COMPANY RESEARCH AND ANALYSIS REPORT

TODA KOGYO CORP.

4100

Tokyo Stock Exchange Prime Market

7-Nov.-2022

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Summary

Growing its business by further improving its fine particle synthesis technology cultivated with iron oxides to create new materials and new products that are highly original

TODA KOGYO CORP. <4100> (“the Company”) has been evolving its fine particle synthesis technology cultivated with iron oxides to expand its business in a number of areas. These areas include high-purity iron oxides used in optical lens abrasives, magnetic iron oxides used in products such as audiotape that took the world by storm, materials for toners used in copiers and printers, dielectric materials for multilayer ceramic capacitors (“MLCC”) widely used in smartphones, as well materials used in lithium-ion batteries which are increasingly being used in electric vehicles (“EVs”) and other applications. Currently, the Company is engaged in two businesses; the Functional Pigments Business (various coloring materials, environmental-related materials) and the Electronic Materials Business (including magnet materials, dielectric materials, soft magnetic materials, and materials used in lithium-ion batteries).

1. Summary of FY3/22 results

In the FY3/22 consolidated results (new accounting standard), net sales increased 34.9% year on year (YoY) to ¥35,332mn, operating profit increased by ¥2,508mn to ¥2,519mn, ordinary profit was ¥4,184mn (an improvement of ¥4,784mn, thereby turning to profitability), and profit attributable to owners of parent came to ¥3,116mn (an improvement of ¥7,258mn, thereby turning profitable). In the Functional Pigments Business, net sales were ¥13,562mn (up 10.2%) and operating profit was ¥2,124mn (up 69.0%) due to the significant recovery in materials for copiers and printers accompanying the rebound from the COVID-19 pandemic. In the Electronic Materials Business, sales grew, mainly for magnet materials and dielectric materials, due to the progress in CASE in the automotive market and the increasingly widespread use of ICT in the information and communications market, resulting in net sales of ¥21,770mn (up 30.3%) and operating profit of ¥3,285mn (up 118.3%). Segment profit from the two businesses came to ¥5,410mn (up 95.8%), while Company-wide expenses were only ¥2,890mn (up 5.1%), resulting in a large increase in operating profit. Ordinary profit surpassed ¥4,000mn for the first time since FY3/1983, and was the third highest level in the Company’s history. This was due to a big improvement in non-operating income and expenses, with solid earnings of entities accounted for using equity method resulting in share of profit of entities accounted for using equity method of ¥1,520mn (an improvement of ¥2,351mn resulting in a change from loss to profit), along with the depreciation of the yen resulting in foreign exchange gains of ¥151mn (up ¥117mn), and other factors. Furthermore, in extraordinary income/losses, impairment losses were held to ¥178mn (down ¥2,045mn), and profit attributable to owners of parent set a new record high, eclipsing the ¥2,642mn set back in FY3/1984.

2. Outlook for FY3/23

The outlook for FY3/23 consolidated results is for net sales of ¥40,000mn (up 13.2% YoY), operating profit of ¥1,600mn (down 36.5%), ordinary profit of ¥2,500mn (down 40.3%), and profit attributable to owners of parent of ¥1,500mn (down 51.9%). While growth in net sales is expected for the portion linked to the market prices, the Company is anticipating a significant fall back in profits due to the impacts of soaring raw materials and energy prices, among other factors.

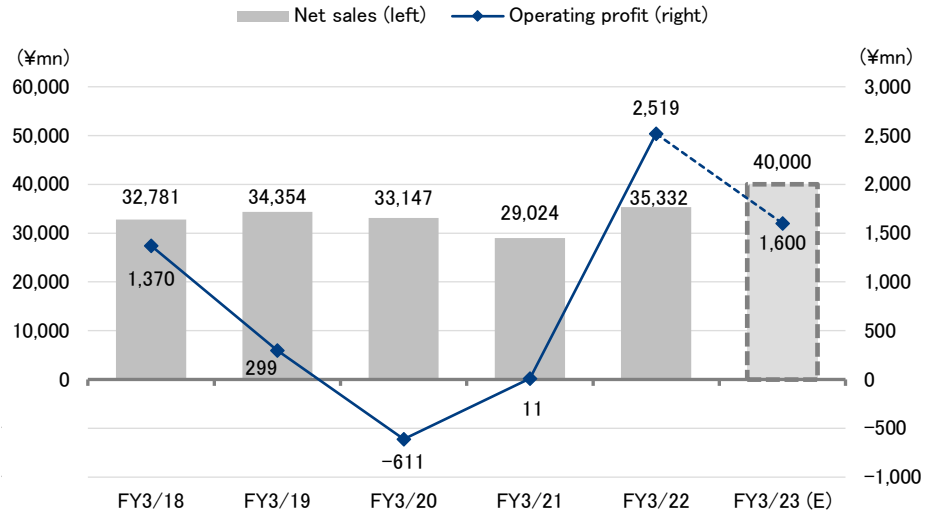
3. Progress on medium-term business plan

Regarding the medium-term business plan for FY3/22 through FY3/24 Vision2023, operating profit in FY3/22 exceeded the target value for the final fiscal year of the plan. For net sales, the Company is forecasting net sales of ¥40,000mn in FY3/23 and is expected to achieve the target by a significant margin. In the plan, it added environmental-related and soft magnetic materials as next-generation fields and is planning to expand its business with respect to five domains, while also making progress on developing other innovative materials. The record-high operating profit was ¥5,030mn in FY3/1984. For net sales and profit attributable to owners of parent, the Company has already set a new record high. It seems that sooner or later it will exceed the record-high operating profit due to the growth in strategic products. The Company is aiming for additional growth after 2023, the year it will mark the 200th anniversary of its founding, and is working on formulating Go Beyond 200 as a vision for 2024 and thereafter, so there are growing expectations for new leaps forward.

Key Points

- In the FY3/22 consolidated results (new accounting standard), net sales increased 34.9% YoY, while profit attributable to owners of parent was a new record high
- For FY3/23, the Company is forecasting a 13.2% increase in net sales, but expects operating profit to decline by 36.5% based on the assumption of rising raw materials costs and other factors
- The Company has already effectively achieved Vision 2023, which are its targets for its 200th anniversary, ahead of schedule, and is aiming for additional leaps in Go Beyond 200, its vision for the years after its 200th anniversary

Results trends



Note: Since FY3/22, the Company has been adopting the Accounting Standard for Revenue Recognition, etc.
Source: Prepared by FISCO from the Company's financial results

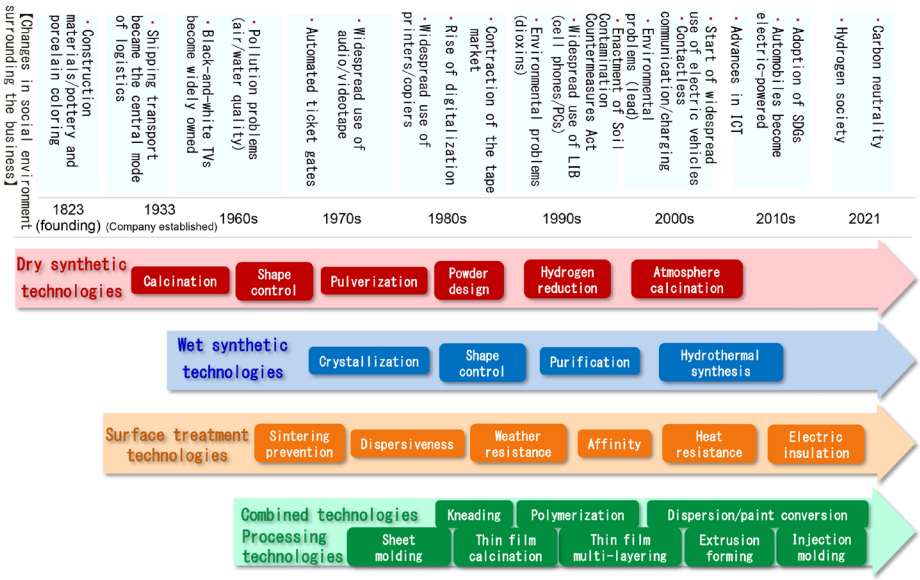
Company profile

A chemical materials manufacturer that will celebrate the 200th anniversary of its founding in 2023

1. Company profile

The Company was founded in 1823 (Bunsei Year 6) by Shozo Toda in Nishiebara Village, Shitsuki District, Okayama Prefecture (currently Ibara City) as Seikinsha that made a living by manufacturing of wood paints and coatings for buildings, navy blue-dyed bases, and Bengala (iron oxides binding oxygen and iron) used in items such as lacquerware, umbrella coloring and ceramics (red painting glazes). The Company is a long-established chemicals manufacturer that will celebrate the 200th anniversary of its founding in 2023. The Company has expanded its business by improving its fine particle synthesis technologies cultivated with iron oxides to provide cutting-edge materials appropriate for the times, including high-purity iron oxides used in optical lens abrasives, magnetic iron oxides used in products such as audiotape that took the world by storm, materials for toners used in copiers and printers, dielectric materials for multilayer ceramic capacitors (“MLCC”) widely used in smartphones, as well materials used in lithium-ion batteries which are increasingly being used in electric vehicles (“EVs”) and other applications. Currently, the Company is engaged in two businesses; the Functional Pigments Business (various coloring materials, environmental-related materials), and the Electronic Materials Business (including magnet materials, dielectric materials, soft magnetic materials, and materials used in lithium-ion batteries).

Changes in the Company’s technologies (1823 – 2021)



Source: From the Company’s medium-term business plan

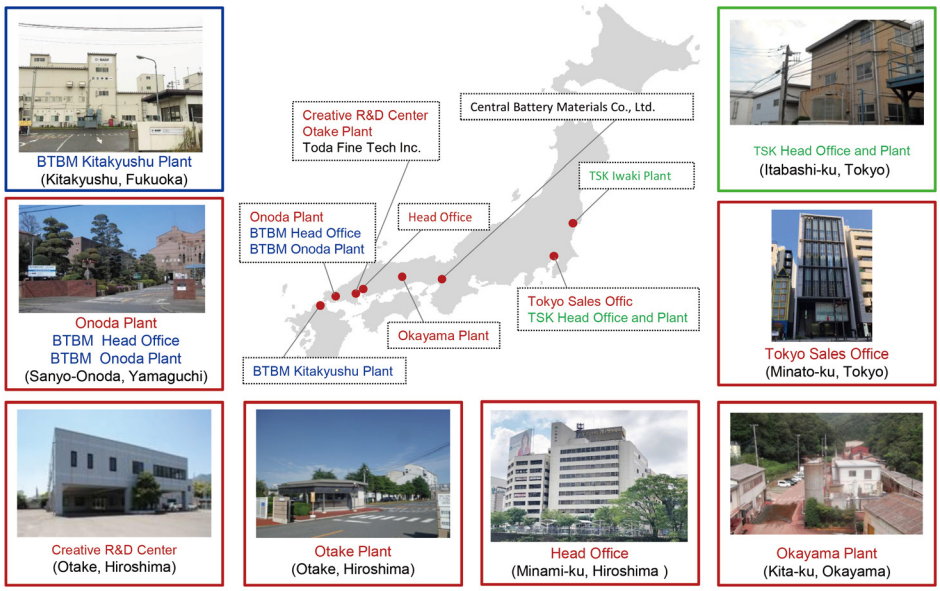
The Group comprises the Company, 17 consolidated subsidiaries, 6 affiliates, and 1 other affiliated company. As of the end of FY3/22, there were 1,303 employees on a consolidated basis, and the Company itself has 374 employees.

Company profile

In the Functional Pigments Business, the Company's activities are centered on manufacturing and sales, and TOKYO SHIKIZAI INDUSTRY CO., LTD. manufactures and sells organic pigments for coloring. Overseas, Toda United Industrial (Zhejiang) Co., Ltd. and Zhejiang Huayuan Pigment Co., Ltd. manufacture and sell inorganic pigments, as well as supply raw materials to the Company.

In the Electronic Materials Business, the Company manufactures and sells ferrite magnetic compounds and ferrite materials, etc. as materials related to bonded magnets, and overseas, TODA PLASTIC MAGNET MATERIAL (ZHEJIANG) CORP. and Toda Kogyo Asia (Thailand) Co., Ltd. manufacture and sell ferrite magnetic compounds, while ZHEJIANG TODA DMEGC MAGNETICS CO., LTD. manufactures and sells ferrite materials, and Toda Magnequench Magnetic Material (Tianjin) Co., Ltd. manufactures and sells rare earth magnetic compounds and other materials. Jiangmen & Partner's Magnetic Product Co., Ltd. manufactures and sells injection molding bonded magnets and other materials. In electronic equipment components, TODA ISU CORPORATION manufactures and sells soft ferrite cores and other materials. Furthermore, the Company manufactures and sells dielectric materials as materials for use in MLCC. With respect to lithium-ion batteries, Mechema Toda Corporation manufactures and sells raw materials of cathode materials for use in lithium-ion batteries. Toda Advanced Materials Inc. and Central Battery Materials Co., Ltd. manufacture and sell precursors of cathode materials used in lithium-ion batteries, while BASF TODA Battery Materials LLC manufactures and sells cathode materials used in lithium-ion batteries.

The Company's domestic bases



※BTBM = BASF TODA Battery Materials LLC
※TSK = TOKYO SHIKIZAI INDUSTRY CO., LTD.

Source: From the Company's materials

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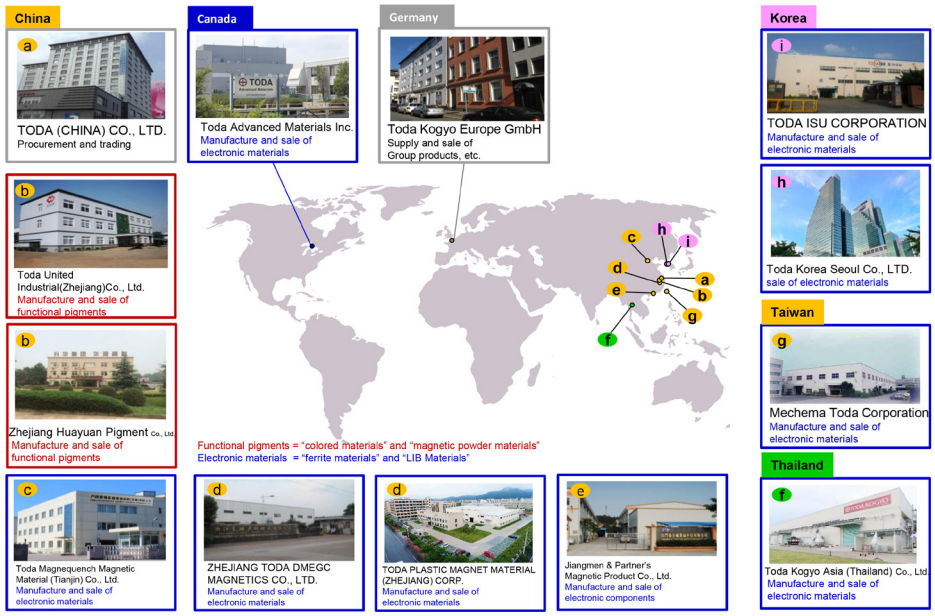
Company profile

The Company's overseas bases



Source: From the Company's materials

History

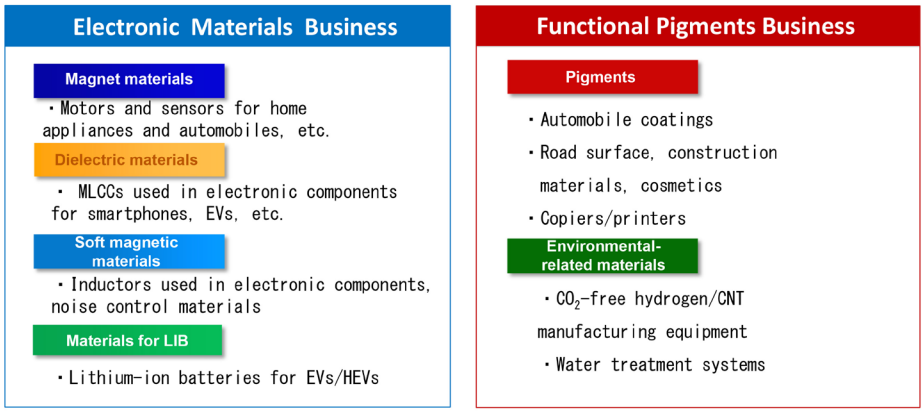
November 1933	TODA KOGYO CORP. established with ¥500,000 in capital in Yokogawa, Hiroshima City, for the purpose of producing and selling Bengala.
April 1951	Took over Kutsuwa Bengala Manufacturing Corp. through a merger.
November 1954	Took over Kibi Kogyo Corp. through a merger.
October 1959	Onada Plant built in Onada City, Yamaguchi Prefecture.
July 1969	Equipment for production of magnetic powder materials for audiotapes and videotapes added to Onada Plant.
June 1973	Wet coloration pigment facility added to Onada Plant.
September 1983	Shares listed on the First Section of the Tokyo Stock Exchange (now Prime Market).
December 1984	Established a plant for producing ferrite materials (Otake Plant) in Otake City, Hiroshima Prefecture.
April 1988	Built dedicated production facility for coloring materials for electronic printing in Onoda Plant.
July 1994	Established Toda Kogyo Europe GmbH in Duesseldorf, Germany.
August 1996	Established Toda America Inc. in Schaumburg, Illinois, USA (has since relocated to Battle Creek, Michigan).
January 2003	Established Toda Plastic Magnet Material (Zhejiang) Corp. in Zhejiang, China.
August 2004	Established Zhejiang Toda DMEGC Magnetic Co., Ltd. in Zhejiang, China.
October 2006	Established TODA Ferrite KOREA Co., Ltd. in Busan, South Korea (has since relocated to Anyang City, Gyeonggi-do) (in February 2022, the company name was changed to Toda Korea Seoul Co., LTD.).
April 2007	Established Toda Magnequench Magnetic Material (Tianjin) Co., Ltd. in Tianjin, China.
August 2007	Established Toda Advanced Materials Inc. in Sarnia, Ontario, Canada.
March 2008	Obtained a patent license relating to the cathode material for lithium-ion batteries from Argonne National Laboratory USA.
April 2008	Established TODA ISU CORPORATION in Wonju City, Gangwon-do, South Korea.
June 2008	Acquired the shares of TOKYO SHIKIZAI INDUSTRY CO., LTD.
September 2011	Acquired some of the shares of Toda United Industrial (Zhejiang) Co., Ltd. in Zhejiang, China
February 2015	Established BASF TODA Battery Materials LLC, the joint venture company with BASF Japan Ltd., through an in-kind investment of lithium-ion battery cathode materials production facilities at Onoda Plant and Kitakyushu Plant.
April 2016	Established Toda Kogyo Asia (Thailand) Co., Ltd. in Bangkok, Thailand (has relocated to Ayutthaya). Made Toda Factory Co., Ltd. (in April 2016, company name was changed to Toda Fine Tech Inc.) a consolidated subsidiary.
April 2021	Carried out an absorption merger of Toda Pigment Corp., which had been spun off in 1997, and made it the Company's Okayama Office.
August 2021	Made Jiangmen & Partner's Magnetic Product Co., Ltd. of Guangdong, China, a consolidated subsidiary.
April 2022	Switched listing from the Tokyo Stock Exchange's First Section to the Prime Market in conjunction with the Tokyo Stock Exchange's market recategorization.

Source: Prepared by FISCO from the Company's annual securities report

2. Business description

Currently, the Company is engaged in two businesses; the Functional Pigments Business (various coloring materials, environmental-related materials) and the Electronic Materials Business (including magnet materials, dielectric materials, soft magnetic materials, and materials used in lithium-ion batteries).

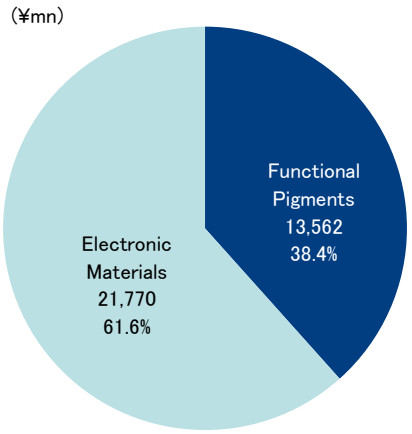
Domains of each business



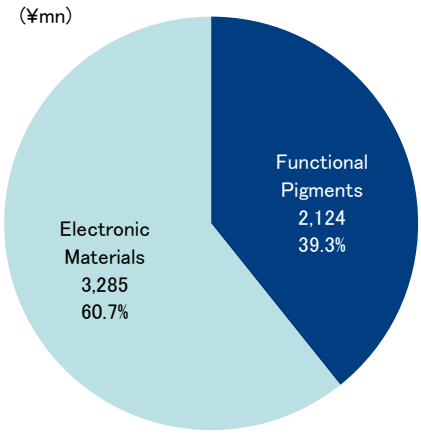
Source: From the Company's results briefing materials

FY3/22 by segment

Net sales and percentage of net sales



Segment profit and percentage of profit



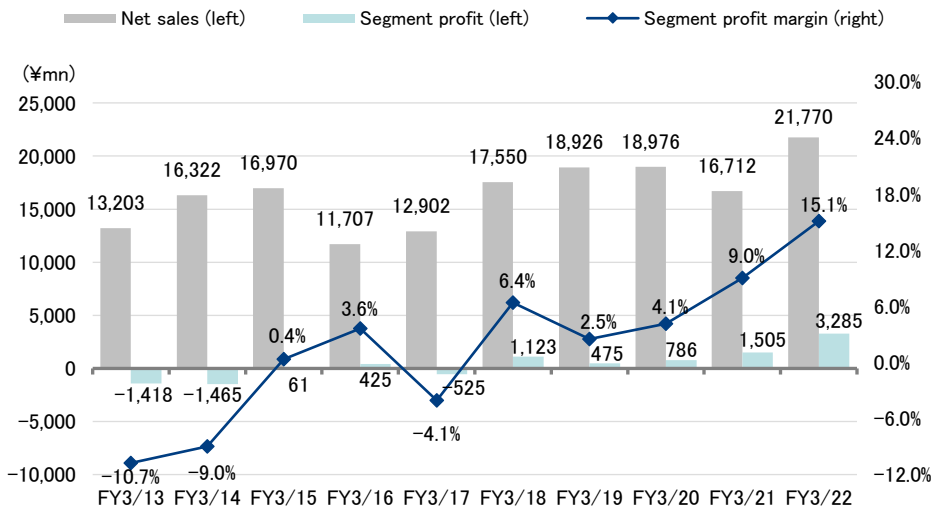
Source: Prepared by FISCO from the Company's financial results

(1) Electronic Materials Business

This business mainly develops products for the business fields of the automotive market and the communications and home appliances market. It positions magnet materials (ferrites, rare earth materials), dielectric materials (barium titanate) and lithium-ion battery materials as the three strategic businesses. Overall, for battery materials and magnet materials, apparent sales fluctuate significantly due to the effect of the market prices of metals and rare metals, along with foreign exchange rate movements. Profits can also fluctuate greatly as a result of the extent to which profits track changes in inventory, sales prices changes, as well as utilization rates.

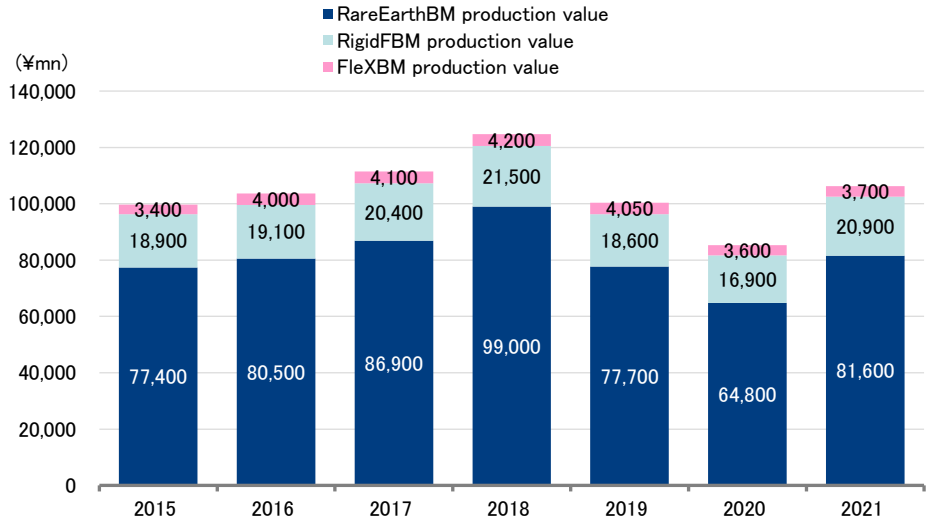
By product, magnet materials are driving sales. This is centered on ferrites and rare earth magnetic compound materials (combinations of magnetic powder and resins) used in bonded magnets. Bonded magnets are produced from magnetic compounds highly-filled with a binder such as a polymer resin or rubber along with fine-grain powder of ferrite magnets or rare earth magnets. Although they are not as strong as sintered magnets in terms of magnetic force, they can be processed and molded into complex shapes, and allow for one-piece molding with metal, a thinner profile, and longer and wider size that are not possible with sintered magnets. In terms of sales trends, the production of bonded magnets by Japanese manufacturers is on the order of ¥100bn (according to research by the Japan Association of Bonded Magnetic Materials). In 2020, sales decreased due to the COVID-19 pandemic, but there was a recovery in sales in 2021, and the Company's magnet business has been trending a similar way. Among bonded magnets, the Company's materials are used in all applications, but the fields of application are also expanding, such as for copiers and printers, as well as for air conditioners, air purifiers, and automobiles, as demand is expanding. In August 2021, the Company acquired an equity interest (planning to acquire a 100% equity interest in July 2024) in Jiangmen & Partner's Magnetic Product Co., Ltd., which manufactures and sells injection-molded bonded magnets, and going forward the Company will engage in business including the processing business.

Electronic Materials segment earnings



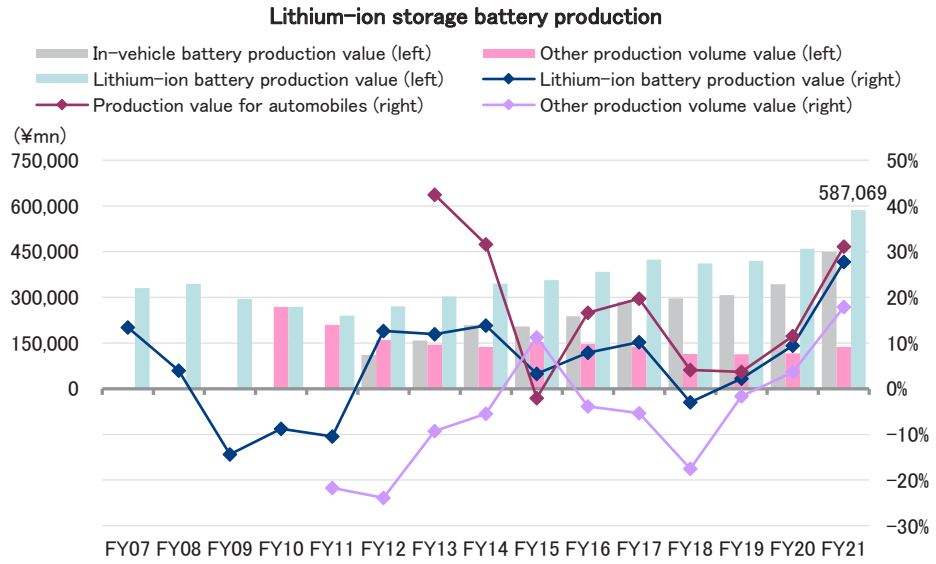
Source: Prepared by FISCO from the Company's financial results

Japanese manufacturers' production of bonded magnets



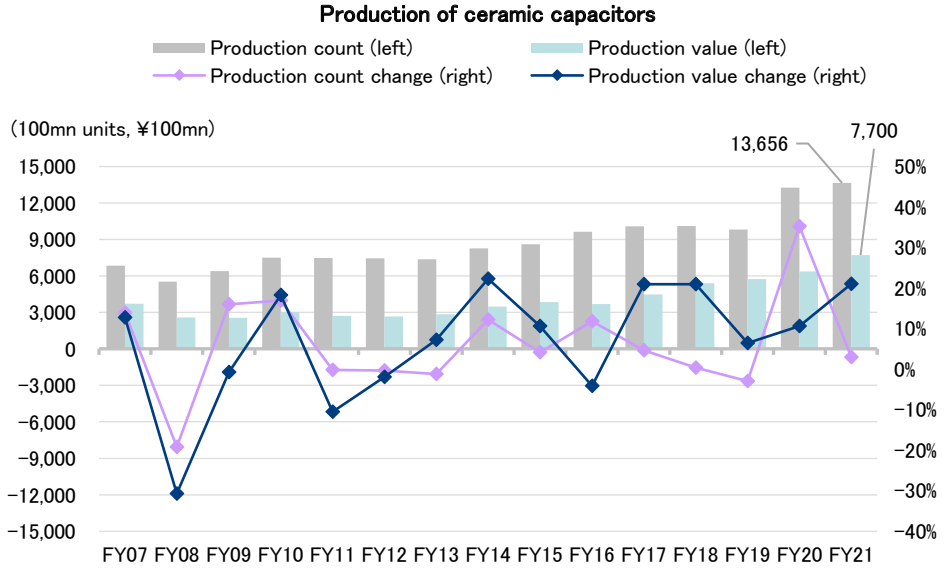
Source: Prepared by FISCO using materials from the Japan Association of Bonded Magnetic Materials

Materials for lithium-ion batteries have grown significantly over the past few years. Analog magnetic tape, which had taken the world by storm, disappeared amid the wave of digitalization, and by around 2000, the Company was faced with the challenge of the sharp contraction of the magnetic iron oxides market. Thus, the Company set out on a challenge to use the technologies in existing businesses to develop and commercialize new functional materials. The Company started researching cathode materials for lithium-ion batteries in the 1990s, making use of its extensive business experience in the field of inorganic synthetic chemistry. In 2000, the Company started the lithium cobalt oxide ($LiCoO_2$) business using tricobalt tetroxide (Co_3O_4) as the starting material. In 2002, the Company took over the lithium nickel cobalt aluminum oxide ($LiNiCoAlO_2$) business from FUJI CHEMICAL CO., LTD. and in 2007 in Canada, the Company took over the $Ni(OH)_2$/CoOx business from H.C. Starck GmbH and established Toda Advanced Materials Inc. In 2008, the Company commercialized spinel-type lithium manganese oxide ($LiMn_2O_4$), and at the same time obtained a license with Argonne National Lab for lithium-rich nickel cobalt manganate oxide (Li-Rich NCM), and quickly commercialized a three-component cathode material for lithium-ion batteries. The Company began construction of a plant in Michigan, USA, and in 2010 launched a joint venture with ITOCHU Corporation <8001> to manufacture precursors and cathode materials. Furthermore, in 2015, the Company and BASF (a major European chemicals company) launched BASF Toda Battery Materials (BTBM), a Japan-based company that develops lithium-ion battery cathode materials, to start R&D, manufacture and sale of various cathodes such as NCA and NCM, and in 2017 the Company significantly expanded its high-nickel-based cathode material production facilities. Much of the lithium-ion battery materials business is operated by BTBM, a joint venture with BASF (66% owned by BASF Japan and 34% owned by the Company), and BTBM's net sales for FY12/21 were ¥16,896mn (up 15.4% YoY). On July 20, 2022, the company announced that it would increase its production capacity to 60,000 tons. In terms of profits, there was a feeling that small lithium-ion batteries had been weighing down profits as a negative in the past, due to the downturn in the market share of Japanese manufacturers, as well as large upfront investments, impairment losses, investment losses, and volatility in market conditions in the automotive field, but sales have recently expanded rapidly due to the expansion of EVs worldwide and other factors, the break-even point has been surpassed, and their contribution to profit is rising.



Source: Prepared by FISCO from METI's machinery statistics

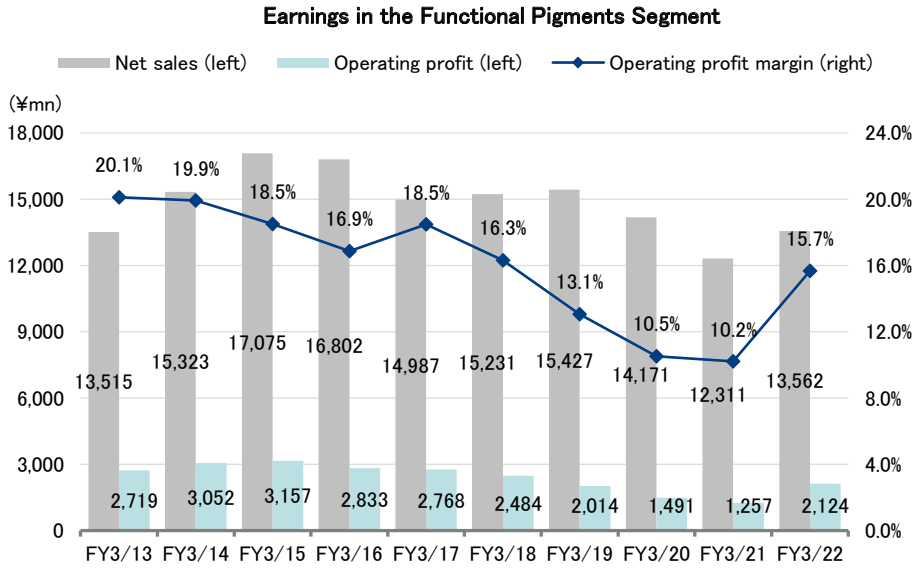
In addition, although net sales are still small, the dielectric materials business for MLCCs (which are markedly expanding) is growing steadily. Capacitors, along with resistors and coils, are one of the three major passive components (which consume, store, and release received power) that are the basic components of electronic circuits. Used in most electronic devices, it is an indispensable component for the correct operation of active components (amplifying, converting, and rectifying supplied electricity). Among these, ceramic capacitors account for nearly 80% of the total production value of capacitors. The function of the capacitor is to store charge (electricity) and pass alternating current without passing direct current, and it can play the role of charging/discharging a charge (electricity), keeping the voltage constant, and eliminating noise in electrical circuits. Currently, the use of capacitors is increasing in all kinds of electronic devices such as smartphones, automobiles, and home appliances, and production value was ¥770bn in FY2021. The main raw material for ceramic capacitors is barium titanate, which was discovered for military purposes during World War II, and Murata Manufacturing Co., Ltd. <6981> took the lead in industrialization. Production involves a series of processes involving barium titanate synthesis, fine granulation, sheet coating, electrode formation, and chip packaging, and at the time it was difficult to manufacture them without Japan alignment technology, but after that, Japanese companies such as TAIYO YUDEN <6976> and TDK <6762> succeeded in making it a core business, and until Samsung entered the market in earnest in the 2000s, it was a product of Japan without rivals. The Company made a full-scale entry into the field in 2004 with the construction of a new barium titanate production facility, and the distinctive characteristic of the Company's business is its manufacturing method. Conventionally, barium titanate has been mainly manufactured by baking raw materials in a method called the solid phase method, and most companies, including Murata Manufacturing, have manufactured it in-house using this manufacturing method. Nippon Chemical Industrial Co., Ltd., Fuji Titanium Industry Co., Ltd. and others use the oxalate method, a production method that combines wet reaction and calcination, and it is characterized by allowing finer particle sizes to be obtained than with the solid phase method. Unlike these methods, the Company uses its wet synthesis technology to react raw materials under high temperature and high pressure, and uses a hydrothermal synthesis method that can uniformly control fine particle sizes up to 10nm. Currently, ceramic capacitors are required to be miniaturized, have large capacity, and have high dielectric constants, and the demand for barium titanate ultrafine particles is increasing.



Note: The graph shows figures from a domestic manufacturer
Source: Prepared by FISCO from METI's machinery statistics

(2) Functional Pigments Business

In the Functional Pigments Business, the Company develops products with its main business fields being paints, copiers/printers, and environmental markets. This business has expanded centered on pigments for paints and materials used in toners/carriers for copiers and printers. The pigments business has been a business since the Company's founding, but recently the paints market has remained flat, while in the copiers/printers market, despite the decline in demand due to the impact of the shift to paperless operations and digitalization, the Company has been increasing its market share as well as growing its new product lineup, including cosmetic pigments and transparent iron oxides. The Company has also been supplementing this with soil and groundwater purification materials for the environmental market. As a result, the Company has been able to secure sales in this business. In terms of profit, it seems that this business has seen a decline in its profit margin partly due to the decline in the sales ratio of copiers and printers. However, in FY3/22, sales recovered, and earnings also bounced back due to the increase in printers and other items due to the expansion in home use resulting from the growth in telecommuting in response to the COVID-19 pandemic. As a result, earnings have recovered.



Source: Prepared by FISCO from Company's financial results

The Company has divided its businesses into five business fields: automobiles, home appliances and communication device, paints, copiers/printers, and environment, and the Company has been exploring growth especially in the two business fields of automobiles and home appliances and communication device. Overall, the effects of upfront investments are emerging, centered on magnet materials and lithium-ion battery materials.

Results trends

FY3/22 consolidated net sales (based on the new accounting standard) increased 34.9% YoY, while profit attributable to owners of parent was a record high

1. Summary of FY3/22 results

In the FY3/22 consolidated results (new accounting standard), net sales were ¥35,332mn (growth rate not disclosed due to the change in the revenue recognition standard), operating profit increased by ¥2,508mn to ¥2,519mn, ordinary profit was ¥4,184mn (an improvement of ¥4,784mn, thereby turning positive), and profit attributable to owners of parent came to ¥3,116mn (an improvement of ¥7,258mn, thereby turning profitable). Ordinary profit exceeded ¥4,000mn for the first time since FY3/1983, marking the third highest level in the Company's history. In extraordinary income and losses, impairment losses were kept to ¥178mn (¥2,045mn less than the previous fiscal year), and profit attributable to owners of parent was a new record high, surpassing the ¥2,642mn set in FY3/1984. If one excludes the net sales from the engineering business which was sold, net sales in FY3/22 were also a record high, exceeding the level in FY3/19.

Results trends

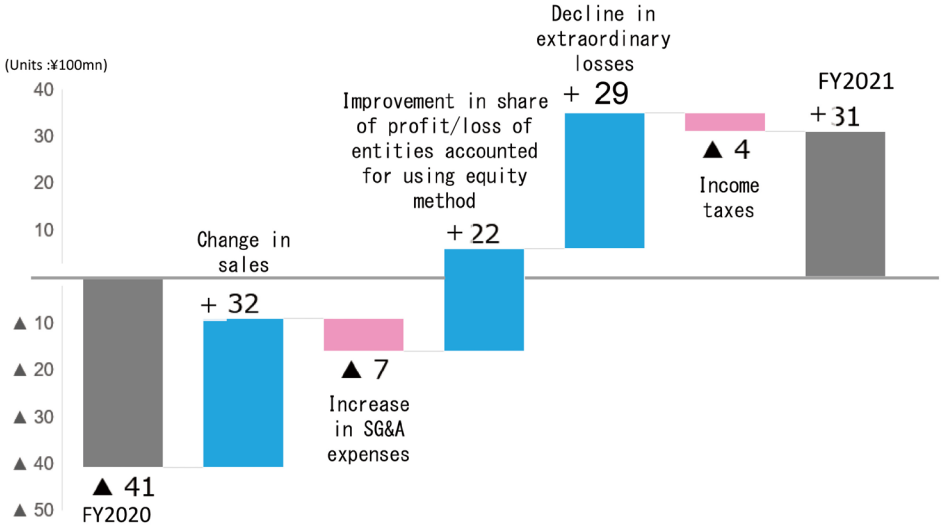
Overview of results (under new accounting standard)

(¥mn)

	FY3/21		FY3/22		
	Results	% of net sales	Results	% of net sales	YoY change
Net sales	26,200	90.3%	35,332	100.0%	34.9%
Cost of sales	21,422	73.8%	27,328	77.3%	27.6%
Selling, general and administrative expenses	4,767	16.4%	5,484	15.5%	15.0%
Operating profit	11	0.0%	2,519	7.1%	-
Ordinary profit	-600	-2.1%	4,184	11.8%	-
Profit attributable to owners of parent	-4,142	-14.3%	3,116	8.8%	-

* New accounting standard used for both fiscal years
Source: Prepared by FISCO from the Company's financial results

Analysis of factors behind the change in profit attributable to owners of parent



Source: From the Company's results briefing materials

Summarizing the change factors for profit attributable to owners of parent (from a ¥4.1bn loss to a ¥3.1bn profit), there was a +¥3.2bn impact from the increase in sales, a +¥2.2bn impact from the improvement in share of profit/loss of entities accounted for using equity method, and a +¥2.9bn impact from the decline in extraordinary losses, for a total positive impact of ¥8.3bn. Meanwhile, there were only minus impacts of ¥700mn from the increase in SG&A expenses and a minus ¥400mn impact from the increase in income taxes, and as a result, the Company set a new record high in profit attributable to owners of parent.

With respect to results by business segment in FY3/22, in the Electronic Materials Business, net sales were ¥21,770mn (up 44% YoY if the revenue recognition standard in FY3/21 were adapted to the new standard), and operating profit soared to ¥3,285mn (up 118.3% based on same as above), due to progress in CASE in the automotive market and the increasingly widespread use of ICT in the information and communications market. Breaking this down, there was a ¥3.6bn increase in magnet materials due to favorable sales of motors and sensors for home appliances, automobiles, and other applications, a ¥400mn increase in dielectric materials such as for MLCC, and a ¥2.8bn increase in lithium-ion battery materials due to growth in sales for EVs/HEVs. In the Functional Pigments Business, net sales increased 22% to ¥13,562mn, while operating profit increased 69.0% to ¥2,124mn, due to the large recovery in sales of materials for copiers and printers resulting from the recovery from the COVID-19 pandemic.

Breakdown of FY3/22 results by segment

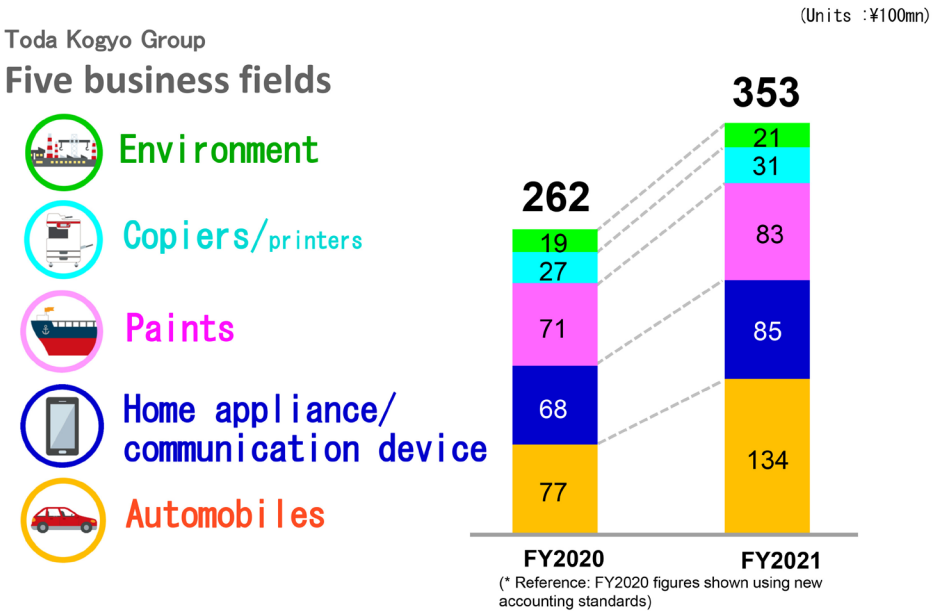
(¥bn)

	FY3/21		FY3/22		Change	Main uses
	Net sales	Segment profit margin	Net sales	Segment profit margin		
Electronic Materials	15.1	10%	21.7	15%	6.6	
Magnet materials	6.2	-	9.8	-	3.6	For motors and sensors for home appliances, automobiles, etc.
Dielectric materials	1.1	-	1.5	-	0.4	MLCC used in electronic components for ICT equipment, EVs, etc.
LIB materials	5.5	-	8.3	-	2.8	Lithium-ion batteries for EVs/HEVs
Other materials	2.3	-	2.1	-	-0.2	-
Functional pigments	11.1	11%	13.5	16%	2.4	
Pigments	11.1	-	13.5	-	2.4	Road surfaces/construction material coloring, copiers/printers

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

In terms of the five business fields, net sales were driven by ¥13.4bn in the automobile field and ¥8.5bn in the home appliances and information and communications field. In terms of profit, segment profit from the two businesses (Functional Pigments and Electronic Materials) came to ¥5,410mn (up 95.8%), Company-wide expenses were only ¥2,890mn (up 5.1%), resulting in a large increase in operating profit. Ordinary profit turned significantly positive. This was due to a large improvement in non-operating income and expenses, with revenue from affiliates accounted for using the equity method progressing on a favorable note (especially BTBM) and the Group posting ¥1,520mn in share of profit of entities accounted for using equity method (an improvement of ¥2,351mn resulting in a change from investment loss to investment profit), along with the depreciation of the yen resulting in foreign exchange gains of ¥151mn (up ¥117mn), and other factors. Furthermore, in extraordinary income and losses, impairment losses were held to ¥178mn (a decline of ¥2,045mn), and profit attributable to owners of parent was ¥3,116mn, a new record high, eclipsing the ¥2,642mn set back in FY3/1984.

YoY comparison of net sales by final use



Source: From the Company's results briefing materials

Financial condition has improved modestly, but the Company must continue to bolster its financial position

2. Financial condition

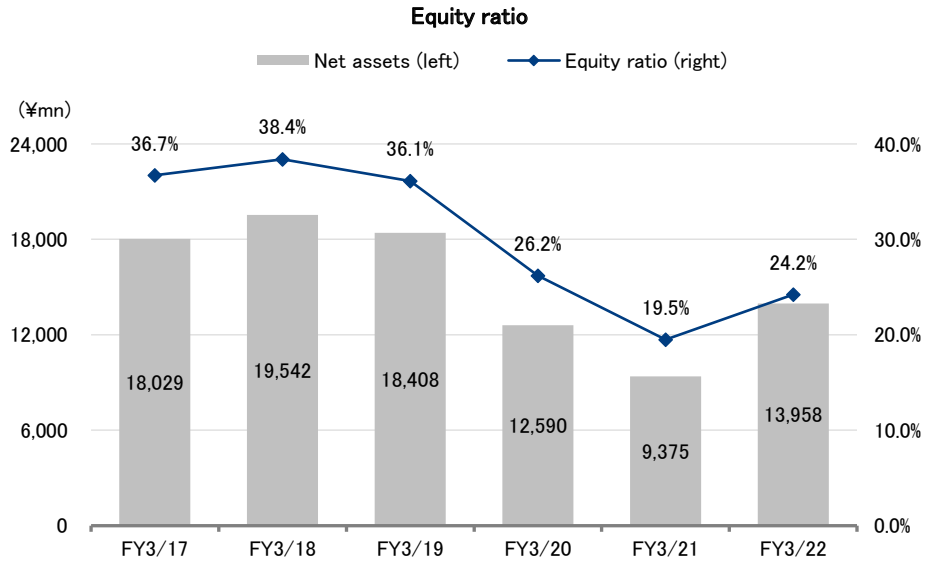
The Company had recorded net losses in 5 of the past 10 fiscal years, and its equity ratio had fallen from 46.5% at the end of FY3/15 to 19.5% at the end of FY3/21, but in FY3/22 the Company posted a record-high net profit, helping the equity ratio to improve to 24.2% at the end of FY3/22, however it is still at a low level. With regard to cash flow, the Company suppressed capital investment as much as possible and kept the outflow of cash to a minimum amid severe earnings conditions. Despite curbing the increase in interest-bearing debt, the net debt-to-equity ratio deteriorated from 0.52x in FY3/15 to 2.04x in FY3/21, partly because of continued significant losses. This is also showing an improvement to 1.34% at the end of FY3/22 due to a recovery in profits, but it seems that it will take time to improve the balance sheet as a whole.

Consolidated balance sheet and key management indicators

(¥mn)

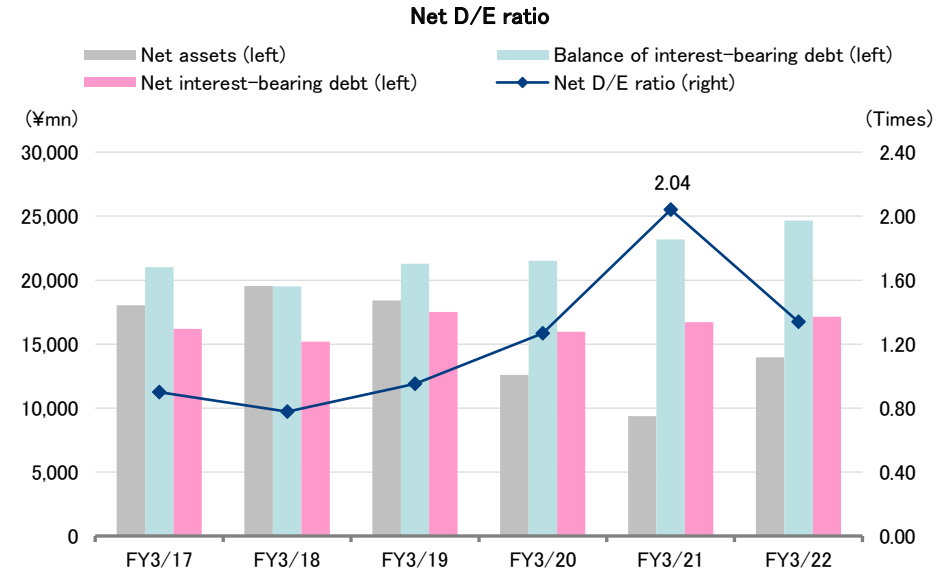
	FY3/21-end	FY3/22-end	Change
Current assets	23,065	29,381	6,316
Non-current assets	18,718	21,910	3,192
Total assets	41,783	51,292	9,509
Current liabilities	19,051	20,276	1,225
Non-current liabilities	13,356	17,056	3,700
Total liabilities	32,408	37,333	4,925
Net assets	9,375	13,958	4,583
(Soundness)			
Current ratio	121.1%	144.9%	
Equity ratio	19.5%	24.2%	

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



Source: Prepared by FISCO from Company's financial results

Results trends



Source: Prepared by FISCO from Company's financial results

Outlook

FY3/23 1Q results were positive, will continue to improve profitability For FY3/23, given the uncertainties, the Company has made no changes to its initial forecast of a 13.2% increase in net sales, a 36.5% decline in operating profit, and a 40.3% decline in ordinary profit

1. Outlook for FY3/23

The outlook for FY3/23 consolidated results is for net sales of ¥40,000mn (up 13.2% YoY), operating profit of ¥1,600mn (down 36.5%), ordinary profit of ¥2,500mn (down 40.3%), and profit attributable to owners of parent of ¥1,500mn (down 51.9%). In the Electronic Materials Business, the Company expects net sales to increase due to factors including the progress in CASE in the automobile market and the increasing use of ICT in the information and communications market, while the Company expects net sales growth in the Functional Pigments Business due to the global resumption of economic activity and other factors. However, the Company is forecasting a decline in operating profit, considering soaring prices of raw materials and energy, along with other factors. Despite the outlook for a decline in profit in FY3/23, when FY3/24 is included, the Company is aiming to achieve its three-year total target in the medium-term business plan it formulated in August 2021.

By business, the Company is expecting net sales of ¥26bn in the Electronic Materials Business, and net sales of ¥14bn in the Functional Pigments Business, but in the Electronic Materials Business this includes the apparent increase in sales due to the increase in raw materials prices, and the effective numerical growth rate is seen as being low. Currently, sales in the automotive field are being impacted due to the semiconductor shortage and the lockdowns in China, while sales for smartphones are being affected by the stagnation in production for the same reasons. These factors, as well as soaring energy and raw materials prices caused by the Ukraine situation, along with the significant depreciation of the yen due to the expanding gap in interest rates between Japan and the U.S., are factors that are disrupting the Company's earnings.

FY3/23 and FY3/24 results outlook

(¥bn)

	FY3/21	FY3/22	FY3/23 (E)	FY3/24 plan
Net sales	26.2	35.3	40.0	36.5
Operating profit	0	2.5	1.6	2.3
Operating profit margin	0.04%	7.1%	4.0%	6.3%

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

2. FY3/23 1Q results and revision of 1H outlook

On August 8, the Company announced its FY3/23 1Q results. Net sales were ¥9,708mn (up 18.8% YoY), operating profit was ¥853mn (up 33.2%), ordinary profit was ¥1,170mn (up 11.7%), and profit attributable to owners of parent was ¥852mn (down 9.8%). Looking at the trends by business segment, in the Electronic Materials Business, net sales were ¥5,795mn (up 13.5%) and segment profit was ¥1,055mn (up 25.7%), as sales were favorable, centered on the core business of the magnet business. In particular, there was an increase in demand for rare earth bonded magnet materials with excellent magnetic properties for use in EV/HEV motors, while the consolidation of Jiangmen & Partner's Magnetic Product Co., Ltd., which the Company turned into a subsidiary, contributed to earnings. In the Functional Pigments Business, net sales were ¥3,913mn (up 27.6%), and segment profit was ¥514mn (up 8.0%), based on the overall favorable performance primarily in materials for copiers and printers, materials for paints, and materials for catalysts. Profit margin declined due to the impact of high raw materials prices and other factors, but profit was secured based on the increase in sales. In non-operating income, the depreciation of the yen resulted in the posting of ¥167mn in foreign exchange gains, but the share of profit of entities accounted for using equity method declined ¥299mn YoY, resulting in a dulling of growth.

In addition, the Company revised its forecasts for FY3/23 1H based on the fact that earnings in 1Q exceeded the Company's forecasts along with the trends in the prices of key raw materials. Specifically, the Company is now forecasting net sales of ¥18,500mn (down ¥500mn vs. initial forecast; up 15.7% YoY), operating profit of ¥1,100mn (up ¥300mn vs. initial forecast; down 12.7% YoY), ordinary profit of ¥1,600mn (up ¥400mn vs. initial forecast; down 14.3% YoY), and profit attributable to owners of parent of ¥1,000mn (up ¥300mn vs. initial forecast; down 35.6% YoY). With respect to net sales, at a subsidiary that manufactures battery-related materials, the larger than expected drop in the market prices of nickel and cobalt, which are key raw materials, is a factor for a decline in net sales, but the Company is expecting solid sales volume. In terms of profits, the Company is expecting profits to exceed the initial forecasts due to an improvement in the product mix, with an increase in sales of products with high profit margins in the core businesses of magnet materials and coloring materials. As a result, the back-calculated FY3/23 2Q earnings are expected to see a decline in operating profit and are a slightly modest forecast. With respect to full-year FY3/23 forecasts, the Company did not change its forecasts based on the fact that there are many uncertainties, including how the COVID-19 pandemic will spread and when it will come under control, the impact of semiconductor shortages on the automobile market, soaring prices of raw materials and energy, as well as movements in foreign exchange rates. However, looking at 1Q earnings, we at FISCO believe that upward revisions to earnings can be expected in the future, based on the fact that profitability has been improving.

Medium- to long-term growth strategy

Aiming for new leap forward by expanding next-generation businesses in addition to medium-term growth businesses

1. Medium-term business plan – Vision 2023

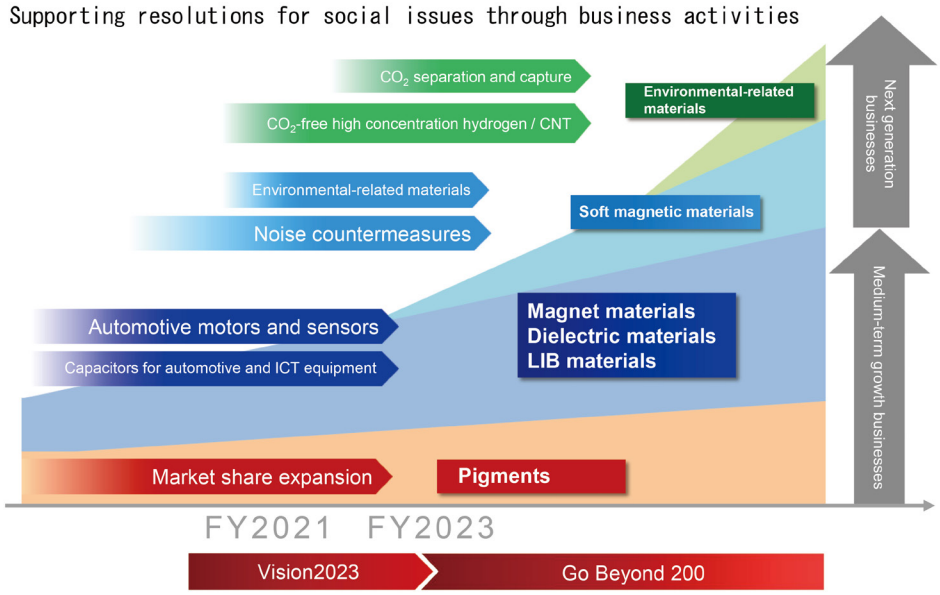
In August 2021, the Company announced Vision 2023, as a medium-term business plan with the 200th anniversary of the Company's founding in 2023 in mind. The Company laid out a management philosophy and management policy of "Fine Materials for the Future" by improving the fine particle synthesis technology developed with iron oxides and establishing a management foundation as a manufacturing company that can contribute to society.

The Company has set numerical targets of net sales of ¥36.5bn and operating profit of ¥2.3bn in FY3/24. The Company's plan in the Electronic Materials Business is to grow the three strategic businesses, and in the five business fields to aim for expansion in automobiles and home appliances and communication device.

In FY3/22, net sales exceeded the forecast for FY3/23, while for operating profit the Company has already posted ¥2.5bn which exceeds the forecast for the final fiscal year. The exchange rate is also far removed from the assumption of 1$=¥105, and because many products the Company sells are linked to market prices, all indicators are off from the figures in the medium-term business plan. By division, sales of lithium-ion battery materials are growing significantly, and sales of magnet materials are close to the forecast for the final fiscal year of the plan, so it can be said that the trend is for growth in strategic divisions to be surpassing that of the plan. However, the environment is challenging with respect to profits in FY3/23, as amid soaring raw materials prices, the depreciating yen, as well as issues in automobile production due to semiconductor procurement and lockdowns in China, and the steeply rising energy prices due to the Ukraine situation, the Company expects a decline in profit as well as for its profit margin to be lower than its forecast. In FY3/23 2H, there are expectations for a recovery in earnings based on an outlook for automobile production and other production of products including smartphones to normalize, along with an outlook for increased usage of highly-functional materials compatible with 5G. Also, for FY3/24, the Company is expecting renewed growth in earnings based on an outlook for a normalization in market conditions and other factors to keep cost increases down.

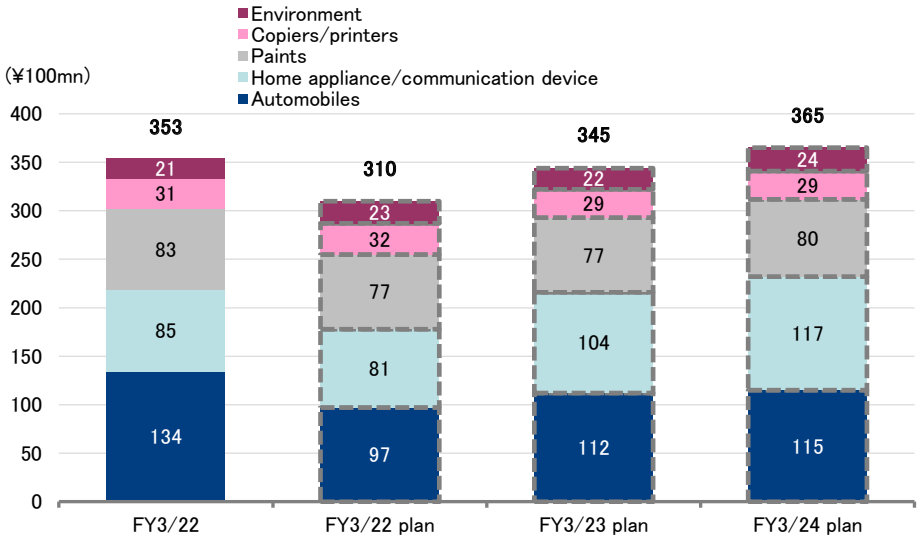
Medium- to long-term growth strategy

Medium-term vision through to the Company's 200th anniversary in 2023 and long-term vision beyond that



Source: From the Company's results briefing materials

Results and business plan for five business fields



Note: Figures are reference figures calculated by FISCO
Source: Prepared by FISCO from the Company's materials

2. Moving beyond the 200th founding anniversary – Go Beyond 200

The Company will mark its 200th founding anniversary in 2023. The Company is poised to achieve the targets of Vision 2023 by a large margin, with operating profit already surpassing the target as of FY3/22, and net sales also forecast to reach ¥40,000mn in FY3/23. Now, the Company has added environmental-related and soft magnetic materials as next-generation materials, and plants to expand its business in five fields. In addition, the Company is making steady progress on development of innovative materials. In Go Beyond 200, the Company's vision for 2024 and beyond, it plans to expand its current three strategic businesses in magnet materials, dielectric materials, and lithium-ion battery materials, and will also expand next-generation businesses such as soft magnetic materials and environmental-related materials to achieve a new leap forward. The Company's previous record for operating profit was ¥5,030mn in FY3/1984, and it has already set new record highs in net sales and profit attributable to owners of parent. However, it seems that it will soon set a new record for operating profit as well through the expansion of strategic products, and expectations are growing for a new leap ahead with Go Beyond 200.

(1) Three existing strategic businesses

a) Magnet Materials Business

In the Magnet Materials Business, in addition to conventional applications, the Company aims to secure heat resistance suitable for automotive applications and is engaged in material development and strengthening of its supply chain. For ferrite magnet materials, the market for magnetic rollers used in copiers and printers has matured, and from 2000 onward, as the conversion to DC motors to save energy in air conditioners accelerated, polar anisotropic bonded magnets were used to make them more efficient, lighter, and to enable axial insert molding, and are currently in widespread use. Furthermore, rare earth magnet materials are used in spindle motors for PC peripherals, as well as for other PC peripherals and game consoles.

Looking ahead, there are significant expectations for automotive applications. Rubber magnets are already used for magnetic encoders for ABS systems used in automobiles. Recently, demand is growing for their use as various cooling pump magnets needed for thermal management.

With advances in automobile electrification, the demand for bonded magnets is increasing. Meanwhile, on the performance front, demand for high temperature characteristics, environmental resistance, and high magnetic strength characteristics is increasing. In its materials development, the Company aims to improve magnetic powder (ferrite, rare earth), and to further refine resin compounding technologies. For example, in ferrite magnet materials, the Company succeeded in developing highly durable materials and materials that have reduced emissions of corrosive gas during molding. The newly developed highly durable materials have increased resistance to temperature changes, and are mainly targeted for use in cooling pump motors used for temperature control inside the vehicle cabins of EVs and so forth. While EVs do not have an internal combustion engine, heat management is still important because the secondary batteries and ECUs generate heat. This means that cooling pumps are both necessary and important components, and demand is expected to expand going forward. In addition, the materials can also be used in sensors, and the Company intends to work on expanding applications.

In addition, with the acquisition of magnet molding operating company Jiangmen & Partner's Magnetic Product Co., Ltd., the Company is now expected to achieve synergies from the building of an integrated production system covering the range from materials through to component processing.

Under the medium-term management plan, the magnet materials business was targeting net sales of ¥10bn, but the acquisition of Jiangmen & Partner's Magnetic Product appears to have taken place after the plan was formulated, and the Magnetic Materials Business is expected to exceed the ¥10bn level by a considerable margin.

Magnet Materials Business strategy

Market needs	Initiatives
■ Securing heat resistance suitable for automotive applications	【Development of materials】 ・Improve neodymium iron boron magnet powder ・Further refine resin compounding technologies
■ Stable supply and strengthening of supply chain	【Expansion of business areas and increase in development speed】 ・Build an integrated production system covering the range from materials to components through consolidation of molding operating company (Jiangmen & Partner's Magnetic Product)

Source: From the Company's medium-term business plan

b) Dielectric Materials Business

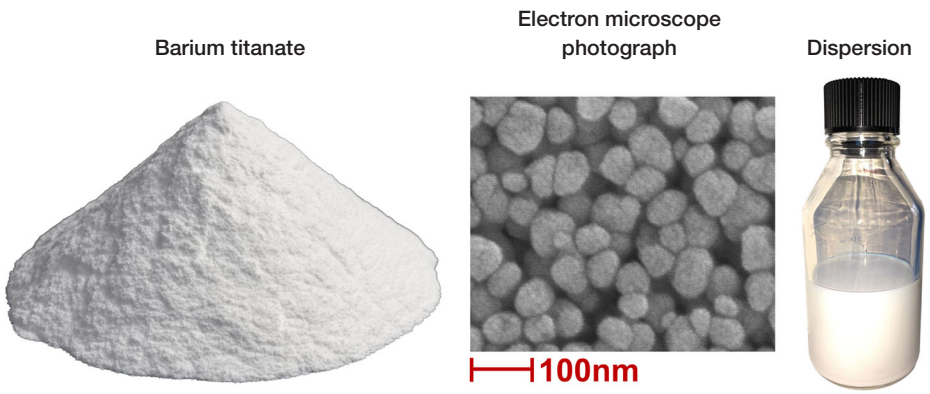
In the Dielectric Materials Business, the Company is pursuing finer microparticulation to respond to further miniaturization of MLCCs, while aiming to reduce costs by simplifying the manufacturing process, expand the dielectric materials as cutting-edge materials, and increase its market share. Going forward, as the number of MLCCs mounted for 5G and automotive use continuously expands, dielectric ceramics need to be made even thinner. For automotive applications in particular, amid demand for performance under high temperatures and higher capacitances, the Company's materials combine ultrafine particle size, uniformity, and a high dielectric constant. As such, there is potential for their application to be expanded from the conventional use as an additive material for electrode layers to use in the dielectric layer as well. If their use is expanded to dielectrics, their sales can be expected to outpace the growth of the semiconductor capacitor market.

Dielectric Materials Business strategy

Market needs	Initiatives
■ Finer microparticulation in response to miniaturization of MLCCs	【Development of materials】 Dielectric particles of 200 nm or less
■ Cost reduction through manufacturing process simplification and GHG emission reduction	【Improvement of processing level】 Provision in a dispersion

Source: From the Company's medium-term management plan materials

Dielectric materials



Source: From the Company's materials

c) Lithium-ion Battery Cathode Materials Business

The main part of this business is BASF TODA Battery Materials LLC (BTBM). Amid the global spread of EVs and moves to accelerate it, BTBM's capacity utilization is steadily increasing, and it is approaching the time at which it passes the break-even point and begins to reap profits. Sales are also expected to continue expanding going forward. Furthermore, the cathode materials supplied by BTBM are primarily used in Europe and the U.S., and while they are not for use in the lithium iron phosphate batteries developed in China that have been the subject of recent attention, luxury vehicles are expected to continue using lithium hi-nickel nickel cobalt aluminum oxide (Hi-Nickel NCA), and battery companies are planning to increase production. In light of these factors, BTBM's net sales are expected to continue outperforming its forecasts. Moreover, TODA KOGYO is developing iron oxides for use in olivine-type lithium-ion phosphate batteries.

(2) Next generation businesses

a) Environment Related Materials Business

The Company has been actively engaged in 3R activities for the creation of a recycling-oriented society, including reduction in the volume of rare metals used, rare metal recycling, industrial waste recycling, and expansion of green purchasing. Furthermore, the Company has also supplied products such as iron oxide that has catalytic activity to reduce the release of hazardous substances upon incineration, as well as iron oxide that has the function of purifying soil and groundwater.

Electrification targets for each country

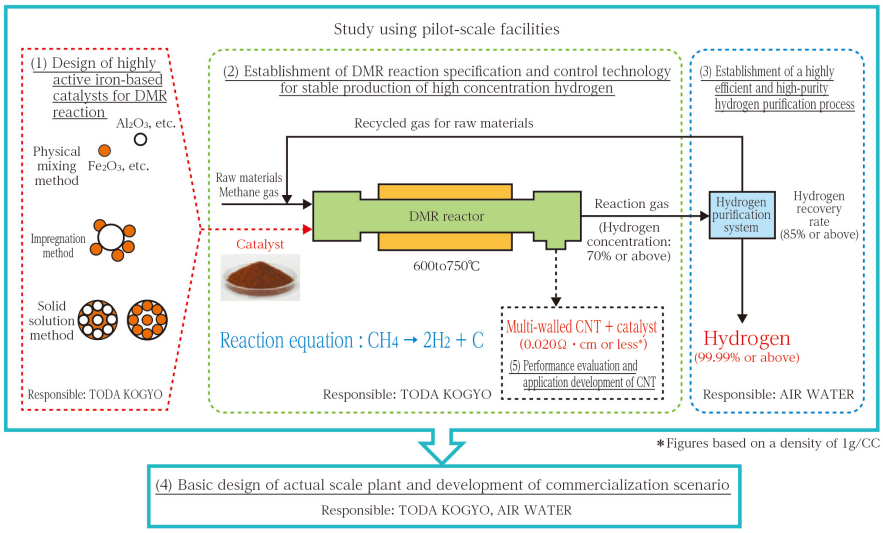
	Market scale	Gasoline cars	EV/PHEV/FCV
U.K.	2.7 million units	**Sales banned in 2030** ***HV/PHEV sales banned in 2035**	**2030 sales target** **EVs: 50–70%**
France	2.8 million units	**Sales banned in 2040**	**2028 market size targets** **EVs: 3 million units** **PHEVs: 1.8 million units**
China	25.8 million units	**No national target** *China Society of Automotive Engineers: Announced all companiesto shift to electric by 2035 (Hybrid 50%, EVs/PHEVs/FCVs 50%)	**2025 sales target** **EVs/PHEVs/FCVs: 20%**
Germany	4.0 million units	**No national target** * German Bundesrat: Resolved to ban sales in 2030 (No legally binding promise)	**2030 market size targets** **EVs: 15.0 million units**
EU	14.0 million units	**Sales banned in 2035** *Internal combustion engines to be banded, effectively including PHEVs/HVs (European Commission Declaration)	**2035 sales target** **EVs/FCVs: 100%** (European Commission Declaration)
U.S.	17.5 million units	**No national target** *California State Governor: EVs/FCVs 100% by 2035 New York State Governor: EVs/FCVs 100% by 2035	**2030 sales target** **EVs/PHEVs/FCVs: 50%**
Japan	4.3 million units	**2035 EVs 100%** (EV/PHEV/FCV/HV)	**2030 sales target** **EVs/PHEVs: 20–30%, FCVs: up to 3%**

Source: From reference materials of METI's "4th Study Group on Structural Changes in Mobility and Future Directions of Automobile Policies Beyond 2030"

Medium- to long-term growth strategy

Under these conditions, the Company has started new initiatives. To realize carbon neutrality, the Company has been conducting joint research with AIR WATER INC. on CO_2-free hydrogen using a direct methane reforming method through a project contracted by NEDO. Furthermore, to realize carbon recycling, the Company is conducting industrial production of a solid sorbent for CO_2 capture using sodium ferrite, currently being researched by Associate Professor Yanase of Saitama University. In other initiatives, the Company is working in collaboration with JDC Corporation to develop functional adsorbent materials for purifying groundwater into safe drinking water. These initiatives are expected to require some time before they can contribute to earnings, however, there are growing expectations of the Company's initiatives to realize a carbon-free society and a recycling-oriented society.

R&D initiatives for CO_2-free hydrogen using a direct-methane reforming method



Source: From the Company's results briefing materials

Solid sorbent for CO_2 capture using sodium ferrite

Sodium ferrite

Solid sorbent for CO_2 capture

Source: From the Company's results briefing materials

b) Soft Magnetic Materials Business

In magnet materials, the Company is promoting the development of rare earth magnetic materials, such as neodymium; and at the same time, it is developing soft magnetic materials with a renewed focus on automobiles. These materials have limited ability to retain magnetic force, and although they adhere to magnets, they lose their magnetism rapidly when an external magnetic field is removed. Specifically, with the main focus on automobiles, the Company is developing noise countermeasure materials and thick-film large flexible ferrite plates for wireless charging of EVs. As the electrification of automobiles advances, use of electronic controls is accelerating, giving rise to concerns about the demand for materials associated with the increase in electronic components and the various noise related issues that will arise with the use of higher frequencies. To keep pace with components, the Company has developed soft magnetic powder and low-frequency electromagnetic shield materials as a noise countermeasure for various frequency bands, including low-frequency band electromagnetic shielding material, milliwave band electromagnetic wave absorbing materials, and noise countermeasure components and materials for automotive cables. In addition, looking ahead to the expected rapid expansion of EVs, the Company is also proceeding with development of large flexible ferrite plates for automobiles, based on its accumulated technologies in the field of flexible ferrite sheets, to meet expectations for development and commercialization of wireless charging systems.

Shareholder return policy

Aiming for early resumption of dividends, taking into account consolidated performance trends

Since the Company paid a ¥40 dividend in FY3/19, it has not paid a dividend again, partly due to lackluster operating results. In FY3/23, the Company is forecasting a decrease in profits, and therefore expects to continue not paying a dividend. The Company aims to quickly resume dividend payments while retaining the necessary internal reserves to develop business for the future and strengthen its management structure.

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