

# TODA KOGYO CORP.

**4100**

Tokyo Stock Exchange Prime Market

1-Sept.-2023

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<https://www.fisco.co.jp>

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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

TODA KOGYO CORP. <4100> (“the Company”) is a chemical company founded as a manufacturer of Bengala (a pigment essential for ceramics painting glazes and historical buildings). It will mark its 200th anniversary in November 2023. As a leading iron oxide company since its foundation, 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, materials for toners used in copiers and printers, multilayer ceramic capacitors (“MLCC”) widely used in smartphones, as well materials used in lithium-ion batteries (“LIB”) 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 LIB).

#### 1. Summary of FY3/23 results

In the FY3/23 consolidated results, net sales declined 1.1% year on year (YoY) to ¥34,934mn, operating profit fell 45.7% to ¥1,367mn, ordinary profit was down 20.0% to ¥3,349mn, and profit attributable owners of parent increased 4.9% to ¥3,268mn. In the Functional Pigments Business, net sales were ¥14,723mn (up 8.6% YoY) due to brisk sales of materials for copiers and printers, coatings, and catalysts accompanying the rebound from the COVID-19 pandemic (COVID-19). However, operating profit was ¥2,001mn (down 5.8%) because of sharply higher raw material and energy prices. In the Electronic Materials Business, net sales were ¥20,210mn (down 7.2% YoY) and operating profit was ¥2,389mn (down 27.3%) due to production adjustment in the automobile market caused by the semiconductor shortage and ICT equipment-related inventory adjustment amid weak demand. Total segment profit of the two businesses came to ¥4,391mn (down 18.8% YoY) and companywide expenses to ¥3,023mn (up 4.6%) for an accelerating rate of profit decline. Ordinary profit fell by just 20.0% YoY due to a ¥317mn improvement in the non-operating profit/loss, partly because of strong share of profit of entities accounted for using equity method of ¥1,704mn (up 12.1%YoY) and a 48.3% (¥73mn) increase in foreign exchange gains to ¥224mn stemming from yen depreciation. Profit attributable to owners of parent increased YoY, because the Company transferred its investment stake in consolidated subsidiary Toda United Industrial (Zhejiang) Co., Ltd. (Toda United) to equity-method affiliate Zhejiang Huayuan Pigment Co., Ltd. (Zhejiang Huayuan), recording a ¥933mn gain on sales of shares of subsidiaries and associates.

#### 2. Outlook for FY3/24

The outlook for FY3/24 consolidated results is for net sales of ¥32,000mn (down 8.4% YoY), operating profit of ¥900mn (down 34.2%), ordinary profit of ¥2,000mn (down 40.3%), and profit attributable to owners of parent of ¥1,400mn (down 57.2%). While the removal of Toda United from the scope of consolidation will have a significant impact on net sales and operating profit, the forecast calls for an increase in net sales and flat operating profit adjusted for this factor. Ordinary profit is forecast to drop sharply, because the expected decline in share of profit of entities accounted for using equity method is greater than that of operating profit, while profit attributable to owners of parent is forecast to be less than half of the FY3/23 figure due to the dropout of gain on sales of shares of subsidiaries and associates.

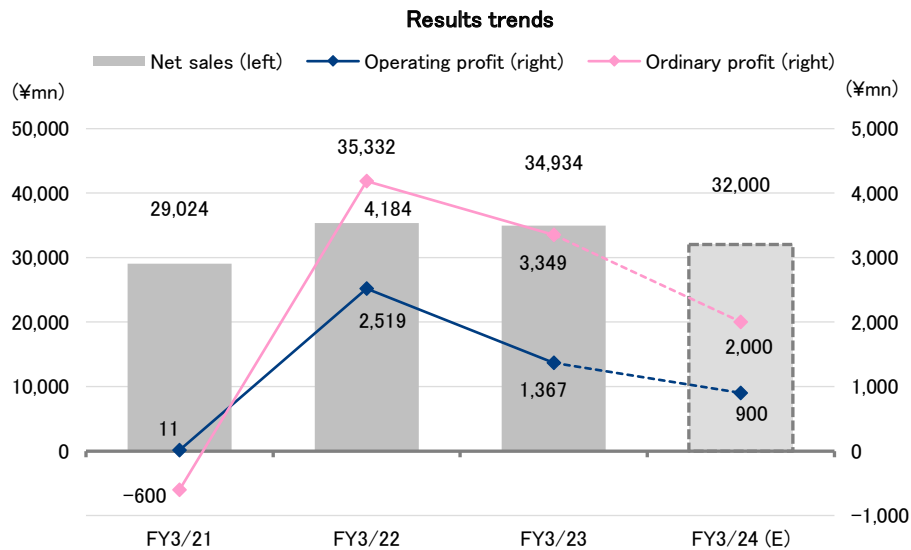
Summary

**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. Operating profit fell sharply in FY3/23, however, because of a surge in raw material prices, delayed recovery of automobile production, and weak performance of the electronics and IT equipment industries. The outlook for the operating environment in FY3/24 remains severe. The Company assumes it will attain or get close to its net sales target adjusted for the unexpected removal of Toda United from the scope of consolidation, but expects profit to fall 10% short of target adjusted for this effect. It plans to announce the next medium-term business plan (a three-year plan starting in FY3/24) in May 2024, which aims for further growth in new business areas.

**Key Points**

- In the FY3/23 consolidated results, net sales fell 1.1% YoY, while ordinary profit was down 20.0%, with weak automobile and ICT equipment-related demand hurting earnings
- For FY3/24, the Company forecasts declines of 8.4% in net sales and 40.3% in ordinary profit, which correspond to higher net sales and flat ordinary profit adjusted for removing Toda United from scope of consolidation
- Announced Purpose of “We transform the potential of fine particles into new possibilities for our world.” will aim for further growth in next medium-term business plan to be unveiled in May 2024



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

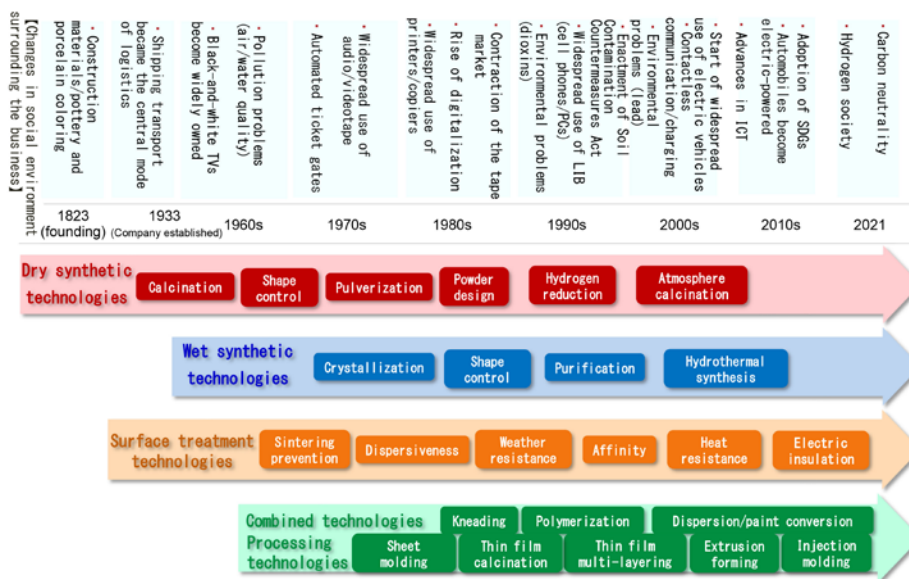
## Company profile

### 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 Okayama Prefecture 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 and videotape, materials for toners used in copiers and printers, dielectric materials for MLCC, as well materials used in LIB 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 LIB).

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



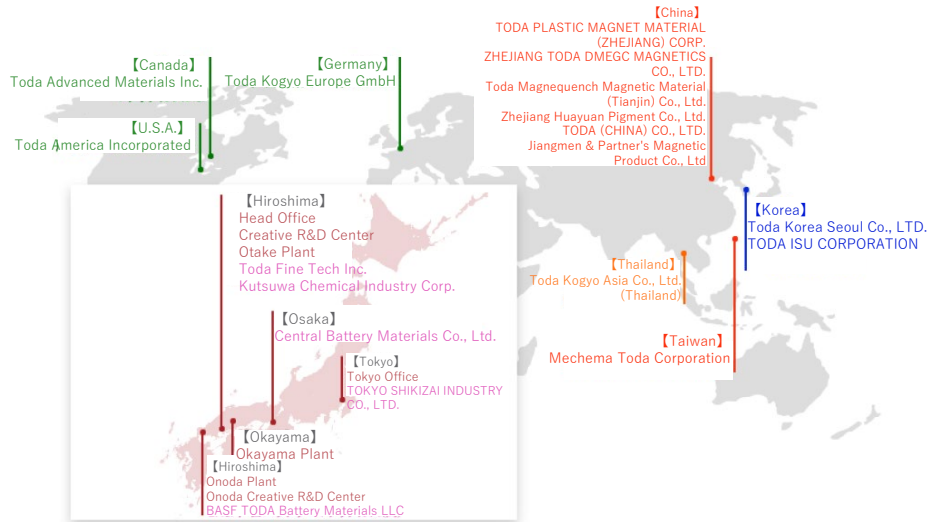
Source: From the Company's medium-term business plan

The Group comprises the Company, 13 consolidated subsidiaries, 6 affiliates, and 1 other affiliated company. As of the end of FY3/23, there were 846 employees on a consolidated basis.

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Company profile

The Company's bases



Source: From the Company's website

History

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

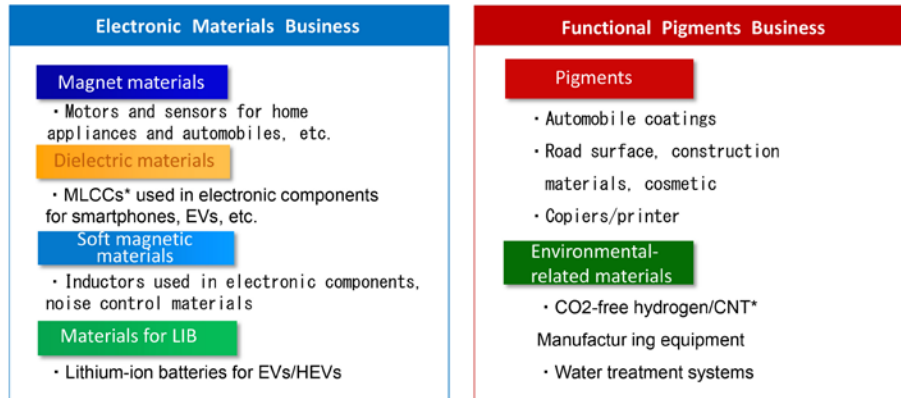
Source: Prepared by FISCO from the Company's annual securities report

Company profile

2. Business description

Currently, the Group 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 LIB).

Domains of each business

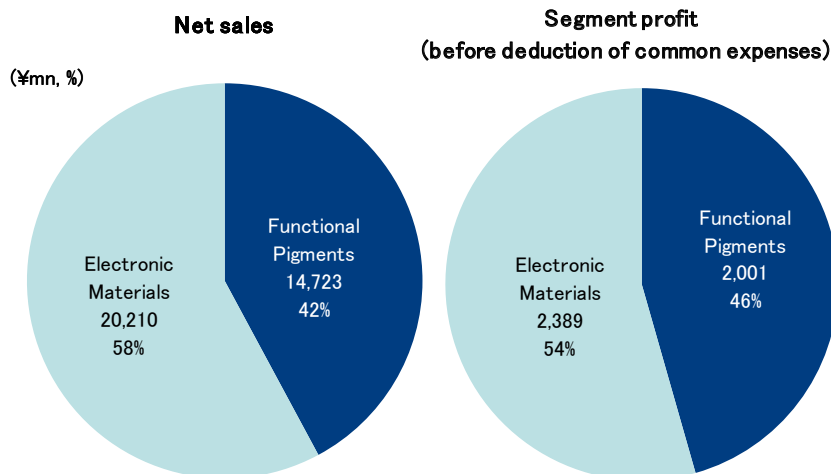


\*MLCC: Multilayer ceramic capacitors

Source: From the Company's medium-term business plan Vision 2023

In FY3/23, the Functional Pigments Business accounted for 42.1% of consolidated net sales and the Electronic Materials Business accounted for 57.9%. For segment profit before deduction of common expenses, the Functional Pigments Business had a 45.6% share and the Electronic Materials Business a 54.4% share of the total.

FY3/23 percentage by segment



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

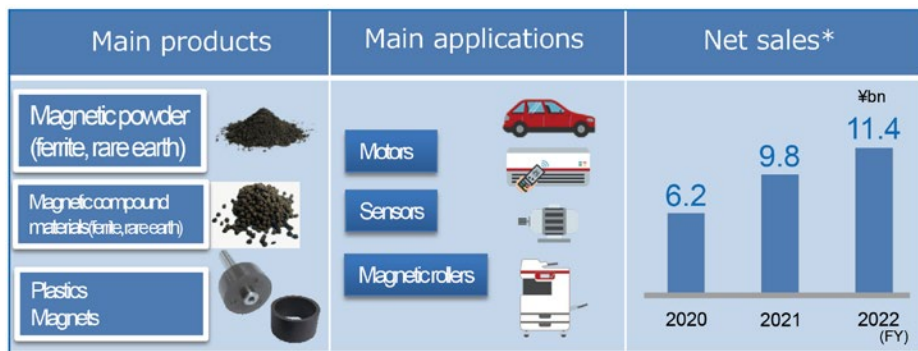
Company profile

**(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 LIB materials as the three strategic businesses. Overall, for LIB 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 as a result of the extent to which profits track changes in inventory, sales prices changes, as well as utilization rates.

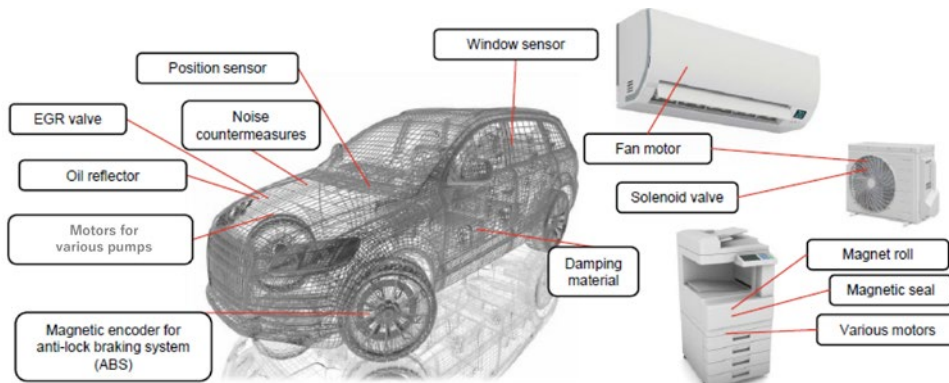
By product, magnet materials are driving sales in this segment at ¥11,400mn (accounting for 56% of segment sales). This is centered on ferrites and rare earth magnetic compound materials (combinations of the molding materials of magnetic powder and resins) used in bonded magnets. Bonded magnets are produced 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 have less magnetic force than sintered magnets, they offer advantages such as ease of processing to form complex shapes, one-piece molding with metals, and ability to be made thinner, longer, and wider. These magnets comprise a diverse product range, including hard ferrite, soft ferrite, and isotropic and anisotropic rare earth. Thus, the Company's materials are widely used in various industries. Their use is also expanding into new areas, with demand growing for air-conditioners, air filtration systems, and automotive applications. After acquiring a stake in Jiangmen & Partner's Magnetic Product Co., Ltd. (Jiangmen & Partner's), which manufactures and sells injection molding bonded magnets and other products in August 2021, the business also incorporates processing of magnet materials.

Magnet materials



\* Net sales in FY2020 based on new accounting standard  
 Source: From the Company's results briefing materials

Examples of uses of magnet materials



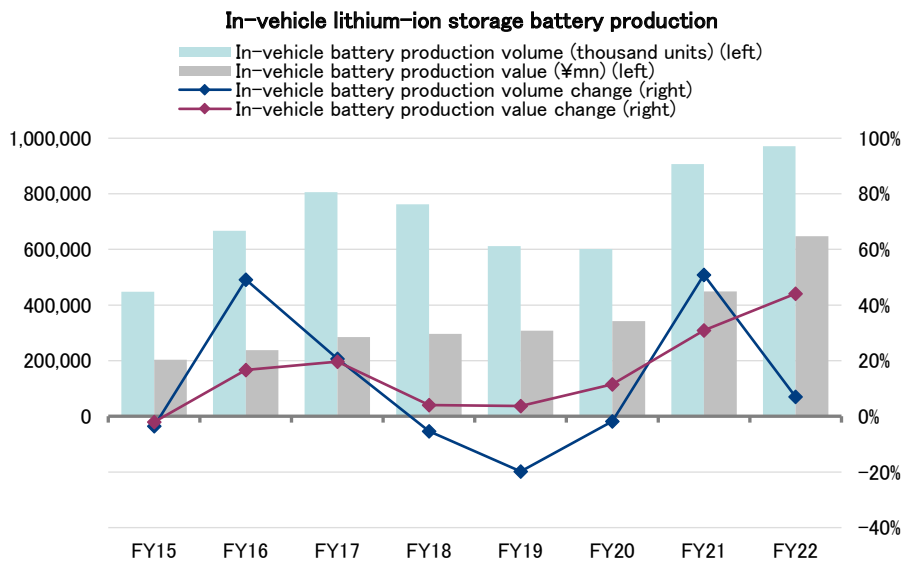
\* Image material: PIXTA  
 Source: Magnetic compounds for bonded magnet (Brochure)

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Company profile

Sales of high nickel and other in-vehicle LIB materials have grown sharply in recent years, reaching ¥5,800mn (29% segment sales share) in FY3/23. In response to the sudden contraction of the magnetic iron oxides market (represented by magnetic tapes) after their heyday in the 1990s, the Company harnessed the technologies of its existing business to begin research into LIB cathode materials. It launched its lithium cobalt oxide (LiCo<sub>2</sub>) business in 2000, with tricobalt tetroxide (Co<sub>3</sub>O<sub>4</sub>) as the starting material. After that, the Company commercialized through acquisitions and other means lithium nickel cobalt aluminum oxide (LiNiCoAlO<sub>2</sub>) in 2002, Ni(OH)<sub>2</sub>/CoOx (lithium cobalt oxide, nickel hydroxide, cobalt oxide) in 2007, and spinel-type lithium manganese oxide (LiMn<sub>2</sub>O<sub>4</sub>) in 2008. It also obtained a license for lithium-rich nickel cobalt manganese oxide (Li-Rich NCM) from Argonne National Laboratory in the US and quickly commercialized LIB cathode materials using three different materials. In addition, it began construction of a manufacturing facility in Michigan, US, established a joint venture with Itochu Corporation <8001> in 2010 to manufacture precursors and cathode materials, and in 2015 established BASF Toda Battery Materials LLC (BTBM) with major European chemical company BASF in Japan for R&D, manufacture, and sales of cathode materials. In 2017, the Company sharply expanded its high-nickel-based cathode material production facilities. The LIB materials business is operated by BTBM, a joint venture with BASF in which the Company has a 34% stake and BASF Japan a 66% stake (equity-method affiliate of the Company). In FY12/22, BTBM net sales were ¥21,644mn (up 28.1% YoY). The Company announced on July 20, 2022 that it would raise production capacity of high-nickel-based cathode materials to 60,000 tons by 2025 to secure sufficient volume for annual battery cell production capacity of 45GWh. It also disclosed on December 19, 2022 that BASF SE would begin supplying LIB materials to Prime Planet Energy & Solutions, Inc. (PPES), a joint venture between Toyota Motor <7203> and Panasonic Holdings <6752> through BTBM. LIB material businesses must make large upfront investment to supply in-vehicle materials, and their earnings came under further pressure from impairment loss, investment loss, and volatile market prices. However, they are reaching the stage where their investment is being rewarded and they are beginning to make a profit.

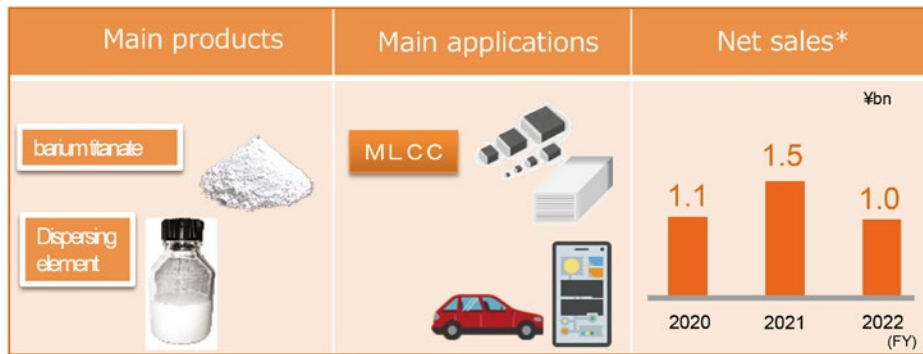


Source: Prepared by FISCO from METI's machinery statistics

Company profile

Dielectric materials for MLCC have substantial potential, although sales were a modest ¥1.0bn in FY3/23. Capacitors are one of the three main passive components used in almost all electronic equipment. They are essential components for ensuring that active components (capable of amplifying, converting, and rectify the electrical energy supplied) function correctly. Ceramic capacitors account for almost 80% of all capacitors. Today they are used in various electronic equipment from smartphones to automobiles and home appliances, with production totaling ¥770.0bn in FY2021. Barium titanate is the main material of ceramic capacitors, with Murata Manufacturing Co., Ltd. <6981> pioneering its industrial application. TAIYO YUDEN CO., LTD. <6976>, TDK Corporation <6762>, and other Japanese manufacturers followed its lead in making barium titanate a core business, dominating the market until Samsung entered the business in earnest in the 2000s. The Company built a new barium titanate manufacturing facility in 2004 to enter the market in a big way, employing a distinctive manufacturing method. Traditionally, barium titanate is made by the solid-phase method (sintering the raw material) – most companies including Murata Manufacturing produce it internally by this method. However, Nippon Chemical Industrial Co., Ltd. <4092> and Fuji Titanium Industry Co., Ltd. use the oxalate method, a production method that combines wet reaction and calcination and provides finer particles than the solid-phase method. The Company uses its proprietary wet synthesis technology, which entails a hydrothermal synthesis method to create a reaction in the raw materials at high temperature and high pressure to produce fine, even particles smaller than 100nm. The trend for ceramic capacitors is smaller, larger capacity, and higher dielectric constant. In terms of size, the share of 0603 is now the largest (previously 1005), the share of 0402 is increasing, and 0201 is now being used in specific applications such as communication modules and wearable devices. Production has recently slowed due to weak smartphone sales, but we expect a sharp increase in demand for ultrafine barium titanate particles going forward.

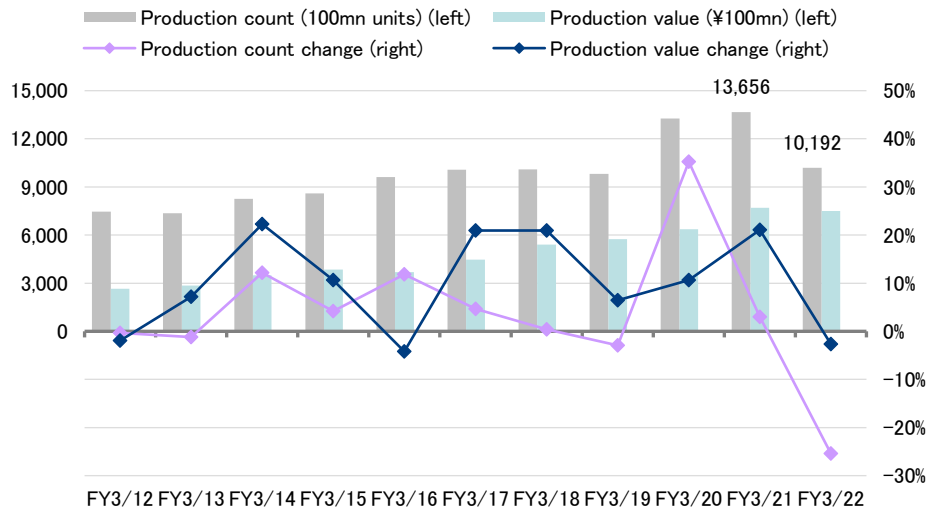
Dielectric materials



\* Net sales in FY2020 based on new accounting standard  
 Source: From the Company's results briefing materials

Company profile

**Production of ceramic capacitors**

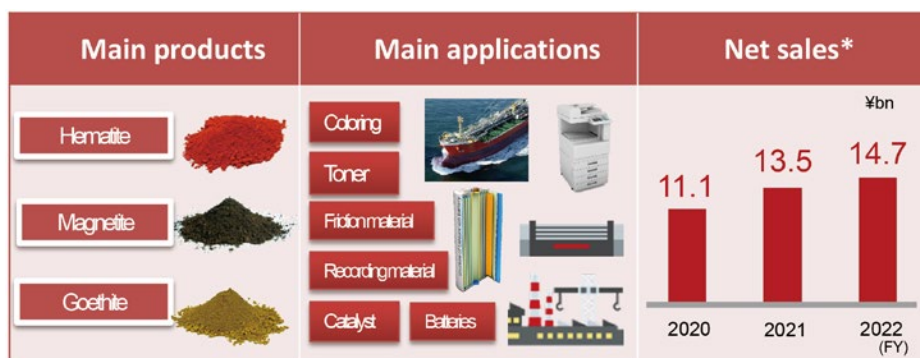


Note: The graph shows figures from a domestic manufacturer  
 Source: Prepared by FISCO from METI's machinery statistics

**(2) Functional Pigments Business**

In the Functional Pigments Business, net sales for FY3/23 were ¥14,723mn. 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. Pigments are one of the Company's founding businesses. Their applications have expanded in the paints and coatings market, such as construction-use coloring materials for buildings and structures, but the printer market, however, has been impacted by the trend toward paperless offices and digitalization. The Company has worked to increase its market share and compensate for negative factors by expanding into new products such as cosmetics pigments and transparent iron oxide as well as soil and groundwater purification materials for the environmental market to secure sales. For profit, margins have been impacted by higher raw material and energy prices, but the business is recovering from the impact of COVID-19 and profitability is improving.

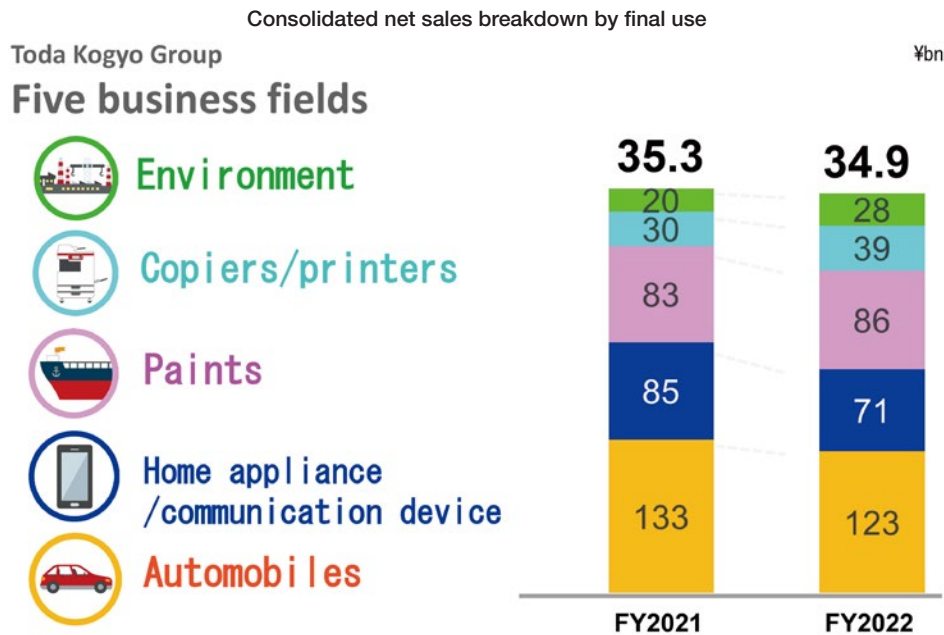
**Functional pigments**



\* Net sales in FY2020 based on new accounting standard  
 Source: From the Company's results briefing materials

Company profile

The business breaks down by end-application into five business fields. Environment, copiers/printers, and paints comprise the Functional Pigments Business field and home appliance/communications device and automobiles comprise the Electronic Materials Business field. Automobiles had the largest net sales share in FY3/23 with net sales of ¥12,300mn (35%), followed by paints (¥8,600mn, 25%) and home appliance/communication device (¥7,100mn, 20%).



Source: From the Company's results briefing materials

## Results trends

**FY3/23 consolidated net sales fell 1.1% YoY and ordinary profit was down 20.0%, but profit attributable to owners of parent increased 4.9% due to gain on sales of shares of subsidiaries and associates**

### 1. Summary of FY3/23 results

In the FY3/23 consolidated results, net sales were ¥34,934mn (down 1.1% YoY), operating profit was ¥1,367mn (down 45.7%), ordinary profit was ¥3,349mn (down 20.0%), and profit attributable to owners of parent was ¥3,268mn (up 4.9%). The Company raised its profit forecast on November 10 versus the initial forecast of May 13, 2022, but lowered its net sales, operating profit, and ordinary profit forecasts on February 10, 2023 to reflect the transfer of its stake in Toda United. Net sales were in line with the revised forecast of February 10, 2023 (¥66mn lower), but operating profit and ordinary profit missed revised targets by ¥233mn and ¥51mn, respectively, while profit attributable to owners of parent was ¥268mn higher due to recording a gain on sales of shares of subsidiaries and associates from the transfer of the Company's stake in Toda United.

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Results trends

Overview of results

(¥mn)

	FY3/22			Initial FY3/23 company forecast (May 13, 2022)			Revised FY3/23 company forecast (Nov 11, 2022)			Revised FY3/23 company forecast (Feb 10, 2023)			FY3/23		
	Results	% of net sales	YoY change	Company forecast	% of net sales	YoY change	Company forecast	% of net sales	YoY change	Company forecast	% of net sales	YoY change	Results	% of net sales	YoY change
Net sales	35,332	100.0%	34.9%	40,000	100.0%	13.2%	36,000	100.0%	1.9%	35,000	100.0%	-0.9%	34,934	100.0%	-1.1%
Operating profit	2,519	7.1%	-	1,600	4.0%	-36.5%	1,800	5.0%	-28.5%	1,600	4.6%	-36.5%	1,367	3.9%	-45.7%
Ordinary profit	4,184	11.8%	-	2,500	6.3%	-40.3%	3,700	10.3%	-11.6%	3,400	9.7%	-18.7%	3,349	9.6%	-20.0%
Profit attributable to owners of parent	3,116	8.8%	-	1,500	3.8%	-51.9%	2,400	6.7%	-23.0%	3,000	8.6%	-3.7%	3,268	9.4%	4.9%

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

## 2. Electronic Materials Business

In the Electronic Materials Business, net sales were ¥20,210mn (down 7.2% YoY) and segment profit was ¥2,389mn (down 27.3%). Net sales were boosted by sales growth of magnetic materials (up 16% to ¥11,400mn) and Jiangmen & Partner's, an injection molding magnet manufacturing and sales company which became a subsidiary (up ¥1,500mn). Adjusted for the above sales growth effect, liquidation of Toda Magnet (Shenzhen) Co., Ltd., and the closure of TODA Ferrite KOREA's factory, which had a ¥400mn negative impact on net sales, established businesses increased net sales by 6% from ¥8,400mn to ¥8,900mn. This is mainly due to the growth of rare earth bonded magnetic materials, which offer world-class magnetic properties, for use in automobile motors. Sales of dielectric materials fell sharply to ¥1,000mn (down 33% YoY), hurt due to the impact of inventory adjustments of ceramic capacitors caused by the semiconductor shortage and weak sales of smartphones and PCs, halving YoY in 2H. Sales of LIB materials were also weak, falling 30% YoY to ¥5,800mn, reflecting slow sales (down 15% YoY) to battery manufacturers of Toda Advanced Materials Inc. in Canada, which makes precursors used in LIB cathode materials, and worsening market prices. Operating profit declined sharply. The segment operating margin fell 3.3pp to 11.8% despite the full-year contribution of the profitable Jiangmen & Partner's, which has marked an operating margin of over 30% in the past, hurt by lower sales of LIB materials and dielectric materials, worsening market prices, and impact of rising raw material and energy prices.

Net sales of electronic materials

¥bn

		FY2021	FY2022	Change	
<b>Electronic materials</b>	Net sales	21.7	20.2	△1.5	
	Segment profit margin	1.5%	1.2%	△3 points	Main applications
Magnet materials		9.8	11.4	+1.6	Motors and sensors for home appliances and automobiles, etc.
Dielectric materials		1.5	1.0	△0.5	MLCCs* used in electronic components for ICT equipment, EVs, etc.
LIB Materials		8.3	5.8	△2.4	Lithium-ion battery for EVs/HEVs
Other materials		2.1	1.8	△0.3	

\*MLCC: Multilayer ceramic capacitors

Source: From the Company's results briefing materials

## Results trends

### 3. Functional Pigments Business

In the Functional Pigments Business, net sales came to ¥14,723mn (up 8.6% YoY), but operating profit was ¥2,001mn (down 5.8%). Net sales increased on growth of toner materials for copiers and printers amid recovery from the pandemic, while sales of materials for road surface and building material color coatings and environment-related catalyst materials were also brisk. Operating profit declined, however, because price revisions could not keep up with the impact of rising raw material and energy prices, and volume growth was smaller than the growth in sales value inflated by yen depreciation. A change in the sales mix was also a negative factor.

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

### 4. Financial condition

The Company had recorded net losses in 6 of the past 10 fiscal years up until FY3/22, 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, and improvement moved ahead to 30.5% in FY3/23. With regard to cash flow, the Company curtailed investment as much as possible to stem cash outflows during a period of weak earnings. Profit recovery has progressed, with the net debt-to-equity ratio improving from 2.04x in FY3/21 to 1.09x in FY3/23, but the balance of interest-bearing debt still remains at a high level of ¥25,729mn, which shows 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	FY3/23-end	Change
Current assets	23,065	29,381	28,465	-916
Non-current assets	18,718	21,910	23,550	1,640
<b>Total assets</b>	<b>41,783</b>	<b>51,292</b>	<b>52,016</b>	<b>724</b>
Current liabilities	19,051	20,276	17,604	-2,672
Non-current liabilities	13,356	17,056	17,852	796
<b>Total liabilities</b>	<b>32,408</b>	<b>37,333</b>	<b>35,456</b>	<b>-1,877</b>
<b>Net assets</b>	<b>9,375</b>	<b>13,958</b>	<b>16,559</b>	<b>2,601</b>
<b>(Soundness)</b>				
Current ratio	121.1%	144.9%	161.7%	
Equity ratio	19.5%	24.2%	30.5%	

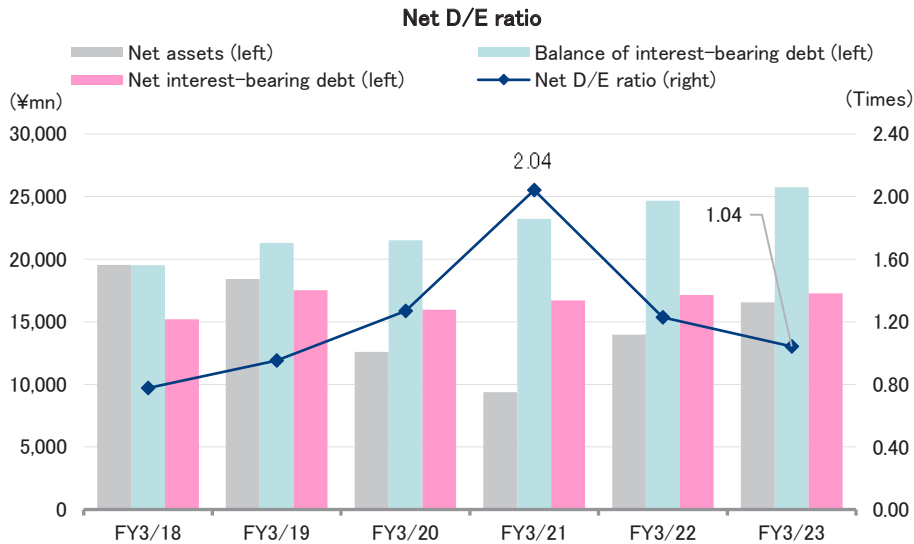
Source: Prepared by FISCO from the Company's financial results

#### Cash flow statement

	(¥mn)			
	FY3/20	FY3/21	FY3/22	FY3/23
Cash and cash equivalents at beginning of period	3,760	5,542	6,492	7,527
Cash flows from operating activities	2,259	612	903	833
Cash flows from investing activities	-239	-1,219	-1,138	-375
Cash flows from financing activities	-120	1,416	913	187
Cash and cash equivalents at end of period	5,542	6,492	7,527	8,476
Free cash flow	2,020	-607	-235	458
Capital investment	1,192	961	722	1,753
Depreciation	1,725	1,043	687	685
Research and development expenses	1,240	1,274	1,258	1,315

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

Results trends



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

## ■ Outlook

### Company's FY3/24 forecast calls for decreases of 8.4% in net sales and 40.3% in ordinary profit; increase in net sales and flat operating profit adjusted for removal of Toda United from scope of consolidation

● Outlook for FY3/24

The outlook for FY3/24 consolidated results is net sales of ¥32,000mn (down 8.4% YoY), operating profit of ¥900mn (down 34.2%), ordinary profit of ¥2,000mn (down 40.3%), and profit attributable to owners of parent of ¥1,400mn (down 57.2%). Net sales are largely impacted by the removal of Toda United from the scope of consolidation; it is forecast to increase adjusted for this factor. Profit is similarly impacted. Although the Company expects raw material and energy prices to remain high, it forecasts a gradual recovery in demand and the contribution of price revisions in 2H for flat operating profit adjusted for the removal of Toda United from the scope of consolidation. The rate of decline is expected to expand for ordinary profit, because the Company assumes a smaller contribution from equity-method companies, and grow even greater for profit attributable to owners of parent due to the dropout of gain on sales of shares of subsidiaries and associates from the sale of its stake in Toda United recorded in the previous fiscal year. Comparing earnings in 1H and 2H, the Company forecasts decreases of 17.4% YoY in net sales and 91.4% operating profit in 1H versus increases of 2.0% YoY in net sales and 3.9x in operating profit in 2H. Thus, the Company assumes that the effect of price revisions and recovery of ICT equipment-related business to contribute to earnings improvement in 2H.

## Outlook

**FY3/24 results outlook**

(¥mn)

	FY3/22		FY3/23		FY3/24		
	Results	% of net sales	Results	% of net sales	Plan	% of net sales	YoY change
Net sales	35,332	100.0%	34,934	100.0%	32,000	100.0%	-8.4%
Operating profit	2,519	7.1%	1,367	3.9%	900	2.8%	-34.2%
Ordinary profit	4,184	11.8%	3,349	9.6%	2,000	6.3%	-40.3%
Profit attributable to owners of parent	3,116	8.8%	3,268	9.4%	1,400	4.4%	-57.2%

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

The Company did not disclose a segment breakdown of its FY3/24 forecast, but looks for strong performance of magnet materials and recovery in dielectric materials in the Electronic Materials Business and a delayed recovery of LIB materials. It forecasts net sales growth for the Electronic Materials Business overall on the contribution of price revisions and other factors. In the Functional Pigments Business, a ¥5,000mn decrease in net sales in the Paints field is unavoidable due to the removal of Toda United from scope of consolidation despite the outlook for strong performance of materials for copiers/printers and catalyst materials. Overall, the Company expects net sales to be slightly over ¥10,000mn.

The Company also did not disclose a breakdown of its net sales forecast by business field, but looks for roughly ¥5,000mn decrease in net sales in paints due to the removal of Toda United from the scope of consolidation. Sales of copiers/printers are expected to expand due to continued strong demand, and sales of automobile-related products are expected to grow due to strong demand for magnets and a recovery in automobile production overall, despite weak growth of LIB materials. Home appliance/communication device sales are also expected to increase as ICT equipment-related sales recover in 2H and inventory adjustment slows down.

The removal of Toda United from the scope of consolidation will have a substantial impact on profit as well. Adjusted for this factor, the Company forecasts flat YoY operating profit. It expects the impact of rising raw material and energy prices to continue through 1H, and expects recovery in the ICT-related equipment sector, but forecasts profit recovery in 2H as a result of the price revision effect and improving sales mix. It expects a higher rate of decline for ordinary profit due to a decrease in share of profit of entities accounted for using equity method and a reduction in the non-operating profit from ¥1,982mn to ¥1,100mn. That being said, ordinary profit will likely exceed the company's forecast and increase slightly YoY given that operating conditions are not too bad for equity-method companies despite their investment in facility enhancement. The Company expects profit attributable to owners of parent to decline by more than 50% YoY on the dropout of a ¥933mn gain on sales of shares of subsidiaries and associates.



## ■ Medium- to long-term growth strategy

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

#### 1. Medium-term business plan – Vision 2023

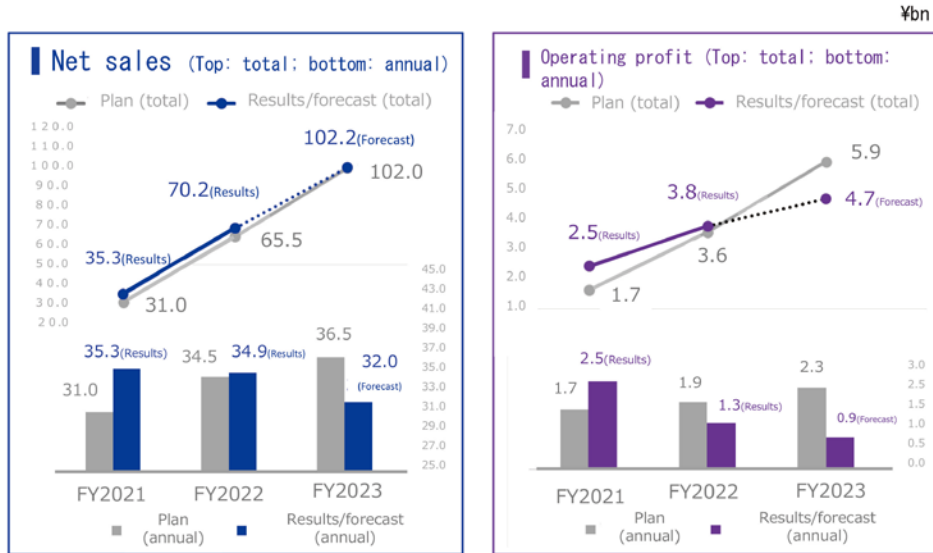
In August 2021, the Company announced Vision 2023, as a medium-term business plan for the three-year period from FY3/22 to FY3/24 with the 200th anniversary of the Company's founding in 2023 in mind. During the plan period, the Company will work toward its targets by positioning the Electronic Materials Business as a growth business and Functional Pigments Business as a stable management foundation, and implementing the following strategies: strengthening production capacity for business growth and maintaining and updating existing facilities, investing in new businesses such as next-generation electronic materials and environment-related materials, and promoting ESG initiatives. Numerical targets are 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 of the five business fields, to aim for expansion in automobiles and home appliances and communication device.

#### 2. Progress on Vision 2023

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 year. The exchange rate is also far removed from the assumption of \$1 = ¥105, and because many products the Company sells (e.g., nickel) are linked to market prices, all indicators are off from the figures in the medium-term business plan. However, the operating environment changed dramatically in FY3/23 amid soaring raw materials prices, yen depreciation, and issues in automobile production due to semiconductor procurement problems and lockdowns in China, and steeply rising energy prices due to the Ukraine situation. As a result, net sales came in ahead of plan target at ¥34,934mn, but operating profit fell far short at ¥1,367mn. The operating environment is expected to remain challenging in 1H FY3/24, because weak market prices remain a concern amid ongoing cost increases. In addition, the initial Company plan had not factored in the removal of Toda United from the scope of consolidation. As a result, the Company forecasts FY3/24 net sales of ¥32,000mn (¥4,500mn below plan target) and operating profit of ¥900mn (¥1,400mn lower). Adjusted for the removal of Toda United from the scope of consolidation, which had not been factored into the initial plan, net sales would be around ¥5,000mn ahead of target, but we can say it is in line in real terms considering that the initial forex assumption was \$1 = ¥105. We believe, however, that profit is not as forex sensitive, and will be around 90% of target adjusted for the Toda United factor.

Medium- to long-term growth strategy

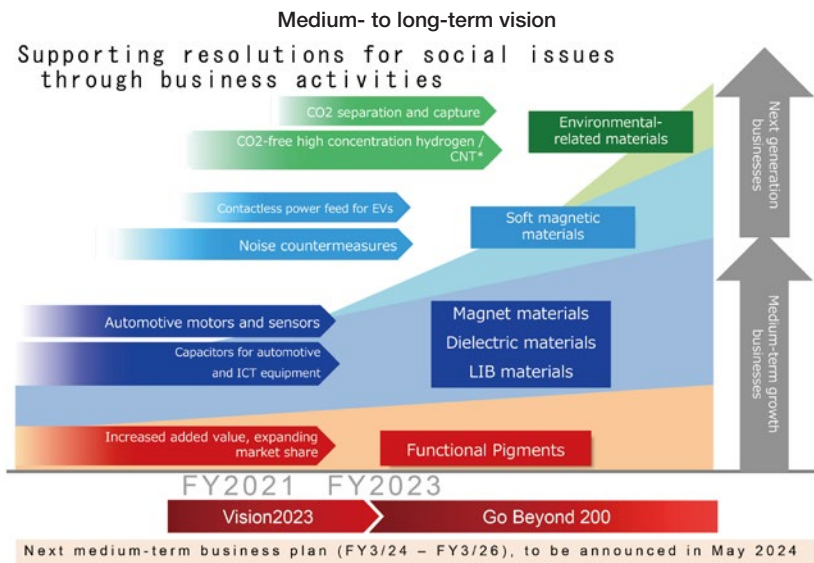
**Progress on Medium-term business plan “Vision 2023”**



Source: From the Company's results briefing materials

**3. Moving beyond the 200th founding anniversary – Go Beyond 200**

In May 2024, the Company plans to announce its next three-year medium-term business plan “Go Beyond 200” starting in FY3/24 that targets new growth by expanding new businesses in a big way. The direction of the Company's vision remains unchanged, although we must wait for the announcement of specific numerical targets. The Company plans to expand its current three strategic businesses in magnet materials, dielectric materials, and LIB materials, and will also expand next-generation businesses such as soft magnetic materials and environment-related materials for a new leap ahead.



\* Carbon nanotube (CNT)

Source: From the Company's results briefing materials

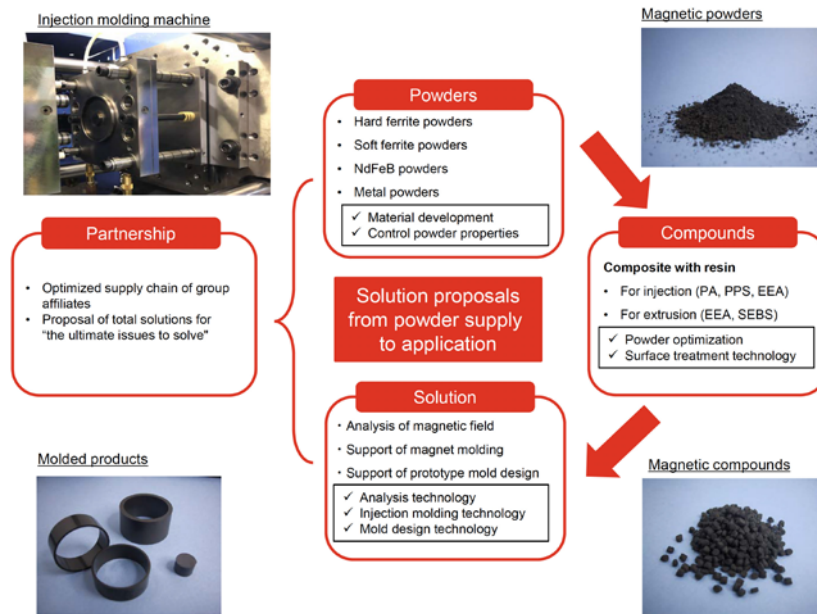
Medium- to long-term growth strategy

**(1) Three 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.

**Solutions provided by the Group**



Source: Magnetic compounds for bonded magnet (Brochure)

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

Medium- to long-term growth strategy

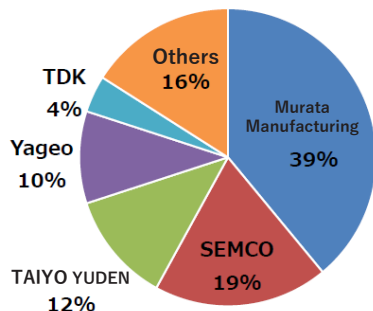
With advances in automobile electrification, the demand for bonded magnets is increasing. Meanwhile, on the performance front, demand for high temperature characteristics, environmental resistance, and high magnetic strength characteristics is increasing. In its materials development, the Company aims 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 durable materials developed in 2022 have 1.25 times higher heat resistance and higher resistance to temperature changes than conventional products by devising a resin blending ratio, 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. Bonded magnet polyphenylene sulfide (PPS; a composite material with superior heat resistance, chemical resistance, and electrical insulation properties) compound for injection molding, which reduces gases that corrode molds by about 90% during the injection molding process, helps to reduce mold maintenance costs by extending their useful life. It can also be used for sensors and air-conditioner components, and the Company is working on expanding other end-applications. Having acquired Jiangmen and Partner's, which manufactures and sells injection molding bonded magnets, the Company expects synergy effects from an integrated production system from raw materials through to component processing.

The previous medium-term business plan targeted net sales of ¥10.0bn for the magnet business. Magnet material sales totaled ¥11.4bn in FY3/23, to which the increase in sales at Jiangmen and Partner's will be added in FY3/24. We expect growth of the world bonded magnet market to accelerate amid the spread of EVs.

**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 and expand their use as cutting-edge materials. Regarding MLCC size, 0603 has overtaken 1005 to take the largest share, the share of 0402 is increasing due to the growth of mobile devices such as smartphones, and 0201 is now being used in specific applications such as communication modules and wearable devices. 1005 has become mainstream for in-vehicle applications due to smaller control units (ECUs) and use of the 0603 size is also likely to increase going forward. For in-vehicle MLCCs, reliability (i.e., stable performance in a wide range of temperature conditions from freezing cold to severe heat) is more important than miniaturization. The use of MLCCs per vehicle has increased from 100–3,000 units to 3,000–6,000 units amid the spread of eco-friendly and advanced driver assistance systems. The use of MLCCs is projected to increase further in all vehicle systems including powertrain, xEV, auto body, safe driving, and infotainment systems.

Market share and market size of ceramic capacitors



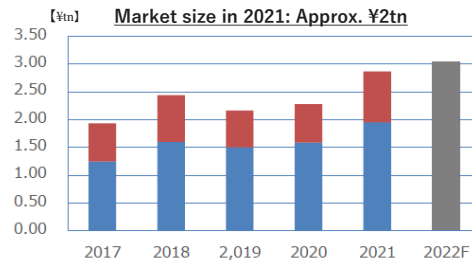
\* Source: METI based on interview and other information

**World market share of MLCC manufacturers (FY2021, shipment value basis)**

Source: METI "The Strategy for Semiconductors and the Digital Industry"

Ceramic capacitors (mostly MLCCs)

Market size in 2021: Approx. ¥2tn



\* Source: OMDIA

**World ceramic capacitor market trends**

We encourage readers to review our complete legal statement on "Disclaimer" page.

Medium- to long-term growth strategy

The internal structure of MLCC comprises stacks of barium titanate (BaTiO<sub>3</sub>; TB) dielectric layers and nickel electrode layers. Both dielectric and electrode layers must be thin and the number of layers increased to fulfill the requirements of high performance. This requires nanoparticle component materials. TB nanoparticles must be used as a co-material to strengthen the mechanical bond between the internal electrode layer (metal) and dielectric layer. The mechanical strength of the electrode layer must be enhanced to prevent it from splitting or cracking during the MLCC manufacturing process as well as ensuring that the MLCC does not lose its electrical properties or break down. The co-material also plays the important role of providing a consistent electrical field between the electrode and dielectric layer to improve the electric polarization of the dielectric layer. The Company manufactures consistent, highly dispersible, ultra-fine nanoparticles (30–100nm) unmatched by any of its competitors' products. Although production value is modest, we think the co-material offers substantial added value. Further miniaturization of MLCCs is expected, and thus thinner electrode layers will be required going forward amid the trend for higher capacity MLCCs, which will require nickel particles smaller than 100nm and co-material particles smaller than 20nm. The Company plans to begin supplying TB nanoparticles as a dispersing element for the dielectric layer as well as a co-material. Its materials offer consistent, ultrafine particles and high dielectric constant, making it likely to be adopted for use in dielectric layers as well as a co-material for electrode layers by MLCC manufacturers (even those that manufacture internally), especially for in-vehicle applications that require superior performance in high temperature conditions and greater static capacitance. It also improves the fluidity of the dielectric layer and forms a uniform film thickness. Dispersing elements used to improve the dielectric constant of the dielectric layer disperse the dielectric particles, preventing them from clumping together, to form a consistent dielectric layer. Smaller particles are required for dispersing elements, and here again the Company's nanoparticles will be essential. Once its products are adopted for dispersing elements as well as co-material for the electrode layer, sales growth will likely outpace that of the MLCC market overall, considering that Japanese manufacturers have a large share of the MLCC market.

**c) LIB Materials Business**

BTBM is the core company in the LIB Materials Business, whose outlook is for accelerating sales expansion, because it is now at the stage of making a profit amid the accelerating shift to EVs. Cathode materials supplied by BTBM are mainly used by US and European manufacturers. High-end vehicles are likely to continue using lithium hi-nickel nickel cobalt aluminum oxide (Hi-Nickel NCA). Continued sales expansion is forecast for BTBM, because battery manufacturers are ramping up production plans. With regard to supplying Japanese companies, on December 19, 2022, the Company disclosed that BASF SE would begin supplying lithium nickel cobalt manganese oxide (NCM) cathode active materials (CAM) to PPES through BTBM. This is a tailor-made product resulting from collaboration between BASF and PPES over the past few years, offering high output, long working life, and improved efficiency, which is likely to see strong growth alongside Toyota Motor's EV strategy. BTBM is expanding its CAM facility at its Onoda Plant, which is scheduled to begin production in 2H 2024. Planned annual CAM production is 60,000 tons or 45GWh in terms of battery cells, which will make a substantial contribution to earnings. The business is forecast to grow, including Toda Advanced Materials of Canada, which supplies precursors, and Central Battery Materials based in Gifu Prefecture.

Medium- to long-term growth strategy

So far, the Company has been manufacturing LIB materials for in-vehicle applications (especially for high-powered EVs) and plans to continue in this field. However, given concerns about the procurement of lithium resources and cost issues, it has started development of sodium-ion batteries, which are considered suitable for a stationary power supply because they are low cost and have no resource supply constraints. The Company is engaged in joint research with Tottori University. After many studies in which they added various substances to fine iron oxide (Fe2O3) particles developed by the Company, they discovered that adding antimony (Sb) to the particles resulted in a sodium-ion battery anode with superior properties. The Company has a 200-year history in iron oxides and has a policy of harnessing the results of combining iron oxide with another metal to solve various problems. It believes that this method can also be applied to solid electrolyte batteries, offering potential to make a big impact on its battery materials business in the long term.

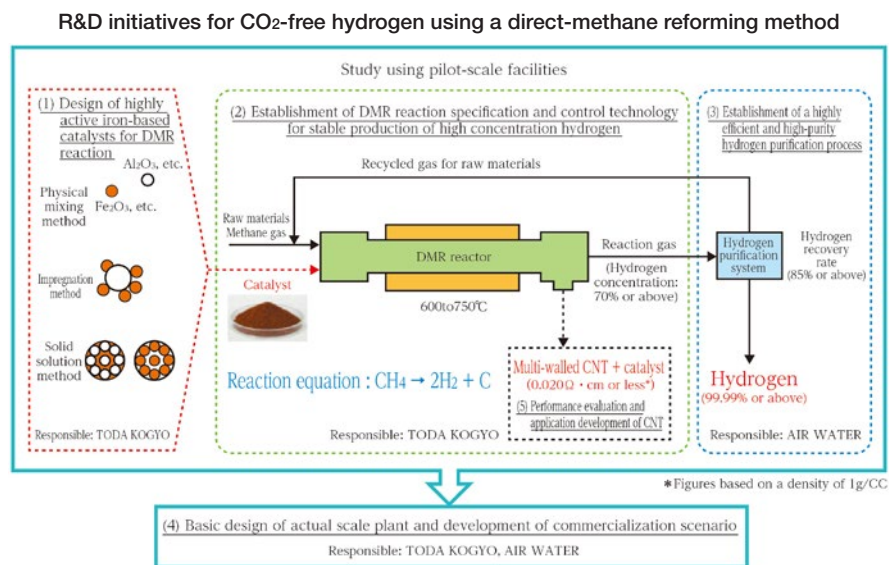
**d) Pigments and Environment Related Materials Business**

Although the Pigments and Environment Related Materials Business represent maturing markets, the transfer of the Company's stake in Toda United to equity-method affiliate Zhejiang Huayuan offer potential for new developments. The Company took a stake in Toda United, which mainly manufactures and sells yellow iron oxide pigments, in 2011, and invested in Zhejiang Huayuan (which has a red iron oxide pigment business) in 2001. Consolidation and alliances among iron oxide pigment companies in China has accelerated in recent years. The latest integration of these two pigment companies has resulted in the world's second-largest iron oxide pigment manufacturer with production capability of all three iron oxide pigments (red, yellow, and black).

**(2) Next generation businesses**

**a) Environment Related New Materials Business**

The Company has supplied products contributing to the formation of a recycling-oriented society 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. It is making progress with further initiatives to achieve carbon neutrality, specifically a New Energy and Industrial Technology Development Organization (NEDO) commissioned business for R&D of CO2-free hydrogen using a direct-methane reforming method in collaboration with AIR WATER INC. <4088>.

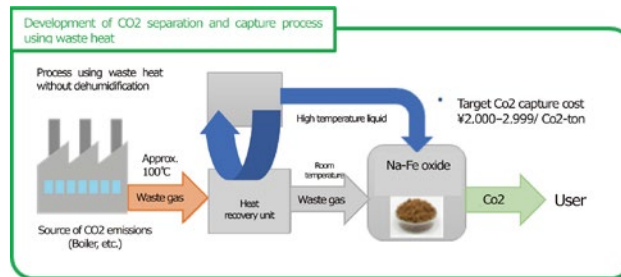


Source: From the Company's results briefing materials

Medium- to long-term growth strategy

The Company is also developing industrial production of a solid sorbent for CO<sub>2</sub> capture using sodium ferrite, a research theme of Associate Professor Ikuo Yanase of Saitama University. It is a promising material for contributing to carbon neutrality, being a solid that can be used repeatedly that captures CO<sub>2</sub> in exhaust gas and releases CO<sub>2</sub> heated to around 100°C. The Company, Air Water, and Saitama University jointly submitted an application with the project title “Development of innovative CO<sub>2</sub> separation technology using Na-Fe oxides” to the NEDO Green Innovation Fund/Development of Technology for CO<sub>2</sub> Separation, Capture, etc. project, which was accepted in July 2022. Possible uses of the separated and captured CO<sub>2</sub> include synthesis of methanol and ethanol, fuel, and concrete compound.

**CO<sub>2</sub> separation and capture process using waste heat**

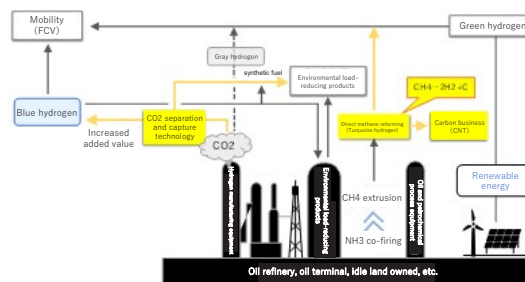


Source: From the Company's press releases

Also, in January 2023, the Company concluded a basic agreement for joint development with COSMO ENERGY HOLDINGS CO., LTD. <5021> to commercialize eco-friendly technologies. The two companies have identified five themes for consideration and will explore ways to convert fraction generated by the Cosmo Energy Group into next-generation energies hydrogen and carbon (for use in carbon materials) using low carbon hydrogen production technology through the Company's direct-methane reforming method. Although we think it will take time before the project will begin contributing to earnings, we are positive on the potential of the Company's initiatives for realizing a decarbonized, recycling-oriented society.

**Image of joint development/scope of work considered and solid sorbents for CO<sub>2</sub> capture**

<Image of joint development and scope of work considered >



<CO<sub>2</sub> separation technology: CO<sub>2</sub> capture using solid sorbents\*1>



\*1 Solid sorbents for CO<sub>2</sub> capture  
Industrial production using Toda Kogyo's proprietary iron oxide synthesis technology

Source: From the Company's press releases

We encourage readers to review our complete legal statement on “Disclaimer” page.

Medium- to long-term growth strategy

#### **b) Soft Magnetic Materials Business**

Soft magnetic 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 accelerating sales of developing noise countermeasure materials, thick-film large flexible ferrite plates for wireless charging of EVs, and flexible ferrite sheets and tape for noise reduction. As the electrification of automobiles advances, use of electronic controls is accelerating, giving rise to concerns about various noise-related issues that arise due to the increased use of electronic components.

#### **c) Other products under development**

The Company also plans to begin sales of a range of new products such as electromagnetic wave countermeasure components including millimeter wave absorption sheets and ferrite powder with electromagnetic wave absorption properties compatible with 5G, as well as new functional materials such as multilayer carbon nanotubes to evolve into a company that develops cutting-edge products.

## 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 FY3/24, 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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