deposits), long-term investments (investment securities) and assets related to administrative departments of the Company.
3. Adjustments for depreciation and amortization of ¥642 million are mainly administrative expenses.
4. Adjustments for increase in property, plant, equipment and intangible assets of ¥375 million are assets related to administrative departments of the Company.
5. Segment income is measured according to operating income.

d. Related information

Information about geographical area

As of and for the year ended March 31, 2020

(1) Sales

Millions of yen							
		Asia					
Japan		China	Korea	America	Europe	Others	Total
¥57,807	¥74,010	¥41,502	¥19,714	¥16,135	¥12,195	¥69	¥160,217

Thousands of U.S. dollars							
		Asia					
Japan		China	Korea	America	Europe	Others	Total
$531,170	$680,054	$381,348	$181,145	$148,259	$112,056	$640	$1,472,182

Note: Sales are classified in countries or regions based on location of customers.

(2) Property, plant and equipment

Millions of yen				
Japan	North America	Asia	Others	Total
¥28,950	¥24,634	¥12,116	¥360	¥66,062

Thousands of U.S. dollars				
Japan	North America	Asia	Others	Total
$266,019	$226,353	$111,337	$3,312	$607,022

As of and for the year ended March 31, 2019

(1) Sales

Millions of yen							
		Asia					
Japan		China	Korea	North America	Europe	Others	Total
¥65,118	¥74,235	¥39,021	¥18,843	¥19,721	¥14,484	¥90	¥173,650

Note: Sales are classified in countries or regions based on location of customers.

(2) Property, plant and equipment

Millions of yen					
			Asia		
Japan	North America		Thailand	Others	Total
¥30,880	¥25,657	¥15,597	¥8,052	¥468	¥72,604

30 Amounts per Share

Amounts per share as of and for the years ended March 31, 2020 and 2019 were as follows:

	Yen		U.S. dollars
	2020	2019	**2020**
Net assets	**¥2,063.21**	¥2,405.01	**$18.95**
Profit (loss) per share:			
– basic	**(229.83)**	163.70	**(2.11)**
– diluted	**—**	157.45	**—**

On October 1, 2018, the effective date, a share consolidation was conducted at a ratio of five (5) shares to one (1) share of the Company's common stock. Profit (loss) per share for the year ended March 31, 2019 and diluted profit per share for the year ended March 31, 2019 were calculated assuming that the share consolidation was carried out at the beginning of the year ended March 31, 2019.

Diluted profit (loss) per share was not disclosed because a net loss per share was recorded for the year ended March 31, 2020.

Profit (loss) per share was calculated on the following basis:

	Millions of yen, except number of shares		Thousands of U.S. dollars, except number of shares
	2020	2019	**2020**
Profit (loss) attributable to owners of parent	**¥ (5,559)**	¥ 3,967	**$(51,084)**
Amounts not available to shareholders of common stock	**—**	—	**—**
Profit (loss) attributable to owners of parent related to common stock	**(5,559)**	3,967	**(51,084)**
Average number of shares outstanding during the year (Thousands of shares)	**24,189**	24,233	**—**

Diluted profit per share was calculated on the following basis:

	Millions of yen		Thousands of U.S. dollars
	2020	2019	**2020**
Adjustments to profit attributable to owners of parent	**¥—**	¥(151)	**$—**
Adjustment for dilutive shares issued by subsidiaries	**—**	(151)	**—**

Net assets per share were calculated on the following basis:

	Millions of yen, except number of shares		Thousands of U.S. dollars, except number of shares
	2020	2019	**2020**
Net assets	**¥ 71,776**	¥ 78,541	**$ 659,526**
Amounts deducted from net assets:	**21,933**	20,261	**201,541**
Non-controlling interests	**(21,933)**	(20,261)	**(201,541)**
Net assets attributable to shareholders	**49,842**	58,279	**457,984**
Number of shares outstanding at the end of the year (Thousands of shares)	**24,157**	24,232	**—**

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Building a better working world

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Independent Auditor's Report

The Board of Directors
Sanken Electric Co., Ltd.

Opinion

We have audited the accompanying consolidated financial statements of Sanken Electric Co., Ltd. and its consolidated subsidiaries (the Group), which comprise the consolidated balance sheet as at March 31, 2020, and the consolidated statements of operations, comprehensive income, changes in net assets, and cash flows for the year then ended, and notes to the consolidated financial statements.

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

Basis for Opinion

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

Responsibilities of Management, the Corporate Auditor and the Board of Corporate Auditors for the Consolidated Financial Statements

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

In preparing the consolidated financial statements, management is responsible for assessing the Group's ability to continue as a going concern and disclosing, as required by accounting principles generally accepted in Japan, matters related to going concern.

The Corporate Auditor and the Board of Corporate Auditors are responsible for overseeing the Group's financial reporting process.

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

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

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

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

We communicate with the Corporate Auditor and the Board of Corporate Auditors regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

We also provide the Corporate Auditor and the Board of Corporate Auditors with a statement that we have complied with the ethical requirements regarding independence that are relevant to our audit of the financial statements in Japan, and to communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, related safeguards.

Interest Required to Be Disclosed by the Certified Public Accountants Act of Japan

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

Convenience Translation

The U.S. dollar amounts in the accompanying consolidated financial statements with respect to the year ended March 31, 2020 are presented solely for convenience. Our audit also included the translation of Japanese yen amounts into U.S. dollar amounts and, in our opinion, such translation has been made on the basis described in Note 3 to the consolidated financial statements.

Ernst & Young ShinNihon LLC
Tokyo, Japan

June 26, 2020

木村 修

Yoshimi Kimura
Designated Engagement Partner
Certified Public Accountant

田辺 敦子

Atsuko Tanabe
Designated Engagement Partner
Certified Public Accountant

Corporate Information

Company Overview

Name	Sanken Electric Co., Ltd.
Trademark	Sanken
Head office	3-6-3 Kitano, Niiza-shi, Saitama-ken 352-8666, Japan
Paid-in capital	¥20,896,789,680
Number of shares outstanding	25,098,060
Date of establishment	September 5, 1946
Business purpose	1. Manufacture, sale and purchase of electric equipment and apparatus 2. Electrical construction, telecommunications construction and any other works related to the preceding item 3. All matters related to the conduct of the business stated in the preceding items

Business Settlement Information

Business year	From April 1 to March 31
Ordinary General Meeting of Shareholders	June of each year
Record date with respect to above meeting	March 31 of each year
Record date for dividends	Year-end dividends: March 31 of each year Interim dividends: September 30 of each year
Listed stock exchange	First Section, Tokyo Stock Exchange

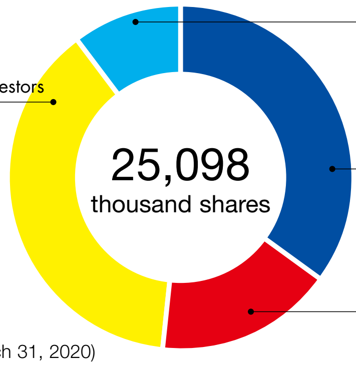
Bonds (As of March 31, 2020)

Bond name	Date of issue	Balance of bonds (Billions of yen)
9th unsecured bonds	June 17, 2015	¥15.0
11th unsecured bonds	September 27, 2016	¥10.0
12th unsecured bonds	September 20, 2018	¥ 5.0
13th unsecured bonds	September 20, 2018	¥ 5.0

Shares Information (As of March 31, 2020)

Total number of issuable shares	51,400,000 shares
Number of shares outstanding	25,098,060 shares
Number of shareholders	9,034

Distribution of Shareholders by Category



(As of March 31, 2020)

Principal Shareholders

Shareholder name	Number of shares owned (thousands)	Ownership ratio
THE MASTER TRUST BANK OF JAPAN, LTD. (TRUST ACCOUNT)	1,991	8.22%
JAPAN TRUSTEE SERVICES BANK, LTD. (TRUST ACCOUNT)	1,738	7.17%
SAITAMA RESONA BANK, LIMITED	1,202	4.96%
BNY GCM CLIENT ACCOUNT JPRD AC ISG (FE-AC)	1,063	4.38%
J.P. MORGAN SECURITIES PLC FOR AND ON BEHALF OF ITS CLIENTS JPMSP RE CLIENT ASSETS-SEGR ACCT	898	3.70%
STATE STREET BANK AND TRUST COMPANY 505253	775	3.20%
STATE STREET BAND AND TRUST COMPANY 505103	499	2.06%
JAPAN TRUSTEE SERVICES BANK, LTD. (TRUST ACCOUNT 5)	447	1.84%
JPMORGAN CHASE BANK 385151	413	1.70%
J.P. MORGAN BANK LUXEMBOURG S.A. 1300000	389	1.60%

Notes: 1. The Company holds 867 thousand shares of treasury stock (3.45%), but is excluded from the principal shareholders listed above.
2. Ownership ratio is calculated by subtracting treasury stock from the total number of shares outstanding.