

# FACTBOOK

7467/TSE 1<sup>st</sup> Section, NSE 1<sup>st</sup> Section  
**HAGIWARA ELECTRIC HOLDINGS CO., LTD.**  
 For the six months of the fiscal year  
 ending on March 31, 2020



## Contents

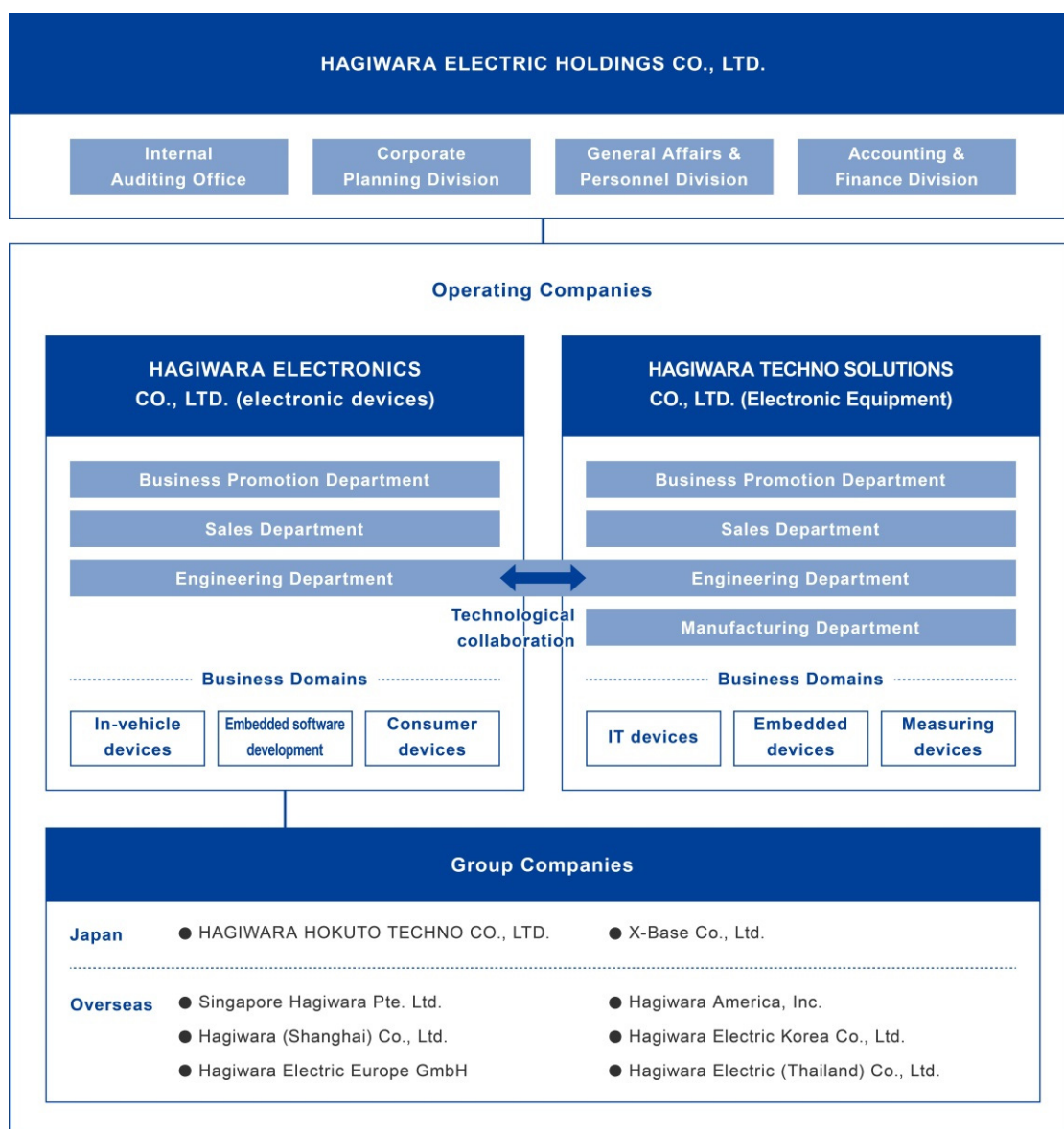
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## Corporate Outline (as of September 30, 2019)

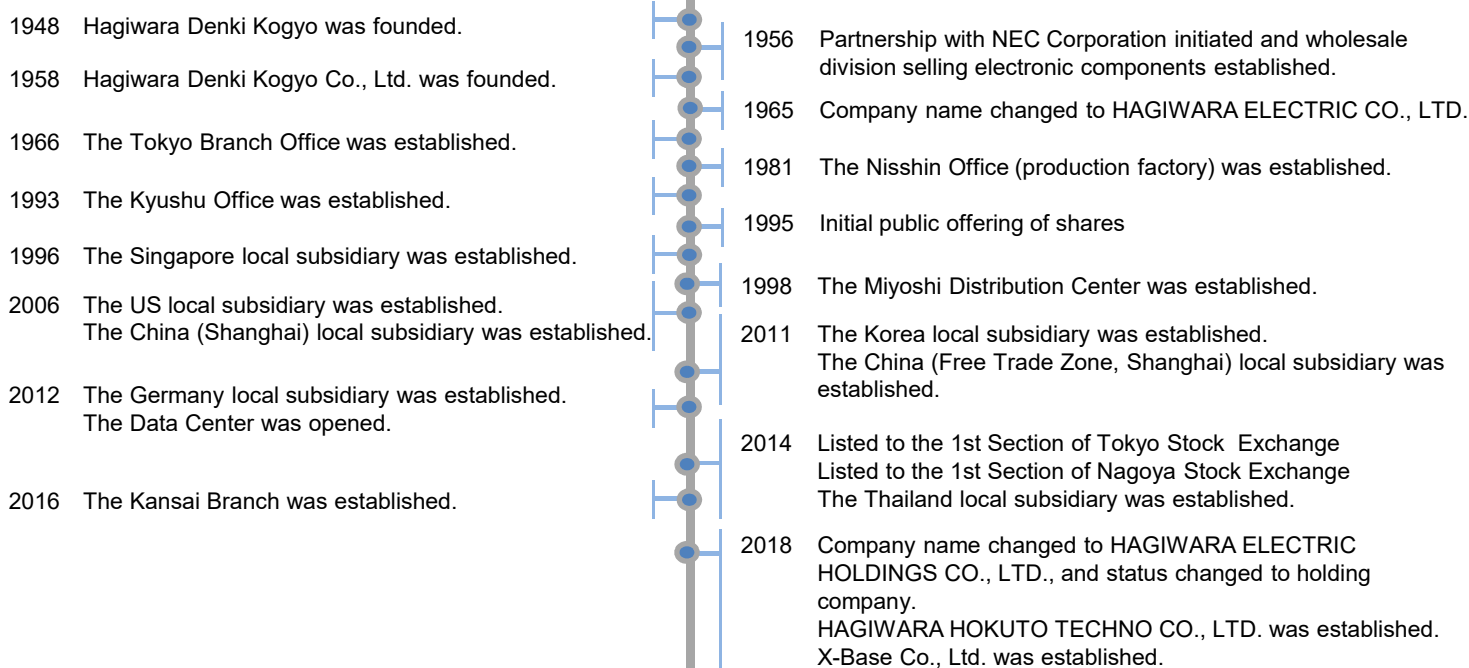
Name of Company	HAGIWARA ELECTRIC HOLDINGS CO., LTD.
Head Office	2-2-1 Higashisakura, Higashi-ku, Nagoya City, Aichi Pref. 461-8520 Japan
Representative	Mitsuo Iwai, President and Representative Director
Established	March 31, 1948
Share Capital	4,361,243,696 yen
Number of Employees	Consolidated: 581 *Excluding temporary employees
Major Business	Formulation and management of business strategies for group companies selling electronic devices and electronic equipment and manufacturing and selling FA equipment
Subsidiaries	HAGIWARA ELECTRONICS CO., LTD. HAGIWARA TECHNO SOLUTIONS CO., LTD.

## Organizational structure of the Group

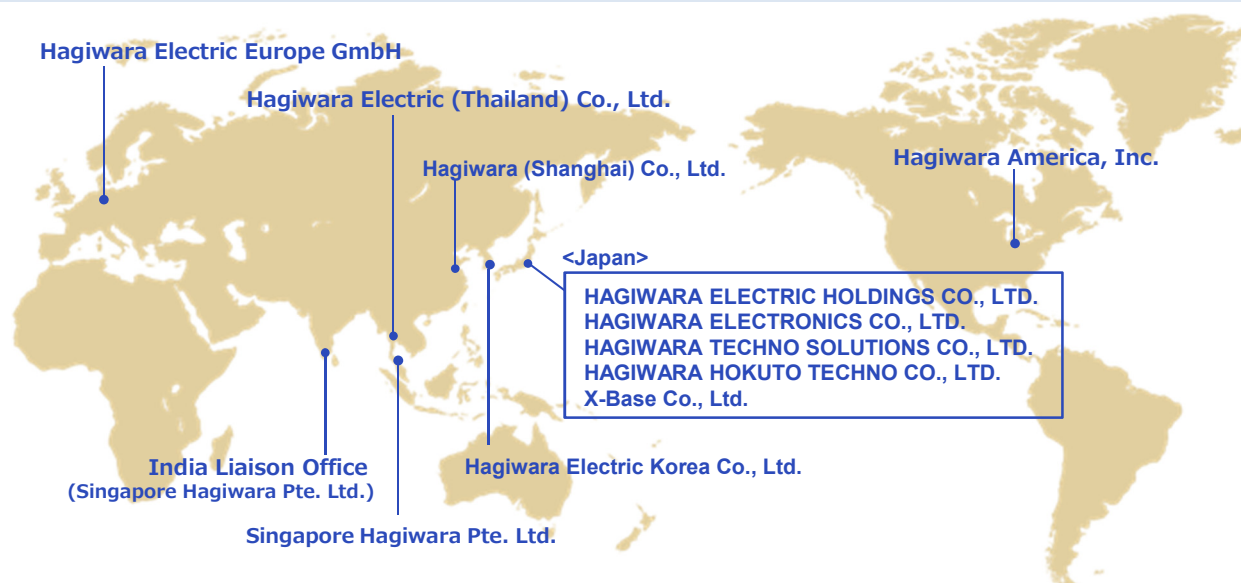
As of September 30, 2019



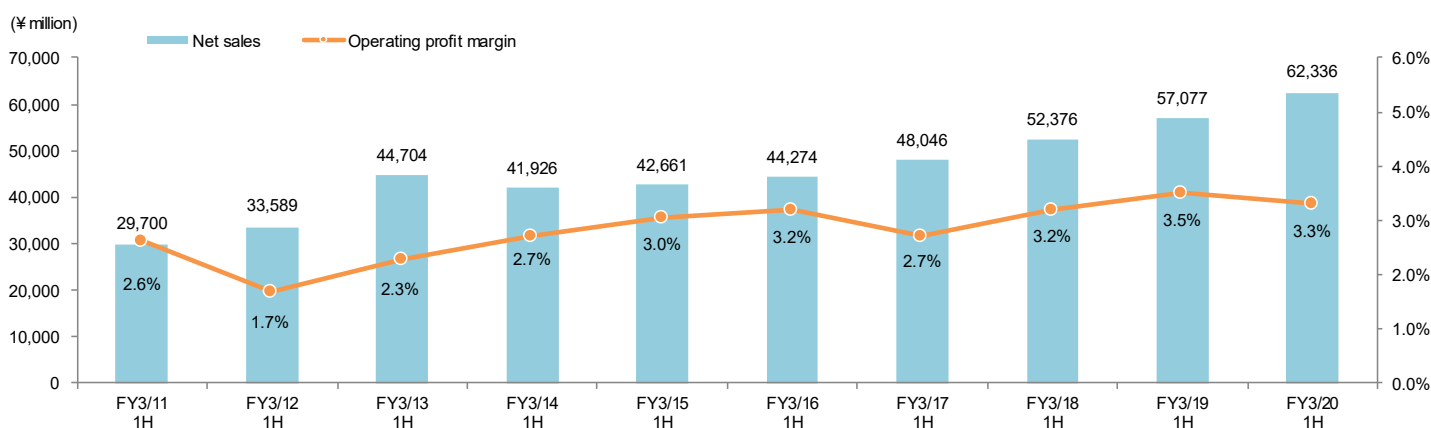
## Corporate History Timeline



## Group Network



## Trend of Business Performance



Note: The Company transitioned to a holding company system on April 1, 2018.  
The business performance up to FY3/18 in this FACTBOOK refers to the figures of the former HAGIWARA ELECTRIC CO., LTD. before the transition.

# Consolidated Balance Sheet

( ¥ million)	FY3/16 1H End	FY3/17 1H End	FY3/18 1H End	FY3/19 1H End	FY3/20 1H End
<b>Assets</b>					
<b>Total assets</b>	<b>46,994</b>	<b>47,511</b>	<b>53,981</b>	<b>59,316</b>	<b>62,210</b>
<b>Current assets</b>	<b>42,476</b>	<b>43,170</b>	<b>49,286</b>	<b>54,194</b>	<b>57,126</b>
Cash and deposits	5,821	5,535	5,424	7,013	8,389
Notes and accounts receivable - trade	24,667	24,879	26,224	29,750	31,636
Electronically recorded monetary claims - operating	951	1,597	2,159	1,980	1,512
Securities	100	—	—	—	—
Merchandise and finished goods	9,897	10,047	13,861	14,154	14,250
Work in process	277	312	422	460	420
Raw materials and supplies	153	153	228	274	286
Other	610	646	968	564	633
Allowance for doubtful accounts	(3)	(1)	(3)	(2)	(3)
<b>Non-current assets</b>	<b>4,518</b>	<b>4,340</b>	<b>4,695</b>	<b>5,122</b>	<b>5,084</b>
Property, plant and equipment	2,687	2,629	2,608	2,664	2,677
Intangible assets	165	117	105	121	202
Investments and other assets	1,665	1,593	1,980	2,336	2,204
Other	1,686	1,614	1,981	2,336	—
Allowance for doubtful accounts	(21)	(21)	(0)	(0)	—

( ¥ million)	FY3/16 1H End	FY3/17 1H End	FY3/18 1H End	FY3/19 1H End	FY3/20 1H End
<b>Liabilities</b>					
<b>Total liabilities</b>	<b>23,120</b>	<b>23,168</b>	<b>27,420</b>	<b>28,695</b>	<b>27,986</b>
<b>Current liabilities</b>	<b>19,661</b>	<b>18,815</b>	<b>24,086</b>	<b>24,576</b>	<b>22,418</b>
Notes and accounts payable - trade	11,636	9,834	11,286	11,482	11,591
Electronically recorded obligations - operating	—	1,804	2,413	2,769	2,161
Short-term borrowings	4,302	4,322	6,590	6,835	5,770
Current portion of long-term borrowings	2,095	1,080	1,756	850	225
Income taxes payable	477	439	488	783	724
Provision for loss on order received	—	—	56	—	—
Other	1,150	1,334	1,494	1,856	1,945
<b>Non-current liabilities</b>	<b>3,458</b>	<b>4,353</b>	<b>3,333</b>	<b>4,118</b>	<b>5,568</b>
Long-term borrowings	2,961	3,631	2,875	3,800	5,175
Retirement benefit liability	30	249	156	79	181
Other	466	472	301	239	212
<b>Net assets</b>					
<b>Total net assets</b>	<b>23,874</b>	<b>24,342</b>	<b>26,561</b>	<b>30,620</b>	<b>34,223</b>
<b>Shareholders' equity</b>	<b>23,238</b>	<b>24,227</b>	<b>26,044</b>	<b>30,126</b>	<b>31,992</b>
Share capital	3,301	3,301	3,301	4,361	4,361
Capital surplus	3,792	3,792	3,792	4,861	4,867
Retained earnings	16,156	17,487	19,305	21,246	23,096
Treasury shares	(12)	(354)	(354)	(343)	(332)
<b>Accumulated other comprehensive income</b>	<b>636</b>	<b>115</b>	<b>516</b>	<b>475</b>	<b>176</b>
Valuation difference on available-for-sale securities	202	180	396	361	268
Foreign currency translation adjustment	359	58	225	206	107
Remeasurements of defined benefit plans	73	(124)	(105)	(92)	(199)
<b>Non-controlling interests</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>18</b>	<b>2,054</b>
<b>Total liabilities and net assets</b>	<b>46,994</b>	<b>47,511</b>	<b>53,981</b>	<b>59,316</b>	<b>62,210</b>

# Consolidated Statement of Income/ Information by Segment



## Consolidated Statement of Income

( ¥ million)	FY3/16 1H	FY3/17 1H	FY3/18 1H	FY3/19 1H	FY3/20 1H
<b>Net sales</b>	<b>44,274</b>	<b>48,046</b>	<b>52,376</b>	<b>57,077</b>	<b>62,336</b>
Cost of sales	39,794	43,620	47,326	51,283	56,179
Gross profit	4,480	4,426	5,050	5,794	6,157
Selling, general and administrative expenses	3,069	3,143	3,398	3,820	4,114
Operating profit	1,411	1,283	1,651	1,974	2,043
Non-operating income	31	45	72	53	60
Interest income	4	4	3	1	2
Dividend income	7	7	8	10	9
Foreign exchange gains	—	—	11	17	—
Insurance claim income	—	—	—	—	25
Surrender value of insurance policies	—	—	30	0	—
Refunded import duty	—	15	—	—	—
Outsourcing service income	7	—	—	—	—
Other	11	18	18	23	22
Non-operating expenses	71	112	43	51	101
Interest expenses	23	21	18	20	24
Foreign exchange losses	33	58	—	—	38
Loss on valuation of investment securities	—	—	—	—	28
Loss on sales of trade receivables	10	—	23	17	7
Other	4	32	1	13	2
Ordinary profit	1,370	1,216	1,680	1,975	2,001
Extraordinary income	0	124	—	—	—
Gain on sales of non-current assets	—	120	—	—	—
Gain on sales of investment securities	0	—	—	—	—
Gain on reversal of asset retirement obligations	—	4	—	—	—
Extraordinary losses	0	9	1	1	3
Loss on disposal of non-current assets	0	0	1	1	0
Loss on valuation of membership	—	—	—	—	2
Impairment loss	—	9	—	—	—
Loss on valuation of investment securities	—	—	—	0	1
Profit before income taxes	1,370	1,331	1,678	1,974	1,998
Income taxes	494	457	535	634	663
Profit	875	874	1,142	1,340	1,335
Profit attributable to non-controlling interests	—	—	—	3	28
Profit attributable to owners of parent	875	874	1,142	1,336	1,307

## Information by Segment

### Net Sales Breakdown by Business Segment

( ¥ million)	FY3/16 1H	FY3/17 1H	FY3/18 1H	FY3/19 1H	FY3/20 1H
<b>Net sales</b>	<b>44,274</b>	<b>48,046</b>	<b>52,376</b>	<b>57,077</b>	<b>62,336</b>
Electronic Devices Business	36,501	40,490	43,910	46,687	50,824
Technology Solutions Business	7,772	7,555	8,466	10,390	11,512
Segment profit	1,411	1,283	1,651	1,974	2,043
Electronic Devices Business	1,562	1,628	2,008	1,420	1,406
Technology Solutions Business	470	335	412	553	636
Reconciling items	(621)	(681)	(769)	—	—

Note: The Company changed the calculation method of segment profit from the first half of FY3/19.

Along with this, corporate expenses and income related to the Company (the holding company) are allocated to each segment.

### Net Sales Breakdown by Major Client

( ¥ million)	FY3/16 1H	FY3/17 1H	FY3/18 1H	FY3/19 1H	FY3/20 1H
<b>Net sales</b>	<b>44,274</b>	<b>48,046</b>	<b>52,376</b>	<b>57,077</b>	<b>62,336</b>
DENSO CORPORATION	24,696	27,960	30,422	32,773	35,333
Toyota Motor Corporation	3,554	3,752	3,581	4,262	4,425
TOKAI RIKA CO., LTD.	2,774	2,452	2,603	2,150	2,262
Others	13,248	13,881	15,770	17,892	20,315

Note: Net sales to overseas subsidiaries of DENSO CORPORATION, etc. are included in "Others."

# Consolidated Statement of Cash Flows



(¥ million)	FY3/16 1H	FY3/17 1H	FY3/18 1H	FY3/19 1H	FY3/20 1H
<b>Cash flows from operating activities</b>					
Net cash provided by (used in) operating activities	394	604	(1,768)	324	908
Profit before income taxes	1,370	1,331	1,678	1,974	1,998
Depreciation	98	94	84	86	96
Impairment loss	—	9	—	—	—
Loss (gain) on sales and retirement of non-current assets	0	(120)	1	1	0
Increase (decrease) in allowance for doubtful accounts	(0)	3	(1)	0	(0)
Increase (decrease) in retirement benefit liability	(31)	(36)	(28)	(30)	(21)
Increase (decrease) in provision for loss on order received	—	—	55	(11)	—
Interest and dividend income	(11)	(11)	(11)	(12)	(11)
Interest expenses	23	21	18	20	24
Surrender value of insurance policies	—	—	(30)	—	—
Gain on reversal of asset retirement obligations	—	(4)	—	—	—
Loss (gain) on sales of investment securities	(0)	—	—	—	—
Decrease (increase) in trade receivables	575	28	1,545	365	1,455
Decrease (increase) in inventories	(496)	701	(3,010)	(1,409)	(3)
Increase (decrease) in trade payables	(292)	(872)	(916)	(248)	(1,133)
Other, net	(327)	(15)	(567)	76	(481)
Subtotal	907	1,128	(1,181)	813	1,922
Interest and dividends received	12	12	11	12	12
Interest paid	(24)	(20)	(17)	(20)	(24)
Income taxes paid	(501)	(515)	(580)	(480)	(1,001)
<b>Cash flows from investing activities</b>					
Net cash provided by (used in) investing activities	(77)	506	(6)	(292)	(133)
Proceeds from withdrawal of time deposits	—	300	—	70	—
Payments into time deposits	—	—	—	(200)	—
Purchase of investment securities	(26)	(36)	(21)	(15)	(5)
Proceeds from sales of investment securities	0	—	—	—	—
Proceeds from redemption of investment securities	—	100	—	—	—
Proceeds from sales of property, plant and equipment	—	234	—	—	—
Purchase of property, plant and equipment	(35)	(96)	(43)	(111)	(80)
Purchase of intangible assets	(13)	(13)	(24)	(39)	(29)
Proceeds from cancellation of insurance funds	—	—	86	—	—
Other, net	(2)	17	(2)	4	(17)
<b>Cash flows from financing activities</b>					
Net cash provided by (used in) financing activities	223	(940)	1,770	474	179
Net increase (decrease) in short-term borrowings	278	(196)	2,081	252	233
Proceeds from long-term borrowings	500	1,450	500	700	1,250
Repayments of long-term borrowings	(247)	(1,547)	(432)	(893)	(800)
Purchase of treasury shares	(0)	(341)	(0)	—	—
Proceeds from issuance of shares	—	—	—	879	—
Dividends paid	(291)	(290)	(366)	(467)	(485)
Proceeds from share issuance to non-controlling shareholders	—	—	—	15	—
Dividends paid to non-controlling interests	—	—	—	—	(5)
Other, net	(15)	(15)	(12)	(11)	(13)
Effect of exchange rate change on cash and cash equivalents	16	(248)	(16)	(32)	(73)
Net increase (decrease) in cash and cash equivalents	557	(78)	(20)	473	881
Cash and cash equivalents at beginning of period	5,193	5,543	5,375	6,540	7,508
Cash and cash equivalents at end of period	5,751	5,465	5,354	7,013	8,389

# Consolidated Profitability Indicators

(%)	FY3/16 1H	FY3/17 1H	FY3/18 1H	FY3/19 1H	FY3/20 1H
Gross profit on Net sales	10.1	9.2	9.6	10.2	9.9
Operating profit margin	3.2	2.7	3.2	3.5	3.3
Ordinary profit margin	3.1	2.5	3.2	3.5	3.2
Net profit margin	2.0	1.8	2.2	2.3	2.1

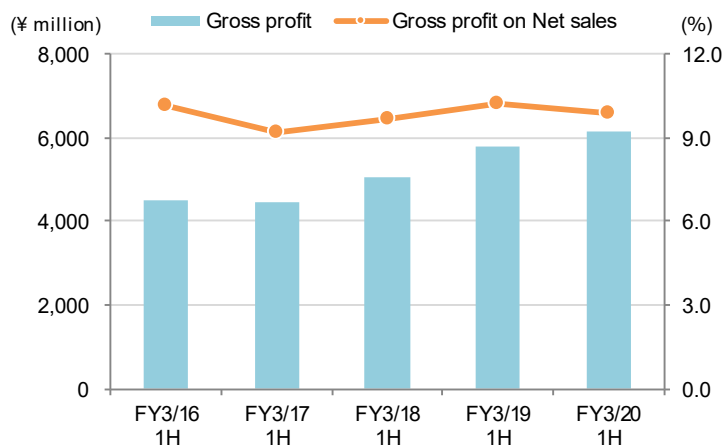
Gross profit on Net sales=Gross profit/Net sales

Operating profit margin=Operating profit/Net sales

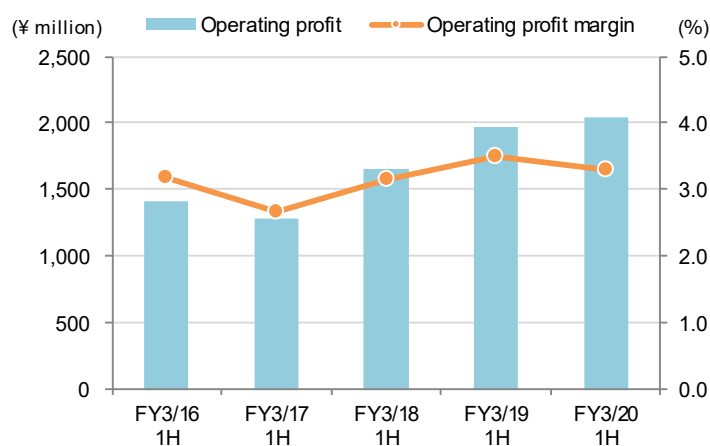
Ordinary profit margin=Ordinary profit/Net sales

Net profit margin=Profit attributable to owners of parent/Net sales

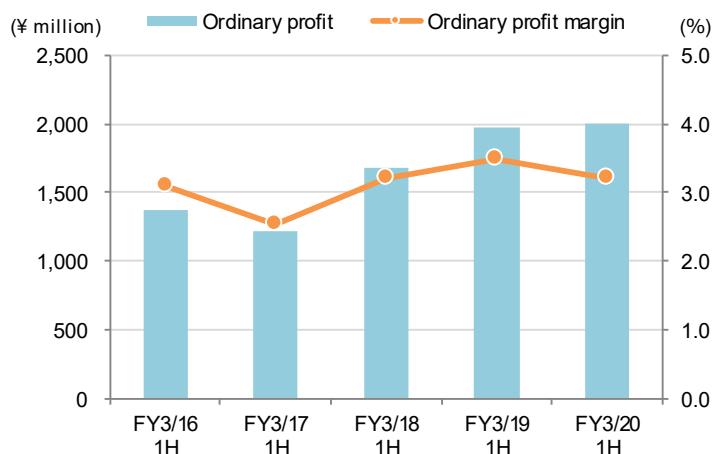
Gross profit on Net sales



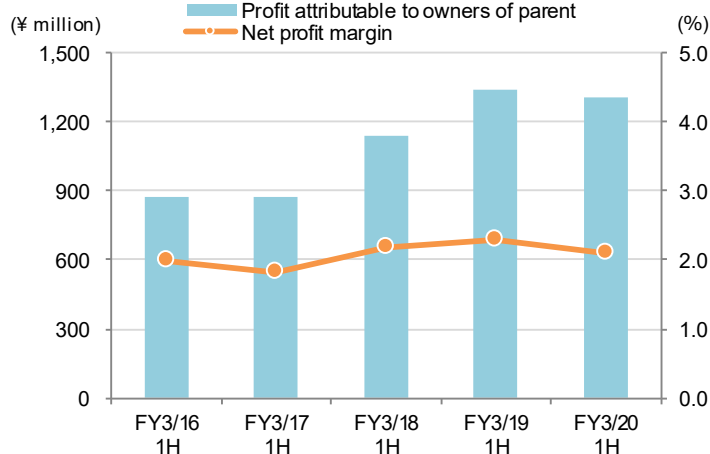
Operating profit margin



Ordinary profit margin



Net profit margin



		FY3/16 1H	FY3/17 1H	FY3/18 1H	FY3/19 1H	FY3/20 1H
Interest coverage ratio	(times)	61.8	61.6	92.3	99.3	85.6
Number of employees at end of period	(persons)	470	496	517	547	581
Number of temporary employees at end of period	(persons)	39	42	42	49	56
Net sales per employee	(¥ thousand)	86,982	89,305	93,696	95,767	97,859
Ordinary profit per employee	(¥ thousand)	2,692	2,260	3,005	3,314	3,141
Net profit per employee	(¥ thousand)	1,719	1,625	2,043	2,242	2,052

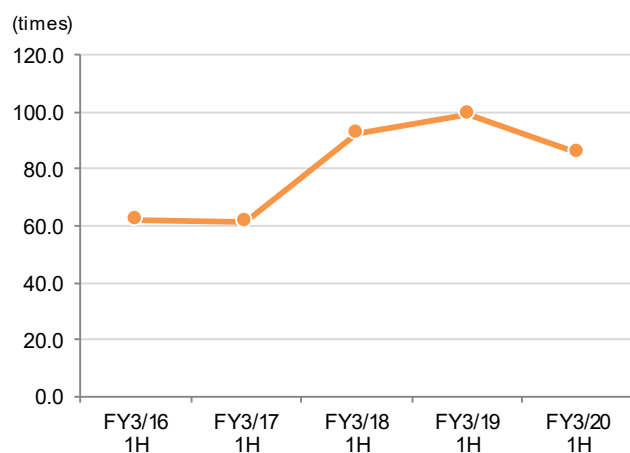
Interest coverage ratio=(Operating profit+Interest income+Dividend income)/Interest expenses

Net sales per employee=Net sales/(No. of employees at end of period+No. of temp. employees at end of period)

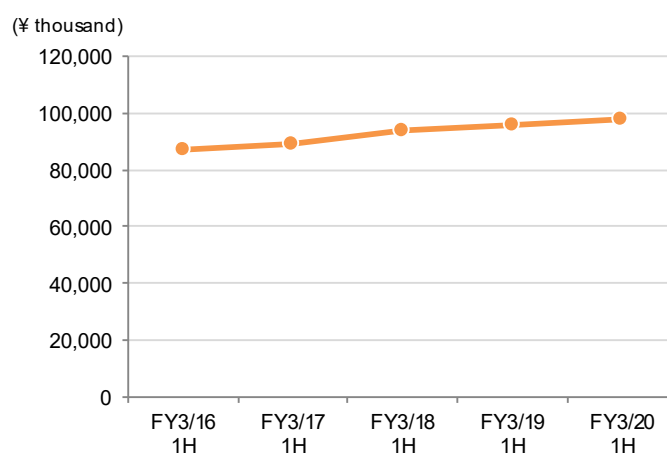
Ordinary profit per employee=Ordinary profit/(No. of employees at end of period+No. of temp. employees at end of period)

Net profit per employee=Profit attributable to owners of parent/(No. of employees at end of period+No. of temp. employees at end of period)

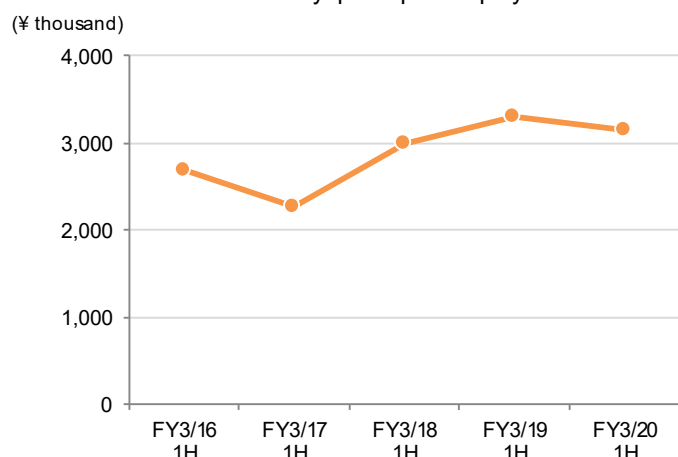
Interest coverage ratio



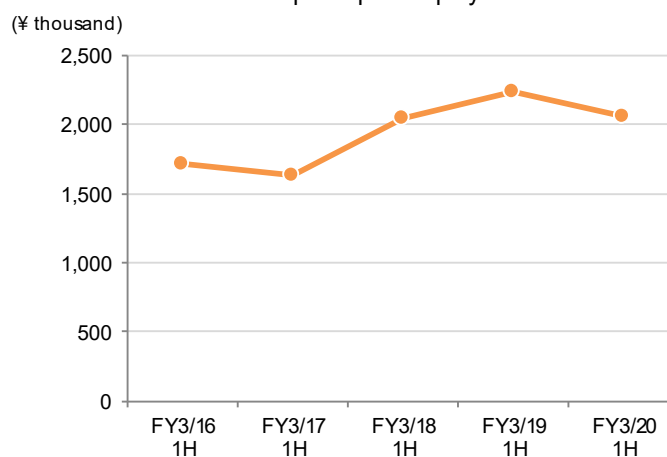
Net sales per employee



Ordinary profit per employee



Net profit per employee





(%)	FY3/16 1H	FY3/17 1H	FY3/18 1H	FY3/19 1H	FY3/20 1H
Equity ratio	50.8	51.2	49.2	51.6	51.7
Interest-bearing debt ratio	19.9	19.0	20.8	19.4	18.0
Acid-test ratio	159.9	170.1	140.4	157.6	185.3
Current ratio	216.0	229.4	204.6	220.5	254.8
Non-current ratio	18.9	17.8	17.7	16.7	15.8
Non-current assets to Non-current liability ratio	16.5	15.1	15.7	14.8	13.5

Equity ratio=Equity/Total assets

Interest-bearing debt ratio=Interest-bearing debt/Total assets

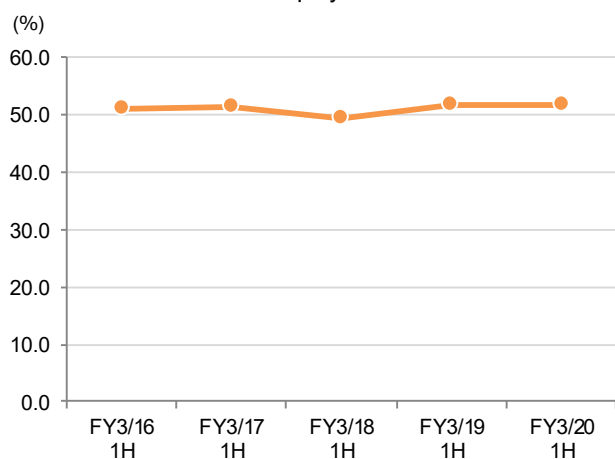
Acid-test ratio=Liquid assets/Current liabilities

Current ratio=Current assets/Current liabilities

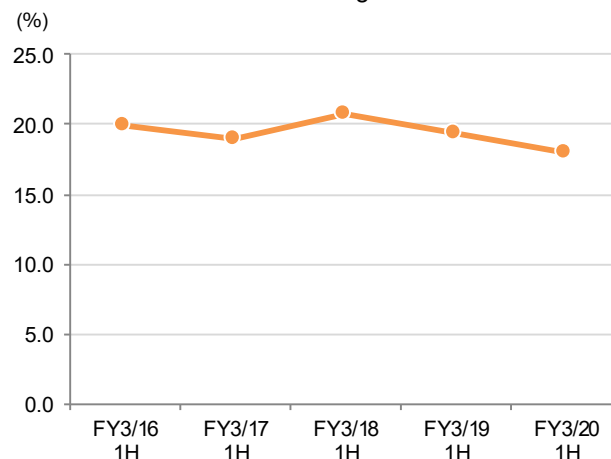
Non-current ratio=Non-current assets/Equity

Non-current assets to Non-current liability ratio=Non-current assets/(Equity+Non-current liabilities)

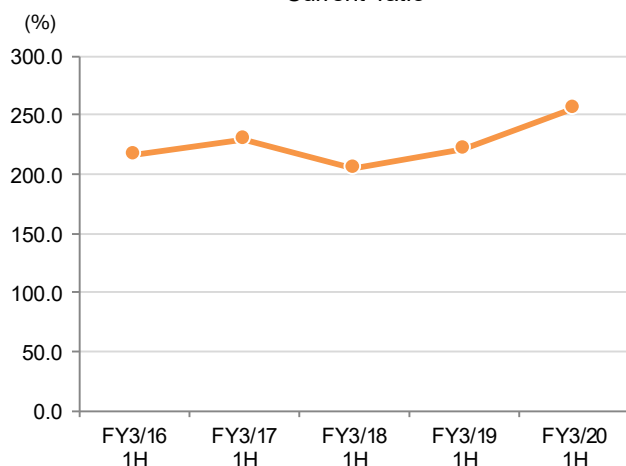
Equity ratio



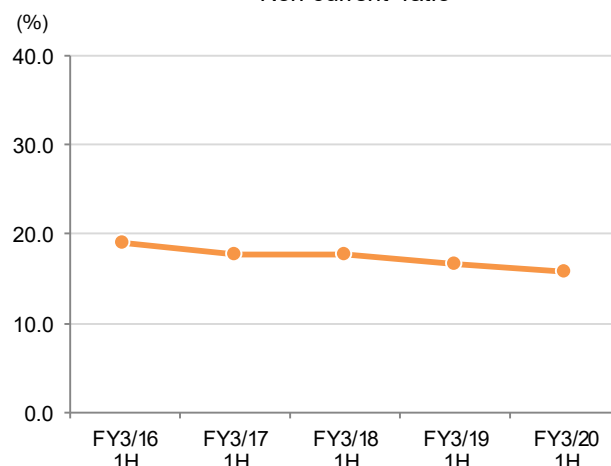
Interest-bearing debt ratio



Current ratio



Non-current ratio



## Per Share Indicators

(¥)	FY3/16 1H	FY3/17 1H	FY3/18 1H	FY3/19 1H	FY3/20 1H
Share price at end of period	1,742	1,839	3,275	3,390	2,680
Closing stock price range for the last 12 months	1,406-2,110	1,667-2,337	1,843-3,275	2,892-3,990	2,557-3,385
Earnings per share (EPS)	105.40	106.43	140.66	153.25	147.98
Dividend per share (DPS)	35.00	35.00	40.00	50.00	50.00

## Other Indicators

		FY3/16 1H	FY3/17 1H	FY3/18 1H	FY3/19 1H	FY3/20 1H
Total amount of dividends	(¥ million)	290	284	325	441	441
Dividend payout ratio	(%)	33.2	32.9	28.4	32.6	33.8
Price earnings ratio (PER)	(times)	8.26	8.64	11.64	11.06	9.06
Term-average number of shares outstanding	(thousand shares)	8,305	8,212	8,125	8,722	8,833
Number of shareholders	(persons)	3,171	3,359	2,840	2,794	2,825

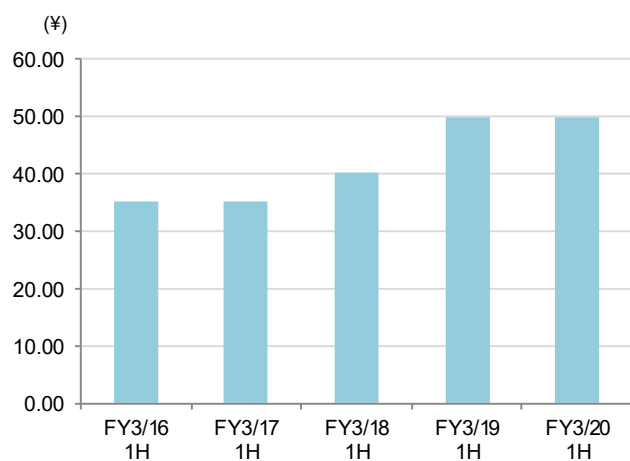
Notes: The Company conducted acquisition of treasury shares through market purchases during the first half of FY3/17.

: The Company issued the share acquisition rights during the second half of FY3/18.

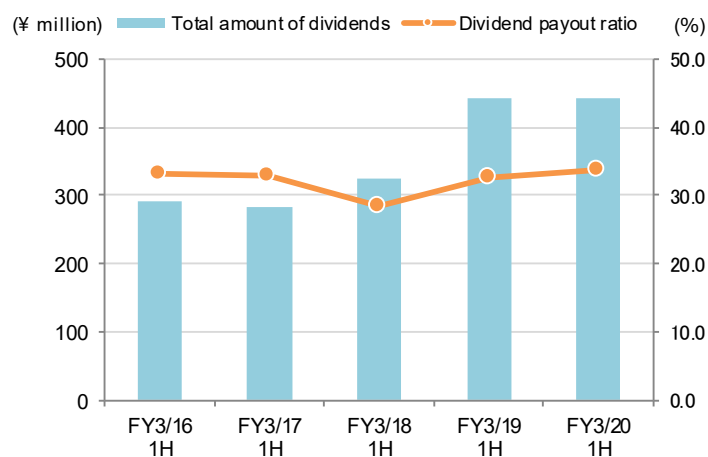
Dividend payout ratio=DPS/EPS

PER=Share price at end of period/EPS\*2

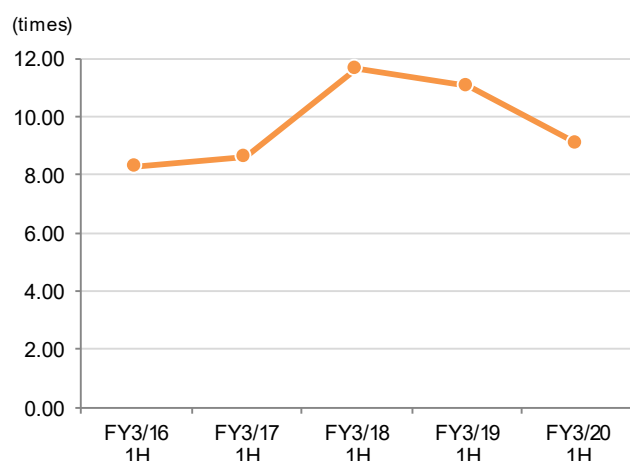
Dividend per share



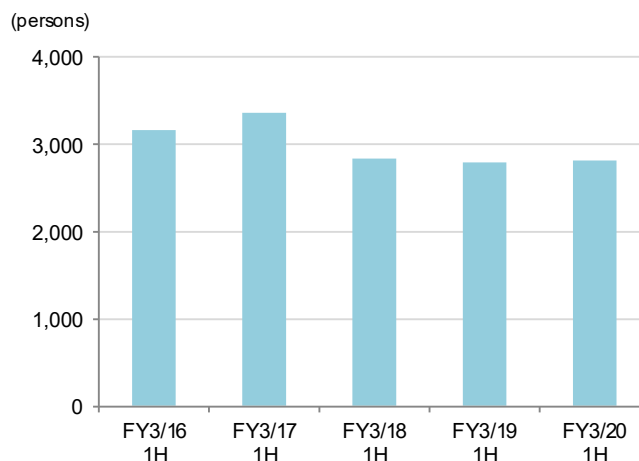
Total amount of dividends/Dividend payout ratio



PER



Number of shareholders



## Status of Major Shareholders

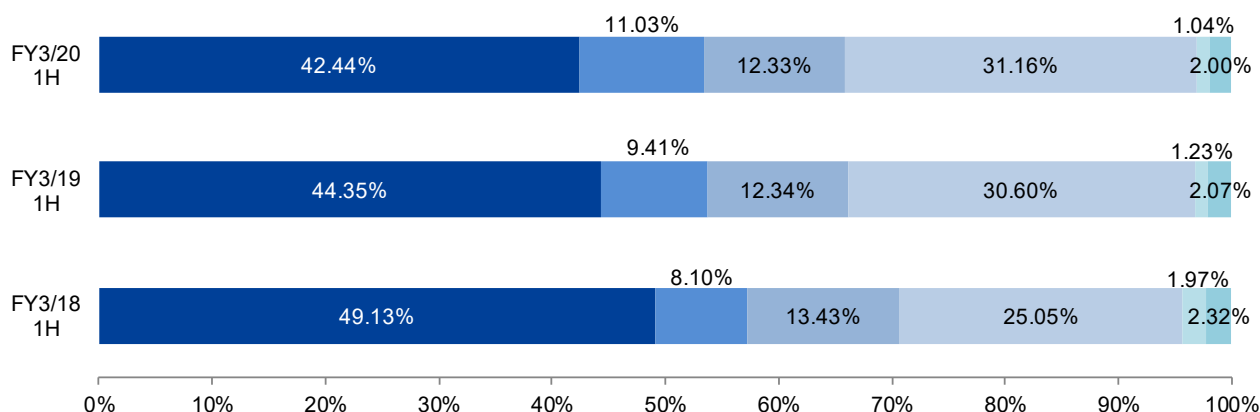
as of September 30, 2019

Top 10 Shareholders	Number of shares	Shareholding ratio (%)
Japan Trustee Services Bank, Ltd. (trust account)	909,800	10.29
STANY Co., Ltd.	495,250	5.60
The Master Trust Bank of Japan, Ltd. (trust account)	426,800	4.83
BBH FOR FIDELITY PURITAN TR: FIDELITY SR INTRINSIC OPPORTUNITIES FUND	350,000	3.96
Tomoaki Hagiwara	336,400	3.81
Yoshiaki Hagiwara	248,175	2.81
Employees' Stockholding	240,074	2.72
MUFG Bank, Ltd.	232,500	2.63
Nagoya Small and Medium Business Investment & Consultation Co., Ltd.	230,000	2.60
Trust & Custody Services Bank, Ltd. (securities investment trust account)	221,200	2.50

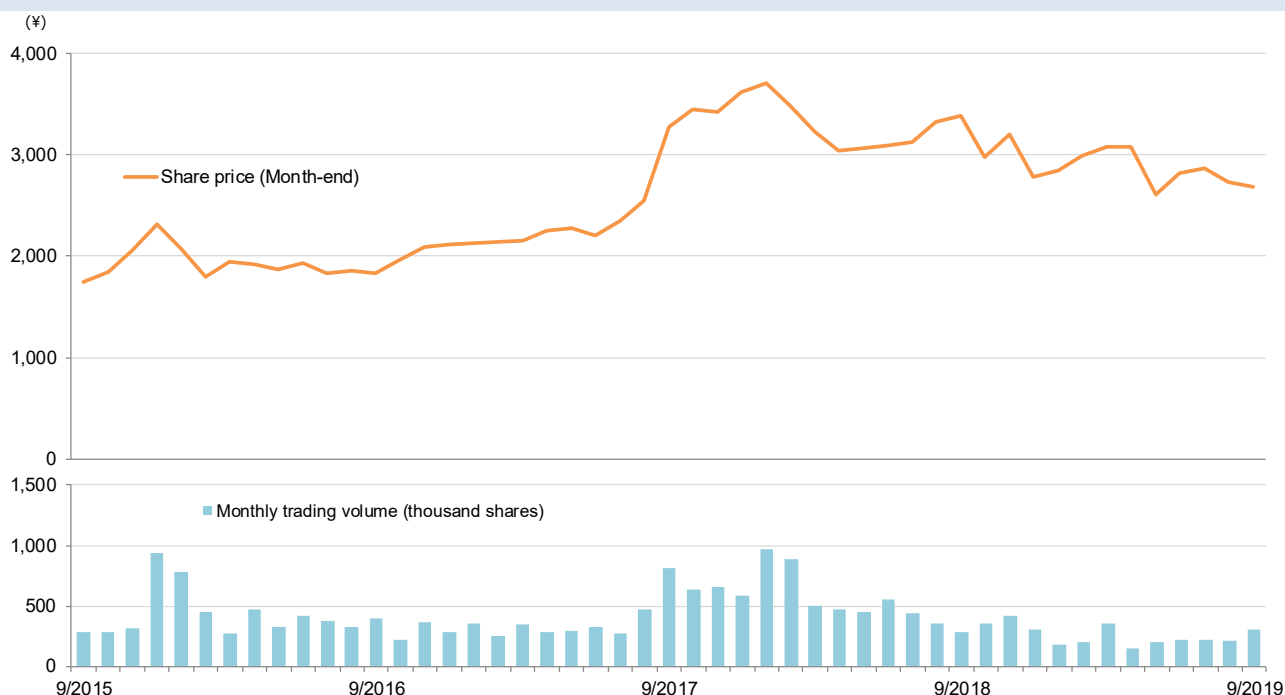
Note: Shareholding ratio is calculated excluding treasury shares (180,644 shares).

## Breakdown of Type of Shareholders

- Individuals and others
- Foreign institutions and others
- Other Japanese companies
- Financial institutions
- Financial instruments business operators
- Treasury shares



## Share Price and Trading Volume



## Our vision is to be a global supplier of one-stop solutions providing our customers with the best practices from devices to systems.

The foundation of our corporate activities is to prioritize our customers' perspective. We not only meet our customers' needs, but we exceed their expectations by using our knowledge as a trading company to make proposals and leverage our proven technologies to deliver the best solution. The Hagiwara Electric Group works as one to fulfill its role and

mission as a technology-related trading company. We contribute to the achievement of a prosperous society by creating technological bases to support our electronic devices business, technology solutions business, and overseas business expansion, through which we create solutions that add new value and create greater opportunities for success in all fields.



### Electronic Devices Business Supporting the Automotive Society of Tomorrow

#### Crafting the automobile of tomorrow as a universal device specialist

The automotive industry has entered a period of rapid change. As the speed of development has accelerated, there have been revolutionary innovations in automotive technologies, from electric vehicles (EV) to advanced driver-assistance systems (ADAS). Hagiwara Electric Holdings strives to further these advancements, by providing state-of-the-art device solutions to the automotive society of tomorrow, which transcend conventional concepts.

### Overseas Business Expansion Supporting Your Global Expansion

#### One-stop solutions to connect manufacturing across the globe

The Hagiwara Electric Group supports the globalization of manufacturing by actively promoting overseas expansion. We currently have a worldwide network originating in Japan and covering North America, Asia and Europe. By utilizing the group know-how and resources of our local bases, we are able to provide the same level of support for customers engaged in overseas manufacturing operations as for customers operating in Japan.

### Technology Solutions Business Supporting the IoT Society for Tomorrow

#### Expanding tomorrow's potential with IoT to realize a society where data and information are connected

We provide one-stop IoT solutions to realize a "connected society" by fusing and growing factory automation (FA) and other technologies for measurement and IT cultivated on the factory floor.

### Technological Base Supporting Hagiwara Electric Technologies

#### Creating new value in society with the power of technology

From development of original component technologies to applied technology and cutting-edge technology, we actively pursue new potential and functional diversity in addition to seeking new technologies. We create new value in society by being responsive to the expanding markets of many different industries, while at the same time, using our strengths to support the business of Hagiwara Electric Group.

## Electronic Devices Business

### Crafting the automobile of tomorrow as a universal device specialist

The automotive industry has entered a period of rapid change. As the speed of development has accelerated, there have been revolutionary innovations in automotive technologies, from electric vehicles (EV) to advanced driver-assistance systems (ADAS). Hagiwara Electric Holdings strives to further these advancements, by providing state-of-the-art device solutions to the automotive society of tomorrow, which transcend conventional concepts.

#### Business Domains

Contributing to the automotive society of tomorrow, transitioning beyond conventional concepts, by providing the cutting edge solutions



#### Supporting the Latest Innovations

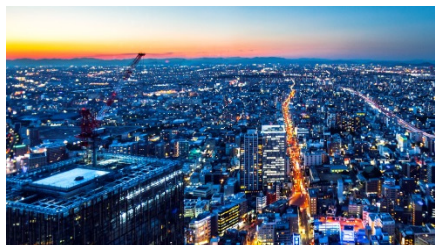
##### Internal vehicle devices

The safety and comfort of one's car is paramount to a relaxed and enjoyable driving experience. We handle a diverse selection of electronic devices that support these developments. What's more, our team is equipped to provide a personalized experience with advanced device solutions. Our specialists are experienced in developing new cutting edge products that are customized and tailored to suit your company's needs.

##### Embedded software development

With the increasing usage of electronics in vehicles, the demand for microcontrollers has increased.

To meet this ever increasing demand, we are developing improved software to advance the quality and performance of automotive microcontrollers.



#### Supporting the Evolution of Industry

##### Devices for industry and social infrastructure

As automation and motorization expand, so too does the technology used in our daily lives. The electronic devices we supply support these developments and allow us to respond quickly to our customers' needs in a variety of fields even as the global demand outgrows production.

## Features of Electronic Devices Business

### 1. The Hagiwara of Cars

**A wealth of achievements in the automotive industry especially in the Chubu region**

The Hagiwara Electric Group is based in Nagoya, where the world's top automobile and auto parts manufacturers are located. When the Hagiwara Electric Group was founded, we put down roots in the Chubu region, where we have been able to create and foster close relationships with our customers. These relationships have been cultivated over many years and at their cores are built on trust. This has allowed us to gather the latest knowledge about industry trends as well as accumulate the latest and most advanced technology available with which the cars of the future will be fashioned.

### 2. The Hagiwara of Solutions

**Established partnerships with global leaders and drivers of growth**

The partnerships we promote are those that will benefit our customers and provide us the tools to resolve any issues they might face. With a focus on long-established global brands, we are always in pursuit of manufacturers who will be the leaders of the next generation. This commitment to coordinating and selecting only the best assists us in providing our customers with most innovative solutions available.

### 3. The Hagiwara of Technological Strengths

**Our efforts in the field of hardware development and EMS/ODM**

In recent years, semiconductors such as LSIs with integrated functionality have become mainstream. The Hagiwara Electric Group utilizes its technological strengths to support the functional development of semiconductors as well as the incorporation of "plus alpha" functions into general purpose products. Due to our advancements in software creation and design, we are able to provide electronics manufacturing services (EMS) and original design manufacturing (ODM).

### 4. The Hagiwara That Is Everywhere in Society

**A presence in multiple fields including industry, robots, housing equipment, and nursing care**

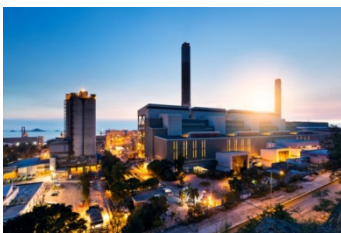
Device solutions from the Hagiwara Electric Group are utilized in factories to accelerate factory automation (FA). Additionally, our solutions are used in both the housing equipment field and the nursing care field. Our cutting-edge inventory of electronic components and ability to propose solutions support automation and motorization, bringing more convenience to our lives.

## Technology Solutions Business

### Expanding tomorrow's potential with IoT to realize a society where data and information are connected

We provide one-stop IoT solutions to realize a "connected society" by fusing and growing factory automation (FA) and other technologies for measurement and IT cultivated on the factory floor.

#### Solutions for Every Area



#### Features of Technology Solutions Business

##### 1. Trading Company with Manufacturing Functions

Partnerships with a variety of manufacturers and our own manufacturing function

In addition to the major manufacturers we have been working with for many years, we also actively collaborate with leading manufacturers across the globe. We assist our customers in finding state-of-the-art technologies and products that suit them. We also have a manufacturing arm where we develop and manufacture our own original products. We resolve the issues faced by our customers through our commitment to quality and meticulous support.

##### 2. Achievements in Industry

A wealth of achievements at auto factories and other production sites especially in the Chubu region

The Chubu region is where many world-class automobile manufacturers and automobile parts manufacturers have their production bases. The region is also playing host to an increasing number of companies engaged in manufacturing equipment for production facilities such as machine tools. Headquartered in Nagoya—the heart of the Chubu—the Hagiwara Electric Group has a proven track record in production site-related business. We are also leveraging these achievements to develop a wide range of solutions in various other fields such as IT and security.

##### 3. Looking Ahead and Being a Pioneer

Using our technological strengths stay new and on trend

From selling computers and servers to building networks and IT platforms, we have always used state-of-the-art and trending technologies such as measurement solutions that support model-based development. We will continue to use our proven, extensive technological resources to seek new technologies that will form the foundation of the next generation.

##### 4. Widely Connected IoT

Achieving a connected IoT where data is gathered from machines and objects and then analyzed

We can capture data from various machines and objects by utilizing our achievements in IT, embedded devices, measurement and other areas of factory automation (FA). The Internet of Things (IoT) will transform accumulated data into meaningful information that will create new value. With data collection and analysis based IoT, we can provide a one-stop solution encompassing the entire process from beginning to end. This is our strength.

## Overseas Business Expansion

### One-stop solutions to connect manufacturing across the globe

The Hagiwara Electric Group supports the globalization of manufacturing by actively promoting overseas expansion. We currently have a worldwide network originating in Japan and covering North America, Asia and Europe. By utilizing the group know-how and resources of our local bases, we are able to provide the same level of support for customers engaged in overseas manufacturing operations as for customers operating in Japan. Our goal is to strengthen the development support system of local subsidiaries by implementing measures such as stationing engineers at each location. This allows us to contribute to the creation and expansion of global markets with our customers while at the same time developing new products and new businesses.

## Approach to Overseas Business

- Meeting the global needs of Japanese companies
- Proposing Solutions That Correspond with Local Needs
- Expanding Our Overseas Network
- Business localization
- Enhancing development and design
- Creating new markets

## Technological Base

### Creating new value in society with the power of technology

From development of original component technologies to applied technology and cutting-edge technology, we actively pursue new potential and functional diversity in addition to seeking new technologies. We create new value in society by being responsive to the expanding markets of many different industries, while at the same time, using our strengths to support the business of Hagiwara Electric Group.

## Hagiwara Electric's Strengths



The Hagiwara Electric Group's strength lies in the ability to use our technological advantages to provide solutions for issues and challenges faced by our customers. Our technologies are largely divided into support technology and development technology, and at the heart of both of these is our component technology and experience. Electronic products are becoming increasingly sophisticated and complex. What is needed now is not only product lineup, but also the ability to support all the technical aspects of a customer's project by utilizing expertise in each field of the customer's business. Utilizing our proven track record and the experience we have accrued, we serve the role of a bridge between suppliers and customers. Our competencies translate into an ability to support our customers' product development and to help their business succeed. At the heart of our ability to provide solutions is the technological strength of the Hagiwara Electric Group and we will further enhance it as a horizontally interconnected foundation that supports the entire Group.

## Our Technologies

### Examples of Support Technologies

#### Support for Component Selection

- Introduction of new products from manufacturing partners
- Provision of the latest product information and technical trends
- Assistance in new product evaluation and comparative evaluation of parts

#### Development Support for Customers

- Support for advance development of embedded systems
- Support for development of embedded software and hardware mass production
- Support for constructing IT and other systems (system integrator)
- Introduction of partner companies that can perform development and evaluation

#### Support for Failure Analysis

- Cooperation in failure classification, reproduction testing and analysis
- Follow up on failure analysis in collaboration with manufacturing partners

### Examples of Development Technologies

#### Contracted Development of Embedded Systems

- Embedded software development and evaluation
- Development of embedded system hardware
- Circuit design and evaluation of system LSIs and ICs

#### Contracted Development Related to IT Solutions

- IoT-related system development
- System development for production management systems, etc.
- Construction of various FA and measurement systems

#### Establishment of Evaluation Environments and Contracted Development of Component Technologies for Automated Driving and Other Systems

- Acquisition of car driving video and data tagging
- Image processing that can be applied to electronic mirrors and peripheral monitoring
- Implementation of new algorithms in embedded systems

## HAGIWARA ELECTRONICS CO., LTD.



**Hagiwara Electronics' mission is to continually pursue new areas of business while supporting this period of innovation in the automotive society.**

Name of Company	HAGIWARA ELECTRONICS CO., LTD.
Location	Takaoka Park Building, 2-2-1 Higashi Sakura, Higashi-ku, Nagoya-shi, Aichi
Representative	Takehiko Mori, President and Representative Director
Established	May 1, 2017 (Business operation commenced on April 1, 2018)
Share Capital	1,310 million yen
Major Business	Sale of integrated circuits, semiconductors and electron devices

## HAGIWARA TECHNO SOLUTIONS CO., LTD.



**Hagiwara Techno Solutions' mission is to contribute to factories that enable more efficient manufacturing by realizing traceability using factory IoT.**

Name of Company	HAGIWARA TECHNO SOLUTIONS CO., LTD.
Location	Takaoka KANAME Building, 2-28-23 Izumi, Higashi-ku, Nagoya-shi, Aichi
Representative	Kazunari Shiraki, President and Representative Director
Established	May 1, 2017 (Business operation commenced on April 1, 2018)
Share Capital	310 million yen
Major Business	Sale of electronic equipment and manufacture and sale of FA equipment

## HAGIWARA HOKUTO TECHNO CO., LTD.

Name of Company	HAGIWARA HOKUTO TECHNO CO., LTD.
Location	Takaoka Park Building, 2-2-1 Higashi Sakura, Higashi-ku, Nagoya-shi, Aichi
Representative	Koji Fujita, President and Representative Director
Established	April 2, 2018
Share Capital	45 million yen
Equity ownership ratio	HAGIWARA ELECTRONICS CO., LTD.: 66.56% Hokuto System Co., Ltd.: 33.44%
Major Business	Consignment and services related to in-vehicle software verification and development

## X-Base Co., Ltd.

Name of Company	X-Base Co., Ltd.
Location	Takaoka Park Building, 2-2-1 Higashi Sakura, Higashi-ku, Nagoya-shi, Aichi
Representative	Yozo Terano, President and Representative Director
Established	August 1, 2018
Share Capital	70 million yen
Major Business	Planning, development and operation of applied service of cutting-edge technology centering on block chains







Contact

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