COMPANY RESEARCH AND ANALYSIS REPORT

Hagihara Industries Inc.

7856

Tokyo Stock Exchange First Section

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Index

Information security Summary

Taking a strategy of implementing “Brave Challenge and New Hagihara Dynamism”

Hagihara Industries Inc. <7856> (hereafter, also “the Company”) sets the slogan in its current three-year medium-term management plan of “Dynamic HAGIHARA 56 (DH56) Dynamic Brave Challenge and New Hagihara Dynamism” that inherits the pioneering spirit of its founder of “That sounds interesting…let’s try it right away.” Rather than trying to only compete on price in existing markets, the Company is taking a Blue Ocean strategy of opening-up new markets and developing new products, and acquiring market share in fields that other companies are not working on or by utilizing its strengths. On entering this year, it has been actively taking various measures, including conducting two M&As.

1. In FY10/18 1H, ordinary income declined 5.1% YoY due to the lag in passing higher costs onto prices and for accounting reasons

In FY10/18 1H, net sales increased 9.4% year-on-year (YoY), but ordinary income decreased 5.1%. The operating income margin was 11.2%, and the high level of income was maintained. The decline in income was due to the fact that some of the transfer of the soaring prices of raw materials onto prices was pushed-back until the 2H and also due to accounting reasons following the acquisition of a sales agency and it being made a subsidiary. On a stand-alone basis, net sales and ordinary income were both new record highs for a first half.

2. For the FY10/18 full year, has left unchanged the initial forecast of record high income

For the FY10/18 consolidated results, the Company has left unchanged the initial forecasts, of net sales to increase 5.4% YoY to ¥24,500mn and ordinary income to rise 1.7% ¥2,800mn. If it achieves them, both net sales and ordinary income will be new record highs. However, the soaring price of domestically produced naphtha, which is the main raw material, and the rise in transportation costs, will put downward pressure on income in the plastic processed products business. The Company’s basic policy is to transfer the increase in costs onto sales prices, but there are concerns that profitability will temporarily worsen due to the time lag in doing so. On the other hand, the conditions in the machinery products business are excellent, as production cannot keep pace with the strong demand and the backlog of orders is accumulating. So this business will compensate for the slump in the plastic processed products business.

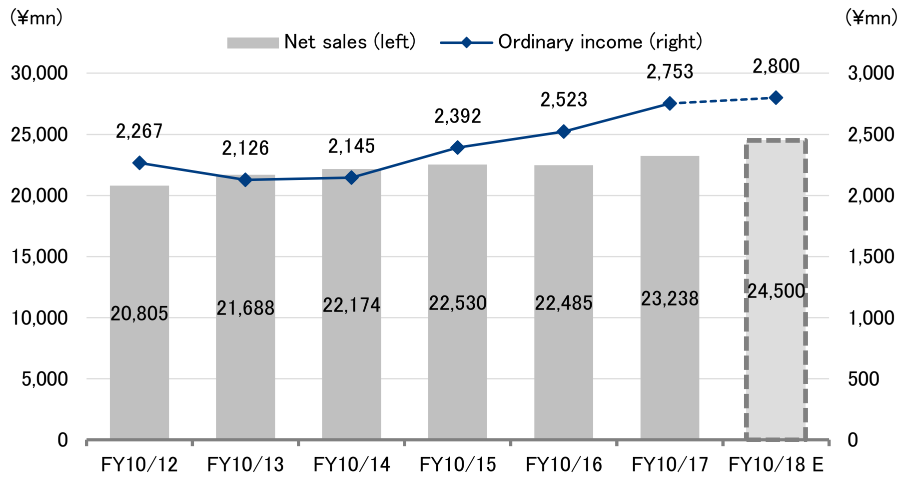
3. On entering 2018, has implemented two M&As domestically and overseas for the plastic processed products business

On entering 2018, the Company has implemented two M&As domestically and overseas for the plastic processed products business. In February, as one part of its measures to strengthen overseas sales of BarChip, it acquired all of the shares of EPC Holdings (Singapore), which was the Company’s sales agency, for ¥1,445mn and made it a subsidiary. Through integrating production and sales, it is aiming to develop strategic sales, including for price negotiations. It will also feed-back the needs from final customers into technologies and product development. Next, in the middle of July it acquired Toyo Heisei Polymer Co., Ltd., which conducts a plastic films business, for ¥1,130mn, and made it a subsidiary. Its business partially overlaps with that of the Company, but it is also involved in fields that the Company is not involved in, including medical infusion bags, and the markets are expanding. Both companies are profitable. These M&As were anticipated within the current medium-term management and were carried out after careful consideration.

Key Points

- In FY10/18 1H, ordinary income declined 5.1% YoY due to temporary factors
- Has left unchanged the full fiscal year forecast for record high income in FY10/18
- Domestically and overseas, is acquiring companies related to its plastic processed products business

Trends in consolidated net sales and ordinary income



Source: Prepared by FISCO from the Company's financial results

Company profile

Conducts management based on the pioneering spirit of "Constantly aim for the innovative and creative enterprise"

1. Company profile

Hagihara Industries, whose Head Office is in Kurashiki City, Okayama Prefecture, is a manufacturer of plastic processed products and machinery products. It pursues profitability rather than scale, and it is a highly profitable company with each of ROE, ROA, and the operating income margin exceeding 10% in FY10/17. It conducts businesses for industrial machinery that apply its core technologies of "cutting," "stretching," and "winding" that it has cultivated through the production of plastic processed products using flat yarn and flat yarn manufacturing. It is the only manufacturer within Japan that conducts operations from raw materials through to sheet manufacturing, and one of the Company's features is that it has an Engineering Division that conducts the machinery products business.

With the motto of "Constantly aim for the innovative and creative enterprise," the Company conducts business full of a pioneering spirit. The pioneering spirit of its founder of "That sounds interesting…let's try it right away" is continued in the slogan of the current medium-term management plan (FY10/16 to FY10/18), of "Dynamic HAGIHARA 56 (DH56) Brave Challenge and New Hagihara Dynamism."

2. History

The Company was established in 1962 in Mizushima, Kurashiki City, Okayama Prefecture, for the production and sales of polyethylene monofilament for tatami-mat called a ‘hana goza.’ Flat yarn is the name of the yarn made from polyethylene and polypropylene being cut into strips, and it is strong from being stretchable.

Typical products made from weaving flat yarn and applying laminate processing include familiar ones, such as leisure sheets and blue (tarpee) sheets. In addition, flat yarn is the material used for the Handy Mop. Baseball stadium artificial grass and other products are made from monofilament. The Company is the leading manufacture in Japan of blue sheets and the material for artificial grass. However, the main markets it targets are materials for construction and civil engineering, industry, and agriculture.

In 2000, the Company was listed on the Osaka Stock Exchange (OSE) Second Section, and has been a listed company for 18 years. In May 2014, its listing was upgraded from the Tokyo Stock Exchange (TSE) Second Section to the TSE First Section.

History

1962	Hagihara Industries was established by Yuichi Hagihara the Second, for the manufacture of PE monofilament for tatami-mat vertical yarn.
1964	Developed flat yarn.
1965	Innovated the production of flat yarn. Acquired a patent for a hot-plate stretching method.
1966	Exported flat yarn production equipment to Taiwan for the first time.
1970	Completed the Kasaoka factory. Opened the Tokyo sales office.
1974	Established a new production factory that integrating the weaving and laminating of blue sheet (tarpee sheet) yarn.
1976	Exported a large-scale plant for the complete manufacture of bags to an Indonesian, state-owned fertilizer company.
1980	Completed an unmanned processing machine for sandbags. Completed a tarpee-sheet labor-saving processing machine.
1981	Expanded exports of high performance, flat yarn manufacturing-related machinery. Within the site of the Head Office, newly established a carpet secondary lining (tough bag) manufacturing factory.
1986	Implemented the laminate tandem system at the tarpee factory.
1989	Completed the carpet base cloth integrated factory.
1991	Opened the Distribution Center in Kurashiki City, Okayama Prefecture.
1994	Market launched a paper slitter.
1995	Established an Indonesian subsidiary (currently, P.T. HAGIHARA WESTJAVA INDUSTRIES). Made a subsidiary of laminated cloth company Kakosenshinseishokufu Co., Ltd. (currently, Japan Fabweld Co, Ltd.).
1996	Completed the Kayo factory to compete with imported goods. Market launched Barchip F.
1999	Transferred the flat yarn and monofilament-related business from Taniyama Chemical Industry Co., Ltd.
2000	Listed on the OSE Second Section.
2001	Listed on the TSE Second Section.
2002	Established a subsidiary in Qingdao, China, to manufacture and sell plastic processed products
2003	Started the ERP software SAP R/3.
2004	Acquired the ISO9001: 2000 certification. Awarded the TPM Excellence Award, 1st Class.
2005	Established the Shanghai subsidiary (Hagihara Machinery (Shanghai) Co., Ltd.) (machine design, parts procurement and assembly).
2009	Rebuilt the Kayo factory to respond to the Lehman Shock.
2010	Acquired the ISO9001: 2008 certification. Conducted a capital increase through a public third-party allotment
2012	The Indonesia subsidiary completed the second factory.
2014	Listing upgraded to the TSE First Section.
2018	Acquired all the shares and made a subsidiary of EPC Holdings (Singapore), its BarChip overseas sales agency. Acquired all the shares and made a subsidiary of Toyo Heisei Polymer (Kochi City, Kochi Prefecture).

Source: Prepared by FISCO from the Company's materials

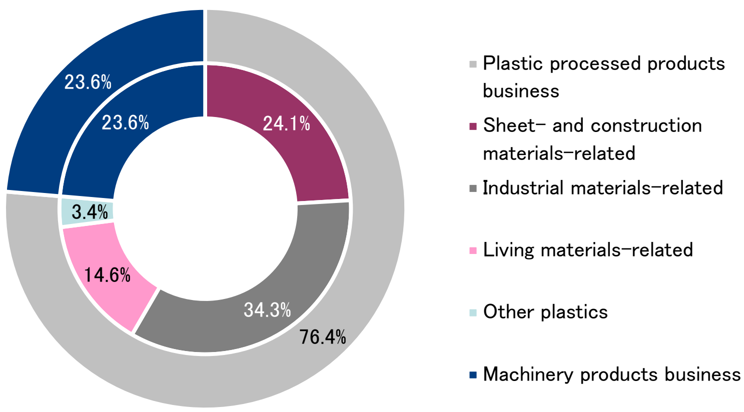
Business overview

Has built a highly profitable business model that does not start and end with price competition

1. Business overview

Sales are from two businesses: the plastic processed products business for the manufacture and sale of related products using plastics, including flat yarn; and the machinery products (engineering) business for the manufacture and sale of industry machinery that adopts its core flat yarn technologies. In FY10/17, the percentages of total consolidated net sales (¥23,238mn) by business were that the plastic processed products business contributed 76.4% (within which, sheet and construction materials-related: 24.1%, industrial materials-related: 34.3%, living materials-related: 14.6%, and other plastics: 3.4%), while the machinery products business contributed 23.6%. The operating income margin is high in both businesses, 12.1% in the plastic processed products business and 10.6% in the machinery products business.

Percentages of total net sales by business (FY10/17: ¥23,238mn)



Source: Prepared by FISCO from the Company's results briefing materials

2. Product lineup

The markets covered by the Company's plastic processed products business are "living and leisure," "agriculture and fishery," "packaging and distribution," "industrial materials," and "construction and civil engineering." Products for living include leisure sheets, artificial grass, and wood-pattern mats. Sales are more dependent on B-to-B than on B-to-C.

Product lineup

Living and leisure	Agriculture and fishery : Black-out cloth for poultry sheds	Packaging and distribution
Leisure sheets Hibikan Zo Lite Artificial grass Wood-pattern mats	UV sheets Snowtex (for houses) Snowtex (for reflection) Black-out cloth for	Adhesive tape cloth Container bags Truck sheets

Industrial materials : Flat yarn & monofilament-derived yarn	Construction and civil : Design sheets	Machinery
UV clear sheets Barchip M Flat yarn & monofilament-	Fireproof sheets Soft-mesh sheets Large sandbags Design sheetsト	Slitters Inspection devices Winders Recycled pellet manufacturing equipment

Source: Prepared by FISCO from the Company's materials

Products for agriculture and fishery include UV sheets, functional products, and black-out cloth for poultry sheds. Functional products are designed to have various functions depending on their intended use, such as light shielding and lighting functions, waterproofing and water permeability functions, wind-proofing and breathability functions, and a thermal insulation function. Products for the packaging and distribution market include adhesive tape cloth, container bags, and truck sheets. A feature of adhesive tape cloth, for which the Company has the leading market share, is that the tape is easy to cut, so it can be cut into sizes to suit the application, both vertically and horizontally. Industrial materials include UV clear sheets, flat yarn, and monofilament-derived yarn.

Products for construction and civil engineering include fireproof sheets, soft-mesh sheets, large sandbags, and design sheets. PE (polyethylene) fireproof sheets and cloth are light compared to PVC products and have superior strength and optical transparency. As they are used at construction sites, being light improves work efficiency and contributes to reducing the construction period. It also reduces the labor of workers and transportation costs. In addition to being a fireproof material, they do not generate chlorinated dioxins when they are incinerated. Soundproofing sheets, which are used for demolition work and other purposes, use an olefin material that, compared to PVC products, is less prone to deterioration and hardening at work sites, even in cold locations and other severe environments. They are also lighter than PVC sheets, so have a work-reduction effect. For sandbags, the Company has a lineup of products that realize the highest level of durability among domestically produced items, of approximately three years. Also, for its sandbags, to which it has added an ultraviolet deterioration inhibitor and which are weather resistant in the medium term (about two years), the Company utilizes a technique of placing a black horizontal line on a white background so that anyone can fill the bags with an equal amount of soil or sand.

The Company is constantly launching new products that enhance the functionality of the conventional product lineup. The civil engineering-use Ground Barrier Cloth, which combines breathability and water permeability, prevents the development and growth of weeds, so reduces weeding work. It is installed in various facilities, such as solar power generation systems.

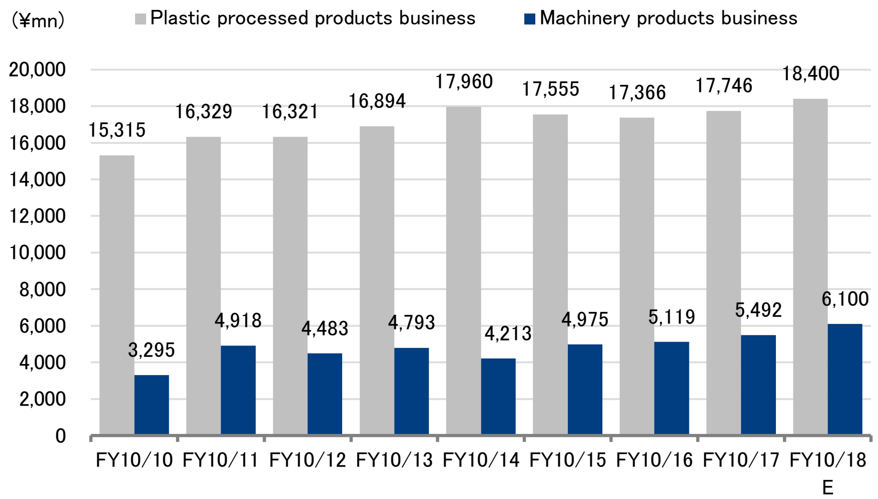
3. Management that prioritizes profitability

The Company achieves high profits by avoiding price competition in the commoditized products market and maintaining leading shares in niche markets in which there are no new entrants. It has the leading shares for products including pile yarn for artificial grass, multifunctional blue sheets, sandbags, and carpet base cloth. It also has the leading share globally of polypropylene reinforcing fiber for mortar and concrete, which will be described later. Rather than in large markets with fierce competition, it is taking a Blue Ocean strategy of targeting niche markets in which it can obtain the survivor advantage and demonstrate its strengths.

The Company's business stance is not to sell products' functions, but to provide their essential roles. For example, rather than the cost of the adhesive tape, what is important to a transportation company is the personnel expenses of workers and reducing the packaging-work time, so the Company develops and provides products that increase the efficiency of workers. Products that have been adapted according to what customers require as their essential roles can be priced 20% to 30% higher than general-purpose products. By being orientated to the essential value required by customers ahead of these products' functions, the Company is building a highly profitable business model that does not begin and end with price competition.

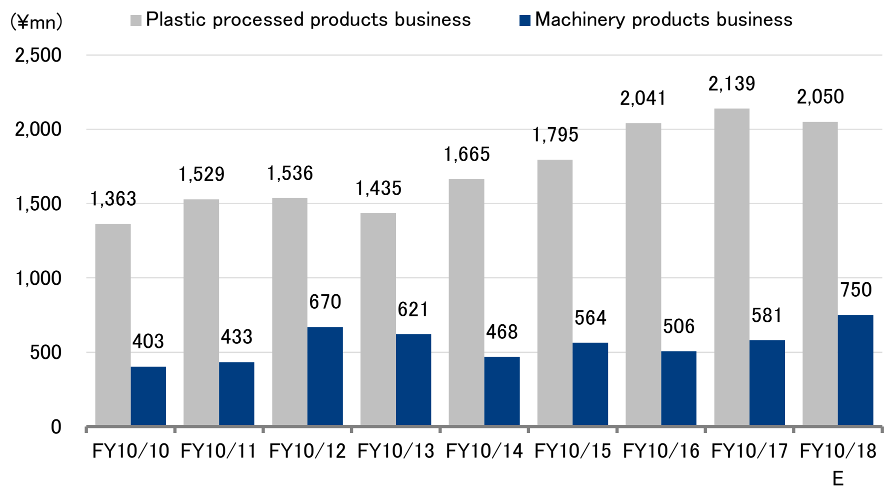
In the past, the Company's results deteriorated during the time of the negative economy due to the collapse of the economic bubble, but it recovered quickly. In FY10/09, which followed the Lehman Shock in September 2008, net sales declined 22.5% YoY and operating income fell 41.0%. But by responding quickly to changes in the business environment, in FY10/10 it achieved a V-shaped recovery, with net sales increasing 1.3% and operating income rising 52.6%. It takes a strategy of positioning as the strategic products group those products that are strongly competitive and highly profitable, and then working to raise the percentage of total sales provided by them.

Trends in net sales by business



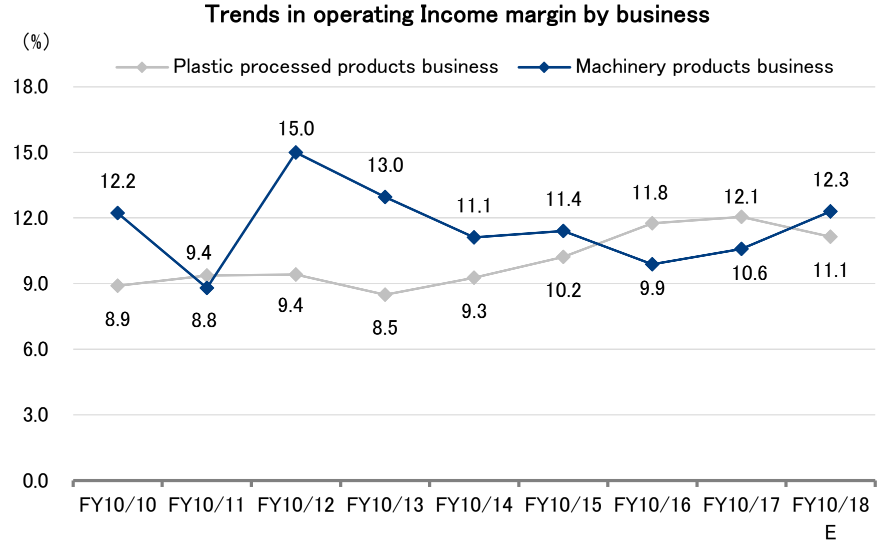
Source: Prepared by FISCO from the Company's financial results

Trend in operating income by business



Source: Prepared by FISCO from the Company's financial results

Trends in operating Income margin by business



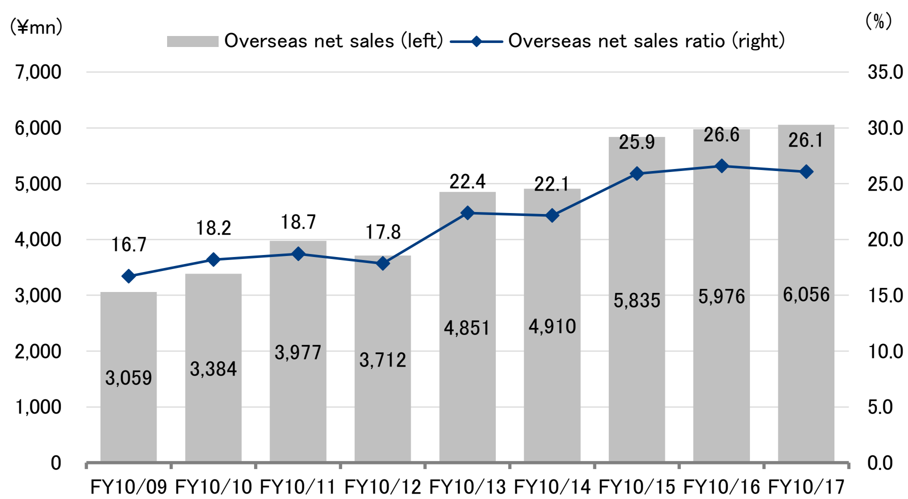
Source: Prepared by FISCO from the Company's financial results

4. Overseas business development

In the fourth year after its establishment, the Company exported flat yarn manufacturing equipment. In 1976, it exported a complete bag manufacturing large plant to an Indonesian, state-owned fertilizer company. In 1995, it established the local subsidiary P.T. HAGIHARA WIHARTA INDONESIA (currently, P.T. HAGIHARA WESTJAVA INDUSTRIES), which is conducting a plastic processed products business. In China, in 2002 in Qingdao, it established Qingdao Hagihara Industries Co., Ltd., which conducts a plastic processed products business. Further, in 2005 in Shanghai, it established the subsidiary Hagihara Machinery (Shanghai) Co., Ltd., which designs machinery and procures and assembles parts. Currently, each are in actuality the Company's wholly-owned subsidiaries. In the machinery products business, it is strengthening overseas sales, including by newly establishing a sales department in the Shanghai subsidiary, and taking measures in the Philippines and Thailand that will lead to new orders.

In FY10/17, overseas net sales were ¥6,056mn, which was 26.1% of total net sales.

Trends in overseas net sales and the overseas net sales ratio

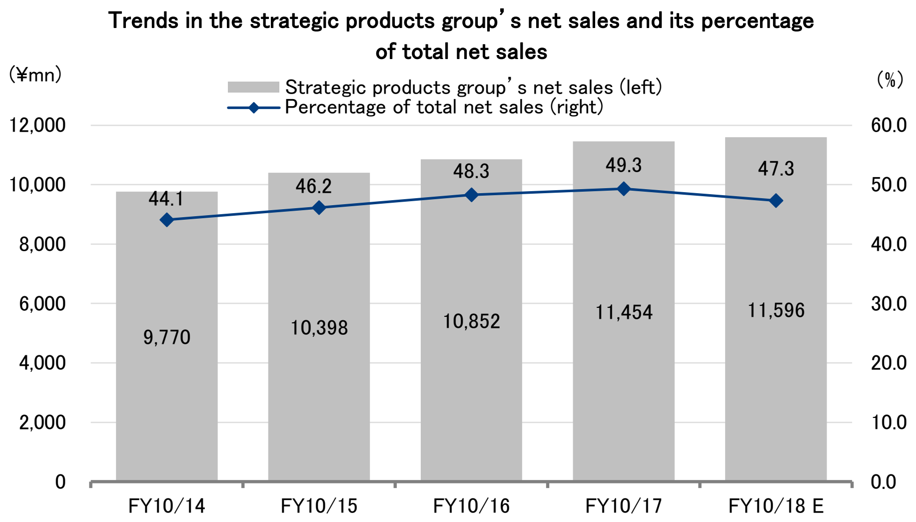


Source: Prepared by FISCO from the Company's financial results

In the plastic business for overseas markets, the Company is taking a strategy of conducting pinpoint sales of highly competitive products. A product that typifies this is tank liners. This product is an inner sheet that is affixed to the insider of water tanks. In Australia and the United States, large tanks are used mainly in drought zones for storing rainwater, agricultural water, and industrial water. When they are used for many years, rust is generated and their condition deteriorates, but by affixing the Company's tank liner to the inside of an iron tank, it is possible to prevent the deterioration of its main body. A feature of the Company's products is that they are light and strong compared to the competing products made of PVC, because they use a polyolefin material. In addition to Australia, in the future it will expand business deployment in the North America market, where many PVC products are used. It is also positioning its grain cover laminated cloth as a strategic product in this market, due to the enormous area of arable land and harvest volume.

5. Strategic products group

The Company selects strategic products from viewpoints such as leading share, high profitability, and growth potential. Currently, this applies to “BarChips,” “adhesive tape original fabric,” “other advanced functional products,” and “film slitters.” The Company-wide gross profit margin is 29.6% (FY10/17), but it is over 30% for this strategic products group and it has become its cash cow. In FY10/17, the percentage of total net sales provided by the strategic products group rose 1.0 percentage point YoY to 49.3%. The outlook for FY10/18 is that this percentage will decline to 47.3% because sales of grain cover laminated cloth, which grew in the previous fiscal period, will level-off. The Company is aiming to raise this percentage to 50%.



Source: Prepared by FISCO from the Company's results briefing materials

Strategic products group

Source: The Company's results briefing materials

(1) BarChips – recovering for overseas and demand is stable

BarChip is a strategic product for which there are major expectations. It is a polypropylene reinforced fiber for mortar and concrete developed from the plastic fiber stretching and manufacturing technologies that the Company has cultivated over many years. More than 20 years have passed since the Company launched BarChip and other market participants have appeared in this time. The increase in the number of suppliers has the merit of accelerating the market's expansion. In the reinforcing fiber (domestic) market, the Company has an overwhelming large share of around 70% to 80%. Its strength includes its comprehensive power, such as a product lineup with cost advantage relative to performance and fibers of different thickness, and also applications development.

Initially, this product was created as a substitute for asbestos, and since it was market launched in 1995, it has acquired a track record of use in the construction field as a reinforcing material, such as for roof tiles and outer-wall materials. Subsequently, its applications expanded toward mining and infrastructure through product development according to type, and it acquired an excellent reputation. The product's features include that it gives a reinforcing effect even when only a small amount is used, it prevents flaking and scaling, improves bending toughness, and has excellent corrosion resistance. In Japan, the ratio of the sizes of the construction market and civil engineering works market is 7:3, but BarChip's sales reverse this, with a ratio of 3:7. In the construction field, construction laws and fire prevention laws become barriers preventing the spread of new construction methods, which is particularly noticeable in public works. However, the Company is aiming for the fiber to be adopted in Japanese Industrial Standards (JIS) and as construction method, and it is strengthening its measures for the construction field.

For construction applications, more than 20 years have passed since BarChip was used in the soil-floor concrete of a distribution facility, and its durability has been demonstrated at this work site. It enables the installation of troublesome mesh wires to be omitted, and both cost reduction and shortening of work time can be achieved. The top priority at construction sites is securing manpower, and meshless concrete that incorporates BarChip has acquired an excellent reputation for labor saving.

In civil engineering applications, it is known from its use in mines, such as in Australia and South America, and in Tokyo's outer ring road. Demand for products for Australian mines is trending downward due to the slowdown in China's economic growth rate and the fall in the prices of raw materials. Conversely, the Company is progressing applications development and it seems that it is now being used for private-sector construction and social infrastructure projects. It captured demand related to the Rio Olympics, and going forward also, it expects business related to the Tokyo Olympics. In terms of its applications for railway tracks, it is used to reinforce the concrete used to adjust the height of sleepers and concrete roads, to prevent the fall of mortar and concrete from tunnel covers, and to suppress and reinforce cracks. It is highly probable that it will be used at the entrances of railroad tunnels where shock waves occur.

In 2003, it became possible to use the reinforcing fiber BarChip JK, a reinforcing fiber used for tunnel-cover concrete, in the NEXCO (formerly Nippon Highway Public Corporation) Tunnel Construction Management Guidelines. It was confirmed that the crosslinking effect of the fiber added to concrete contributes to preventing concrete pieces from falling and third-party damage. Although the peak of the Tokyo outer ring road work has passed, the Company is progressing BarChip's applications development and demand is expected to continue to remain at a high level within Japan.

For large projects in the future, there are expectations for the Linear Chuo (Central) Shinkansen (Bullet Train) Line. The Company has made no specific comments about this project and has not included it in its results forecasts. The anticipated demand is that BarChip will be used as a reinforcing material for the track and for tunnel-cover concrete. With a total route of 438 kilometers, the Chou Shinkansen Line is scheduled to open in 2027 between Shinagawa and Nagoya and in 2037 between Nagoya and Osaka. As it is scheduled to connect Shinagawa to Nagoya in 40 minutes at top speed, the plan is to run a direct route with a top speed of 505 km/h. In the metropolitan areas of Tokyo, Nagoya and Osaka where it is difficult to secure land, it will utilize the "deep underground," for which it not necessary to compensate landowners because it is highly public in nature. About 250 kilometers, or more than 80%, of the route from Shinagawa to Nagoya will be covered by tunnels. It will take a straight route, from the vicinity of Kofu City, Yamanashi Prefecture, via the Southern Japanese Alps (the Akaishi Mountain Range) to the vicinity of Nagoya City. It is expected that reinforcing materials will be used at places where construction and maintenance work will be difficult.

Overseas, it is being used in Spain for sewer concrete segments. The Company's highly durable product is being adopted because it is difficult to conduct repair work after the segments have been buried underground.

(2) Machinery products business

This business involves applying flat yarn manufacturing technologies and developing, manufacturing, and selling slitters (cutting machines) for a wide range of applications. The Company has the leading market shares for slitters for cash register paper rolls, slitters to cut optical film, and film slitters for touch panels. It also handles slitters for separators of lithium-ion (LiB) batteries. China, which is aiming to overcome air pollution and take the initiative for next-generation vehicles, has a policy of providing subsidies to promote the spread of eco vehicles, such as plug-in hybrid vehicles (PHV) and electric vehicles (EV). So within China, demand for splitters for separators is strong due to the increased production of LiB batteries.

Performance trends

In FY10/18 1H, ordinary income declined 5.1% YoY due to temporary factors

1. Review of 1H FY10/18 results

(1) Results summary

In the FY10/18 1H consolidated results, net sales increased 9.4% YoY to ¥12,658mn, operating income decreased 7.9% to ¥1,413mn, ordinary income fell 5.1% to ¥1,479mn, and net income attributable to the owners of the parent was down 6.3% to ¥1,010mn. Compared to the initial forecasts, net sales were 5.5% up on the forecast, operating income was 2.5% down, ordinary income was 2.0% up, and net income attributable to the owners of the parent was 1.4% down. The factors behind the decline in income was that one part of the transferring of the soaring prices of raw materials onto sales prices was pushed-back to the 2H and also due to accounting reasons, following the acquisition of a sales agency and it being made a subsidiary. On a stand-alone basis, both net sales and ordinary income were new record highs. Income declined slightly on a consolidated basis, but this was compared to the extremely good results in the same period in the previous fiscal year, and the operating income margin was maintained at the high level of 11.2%.

FY10/18 1H consolidated results

(¥mn)

	1H FY10/17		1H FY10/18			YoY		Change rate compared to forecast
	Amount	% of net sales	Initial forecast	Amount	% of net sales	Change	% change	
Net sales	11,571	100.0%	12,000	12,658	100.0%	1,086	9.4%	5.5%
Plastic processed products business	8,720	75.4%	-	9,566	75.6%	846	9.7%	-
Sheet and construction materials-related	2,793	24.1%	-	2,841	22.5%	48	1.7%	-
Industrial materials-related	3,792	32.8%	-	4,312	34.1%	520	13.7%	-
Living materials-related	1,745	15.1%	-	1,939	15.3%	194	11.1%	-
Other plastics	389	3.4%	-	473	3.7%	84	21.5%	-
Machinery products business	2,850	24.6%	-	3,091	24.4%	240	8.4%	-
Gross profit	3,527	30.5%	-	3,633	28.7%	105	3.0%	-
SG&A expenses	1,993	17.2%	-	2,220	17.5%	226	11.4%	-
Operating income	1,533	13.3%	1,450	1,413	11.2%	-120	-7.9%	-2.5%
Plastic processed products business	1,213	13.9%	-	993	10.4%	-219	-18.1%	-
Machinery products business	320	11.2%	-	419	13.6%	99	30.9%	-
Ordinary income	1,558	13.5%	1,450	1,479	11.7%	-79	-5.1%	2.0%
Net income attributable to the owners of the parent	1,078	9.3%	1,025	1,010	8.0%	-68	-6.3%	-1.4%

Source: Prepared by FISCO from the Company's results briefing materials

(2) Segment trends

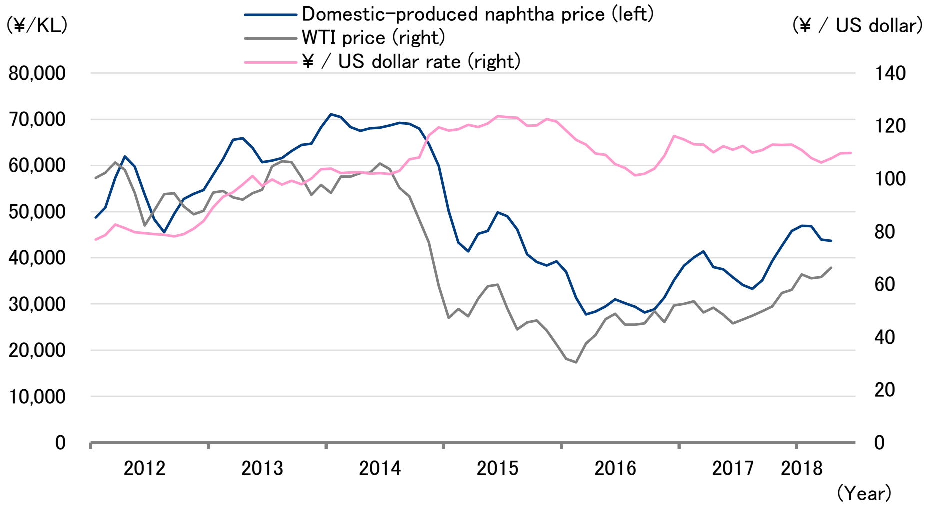
In the plastic processed products business, which contributes three quarters of total net sales, net sales increased 9.7% YoY. Sales of sheet and construction materials-related rose only slightly, but sales of industrial materials-related, which includes BarChip, grew 13.7%. Sales of living materials-related increased 11.1% from the growth in sales of adhesive cloth and original yarn for artificial grass. In this segment, operating income declined 18.1% YoY and the operating income margin worsened by 3.5 percentage points to 10.4%. On analyzing the factors causing operating income to increase and decrease, we see that the effects of the higher sales (+¥254mn) failed to cover for the deterioration in the profit margin due to the soaring prices of raw materials (-¥252mn) and the increase in SG&A expenses (-¥220mn).

In the machinery products business, net sales increased 8.4% YoY, including due to the higher sales of film slitters for LiB batteries in China and the effects of actively exhibiting products overseas, including at overseas exhibitions. In this segment, the operating income margin improved 2.4 percentage points to 13.6%.

(3) Trends in the price of the main raw materials

In the domestically produced naphtha market, in FY10/18 1H the price per kiloliter of naphtha soared to ¥45,000, up 20% YoY. The Company's basic policy is to transfer fluctuations in raw-materials costs onto sales prices, but the rise in the prices of sheet construction materials-related products did not finish at the end of April and the profit margin worsened. Although a time lag occurred, the price increases had spread by May.

Changes in prices of crude oil and naphtha



Source: Prepared by FISCO from various market data

(4) Impact of the acquisition of EPC Holdings

In February 2018, the Company acquired its sales agency, EPC Holdings (Singapore), in order to strengthen overseas sales of the concrete reinforcing fiber BarChip. It acquired all of the shares, which were held by six Australian companies, including investment companies, for ¥1,445mn, and made it a consolidated subsidiary. Half of the increase in SG&A expenses in FY10/18 1H, of approximately ¥100mn, was related to the acquisition of EPC Holdings. Due to it being made a subsidiary, two months of this company's results were reflected in the consolidated results. In the past, the Company recorded it sales as profits, but transactions that remained in the inventory assets of EPC Holdings were treated as unrealized gain. Goodwill from the acquisition was ¥817mn, which will be amortized over five years. In FY10/18 1H, ¥27mn, which is equivalent to two months' worth, was recorded in SG&A expenses, and the remainder of ¥790mn was recorded in intangible non-current assets. Also, costs relating to the acquisition were ¥15mn. The two-month contributions of EPC Holdings to the consolidated results were ¥458mn to net sales, ¥41mn to operating income, ¥33mn to ordinary income, and ¥17mn to net income. Its income level was higher than was anticipated at the time of the acquisition.

2. Financial position and management indicators

At the end of FY10/18 1H, total assets were up ¥1,051mn on the end of the previous fiscal year to ¥28,165mn. Current assets increased ¥283mn, with the main increase and decrease items including cash and deposits (-¥1,532mn), notes and accounts receivable (+¥975mn), and inventory assets (+¥665mn). The decrease in cash and deposits was from the expenditure relating to the corporate acquisitions. Notes and accounts receivable rose due to the higher sales. The increase in inventory assets was not an unintended one, as the sales destinations have been determined. In debits, interest-bearing debt increased ¥187mn. Net assets rose ¥585mn. The current ratio, which shows the ability to make short-term payments, was 272.7%, while the equity ratio, which is a long-term indicator, was 72.5%, and both indicate an extremely high level of financial stability.

Consolidated balance sheet

(¥mn)

	As of October 31, 2016	As of October 31, 2017	As of April 30, 2018	Change
Current assets	15,785	17,761	18,044	283
Cash and deposits	6,235	7,648	6,116	-1,532
Notes and accounts receivable - trade	5,312	5,490	6,466	975
Inventory assets	3,645	3,955	4,620	665
Property, plant and equipment	7,027	7,245	7,196	-49
Intangible non-current assets	137	122	918	795
Investment, etc.	1,923	1,984	2,006	22
Total assets	24,874	27,114	28,165	1,051
Current liabilities	5,450	6,025	6,616	591
Non-current liabilities	1,474	1,244	1,119	-125
(Interest-bearing debt)	1,052	967	1,155	187
Total liabilities	6,924	7,269	7,735	466
Net assets	17,949	19,844	20,430	585
[Stability]				
Current ratio	289.6%	294.8%	272.7%	
Equity ratio	72.2%	73.2%	72.5%	

Source: Prepared by FISCO from the Company's financial results

Outlook

For FY10/18, has left unchanged the initial forecast of record high income

● FY10/18 outlook

FY10/18, the Company projects a 5.4% YoY increase in consolidated net sales to ¥24,500mn, a 2.9% rise in operating income to ¥2,800mn, a 1.7% increase in ordinary income to ¥2,800mn, and a 0.8% increase in net income attributable to the owners of the parent to ¥1,980mn, and there have been no changes to the initial forecasts.

FY10/18 consolidated forecast

(¥mn)

	FY10/17		FY10/18 E		YoY	
	Amount	% of net sales	Amount	% of net sales	Change	% change
Net sales	23,238	100.0%	24,500	100.0%	1,262	5.4%
Plastic processed products business	17,746	76.4%	18,400	75.1%	654	3.7%
Machinery products business	5,492	23.6%	6,100	24.9%	608	11.1%
Operating income	2,721	11.7%	2,800	11.4%	79	2.9%
Plastic processed products business	2,139	12.1%	2,050	11.1%	-89	-4.2%
Machinery products business	581	10.6%	750	12.3%	169	28.9%
Ordinary income	2,753	11.8%	2,800	11.4%	47	1.7%
Net income attributable to the owners of the parent	1,964	8.5%	1,980	8.1%	16	0.8%

Source: Prepared by FISCO from the Company's results briefing materials

By business, in the plastic processed products business, the forecasts are for net sales of ¥18,400mn, up 3.7% YoY, and operating income of ¥2,050mn, down 4.2%. In the machinery products business, the forecasts are for net sales of ¥6,100mn, up 11.1%, and operating income of ¥750mn, up 28.9%, so this business will cover for the slump in the plastic processed products business. Up until the present time, both businesses have maintained a mutually complementary relationship, of performing well when the other is slumping and vice versa.

The market price of domestically produced naphtha fell from approximately ¥47,900 per kiloliter in FY10/15 to around ¥31,600 in FY10/16, and then increased to approximately ¥36,600 in FY10/17. At the time of preparing the budget for FY10/18, the price of naphtha was trending upwards, so the Company set the estimated price at ¥43,900. The price was ¥45,000 in the current Q1 and around ¥44,800 in Q2. A rise in the price of naphtha of ¥1,000 per kiloliter causes income to decline by approximately ¥30mn a year. However, in terms of financial recording, a cost increase does not in itself cause income to decrease. The Company aims to transfer the soaring prices of raw materials onto sales prices, and the time lag until the prices are increased causes profitability to worsen in the plastic processed products business. As a measure to deal with the rise in raw material prices, it is working so it does not rely on the specific raw material of domestically produced naphtha and it is progressing development that will make it possible to substitute it with imported goods.

Up to the present time, the Company has transferred the rise in the price of domestically produced naphtha onto sales prices. Moreover, it plans to raise prices again to reflect the increase in distribution costs.

The unrealized gain relating to the acquired EPC Holdings will remain to a small extent in Q3, but it will have been eliminated by the end of the period.

In the middle of June 2018, the Company acquired all of the shares of Toyo Heisei Polymer (Kochi City, Kochi Prefecture) for ¥1,130mn from Toyo Denka Kogyo Co., Ltd., and made it a subsidiary. The business results of this company in FY3/17 were net sales of ¥4,298mn, operating income of ¥342mn, ordinary income of ¥330mn, net income of ¥235mn, net assets of ¥1,682mn, and total assets of ¥4,949mn. The acquired company conducts businesses for functional yarn based on flat yarn and various types of industrial material laminated cloth, and it also handles plastic film products. Through making it a subsidiary, the Company will open-up new markets by integrating both companies' technological capabilities, while also improving their shared plastic processing technologies.

In the machinery products business, demand from China is strong and the size of orders is expanding. Unlike in the past, payment terms are also not a problem. As it is a cyclical business, when demand is strong, the backlog of orders accumulates and the delivery dates are pushed back. At the present time, while focusing on eliminating the backlog of orders in accordance with the schedule, it is also essential that a certain amount of management resources is allocated to areas such as developing new strategic products.

Longer-term growth strategies

Is acquiring plastic processed products business-related companies domestically and overseas

1. Medium-term management plan DH56

DH56, the current medium-term management plan, runs for 3 years up until FY10/18. In order for the Company's Group to realize new growth, it has set the slogan of "Dynamic HAGIHARA 56 (DH56) Brave Challenge and New Hagihara Dynamism." The plan's basic policies are 1) Strengthen sales of strategic products and open-up markets, 2) Expand overseas sales, 3) Rebuild the product manufacturing process, and 4) Create value for customers by integrating new technologies.

Basic policies in the medium-term management plan "Dynamic HAGIHARA 56"

Basic policies
(1) Strengthen sales of strategic products and open-up markets
· Rebuild the marketing system
· Implement a products strategy to capture a broad customer base
(2) Expand overseas sales
· Develop new markets overseas
· Expand the overseas sales structure
(3) Rebuild the product manufacturing process
· Specialization of functions at overseas factories and promotion of labor saving and unmanned operations at domestic factories
· Improve quality and reduce costs through the standardization of modules and unitization
(4) Create value for customers by integrating new technologies
· Develop products that meet customer needs
· Launch new materials and new technologies

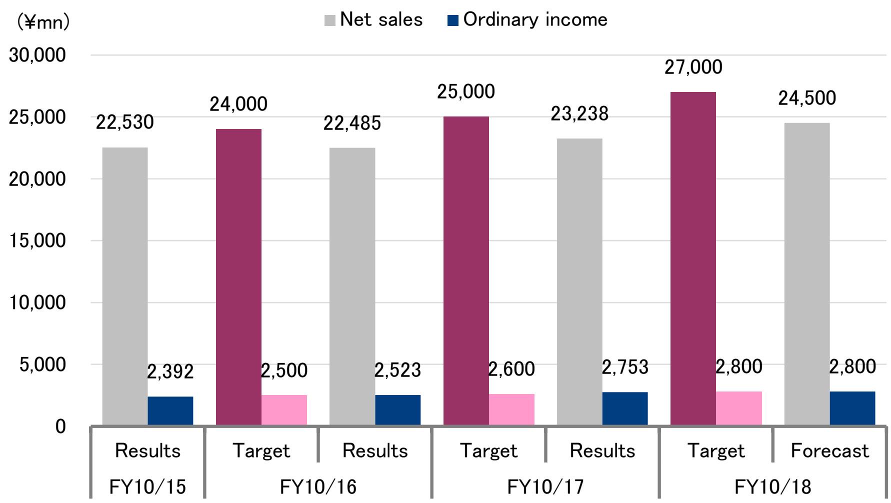
Source: Prepared by FISCO from the Company's financial results

In FY10/18, the Company actively implemented various measures, such as exhibiting in 13 exhibitions. It participated in exhibitions held in Japan, Vietnam, China, Thailand, the Philippines and Taiwan. At the exhibitions, it not only exhibited and sold its own products, it also collected information on rival companies, customers and production facilities. The effects of these efforts are already starting to appear, including the acquisition of orders for battery-related special slitters and the acquisition of the first order in the Philippines.

2. Progress on the medium-term management plan targets

The numerical targets in the medium-term management plan for FY10/18, which is its final fiscal year, are net sales of ¥27,000mn, ordinary income of ¥2,800mn, and an ordinary income margin of 10.4%. The full fiscal year results forecasts for the same period are net sales of ¥24,500mn, ordinary income of ¥2,800mn, and an ordinary income margin of 11.4%. So the forecast for ordinary income is the same as the target in the medium-term management plan, but the net sales forecast is less than its target.

Progress on the medium-term management plan targets



Source: Prepared by FISCO from the Company's financial results

3. Growth strategy

(1) Market penetration strategy

As part of its market penetration strategy, the Company plans to increase sales volume and expand market share through improving productivity in factories and reducing costs, and conducting the strategic pricing of some products. Over the 3 years of the current medium-term management plan, it intends to actively invest ¥5bn, in addition to the approximately ¥2.5bn of normal capital investment. As one of the objectives is to improve the movement lines between factories, it is investigating reorganizing the factories. But due to various conditions, such as the land allowance, it is behind schedule, so is likely that this task will be carried over to the next medium-term management plan. At its existing factories, it is introducing the latest machinery and completing the skills training for operations. At new bases, it intends to advance the updating of manufacturing equipment and further reduce costs. The Company also plans to expand the product lineup and widen the custom base that it targets, with the aims of increasing sales and maintaining the profit margin.

In the machinery products business, the delivery periods of slitters for LiB battery separator film in China are being extended to more than half a year due to the strong demand. In the production goods business, the Company decided that it would not be appropriate to simply expand facilities in factories in conjunction with the current strong demand, and rather it is aiming to shorten the production period by improving productivity. Since a few years ago, it has been progressing unitization and thereby lowering design costs.

The Company is taking the business stance of meeting customers' essential needs through the sales of its products. Against the backdrop of the labor shortage and soaring personnel costs, recently its keywords have been "time reduction" and "labor saving." The use of BarChips reduces the work processes in the installation of concrete in soil floors at construction sites and thereby reduces the construction period. A new product, the three-axes shaftless center driver slitter, improves operating performance and is designed to replace the work of cutting film and can be carried out in a short time by one person.

(2) Market development strategy

On entering FY10/18, the Company conducted two M&As domestically and overseas in its plastic processed products business. The acquisitions of these companies were events anticipated in the current medium-term management plan and were carried out after careful consideration over a long period.

a) Acquired EPC Holdings of Singapore, which is responsible for overseas sales of BarChip

The Company acquired EPC Holdings in February 2018, and although its sales of grain cover laminated cloth to the United States have been slumping, in this 1H the percentage of total sales from overseas sales was maintained at around the same level YoY, rising 0.1 of a percentage point to 28.1%. EPC Holdings, which was established in September 2007, has subsidiaries in Australia, Europe, North America and Latin America, which means 10 companies have been newly added to the scope of the Company's consolidated results.

For overseas sales of BarChip, the Company sells to Japan, South Korean, China (including Hong Kong) and Taiwan, but the EPC Group, from its location in Singapore, conducts sales in another 30 countries and regions, based on its exclusive sales agreements with the Company. Incorporating the sales function of the EPC Group makes it possible to carry out a sales strategy with a high degree of freedom that integrates manufacturing and sales, including price negotiations with customers. Information on the final customers is acquired and user needs are fed-back into technologies and product development. For the future, the Company is looking to further develop its overseas business, including by utilizing the sales network of the ECP Group not only for BarChip, but also for other products. It plans to send several of its officers to EPC Holdings.

b) Acquired Toyo Heisei Polymer, which conducts a plastic film business

In the middle of June 2018, the Company acquired all of the shares of Toyo Heisei Polymer held by Toyo Denka Kogyo, a manufacturer of special alloy iron, for ¥1,130mn and made it a subsidiary. In 2007, Toyo Denka Kogyo, which holds one third of the shares of TOAGOSEI Co., Ltd. <4045>, integrated its wholly-owned subsidiary TOYO CHEMICAL Co., Ltd., and Heisei Polymer Co., Ltd., which it acquired from SHOWA DENKO K.K. <4004>, to create Toyo Heisei Polymer. Toyo Heisei Polymer has plastic processing technologies in common with the Company, but it additionally handles plastic films, which the Company does not. Its product lineup covers a wide range of packaging items not handled by the Company, of stationary items such as clear files, tape for sealing beverage containers, and infusion bags and other medical-use items. The Company is integrating both companies' film and yarn technologies and advancing new applications development. Mr. Kuniaki Hagihara, the Company's Chairman and Representative Director, will participate in the management of this subsidiary.

(3) Product development strategy

BarChip's new applications development include Hybrid Prestressed Concrete (HPC). In Okinawa, an overwhelming large number of houses are made of reinforced concrete due to the lack of wood in the post-war period and climatic reasons, such as typhoons. The steel rods used in reinforced concrete are susceptible to salt damage. Carbon fiber is used as a substitute without any concerns that it will rust, but while it is resistant to distortion, it is prone to cracking. The Company overcame this weak point by mixing carbon fiber with BarChip, expansion materials, and other materials, to create concrete that is "thin," "light," "and resistant to bending." Concrete products that are highly durable and easy to process and transport can be used for the construction of homes that prioritize design. The latest products originating from Okinawa will change the common perception in the industry that concrete is "thick," "heavy," and "hard." Going forward, the Company will advance new HPC applications developments.

Shareholder return policy

In FY10/18, plans to pay an annual dividend of ¥32

1. Dividend policy

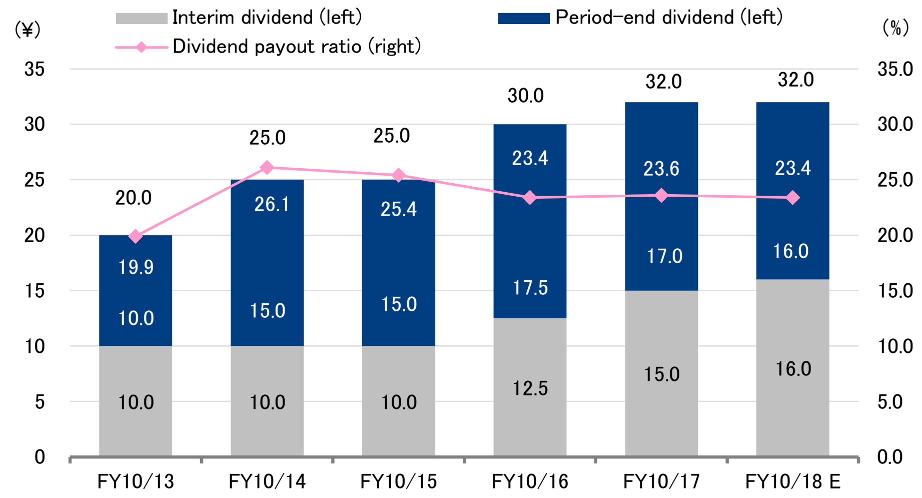
Dividend policy is to return profits to shareholders and maintain stable dividends. The dividend payout ratio standard is around 20%.

On November 1, 2017, the Company carried out a 2-for-1 share split of ordinary shares, and after adjusting for this, in FY10/16 the dividend per share increased ¥5 YoY to ¥30. It obtained temporary profits, as its recorded extraordinary income of ¥322mn as compensation for land acquisition, and therefore it returned profits to shareholders by increasing the dividend.

As it did not record extraordinary income in FY10/17 as it did in the previous fiscal year, the initial forecast for the dividend per share was an annual dividend of ¥25.0 from dividends of ¥12.5 at the end of 1H and ¥12.5 at the end of the fiscal period. But as the favorable results exceeded the forecasts, the Company raised the annual dividend to ¥32.0 for a dividend payout ratio of 23.6%.

For FY10/18, the forecast is that net income attributable to the owners of the parent will be basically unchanged YoY, so the Company is forecasting an annual dividend per share of ¥32.0 from dividends of ¥16.0 at the end of 1H and ¥16.0 at the end of the fiscal period. The forecast dividend payout ratio is 23.4%.

Dividend per share and dividend payout ratio after adjustment



Note: The Company made a 2-for-1 share split on November 1, 2017.
Source: Prepared by FISCO from the Company's financial results

2. Shareholder benefits program

The Company introduced a benefits program for shareholders at the end of FY10/16. Shareholders who satisfy certain conditions can choose from among the products or donations listed by the Company. Shareholders who have held shares continuously for less than three years can choose a product with a value of ¥1,000 if they hold from 100 to less than 500 shares, and of ¥3,000 if they hold 500 or more shares. Shareholders who have held shares continuously for three years or more can choose a product with a value of ¥2,000 if they hold from 100 to less than 500 shares and of ¥6,000 if they hold 500 or more shares. The Company also gives shareholders the option of donating equivalent amounts to the Ohara Museum of Art, the Association of Medical Doctors of Asia (AMDA), and the Japanese Red Cross Society. It will continue the shareholder benefits program in FY10/18 also.

The number of shareholders temporarily decreased to around 2,000 people, but by the end of FY10/17, it had increased to 5,068 people, including due to the effects of the share split and the introduction of the shareholder benefits program

Information security

In addition to restricting the taking-out of information devices, including ordinary laptop computers, in preparation for the occurrence of a disaster or other emergency situation, the Company plans to move its systems to the Cloud by the summer of 2018 as part of its business continuity plan (BCP).

Disclaimer