COMPANY RESEARCH AND ANALYSIS REPORT

Nippon Piston Ring Co., Ltd.

6461

Tokyo Stock Exchange Prime Market

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Index

Summary

Aiming to realize growth by both reinforcing the earning capabilities of the automobile engine business and establishing and cultivating a non-automobile engine business

1. Company profile

Nippon Piston Ring Co., Ltd. <6461> (hereafter, also "the Company") is a major manufacturer of products including piston rings and valve seat inserts that are used as vehicle engine parts. It supplies a wide range of products to the world's leading auto manufacturers. Applying the core technologies that it has cultivated across its history of approximately 90 years since its establishment, the Company is also increasing sales for applications other than automobile engines as new product businesses, primarily in the industrial equipment and medical fields.

The business segments are the Products for Automobiles Business, Products for Marine Engines and Other Products Business, and Others (merchandise sales, etc.). Separate to these segments, the Company also classifies its business as automobile engine business (existing business) and non-automobile engines business (new product businesses that utilize core technologies), and it is working to reinforce the earning capabilities of the automobile engine business and cultivate and establish the non-automobile engine business toward achieving the goals of the long-term vision and mid-term management plan. It's main automobile engine business products include piston rings, valve seat inserts, and assembled sintered camshafts, which are all important functional components of a vehicle's engine, and it holds a top-five share of the global market for piston rings, as well as a leading share of the market for valve seat inserts for Japanese auto manufacturers. Its main non-automobile engine business products include piston rings for marine engines, and METAMOLD products (metal powder injection molding parts), as well as medical equipment products and recreational vehicle (RV) products.

In the medium term, the Company expects the global automobile market will grow, due in part to vehicle use expanding in emerging countries. So rather than a change in the number of vehicles produced, a risk factor for the Company at the current time is the impact of medium- to long-term environmental regulations (greater fuel efficiency of engines, declining use of gasoline engines, increased use of new clean fuel engines, spread of electric vehicles (EV), etc.) driven by global movement toward decarbonization. The Company anticipates that the probability that widespread use of EV will quickly increase is low. Its policy is to develop technologies for the evolution of the automobile engine, including responses to the further improved fuel performance of gasoline engines and new clean fuel engines. In addition, based on the trend of the gradual shift to EV, it is also working to increase sales for non-automobile engines through new product businesses.

2. Outline of results for 1H FY3/23

In the 1H FY3/23 consolidated results, net sales increased 9.0% year on year (YoY) to ¥27,788mn, operating income decreased 44.8% YoY to ¥955mn, ordinary income decreased 25.5% YoY to ¥1,384mn, and net income attributable to owners of parent decreased 55.1% YoY to ¥573mn. Net sales grew strongly from the Company capturing demand in line with customer trends, and boosting sales of products for repair in the Products for Automobiles Business, and other factors including foreign exchange rates. A contribution from newly consolidated subsidiary Normeca Asia Co. Ltd. also helped boost overall net sales. For operating income, the Company was able to absorb higher costs from rising raw material and fuel prices and the weak yen by adjusting sale prices and reducing costs, but operating income still fell. The effect of the weak yen bolstered operating income by around ¥50mn. This was mainly due to the yen weakening against the Euro, and there was no impact versus the US dollar due to foreign exchange sensitivity decreasing from localization advances.

3. FY3/23 results outlook

For the FY3/23 consolidated results, the Company left its initial forecasts unchanged, and is forecasting net sales to increase 8.3% YoY to ¥55,000mn, operating income to increase 2.8% to ¥2,700mn, ordinary income to decrease 8.5% to ¥2,800mn, and net income attributable to owners of parent to decrease 1.5% to ¥1,900mn. The Company expects raw material and fuel prices to remain at high levels, but that auto manufacturers will have returned to normal production levels by the second half of the fiscal year, and it will continue to reduce costs and adjust sale prices to reflect increases in raw materials and fuel prices. In addition, the Company forecasts the consolidation of Normeca Asia will generate sales of about ¥1.8bn and an operating profit margin of around 10%. The Company forecasts a small decrease in both ordinary income and net income attributable to owners of parent, and does not anticipate any foreign exchange gains for non-operating income. Net sales achieved 50.5% of the Company's full-year forecast, operating income 35.4%, ordinary income 49.4% and net income attributable to owners of parent 30.2%. Although operating income progress is a little sluggish, FISCO believes the Company is likely to achieve its full-year forecast based on the expectation that auto manufacturers will have returned to normal production levels by the second half of this fiscal year, continued reduction of costs and sales price adjustment to reflect increases in raw material and fuel prices, and a fall in some raw material prices.

4. Growth strategy

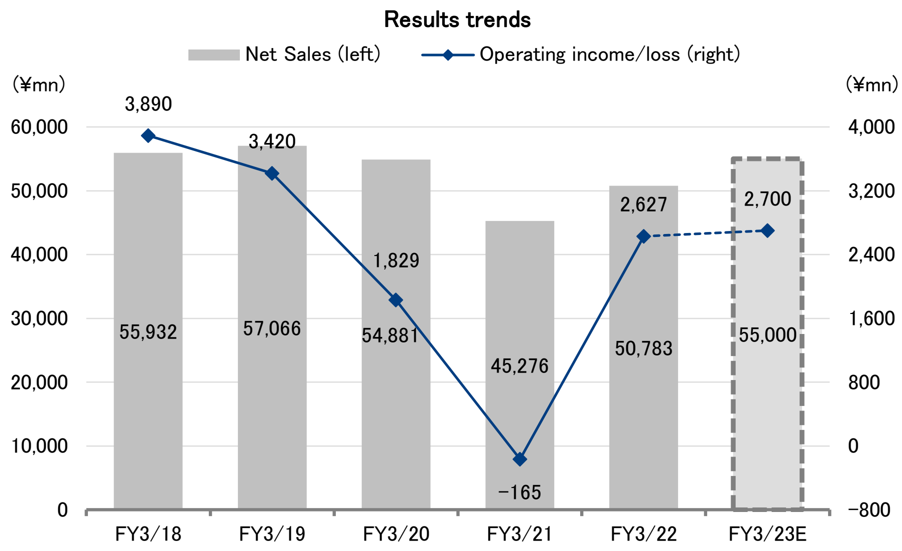
The Company has formulated The Next NPR 2030 long-term vision in order to respond to the big changes in the business environment surrounding the automobile industry. Its numerical targets are net sales of ¥100bn, an operating income margin of at least 10%, for non-automobile engine sales to provide at least 40% of net sales, and a reduction in the CO_2 emissions volume of 46% (compared to FY3/14) in FY3/31. In May 2021, it also formulated the 8th Medium-term Management Plan (FY3/22 to FY3/24) by backcasting from its ideal vision of the future. The plan has been positioned as a period for building a foundation for achieving the long-term vision and its targets are net sales of at least ¥54bn, an operating income margin of at least 8%, for non-automobile engine sales to provide at least 15% of net sales, and a reduction of the CO_2 emissions volume of 25% (compared to FY3/14) in FY3/24.

To achieve the targets in its long-term vision and medium-term management plan, the Company is focusing resources on three priority initiatives: (1) Reinforce earning capabilities in existing businesses (automobile engine business), (2) establish and cultivate new product businesses (non-automobile engine business), and (3) promote sustainability management. In the non-automobile engine business, it is aiming to steadily develop new product businesses in the medical and industrial equipment fields among others, and to use M&A and open innovation to establish business operations swiftly. FISCO has high hopes for medical business growth in particular.

On July 27, 2022, the Company entered into a memorandum of understanding on business integration (establishment of joint holding company through stock transfer) with Riken <6462>. With the automobile industry undergoing a remarkable transformation said to occur only once every 100 years, as the first step in their development for the future, the two companies have realized the need to utilize the brands they have nurtured over the years and harness their integrated governance to promote management resource allocation, to cultivate future core businesses. Doing so will make it possible for them to achieve major synergies as they accelerate efforts to achieve decarbonization, to allow them to evolve into a completely new business entity capable of sustaining growth and increasing corporate value. The expected synergistic effects of the business integration is to: (1) Strengthen existing businesses by reallocating management resources, and quickly developing products that will form the core of future business, (2) strengthen the ability to respond to an increasingly decarbonizing society, (3) reduce costs through shared use of infrastructure and other resources, (4) reduce manufacturing costs by improving production efficiency through shared product integration, and achieving a timely and appropriately fulfill supply responsibilities, and (5) upgrade interpersonal abilities through the exchange of personnel and technologies. In consideration of the time required for the business integration review by the Japan Fair Trade Commission which is a prerequisite for the integration, the two companies changed the schedule for the integration on November 28, 2022 (conclusion initially scheduled for April 3, 2023). There is however no change in the business integration policy, and the companies aim to conclude the integration as soon as possible.

Key Points

- Is a major manufacturer of automobile engine-use parts including piston rings and valve seat inserts
- Net sales increased in 1H FY3/23 cumulative results, but profit declined due to impact of higher raw materials and fuel prices and other factors
- Left initial forecast unchanged, but expects auto manufacturers to have returned to normal production levels by the second half of FY3/23
- In July 2022, concluded memorandum of understanding on business integration with Riken. In November 2022, schedule for the integration changed due to time required for the integration review by the Japan Fair Trade Commission, but companies collaborating and aiming for early conclusion to integration



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

Company overview

A major manufacturer of piston rings and valve seat inserts

1. Company overview

The Company is a major manufacturer of products including piston rings and valve seat inserts that are used as vehicle engine parts. Its corporate philosophy is to advance all things while placing the customer first, respond flexibly to environmental changes, secure profits appropriately, and reward our shareholders and other stakeholders; act in harmony with society, secure a position as a global comprehensive parts manufacturer, and contribute to the advancement of humanity; and always strive to innovate and improve results, promote the prosperity of the company and improve the lives of employees.

As of the end of 1H FY3/23, the head office was located in Saitama City, Saitama Prefecture, and total assets were ¥70,788mn, net assets were ¥38,213mn, capital was ¥9,839mn, the equity ratio was 51.0%, and the number of outstanding shares was 8,374,157 shares (including 604,645 treasury shares). The Group consists of 14 companies in total—the Company and 13 consolidated subsidiaries. Normeca Asia, a trading company specializing in medical equipment for emergencies and disasters, was made into a consolidated subsidiary on January 11, 2022, and has been included in the scope of consolidation from 1Q FY3/23.

On July 27, 2022, the Company entered into a memorandum of understanding on business integration (establishment of joint holding company through stock transfer) with Riken. In consideration of the time required for the business integration review by the Japan Fair Trade Commission which is a prerequisite for the integration, the two companies changed the schedule for the business integration on November 28, 2022 (conclusion initially scheduled for April 3, 2023). There is however no change in the business integration policy, and the companies aim to conclude the integration as soon as possible (Details are below).

2. History

Nippon Piston Ring Co., Ltd. was established in December 1934 in Tamura-cho, Shiba Ward, Tokyo City, at which time it also opened the Kawaguchi Plant. It then opened the Yono Plant in April 1939, and was listed on the Tokyo Stock Exchange (TSE) in May 1949 (transferred to the TSE Prime Market as part of the exchange's restructuring in April 2022). Subsequently, it started overseas business development from the 1970s, providing a wide range of products to the world's leading auto manufacturers. Since the 2000s, it has been accelerating business development for the growth markets of China, ASEAN, and India.

Also, the Company acquired a dental implant business and obtained approval for medical equipment manufacturing and marketing in October 2014, aiming to increase sales for non-automobile engines as new product businesses applying the core technologies accumulated since its establishment. Utilizing this, it began imports and sales of radiology medical equipment in September 2020, and started a technological investigation in April 2021 toward a specific project jointly with Professor Noriyuki Hisamori of Sophia University for NiFreeT, which is a new medical-use material of a titanium-tantalum alloy. In June 2021, it began a joint development program for implantable medical devices with Medtronic<MDT>, a medical equipment manufacturer that ranks first for global sales (consolidated net sales of US$28.9bn in FY4/20). Recently, Normeca Asia Co., Ltd. was made into a consolidated subsidiary in January 2022, and in September 2022, it succeeded in developing a new medical-use titanium alloy material.

History

Date	Event
December 1934	Established Nippon Piston Ring Co., Ltd., in Tamura-cho, Shiba Ward, Tokyo City, and opened the Kawaguchi Plant
April 1939	Opened the Yono Plant
May 1949	Listed on the Tokyo Stock Exchange
June 1964	Established Nippon Ring Service Co., Ltd.
January 1973	Established Schöttle Motorenteile GmbH in West Germany
July 1973	Established NPR of America, Inc. in U.S.A.
April 1974	Established NPR FUKUSHIMA WORKS CO., LTD.
September 1982	Established NPR Kawaguchi Works Co., Ltd., and NPR Distribution Center Co., Ltd.
December 1983	Established NPR Imanishi Works Co., Ltd., (currently NPR Shimane Co., Ltd.)
October 1984	Relocated the Kawaguchi Plant. Opened the Tochigi Plant
June 1989	Opened the Nogi Branch Plant of the Yono Plant (currently the Nogi Branch Plant of the Tochigi Plant)
April 1990	Established NPR IWATE CO., Ltd.
February 1996	Capital participation in IP Rings Ltd., in India
July 1997	Established Siam NPR Co., Ltd. in Thailand as a joint venture with Siam Cement Public Co., Ltd. (currently Cement Thailand Holdings)
May 1998	Transferred the headquarters to Yono City (currently Saitama City), Saitama Prefecture
December 1999	Established NPR of Europe GmbH. in Germany
December 2000	Established PT. Nippon Piston Ring Indonesia (currently PT. NT PISTON RING INDONESIA) in Indonesia
December 2001	Converted Siam NPR Co., Ltd., (Thailand) into a wholly-owned subsidiary
September 2002	Opened the Ichinoseki Plant of NPR IWATE CO., Ltd.
October 2004	Established NPR Manufacturing Michigan, Inc. in U.S.A.
January 2005	Merged Schöttle Motorenteile GmbH. with NPR of Europe GmbH
February 2005	Established NPR Auto Parts Manufacturing (Yizheng) Co., Ltd. in China
March 2005	Established NPR SINGAPORE PTE. LTD. in Singapore
February 2006	Established NPR Trading (Shanghai) Co., Ltd. in China (liquidated in December 2009)
March 2006	Established PT. NPR MANUFACTURING INDONESIA in Indonesia.
April 2006	Established NPR Auto Parts Manufacturing (Zhenjiang) Co., Ltd. in China.
May 2006	Established NPR Manufacturing Kentucky, LLC. in U.S.A. (absorbed and merged in January 2011)
January 2011	Merged the four US subsidiaries, of NPR US Holdings, Inc., NPR of America Inc., NPR Manufacturing Michigan, LLC. and NPR Manufacturing Kentucky, LLC. Changed the company name to NPR of America, Inc.
March 2011	Transferred all stocks held of NPR Shimane Co., Ltd.
December 2011	Established NPR AUTO PARTS MANUFACTURING INDIA PRIVATE LIMITED in India
March 2012	Absorbed and merged NPR Kawaguchi Works Co., Ltd. and NPR Distribution Center Co., Ltd.
July 2012	Conducted an absorption merger of NPR Auto Parts Manufacturing (Yizheng) Co., Ltd., and NPR Auto Parts Manufacturing (Zhenjiang) Co., Ltd.
December 2012	Established NPR Powdered Metals Manufacturing (Yizheng) Co., Ltd. in China.
July 2013	Converted PT. NT PISTON RING INDONESIA into a wholly-owned subsidiary, and it ceased to be a joint venture
October 2013	Transferred shares of NPR Powdered Metals Manufacturing (Yizheng) Co., Ltd. to Yizheng Shuanghuan Piston Ring Co., Ltd. (currently ASIMCO Shuanghuan Piston Ring (Yizheng) Co., Ltd.) and made it a joint venture. Changed the company name to NPR ASIMCO Powdered Metals Manufacturing (Yizheng) Co., Ltd.
May 2014	Acquired the metal injection molding business of Sumitomo Metal Mining Co., Ltd.
October 2014	Acquired the dental implant business of ISHIFUKU Metal Industry Co., Ltd.
October 2015	Established the Dental Implant Medical Device Center in the Tochigi Plant
October 2018	Transferred a part of the equity intertest in NPR of Europe GmbH. to Daido Metal Co., Ltd. <7245>
April 2021	Conducted an absorption merger of Nippon Ring Service Co., Ltd., and NPR Business Services Co., Ltd. Started a technological investigation with Sophia University for NiFreeT, which is a new medical-use material of a titanium-tantalum alloy
June 2021	Stated a joint development program with Medtronic <MDT> for implantable medical devices
August 2021	Developed cobalt-free valve seat inserts
October 2021	Established the Sustainability Promotion Office
January 2022	Made Normeca Asia Co., Ltd., a trading company specializing in medical equipment for emergencies and disasters, into a consolidated subsidiary
April 2022	Transferred to the TSE Prime Market as part of the exchange's restructuring
July 2022	Entered into a memorandum of understanding on business integration through the establishment of a joint holding company (stock transfer) with Riken
September 2022	Succeeded in developing a new medical-use titanium alloy material using the MIM process

Source: Prepared by FISCO from the Company's securities report and press releases

Business summary

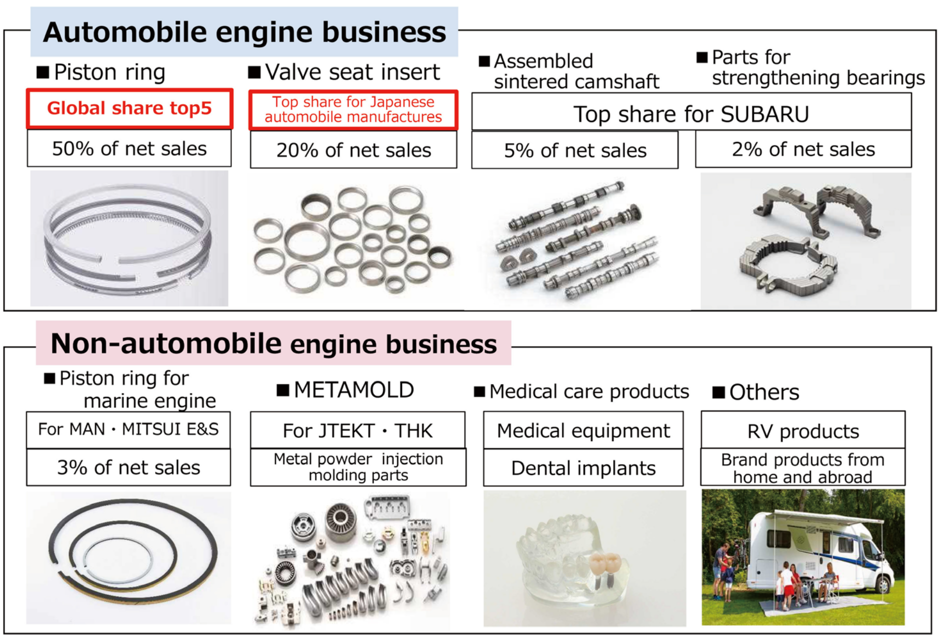
Main products are automobile engine-use piston rings and valve seat inserts

1. Business summary

The business segments are the Products for Automobiles Business, Products for Marine Engines and Other Products Business, and Others (merchandise sales, etc.). Separate to these segments, the Company also classifies its business as automobile engine business (existing business) and non-automobile engine business (new product businesses that utilize core technologies), and it is working to reinforce the earning capabilities of the automobile engine business and cultivate and establish the non-automobile engine business toward achieving the goals of the long-term vision and mid-term management plan.

The main products of the automobile engine business include piston rings, valve seat inserts, and assembled sintered camshaft, which are all important functional components of a vehicle's engine, and it holds a top-five share of the global market for piston rings, as well as a leading share of the market for valve seat inserts for Japanese manufacturers. Its main non-automobile engine business products include piston rings for marine engines, and METAMOLD products (metal powder injection molding parts), as well as medical equipment products and recreational vehicle (RV) products.

Products

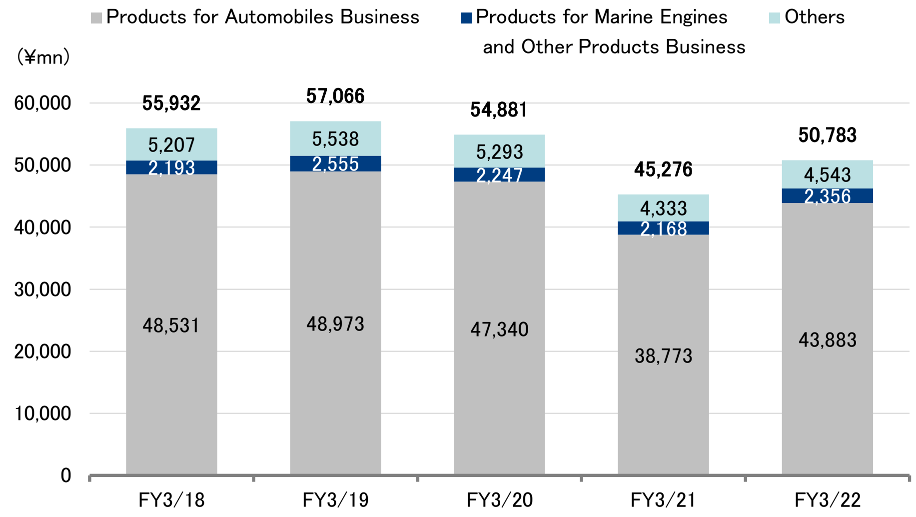


Source: The Company's results briefing materials

In net sales by segment, the Products for Automobiles Business provides the majority of net sales*. Furthermore, in the composition of net sales by product, roughly speaking, piston rings provide 50% and valve seat inserts 20%, and this has not changed greatly in the last five fiscal years. Looking at sales composition by region in FY3/22, Japan accounted for 38.7% of sales while overseas sales accounted for 61.3% (Asia: 27.4%, Europe: 14.1%, North America: 10.4%, other: 9.5%).

* Due to the impact of COVID-19, particularly in FY3/21, the number of vehicles produced globally declined, and therefore the Company's net sales decreased similarly.

Trends in net sales by segment



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

Company's strengths include its precision processing, surface treatment, materials and metals powder metallurgy technologies, and sintered alloy powder blending expertise

2. Characteristics and strengths

The Company's main products of piston rings and valve seat inserts are parts performing important functions related to automobile engine performance.

The main roles of piston rings include functions to seal gas leaks in an engine's combustion chamber, control lubricating oil (engine oil), transfer combustion heat that escapes, and minimize piston abrasion. They are used within the combustion chamber in the harsh conditions of a temperature of 300ºC, and are an important functional component related directly to engine performance. Therefore, in actuality there are only five companies in the world (one in the U.S., one in Germany, and three in Japan), including the Company, that are able to provide high-quality piston rings. In terms of technological trends, there are requirements such as for lower friction and improved abrasion resistance, high-performance and high-quality materials, and surface treatment. The Company's strengths include its advanced precision processing, surface treatment, and materials and powder metallurgy technologies that it has cultivated across its history of 90 years since its establishment.

Valve seat inserts are the seats of the valves and exhaust valves and play the role of maintaining the airtightness of the combustion chamber. They are required to have durability that does not deteriorate even when impacted at high temperatures and airtightness that reliably seals in combustion gas. Therefore, sintered alloy is used as a material with high heat resistance and abrasion resistance. One of the Company's strengths is its expertise in sintered alloy powder blending, for which it holds the top share, approximately 40%, for Japanese auto manufacturers.

Supplies wide range of products to world's leading automobile manufacturers

3. Main customers

As its customers, the Company supplies a wide range of products to the world's leading auto manufacturers, including Toyota Motor Corporation <7203>, and one of its features is that it does not rely on any specific auto manufacturer for more than 10% of net sales. Moreover, its supply of products to major auto manufacturers in the U.S. and Europe and local auto manufacturers in China is increasing.

Main customers

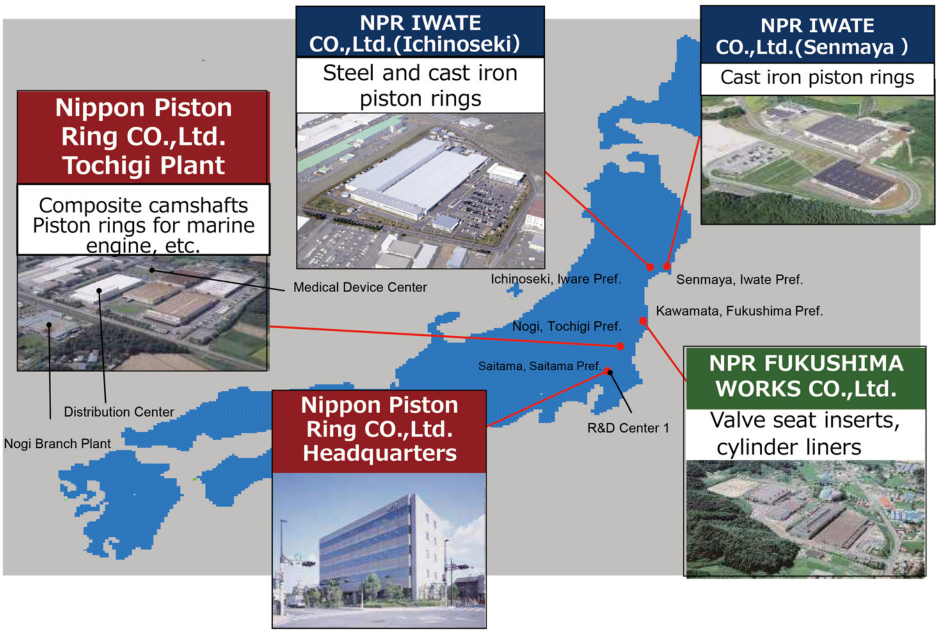
Source: The Company's results briefing materials

4. Bases

The Group's manufacturing bases are the Company's Tochigi Plant (which includes the Medical Device Center and the Nogi Branch Plant), while manufacturing is also conducted within Japan by the manufacturing subsidiaries NPR Fukushima Works Co., Ltd. and NPR IWATE Co., Ltd. (Higashidai, Ichinoseki and Senmaya, Ichinoseki), and overseas by the manufacturing subsidiaries NPR of America, Inc. (NOA, U.S.), NPR Auto Parts Manufacturing (Yizheng) Co., Ltd (NAMY, China), NPR ASIMCO Powdered Metals Manufacturing (Yizheng) Co., Ltd. (NAPM, China), PT. NT Piston Ring Indonesia (NTRI, Indonesia), PT. NPR Manufacturing Indonesia (NPMI, Indonesia), SIAM NPR Co., Ltd. (SNPR, Thailand), and NPR Auto Parts Manufacturing India Pvt. Ltd. (NPRI, India).

As the Group's overseas sales bases, it has sales offices for NOA in the U.S., NAMY in China, SNPR in Thailand, and NPRI in India. Furthermore, its sales subsidiaries include NPR of Europe GmbH. (NOE, Germany), NPR Singapore Pte. Ltd. (NPRS, Singapore), E.A. Associates Sdn. Bhd (EAA, Malaysia), and an office in South Korea.

Bases in Japan



Source: The Company's results briefing materials

Overseas bases

Source: The Company's results briefing materials

Promotes new product development in the non-automobile engine business

5. New product businesses

In order to increase sales for non-automobile engines, the Company is progressing new product businesses centered on the industrial equipment and medical fields.

Regarding the industrial equipment field, the Company is working to grow sales of METAMOLD for industrial equipment as deflectors for ball screws for vehicles' electric power steering and for SCARA robots. Furthermore, utilizing its superiority in terms of the degree of freedom for shaping and use of materials, the Company's policy is also to develop businesses for CASE*-related parts and the robot, sensor, and medical fields.

* An acronym for Connected, Autonomous, Shared & Services, Electric.

In the medical field, the Company acquired a dental implant business and obtained approval to conduct medical equipment manufacturing and marketing in October 2014. Utilizing this, it began imports and sales of radiation treatment products in September 2020, started sales of oral scanners in April 2021, and began a technological investigation into a specific project involving NiFreeT. In January 2022 it made Normeca Asia Co., Ltd., a trading company specializing in medical equipment for emergencies and disasters, into a consolidated subsidiary. More recently in September 2022, the Company succeeded in developing a new medical-use titanium alloy material (titan 6 aluminum 4 vanadium) in accordance with surgical implants standard ASTM-F2885 using the metal injection molding (MIM) process (Details are below).

6. Risk factors and earning characteristics

A risk factor is that the number of vehicles produced may decrease due to changes in demand and the impact of infectious diseases, disasters, and other factors. However, in the medium term, the global automobile market will grow, due in part to vehicle use expanding in emerging countries. So rather than a change in the number of vehicles produced, a risk factor for the Company at the current time is the impact of medium- to long-term environmental regulations (greater fuel efficiency of engines, declining use of gasoline engines, increased use of new clean fuel engines, spread of EV, etc.) driven by global movement toward decarbonization. The Company anticipates that the probability that widespread use of EV will quickly increase is low. Its policy is to develop technologies for the evolution of the automobile engine, including responses to the further improved fuel performance of gasoline engines and new clean fuel engines. In addition, based on the trend of the gradual shift to EV, it is also working to increase sales for non-automobile engines through new product businesses.

Results trends

Net sales increased in 1H FY3/23 cumulative results, but profit declined due to impact of higher raw materials and fuel prices and other factors

1. Outline of results for 1H FY3/23

In the 1H FY3/23 consolidated results, net sales increased 9.0% year on year (YoY) to ¥27,788mn, operating income decreased 44.8% YoY to ¥955mn, ordinary income decreased 25.5% YoY to ¥1,384mn, and net income attributable to owners of parent decreased 55.1% YoY to ¥573mn.

Consolidated results for 1H FY3/23

(¥mn)

	1H FY3/22		1H FY3/23		
	Results	%	Results	%	YoY
Net sales	25,497	100.0%	27,788	100.0%	9.0%
Products for Automobiles Business	21,848	85.7%	23,628	85.0%	8.1%
Products for Marine Engines and Other Products Business	1,269	5.0%	1,103	4.0%	-13.1%
Others	2,379	9.3%	3,056	11.0%	28.4%
Gross profit	6,144	24.1%	5,775	20.8%	-6.0%
SG&A expenses	4,413	17.3%	4,820	17.3%	9.2%
Operating income	1,731	6.8%	955	3.4%	-44.8%
Products for Automobiles Business	1,527	7.0%	1,031	4.4%	-32.5%
Products for Marine Engines and Other Products Business	386	30.4%	159	14.4%	-58.9%
Others	88	3.7%	25	0.8%	-71.4%
Adjustment	-271	-	-259	-	-
Ordinary income	1,858	7.3%	1,384	5.0%	-25.5%
Net income (loss) attributable to owners of parent	1,277	5.0%	573	2.1%	-55.1%
Exchange rate					
US$/¥	107.82	-	123.14	-	-
Euro/¥	129.89	-	134.39	-	-

Note: The percentage for operating income (loss) by segment shows the ratio compared to the net sales of each segment (segment operating income margin)
Source: Prepared by FISCO from the Company's financial results

Net sales grew strongly from the Company capturing demand in line with customer trends, and boosting sales of products for repair in the Products for Automobiles Business, and other factors including foreign exchange rates. A contribution from newly consolidated subsidiary Normeca Asia also helped boost overall net sales.

For operating income, the Company was able to absorb higher costs from rising raw material and fuel prices and the weak yen by adjusting sale prices and reducing costs, but operating income still fell. Increasing factors included roughly ¥500mn from adjusting sale prices and reducing costs, and roughly ¥300mn from increased production. Decreasing factors were roughly ¥1,000mn from higher raw materials and fuel prices and roughly ¥600mn from increased labor expenses and SG&A expenses. The effect of the weak yen bolstered operating income by roughly ¥50mn. This was mainly due to the yen weakening against the Euro, and there was no impact versus the US dollar due to foreign exchange sensitivity decreasing from localization advances. For ordinary income, non-operating income (foreign exchange gains) increased by ¥220mn, meaning the profit decline was smaller than for operating income. For net income attributable to owners of parent, a ¥252mn increase in corporation tax and other factors meant the quarterly profit decline was greater than for ordinary income.

2. Segment trends

(1) Products for Automobiles Business

Net sales increased 8.1% YoY to ¥23,628mn, and segment profit decreased 32.5% YoY to ¥1,031mn. Although the impact of in-vehicle semiconductor shortage and other factors meant the the number of vehicles produced globally increased only marginally YoY, net sales increased from the Company capturing demand in line with customer trends, boosting sales of products for repair, one of the Company's strengths, and other factors such as foreign exchange rates. By contrast, segment profit declined due to factors such as rising raw material and fuel prices and higher labor expenses and SG&A expenses. Looking at the composition of total net sales by region, Japan accounted for 34.1%, Asia 30.7%, Europe 10.7%, North America 12.9% and other regions 11.6%.

(2) Products for Marine Engines and Other Products Business

Net sales decreased 13.1% YoY to ¥1,103mn, and segment profit decreased 58.9% YoY to ¥159mn.

(3) Others

Net sales improved 28.4% YoY to ¥3,056mn, helped by a contribution from newly consolidated subsidiary Normeca Asia, while segment profit declined 71.4% YoY to ¥25mn.

3. Financial condition

At the end of 1H FY3/23, total assets had increased ¥3,412mn to ¥70,788mn. This was mainly due to an increase of ¥1,859mn in inventory assets, an increase of ¥1,389mn in property, plant and equipment, and an increase of ¥821mn in cash and deposits, with investment securities decreasing ¥812mn. The increase in inventory assets is a temporary increase due to the impact of the weak yen and rise in the cost of raw materials in addition to the strategic increase taking into account the production adjustments by auto manufacturers and supply chain disruptions. Total liabilities increased ¥205mn to ¥32,574mn, which was mainly due to an increase of ¥1,058mn notes and accounts payable – trade, and an increase of ¥346mn in electronically registered obligations. Interest-bearing debt decreased by ¥1,342mn, lowering the net D/E ratio to 0.19 (compared to 0.27 at the end of the previous fiscal year). Total net liabilities increased ¥3,206mn to ¥38,213mn, primarily because of an increase of ¥3,245mn in foreign currency translation adjustment, an increase of ¥169mn in retained earnings, and a decrease of ¥564mn in valuation difference on available-for-sale securities.

As a result, the equity ratio improved to 51.0% (compared to 49.2% at the end of the previous fiscal year). There are no particularly major concerns in this regard, and it can be said that the Company is maintaining its fiscal soundness.

Consolidated balance sheet

(¥mn)

	End of FY3/20	End of FY3/21	End of FY3/22	End of 1H FY3/23	Change
Total assets	63,608	61,809	67,375	70,788	3,412
Current assets	27,623	26,131	30,166	32,745	2,579
Non-current assets	35,985	35,678	37,208	38,042	834
Total liabilities	32,319	31,541	32,368	32,574	205
Current liabilities	22,050	19,254	20,959	22,578	1,619
Non-current liabilities	10,269	12,287	11,409	9,996	-1,413
Net assets	31,289	30,267	35,006	38,213	3,206
Shareholders' equity	29,950	28,299	29,969	30,187	218
Equity ratio	46.9%	46.4%	49.2%	51.0%	1.8pt

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

Consolidated balance sheet

(¥mn)

	1H FY3/22	1H FY3/23
Cash flow from operating activities	4,716	3,466
Cash flow from investing activities	-1,332	-1,569
Cash flow from financing activities	-2,025	-2,099
Change in cash and cash equivalents at the end of the period	1,488	821
Cash and cash equivalents at the end of the period	6,255	6,811

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

Outlook

No change to initial FY3/23 forecasts, expects auto manufacturers will have returned to normal production levels by the second half of the fiscal year

● FY3/23 results outlook

For the FY3/23 consolidated results, the Company left its initial forecasts unchanged, and is forecasting net sales to increase 8.3% YoY to ¥55,000mn, operating income to increase 2.8% to ¥2,700mn, ordinary income to decrease 8.5% to ¥2,800mn, and net income attributable to owners of parent to decrease 1.5% to ¥1,900mn. The assumed foreign currency exchange rate have been revised, and are now ¥130 to the U.S. dollar (compared to ¥109.90 in the previous fiscal year), and ¥135 to the euro (¥129.91). As for foreign exchange sensitivity, there are positive impacts of yen's depreciation against the euro, but there is only minor impact versus the US dollar due to localization advances.

Consolidated outlook for FY3/23

(¥mn)

	FY3/22		FY3/23			1H progress rate
	Results	% of net sales	Forecast	% of net sales	YoY	
Net sales	50,783	100.0%	55,000	100.0%	8.3%	50.5%
Operating income	2,627	5.2%	2,700	4.9%	2.8%	35.4%
Ordinary income	3,058	6.0%	2,800	5.1%	-8.5%	49.4%
Net income attributable to owners of parent	1,928	3.8%	1,900	3.5%	-1.5%	30.2%
Exchange rate						
US$/¥	109.90	-	130.00	-	-	-
Euro/¥	129.91	-	135.00	-	-	-

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

The Company expects raw material and fuel prices to remain at high levels, but that auto manufacturers will have returned to normal production levels by the second half of the fiscal year, and it will continue to reduce costs and adjust sale prices to reflect increases in raw materials and fuel prices. The Company expects the consolidation of Normeca Asia to realize net sales of around ¥1,8bn and an operating income margin of around 10%. The Company expects a small decrease in ordinary income and net income attributable to owners of parent, and does not forecast any foreign exchange gains for non-operating income.

Initially, expected ordinary income increasing factors were ¥300mn from increased production, ¥1,300mn from cost reductions (including reflecting the rise of raw material costs in sales prices), while expected decreasing factors were ¥1,400mn from rising raw material and fuel prices, ¥100mn from increases in depreciation expenses, ¥100mn from increases in R&D and other related expenses, and ¥300mn from non-operating costs (including a decrease in foreign exchange gains compared to the previous fiscal year). The Company however revised 2H forecasts based on 1H results. Although it expects rising raw material and fuel prices to further increase electricity costs, it believes this will be absorbed by factors such as price hikes and a weaker yen, and left the overall ordinary income unchanged.

The Company revised its initial capital investment forecast (a ¥2,100mn increase YoY to ¥4,900mn) to ¥3,700mn due to the installation of some equipment being pushed back due to stagnation of parts procurement at equipment manufacturers and the impact of production adjustments at auto manufacturers. The Company is mainly prioritizing streamlining and R&D in Japan and new and increased production overseas (China), and also focusing on DX-related investments and environmental investments that will contribute to reductions in CO_2 emissions. It is also actively allocating R&D expenses to differentiating existing products and developing new products and businesses, and will spend ¥1,800mn, the same as in FY3/22.

Net sales achieved 50.5% of the Company's full-year forecast, operating income 35.4%, ordinary income 49.4% and net income attributable to owners of parent 30.2%. Although operating income progress is a little sluggish, FISCO believes the Company is likely to achieve its full-year forecast based on the expectation that auto manufacturers will have returned to normal production levels by the second half of this fiscal year, continued reduction of costs and sales price adjustment to reflect increases in raw material and fuel prices, and a fall in some raw material prices.

Growth strategy

Is aiming for non-automobile engine sales to provide at least 40% of net sales in FY3/31

1. Long-term vision and 8th Medium-term Management Plan

The Company formulated The Next NPR 2030 long-term vision in order to respond to the major changes to the business environment surrounding the automobile industry, including those related to environmental contribution such as exhaust gas regulations, cost reductions, the spread of EVs, technological solutions such as CASE, and globalization. Its numerical targets for FY3/31 are net sales of ¥100bn, an operating income margin of at least 10%, for non-automobile engine sales to provide at least 40% of net sales, and a reduction of CO_2 emissions of 46% (compared to FY3/14).

In May 2021, it also formulated the 8th Medium-term Management Plan (FY3/22 to FY3/24) by backcasting from its ideal vision of the future. The plan has been positioned as a period for building a foundation for achieving the long-term vision and its targets are net sales of at least ¥54bn, an operating income margin of at least 8%, for non-automobile engine sales to provide at least 15% of net sales, and a reduction of the CO_2 emissions volume of 25% (compared to FY3/14) in FY3/24.

Numerical targets

	8th Medium-term Management Plan FY3/24	The Next NPR 2030 FY3/31
Net sales	At least ¥54bn	At least ¥100bn
Operating income margin	At least 8%	At least 10%
Percentage of net sales from non-automobile engine sales	At least 15%	At least 40%
CO_2 emissions (compared to FY3/14)	-25%	-46%

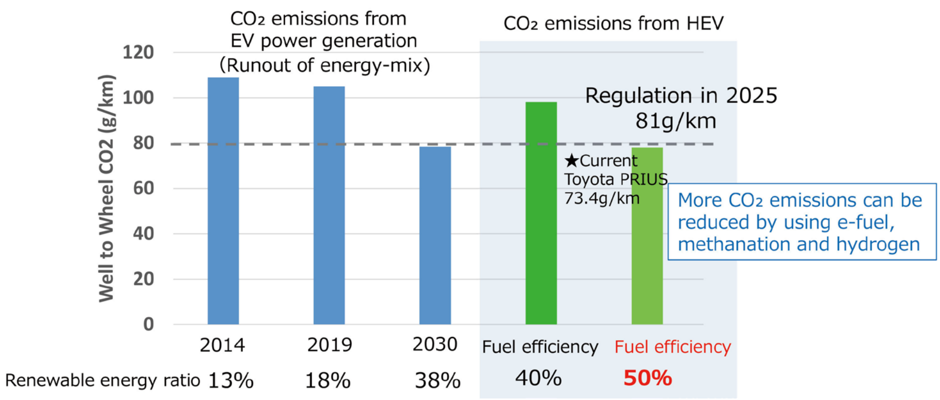
Source: Prepared by FISCO from the Company's results briefing materials

Despite market environment changes, current engines are expected to survive

2. Market environment

In the global automobile market, demand for vehicles is forecast to grow, especially in emerging countries. However, movements such as the introduction of environmental regulations and a shift to EV are expected to accelerate in response to global warming and energy issues and a decline in the use of internal combustion engines (ICE) will prompt changes in powertrain composition. Furthermore, progress is being made on the development of hydrogen engines and clean e-fuel engines that use renewable energy to create fuel which is expected to lead to the spread of a new generation of mobility options. A comparison of CO_2 emissions generated well-to-wheel by EV and hybrid electric vehicles (HEV) show that a HEV equipped with a 50% fuel efficient engine based on the current stage of research and development performs competitively with an EV, so the possibility of an immediate, complete conversion to EV is forecast to be low and current engines are expected to survive and remain in developed countries. In December 2022, Toyota entered a GR Corolla installed with a clean hydrogen engine in an endurance race in Thailand. It was the first time a hydrogen engine car was entered in an overseas race, and showcases the hydrogen engine as a new clean fuel option for the carbon-neutral era. A recent topic concerns the hydrogen engine truck development project implemented by iLabo Co., Ltd. (which the Company has participated in since 2021), in which equipment that evaluates engines containing the Company's piston rings and valve seat inserts has started operating in August 2022.

CO_2 emissions generated well-to-wheel by EV and HEV



Source: The Company's results briefing materials

3. Management strategy

To achieve the targets in the long-term vision and medium-term management plan, and taking into account automobile industry trends, the Company is focusing resources on three priority initiatives: (1) Reinforce earning capabilities in existing businesses (automobile engine business), (2) establish and cultivate new product businesses (non-automobile engine business), and (3) promote sustainability management.

(1) Reinforce earning capabilities in existing businesses (automobile engine business)

The Company plans to reinforce earning capabilities in existing businesses by contributing to engine development by customers through the provision of high-quality ICE parts adapted to environmental regulations. Specifically, it will develop products that contribute to realizing 50% fuel efficiency through differentiated technology, as well as consider methods for achieving carbon neutrality, such as e-fuel and hydrogen fuel. It will also strengthen efforts to leverage its core technologies to grow sales in markets in emerging countries. In emerging countries such as India and many African countries market, the shift to EV has not manifested and the use of ICE vehicles is expected to continue growing for the foreseeable future. Therefore, the Company will aim to increase its market share in these countries, where there is still room for growth. Additionally, the electrification of large commercial vehicles is also facing many challenges and it is expected that diesel engines will continue to be used for the time being, so the Company will aim to expand its share of the market for large-scale commercial vehicles in China market, where it has already successfully acquired many customers. Furthermore, even in markets where new cars tend to be EV, demand for engine maintenance is forecast to remain steady, so it will continue efforts to expand its share of the aftermarket business especially in North America, Central America, and Africa.

(2) Establish and cultivate new product businesses (non-automobile engine business)

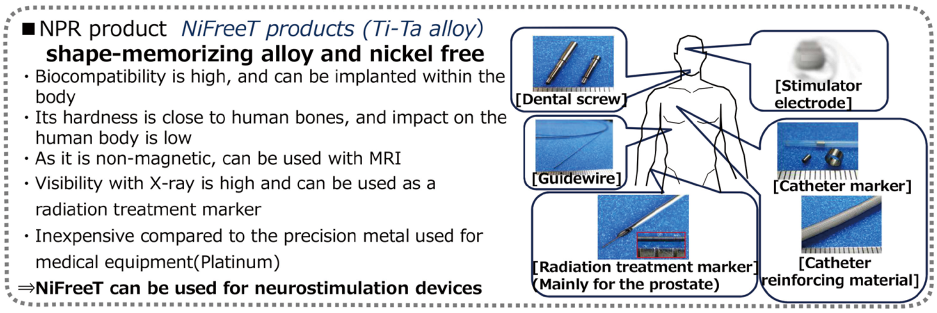
In the non-automobile engine business, the Company is aiming to steadily develop new product businesses in the medical and industrial equipment fields among others, and to use M&A and open innovation to establish business operations swiftly.

a) Medical field

Since FY3/15, the Company has been developing a business in the medical equipment field using the metal materials technology and precision processing expertise it has accumulated in its core business of manufacturing and selling auto engine parts. It is also working with influential medical device manufacturers, universities, and other partners in the medical field, both in Japan and overseas, with a focus on developing “people-friendly medical equipment” that takes the perspectives of both medical professionals and patients into account.

NiFreeT, a new medical-use material of a titanium-tantalum alloy, is highly biocompatible being nickel-free and non-magnetic. It can also be retained within the body and it is less expensive than the precious metals conventionally used in medical equipment (platinum). NiFreeT was initially developed in-house by the Company for use with piston rings as a shape-memorizing alloy, but it was then re-classified as a medical-use material because it is nickel-free and presents excellent processability. It is expected to be used in medical implants such as dental screws, guidewires, and catheter reinforcing materials, and the Company is aiming to develop products and a business swiftly. In 2022, it is estimated that sales in the medical implant market will amount to around US$4bn (approx. ¥500bn) and there is plenty of room for further market cultivation.

NiFreeT products (Ti-Ta alloy)



Source: The Company's results briefing materials

Normeca Asia Co., Ltd., a trading company specializing in medical equipment for emergencies and disasters, was made into a consolidated subsidiary in January 2022. Normeca Asia is advocating the immediate introduction of disaster medical care in Japan and has a wealth of knowledge and experience in the disaster and emergency field as the first trading company in Japan to specialize in disaster medical care equipment. In addition to handling medical equipment for emergencies and disasters and products to help prevent the spread of infections, it also provides services such as planning for disaster medical care training drills. The Company aims to grow sales in the non-automobile engine business by realizing Group synergies through the combination of Normeca Asia's broad customer base and ability to develop and deliver solutions and the Company's core technologies, manufacturing and sales capabilities, and organizational adaptability that leverages locations in Japan and overseas.

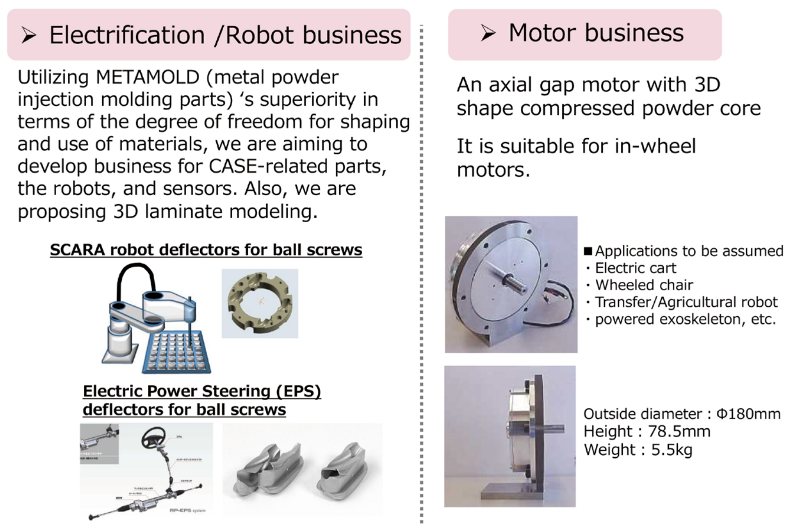
In September 2022, the Company succeeded in developing a new medical-use titanium alloy material (titan 6 aluminum 4 vanadium) in accordance with surgical implants standard ASTM-F2885 using the metal injection molding (MIM) process. By reducing impurities, the material has a fatigue strength around 40% stronger than other materials manufactured using the general MIM process and also achieves costs reductions compared to existing manufactured goods. It appears the material has been subject to business inquiries from markets such as surgical implants where strength is required. The Company's policy is to continue developing material and processing technologies to contribute to the progress of medical equipment.

The Company is also advancing new product development through a joint development program for implantable medical devices with Medtronic, a major global medical equipment manufacturer.

b) Industrial equipment field

In the industrial equipment field, the Company will utilize the METAMOLD production method's superiority in terms of the degree of freedom for shaping and use of materials to develop businesses in areas such as CASE-related parts, robots, and sensors. Also, its axial gap motor with 3D shape compressed powder core is perfectly suited for in-wheel motors and it is expected to be used for electric carts, wheelchairs, robot carriers, agricultural robots, and powered exoskeletons.

Establishing and cultivating industrial equipment businesses



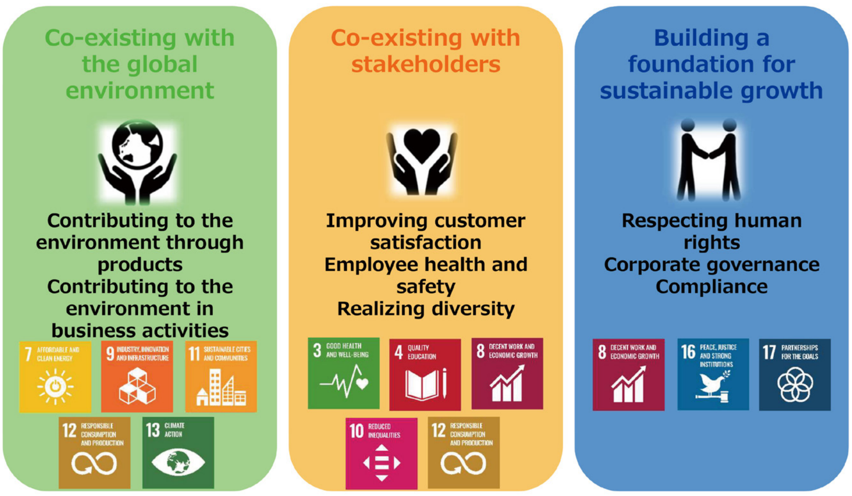
Source: The Company's results briefing materials

(3) Promote sustainability management

For its initiatives toward the SDGs as important issues (materiality) that the Company will tackle as a priority from among the various issues that exist in society, it has specified co-existing with the global environment (contributing to the environment through products and in business activities), co-existing with stakeholders (improving customer satisfaction, employee safety and health, and realizing diversity), and building a foundation for sustainable growth (respecting human rights, corporate governance, and compliance), and it is conducting activities toward realizing a sustainable society.

Furthermore, in October 2021, the Company newly established the Sustainability Promotion Office. Previously, various measures toward realizing a sustainable environment and society were progressed centered on the CSR Promotion Committee. However, in order to further strengthen these measures, it established the Sustainability Promotion Office within the Corporate Planning Department as a specialist organization to plan and progress the execution of sustainability-related operations.

Taking a leap forward toward becoming a sustainable company



Source: The Company's results briefing materials

Of the materiality, the Company to address "contributing to the environment in business activities" by aiming to reduce CO_2 emissions by 25% (compared to FY3/14) by FY3/24, by 46% by FY3/31, and to become carbon neutral by around 2050. Initiatives to date have included the introduction of innovative production lines, the reuse of waste heat, switching lighting to LED, and the use of J-credits related to prefectural forests in Iwate Prefecture. It is also considering initiatives such as upgrading equipment to energy-saving and high-efficiency models and switching to electricity from renewable sources. Initiatives to become carbon neutral include subsidiary NPR IWATE Co., Ltd. entering into an energy service agreement in August 2022 to introduce a power purchase agreement (PPA) model with SMFL MIRAI Partners Co., Ltd., a member of the Sumitomo Mitsui Finance and Leasing Co., Ltd. group. The service will commence sometime in 2023.

For "improving employee safety and health," the Company was certified as an Excellent Health Management Corporation 2022 (large-scale corporations section) in the Excellent Health Management Corporations Certification System initiated by the Ministry of Economy, Trade and Industry and Nippon Kenko Kaigi (the third consecutive year it has received such certification since 2020). It also received a Bronze Medal in the 2022 sustainability assessment carried out by EcoVadis, a France-based international sustainability assessment body. Regarding "realizing diversity," the Company has received a Platinum Rating in the Companies Implementing Diverse Working Styles accreditation system operated by Saitama Prefecture, the prefecture in which the Company's head office is located.

As initiatives to strengthen corporate governance, the Company established a nomination and remuneration advisory committee in June 2020 and transitioned to being a company with an audit and supervisory committee in June 2021.

In addition, in August 2021, the Company developed cobalt-free valve seat inserts that do not use cobalt as a raw material. It previously used cobalt as a material for valve seat inserts in order to improve abrasion resistance. As background to this new product, being an essential material for batteries used in EV, cobalt's market price is soaring, and it's a resource that presents many issues including from the sustainability perspective, such as risks related to responsible mineral procurement as it is a rare metal. By developing cobalt-free valve seat inserts, the Company has been able to ensure the same level of functionality as before without having to rely on cobalt. It is working to increase sales of this product, and at the same time its policy going forward is to continue to actively conduct measures to respond to environmental, human rights, and other social issues and contribute to building a sustainable society.

4. Business integration with Riken

On July 27, 2022, the Company and Riken announced that they entered into a memorandum of understanding on business integration. Both companies conduct businesses centering around ICE parts such as piston rings and contribute to global motorization development, and both believe it their duty to develop engine parts that are friendly to the global environment. With the automobile industry undergoing a remarkable transformation said to occur only once every 100 years, as the first step in their development for the future, the two companies have realized the need to utilize the brands they have nurtured over the years and harness their integrated governance to promote management resource allocation, to cultivate future core businesses. Doing so will make it possible for them to achieve major synergy as they accelerate efforts to achieve decarbonization, to allow them to evolve into a completely new business entity capable of sustaining growth and increasing corporate value. The two companies entered into the memorandum of understanding for business integration as the best option for their shareholders, employees and all stakeholders.

The expected synergistic effects of the business integration is to: (1) Strengthen existing businesses by reallocating management resources, and quickly developing products that will form the core of future business, (2) strengthen the ability to respond to an increasingly decarbonizing society, (3) reduce costs through shared use of infrastructure and other resources, (4) reduce manufacturing costs by improving production efficiency through shared product integration, and achieving a timely and appropriately fulfill supply responsibilities, and (5) upgrade interpersonal abilities through the exchange of personnel and technologies.

(1) Strengthen existing businesses by reallocating management resources, and quickly developing products that will form the core of future business

Both companies will adjust capital investment and promote wide-range product optimization in order to work towards improving business efficiency and deepening development capabilities in existing businesses, strengthening cash flow creation. They will also increase the efficiency of existing business to reallocate management resources to future core businesses and new products to quickly develop products. Specifically, the Company will seek to cultivate and establish new product businesses (medical equipment, motorization/robot, motor), while Riken will aim to create the shoots of next-generation core products (thermal engineering business, EMC business, hydrogen/new energy business, next-generation new business (non-ICE)).

(2) Strengthen the ability to respond to an increasingly decarbonizing society

The two companies will bring to the table products and production technologies and resources cultivated to date, and by doing so, will contribute to the creation of a sustainable society by developing environmental technologies that accelerate product decarbonization and by actively working to reduce CO_2 emissions throughout the entire supply chain. Specifically, the companies will contribute to a reduction of ICE fuel consumption (environmental burden) through products with advanced environmental performance, providing high-efficiency power train system solutions, and Riken developing next-generation ICE parts.

(3) Reduce costs through shared use of infrastructure and other resources

The companies aim to improve operational efficiency and cost reductions to secure a competitive advantage by improving productivity through the entire supply chain, reducing external outflow costs by standardizing internal manufacturing processes in both companies; reducing procurement costs through joint purchasing, and increasing efficiency by eliminating duplicated systems and indirect operations.

(4) Reduce manufacturing costs by improving production efficiency through shared product integration, and achieving a timely and appropriately fulfill supply responsibilities

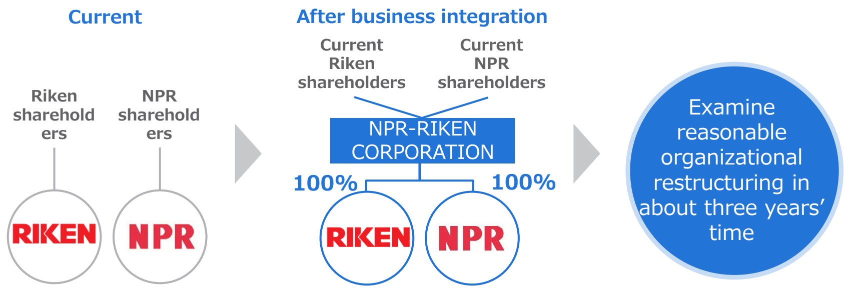
The two companies will promote the optimization of production hubs with the goal of significantly improving productivity, expanding the capability of offering high-quality products, and reducing fixed costs. Additionally, by establishing a sustainable production system, we will be able to fulfill our responsibility to supply products to our customers in a timely and appropriate manner.

(5) Upgrade interpersonal abilities through the exchange of personnel and technologies

The companies will provide the opportunity for new ideas to be born through the active exchange of knowledge and technologies. The companies will strive to build a workplace environment that increases employee engagement more than ever before.

The business integration will result in the establishment of NPR-RIKEN CORPORATION, a joint holding company through stock transfer. There will be two representative directors (a Riken director will assume the position of CEO, and a Company director will assume the position of COO). There will be 13 directors (with at least one-third to be outside directors). The stock transfer ratio will be determined through discussion between the two companies. In consideration of the time required for the business combination review by the Japan Fair Trade Commission which is a prerequisite for the Consolidation, the two companies changed the schedule for the business integration on November 28, 2022 (conclusion initially scheduled for April 3, 2023). There is however no change in the business integration policy, and the companies aim to conclude the integration as soon as possible.

Summary of business integration

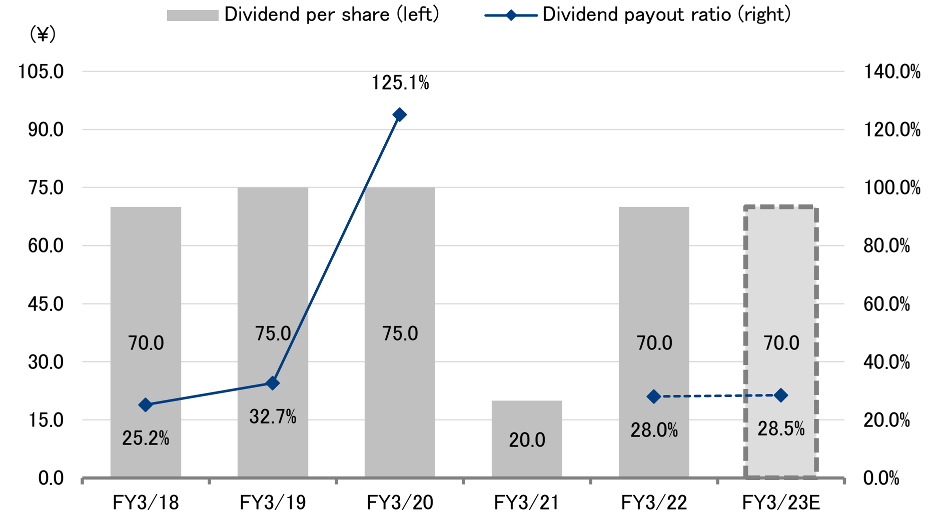


Source: Prepared by FISCO from the Company's materials

Shareholder return policy

The Company considers appropriately and stably returning profits to shareholders to be its most important management issue, and it does so after comprehensively considering factors such as results trends and business development in the future. In accordance with this basic policy, For FY3/23, it plans to pay the same annual dividend as the previous fiscal year of ¥70.0 (interim dividend of ¥20.0, period-end dividend of ¥50.0) with an expected dividend payout ratio of 28.5%.

Dividend per share and dividend payout ratio



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

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