

HAGIHARA INDUSTRIES (7856 JP)  
FINDING SOLUTIONS TO ENSURE STAKEHOLDERS ARE SATISFIED

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## Executive Summary: Growth Adhering to an Ethos of “Hamidase, Amidase” – Be Unique, Create New Value

Hagihara Industries Inc. (7856 JP) is a manufacturer of plastic-processed products headquartered in Kurashiki, Okayama, in western Japan. Since its establishment in 1962, Hagihara has developed various products from flat yarn made of slit polyethylene and polypropylene films. The blue sheet product, whose usage is widespread – from a picnic mat to a cover sheet at construction sites – is made of fabric made of fortified yarn derived from slit and stretched polyethylene and polypropylene films.

The firm’s products are broadly used in a variety of industries such as construction, civil engineering, agriculture, and logistics. Given the core materials used, the firm’s costs are sensitive to crude oil and naphtha prices, although the impact to profits and margins is well mitigated thanks to Hagihara’s policy to focus on retaining profitability rather than chasing scale by pricing. Moreover, Hagihara has managed to pass on material price hikes to customers because it tends to have a dominant market share in niche markets. In addition, Hagihara also develops machinery products derived from its core technology expertise – slitting, stretching, winding and weaving. The firm’s slitter, for example, is used for cutting PET film to LCD film.

### FY19 (OCT YEAR-END) RESULTS

Hagihara produced record earnings in FY19 with consolidated OP of ¥2,723mil (+1.4%YoY) on sales of ¥29,647mil (+12.1% YoY) thanks to:

1. The strong performance in its subsidiaries: Full-year contribution from Toyo Heisei Polymer [THP] – a subsidiary acquired in FY18 that sells commoditised products included in Hagihara’s Living Materials business – and also in the Industrial Materials business in the Plastic-processed Products Segment. Another add-on to sales came from a Singapore-based subsidiary EPC, a global supplier of BarChip – a synthetic fibre that reinforces concrete.
2. Improved margin of construction material products.
3. Favourable sales of machinery products such as paper slitters and screen changers.

OP growth is lower than sales growth due to a worsening sales mix for THP as it mainly supplies commodity products. Also, BarChip sales did not grow as much as expected due to its correlation with the mining demand which remained sluggish throughout FY19. BarChip is used in the construction of concrete tunnels that lead to the mining site. Furthermore, the addition of two subsidiaries pushed up consolidated SG&A, squeezing OPM by 1%pt.

### FY20 OUTLOOK AND MEDIUM-TERM MANAGEMENT PLAN

Hagihara is guiding for FY20 OP of ¥2,700mil (-0.88% YoY) on sales of ¥31,000 (+4.6% YoY). OPM is guided to fall from 9.2% in FY19 to 8.7% in FY20; For 1H, the firm expects OP of ¥1,395 (+7.2% YoY / -1.9% HoH) but in 2H, OP forecast to drop to ¥1,305mil (-8.2% YoY / -6.5% HoH) for the firm is estimating a rise in raw materials cost and in personnel cost in overseas subsidiaries in 2H.

The new 3-year management plan starts in FY20 and targets FY22 OP of ¥3,300mil (3-year CAGR 5.63%) on sales of ¥33,000mil (3-year CAGR 3.69%). The firm aims to achieve those targets by the following basic strategies:

1. Further improve its technology to cultivate the new demand and new markets.
2. Expand the product range to reach a wider customer base.
3. Create new markets, including a recycling system for plastic waste.
4. Widely supporting ESG through its business and products as well as by offering care and support to its employees for their prosperity and work-life balance and satisfaction.

## Hagihara Industries – “The Most Treasured Company in Japan”

Hagihara Industries started as a manufacturer of polyethylene monofilament for vertical yarn used in tatami mats. Two years later, it developed flat yarn – the origin of various plastic-based products that Hagihara has developed to date. The firm has extended its operations globally. Currently, it has both manufacturing and sales bases in 12 countries.

Flat yarn is formed of strong flat threads created by slitting / cutting polyethylene or polypropylene films into strips. These strips are subsequently stretched – this stretching process makes the yarn strong. Fortified strips (flat yarns) are woven together to become a thin but strong fabric. As seen in Hagihara’s product range – including blue sheets, packaging materials and container bags – flat yarn is a widely used material. Applications vary from construction and civil engineering industry, to agriculture and logistics and household living ware. In its Plastic-processed Products Segment, Hagihara has 8 types of products, generating some 80% of consolidated sales.

In addition to various plastic-processed products, Hagihara has series of engineering products that are developed from the core technologies to manufacture products derived from flat yarn – cutting, stretching, winding and weaving. In the Engineering Products Segment, the firm’s industrial machinery products include slitters (machines that cut film to the desired size and shape, such as label films and LCD films), winders (used to wind synthetic fibres, multifilament, etc.), and recycled pellet production equipment that produces pellets used to make recycled plastics.

Business and technological developments of Hagihara have been driven by the pioneer spirit of the founder, Fuichi Hagihara, who encouraged his employees to test an idea immediately when they discovered something new. His slogan, “Sounds interesting. Let’s try it right away!” is still a large part of Hagihara’s corporate culture. The current slogan, “*Hamidase, Amidase*” – be unique, create new value – relays the message of how Hagihara enjoys going beyond the status quo to fearlessly create new products, cultivate new markets and expand into new countries.

### Strong Sense of Social Responsibility

What the firm has behind its eagerness to create something new is its desire to support social causes. On 27 Feb 2018, Hagihara won the Grand Prize (the Minister of METI Prize) for being “the Most Treasured Company in Japan”. The award is designed to prize “white” companies which have managed to make stakeholders happy. Stakeholders include 5 parties: employees and their family members, suppliers and subcontractors, customers, communities and shareholders. The judging committee is chaired by Prof. Koji Sakamoto, a professor in management studies, whose extensive research on Japanese companies especially on their ESG practice. The award is also backed by METI. The aim of the award is to praise companies that do the right things in the right way.

#### Criteria of Candidates for The Most Treasured Companies in Japan

For the past 5 years, a candidate company;

1. Has never done redundancy on employees
2. Has never introduced forceful price cut against suppliers and partner companies
3. Has not caused any serious occupational accident
4. Hires more than mandatory numbers of workers with disabilities
5. Has been profitable both in operating and recurring levels (excl. NGOs, social enterprises and educational entities)
6. Has not engaged in any legal malpractice such as breach of Act against Delay in Payment to Subcontractors

Source: <https://taisetu-taisyojimdofree.com>

Hagihara has a strong track record regarding its support of social causes, especially in disaster-struck areas. As a company that manufactures products necessary for daily lives, Hagihara reckons that it needs to fulfil its responsibilities to promptly supply – whether it was day or night, or a holiday or a workday – and to deliver wherever designated. After the heavy rainfall disaster in the West Japan in July 2018, Hagihara was quick to respond to METI’s request for supplies: the firm manufactured blue sheets day and night to ensure swift delivery to the disaster-hit areas. Prior to that, after the Tottori Earthquake in 2016, Hagihara supplied its blue sheets, which were

used to cover the many damaged roof tops so as to protect residents in the area from the rain and the secondary disasters.

The firm's social activities do not end at supply. The blue sheets used in the West Japan Rain Disaster were recycled to become tote bags, the proceeds of which are donated to support the recovery efforts in the affected areas. Okayama, where the firm is headquartered, was also affected by the heavy rain fall. Those donated to Kurashiki City by Hagihara were later washed and recycled as locally produced tote bags. Historically, Kurashiki made its wealth in the textile industry and is the home of Kurashiki Hanpu, a type of canvas fabric – 70% of the made-in-Japan canvas is made in Kurashiki. The city is also the home of BettySmith, a company renowned for tailor-made jeans worn by some global A-listers. As for the blue sheet recycled tote bags, Byston – a local maker of various canvas products – cooperates with Hagihara on the project and sew the bags. The made-in-Okayama recycled totes have been on sale since July 2019.

Winning the Grand Prize from METI, along with its various social activities, has afforded Hagihara the reputation as company with a strong element of social enterprise. This ethos appeals to jobseekers and has led to Hagihara now ranking in the top 10 places to work among the Okayama-based companies listed on the online recruitment support site *Shukatsu-Navi 2020* (now No.9, up from No. 21 last year).

## Business Segments: Offering Unique and Original Solutions

Hagihara's business is split into two key segments:

1. Plastic-processed Products, and
2. Engineering (machinery) Products.

### PLASTIC-PROCESSED PRODUCTS SEGMENT

Hagihara produces and sells various plastic-processed products that are derived from a type of synthetic resin – flat yarn. In FY19, the segment generated OP of ¥1,934mil (+0.9% YoY) on sales of ¥23,674mil (+13.5% YoY) and comprised ca. 80% of the total consolidated sales and 71% of the total consolidated OP. The customer base is widespread with its top 10 customers generating just 17.8% of sales. The top two customers are both trading companies specialised in synthetic resin products, generating only ca. 3% of the segment sales.

The segment sales is further divided by different product groups:

| Plastic-processed Products Segment sales & OP |        |        |        |         |        |         |
|---|--------|--------|--------|---------|--------|---------|
| (¥mil)  | FY17   | FY18   | FY19   |         | FY20CE |         |
|   | A      | A      | A      | YoY (%) | CE     | YoY (%) |
| Plastic-processed Products Total              | 17,746 | 20,854 | 23,674 | 13.5    | 25,000 | 5.6     |
| Sheet and construction materials              | 5,594  | 6,180  | 6,281  | 1.6     | 6,368  | 1.4     |
| Industrial materials                          | 7,951  | 9,398  | 10,038 | 6.8     | 10,922 | 8.8     |
| Living materials                              | 3,401  | 4,288  | 6,164  | 43.8    | 6,619  | 7.4     |
| Other plastics                                | 798    | 986    | 1,189  | 20.6    | 1,089  | -8.4    |
| Total OP                                      | 2,140  | 1,918  | 1,934  | 0.9     | 2,000  | 3.4     |
| OPM (%)                                       | 12.1   | 9.2    | 8.2    | -1.0ppt | 8.0    | -0.2ppt |

*Source: Hagihara Industries earnings results materials*

### Sheet and Construction Materials

Sheet and construction materials include sheets used at construction sites, such as soundproofing cloth and protective mesh products – mandatory items for safety of the construction site and the surrounding environment. Other products also included in this product group are disaster-prevention sheets (e.g. blue sheets), sandbags and sheets used in agriculture and stockbreeding. In FY19, Sheet and Construction Materials sales were ¥6,281mil (+1.6% YoY), a much slower growth rate than the 10% YoY gain reported in FY18. However, this was built into the company's assumptions as a large order for sheets designed for use in non-disaster areas had been completed in FY18.



Blue sheets are widely used in Japan during the natural disasters. The domestic market for blue sheets has an estimated size of ¥8,000~10,000mil. Hagihara has market share in Japan of around 30% - the market has been increasingly competitive with more imported products from China and Vietnam – but it commands a share as high as 90% for blue sheet made-in-Japan.

At the time of the disaster, there were reported incidences that the imported blue sheets were ripping, which resulted in increasing demand for domestic-made products. Over time, however, the quality of imported sheets improved and have penetrated the domestic market with lower prices. In such a market, Hagihara is the only domestic supplier of blue sheets that has vertically integrated the supply chain, from manufacturing the flat yarn to the final product. Its product offers high quality strength, durability and has a shorter lead-time: Imported goods are sold via sales reps in Japan; therefore, it takes a minimum of two months to stock up enough blue sheets – too long of a lead time in times of natural disasters. Hagihara has formed supply networks with local governments to promptly supply blue sheets during the disasters. It also set up a hotline with METI. Because of Hagihara's past action in the disaster struck areas, the ministry ordered extra stocks of blue sheets from the firm, and this is expected to continue to March 2020.

Furthermore, Hagihara aims to differentiate its products with recyclability going forward. The firm is well aware of the global trend of anti-plastics and plans to establish a well-working method of plastic recycling. It is still premature to disclose what the firm is planning to do, but Hagihara reckons that the first step is to establish a system to collect its plastic-based products, such as blue sheets, after use. The system will likely include equipping an identifying device, such as IC tags, on blue sheet so that the firm can identify if the collected blue sheet was 1) made by Hagihara, 2) who bought them and 3) where they were used. The firm has been in discussion with recycling companies in Japan to build nationwide networks to collect the used blue sheets. Technically, plastics recycling depends on the synthetic resin technology so Hagihara aims to find solution to recycle and reuse with the collaboration of synthetic resin technology specialists. The firm's customers, such as general construction companies, have become increasingly aware of the environmental issues. Recyclability will enable Hagihara's sheets to gain extra credit from users.

### Industrial Materials

The largest sales in the segment is generated by industrial materials such as concrete reinforcing fibre BarChip and flexible container bags. The Industrial Materials products saw sales rise 6.8% YoY to ¥10,038mil. Strategic products sales, which includes BarChip, was ¥12,338mil (flat YoY) in FY19, though slightly short of the firm's estimate of ¥12,383mil. BarChip sales were lower mainly due to a decline in production in the mining industry. BarChip is a structural synthetic fibre reinforcement for concrete. Due to its anti-crack and anti-blast properties, it is typically used in tunnels, such as the underground tunnels in mining sites and the entrance part of railway tunnels. Its sales trend is somewhat correlated to the mining market trend as the firm directly sells BarChip to mining companies in addition to unhardened concrete makers.

Flexible container bags are typically used to contain and carry powdered and bead materials. Main customers include chemical companies and cement makers. Since the start of the US-China trade friction in May 2019, the movement

of goods slowed globally, affecting demand for container bags in wider industries. Hagihara saw ca. 2% decline in sales of flexible container bags in FY19. These bags are also used to contain feedstuff for cattle in the US.

Since many farmers are not able to export livestock to China due to the trade friction, demand for flexible container bags has shrunk. In addition to the sales decline, the margin of flexible container bags has also worsened. Under normal conditions, products are mainly sourced in China and directly shipped to the US. However, due to the trade friction, the products are now first shipped to Japan, before exporting to the US.

The Plastic-Processed Products Segment FY19 OP growth was just +0.9% YoY due to a reduction in segment GP of ¥251mil, ¥46mil of which came from industrial materials especially BarChip and flexible container bags.



An example of Flexible Container Bag



BarChip®

### Living Materials

The third sub-segment of the Plastic-processed Products Segment is Living Materials, which includes mesh packaging bags for store vegetables, such as potatoes, onions and carrots, and adhesive cloth and yarn for artificial grass. FY19 sales rose 43.8% YoY to ¥6,164mil, boosted by the full-year add-on from the acquisition of THP. The consolidation of THP added ca. ¥1,800mil in Living Material sales and providing almost all the YoY sales growth. However, the product mix worsened because its products are mostly commoditised.

#### *Examples of solutions delivered by Hagihara's products that led to high market share in the niche markets*

Hagihara's plastic-based products have been developed to cover wide range of uses but all have been developed from flat yarn. The vast range of products on offer resulted from the firm's efforts to find solutions for customers' existing concerns and issues rather than simply developing and selling products solely from in-house ideas. Hagihara does not disclose its market share of its major products but says that it has high market share in the niche markets. This is because the firm develops solutions for customers that otherwise do not exist. Because those solutions were cultivated by Hagihara and are therefore quite unique, customers are not able to find similar products elsewhere. This means the firm has relatively stronger selling power with its customers, enabling it to pass on raw material cost hikes to customers as they are not able to find alternative solutions elsewhere.

In the domestic construction industry, it is mandatory to cover the building under construction with soundproofing cloth. Soundproofing properties are better if the cloth is heavier, however, heavier means more manpower is required to install and manage the cloth. Hagihara's soundproofing cloth is as thin as legally allowed, hence is much lighter in weight hence less need for manpower and scaffolding.

Another example is adhesive tapes. Hagihara's tapes can be easily cut by hand, either horizontally or vertically, so packaging tasks for workers at physical distribution companies are quick and effortless. The land transportation industry is one of the industries experiencing the most severe labour shortage and would like to reduce time on packaging.

The table below shows to which markets the segment is exposed to.

| <b>Product Exposure</b>           |  |  |   |         |
|-----------------------------------|--|--|---|---------|
| <b>Plastic-processed Products</b> |  |  |   |         |
| Market                            | Product examples   | Customers  | Competitors   | % sales |
| Construction & Civil Engineering  | Mesh Sheet, Soundproofing clothes, BarChip   | General construction companies, cement manufacturers                   | Sheets: Kyowa Inc (Unlisted, Japan)<br>BarChip: Daiichi Seikan (Unlisted, Japan), SIKA (SIKA:SW)  | 16      |
| Living and leisure                | Picnic mats (leisure sheets), Artificial grass, fibre for mops, Meltac bags, carpet layers | Consumers  | Leisure sheets, mops: imported products from China & Vietnam<br>Artificial grass yarn: TenCate (Unlisted, Netherlands)<br>Carpet layers: Yoshikawa Orimono (Unlisted, Japan), Koizumi Seima (Unlisted, Japan)<br>Meltac bags: other materials | 6       |
| Packaging / physical distribution | Flexible container bags (FCBs), adhesive tape clothes                                      | FCBs: Chemical Companies<br>Adhesive tape cloths: adhesive tape makers | Nihon Matai (Unlisted, Japan)   | 24      |
| Agriculture & stockbreeding       | Reflective tarps, Curtain clothes for poultry houses                                       | Farmers  | Koizumi Seima (Unlisted, Japan), Fujimori Kogyo (7917:JP)   | 2       |
| Disaster prevention & recovery    | Blue sheet, sandbags   | Local governments, METI  | Imported products from China and Vietnam  | 13      |
| <b>Engineering Products</b>       |  |  |   |         |
| Market                            | Product examples   | Customers  | Competitors   | % sales |
| Machinery                         | Slitter  | Label makers, LiB separator makers, film makers                        | Nishimura Machine Works (Unlisted, Japan), Toshin (Unlisted, Japan)   | 18      |
|                                   | Winders  | Textile makers   | Yashima Netsugaku (Unlisted, Japan), TMT Kamitsu (Unlisted, Japan)  | 1       |
|                                   | Recycled pellet production equipment   | Plastic recycling companies  | EREMA (Unlisted, Austria), Ye I Machinery Factory (Unlisted, Taiwan)  | 4       |

*Source: Nippon-IBR based on publicly available information provided by Hagihara Industries*

## ENGINEERING PRODUCTS SEGMENT

Hagihara manufactures and sells automated industrial machinery such as slitters and winders. These machines were developed from the firm's technological core competences; cutting, stretching, winding and weaving with a simple desire in mind – that the machinery and equipment are easy to handle yet able to bring high cost performance.

Hagihara's slitter is used in various industries, such as food labels, diapers, lithium-ion [LiB] battery separator membranes and LCD film. The Engineering Products Segment generated FY19 OP of ¥788mil (+2.7% YoY) on sales of ¥5,973mil (+6.6% YoY). The machinery products were sold to Chinese and Korean separator film makers. In FY19, export sales to film slitters was almost nil due to slower than expected EV battery production. However, the impact to Hagihara's revenue was not significant given its wide customer base.

The firm also developed recycled pellet production equipment – an idea derived from its Plastic-processed Products Segment. When film makers cut film into certain sizes, there is selvage (an edge produced on woven fabric during manufacture that prevents it from unravelling). Hagihara's slitters are equipped with automated selvage winders. Selvage collected through the winders can be recycled through Hagihara's plastic recycle pelletisers. The solution promotes recycling of otherwise unwanted plastic products so that impact to the environment can be better managed.



Slitter rewinderYarn WinderRecycling Pellet Machine

Source: Hagihara Industries

## Earnings Trends and Medium-Term Management Plan

### FY20 1Q RESULTS

Hagihara reported FY20 1Q OP of ¥725mil (+15.1% YoY) on sales of ¥7,225mil (-4.5% YoY). Sales dropped mainly due to a fall in sales volume of Plastic-processed Products.

Plastic-Processed Products Segment sales fell 4.1% YoY from ¥5,985mil to ¥5,741mil in Q1. Some 87.8% of the 4.1% YoY drop (i.e. ¥215mil of the ¥245mil sales decline) came from a fall in volumes of products such as artificial grass yarn and flexible container bags. However, segment OP was ¥540mil (+8.1% YoY). While the drop in sales hit OP by ¥69mil, of which ¥30mil was from the fall in sales of the aforementioned products, the hit was well offset by an improvement in the GPM (+¥94mil), especially for sheets and construction materials (+¥40mil) and BarChip. Although mining-related sales remained weak, demand from urbanisation development projects in Australia supported sales.

Engineering Products Segment sales fell 6.1% YoY to ¥1,484mil. However, thanks to improved GPM on film slitters, segment OP rose by 41.8% YoY to ¥185mil. In addition, demand grew for film slitters for a more environment-friendly water ink packaging film improved and demand for slitters for large-size LCD films and LiB separator films in China also rose. Film slitters contributed ¥77mil to the rise in segment OP, more than offsetting the negative impact from the decline in winder sales (-¥44mil).

There was no revision to the IH or full year guidance. Nominally, a ¥1/kg change in the price of naphtha has a ¥2mil impact to OP, assuming no change in the selling price. The price of Hagihara's main products move in line with the price of naphtha, resulting in stable spreads, thus management does not expect much impact on its earnings from current volatile crude oil price, especially since most of its products are not replaceable. The firm has a procurement policy of having three different suppliers to produce one type of yarn. The same polypropylene has different prices and quality across different suppliers. However, by applying its technological expertise, Hagihara is able to achieve equal quality from any quality of materials received.

Given 1Q ended in Jan 2020, the results were not reflective of impact from COVID-19. Hagihara has two factories in China – Shanghai and Qingdao – but all employees are now (as of end of March) back to operation. The firm is yet to estimate the impact of the virus to its earnings for the rest of the year, however, so far, it only sees some impact in Engineering Products for some parts supply was suspended.

## FY19 RESULTS – ACHIEVED RECORD EARNINGS

Hagihara reported FY19 consolidated OP of ¥2,723mil (+1.4%YoY) on sales of ¥29,647mil (+12.1% YoY).

In general, the plastic-based products market is highly commoditised, therefore tends to suffer from pricing competition. In such a market, however, Hagihara is able to maintain a relatively healthy OPM in its Plastic-Processed Products Segment thanks to the unique qualities of its products. Segment sales rose 13.5% YoY to ¥23,674mil in FY19 and generated an OPM of 8.2% (-1%ppt YoY). The YoY decline in OPM was reflective of the deterioration in the sales mix with a full contribution of THP as well as an increase in SG&A from two newly added subsidiaries, THP and EPC.

The sales increase of Plastic-processed Products Segment can be further broken down to as follows:

| Plastic-processed Products Segment: change in sales (¥mil) |        |         |
|--|--------|---------|
| (¥ mil)  | Value  | YoY (%) |
| Change in pricing by passing on raw material cost hike     | +808   | 3.9     |
| Sales Volume increase                                      | +2,006 | 9.6     |
| FOREX impact   | +3     | 0       |
| Total change in segment sales                              | +2,817 | 13.5    |

Source: Nippon-IBR based on Hagihara Industries' presentation material



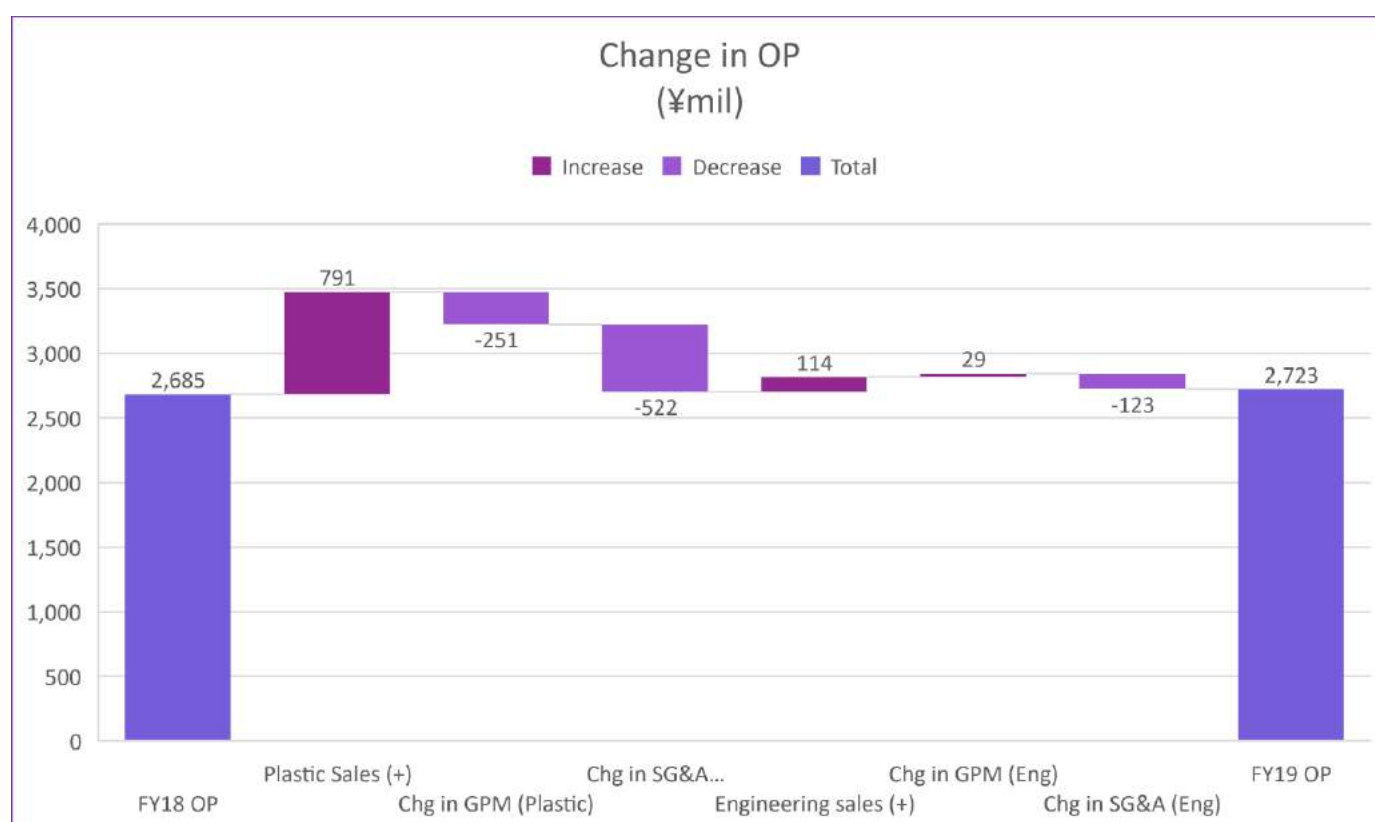
Source: Hagihara Industries FY19 results material

OP growth (+1.4% YoY) was small compared to the sales increase mainly due to the negative impact from the reduced GPM in the Plastic-processed Products Segment (-¥251mil), of which includes a ¥46mil reduction from BarChip and flexible container bags. BarChip GPM slightly dropped overseas because of volume declines. In addition to the drop in GPM, SG&A rose by ¥522mil, of which ¥501mil was related to the addition of the two subsidiaries. As a result, OPM dipped 1%ppt YoY.

On the other hand, the Engineering Products Segment saw sales hit ¥5,973mil (+6.6% YoY), with segment OP up 2.7% YoY (+¥20mil), thanks to an increase in sales of paper slitters (contributing ¥79mil to the rise).

| Change in OP – Main Factors       |                 |   |
|-----------------------------------|-----------------|---|
| (¥mil)                            | Change in Value | Main factors  |
| <b>Plastic-processed Products</b> |                 |   |
| Change in sales                   | 791             | +621 from added profit from merging 2 subsidiaries, THP and EPC |
| Change in GPM                     | -251            | -46 from drop in GPM in BarChip and flex container bags         |
| Change in SG&A                    | -522            | -501 from SG&A increase from 2 subsidiaries                     |
| <b>Engineering Products</b>       |                 |   |
| Change in sales                   | 114             | +79 from increase in sales of paper slitter                     |
| Change in GPM                     | 29              | +32 from improving GPM of screen changer                        |
| Change in SG&A                    | -123            | +45 from increase in the segment SG&A, trade shows etc.         |

Source: Hagihara Industries FY19 results material



Source: Hagihara Industries FY19 results material

## Segment Sales and OP

| (¥mil)                             | FY17   | FY18   | FY19   |         | FY20CE |         |
|------------------------------------|--------|--------|--------|---------|--------|---------|
|                                    | A      | A      | A      | YoY (%) | CE     | YoY (%) |
| Plastic processed Products Segment | 17,746 | 20,854 | 23,674 | 13.5    | 25,000 | 5.6     |
| Sheet and construction materials   | 5,594  | 6,180  | 6,281  | 1.6     | 6,368  | 1.4     |
| Industrial materials               | 7,951  | 9,398  | 10,038 | 6.8     | 10,922 | 8.8     |
| Living materials                   | 3,401  | 4,288  | 6,164  | 43.8    | 6,619  | 7.4     |
| Other plastics                     | 798    | 986    | 1,189  | 20.6    | 1,089  | -8.4    |
| Segment OP                         | 2,140  | 1,918  | 1,934  | 0.9     | 2,000  | 3.4     |
| Segment OPM (%)                    | 12.1   | 9.2    | 8.2    | -1.0ppt | 8.0    | -0.2ppt |
| Engineering Products Segment       | 5,492  | 5,602  | 5,973  | 6.6     | 6,000  | 0.5     |
| Segment OP                         | 582    | 768    | 789    | 2.7     | 700    | -11.3   |
| Segment OPM (%)                    | 10.6   | 13.7   | 13.2   | -0.3ppt | 11.7   | -1.1ppt |
| Total Sales                        | 23,558 | 26,457 | 29,647 | 12.1    | 31,000 | 4.6     |
| Total OP                           | 2,722  | 2,686  | 2,724  | 1.4     | 2,700  | -0.9    |
| OPM (%)                            | 11.6   | 10.2   | 9.2    | -1.0ppt | 8.7    | -0.5ppt |

Source: Nippon-IBR based on Hagihara Industries' FY19 earnings results materials

## FY20 GUIDANCE

Hagihara is guiding for FY20 OP of ¥2,700mil (-0.88% YoY) on sales of ¥31,000 (+4.6% YoY). OPM is estimated to fall from 9.2% in FY19 to 8.7% in FY20 due to a rise in depreciation costs amid increases in new product investment. The firm is guiding for FY20IH OP of ¥1,395mil (+7.2% YoY) on sales of ¥15,300mil (+3.5% YoY). However, 2H OP is expected to fall 8.2% YoY to ¥1,305mil due to higher raw material costs and a rise in personnel costs at overseas subsidiaries. Sales growth of strategic products, such as BarChip and yarn for artificial turf, is estimated to improve 3.1% YoY to ¥12,727mil in FY20.

| Earnings Guidance |         | FY19   |        |        | FY20   |        |        |         |
|-------------------|---------|--------|--------|--------|--------|--------|--------|---------|
| (¥mil)            |         | IH     | 2H     | FY     | IH     | 2H     | FY     | YoY (%) |
| Consolidated      | Sales   | 14,788 | 14,858 | 29,647 | 15,300 | 15,700 | 31,000 | 4.56    |
|                   | OP      | 1,301  | 1,422  | 2,723  | 1,395  | 1,305  | 2,700  | -0.84   |
|                   | OPM (%) | 8.8    | 9.6    | 9.2    | 9.1    | 8.3    | 8.7    | -0.5ppt |
|                   | RP      | 1,263  | 1,595  | 2,850  | 1,695  | 1,305  | 3,000  | 5.26    |
|                   | RPM (%) | 8.5    | 10.7   | 9.6    | 11.1   | 8.3    | 9.7    | -0.1ppt |
|                   | NP      | 867    | 1,161  | 2,014  | 1,190  | 900    | 2,090  | 3.77    |
| Parent            | Sales   | 11,333 | 11,462 | 22,796 | 11,450 | 11,990 | 23,350 | 2.43    |
|                   | OP      | 1,079  | 1,267  | 2,347  | 1,140  | 1,145  | 2,285  | -2.64   |
|                   | OPM (%) | 9.5    | 11.1   | 10.3   | 10.0   | 9.6    | 9.8    | -0.5ppt |
|                   | RP      | 1,127  | 1,539  | 2,667  | 1,440  | 1,145  | 2,585  | -3.07   |
|                   | RPM (%) | 9.9    | 13.4   | 11.7   | 12.6   | 9.6    | 11.1   | -0.6ppt |
|                   | NP      | 804    | 1,177  | 1,982  | 1,025  | 770    | 1,795  | -9.43   |

Source: Hagihara Industries' FY19 results material

## MEDIUM-TERM MANAGEMENT PLAN – “UPGRADE FOR NEXT 60”

Hagihara started the new medium-term management plan, UPGRADE For Next 60, from this fiscal year. The ultimate financial goal in FY22 is OP of ¥3,300mil (3-year CAGR 5.63%) on sales of ¥33,000mil (3-year CAGR 3.69%), based on the plan’s basic principle made of three strategies and one goal, which the firm sets as its Sustainable Development Goals (SDGs).

### 1. Polish its technology to cultivate the new demand and new markets:

Hagihara aims to improve its technology and the expertise it has built up over time, together with actively using external expertise. The firm aims to develop new materials and basic core technologies, introduce enhanced design technology and promote efficiency and less man-hours. For example, a patent application is in place for *Laysys*, an adhesive patch with zero-order release property. It can be used in various applications such as medical and beauty that need functions such as absorption and decomposition. The sales target in FY22 from the *Laysys* business is ¥600mil.

### 2. Expand the product range to reach wider customer base:

The ultimate goal of Hagihara’s product development is to supply products that can support lives of people and communities. Hagihara aims to provide a stable supply of disaster prevention products, an improvement in function of its packaging materials and to expand the applications of construction- and agriculture-related product.

### 3. Create the new markets, including a recycling system for plastic waste:

Hagihara develops new markets by developing new products and new applications of existing products. New market includes overseas market such as Africa. Products that support and promote work-style reform include ones that help solve labour shortages and the health & safety of workplaces. Furthermore, recycling is one of the biggest challenges Hagihara regularly discusses, especially as environmental issues such as the use and disposal of microplastics needs prompt solutions.

### 4. Widely supporting ESG including care and support for employees’ growth and happiness:

Hagihara has introduced unique solutions in the workplace to support its employees. For example, employees can take paid holiday from as little as one hour out of their working day – helpful for meetings at school, or appointments with specialists – and the firm also provides nursery facilities to support working parents. The firm has also hire retired engineers and professionals, believing their expertise can add value to product development. These welfare measures were introduced to make the company a happy workplace. The management believes that employees who are happy at work outperform. As of FY19, the employee turnover rate dropped to 0.76% from the previous year’s 1% while the average age of the employees fell from 40.1yrs in FY18 to 39.7yrs in FY19. Over the next 3 years, Hagihara wants to further improve turnover ratio. At the same time, the management is actively promoting young talented employees – in their view, younger employees’ retention rate tends to improve by giving them challenges that boost their passion for work.

| Profile of Hagihara's Staff Members        |      |      |      |      |      |
|--|------|------|------|------|------|
|  | FY15 | FY16 | FY17 | FY18 | FY19 |
| Average age of the employees               | 40.8 | 41.1 | 40.8 | 40.1 | 39.7 |
| Average years of service (years)           | 18.0 | 18.1 | 17.7 | 16.8 | 16.6 |
| Turnover rate (%)                          | 1.97 | 1.54 | 1.04 | 1.00 | 0.76 |
| Average monthly overtime (hours)           | 7.03 | 7.48 | 7.35 | 6.81 | 5.30 |
| Annual leaves actually taken over year (%) | 33.4 | 37.0 | 40.7 | 48.3 | 51.1 |

Source: Hagihara Industries Inc.

## STRATEGIC PRODUCTS

Hagihara's strategic products are centred around its Sustainable Development Goals: Hagihara identifies strategic products by 1) having more than 30% GPM, and 2) being made in Hagihara. Currently there are three strategic products including BarChip, adhesive tape fabric, yarn for artificial grass. In FY20, Sales from strategic products is expected to be ¥12,727mil (+3.1% YoY), comprising 41.1% of the total sales. The ratio of strategic products in total sales is expected to drop by 0.5%pt YoY in FY20. This is because a boost in total sales with addition of THP. Potentially, however, management believes THP has products that may prove to be suitable candidates for strategic products.

The following 3 are the examples of strategic products.

### • BarChip

BarChip is a structural synthetic fibre reinforcement for concrete made of polypropylene flat yarn and cut to appropriate sizes. It was first launched in the market more than 20 years ago. There have been new entrants in the market of synthetic resin concrete reinforcing materials such as Polystron by Dainichi Can (Unlisted, Japan). However, BarChip remains the top seller among synthetic fibre concrete reinforcement products, with an estimated 50% market share in Japan. The conventional concrete reinforcement material used to be steel mesh wire, but it has been gradually replaced by synthetic resin concrete reinforcing materials. BarChip is also used to repair cracks on concrete which was originally reinforced by steel wires.

Advantage BarChip offers is not only quality and performance but cost competitiveness. BarChip was first used as a reinforcing material for concrete floor in warehouses. During the past 20 years, BarChip's durability was proved to be superior, as well as having a cost advantage as it reduces project processes and man-hours at sites.

The conventional method to reinforce concrete and prevent cracks is to lay mesh wire structures before pouring the cement. However, wires are heavy, hence require more man-hours due to the need to place the structures first before pouring the concrete. On the other hand, BarChip is light and requires less man-hours because it can be mixed directly with cement.

*BarChip used on the floor of a warehouse*



Source: BarChip Inc.

In the civil engineering industry, BarChip has already passed the strict criteria set by JR companies and general construction companies. Three tunnels in the new Tokyo Outer Ring Road, a project by NEXCO (Nippon Expressway Company Limited), scheduled to be completed in FY20 (started in FY10/15), also used BarChip. Furthermore, because of the characteristics of plastic – that it melts in the heat, BarChip also offers anti-blast properties, which is suitable for the part of tunnels where the wind pressure is at maximum, such as at the entrance.

Used in tunnel lining concrete  
(Peel-off prevention)



Used in concrete spraying  
(Peel-off prevention)



Bridge  
(peel-off and cracks prevention)



Concrete sleeper  
(Crack prevention)



Source: BarChip Inc.

On 28 Jan 2020, Hagihara received a certificate from GBRC (General Building Research Corporation in Japan) for an Assessment of Technology for Construction Materials for a construction method using BarChip that prevents cracks on concrete. Such a certificate is likely to be a catalyst for broader applications in construction projects such as waterproof roofing.

Although the projects from Tokyo Outer Ring tunnels are about to peak, demand for BarChip remains promising thanks to continuous new applications promoted by Hagihara. The largest project in recent years in Japan is the maglev shinkansen project that extends some 438km. It is expected to start operations between Shinagawa and Nagoya in 2027, followed by extension between Nagoya and Osaka to open in 2037. The plan is for the train to run at a top speed of 505km/h. Since it runs through the busiest cities in Japan, it will need to run deep underground. Therefore, of the 250km between Shinagawa and Nagoya, more than 80% will be tunnelled. Since the route will run in a straight-line, in the difficult locations to work in, such the surrounding areas of cities and establishing lines that go under the mountains, will likely require concrete reinforcing materials. Hagihara already received an order for the Kita-Shinagawa portion of the line, with estimated total of ¥250mil sales over the 5 years starting FY19.

#### • Yarn for Artificial Grass

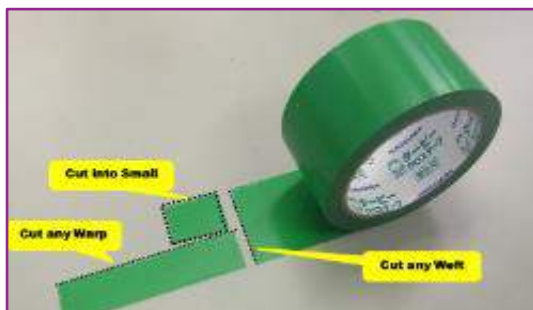
Artificial grass was used to cover the grounds of the Yokohama International Stadium which hosted The Rugby World Cup Final. Hagihara developed yarn for artificial grass that is light and easy to remove, which was a perfect fit for the stadium as it is also able to be used in other games and events. Hagihara's grass yarn provides a cushion as soft as natural grass (it was said to be good for rugby players as they often get serious injuries from falling to conventional artificial grass which is much coarser and harder) and well drained. Moreover, the artificial grass floorings can be removed and repeatedly used. Hagihara works with Unitika (3103 JP) and KANBO PRAS (Unlisted, Japan) to develop the artificial grass supplied to the stadium. The firm reckons that there will be demand for this new type of artificial grass for sports entertainment.



Source: Hagihara's Medium-term Management Plan presentation

### • Adhesive tape cloths

Hagihara's adhesive tape cloth can be hand-cut either horizontally or vertically. The physical distribution industry needs to improve labour efficiency due to the severe labour shortage. An adhesive tape that can be hand-cut in any direction reduces the workload for packing items and improve efficiency. Hagihara manufactures tape cloth and sells to adhesive tape makers.



Source: [en.hagihara-pls.com](http://en.hagihara-pls.com)

## Social Responsibility and Corporate Governance

Hagihara has been active in social responsibility programmes, such as prompt supply of blue sheets in areas damaged by natural disasters and then the recycling of those products to make tote bags, to list a few. Hagihara is especially conscious of plastic waste issues and has developed several biodegradable products. Japan Flat Yarn Industry Association, together with its superior associations such as Japan Plastic Industry Association and Japan Polyethylene Products Association, signed the declaration to solve plastic waste in the ocean in May 2019. However, the firm also realises that while consumers have awareness in ecological issues, they are also price conscious. Biodegradable products will not penetrate the market replacing the existing plastic products rapidly enough because of the price. Therefore, the firm is first taking baby steps to solve the plastic waste issues by making day to day efforts to reduce plastic waste as much as possible while aiming to develop a practical synthetic resin recycling solution.

The current president of Hagihara, Mr. Asano, has a unique view over corporate governance. The firm has its own standard of governance and does not just tick boxes on recommendations by the Corporate Governance Code or proxy advisories. For example, it has one female external director out of the two external independent directors. But Hagihara's criteria for its external independent directors is not necessarily the same as many other Japanese companies – candidates do not necessarily have to have experience in management, overseas experience, have expertise in finance or law. The firm is even willing to have an independent director from the general population who can champion the views from the public. This is because the management would like the Board to provide broader view, especially on pressing issues such as plastic waste and what the firm can do to tackle such a problem.

The management values direct communication with shareholders and investors. Every January, Hagihara holds a networking event with shareholders after the AGM, the aim of which is to provide the opportunity for direct communicating and to exchange the firm's visions with shareholders.

### Shareholder Return Policy

Hagihara's official commitment for shareholder return is to pay out 20% of net profit. Over the past three years, the firm has paid out more when earnings were better than expected and paid the same as previous year when net profit was down YoY. In FY19, the firm added extra ¥2/share to the original dividend forecast after the review of earnings environment and announced to pay ¥34/share (pay-out ratio of 24.4%). In FY20, the firm is guiding for an annual dividend of ¥36/share, pay-our ratio of 24.9%. For now, the management wishes to maintain the balance for growth investment and shareholder return.



**Hagihara Industries (7856 JP) : Financial Summary**

| (¥mil)  | FY10/15   | FY10/16   | FY10/17   | FY10/18    | FY10/19    | FY10/20CE  |
|---|-----------|-----------|-----------|------------|------------|------------|
| Sales   | 22,530    | 22,485    | 23,238    | 26,457     | 29,647     | 31,000     |
| Operating Profit                              | 2,360     | 2,548     | 2,721     | 2,685      | 2,723      | 2,700      |
| Recurring Profit                              | 2,392     | 2,523     | 2,753     | 2,781      | 2,850      | 3,000      |
| Net Profit                                    | 1,454     | 1,856     | 1,964     | 1,884      | 2,014      | 2,090      |
| EPS (JPY) <sup>1</sup>                        | 196.87    | 256.64    | 135.80    | 130.27     | 139.23     | 140.29     |
| Adjusted EPS (JPY)                            | -         | -         | -         | -          | -          | -          |
| Cash flow from operation (CFO)                | 1,762     | 3,904     | 2,535     | 2,009      | 3,604      | -          |
| Cash flow from investment (CFI)               | -815      | -1,320    | -848      | -3,341     | -1,801     | -          |
| Cash flow from finance (CFF)                  | -1,117    | -739      | -326      | -837       | -407       | -          |
| Cash and cash equivalent                      | 3,134     | 4,923     | 6,317     | 4,167      | 5,556      | -          |
| Free cash flow (FCF)                          | 947       | 2,584     | 1,687     | -1,332     | -          | -          |
| CFO per share (JPY)                           | 238.46    | 539.70    | 340.32    | 138.87     | -          | -          |
| FCF per share (JPY)                           | 128.16    | 357.22    | 226.48    | -92.07     | -          | -          |
| Total asset                                   | 24,731    | 24,874    | 27,114    | 31,870     | 32,572     | -          |
| Liabilities                                   | 7,577     | 6,924     | 7,269     | 10,755     | 10,217     | -          |
| Net asset                                     | 17,154    | 17,949    | 19,844    | 21,114     | 22,354     | -          |
| Capital                                       | 1,778     | 1,778     | 1,778     | 1,778      | 1,778      | -          |
| Shareholders' equity                          | 17,153    | 17,948    | 19,843    | 21,113     | 22,353     | -          |
| BPS (JPY)                                     | 2,371.26  | 2,481.25  | -         | 1,459.46   | 1,545.16   | -          |
| OPM (%)                                       | 10.47     | 11.33     | 11.71     | 10.15      | 9.18       | 8.7        |
| ROE (%)                                       | 8.66      | 10.58     | 10.39     | 9.20       | 9.27       | -          |
| ROA (%)                                       | 9.51      | 10.10     | 10.28     | 8.90       | 8.24       | -          |
| Shareholder equity ratio (%)                  | 69.36     | 72.16     | 73.18     | 66.25      | 68.63      | -          |
| D/E ratio (%)                                 | 44.17     | 38.58     | 36.63     | 50.94      | 45.71      | -          |
| Total asset turnover (X)                      | 0.92      | 0.91      | 0.89      | 0.90       | 0.92       | -          |
| Interest coverage (x)                         | 48.24     | 53.17     | 50.44     | 41.37      | 35.91      | -          |
| Current ratio (%)                             | 253.67    | 289.63    | 294.79    | 223.41     | 226.45     | -          |
| Interest-bearing debt                         | 1,586     | 1,051     | 966       | 2,856      | 2,867      | -          |
| EBIT  | 2,441     | 2,571     | 2,807     | 2,846      | -          | -          |
| EBIT Margin (%)                               | 10.83     | 11.43     | 12.08     | 10.76      | -          | -          |
| EBITDA  | 3,325     | 3,459     | 3,704     | 3,900      | 4,123      | -          |
| EBITDA margin (%)                             | 14.76     | 15.38     | 15.94     | 14.74      | 13.91      | -          |
| Dividend (JPY)                                | 50.00     | 60.00     | 64.00     | 32.00      | 34.00      | 36.00      |
| Total dividend payment from retained earnings | 365       | 434       | 462       | 464        | 494        | -          |
| Dividend pay-out ratio (%)                    | 25.40     | 23.40     | 23.60     | 24.60      | 24.40      | 25.66      |
| DOE (%)                                       | 2.20      | 2.50      | 2.30      | 2.30       | 2.20       | -          |
| Shares outstanding (shares)                   | 7,448,800 | 7,448,800 | 7,448,800 | 14,897,600 | 14,897,600 | 14,897,600 |
| Treasury (shares)                             | 215,045   | 215,132   | 215,440   | 430,980    | 431,013    | 431,013    |

Source: Nikkei Value Search

<sup>1</sup> Hagihara exercised 1:2 stock split on 1 Nov 2017.

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For further enquiry, please contact:

Yumi Yamamoto-Tyrrell

Nippon Investment Bespoke Research UK Ltd

First Floor,

35 Little Russell Street

London WC1A 2HH

TEL: +44 (0)20 7993 2583

Email: [y.yamamoto@nippon-ibr.com](mailto:y.yamamoto@nippon-ibr.com)



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