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TOCALO

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Executive summary

Business overview

TOCALO Co., Ltd. (TOCALO) provides surface treatments that improve the performance of materials used across a range of industries by adding properties such as abrasion and heat resistance, conductivity, insulation, and heat shielding and dissipation. Its core technology is thermal spraying, which involves coating target surfaces by spraying metals or ceramics that have been melted using high temperature heat sources (e.g., plasma and gas). The company particularly excels in functional thermal spraying that provides both growth potential and high added value, and leads the Japanese market for thermal spraying with a share of 40% (Shared Research estimate based on data from Yano Research Institute, Digital Research, and other sources). The company also offers other surface treatments as ancillary services. These include the Toyota diffusion (TD) process, zinc alloy coating (ZAC), plasma transferred arc (PTA) process, and physical vapor deposition (PVD) process. (See the box on the next page for details.)

TOCALO's surface treatments are made to order. Accordingly, selling volume is not a business priority. The company procures coating materials and generates sales by applying surface treatments to goods and parts provided by customers. In FY03/24, it reported a GPM of 34.1%, an SG&A ratio of 15.1%, and an OPM of 19.7%, on a consolidated basis. Over half of the parent company's total manufacturing costs in FY03/24 were labor (27.6% of the total) and outsourcing costs (27.1%). Other manufacturing costs included materials (13.1%), consumables (10.7%), utilities (4.4%), depreciation (7.7%), and other costs (9.4%). TOCALO's business is labor-intensive, with personnel expenses accounting for about 50% of SG&A expenses.

The thermal spraying industry divides into companies that conduct thermal spraying internally and companies that perform thermal spraying as a contracted service. In 2018, the market for contracted treatment in Japan was worth approximately JPY60.0bn, while the global market was about JPY700.0bn (source: Yano Research Institute). Some overseas competitors sell thermal spraying materials and equipment in addition to providing contracted treatment services, but TOCALO specializes in services. Overseas sales accounted for 28.2% of sales in FY03/24 and mainly came from Japanese companies that have expanded abroad. The company also receives royalty income from licensing agreements with overseas companies, including competitors.

By area of application, 20% of thermal spraying in Japan is associated with industrial equipment, 20% semiconductors and flat panel displays (FPDs), 13% steelmaking, 10% bridges and structures, 10% paper manufacturing, and 27% other uses (2018 actual; Yano Research). At TOCALO, semiconductor/FPD-related sales at the parent made up about 41.8% of consolidated sales in FY03/24. By customer, the Tokyo Electron Limited group (TSE Prime: 8035) accounted for 27.0% of sales, and the Applied Materials group (US; AMAT) accounted for 11.5% in FY03/24. Semiconductor-related business is TOCALO's growth driver, and the company and Tokyo Electron have built a close relationship that allows them to conduct joint development.

In September 2004, TOCALO acquired all shares of Japan Coating Center Co., Ltd. (JCC), expanding into the thin coating technology known as the physical vapor disposition (PVD) process. PVD is a surface treatment method in which metals (e.g., titanium and chromium) are ionized with reactive gases in a vacuum to form highly adhesive ceramic coatings that are hard and dense but thin. Applied to surfaces of cutting tools, metallic molds, and other items, these coatings add functionality such as abrasion and corrosion resistance. JCC's profit margin is higher (20.0% in FY03/24; before segment profit adjustments) than that of the Thermal Spraying (Parent) business. Shared Research notes that synergies between the parent and the subsidiary have generated.

By segment, Thermal Spraying (Parent) accounted for 72.4% of sales in FY03/24, Domestic Subsidiary (JCC) for 5.3%, Overseas Subsidiaries for 15.5%, Other Surface Treatments for 6.5% and Royalty Income 0.3%. The segment profit margins (recurring profit basis) were 18.6% in Thermal Spraying, 20.0% in Domestic Subsidiary, 26.1% in Overseas Subsidiaries, and 17.7% in Other Surface Treatments (before segment profit adjustments).

Trends and outlook

- In FY03/24, sales were JPY46.7bn (-2.9% YoY), operating profit JPY9.2bn (-12.9% YoY), recurring profit JPY9.7bn (-12.2% YoY), and net income attributable to owners of the parent JPY6.3bn (-13.9% YoY). Sales and profit fell YoY for the first time in four fiscal years due to the impact of adjustments in the semiconductor market. The annual dividend was JPY53.0 per share, up from the company's previous forecast of JPY50.0 per share (JPY50.0 per share in FY03/23), with a payout ratio of 50.2% (41.4%).

- The company forecast for FY03/25 projects sales of JPY54.0bn (+15.5% YoY), operating profit of JPY11.5bn (+25.0% YoY), recurring profit of JPY11.8bn (+22.1% YoY), net income attributable to owners of the parent of JPY7.7bn (+21.7% YoY), and EPS of JPY129.5. Driven by sales growth from a recovery in orders for its core semiconductor and FPD-related applications, the company expects to achieve record-high sales and profits across all categories for the first time in two fiscal years. The company also plans an annual dividend of JPY65.0 per share (up from JPY53.0 per share in FY03/24), with a projected payout ratio of 50.2% (unchanged from 50.2% in FY03/24). At the time of the cumulative Q3 results announcement (April—December), the company upwardly revised its previous forecast (consolidated earnings and annual dividend). All figures above reflect this revised forecast.

- On November 9, 2021, the company publicly announced its medium-term management plan for the first time ever. This medium-term management plan clearly defines the company's vision for 2030 and outlines the growth strategy the company plans to implement over the five-year duration of the plan, which concludes with FY03/26. For FY03/26, the company has set a sales target of JPY53.0bn (versus actual sales of JPY39.3bn in FY03/21) and a recurring profit target of JPY12.0bn (versus actual recurring profit of JPY8.9bn in FY03/21). In addition to maintaining and enhancing its financial strength and profitability, the company also clearly indicated that it would aim to increase shareholder returns. However, the company additionally stated that it would periodically monitor and review expansion associated with its business operations targeting semiconductors (expected to be a major driver of results during this medium-term management plan), as it is highly subject to impact from changes in trends within the semiconductor market.

- In May 2024, the company announced the progress of its medium-term management plan. Two and a half years into the plan, progress, which had been ahead of schedule through FY03/23, fell behind due to adjustments in the semiconductor market. However, the company upheld its target for FY03/26, the final year of the plan, anticipating a recovery in orders as the semiconductor market stabilizes. Notably, the company revised its FY03/25 earnings forecast upward, signaling a return to progress exceeding the plan. While remaining cautious about semiconductor market trends, the company indicated it was on track to meet its FY03/26 targets.

Strengths and weaknesses

Shared Research believes that TOCALO's three main strengths are its portfolio of diverse surface treatments that makes the company the leader in a niche market; its ability to acquire top-class customers in major industries through joint development focused on meeting future needs; and stable earnings due to high domestic repeat demand for technologies with added value.

Shared Research has identified three notable weaknesses: a lack of peripheral technologies and mass production bases necessary to process large orders; lackluster cultivation of overseas markets; and low profitability of the Other Surface Treatments business. (See the "Strengths and weaknesses" section for details.)

Surface treatment technologies offered by TOCALO

Thermal spraying
A surface treatment technology that involves forming coatings on the workpieces by spraying them with molten metals, ceramics, cermet*, and other materials.
*Cermet: a composite material that is created by combining powder from hard compounds (metal carbide, nitride, etc.) with metal bonding materials, then sintering the mixture

Chemically defined zinc alloy coating (CDC-ZAC)
A chemical densification treatment for forming composite ceramic coatings through chemical reactions. It is characterized by excellent corrosion resistance and high degrees of hardness, which are unique properties of ceramics.

Toyota diffusion (TD) process
A surface treatment method that enables the formation of super-hard coatings. It is essential to the metallic mold industry as a surface treatment technology.

Plasma transferred arc (PTA) process
An overlay-welding method that utilizes plasma and produces excellent impact resistance.

Physical vapor deposition (PVD) process
This process minimizes heat deformation of the workpiece because it allows for a wide selection of temperature ranges, enabling treatments that best suit the substrate (the material to which spraying deposit is applied).
Source: Shared Research based on company data

Key financial data

Income statement	FY03/15	FY03/16	FY03/17	FY03/18	FY03/19	FY03/20	FY03/21	FY03/22	FY03/23	FY03/24	FY03/25
(JPYmn)	Cons.	Cons.	Cons.	Cons.	Cons.	Cons.	Cons.	Cons.	Cons.	Cons.	Est.
Orders	**27,137**	**28,343**	**29,506**	**36,851**	**38,915**	**38,011**	**39,021**	**45,394**	**48,419**	**47,505**	
YoY	17.5%	4.4%	4.1%	24.9%	5.6%	-2.3%	2.7%	16.3%	6.7%	-1.9%	
Order backlog	**3,843**	**3,440**	**3,983**	**6,725**	**6,081**	**6,195**	**6,143**	**7,896**	**8,349**	**9,260**	
YoY	38.5%	-10.5%	15.8%	68.8%	-9.6%	1.9%	-0.8%	28.5%	5.7%	10.9%	
Sales	**26,068**	**28,746**	**28,964**	**34,109**	**39,558**	**37,896**	**39,294**	**43,813**	**48,144**	**46,735**	**54,000**
YoY	15.4%	10.3%	0.8%	17.8%	16.0%	-4.2%	3.7%	11.5%	9.9%	-2.9%	15.5%
Gross profit	**8,964**	**9,727**	**10,536**	**12,646**	**13,761**	**12,780**	**14,814**	**16,585**	**17,365**	**16,243**	
YoY	18.5%	8.5%	8.3%	20.0%	8.8%	-7.1%	15.9%	12.0%	4.7%	-6.5%	
Gross profit margin	34.4%	33.8%	36.4%	37.1%	34.8%	33.7%	37.7%	37.9%	36.1%	34.8%	
Operating profit	**4,568**	**4,806**	**5,646**	**7,110**	**7,741**	**6,550**	**8,890**	**10,255**	**10,558**	**9,197**	**11,500**
YoY	31.2%	5.2%	17.5%	25.9%	8.9%	-15.4%	35.7%	15.4%	3.0%	-12.9%	25.0%
Operating profit margin	17.5%	16.7%	19.5%	20.8%	19.6%	17.3%	22.6%	23.4%	21.9%	19.7%	21.3%
Recurring profit	**4,890**	**5,028**	**5,801**	**7,363**	**8,076**	**6,812**	**8,914**	**10,571**	**11,003**	**9,662**	**11,800**
YoY	33.7%	2.8%	15.4%	26.9%	9.7%	-15.7%	30.9%	18.6%	4.1%	-12.2%	22.1%
Recurring profit margin	18.8%	17.5%	20.0%	21.6%	20.4%	18.0%	22.7%	24.1%	22.9%	20.7%	21.9%
Net income	**3,031**	**3,016**	**4,070**	**4,836**	**5,441**	**4,404**	**5,463**	**6,909**	**7,350**	**6,326**	**7,700**
YoY	39.3%	-0.5%	34.9%	18.8%	12.5%	-19.1%	24.0%	26.5%	6.4%	-13.9%	21.7%
Net margin	11.6%	10.5%	14.1%	14.2%	13.8%	11.6%	13.9%	15.8%	15.3%	13.5%	14.3%
Per-share data											
Issued shares FY-end(000 shares)	63,200	63,200	63,200	63,200	63,200	63,200	63,200	63,200	63,200	61,200	
EPS	49.9	49.6	67.0	79.6	89.5	72.5	89.9	113.6	120.8	105.5	129.5
EPS (fully diluted)	-	-	-	-	-	-	-	-	-	-	-
Dividend per share	15.0	18.8	21.3	26.3	30.0	25.0	35.0	45.0	50.0	53.0	65.0
Payout ratio	30.1%	37.8%	31.7%	33.0%	33.5%	34.5%	38.9%	39.6%	41.4%	50.2%	50.2%
DOE	3.7%	4.2%	4.4%	4.9%	5.1%	3.9%	5.0%	5.9%	5.9%	5.8%	
Book value per share	427.4	456.9	504.1	562.1	617.8	662.3	727.1	807.3	884.8	933.1	
Balance sheet (JPYmn)											
Cash and cash equivalents	8,404	8,197	8,387	9,234	12,660	16,889	16,227	17,110	16,912	16,905	
Total current assets	**21,527**	**20,830**	**23,000**	**25,941**	**27,749**	**31,837**	**33,140**	**36,365**	**38,827**	**40,342**	
Tangible fixed assets	14,055	16,151	20,305	24,589	27,395	26,786	28,594	30,740	33,037	35,125	
Investments and other assets	597	914	911	1,871	1,838	2,160	2,183	2,180	2,163	2,215	
Intangible assets	467	97	115	260	295	338	264	231	235	257	
Total assets	**36,647**	**37,992**	**44,331**	**52,664**	**57,278**	**61,122**	**64,183**	**69,517**	**74,263**	**77,940**	
Accounts payable	3,189	3,036	1,229	1,434	1,271	1,157	1,194	1,397	1,425	1,477	
Short-term debt	943	511	905	879	1,218	2,153	1,802	1,460	1,490	1,989	
Total current liabilities	**8,383**	**7,877**	**8,884**	**14,054**	**13,362**	**11,323**	**12,193**	**13,334**	**14,272**	**14,308**	
Long-term debt	284	117	2,419	1,701	3,337	6,045	4,267	2,825	1,449	3,114	
Total fixed liabilities	**1,112**	**1,045**	**3,195**	**2,470**	**4,250**	**7,163**	**5,097**	**3,723**	**2,347**	**3,706**	
Total liabilities	**9,495**	**8,922**	**12,079**	**16,524**	**17,613**	**18,487**	**17,291**	**17,058**	**16,620**	**18,015**	
Total liabilities and net assets	**36,647**	**37,992**	**44,331**	**52,664**	**57,278**	**61,122**	**64,183**	**69,517**	**74,263**	**77,940**	
Total interest-bearing debt	1,227	628	3,324	2,580	4,555	8,198	6,069	4,285	2,939	5,103	
Cash flow statement(JPYmn)											
Cash flows from operating activities	4,546	4,534	5,238	7,611	8,044	6,621	10,588	9,873	9,894	7,877	
Cash flows from investing activities	-4,889	-895	-6,537	-4,681	-4,617	-4,217	-4,615	-5,044	-5,094	-4,634	
Cash flows from financing activities	-1,475	-1,743	1,581	-2,217	40	1,871	-3,798	-4,547	-4,561	-3,241	
Financial ratios											
ROA (RP-based)	13.9%	13.5%	14.1%	15.2%	14.7%	11.5%	14.2%	15.8%	15.3%	12.7%	
ROE	12.2%	11.2%	13.9%	14.9%	15.2%	11.3%	12.9%	14.8%	14.3%	11.6%	
Equity ratio	71.5%	73.3%	69.1%	64.9%	65.6%	65.9%	68.9%	70.6%	72.5%	71.2%	
Capex, other (JPYmn)											
Capital expenditures	2,678	3,730	5,936	6,361	5,965	2,313	4,822	4,385	4,855	4,875	6,400
Depreciation	1,440	1,560	1,703	1,948	2,658	2,991	2,771	2,783	2,987	3,056	3,200
R&D expenses	746	862	834	905	1,003	1,159	1,296	1,296	1,400	1,534	1,550
R&D ratio	2.9%	3.0%	2.9%	2.7%	2.5%	3.1%	3.3%	3.0%	2.9%	3.3%	2.9%
Employee data (JPYmn)											
No. of employees (ex. temp. workers)	824	857	898	955	1,021	1,060	1,121	1,176	1,300	1,389	
Temporary workers	243	239	245	236	251	263	253	265	164	148	
Total no. of employees (incl. temp. workers)	1,056	1,080	1,123	1,163	1,239	1,304	1,344	1,414	1,402	1,493	
Sales per employee	24.7	26.6	25.8	29.3	31.9	29.1	29.2	31.0	34.3	31.3	
Operating profit per employee	4.3	4.5	5.0	6.1	6.2	5.0	6.6	7.3	7.5	6.2	

Source: Shared Research based on company data

Notes: Per- share data is adjusted for stock splits. Figures may differ from company materials due to differences in rounding methods.

Citing the application of the accounting standard for revenue recognition from FY03/22, the company has not released YoY growth rates, but Shared Research has provided estimates as the size of the impact appears to be limited.

Recent updates

Revisions to full-year earnings and dividend forecasts for FY03/25

2025-02-04

TOCALO Co., Ltd. announced revisions to its full-year earnings and dividend forecasts for FY03/25.

On February 4, 2025, the company announced an upward revision to its consolidated earnings forecast for FY03/25, along with an increase in the annual dividend forecast. The revised forecasts are as follows.

- Sales: JPY54.0bn (+15.5% YoY; previous forecast: JPY53.0bn)
- Operating profit: JPY11.5bn (+25.0% YoY; JPY11.5bn)
- Recurring profit: JPY11.8bn (+22.1% YoY; JPY11.5bn)
    - RPM: 21.9% (+1.2pp YoY; 21.7%)
- Net income attributable to owners of the parent: JPY7.7bn (+21.7% YoY; JPY7.5bn)
- EPS: JPY129.5 (previous forecast: JPY126.2)
- Annual dividend: JPY65.0 per share (JPY63.0 per share)

Reasons for the revisions

The company cited two primary reasons for the upward revision of its consolidated earnings forecast for FY03/25: (1) cumulative Q3 (April–December) results exceeded the company's previous forecast, and (2) an anticipated continued increase in sales in Thermal Spraying, particularly in the semiconductor sector, during Q4 (January–March). The company raised its sales forecast by JPY1.0bn, recurring profit by JPY300mn, and net income attributable to owners of the parent by JPY200mn, while keeping its operating profit forecast unchanged.

The company also raised its annual dividend forecast by JPY2 (increasing the year-end dividend by JPY2) in line with the revised earnings forecast. Its dividend policy targets a consolidated dividend payout ratio of approximately 50% and a dividend on equity (DOE) of 5% or higher. Based on the updated forecast, the company expects the payout ratio to be 50.2% (compared to 50.2% in FY03/24 and 49.9% in the previous forecast).

Trends and outlook

Quarterly trends and results

Cumulative	FY03/24				FY03/25				FY03/25	
Cumulative (JPYmn)	Q1	Q1-Q2	Q1-Q3	Q1-Q4	Q1	Q1-Q2	Q1-Q3	Q1-Q4	% of Est.	FY Est.
Sales	**11,787**	**22,971**	**34,804**	**46,735**	**12,864**	**25,863**	**39,903**		73.9%	**54,000**
YoY	-1.0%	-4.3%	-4.4%	-2.9%	9.1%	12.6%	14.7%			15.5%
Gross profit	4,112	7,940	11,905	16,243	4,676	9,365	14,618			
YoY	-7.5%	-11.1%	-10.5%	-6.5%	13.7%	17.9%	22.8%			
Gross profit margin	34.9%	34.6%	34.2%	34.8%	36.3%	36.2%	36.6%			
SG&A expenses	1,843	3,644	5,500	7,046	1,989	3,981	6,128			
YoY	7.2%	8.8%	8.3%	3.5%	7.9%	9.2%	11.4%			
SG&A ratio	15.6%	15.9%	15.8%	15.1%	15.5%	15.4%	15.4%			
Operating profit	**2,268**	**4,295**	**6,404**	**9,197**	**2,687**	**5,383**	**8,489**		73.8%	**11,500**
YoY	-16.7%	-23.0%	-22.1%	-12.9%	18.5%	25.3%	32.6%			25.0%
Operating profit margin	19.2%	18.7%	18.4%	19.7%	20.9%	20.8%	21.3%			21.3%
Recurring profit	**2,380**	**4,590**	**6,729**	**9,662**	**2,924**	**5,520**	**8,771**		74.3%	**11,800**
YoY	-19.3%	-23.9%	-22.5%	-12.2%	22.9%	20.3%	30.3%			22.1%
Recurring profit margin	20.2%	20.0%	19.3%	20.7%	22.7%	21.3%	22.0%			21.9%
Net income	**1,539**	**2,985**	**4,280**	**6,326**	**1,886**	**3,556**	**5,781**		75.1%	**7,700**
YoY	-19.5%	-23.8%	-24.5%	-13.9%	22.5%	19.1%	35.1%			21.7%
Net margin	13.1%	13.0%	12.3%	13.5%	14.7%	13.7%	14.5%			14.3%
Cumulative	**FY03/24**				**FY03/25**					
Quarterly (JPYmn)	**Q1**	**Q2**	**Q3**	**Q4**	**Q1**	**Q2**	**Q3**	**Q4**		
Sales	11,787	11,184	11,833	11,931	12,864	12,999	14,040			
YoY	-1.0%	-7.5%	-4.8%	1.8%	9.1%	16.2%	18.7%			
Gross profit	4,112	3,828	3,965	4,338	4,676	4,689	5,253			
YoY	-7.5%	-14.7%	-9.3%	6.8%	13.7%	22.5%	32.5%			
Gross profit margin	34.9%	34.2%	33.5%	36.4%	36.3%	36.1%	37.4%			
SG&A expenses	1,843	1,801	1,856	1,546	1,989	1,992	2,147			
YoY	7.2%	10.6%	7.3%	-10.6%	7.9%	10.6%	15.7%			
SG&A ratio	15.6%	16.1%	15.7%	13.0%	15.5%	15.3%	15.3%			
Operating profit	2,268	2,027	2,109	2,793	2,687	2,696	3,106			
YoY	-16.7%	-29.1%	-20.2%	19.7%	18.5%	33.0%	47.3%			
Operating profit margin	19.2%	18.1%	17.8%	23.4%	20.9%	20.7%	22.1%			
Recurring profit	2,380	2,210	2,139	2,933	2,924	2,596	3,251			
YoY	-19.3%	-28.4%	-19.1%	26.2%	22.9%	17.5%	52.0%			
Recurring profit margin	20.2%	19.8%	18.1%	24.6%	22.7%	20.0%	23.2%			
Net income	1,539	1,446	1,295	2,046	1,886	1,670	2,225			
YoY	-19.5%	-28.0%	-26.0%	21.7%	22.5%	15.5%	71.8%			
Net margin	13.1%	12.9%	10.9%	17.1%	14.7%	12.8%	15.8%			

Source: Shared Research based on company data
Note: Figures may differ from company materials due to differences in rounding methods.

By segment	FY03/24				FY03/25				FY03/25	
Cumulative (JPYmn)	Q1	Q1-Q2	Q1-Q3	Q1-Q4	Q1	Q1-Q2	Q1-Q3	Q1-Q4	% of Est.	FY Est.
Sales	**11,787**	**22,971**	**34,804**	**46,735**	**12,864**	**25,863**	**39,903**		73.9%	**54,000**
YoY	-1.0%	-4.3%	-4.4%	-2.9%	9.1%	12.6%	14.7%			15.5%
Thermal Spraying (Parent)	8,797	16,748	25,294	33,859	9,659	19,325	29,536		75.7%	39,020
YoY	-2.4%	-8.0%	-8.4%	-6.4%	9.8%	15.4%	16.8%			15.2%
% of total	74.6%	72.9%	72.7%	72.4%	75.1%	74.7%	74.0%			72.3%
Domestic Subsidiary	623	1,230	1,859	2,457	609	1,191	1,919		71.9%	2,670
YoY	5.4%	2.8%	2.1%	1.8%	-2.2%	-3.2%	3.2%			8.7%
% of total	5.3%	5.4%	5.3%	5.3%	4.7%	4.6%	4.8%			4.9%
Overseas Subsidiaries	1,607	3,422	5,291	7,257	1,861	3,890	6,230		66.8%	9,330
YoY	1.9%	9.0%	9.9%	9.6%	15.8%	13.7%	17.7%			28.6%
% of total	13.6%	14.9%	15.2%	15.5%	14.5%	15.0%	15.6%			17.3%
Other Surface Treatments	745	1,515	2,286	3,019	717	1,381	2,123		75.0%	2,830
YoY	6.9%	10.8%	11.0%	10.0%	-3.8%	-8.8%	-7.1%			-6.3%
% of total	6.3%	6.6%	6.6%	6.5%	5.6%	5.3%	5.3%			5.2%
Royalty income	14	54	72	141	17	73	92		61.3%	150
YoY	-51.7%	-37.2%	-36.3%	-20.3%	21.4%	35.2%	27.8%			6.4%
Segment profit (recurring profit)	**2,380**	**4,590**	**6,729**	**9,662**	**2,924**	**5,520**	**8,771**		74.3%	**11,800**
YoY	-19.3%	-23.9%	-22.5%	-12.2%	22.9%	20.3%	30.3%			22.1%
Recurring profit margin	20.2%	20.0%	19.3%	20.7%	22.7%	21.3%	22.0%			21.9%
Thermal Spraying (Parent)	1,787	3,171	4,693	6,284	2,217	4,324	6,831			
YoY	-21.6%	-28.9%	-29.1%	-24.7%	24.1%	36.4%	45.6%			
Recurring profit margin	20.3%	18.9%	18.6%	18.6%	23.0%	22.4%	23.1%			
Domestic Subsidiary	114	284	420	492	98	157	227			
YoY	34.1%	62.3%	52.2%	39.8%	-14.0%	-44.7%	-46.0%			
Recurring profit margin	18.3%	23.1%	22.6%	20.0%	16.1%	13.2%	11.8%			
Overseas Subsidiaries	376	887	1,378	1,892	547	1,211	1,991			
YoY	-14.0%	0.2%	11.6%	14.5%	45.5%	36.5%	44.5%			
Recurring profit margin	23.4%	25.9%	26.0%	26.1%	29.4%	31.1%	32.0%			
Other Surface Treatments	130	260	410	534	118	190	325			
YoY	6.6%	6.6%	14.2%	14.1%	-9.2%	-26.9%	-20.7%			
Recurring profit margin	17.4%	17.2%	17.9%	17.7%	16.5%	13.8%	15.3%			
Adjustments	-29	-13	-172	457	-57	-363	-603			
By segment	**FY03/24**				**FY03/25**					
Quarterly (JPYmn)	**Q1**	**Q2**	**Q3**	**Q4**	**Q1**	**Q2**	**Q3**	**Q4**		
Sales	11,787	11,184	11,833	11,931	12,864	12,999	14,040			
YoY	-1.0%	-7.5%	-4.8%	1.8%	9.1%	16.2%	18.7%			
Thermal Spraying (Parent)	8,797	7,951	8,546	8,565	9,659	9,666	10,211			
YoY	-2.4%	-13.5%	-9.2%	-0.0%	9.8%	21.6%	19.5%			
% of total	74.6%	71.1%	72.2%	71.8%	75.1%	74.4%	72.7%			
Domestic Subsidiary	623	607	629	598	609	582	728			
YoY	5.4%	0.2%	1.0%	0.7%	-2.2%	-4.1%	15.7%			
% of total	5.3%	5.4%	5.3%	5.0%	4.7%	4.5%	5.2%			

Overseas Subsidiaries	1,607	1,815	1,869	1,966	1,861	2,029	2,340
YoY	1.9%	16.1%	11.6%	8.7%	15.8%	11.8%	25.2%
% of total	13.6%	16.2%	15.8%	16.5%	14.5%	15.6%	16.7%
Other Surface Treatments	745	770	771	733	717	664	742
YoY	6.9%	14.9%	11.3%	7.0%	-3.8%	-13.8%	-3.8%
% of total	6.3%	6.9%	6.5%	6.1%	5.6%	5.1%	5.3%
Royalty income	14	40	18	69	17	56	19
YoY	-51.7%	-29.8%	-33.3%	7.8%	21.4%	40.0%	5.6%
Segment profit (recurring profit)	2,380	2,210	2,139	2,933	2,924	2,596	3,251
YoY	-19.3%	-28.4%	-19.1%	26.2%	22.9%	17.5%	52.0%
Recurring profit margin	20.2%	19.8%	18.1%	24.6%	22.7%	20.0%	23.2%
Thermal Spraying (Parent)	1,787	1,384	1,522	1,591	2,217	2,107	2,507
YoY	-21.6%	-36.7%	-29.5%	-7.4%	24.1%	52.2%	64.7%
Recurring profit margin	20.3%	17.4%	17.8%	18.6%	23.0%	21.8%	24.6%
Domestic Subsidiary	114	170	136	72	98	59	70
YoY	34.1%	88.9%	34.7%	-5.3%	-14.0%	-65.3%	-48.5%
Recurring profit margin	18.3%	28.0%	21.6%	12.0%	16.1%	10.1%	9.6%
Overseas Subsidiaries	376	511	491	514	547	664	780
YoY	-14.0%	14.1%	40.3%	23.0%	45.5%	29.9%	58.9%
Recurring profit margin	23.4%	28.2%	26.3%	26.1%	29.4%	32.7%	33.3%
Other Surface Treatments	130	130	150	124	118	72	135
YoY	6.6%	6.6%	30.4%	13.8%	-9.2%	-44.6%	-10.0%
Recurring profit margin	17.4%	16.9%	19.5%	16.9%	16.5%	10.8%	18.2%
Adjustments	-29	16	-159	629	-57	-306	-240

Source: Shared Research based on company data

Note: Figures may differ from company materials due to differences in rounding methods.

Orders	FY03/24				FY03/25			
Cumulative (JPYmn)	**Q1**	**Q1-Q2**	**Q1-Q3**	**Q1-Q4**	**Q1**	**Q1-Q2**	**Q1-Q3**	**Q1-Q4**
Orders	**12,276**	**24,316**	**36,177**	**47,505**	**13,592**	**27,398**	**41,981**	
YoY	-2.8%	-2.9%	-4.7%	-1.9%	10.7%	12.7%	16.0%	
Thermal Spraying (Parent)	9,057	17,702	26,505	34,866	10,327	20,313	30,750	
YoY	-5.0%	-5.7%	-6.8%	-3.7%	14.0%	14.7%	16.0%	
Domestic Subsidiary	659	1,295	1,933	2,473	601	1,237	2,013	
YoY	12.6%	7.4%	6.1%	3.0%	-8.8%	-4.5%	4.1%	
Overseas Subsidiaries	1,815	3,757	5,445	7,156	1,906	4,412	6,983	
YoY	-2.6%	1.3%	-3.4%	0.6%	5.0%	17.4%	28.2%	
Other Surface Treatments	744	1,560	2,292	3,009	756	1,434	2,233	
YoY	15.5%	15.5%	12.1%	11.2%	1.6%	-8.1%	-2.6%	
Orders	**FY03/24**				**FY03/25**			
Quarterly (JPYmn)	**Q1**	**Q2**	**Q3**	**Q4**	**Q1**	**Q2**	**Q3**	**Q4**
Orders	**12,276**	**12,040**	**11,861**	**11,328**	**13,592**	**13,806**	**14,583**	
YoY	-2.8%	-3.0%	-8.1%	8.2%	10.7%	14.7%	22.9%	
Thermal Spraying (Parent)	9,057	8,645	8,803	8,361	10,327	9,986	10,437	
YoY	-5.0%	-6.5%	-8.9%	7.9%	14.0%	15.5%	18.6%	
Domestic Subsidiary	659	636	638	540	601	636	776	
YoY	12.6%	2.4%	3.6%	-6.9%	-8.8%	0.0%	21.6%	
Overseas Subsidiaries	1,815	1,942	1,688	1,711	1,906	2,506	2,571	
YoY	-2.6%	5.4%	-12.6%	15.8%	5.0%	29.0%	52.3%	
Other Surface Treatments	744	816	732	717	756	678	799	
YoY	15.5%	15.4%	5.5%	8.5%	1.6%	-16.9%	9.2%	

Order backlog	FY03/24				FY03/25			
(JPYmn)	**Q1**	**Q2**	**Q3**	**Q4**	**Q1**	**Q2**	**Q3**	**Q4**
Order backlog	**8,852**	**9,748**	**9,794**	**9,260**	**10,005**	**10,869**	**11,430**	
YoY	2.4%	7.9%	2.7%	10.9%	13.0%	11.5%	16.7%	
Thermal Spraying (Parent)	6,276	6,970	7,227	7,023	7,691	8,010	8,237	
YoY	-3.8%	6.0%	5.8%	16.7%	22.5%	14.9%	14.0%	
Domestic Subsidiary	70	100	107	50	41	96	143	
YoY	75.0%	78.6%	122.9%	47.1%	-41.4%	-4.0%	33.6%	
Overseas Subsidiaries	2,159	2,286	2,106	1,850	1,896	2,373	2,603	
YoY	23.8%	12.9%	-7.8%	-5.2%	-12.2%	3.8%	23.6%	
Other Surface Treatments	346	391	353	336	376	389	446	
YoY	3.9%	5.7%	-4.6%	-2.9%	8.7%	-0.5%	26.3%	

Source: Shared Research based on company data

Note: Figures may differ from company materials due to differences in rounding methods.

Factors affecting RP change	FY03/24				FY03/25			
Cumulative (JPYmn)	**Q1**	**Q1-Q2**	**Q1-Q3**	**Q1-Q4**	**Q1**	**Q1-Q2**	**Q1-Q3**	**Q1-Q4**
Recurring profit	**2,380**	**4,590**	**6,729**	**9,662**	**2,924**	**5,520**	**8,771**	
YoY change	-568	-1,443	-1,949	-1,341	544	930	2,042	
Sales	-109	-661	-1,080	-980	521	1,239	2,352	
Variable cost ratio	-280	-515	-539	-843	249	466	887	
Personnel expenses	-169	-275	-395	335	-149	-398	-808	
Depreciation	14	3	-25	-58	-29	-83	-146	
Forex impact	-108	-158	-103	43	162	-75	9	
Other	85	166	195	162	-211	-219	-251	
Factors affecting RP change	**FY03/24**				**FY03/25**			
Quarterly (JPYmn)	**Q1**	**Q2**	**Q3**	**Q4**	**Q1**	**Q2**	**Q3**	**Q4**
Recurring profit	**2,380**	**2,210**	**2,139**	**2,933**	**2,924**	**2,596**	**3,251**	
YoY change	-568	-875	-506	608	544	386	1,112	
Sales	-109	-552	-419	100	521	718	1,113	
Variable cost ratio	-280	-235	-24	-304	249	217	421	
Personnel expenses	-169	-106	-120	730	-149	-249	-410	
Depreciation	14	-11	-28	-33	-29	-54	-63	
Forex impact	-108	-50	55	146	162	-237	84	
Other	85	81	29	-33	-211	-8	-32	

Source: Shared Research based on company data

Cumulative Q3 FY03/25 results (out February 4, 2025)

Cumulative Q3 FY03/25 (April–December) results summary

Cumulative Q3 FY03/25 (April–December 2024) results are as follows.

- Sales: JPY39.9bn (+14.7% YoY)
- Operating profit: JPY8.5bn (+32.6% YoY)
- Recurring profit: JPY8.8bn (+30.3% YoY)
  - RPM: 22.0% (+2.7pp YoY)
- Net income attributable to owners of the parent: JPY5.8bn (+35.1% YoY)

- Orders: JPY42.0bn (+16.0% YoY)
- Order backlog: JPY11.4bn (+16.7% YoY)

Sales

- Consolidated sales for cumulative Q3 (April–December) rose 14.7% YoY to JPY39.9bn, marking a record high for cumulative Q3. By business segment, the Thermal Spraying (handled by TOCALO, the parent company) segment, which accounts for approximately 74% of consolidated sales, increased 16.8% YoY, driving overall sales growth. This was primarily due to a recovery in orders (+26.8% YoY) and sales (+23.5% YoY) for semiconductors and flat panel displays (FPDs), the segment's core markets. Outside the semiconductor and FPD fields, industrial machinery-related sales remained largely flat (+1.0% YoY), while steel-related sales increased 14.7% YoY, and sales from other applications grew 9.3% YoY, modestly contributing to overall growth. Among other segments, sales from the Overseas Subsidiaries segment (primarily in China and Taiwan) grew 17.7% YoY, sales from the Domestic Subsidiaries segment rose 3.2% YoY, and sales from the Other Surface Treatments segment declined 7.1% YoY.

Recurring profit and RPM

- Consolidated recurring profit for cumulative Q3 (April–December) rose 30.3% YoY to JPY8.8bn, marking a record high for cumulative Q3, in line with sales growth. The previous record was JPY8.7bn in April–December 2022. Due to a shift in the sales mix, with an increase in high-margin semiconductor and FPD-related sales, RPM improved 2.7pp YoY to 22.0%. By business segment, profit from the Thermal Spraying segment rose 45.6% YoY to JPY6.8bn, while profit from the Overseas Subsidiaries segment increased 44.5% YoY to JPY2.0bn. In contrast, profit from the Domestic Subsidiaries segment declined 46.0% YoY to JPY227mn, and profit from the Other Surface Treatments segment fell 20.7% YoY to JPY325mn. The company's segment profit is linked to recurring profit in the income statement. The mainstay Thermal Spraying segment posted a 45.6% YoY profit increase, driven by the recovery in high-margin semiconductor and FPD-related sales. This growth effectively offset the weaker performances in Domestic Subsidiaries and other segments, contributing to overall profitability improvements.

Orders

- In cumulative Q3 (April–December) FY03/25, consolidated orders rose 16.0% YoY to JPY42.0bn, surpassing the JPY37.9bn recorded in April–December 2022 and marking a record high for cumulative Q3. The main driver was a 26.8% YoY recovery in orders for semiconductors and flat panel displays (FPDs) in the Thermal Spraying segment (parent), as key customers completed their inventory adjustments. Although the company had initially projected a recovery in semiconductor and FPD-related orders for FY03/25 in May 2024, the pace of recovery in cumulative Q3 exceeded expectations. The strong rebound in semiconductor and FPD-related orders also contributed to a record-high order volume for the Thermal Spraying segment in cumulative Q3.

- Outside the Thermal Spraying segment, orders in the Overseas Subsidiaries segment rose 28.2% YoY, reflecting a recovery in the semiconductor market. Orders in the Domestic Subsidiary segment, which focuses primarily on the automotive sector, grew 4.1% YoY, while orders in the Other Surface Treatments segment (e.g., agricultural machinery) declined 2.6% YoY. The breakdown of cumulative Q3 (April–December) orders, totaling JPY42.0bn, is as follows. For detailed order information by segment, refer to the section "Results by segment (April–December, nine months)" below.

  - Thermal Spraying segment (parent): JPY30.8bn (+16.0% YoY)
    - Semiconductor/FPD-related: JPY19.4bn (+26.8% YoY)
    - Industrial machinery-related: JPY3.9bn (+0.1% YoY)
    - Steelmaking-related: JPY3.1bn (+7.3% YoY)

- Other businesses: JPY4.5bn (-1.2% YoY)
- Domestic Subsidiary segment: JPY2.0bn (+4.1% YoY)
- Overseas Subsidiaries segment: JPY7.0bn (+28.2% YoY)
- Other Surface Treatments segment: JPY2.2bn (-2.6% YoY)

Order backlog

- As of end-Q3 FY03/25 (end-December 2024), the consolidated order backlog increased 16.7% YoY to JPY11.4bn, marking a quarterly record high. The breakdown of the JPY11.4bn order backlog as of end-Q3 is provided below.

- Thermal Spraying segment (parent): JPY8.2bn (+14.0% YoY)
  - Semiconductor/FPD-related: JPY6.1bn (+28.8% YoY)
  - Industrial machinery-related: JPY472mn (-12.1% YoY)
  - Steelmaking-related: JPY1.1bn (-12.8% YoY)
  - Other businesses: JPY598mn (-17.2% YoY)

- Domestic Subsidiary segment: JPY143mn (+33.6% YoY)
- Overseas Subsidiaries segment: JPY2.6bn (+23.6% YoY)
- Other Surface Treatments segment: JPY446mn (+26.3% YoY)

Order backlog reached a record-high level

- The order backlog for the mainstay Thermal Spraying segment rose 14.0% YoY, driven by a recovery in orders, with the semiconductor/FPD-related backlog increasing significantly by 28.8% YoY. Meanwhile, order backlogs for industrial machinery-related, steelmaking-related, and other businesses declined by 12.1%, 12.8%, and 17.2% YoY, respectively. However, these declines were fully offset by the strong growth in semiconductor/FPD-related orders. As a result, the Thermal Spraying segment's order backlog exceeded JPY8.0bn for the second consecutive quarter, reaching a record high of over JPY8.2bn as of end-Q3. The company recognizes efficiently managing and fulfilling this backlog is one of its immediate operational priorities.

- The Domestic Subsidiary segment's order backlog increased 33.6% YoY, the Overseas Subsidiaries segment's backlog rose 23.6% YoY, and the Other Surface Treatments segment's backlog grew 26.3% YoY. As a result, the consolidated order backlog, including semiconductor/FPD-related orders, increased 16.7% YoY to a record high of JPY11.4bn.

The company expects clearing the accumulated order backlog will drive earnings growth starting from Q4

- When excluding the impact from the Domestic Subsidiary segment, the order backlog expansion is essentially an indicator of future sales growth. The semiconductor/FPD-related order backlog, a core activity within the Thermal Spraying segment, reached near-record levels, at JPY4.7bn at end-Q3 (October—December 2023) and JPY4.6bn at end-Q4 (January—March 2024), despite the softening of the semiconductor market in FY03/24. However, due to temporary stagnation in the semiconductor market, the company had to adjust shipments for some customers. Additionally, the company reported a shift within its semiconductor/FPD-related order backlog: a decline in backlogged mass-produced product orders (which significantly impact business performance), an increase in backlogged development product-related orders (which have a relatively smaller impact on performance), and growth in backlogged orders for products in transition toward mass production (which have slightly later delivery dates). As a result, despite near-record order backlog levels during 2H FY03/24, the number of orders recognized as sales was lower YoY and did not drive a recovery in the company's performance.

- However, according to the company, backlogged orders for mass-produced products, which significantly contribute to its performance, increased as of end-Q3 FY03/25. As a result, the company expects clearing the existing backlog at end-Q3, along with continued strong order volumes from Q4 (January—March) onward, will support strong performance not only in FY03/25 but also beyond FY03/26.

Factors affecting changes (YoY) in recurring profit

- Consolidated recurring profit, which is closely linked to segment profit in each segment, grew by JPY2.0bn YoY, from JPY6.7bn in cumulative Q3 FY03/24 to JPY8.8bn. The following factors contributed to the change.

- 1) Upward impact of JPY2.4bn due to an increase in sales
- 2) Upward impact of JPY887mn due to a decrease in the variable cost ratio
- 3) Downward impact of JPY808mn due to an increase in personnel expenses
- 4) Downward impact of JPY146mn due to an increase in depreciation
- 5) Upward impact of JPY9mn due to foreign exchange effects
- 6) Downward impact of JPY251mn due to other factors

Increasing factors

- In cumulative Q3 (April–December) FY03/25, profit increased by JPY2.4bn, driven by higher gross profit due to higher sales, primarily from a 23.5% YoY increase in semiconductor/FPD-related sales within the Thermal Spraying segment. This growth was supported by a recovery in sales volumes and timely price revisions, which led to higher selling prices. Additionally, a decrease in the variable cost ratio contributed JPY887mn to profit growth. While manufacturing costs, including material and outsourcing expenses, remained high, the strong increase in highly profitable semiconductor/FPD-related sales significantly improved the overall sales mix (product mix), offsetting cost pressures.

An increase in sales, coupled with a decline in the variable cost ratio, contributed to recurring profit growth

- In FY03/24, recurring profit fell 12.2% YoY to JPY9.7bn, marking the first profit decline in four years. This drop was primarily due to two negative factors: a decrease in sales and an increase in the variable cost ratio. However, in 1H FY03/25, these factors reversed—sales increased, and the variable cost ratio decreased. According to the company, this shift was the key driver behind the 30.3% YoY recovery in recurring profit.

- The company expects that these two factors—higher sales and a lower variable cost ratio—which had been negative (lower sales and a higher variable cost ratio) in FY03/24, will continue to act as positive drivers in Q4 (January–March) FY03/25 and beyond. Although the company anticipates continued increases in personnel costs, depreciation, and R&D expenses in Q4 and beyond, it believes that the dual positive impacts of sales growth and a lower variable cost ratio will be sufficient to absorb these negative factors.

Foreign exchange effects

- In cumulative Q3 (April–December) FY03/25, foreign exchange effects contributed JPY9mn to profit growth but were generally a neutral factor overall. The JPY9mn profit increase from forex impacts consisted of a JPY113mn decline in foreign exchange gains recorded under non-operating income (negative factor), offset by a JPY122mn positive impact from exchange rate differences related to the conversion of overseas subsidiary results and other factors.

- The company expects the impact of foreign exchange fluctuations on its consolidated earnings to gradually increase from FY03/26 onward. Historically, forex effects have had minimal influence on the company's performance, and even during periods of yen depreciation, the contribution to profit remained limited. This was primarily due to the low proportion of foreign exchange gains and losses recorded under non-operating income, as well as sluggish performance of overseas subsidiaries. However, as overseas subsidiaries continue to capture demand in the semiconductor market, their earnings are expanding, and the exchange rates used to convert local currency into yen are gradually having a greater impact on the company's consolidated performance. In the medium to long term, the company aims to further grow its overseas subsidiaries and is currently investing in new plant facilities in China and Taiwan. As a result, the company believes that, in the future, fluctuations in exchange rates will have an increasingly significant impact on its consolidated earnings.

Decreasing factors

The rise in personnel expenses and depreciation was largely in line with the initial forecast

- In cumulative Q3 FY03/25 (April–December), personnel expenses increased, resulting in a JPY808mn negative impact on profit. The rise stemmed from wage hikes, an increase in full-time employees, and higher operational activity for semiconductor/FPD-related production, including overtime costs. The company had accounted for wage increases and additional full-time staff in its initial forecast but incurred extra personnel expenses due to greater-than-expected operational activity in semiconductor-related production. However, the company successfully offset nearly all of these increased personnel costs through higher sales. Additionally, the initial forecast anticipated a YoY increase in depreciation costs of JPY144mn for FY03/25, which aligned with the observed rise.

Inventory valuation losses, R&D expenses, and electricity costs

- The "other factors," which had a JPY251mn negative impact on profit, included various elements. The primary contributors were an increase in inventory valuation losses and higher R&D expenses. Additionally, regarding electricity costs, which were part of "other factors" in FY03/24 results, the company continued receiving government subsidies in cumulative Q3 FY03/25. However, due to higher operating rates for semiconductor/FPD-related production, overall electricity consumption increased, depressing profit YoY.

Results by segment (April–December, nine months)

- Below is a breakdown of individual segment performances. The sales shares provided for each segment represent percentages of the company's consolidated cumulative Q3 FY03/25 (April–December) sales of JPY39.9bn. Consolidated sales include royalty income (which is low and has minimal impact on overall sales performance); accordingly, these segment sales shares do not add up to 100% of consolidated sales. Segment profits do not reflect impact from consolidation adjustments. When consolidated adjustments are reflected, total profit generated through all segments directly corresponds to the company's consolidated recurring profit.

Thermal Spraying (handled by TOCALO, the parent company; 74.0% sales share)

- Sales: JPY29.5bn (+16.8% YoY)
- Segment profit: JPY6.8bn (+45.6% YoY)
    - Segment profit margin: 23.1% (+4.5pp YoY)

- Orders: JPY30.8bn (+16.0% YoY)
- Order backlog: JPY8.2bn (+14.0% YoY)

Orders

- In cumulative Q3 (April–December) FY03/25, orders in the Thermal Spraying segment rose 16.0% YoY to JPY30.8bn, surpassing the April–December 2022 total of JPY28.4bn and setting a new record high for cumulative Q3. The primary driver was a 26.8% YoY increase in semiconductor/FPD-related orders to JPY19.4bn, reflecting the completion of inventory adjustments by key customers amid a recovering semiconductor market. Semiconductor/FPD-related orders also reached a record high for cumulative Q3. The company had projected a recovery in semiconductor/FPD-related orders for FY03/25 in its initial forecast announced in May 2024, but cumulative Q3 results have exceeded expectations.

- Other than semiconductor/FPD-related orders, industrial machinery-related orders increased 0.1% YoY and steelmaking-related orders rose 7.3% YoY, while orders for other applications declined 1.2% YoY. The company partially attributes the increase in steelmaking-related orders to weak results in cumulative Q3 FY03/24. Industrial machinery-related orders remained roughly flat YoY, but considering that the prior-year level was a record high for cumulative Q3, the company believes order volume remains strong.

Sales

- The Thermal Spraying segment (parent company), the company's largest segment, accounted for 74.0% of consolidated sales in cumulative Q3 (April–December) FY03/25. Sales in this segment grew 16.8% YoY to JPY29.5bn, setting a new record high for cumulative Q3. The record-breaking consolidated sales in cumulative Q3 (as mentioned earlier) were largely driven by the Thermal Spraying segment, which achieved its highest-ever sales. The breakdown of the JPY29.5bn in Thermal Spraying segment sales is as follows.

- Semiconductors and FPDs: JPY17.9bn (+23.5% YoY)
    - Of which, semiconductors: JPY16.7bn (+24.7% YoY)
    - Of which, FPDs: JPY1.2bn (+8.7% YoY)
- Industrial machinery-related: JPY3.8bn (+1.0% YoY)
- Steelmaking-related: JPY2.9bn (+14.7% YoY)
- Other businesses: JPY4.9bn (+9.3% YoY)

Semiconductor and FPD-related orders and sales hit record-highs for cumulative Q3

- The record-high sales in the Thermal Spraying segment were primarily driven by a recovery in semiconductor/FPD-related sales, fueled by a recovery and expansion in orders from key customers. These sales, which accounted for 60.7% of the segment's total sales in cumulative Q3 FY03/25, increased by 23.5% YoY to JPY17.9bn, marking a new record high for cumulative Q3. Notably, approximately 93% of semiconductor/FPD-related sales were semiconductor-related, reflecting a continued decline in the proportion of FPD-related sales.

- Sales to key customers grew further, driven by continued expansion in sales to foreign semiconductor production equipment manufacturers, which had already increased in FY03/24, and a recovery in sales to the largest domestic semiconductor production equipment manufacturer. The latter, the company's largest customer, had significantly impacted FY03/24 results due to shipment restrictions during inventory adjustments prompted by a semiconductor market slowdown. However, with the completion of these inventory adjustments and an upward revision of the customer's production plans, including adjustments to inventory levels, the company's orders rebounded sharply, contributing to increased sales.

Gradual expansion of production capacity underway

- In cumulative Q3 (April–December) FY03/25, semiconductor/FPD-related sales reached JPY17.9bn, setting a new record high for cumulative Q3. However, in 1H (April–September), sales did not surpass the previous record of JPY12.1bn, achieved in April–September 2022. This was primarily because, although orders had already hit an all-time high in 1H, production could not keep pace, leading to longer lead times for shipments.

    - According to the company, the primary reason sales have not yet caught up with the recovery in orders is a shortage of production capacity, which has not yet reached the level needed to meet the increased demand. This production capacity includes not only manufacturing equipment but also the workers (including temporary staff) involved in the production lines. While automation has progressed in thermal spraying processes for semiconductors and FPDs through the introduction and upgrading of production equipment, there remain significant labor-intensive processes reliant on manual work. The company is also working to increase the workforce while enhancing production equipment for semiconductor and FPD-related thermal spraying. However, a recent labor shortage has delayed efforts to bolster staffing. Moreover, workers on the manufacturing lines require a certain amount of time to reach the necessary skill level for operations, further contributing to delays in strengthening manpower. As a result, despite record-high orders and order backlog in 1H (April–September), sales did not reach an all-time high.

    - Nevertheless, in response to the recovery in semiconductor and FPD-related orders, particularly from major customers, the company began increasing production capacity early in FY03/25. This effort included not only installing new equipment but also expanding the workforce involved in manufacturing lines, with production capacity being gradually scaled up from Q1 (April–June) onward. According to the company, these gradual capacity enhancements began yielding results in Q3 (October–December), allowing production volumes to start catching up with order levels. As a result, the company recorded its highest-ever cumulative Q3 sales.

Trends in non-semiconductor and FPD-related categories

- Excluding semiconductor and FPD-related sales, industrial machinery-related sales (accounting for 12.8% of the Thermal Spraying segment) increased 1.0% YoY to JPY3.8bn. Steelmaking-related sales (10.0%) grew 14.7% YoY to JPY2.9bn, while sales from other businesses (16.6%) rose 9.3% YoY to JPY4.9bn. The increase in industrial machinery-related sales was driven by growth in the bearing sector, a key customer base for the company, allowing sales to remain roughly flat YoY. Steelmaking-related sales of JPY2.9bn also reached a record high for cumulative Q3, supported by growth in non-automotive sectors. Meanwhile, the rise in sales from other businesses was attributed to large-scale project orders in the power plant and energy sectors.

- While the company focuses primarily on growth in semiconductor/FPD-related sales, which significantly contribute to overall performance, it aims to actively acquire orders in non-semiconductor/FPD areas to ensure that these areas also meet its recovery expectations.

Segment profit, segment profit margins

- In the Thermal Spraying segment, segment profit (linked to recurring profit in the consolidated income statement) for cumulative Q3 (April–December) FY03/25 increased 45.6% YoY to JPY6.8bn, driven by a recovery in highly profitable semiconductor/FPD-related sales. This JPY6.8bn segment profit set a new record high for cumulative Q3. Similar to sales, 1H (April–September) segment profit fell short of the previous record set in April–September 2022. However, as

- gradual production capacity expansions took effect, sales recognition accelerated in Q3 (October–December). As a result, segment profit reached a new cumulative Q3 record, backed by sales growth.

  - Additionally, the segment profit margin improved 4.5pp to 23.1%. However, the company acknowledges that profitability has not yet fully recovered, as the margin consistently exceeded 24.0% during the two years before the semiconductor market adjustment (FY03/22–FY03/23), with a record high of 24.5% in cumulative Q3 (April–December) FY03/22. According to the company, the insufficient recovery in profitability is primarily due to higher manufacturing costs and SG&A expenses over the past two to three years, as well as increased capital investment for future growth. Among these factors, the company sees rising personnel expenses—including direct labor costs in manufacturing and indirect personnel expenses under SG&A—as the biggest obstacle to improving profitability.

  - However, the company regards these personnel expense increases as human capital investment. It acknowledges once personnel expenses (per employee) rise, reducing them becomes challenging, particularly during periods of increasing production volumes driven by order recovery, which also makes the manufacturing workforce reductions difficult. Consequently, the company believes boosting sales to absorb rising personnel expenses is critical for enhancing profitability. To achieve higher sales, it recognizes the need to expand production capacity. Furthermore, as utilization rates for semiconductor and FPD-related operations continue to climb, the company is concentrating on improving productivity by leveling operations while also working to enhance profitability.

Domestic Subsidiary (4.8% sales share)

- Sales: JPY1.9bn (+3.2% YoY)
- Segment profit: JPY227mn (-46.0% YoY)
  - Segment profit margin: 11.8% (-10.8pp YoY)

- Orders: JPY2.0bn (+4.1% YoY)
- Order backlog: JPY143mn (+33.6% YoY)

Orders

- Orders in the Domestic Subsidiary segment for cumulative Q3 (April–December) FY03/25 increased 4.1% YoY to JPY2.0bn. While orders declined YoY in 1H (April–September), they recovered in Q3 (October–December), increasing YoY in cumulative Q3.

Sales

- In cumulative Q3 (April–December) FY03/25, sales increased 3.2% YoY to JPY1.9bn. Although automotive-related sales remained weak, overall sales grew due to contributions from a newly consolidated subsidiary.

  - The company's domestic subsidiary (Japan Coating Center Co., Ltd.) primarily uses physical vapor deposition (PVD) technology for surface modification of cutting tools, knives, molds, and other products. Among these, surface modification for cutting tools, the core business, is mainly targeted at the automotive industry. While sales in the Domestic Subsidiary are not directly correlated with domestic automobile production volume, there is a notable level of linkage. Given that cumulative Q3 domestic automobile production was sluggish (down 6.3% YoY for June–November, with December data yet to be released, based on figures from the Japan Automobile Manufacturers Association), the company believes sales from its existing business in the Domestic Subsidiary segment declined YoY.

Newly consolidated subsidiary contributed to overall sales

  - However, the performance of Terada Kosakusho, a manufacturer of machine tools and precision machinery components, which became a subsidiary in August 2024, was added to the results starting in Q3 (October–December). This contributed to overall sales growth for cumulative Q3. In addition to this boost from Terada Kosakusho, steady performance in non-automotive sectors also supported sales, resulting in YoY sales growth for cumulative Q3.

  - In cumulative Q3 (April–December), the primary reason for the decline in domestic automobile production was the certification frauds at Daihatsu Motor, a non-listed subsidiary of Toyota Motor Corporation (TSE Prime: 7203), which led to the suspension of domestic production for affected vehicle models. Furthermore, from late May 2024 onward, similar certification irregularities were uncovered at other automakers, including Toyota, exacerbating the decline in domestic production volumes. Given that sales in the Domestic Subsidiary segment's automotive-related business are

- highly correlated with domestic auto production volumes, the company believes these certification issues had a significant negative impact on segment sales.

Segment profit, segment profit margin

- In cumulative Q3 (April–December), segment profit decreased 46.0% YoY to JPY227mn. As a result, the segment profit margin declined 10.8pp to 11.8%.

  - Cumulative Q3 segment profit nearly halved, primarily due to the decline in domestic automobile production caused by the certification misconduct at automakers. While cumulative Q3 sales increased YoY, the company indicated that excluding the contribution from newly consolidated Terada Kosakusho, sales would have declined slightly YoY. According to the company, sales in the segment's core automotive-related business were particularly weak due to the drop in domestic production, further amplifying the negative impact on profit. Additionally, the consolidation of Terada Kosakusho had little positive impact on profit, as goodwill amortization and other related expenses offset most of its contribution.

  - The company responded to the reduction in orders caused by fraudulent certification testing at automakers (which led to the suspension of production for certain vehicle models) by implementing cost-cutting measures, such as reviewing personnel allocation, improving productivity, and adjusting prices. However, these efforts were insufficient to fully absorb the impact of declining sales. The company had introduced new production equipment at a factory established in FY03/22. While smaller in scale compared to those in the Thermal Spraying segment, the factory has steadily contributed to productivity improvements. Although the impact of reduced orders in cumulative Q3 could not be fully mitigated, the company believes that performance will recover once the certification issues are resolved and orders rebound.

Overseas Subsidiaries (15.6% sales share)

- Sales: JPY6.2bn (+17.7% YoY)
- Segment profit: JPY2.0bn (+44.5% YoY)
  - Segment profit margin: 32.0% (+6.0pp YoY)

- Orders: JPY7.0bn (+28.2% YoY)
- Order backlog: JPY2.6bn (+23.6% YoY)

Orders

- Orders in the Overseas Subsidiaries segment for cumulative Q3 (April–December) increased 28.2% YoY to JPY7.0bn, marking a record high for cumulative Q3. This growth was primarily driven by a recovery in the semiconductor markets in overseas regions, including China and Taiwan, alongside the company's active sales efforts, which led to increased orders, including from new customers. Additionally, foreign exchange effects (conversion gains due to yen depreciation) also contributed to the increase in orders. Due to differences in fiscal year-end, the company's cumulative Q3 results reflect orders received during January–September for overseas subsidiaries.

Sales

- This segment includes two subsidiaries in China, one in Taiwan, and one in the US, but essentially consists of subsidiaries in China and Taiwan, as the US business is not fully operational. As China and Taiwan have a December fiscal year-end, the company's cumulative Q3 (April–December) results include the financial results of these overseas subsidiaries for January–September. In cumulative Q3 (April–December), sales in the Overseas Subsidiaries segment increased by 17.7% YoY to JPY6.2bn, marking a record high for cumulative Q3. This growth was driven by increased orders following the recovery of the global semiconductor market, as the market's adjustment phase came to an end.

- Additionally, foreign exchange effects (a boost from conversion gains due to yen depreciation) contributed to the strong performance, making this segment the highest in sales growth among all segments, surpassing the 16.8% YoY increase in the Thermal Spraying segment. According to the company, even excluding the impact of foreign exchange gains, cumulative Q3 sales still recorded double-digit YoY growth (over 10%).

Segment profit, segment profit margin

- In cumulative Q3 (April–December), segment profit increased 44.5% YoY to JPY2.0bn, marking a record high for cumulative Q3, as was the case for sales. This growth was driven by an improved sales mix, including increased semiconductor/FPD-related re-coating, as well as contributions from foreign exchange effects and growth in non-semiconductor-related sales. As a result, the segment profit margin improved 6.0pp to 32.0%, maintaining profitability 8.9pp higher than that of the Thermal Spraying segment (23.1%).

Other Surface Treatments (5.3% sales share)

- Sales: JPY2.1bn (-7.1% YoY)
- Segment profit: JPY325mn (-20.7% YoY)
    - Segment profit margin: 15.3% (-2.6pp YoY)

- Orders: JPY2.2bn (-2.6% YoY)
- Order backlog: JPY446mn (+26.3% YoY)

Order backlog

- Orders in the Other Surface Treatments segment for cumulative Q3 (April–December) decreased 2.6% YoY to JPY2.2bn. The decline was primarily due to inventory adjustments by customers in the core agricultural equipment parts business. However, as orders recovered in Q3 (October–December), the rate of the cumulative Q3 decline narrowed from the 8.1% drop in 1H (April–September).

Sales, segment profit, segment profit margin

- Sales in the Other Surface Treatments segment for cumulative Q3 (April–December) declined 7.1% YoY to JPY2.1bn. Segment profit also fell 20.7% YoY to JPY325mn, as the company was unable to fully absorb the impact of lower sales. As a result, the segment profit margin declined 2.6pp to 15.3%.

    - The YoY decline in sales was primarily attributed to reduced orders for the Toyota Diffusion (TD) process applied to agricultural equipment parts, which had grown significantly in FY03/24. The TD process is a surface modification method that forms a functional film by immersing the target workpiece in a high-temperature molten salt bath and allowing vanadium and other carbides to diffusely permeate the surface of the base material. This drop in orders was largely driven by customer inventory adjustments. The company applies surface treatments (TD process) to agricultural equipment parts and supplies these to Japanese agricultural equipment makers, who then sell their products to the US and other markets. The company believes that it benefitted from the expansion of the agricultural industry in North America during FY03/24. Despite the decrease in sales and profit in cumulative Q3 FY03/25, the company remains optimistic about future growth in the agricultural equipment parts business.

Q3 (October–December, three months) results

TOCALO reported the following results for Q3 FY03/25 (October–December 2024).

- Sales: JPY14.0bn (+18.7% YoY)
- Operating profit: JPY3.1bn (+47.3% YoY)
- Recurring profit: JPY3.3bn (+52.0% YoY)
    - RPM: 23.2% (+5.1pp YoY)
- Net income attributable to owners of the parent: JPY2.2bn (+71.8% YoY)

- Orders: JPY14.6bn (+22.9% YoY)

Overview

- Consolidated sales for Q3 (October–December) increased 18.7% YoY to JPY14.0bn, marking the fourth consecutive quarter of YoY sales growth. Additionally, sales reached a record high for any quarter, surpassing JPY14.0bn for the first time.

    - By business segment, the Thermal Spraying segment (parent), which accounts for approximately 73% of consolidated sales, saw a 19.5% YoY increase, driving overall consolidated sales growth. This was primarily due to a recovery in

- orders (+34.8% YoY) and sales (+36.7% YoY) in the segment's core semiconductor and FPD-related operations. Among other segments, sales in the Overseas Subsidiaries segment (mainly China and Taiwan) grew 25.2% YoY, while the Domestic Subsidiary segment increased 15.7% YoY. Meanwhile, sales in the Other Surface Treatments segment declined 3.8% YoY.

- Consolidated recurring profit for Q3 (October—December) increased 52.0% YoY to JPY3.3bn, marking the fourth consecutive quarter of YoY profit growth, in line with sales. Additionally, recurring profit reached a record high for any quarter.

    - By business segment, profit in the Thermal Spraying segment increased 64.7% YoY, while profit in the Overseas Subsidiaries segment grew 58.9% YoY. In contrast, profit in the Domestic Subsidiary segment declined 48.5% YoY, and profit in the Other Surface Treatments segment fell 10.0% YoY. The company's segment profit is linked to recurring profit in the income statement. The significant profit growth in the core Thermal Spraying segment, driven by the recovery in high-margin semiconductor and FPD-related sales, was sufficient to offset the weaker performance in segments such as the Domestic Subsidiary segment. Additionally, positive factors such as sales growth and a shift in the sales mix toward higher-margin semiconductor and FPD-related products contributed to the results. As a result, RPM improved by 5.1pp YoY to 23.2%.

Order trend

- In Q3 (October—December), consolidated orders increased 22.9% YoY to JPY14.6bn, marking the fourth consecutive quarter of YoY growth and achieving a record high for any quarter. The primary driver was a 34.8% YoY recovery in orders for semiconductors and FPDs, the core business of the Thermal Spraying segment, which also set a new quarterly record. This recovery followed the completion of inventory adjustments by key customers. As a result, orders in the Thermal Spraying segment rose 18.6% YoY to JPY10.4bn.

- Outside the Thermal Spraying segment, orders in the Overseas Subsidiaries segment increased 52.3% YoY, driven by a recovery in the semiconductor market. Orders in the Domestic Subsidiary segment rose 21.6% YoY, while orders in the Other Surface Treatments segment (e.g., agricultural machinery) grew 9.2% YoY. The breakdown of Q3 (October—December) orders, which totaled JPY14.6bn, is as follows.

    - Thermal Spraying segment (parent): JPY10.4bn (+18.6% YoY)
        - Semiconductor/FPD-related: JPY6.7bn (+34.8% YoY)
        - Industrial machinery-related: JPY1.4bn (-3.6% YoY)
        - Steelmaking-related: JPY1.1bn (+14.4% YoY)
        - Other businesses: JPY1.3bn (-12.9% YoY)
    - Domestic Subsidiary segment: JPY776m (+21.6% YoY)
    - Overseas Subsidiaries segment: JPY2.6bn (+52.3% YoY)
    - Other Surface Treatments segment: JPY799m (+9.2% YoY)

Results by segment (October—December, three months)

- Below is a breakdown of individual segment performances. The sales shares provided for each segment represent percentages of the company's consolidated Q3 (October—December) FY03/25 sales of JPY14.0bn. Consolidated sales include royalty income (which is low and has minimal impact on overall sales performance); accordingly, these segment sales shares do not add up to 100% of consolidated sales. Segment profits do not reflect impact from consolidation adjustments. When consolidated adjustments are reflected, total profit generated through all segments directly corresponds to the company's consolidated recurring profit.

Thermal Spraying (handled by TOCALO, the parent company; 72.7% sales share)

- Sales: JPY10.2bn (+19.5% YoY)
- Segment profit: JPY2.5bn (+64.7% YoY)
    - Segment profit margin: 24.6% (+6.8pp YoY)

- Orders: JPY10.4bn (+18.6% YoY)

Overview

- The Thermal Spraying segment (parent), the company's largest segment, accounted for 72.7% of consolidated sales in Q3 (October–December). Sales in this segment increased 19.5% YoY to JPY10.2bn, marking the third consecutive quarter of YoY growth and achieving a record high for any quarter. This was also the first time quarterly sales in the segment exceeded JPY10.0bn. By business category, sales in the core semiconductor and FPD-related operations expanded 36.7% YoY to JPY6.5bn. Steelmaking-related sales increased 11.4% YoY to JPY910m, while industrial machinery-related sales declined 7.2% YoY to JPY1.4bn. Sales in other businesses fell 5.1% YoY to JPY1.4bn. The breakdown of the JPY10.2bn in Thermal Spraying segment sales is as follows.

  - Semiconductors and FPDs: JPY6.5bn (+36.7% YoY)
    - Of which, semiconductors: JPY6.0bn (+36.6% YoY)
    - Of which, FPDs: JPY501m (+38.4% YoY)
  - Industrial machinery-related: JPY1.4bn (-7.2% YoY)
  - Steelmaking-related: JPY910m (+11.4% YoY)
  - Other businesses: JPY1.4bn (-5.1% YoY)

- Segment profit for Q3 (October–December) increased 64.7% YoY to JPY2.5bn, primarily driven by higher sales and an improved sales mix. This marked the third consecutive quarter of YoY profit growth and set a new record high for any quarter, as did sales. The segment profit margin also improved 6.8pp YoY to 24.6%. While rising personnel costs and expenses related to production capacity expansion dampened profit in Q3, the company believes higher sales and an improved sales mix fully offset these cost increases.

Domestic Subsidiary (5.2% sales share)

- Sales: JPY728mn (+15.7% YoY)
- Segment profit: JPY70mn (-48.5% YoY)
  - Segment profit margin: 9.6% (-12.0pp YoY)

- Orders: JPY776mn (+21.6% YoY)

Overview

- Sales in Q3 (October–December) increased 15.7% YoY to JPY728mn, marking the first YoY sales growth in three quarters. However, this increase was primarily driven by the consolidation of Terada Kosakusho, which became a subsidiary in August 2024 and began contributing to sales in Q3. The company indicated that excluding this impact, sales from existing businesses declined YoY.

- The weak performance of existing businesses was primarily due to a decline in orders resulting from lower domestic automobile production. While the company made some recovery in non-automotive sectors, it was not enough to fully offset the decline in automotive-related orders. The decrease in domestic production (down 7.1% YoY in October–November, with December data yet to be released) was largely due to certification frauds at multiple automakers, which led to suspended production of affected vehicle models. As sales in the Domestic Subsidiary segment's automotive-related business are highly correlated with domestic auto production volumes, the impact of the domestic production decline was significant.

- The impact of the underlying sales decline (excluding the contribution from the newly consolidated subsidiary) could not be fully offset, resulting in a 48.5% YoY decrease in segment profit for the Domestic Subsidiary segment in Q3 (October–December) to JPY70mn. This marked the fourth consecutive quarter of YoY profit decline. The segment profit margin also deteriorated 12.0pp YoY to 9.6%. Q3 segment profit of JPY70mn was the second lowest for a Q3 on record, following the JPY52mn recorded in July–September 2020, which was severely impacted by the COVID-19 pandemic (Note: April–June 2020 profit was also JPY70mn). However, the company expects the Domestic Subsidiary segment to recover once automaker misconduct issues are resolved and domestic automobile production volumes rebound.

Overseas Subsidiaries (16.7% sales share)

- Sales: JPY2.3bn (+25.2% YoY)
- Segment profit: JPY780mn (+58.9% YoY)
  - Segment profit margin: 33.3% (+7.0pp YoY)

- Orders: JPY2.5bn (+29.0% YoY)

Overview

- This segment includes two subsidiaries in China, one in Taiwan, and one in the US, but effectively consists of the three subsidiaries in China and Taiwan, as the US business is not yet fully operational. Additionally, because China and Taiwan have a December fiscal year-end, the company's Q3 (October–December) financial results include the performance of these subsidiaries for July–September. In Q3 (October–December), sales from the Overseas Subsidiaries segment increased 25.2% YoY to JPY2.3bn, driven by the stabilization of the global semiconductor market and the positive impact of foreign exchange rates. This marked the 16th consecutive quarter of YoY sales growth and set a record high for any quarter.

- In Q3 (October–December), segment profit increased 58.9% YoY to JPY780mn, marking the sixth consecutive quarter of YoY profit growth. As with sales, segment profit reached a record high for any quarter. This growth was driven by an improved sales mix, including increased semiconductor/FPD-related re-coating, as well as contributions from foreign exchange effects and growth in non-semiconductor-related sales. As a result, the segment profit margin improved 7.0pp YoY to 33.3%.

Other Surface Treatments (5.3% sales share)

- Sales: JPY742mn (-3.8% YoY)
- Segment profit: JPY135mn (-10.0% YoY)
    - Segment profit margin: 18.2% (-1.3pp YoY)

- Orders: JPY799mn (+9.2% YoY)

Overview

- Sales decreased 3.8% YoY to JPY742mn, marking the third consecutive quarter of YoY decline. Segment profit also fell 10.0% YoY to JPY135mn, as the impact of lower sales could not be fully offset, resulting in the third consecutive quarter of YoY profit decline. Consequently, the segment profit margin deteriorated 1.3pp YoY to 18.2%.

- The three consecutive quarters of YoY sales and profit declines were primarily due to reduced orders for the Toyota Diffusion (TD) process applied to agricultural equipment parts, as customers adjusted their inventories. The TD process is a surface modification method that forms a functional film by immersing the target workpiece in a high-temperature molten salt bath and allowing vanadium and other carbides to diffusely permeate the surface of the base material.

Company forecast for FY03/25

FY03/25 company forecast (out February 4, 2025)

	FY03/23			FY03/24			FY03/25		
(JPYmn)	1H Act.	2H Act.	FY Act.	1H Act.	2H Act.	FY Act.	1H Act.	2H Est.	FY Est.
Sales	**23,996**	**24,148**	**48,144**	**22,971**	**23,764**	**46,735**	**25,863**	**28,137**	**54,000**
YoY	13.7%	6.3%	9.9%	-4.3%	-1.6%	-2.9%	12.6%	18.4%	15.5%
Thermal Spraying (Parent)	18,205	17,979	36,184	16,748	17,111	33,859	19,325	19,695	39,020
Semiconductor and FPD equipment parts	12,100	11,160	23,260	9,737	9,820	19,557	11,395	12,605	24,000
Semiconductor equipment	11,195	10,544	21,739	8,997	9,022	18,019	10,698	11,547	22,245
FPD equipment	905	615	1,520	740	797	1,537	697	1,057	1,754
Industrial machinery	1,739	2,063	3,802	2,224	2,699	4,923	2,370	2,650	5,020
Steelmaking machinery	1,775	1,807	3,582	1,746	1,905	3,651	2,029	1,921	3,950
Other applications	2,588	2,951	5,539	3,039	2,688	5,727	3,530	2,520	6,050
Other Surface Treatments	1,367	1,378	2,745	1,515	1,504	3,019	1,381	1,449	2,830
Domestic Subsidiary	1,197	1,217	2,414	1,230	1,227	2,457	1,191	1,479	2,670
Overseas Subsidiaries	3,140	3,482	6,622	3,422	3,835	7,257	3,890	5,440	9,330
Royalty income	86	91	177	54	87	141	73	77	150
Cost of sales	15,065	15,714	30,778	15,030	15,461	30,491	16,498	-	-
Gross profit	**8,931**	**8,434**	**17,365**	**7,940**	**8,303**	**16,243**	**9,365**	**-**	**-**
YoY	8.7%	0.8%	4.7%	-11.1%	-1.6%	-6.5%	17.9%		
Gross profit margin	37.2%	34.9%	36.1%	34.6%	34.9%	34.8%	36.2%		
SG&A expenses	3,349	3,457	6,807	3,644	3,401	7,046	3,981	-	-
YoY	7.8%	7.3%	7.6%	8.8%	-1.6%	3.5%	9.2%		
SG&A ratio	14.0%	14.3%	14.1%	15.9%	14.3%	15.1%	15.4%		
Operating profit	**5,581**	**4,977**	**10,558**	**4,295**	**4,902**	**9,197**	**5,383**	**6,117**	**11,500**
YoY	9.2%	-3.2%	3.0%	-23.0%	-1.5%	-12.9%	25.3%	24.8%	25.0%
Operating profit margin	23.3%	20.6%	21.9%	18.7%	20.6%	19.7%	20.8%	21.7%	21.3%
Recurring profit	**6,033**	**4,970**	**11,003**	**4,590**	**5,072**	**9,662**	**5,520**	**6,280**	**11,800**
YoY	15.5%	-7.1%	4.1%	-23.9%	2.1%	-12.2%	20.3%	23.8%	22.1%
Recurring profit margin	25.1%	20.6%	22.9%	20.0%	21.3%	20.7%	21.3%	22.3%	21.9%
Net income	**3,919**	**3,431**	**7,350**	**2,985**	**3,341**	**6,326**	**3,556**	**4,144**	**7,700**
YoY	13.7%	-0.9%	6.4%	-23.8%	-2.6%	-13.9%	19.1%	24.0%	21.7%
Net margin	16.3%	14.2%	15.3%	13.0%	14.1%	13.5%	13.7%	14.7%	14.3%

Source: Shared Research based on company data
Notes: Figures may differ from company materials due to differences in rounding methods.
Citing the application of the accounting standard for revenue recognition from FY03/22, the company has not released YoY growth rates, but Shared Research has provided estimates as the size of the impact appears to be limited.

Second upward revision to company forecast (February 4, 2025)

On February 4, 2025, the company announced an upward revision to its consolidated earnings forecast for FY03/25, along with an increase in the annual dividend forecast. This marks the second upward revision for FY03/25, following the announcement on October 31, 2024, at the time of the 1H (April—September) results announcement. The revised forecasts are as follows.

- Sales: JPY54.0bn (+15.5% YoY; previous forecast: JPY53.0bn)
- Operating profit: JPY11.5bn (+25.0% YoY; JPY11.5bn)
- Recurring profit: JPY11.8bn (+22.1% YoY; JPY11.5bn)
    - RPM: 21.9% (+1.2pp YoY; 21.7%)
- Net income attributable to owners of the parent: JPY7.7bn (+21.7% YoY; JPY7.5bn)
- EPS: JPY129.5 (previous forecast: JPY126.2)
- Annual dividend: JPY65.0 per share (JPY63.0 per share)

- The revised EPS forecast is JPY129.5 (previous company forecast: JPY126.2). The company also raised its annual dividend forecast from JPY63.0 per share to JPY65.0 per share. It attributed the JPY2 increase in the year-end dividend forecast to the upward revision of its earnings forecast for FY03/25. The company targets a consolidated payout ratio of approximately 50% and DOE of at least 5%. Based on the revised forecast, the company expects the payout ratio to be 50.2% (FY03/24: 50.2%, previous company forecast: 49.9%).

Overview

- The company raised its consolidated sales forecast by JPY1.0bn, from JPY53.0bn to JPY54.0bn (+15.5% YoY), citing a stronger-than-expected recovery in orders following the stabilization of the semiconductor market. It increased sales projections for semiconductor and FPD-related businesses, the core operations of the Thermal Spraying segment, as well as for the Overseas Subsidiaries segment and the Other Surface Treatments segment. However, it slightly reduced the forecast for the Domestic Subsidiary segment. If the company achieves its revised sales forecast of JPY54.0bn, it will set a new record high for the first time in two years. However, the company had already anticipated surpassing its previous record in its initial forecast, which was set at JPY51.0bn and later raised to JPY53.0bn at the time of the 1H results announcement, so the revised sales forecast of JPY54.0bn does not represent a new development.

- The company raised its consolidated recurring profit forecast for FY03/25 by JPY300mn, from JPY11.5bn to JPY11.8bn (+22.1% YoY), driven by the expanded effects of higher sales, an improved sales mix, and a review of non-operating income and expenses. It also increased its net income forecast by JPY200mn but left its operating profit forecast unchanged at JPY11.5bn. With these adjustments, the company expects all profit metrics, including recurring profit, to reach record highs for the first time in two years, in line with the revised sales forecast. However, the company had already disclosed at the time of its 1H (April—September) results announcement on October 31, 2024, that all profit figures would reach new highs for the first time in two years, so this revision does not represent a new development. The company projects RPM of 21.9% (+1.2pp YoY, previous forecast: 21.7%), though it is unlikely to surpass the record-high of 24.1% achieved in FY03/22 due to higher personnel costs and raw material prices.

Sales

- The company forecasts consolidated sales of JPY54.0bn for FY03/25, a 15.5% YoY increase, raising its previous forecast by JPY1.0bn from JPY53.0bn. Since the prior forecast of JPY53.0bn already anticipated a record high, surpassing the previous record of JPY48.1bn set in FY03/23, this upward revision to JPY54.0bn does not change that outlook.

    - Based on its assumption that the semiconductor market adjustment phase will end, the company anticipates an increase in orders for core semiconductor and FPD-related operations within the Thermal Spraying segment (parent) and projects a corresponding recovery in semiconductor and FPD-related sales. During a previous earnings presentation, the company mentioned that performance generated through semiconductor/FPD-related thermal spraying operations can be projected up to three months in advance based on orders received. Based on supply and demand-related information (production plans, etc.) obtained from major customers, the company feels confident that performance will recover from its previous nadir.

    - With regard to Thermal Spraying segment sales outside semiconductor/FPD operations, the company projects industrial machinery-related sales will grow only 2.0% YoY, primarily due to an unfavorable comparison with FY03/24, when sales increased. However, it forecasts YoY growth of 8.2% in steelmaking-related sales and 5.6% in other sales. Based on these factors, the company expects Thermal Spraying segment sales to grow 15.2% YoY, achieving double-digit growth. Additionally, the company predicts YoY growth of 22.7% in sales generated through semiconductor/FPD-related operations will drive the achievement of record highs for both Thermal Spraying segment sales and consolidated sales.

- The company projects an 8.7% YoY sales increase in the Domestic Subsidiary segment for FY03/25. In the Overseas Subsidiaries segment, it forecasts a 28.6% YoY sales increase, supported by the recovery in the semiconductor market and the positive impact of foreign exchange (yen depreciation boosting yen-based conversion differences). Previously, the company had forecast a 12.9% YoY increase for the Domestic Subsidiary segment and a 20.4% increase for the Overseas Subsidiaries segment. While it lowered the forecast for Domestic Subsidiary sales, it raised the Overseas Subsidiaries sales forecast. Nonetheless, the company still expects both segments to achieve YoY sales growth. For the Other Surface Treatments segment, the company anticipates a 6.3% YoY sales decline, mainly due to lower sales in core agricultural machinery-related operations. However, this represents an upward revision from the previous forecast of an 8.6% decline. For further details, please refer to the "Sales forecasts by segment" and "Breakdown of sales forecasts for the Thermal Spraying segment" sections below.

Recurring profit and RPM

- The company projects consolidated recurring profit to increase 22.1% YoY to JPY11.8bn in FY03/25, primarily driven by higher semiconductor and FPD-related sales. This represents a JPY300mn upward revision from the previous forecast of JPY11.5bn (+19.0% YoY). Based on this revised forecast, the company expects to surpass its previous record-high recurring profit of JPY11.0bn achieved in FY03/23, setting a new record after two fiscal years. It also raised its net income forecast by JPY200mn, while keeping its operating profit forecast unchanged at JPY11.5bn, considering year-end expenses such as retirement benefit costs. With this revision, the company expects all profit metrics, including recurring profit, to reach record highs for the first time in two years, in line with sales. However, the company had already disclosed along with its 1H results on October 31, 2024, that all profit figures would set new records after two years, so this revision does not represent a new development.

- The company also expects RPM, a key management indicator, to improve 1.2pp YoY to 21.9% in FY03/25, reflecting a 0.2pp upward revision from the previous forecast of 21.7%. However, the forecast margin remains 2.2pp below the record-high 24.1% achieved in FY03/22.

- The company attributes its expected RPM for FY03/25 falling short of the record-high 24.1% achieved in FY03/22 to significant increases in manufacturing costs and various other expenses (including personnel costs, transportation costs, and R&D expenses) compared to FY03/22, as well as expanded capital investments aimed at future growth.

- It identifies rising personnel expenses, in particular, as a major factor constraining profitability improvement. These personnel expenses include labor costs within manufacturing expenses and personnel expenses under SG&A, driven by rising wages amid labor shortages. Additionally, the company notes the sharp recovery in semiconductor and FPD-related operations in FY03/25 has hindered profitability improvement, as it has been difficult to fully stabilize production levels.

- The company considers these personnel expenses as human capital investment, viewing them as part of broader investments alongside capital expenditures on production equipment. It identifies the increased investment burden for future growth as a key factor limiting profitability improvement. However, the company aims to enhance profitability by reducing outsourced processing costs through increased in-house production and limiting workforce expansion through productivity improvements.

Cumulative Q3 (April–December) progress rates

- The progress rates for cumulative Q3 (April–December) results against the company's revised full-year forecast for FY03/25 were 73.9% for sales, 73.8% for operating profit, 74.3% for recurring profit, and 75.1% for net income attributable to owners of the parent. Except for net income, these progress rates fall short of the 75% benchmark, but the company expressed no particular concerns, noting that the upward revision of its full-year forecast already accounts for the strong semiconductor/FPD-related order situation in 1H. Additionally, the company highlighted that its order backlog as of end-Q3 (end-December 2024) had reached a record high. If it can expand production capacity beyond current expectations in Q4 (January–March), the company suggested there could be further room for upward revisions to its FY03/25 full-year forecast.

Company forecast for 2H

- The company revised its FY03/25 forecast upward on February 4, 2025, when it announced its cumulative Q3 (April–December) results. However, the revisions were relatively modest, with the operating profit forecast left unchanged and the recurring profit target raised by only JPY300mn. This was because the company had already made a significant upward revision at the time of its 1H (April–September) results announcement. The modest revision also aligns with the decision of its largest client, Tokyo Electron (TSE Prime: 8035), which maintained its previous earnings forecast at the time of its cumulative Q3 results announcement. Tokyo Electron had already raised its FY03/25 sales forecast in stages—from an initial JPY2.2tn to JPY2.3tn at its Q1 results announcement, and then to JPY2.4tn at its 1H results announcement. Similarly, it had revised its operating profit forecast from JPY582.0bn to JPY627.0bn, and later to JPY680.0bn.

- While the company's sales are not exclusively tied to Tokyo Electron—which accounted for 27.0% of sales in FY03/24, down from 33.1% in FY03/23, including sales to Tokyo Electron group companies—it indicated that the proportion of sales to Tokyo Electron is rising again as the client completes its inventory adjustments amid the recovery in the semiconductor market. The company also noted that sales to its second-largest client, Applied Materials (US), which accounted for 11.5% of sales in FY03/24, are growing faster than initially expected. Based on the performance trends of these major clients, the company considers its upwardly revised FY03/25 forecast to be well within reach.

- TOCALO has not disclosed standalone projections for 2H (October 2024–March 2025). Accordingly, the 2H projections provided below are estimates calculated by Shared Research, derived by subtracting the 1H (April–September) results from the company's revised full-year forecast, announced on February 4, 2025.

  - FY03/25 sales forecast: JPY54.0bn (+15.5% YoY)
    - 1H (April–September) result: JPY25.9bn (+12.6% YoY)
    - 2H (October–March) forecast: JPY28.1bn (+18.4% YoY)

  - FY03/25 recurring profit forecast: JPY11.8bn (+22.1% YoY)
    - 1H (April–September) result: JPY5.5bn (+20.3% YoY)
    - 2H (October–March) forecast: JPY6.3bn (+23.8% YoY)

Annual dividend forecast

- TOCALO raised its annual dividend forecast for FY03/25 to JPY65.0 per share (previous forecast: JPY63.0, FY03/24 actual: JPY53.0), reflecting the upward revision of its earnings outlook announced with its cumulative Q3 (April–December) results. The revised dividend forecast aligns with the company's policy of targeting a payout ratio of approximately 50%. In FY03/24, the company updated its dividend policy to strengthen shareholder returns, shifting from its previous approach of returning one-third or more of profits while maintaining stable dividends to a new policy targeting a 50% payout ratio. Following a payout ratio of 50.2% in FY03/24, the company now projects a payout ratio of 50.2% for FY03/25, based on its revised earnings forecast.

Sales forecasts by segment

- The company releases sales projections for its individual reporting segments. Effective from FY03/22, the company has established the **Royalty Income** segment in addition to its previously existing four segments: **Thermal Spraying (parent), Domestic Subsidiaries, Overseas Subsidiaries, and Other Surface Treatments**. However, the company reported that the Royalty Income segment accounted for only 0.3% of net sales in FY03/24.

- The company's sales projections for each segment, based on its revised overall sales forecast of JPY54.0bn, are as follows.

  - Thermal Spraying segment (parent): JPY39.0bn (+15.2% YoY; previous forecast: JPY38.3bn)
  - Domestic Subsidiary segment: JPY2.7bn (+8.7% YoY; previous forecast: JPY2.8bn)
  - Overseas Subsidiaries segment: JPY9.3bn (+28.6% YoY; previous forecast: JPY9.0bn)
  - Other Surface Treatments segment: JPY2.8bn (-6.3% YoY; previous forecast: JPY2.8bn)
  - Royalty Income: JPY150mn (+6.4% YoY; previous forecast: JPY150mn)

Thermal Spraying segment (72.3% sales share)

- The company forecasts sales in its core Thermal Spraying segment (parent) to grow by 15.2% YoY to JPY39.0bn, setting a new record high. However, it had already projected record high sales in its initial forecast. The breakdown of the Thermal Spraying segment's sales forecast of JPY39.0bn is as follows.

  - Semiconductors and FPDs: JPY24.0bn (+22.7% YoY; previous forecast: JPY23.8bn)
    - Of which, semiconductors: JPY22.2bn (+23.5% YoY; previous forecast: JPY22.3bn)
    - Of which, FPDs: JPY1.8bn (+14.1% YoY; previous forecast: JPY1.5bn)

  - Industrial machinery-related: JPY5.0bn (+2.0% YoY; previous forecast: JPY4.6bn)
  - Steelmaking-related: JPY4.0bn (+8.2% YoY; previous forecast: JPY4.0bn)
  - Other businesses: JPY6.1bn (+5.6% YoY; previous forecast: JPY5.9bn)

  - Within the Thermal Spraying segment, the company forecasts sales in its core semiconductor and FPD-related business to rise 22.7% YoY to JPY24.0bn, setting a new record high. This growth is driven by a recovery and increase in orders from major clients following the completion of inventory adjustments. However, compared to the previous forecast of JPY23.8bn, the outlook remains largely unchanged. This is because the company had already made a significant upward revision at the time of its 1H (April–September) results announcement. Additionally, the company is currently implementing a phased expansion of production capacity to accommodate the growing demand for semiconductor-related orders, which was also factored into the revision.

  - Outside semiconductor and FPD-related sales, the company projects industrial machinery-related sales to increase 2.0% YoY to JPY5.0bn (previous forecast: JPY4.6bn), steelmaking-related sales to grow 8.2% YoY to JPY4.0bn (unchanged from the previous forecast), and other sales to rise 5.6% YoY to JPY6.1bn (previous forecast: JPY5.9bn). While the company left its steelmaking-related sales forecast unchanged, it raised projections for industrial machinery-related and other sales, though the increases were limited. Based on these revisions, the company forecasts total Thermal Spraying segment sales (including semiconductor/FPD, industrial machinery, steelmaking, and other sales) to rise 15.2% YoY to JPY39.0bn in FY03/25.

Overseas Subsidiaries segment (17.3% sales share)

- The company forecasts sales in the Overseas Subsidiaries segment, which, like the Thermal Spraying segment, is heavily focused on semiconductor and FPD-related businesses, to grow 28.6% YoY to JPY9.3bn. This represents a JPY330mn

- upward revision from the previous forecast of JPY9.0bn, making it the second-largest increase among the company's business segments, following the Thermal Spraying segment.

  - The upward revision primarily reflects increased sales at two subsidiaries in China, driven by higher utilization rates following the stabilization of the semiconductor market. The company also attributed the revision to growth in non-semiconductor-related sales. However, the company had already incorporated most of the anticipated growth in the Overseas Subsidiaries segment into the previous forecast announced with its 1H results, which is why the Q3 revision was limited to JPY330mn.

  - The assumed exchange rate for the sales forecast remains unchanged from the initial forecast at JPY144/USD, consistent with the previous fiscal year. As a result, the company does not anticipate that currency effects (conversion gains from yen depreciation) will contribute to FY03/25 sales. However, it noted that such effects significantly boosted its cumulative Q3 results. If the revised sales forecast of JPY9.0bn is achieved, it will mark a record high for the fourth consecutive fiscal year.

Domestic Subsidiary segment (4.9% sales share)

- The company forecasts sales in the Domestic Subsidiary segment for FY03/25 to increase 8.7% YoY to JPY2.7bn, representing a JPY105mn downward revision from the previous forecast of JPY2.8bn.

Contribution of a newly consolidated subsidiary

  - In Q3 (October–December) FY03/25, the company consolidated Terada Kosakusho, a manufacturer of machine tools and precision machinery parts, which became a subsidiary in August 2024. As a result, Terada Kosakusho's sales will contribute to 2H (October–March) results. The company did not reflect the subsidiary's results in its initial upward revision of its FY03/25 earnings forecast, announced with its 1H (April–September) results on October 31, 2024. However, it incorporated the impact in the second upward revision announced on February 4, 2025. While the company did not disclose the exact impact, it indicated that the additional sales contribution exceeds half of Terada Kosakusho's JPY469mn sales for FY07/23.

Lowered automotive-related sales forecast

  - However, despite incorporating Terada Kosakusho's sales contribution, the company reduced the Domestic Subsidiary segment's sales forecast by JPY105mn from the previous projection. This downward revision was primarily due to weaker-than-expected performance in existing businesses, particularly the sluggish automotive-related operations, which is expected to weigh on overall results.

  - The performance of the Domestic Subsidiary segment is closely tied to domestic automobile production volumes. During 1H FY03/25 (April–September 2024), a 6.0% YoY decline in domestic production volumes contributed to weak results, with segment sales down 3.2% YoY and segment profit plunging 44.7% YoY. At the time of the 1H results announcement, the company had not yet consolidated Terada Kosakusho. After the inclusion of the subsidiary's performance in cumulative Q3 (April–December) results, sales increased 3.2% YoY, but segment profit still declined 46.0% YoY, indicating continued weak profitability.

  - The company said it lowered its automotive-related sales forecast from the previous projection, reflecting the approximately 6% YoY decline in domestic automobile production in cumulative Q3 (April–December). According to the company, the reduction in automotive-related sales was significant, and the contribution from newly consolidated Terada Kosakusho could not fully offset the decline, leading to a downward revision in the Domestic Subsidiary segment's sales forecast.

Other Surface Treatments segment (5.2% sales share)

- The company forecasts sales in the Other Surface Treatments segment for FY03/25 to decline 6.3% YoY to JPY2.83bn, representing a JPY70mn upward revision from the previous forecast of JPY2.76bn.

  - According to the company, the 7.1% YoY decline in sales during cumulative Q3 FY03/25 (April–December) stems from sluggish performance in treatments for agricultural machinery parts due to customer inventory adjustments. The company expects this weakness to persist, making a recovery within FY03/25 unlikely. As a result, it forecasts this segment to be the only one among its business segments to fall below the previous fiscal year's results.

Factors affecting change in recurring profit (company forecast)

- On February 4, 2025, the company revised its FY03/25 forecast upward, increasing its recurring profit projection by JPY300mn, from JPY11.5bn to JPY11.8bn. The revised JPY11.8bn forecast represents a JPY2.1bn increase compared to the FY03/24 result of JPY9.7bn. However, the company has not disclosed specific factors driving this projected increase.

- The following description details the factors contributing to the JPY837mn increase in recurring profit, from the FY03/24 result of JPY9.7bn to the initial FY03/25 forecast of JPY10.5bn, as outlined in the company's initial projection announced on May 9, 2024. Although the company has since revised its forecast upward to JPY11.8bn, this information is provided for reference. According to the company, factors driving the profit increase remain higher sales and a lower variable cost ratio (sales mix improvement).

Note: The following description was prepared by Shared Research in June 2024 based on the company's initial projections. The company has not disclosed the factors behind the latest upward revision.

- 1) upward impact of JPY2.8bn due to growth in sales
- 2) upward impact of JPY102mn due to a lower variable cost ratio
- 3) downward impact of JPY1.1bn due to an increase in personnel expenses
- 4) downward impact of JPY144mn due to an increase in depreciation
- 5) downward impact of JPY378mn due to forex effects
- 6) downward impact of JPY376mn due to other factors

Sources of positive recurring profit impact

- Tocalo projects consolidated recurring profit will rise JPY837mn, or 8.7%, YoY to JPY10.5bn in FY03/25, driven mainly by YoY sales growth of JPY2.8bn. The company expects the largest driver of sales growth will be recovery and expansion in semiconductor/FPD-related Thermal Spraying segment orders.

- Tocalo also expects a decline in its variable expense ratio will have a positive recurring profit impact of JPY102mn (in terms of YoY change). Several factors influence fluctuations in variable costs, including shifts in process material cost and outsourcing cost rates and changes in sales mix caused by growth or decline in highly profitable semiconductor/FPD-related sales. In FY03/25, the company projects the share of sales generated through highly profitable semiconductor/FPD-related operations will rise, resulting in a marked improvement in its sales mix. The company maintains that similar improvements have typically contributed significant positive recurring profit impact in the past. However, Tocalo anticipates unavoidable growth in material and outsourcing costs will offset a considerable amount of recurring profit impact stemming from sales mix improvement. Consequently, the company expects positive recurring profit impact from variable cost ratio decline will be limited to only JPY102mn (in terms of YoY change).

Sources of negative recurring profit impact

- Tocalo projects that the largest negative recurring profit impact will come from a YoY personnel expense increase of JPY1.1bn. In FY03/24, the company fully amortized actuarial differences that emerged through retirement benefit accounting, and as a result, personnel expenses declined despite wage increases and workforce growth. The company does not anticipate this positive impact in FY03/25 and therefore projects YoY growth in personnel expenses will be more substantial than usual. According to the company, if not for this impact (FY03/24 return of retirement benefit expenses), it would have projected YoY personnel expense growth of only JPY568mn for FY03/25. However, due to the presence of this impact, the company was forced to factor negative recurring profit impact of JPY1.1bn (in terms of YoY change) into its recurring profit forecast for FY03/25.

- The company also expects negative recurring profit effects (in terms of YoY change) from growth in depreciation, unfavorable forex impact, and other factors other than expansion in personnel expenses. Due to its conservative exchange rate assumptions, the company anticipates both a decline in foreign exchange gains (booked as non-operating income) and less favorable recurring revenue impact from conversion differences associated with overseas subsidiaries. However, the company does not believe that these factors will have any particularly significant impact on earnings.

- Tocalo anticipates negative recurring profit impact of JPY376mn (in terms of YoY change) from "other factors;" primarily an increase in R&D expenses and growth in electricity costs. However, the company only expects YoY R&D expense growth of JPY16mn in FY03/25, so it anticipates the most significant negative recurring profit impact (in terms of "other factors") will come from expansion in electricity costs. By nature, thermal spraying operations require

- the use of electricity, but the company indicates that its projections regarding electricity costs are conservative and fully account for the conclusion of government subsidy policies and changing crude oil prices, which can affect the cost of electricity.

- The above summarizes the factors contributing to the initially anticipated JPY838mn increase in recurring profit from JPY9.7bn in FY03/24 to JPY10.5bn in FY03/25, as outlined in the company's initial forecast on May 9, 2024. While the company has not disclosed detailed factors behind the subsequent upward revision of its recurring profit forecast to JPY11.5bn, it highlighted adjustments to three key drivers: (1) increasing the contribution of "growth in sales" compared to the initial forecast, (2) further enhancing the impact of a "lower variable cost ratio," and (3) factoring in a greater "increase in personnel expenses" due to improved operational activity. The company considers these three factors sufficient to explain the changes underlying its revised forecast.

Capital expenditures, depreciation, and R&D expenses

The plans for FY03/25 are as follows, with no changes from the initial forecast.

- Capital expenditures: JPY6.4bn (actual expenditures for FY03/24: JPY4.9bn)
- Depreciation: JPY3.2bn (actual depreciation for FY03/24: JPY3.1bn)
- R&D: JPY1.6bn (actual R&D for FY03/24: JPY1.5bn)

Breakdown of projected FY03/25 capital expenditures

- Capital expenditures for FY03/24 amounted to JPY4.9bn, level with JPY4.9bn in FY03/23. TOCALO incorporated capital expenditures of JPY5.0bn into its initial forecast for FY03/24 (announced in May 2023). Although procurement of some materials and equipment fell short and construction progress incurred impact from delays, FY03/24 capital expenditures were generally commensurate with the company's projections.

- For FY03/25, the company projects capital expenditures of JPY6.4bn (+31.3% YoY). If this projection proves accurate, FY03/25 capital expenditures will reach a record high on par with the JPY6.4bn the company reported for FY03/18. The company predicts this JPY6.4bn will break down as follows.

  - TOCALO (parent): JPY5.0bn
  - Domestic subsidiary: JPY400mn
  - Overseas subsidiaries: JPY1.0bn

  - The parent company (Thermal Spraying segment) plans to construct a new building at its Kobe Plant; undertake efforts to increase companywide production and improve production efficiency; and strengthen its research facilities. For FY03/24, the company adopted a cyclical perspective and set a policy of proactively pursuing capital investment (to improve production efficiency, increase production capacity, etc.) in preparation for subsequent recovery in demand for semiconductors. In FY03/25, Tocalo (the parent company) plans to step up capital investment in response to acceleration in the recovery of semiconductor-related demand.

  - Additionally, the company anticipates growth in production capacity within the Domestic Subsidiary segment and plans to launch new plants in the Overseas Subsidiaries segment. Since FY03/23, the company has been enhancing the production capacity of its overseas subsidiaries, primarily through the construction of a new plant in Taiwan, with total investment in these initiatives reportedly amounting to approximately JPY4.0bn. For FY03/25, the company also plans to undertake proactive capital investments, including further capacity expansion initiatives.

- In addition to the aforementioned capital expenditures (which do not include these initiatives), the company is focused on expanding its human capital investment, including increasing the number of employees and raising wages, which will result in higher personnel expenses. The company views these investments as essential for sustaining future growth and intends to continue actively increasing human capital investment from FY03/26 onward.

Depreciation outlook

- Meanwhile, the depreciation cost forecast of JPY3.2bn in FY03/25 will be the highest ever, narrowly exceeding the JPY3.1bn of FY03/24. This would represent an increase of JPY144mn YoY, causing a drop in profits, but this has already been factored into the company's forecast. Additionally, as capital expenditures are on the rise (see previous section), the company has indicated that depreciation costs will also remain high in FY03/26 and beyond. On the other hand, the projected R&D expenses of JPY1.6bn would represent a R&D expenses-to-sales ratio of 2.9%. This ratio would be

- down from the 3.3% reported for FY03/24 but remain broadly in line with the company's basic policy of maintaining the ratio at around 3.0%.

Initial company forecast and results

Results vs. Initial Est.	FY03/15	FY03/16	FY03/17	FY03/18	FY03/19	FY03/20	FY03/21	FY03/22	FY03/23	FY03/24	FY03/25
(JPYmn)	Cons.	Cons.	Cons.	Cons.	Cons.	Cons.	Cons.	Cons.	Cons.	Cons.	Cons.
Sales (Initial Est.)	23,000	27,500	28,000	30,000	39,000	36,000	36,500	41,000	47,500	47,000	51,000
Sales (Results)	26,068	28,746	28,964	34,109	39,558	37,896	39,294	43,813	48,144	46,735	
Results vs. Initial Est.	**13.3%**	**4.5%**	**3.4%**	**13.7%**	**1.4%**	**5.3%**	**7.7%**	**6.9%**	**1.4%**	**-0.6%**	
Operating profit (Initial Est.)	3,500	4,866	4,440	5,900	7,900	5,200	5,800	9,000	11,000	8,700	10,500
Operating profit (Results)	4,568	4,806	5,646	7,110	7,741	6,550	8,890	10,255	10,558	9,197	
Results vs. Initial Est.	**30.5%**	**-1.2%**	**27.2%**	**20.5%**	**-2.0%**	**26.0%**	**53.3%**	**13.9%**	**-4.0%**	**5.7%**	
Recurring profit (Initial Est.)	3,600	5,000	4,600	6,000	8,200	5,500	6,000	9,000	11,000	8,700	10,500
Recurring profit (Results)	4,890	5,028	5,801	7,363	8,076	6,812	8,914	10,571	11,003	9,662	
Results vs. Initial Est.	**35.8%**	**0.6%**	**26.1%**	**22.7%**	**-1.5%**	**23.9%**	**48.6%**	**17.5%**	**0.0%**	**11.1%**	
Net income (Initial Est.)	2,178	3,222	2,978	4,000	5,400	3,520	3,880	5,800	7,184	5,800	6,880
Net income (Results)	3,031	3,016	4,070	4,836	5,441	4,404	5,463	6,909	7,350	6,326	
Results vs. Initial Est.	**39.2%**	**-6.4%**	**36.7%**	**20.9%**	**0.8%**	**25.1%**	**40.8%**	**19.1%**	**2.3%**	**9.1%**	

Source: Shared Research based on company data
Notes: Figures may differ from company materials due to differences in rounding methods

Medium-term management plan

Medium-term management plan

Medium-term management plan	FY03/21	FY03/22	FY03/23	FY03/24	FY03/25		FY03/26	5-year	
(JPYmn)	Act.	Act.	Act.	Act.	Est.		MTP	CAGR	
Sales	**39,294**	**43,813**	**48,144**	**46,735**	**53,000**		**53,000**	**6.2%**	
YoY	3.7%	11.5%	9.9%	-2.9%	13.4%				
semiconductors	18,176	20,643	23,260	19,557	23,005		26,000	7.4%	
YoY	28.9%	13.6%	12.7%	-15.9%	17.6%				
% of total	46.3%	47.1%	48.3%	41.8%	43.4%		49.1%		
iron/steel industrial machinery	21,118	23,170	24,884	27,178	29,995		27,000	5.0%	
YoY	-11.2%	9.7%	7.4%	9.2%	10.4%				
% of total	53.7%	52.9%	51.7%	58.2%	56.6%		50.9%		
Recurring profit	**8,914**	**10,571**	**11,003**	**9,662**	**11,500**		**12,000**	**6.1%**	
YoY	30.9%	18.6%	4.1%	-12.2%	19.0%				
Recurring profit margin	22.7%	24.1%	22.9%	20.7%	21.7%		22.6%		
Equity ratio	68.9%	70.6%	72.5%	71.2%			70%		
ROE	12.9%	14.8%	14.3%	11.6%	12.0%		15.0%		
DOE	5.0%	5.9%	5.9%				5%		
Capital expenditures	4,822	4,385	4,855	4,875	6,400	,000 - 35,000			5,000 - 7, /Year
Depreciation	2,771	2,783	2,987	3,056	3,200				
R&D expenses	1,296	1,296	1,400	1,534	1,550		1,590		
R&D ratio	3.3%	3.0%	2.9%	3.3%	2.9%	3%maitain about			

Source: Shared Research based on company data.
*Figures may differ from company materials due to differences in rounding methods. Please note that sales generated through thermal spraying for purposes not involving semiconductors (iron and steel, industrial machinery, etc.) in FY03/21 (JPY21.1bn) include JPY20.9bn in sales categorized according to the company's previous reporting segment structure and JPY221mn in sales stemming from the Royalty Income segment. Accordingly, this JPY21.1bn figure differs from the figure of approximately JPY20.9bn indicated by data from the company.

Medium-term management plan progress report (last updated on May 16, 2024)

- On May 16, 2024, the company provided an update on the progress being made on its first medium-term management plan announced the previous year (November 2021). This is presented below. The medium-term management plan (comparison of numerical targets) began with actual results for FY03/21. CAGR indicates the average annual growth rate.

Sales

- **Target for FY03/26: JPY53.0bn**
- Company forecast for FY03/25: JPY53.0bn
- Five-year CAGR forecast set forth in the medium-term management plan: 6.2%
- CAGR forecast for the four-year period ending with FY03/25: 7.8%

- In its May 2024 progress briefing, the company reported that projected sales growth through FY03/25 is outpacing the targets set in its medium-term management plan, with the JPY53.0bn target now expected to be achieved in FY03/25, one year ahead of the plan's final year. However, as the recovery in the semiconductor market still requires further evaluation, the company has opted not to revise its medium-term management plan (upward) as of October 31, 2024.

Semiconductor-related sales

- **Target for FY03/26: JPY26.0bn**
- Company forecast for FY03/25: JPY23.8bn
- Five-year CAGR forecast set forth in the medium-term management plan: 7.4%
- CAGR forecast for the four-year period ending with FY03/25: 7.0%

- In its May 2022 progress briefing, semiconductor-related sales were expanding at a rate of just under twice the target specified in the medium-term management plan. However, the company emphasized its stance that it will be difficult to figure out when to adjust semiconductor-related sales.

- However, given the decline in demand (adjustment phase) in the semiconductor market that became noticeable from 2H FY03/23, the CAGR through FY03/24 is expected to fall short of the initial plan. Still, the company maintained its initial forecast, having judged that the adjustment in the semiconductor market is only temporary.

- Given the emergence of recovery within the semiconductor market, the company indicated it had made no changes to the projections in its medium-term management plan when announcing its May 16, 2024 progress report.

Sales related to steel-making, industrial machinery and other non-semiconductor items

- **Target for FY03/26: JPY27.0bn**
- Company forecast for FY03/25: JPY29.2bn
- Five-year CAGR forecast set forth in the medium-term management plan: 5.0%
- CAGR forecast for the four-year period ending with FY03/25: 8.4%

- The company also states that sales other than semiconductor-related are also progressing over the targets of the medium-term management plan.

Recurring profit

- Target for FY03/26: JPY12.0bn
- Company forecast for FY03/25: JPY11.5bn
- Five-year CAGR forecast set forth in the medium-term management plan: 6.1%
- CAGR forecast for the four years ending with FY03/25: 6.6%

- The company acknowledged that its progress toward achieving the initial recurring profit target for FY03/25 (JPY10.5bn) had been behind schedule. However, after revising the target upward to JPY11.5bn, it indicated that it is no longer behind. Furthermore, based on noticeably rebounding conditions within the semiconductor market, the company anticipates full-fledged recovery in sales generated through semiconductor-related operations. In accordance with this assumption, the company has indicated that it will target recurring profit of JPY12.0bn in FY03/26, the final year of its medium-term management plan. The company is confident that growth in its sales will tend to outpace recovery in the semiconductor market. Accordingly, the company has concluded that its expectation of profit growth generated through sales expansion is sufficiently justifiable.

- At the same time, various costs (for materials, personnel, etc.) have grown markedly since the time at which the company formulated its medium-term management plan, and the company views this cost growth as cause for concern. Due to this cost growth, the company concludes that achieving its target recurring profit margin of 22.6% for FY03/26 (as set forth in its medium-term management plan) will be decidedly challenging; for FY03/25, the company projects a recurring profit margin of 20.6%.

Finances/shareholder returns

- The company has noted that it is making steady progress with respect to each of the goals (maintaining an equity ratio of around 70%, maintaining ROE and its 15% target, a recurring profit margin of 20%, stable dividends with a dividend payout ratio of 33% or more, DOE target of 5%, etc.) set forth in the medium-term management plan.

- In May 2023, the company announced a change to its dividend policy to enhance the return of profits to shareholders. From FY03/24, the company aims for a consolidated dividend payout ratio of about 50% (previously, it had set a target of about one-third).

Capital expenditures, R&D expenses

- The company recognizes that it has transitioned to the following plan as indicated in the medium-term management plan.

- Capital expenditures: A total of JPY25bn to JPY35bn over the five years of the medium-term management plan
- R&D expenses: Maintained at about 3% of consolidated sales

Summary of medium-term management plan (last updated in May 2024)

- On November 9, 2021, the company announced its medium-term management plan. The plan covers the five-year period extending from FY03/22 through FY03/26 (comparisons have been made using FY03/21 results as a point of reference), but the company also views it as a process toward achieving its long-term vision, which is based upon ideal circumstances the company aims to establish by 2030. This medium-term management plan is the first that the company has announced to the public. TOCALO is using the occasion of its 70th anniversary to present its vision for the future to its stakeholders.

- The company has identified 10 issues based on analyses of its surrounding business environment and major changes affecting this environment. Having identified these issues, the company established its vision of becoming a company that "contributes to a prosperous future for people and nature" by 2030 through its surface treatments, which primarily consist of thermal spraying. As a part of this process, the company has set the following performance targets for FY03/26 (five years after the beginning of the plan) using FY03/21 results as a launch pad (basis of comparison). The company will aim to achieve the targets in this plan by expanding existing businesses and by branching into new business areas.

  - Sales: JPY53.0bn (versus JPY39.2bn in FY03/21)
  - JPY26.0bn of this total to be generated through thermal spraying for semiconductors (versus JPY18.2bn in FY03/21)
  - JPY27.0bn of this total to be generated through thermal spraying for non-semiconductor-related purposes, such as iron and steel and industrial machinery (versus JPY21.1bn in FY03/21)
  - Recurring profit: JPY12.0bn (versus JPY8.9bn in FY03/21)

  - Sales generated through thermal spraying for purposes not involving semiconductors (iron and steel, industrial machinery, etc.) in FY03/21 (JPY21.1bn) include JPY20.9bn in sales categorized according to the company's previous reporting segment structure and JPY221mn in sales stemming from the Royalty Income segment. Accordingly, this JPY21.1bn figure differs from the figure of approximately JPY20.9bn indicated by data from the company.

- In addition these earnings target, the company also aims to maintain or exceed current levels associated with financial strength, ROE and other measurements of earning power, and dividend payout ratio.

Awareness of current circumstances (business environment, etc.)

Awareness of issues (10 issues)

- In formulating this medium-term management plan, which is the first that has been announced to the public, the company first examined its surrounding earnings environment. Then, the company identified the following 10 issues with the goals of further expanding the business domain associated with its core thermal spraying technologies and enhancing its four strengths (development of advanced functional coatings, flexible production support, capacity for providing solutions in response to customer needs, and robust financial strength capable of supporting development investment).

- When identifying these 10 issues, the company established a table in which the horizontal X-axis consisted of four customer categories (semiconductors and FPDs, iron and steel, energy and environment, and industrial machinery and others) and one additional category that applies to all of these customer categories (management and operation). Meanwhile, the vertical Y-axis included three categories: market development, development, and manufacturing (production). Then, the issues were mapped out across this table using a cross-functional format that compares the five categories on the X-axis and the three categories on the Y-axis. The 10 issues identified by the company in this way are shown below.

  - (1) Conversion of customers into partners
  - (2) Targeting of markets aimed at diversifying sources of revenue

- (3) Enhancement of service system
- (4) Global expansion
- (5) Establishment of technological superiority
- (6) Enhancement of manufacturing processes
- (7) Further enhancement of quality control systems
- (8) Reduction of environmental impact
- (9) Creation of comfortable working environments
- (10) Enhancement of internal controls

TOCALO's medium-term management plan was formulated and is being executed based on the company's goal of addressing these 10 issues.

Renewed awareness concerning the company's management philosophy and vision and formulation of a corporate mission

- While formulating its medium-term management plan, the company reaffirmed its management philosophy and vision and defined its corporate mission. Then, based on changes in the global earnings environment (which the company refers to as "megatrends"), the company decided upon the future direction of its growth strategy. In order to solidify this growth strategy, the company has decided to further develop its current business model.

Management philosophy and long-term vision

- The company's management philosophy is to "contribute to society as a specialized manufacturer of surface treatment processes centered on thermal processing and establish ourselves as a corporate group with advanced technologies and a highly profitable structure." Shared Research has selected some of its key points and summarized them below.

- When formulating its medium-term management plan, the company established a new long-term vision for 2030: "contribute to a prosperous future for people and nature." In terms of content, this vision is essentially the same as the company's current corporate philosophy. However, by making it clearer and more concise than the latter, the company has reaffirmed its commitment to both the ideals it has always held and the achievement of its future goals.

Mission

- The company has established a mission to facilitate the realization of its renewed management philosophy and vision of contributing to a "prosperous future for people and nature." The mission of TOCALO's corporate group is "to enhance corporate value through continuous growth with an emphasis on ESG." In addition, the company has adopted to the following four initiatives to facilitate the execution of this essential mission.

1. Create high-quality and high value-added products (films) and provide them to our customers
2. Contribute to technologies that help in the preservation of the global environment
3. Make employees and their families proud to work energetically and safely at TOCALO
4. Be trusted by customers, shareholders, business partners, and local communities
   forever

  - By implementing these four initiatives, the company aims to achieve its absolute mission of enhancing "corporate value through continuous growth with an emphasis on ESG."

Advantageous future direction and three keys to growth as observed from the perspective of megatrends

- In formulating its medium-term management plan, the company deeply analyzed changes affecting the global earnings environment ("megatrends"), including the launch of efforts targeting the achievement of carbon neutrality by 2050. Based on these analyses, the company has identified the following three megatrends as keys to future growth and identified the most advantageous direction it should take moving forward.

- Rising seriousness of environmental issues
- Technological shift toward information & communication technology (ICT) and digitalization
- Resource and food shortages and population growth

In response to these three megatrends, the company plans to actively implement growth strategies, develop new products, and cultivate new markets. In addition, the company has identified specific themes for each of these three megatrends.

- With regard to the rising seriousness of environmental issues, the company identified the following three themes: adopting the use of non-fossil fuels, generating renewable energy, and establishing smart grids (dispersed power sources).
- The three themes the company selected for the technological shift toward ICT and digitalization were the arrival of the big data era, high-speed communication, and the spread of electric vehicles (EVs).
- In addition, the company chose the development of smart agriculture, the improvement of medical technology, and the diversification and expansion of recycling technology as its three themes for resource and food shortages and population growth.

Two initiatives of particular focus (growth strategies)

- Finally, the company says that it will focus on "People and the Environment (Nature)" as two core initiatives (growth strategies) on which its corporate group will place particular emphasis. In the area of "people," the company plans to develop applications for the semiconductor and FPD industries, and in the area of "environment (nature)," it plans to develop applications in the fields of energy and materials. However, these two growth strategies will be difficult to implement successfully within a short period of time. Accordingly, the company has stated that it is not attempting to achieve concrete results through these strategies by FY03/26; rather, it has presented them with the intention of indicating its future direction.

- The company also stated that it would work on "further developing its business model." In accordance with this intention, the company has grouped the 10 issues identified above into several thematic categories. "Conversion of customers into partners" and "targeting of markets aimed at diversifying sources of revenue" have been left to stand as separate and independent themes. "Enhancement of service system" and "global expansion" have been grouped under the theme "enhancement of market development." "Establishment of technological superiority" has been placed under its own theme, "strengthen technology development systems." Meanwhile, the company grouped "enhancement of manufacturing processes," "further enhancement of quality control systems," and "reduction of environmental impact" under the theme "advancement of manufacturing." Finally, "creation of comfortable working environments" and "enhancement of internal controls" were included under the theme "sustainable growth toward a 100-year company."

Numerical targets associated with the company's medium-term management plan

- Within its medium-term management plan, the company has set earnings targets for FY03/26, which is a key point in the the course the company will take to achieve its long-term vision for 2030. The launch pad (basis for comparison) will be results generated in FY03/21.

Earnings targets for FY03/26

- Sales: JPY53.0bn (versus JPY39.0bn in FY03/21; growth of 35.8% over five years)
- Recurring profit: JPY12.0bn (versus JPY8.9bn in FY03/21; growth of 34.6% over five years)
- Recurring profit margin: 22.6% (versus 22.8% in FY03/21; decrease of 0.2pp over five years)

Breakdown of JPY53.0bn sales target

- Semiconductor-related sales: JPY26.0bn (versus JPY18.2bn in FY03/21; growth of 43.0% over five years)
- Other sales (related to iron and steel, industrial machinery, etc.): JPY27.0bn (versus JPY21.1bn in FY03/21; growth of 27.9% over five years)

- The basis for comparison the company is using to calculate rates of change in business performance over the five-year duration of its medium-term management plan is results generated in FY03/21 (the launch pad year). However, in FY03/2021, a decrease in retirement benefit expenses stemming from one-time factors boosted recurring profit by the same amount (approximately JPY358mn). Therefore, the company believes that its recurring profit in FY03/21 was effectively about JPY8.6bn, and maintains that this figure should be used as a basis for comparison. Using this JPY8.6bn figure as a comparative launch pad, Shared Research estimates that recurring profit will grow at a rate of 40.4% over the course of the five-year plan. The company projects that its recurring profit margin in FY03/26 will decline by 0.2pp compared to FY03/2021, but as discussed later on in this report, this prediction was made because the company expects

- a temporary increase in its depreciation burden due to ongoing high levels of capital investment. This projected recurring profit margin is still commensurate with the benchmark of 20% set by the company as a profitability target.

- Although the company did not disclose specific figures, it established sales targets for new businesses in fields such as agriculture and medical care in FY03/26. Fundamentally, these new businesses do not constitute a part of the company's current (existing) businesses. The company has also indicated that it will divide its existing businesses into three categories: businesses to be expanded (semiconductor, FPD, and environment and energy-related operations), businesses to be downsized, and businesses to be maintained. The TOCALO did not specifically indicate which businesses it plans to downsize or maintain.

- TOCALO does not, however, view these earnings targets as goals that it is fully committed to achieving, but rather as benchmarks for sustainable growth. The company maintains this viewpoint because results generated through its semiconductor-related operations, which will drive its performance moving forward, are highly dependent on market trends. Currently, the company's semiconductor-related sales are growing in line with expansion in the market for wafer fab equipment used in front-end processes associated with semiconductor manufacturing equipment. However, past trends have proven that performance within the semiconductor market varies greatly between periods of expansion and contraction, and the company has accordingly decided to closely monitor market trends and revise its forecasts on a regular basis.

Capital expenditures and research and development expenses

Capital expenditures

- In order to generate this expansion in earnings, the company will continue to make high levels of capital investment: over the five years ending with FY03/26, the company plans to invest between JPY25.0bn and JPY35.0bn (between JPY5.0bn and JPY7.0bn per year) to maintain and improve its technological superiority. Listed below is a summary of the company's most recent capital expenditures.

  - FY03/16: JPY3.7bn
  - FY03/17: JPY5.9bn
  - FY03/18: JPY6.4bn
  - FY03/19: JPY6.0bn
  - FY03/20: JPY2.3bn
  - FY03/21: JPY4.8bn
  - FY03/22: JPY4.4bn
  - FY03/23: JPY4.9bn
  - FY03/24: JPY4.9bn
  - FY03/25 (projected): JPY6.4bn

In its medium-term management plan, the company projects that capital expenditures will remain at roughly the same peak level at which trended during the period spanning from FY03/17 through FY03/19 for the next five years (including FY3/2022).

These high levels of capital expenditure are mainly related to efforts aimed at increasing semiconductor production, new technological processes, and production efficiency. The company has indicated how total capital expenditure will divided among these categories, but Shared Research assumes that the largest share of this total will be allocated to efforts aimed at increasing semiconductor production for at least the first two to three years of the plan (which include FY03/22).

Research and development expenses

- Additionally, the company has indicated that it will maintain R&D expenses at a rate of about 3% of consolidated sales. Included below is a summary of the company's most recent research and development expenses.

  - FY03/20: JPY1.2bn (3.0% of sales)
  - FY03/21: JPY1.3bn (3.3% of sales)
  - FY03/22: JPY1.3bn (3.0% of sales)
  - FY03/23: JPY1.4bn (2.9% of sales)
  - FY03/24: JPY1.5bn (3.3% of sales)
  - FY03/25 (projected): JPY1.6bn (3.0% of sales)

If we were to calculate projected research and development expenses in FY03/26 (the final year of the five-year medium-term management plan) using this ratio of 3%, they would amount to approximately JPY1.6bn.

Establishment of financial targets and shareholder return goals

In its medium-term management plan, the company has also set financial targets and shareholder return goals.

Maintenance of a strong financial position

- The company aims to maintain an equity ratio of about 70% and continue to conduct effectively debt-free management.
- Most recently, the company reported equity ratios of 65.9% in FY03/20, 68.9% in FY03/21, 70.6% in FY03/22, and 72.5% in FY03/23.

Maintenance of earning power (ROE, recurring profit margin, etc.)

- Target the achievement and maintenance of an ROE of 15%
- Most recently, the company reported ROEs of 11.3% in FY03/20, 12.9% in FY03/21, 14.8% in FY03/22, and 14.3% in FY03/23.

- Target the achievement and maintenance of a recurring profit margin of 20%
- Most recently, the company reported recurring profit margins of 17.9% in FY03/20, 22.8% in FY03/21, 24.1% in FY03/22, and 22.9% in FY03/23, and forecast 18.5% in FY03/24.

- Maintain and improve EPS

Dividend payout ratio

- **Issue stable dividends equivalent to at least one-third of its net income (Note: In May 2023, the company announced a change to its dividend policy to enhance the return of profits to shareholders. It aims for the consolidated payout ratio of about 50% starting in FY03/24.)**
- Most recently, the company generated dividend payout ratios of 34.5% in FY03/20, 38.9% in FY03/21, 39.6% in FY03/22, and 41.4% in FY03/23. It projects a dividend payout ratio of 51.7% in FY03/24.

- Target the achievement and maintenance of **DOE of 5%.**
  Most recently, the company reported DOE of 3.9% in FY03/20, 5.0% in FY03/21, 5.9% in FY03/22, and 5.9% in FY03/23.

Initiatives aimed at reducing environmental impact

At the end of its medium-term management plan, the company outlined two initiatives aimed at reducing its environmental impact: an initiative consisting of measures targeting the elimination of greenhouse gas emissions and another initiative comprising measures designed to prevent water and air pollution.

Measures targeting the elimination of greenhouse gas emissions

- Exploration of thermal spraying methods that do not use fossil fuels
- Reduction of electricity consumption through the improvement of treatment processes
- Application of renewable energy

As a broader target that includes the implementation of these initiatives, the company is aiming to reduce greenhouse gas emissions in FY2030 by 46% compared to levels in FY2013. This rate of reduction is the same as the rate specified in targets issued by the government of Japan. However, the company has designated 2021 and 2022 as a period during which it will prepare for the implementation of these initiatives.

Measures designed to prevent water and air pollution

Situational awareness and improvement efforts to be applied to all processes associated with the company's business activities

As mentioned above, the medium-term management plan that the company announced on November 9, 2021 along with its long-term vision for 2030 is the first that the company has every publicly announced. Accordingly, comparing or contrasting it with a previous plan is impossible. However, Shared Research had previously included the following description of the company's medium-term strategy in this report. For the time being, the section below will remain in the report for purposes of reference and comparison with the company's newly announced medium-term management plan.

Overview: Achieving sustainable growth

TOCALO does not release a medium-term business plan or numerical targets, but defines its strategy for sustainable growth as the development of new products and markets. The company focuses on five target markets: semiconductor and FPD; energy and environment; advanced materials (high-performance iron and steel materials, highly functional film, paper/nonwoven fabrics, etc.); transportation (high-speed railway, aircraft, etc.); and medical care.

TOCALO's action plan toward sustainable growth includes the following three points:

1. Diversification of earnings sources: Product development in target markets and expanded applications in existing markets
2. Deep cultivation of business within the semiconductor and FPD sectors: Increase production capacity in preparation for market expansion and develop next-generation film technologies
3. Global expansion: Strengthen maintenance businesses, localize operations (subsidiaries and affiliates) and license technologies (licensing business)

Building on success

Made progress in the semiconductor and FPD fields—the largest pillar among TOCALO's target markets

TOCALO's first encounter with a semiconductor equipment maker dates back to the winter of 1994. Before dawn on January 17, 1995, the Great Hanshin earthquake caused the company's headquarters to collapse and also damaged the company's factories in Kobe and Akashi. Despite this tragedy, TOCALO achieved fast recovery through its efforts in the semiconductor and FPD fields. The company then pushed forward with its development of thermal spraying technologies for semiconductor equipment, and in 1997, was awarded an order to apply thermal spraying to etching chamber parts. The company calls 1997 the first year of its semiconductor era. In 2000, TOCALO began mass producing new ceramic coatings through thermal spraying and began applying its thermal spraying technology to the mass production of chamber parts in etching equipment for 300mm wafers. These moves spurred steady progress for the company. The feature size of state-of-the-art semiconductors (very large-scale integrated circuits) is becoming miniaturized and the structure of these semiconductors multi-layered; and the trend toward using dry etching processes (use of plasmas or etchant gases to remove portions of substrate layers based on specific patterns defined by photoresist masks) is becoming increasingly more common. Moving forward, TOCALO will further strengthen its production capacity and enhance its development of next-generation coating technology.

Diversified revenue sources by offering a range of coatings from thick to thin

In September 2004, the company acquired all shares of Japan Coating Center Co., Ltd. (JCC) to enter the field of physical vapor disposition (PVD), which enables the formation of a thin coating. The PVD process adds functionality, such as abrasion and corrosion resistance, to the workpieces (cutting tools, metallic molds, etc.) by forming hard, dense, thin, and highly adhesive ceramic coatings on their surfaces. These coatings are generated by ionizing metals, including titanium and chromium, in a vacuum with reactive gases. Through the acquisition of JCC, the company began covering a wide range of coating technologies from thick coating created by thermal spraying and other surface treatments to thin coating made by the PVD process. This setup will give the company more breadth and depth in target market areas.

Business

Business overview

Note: While the key figures in the description have been updated, we plan to revise certain figures at a later date based on market data.

Surface treatment centered on thermal spraying

TOCALO comprises a parent company, five consolidated subsidiaries, one non-consolidated subsidiary, and one affiliated company. It primarily conducts thermal spraying but also provides peripheral services, including the Toyota diffusion (TD) process, zinc-allow coating (ZAC), plasma transferred arc (PTA) process, and physical vapor deposition (PVD) process. These are all surface treatments that improve the performance of the workpiece through the application of coatings that have different properties from the substrate (the material to which spraying deposit is applied).
The company's strength is in R&D aimed at finding possibilities for new coatings. TOCALO is also proficient in solution-based marketing that resolves customers' worksite issues. Rather than just providing simple proposals, the company actively works with customers to develop new applications, as seen in its partnership with Tokyo Electron, and this approach has propelled it to gain top market share in the industry. The company emphasizes three-pronged management involving "manufacturing, marketing, and technological development."

Segments

By segment, Thermal Spraying (Parent) accounted for 75.2% of sales in FY03/23, while Domestic Subsidiary (JCC) accounted for 5.0%, Overseas Subsidiaries 13.8%, Other Surface Treatments 5.7%, and Royalty Income 0.4%. Segment profit margins (recurring profit basis) were 23.1% for Thermal Spraying (Parent), 14.6% for Domestic Subsidiary, 25.0% for Overseas Subsidiaries, and 17.0% for Other Surface Treatments. Overseas sales, which comprised 23.3% of total sales in FY03/23, primarily came from Japanese companies that have expanded abroad. While some overseas competitors sell thermal spraying materials and equipment in addition to providing contracted treatment services, TOCALO specializes in services. The company has licensing agreements with a number of overseas companies including competitors and receives royalty income (JPY177mn in FY03/23).

Breakdown of sales by segment

By segment	FY03/15	FY03/16	FY03/17	FY03/18	FY03/19	FY03/20	FY03/21	FY03/22	FY03/23	FY03/24
(JPYmn)	Act.	Act.	Act.	Act.	Act.	Act.	Act.	Act.	Act.	Act.
Sales	**26,068**	**28,746**	**28,964**	**34,109**	**39,558**	**37,896**	**39,073**	**43,813**	**48,144**	**46,735**
YoY	15.4%	10.3%	0.8%	17.8%	16.0%	-4.2%	3.1%	12.1%	9.9%	-2.9%
Thermal Spraying (Parent)	19,176	21,933	22,309	26,183	30,400	28,221	30,141	33,043	36,184	33,859
YoY	17.5%	14.4%	1.7%	17.4%	16.1%	-7.2%	6.8%	9.6%	9.5%	-6.4%
% of total	73.6%	76.3%	77.0%	76.8%	76.8%	74.5%	77.1%	75.4%	75.2%	72.4%
Domestic Subsidiary (PVD process)	1,949	1,978	2,111	2,312	2,493	2,364	2,018	2,399	2,414	2,457
YoY	6.7%	1.5%	6.8%	9.5%	7.8%	-5.2%	-14.6%	18.9%	0.6%	1.8%
% of total	7.5%	6.9%	7.3%	6.8%	6.3%	6.2%	5.2%	5.5%	5.0%	5.3%
Overseas Subsidiaries	3,185	3,262	2,806	3,642	4,460	4,925	4,800	5,695	6,622	7,257
YoY	19.8%	2.4%	-14.0%	29.8%	22.5%	10.4%	-2.5%	18.6%	16.3%	9.6%
% of total	12.2%	11.3%	9.7%	10.7%	11.3%	13.0%	12.3%	13.0%	13.8%	15.5%
Other Surface Treatments	1,758	1,572	1,736	1,971	2,204	2,384	2,112	2,502	2,745	3,019
YoY	-1.8%	-10.6%	10.4%	13.5%	11.8%	8.2%	-11.4%	18.5%	9.7%	10.0%
% of total	6.7%	5.5%	6.0%	5.8%	5.6%	6.3%	5.4%	5.7%	5.7%	6.5%
Royalty income	-	-	-	-	-	-	-	171	177	141
YoY	-	-	-	-	-	-	-	-	3.5%	-20.3%
% of total	-	-	-	-	-	-	-	0.4%	0.4%	0.3%

Source: Shared Research based on company data

Breakdown of sales by region

By region	FY03/15	FY03/16	FY03/17	FY03/18	FY03/19	FY03/20	FY03/21	FY03/22	FY03/23	FY03/24
(JPYmn)	Act.	Act.	Act.	Act.	Act.	Act.	Act.	Act.	Act.	Act.
Sales	**26,068**	**28,746**	**28,964**	**34,109**	**39,558**	**37,896**	**39,073**	**43,813**	**48,144**	**46,735**
YoY	15.4%	10.3%	0.8%	17.8%	16.0%	-4.2%	3.1%	12.1%	9.9%	-2.9%
Domestic	21,609	23,678	24,407	28,206	32,155	30,543	30,350	34,568	36,942	33,573
YoY	14.7%	9.6%	3.1%	15.6%	14.0%	-5.0%	-0.6%	13.9%	6.9%	-9.1%
% of total	82.9%	82.4%	84.3%	82.7%	81.3%	80.6%	77.7%	78.9%	76.7%	71.8%
Overseas	4,459	5,068	4,557	5,903	7,403	7,352	8,722	9,245	11,202	13,162
YoY	18.5%	13.7%	-10.1%	29.5%	25.4%	-0.7%	18.6%	6.0%	21.2%	17.5%
% of total	17.1%	17.6%	15.7%	17.3%	18.7%	19.4%	22.3%	21.1%	23.3%	28.2%

Source: Shared Research based on company data

Business model

Note: While the key figures in the description have been updated, we plan to revise certain figures at a later date based on market data.

Focus on functional thermal spraying

One of TOCALO's strengths is its ability to handle a wide variety of surface treatments, ranging from thick coating (e.g., thermal spraying, TD process, ZAC, and PTA process) to thin coating (e.g., PVD process). Of the different categories in thermal spraying (metalized contact thermal spraying, maintenance thermal spraying, and functional thermal spraying), the company excels in functional thermal spraying, which is high value-added and has strong growth potential. It has captured more than 40% of the thermal spraying market in Japan (scale of about JPY60.0bn in 2018; source: Yano Research Institute) and holds the top share.

Key phrases that describe TOCALO

- A coating shop: The company's sales come from coating treatment fees. Although it is a manufacturer, it does not make original products. Workpieces inside of the company's factories belong to its customers.
- Niche business in a niche market: TOCALO's coating treatments are mainly applied to goods and manufacturing equipment components. The customers are manufacturers spanning a wide range of sectors from industrial to lifestyle-related, resulting in a customer mix that helps TOCALO navigate through changing economic climates.
- Made-to-order production: The company's coating technology is both important and essential to customer production lines and products. Accordingly, the company develops coatings that are specially adjusted for each customer.
- R&D driven: By responding to advanced technological demand, the company targets further growth that will enable it to meet diverse customer needs.

Characteristics of thermal spraying

Thermal spraying is a surface coating treatment that uses thermal energy to create molten or semi-molten materials, which—through the addition of kinetic energy—are simultaneously atomized into fine droplets that are emitted at high speeds (spraying). These droplets then make contact with and accumulate on the workpieces, creating a coating. Since thermal spraying can accommodate broad ranges of temperatures and speeds generated from thermal and kinetic energy, it allows for the application of various spraying materials as long as they can be turned to a molten or semi-molten state. Furthermore, there are relatively few limitations on substrates (the material to which spraying deposit is applied), allowing for a high degree of freedom when choosing which spraying and substrate materials to use together. Compared to surface treatments such as plating or physical vapor deposition, coating layers created through thermal spraying do not excel in terms of structural control and density. However, the technology allows for broad selection of materials and is characterized by its high speed and capacity to be applied to large surfaces.

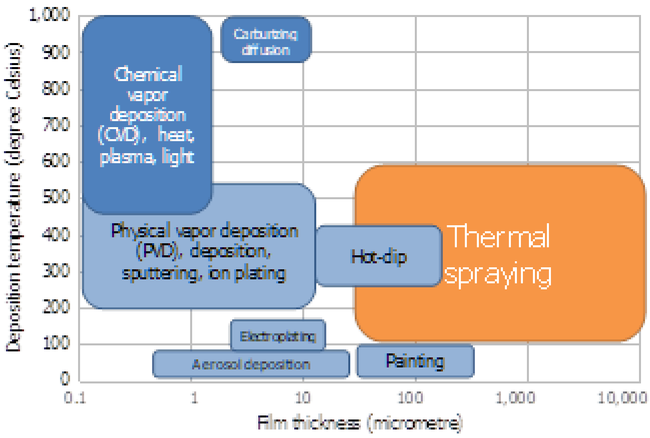
Coating technologies

Method	Coating material	Substrate material	Adhesion	Deposition rate (mm/h)	Principle	Film thickness
Thermal spraying	Metal, alloy, ceramics, plastics, glass	Metal, ceramics, plastics, wood, paper product	Excellent	Flame: 15kg/h Arc: 25kg/h	Thermal spraying; spraying; stacking	Thick
Plating	Metal, alloy	Materials resistant to corrosion by plating liquid	Relatively good	0.01–0.25	Wet plating; reduction of ion; precipitation	Thin, thick
Chemical vapor deposition (CVD)	Heat-resistant metal, sulfide, ceramics, selenium compound	Materials resistant to heat (500–2000 degree Celsius) and chemical corrosion by evaporation materials	Relatively good	0.01–2.00	Chemical reaction of gases; precipitation	Thin
Vacuum deposition	Pure metal, alloy, compound	Surface without gas emission	Good with substrate heating; Excellent when substrate is cleaned with sputtering	0.015–4.500	Vaporization; precipitation	Thin
Ion plating	Pure metal, alloy, carbide, nitride, oxide	Surface without gas emission	Excellent	0.005–1.500	Dry plating; reduction of ion; precipitation	Thin

Source: Shared Research based on data from the Japan Thermal Spray Society

Coating technologies can be divided into thick coating, which includes thermal spraying and plating, and thin coating, which includes chemical vapor deposition (CVD), vacuum deposition, and ion plating. Plating has long been used as a coating technique because it is inexpensive and produces relatively high adhesive properties. However, when compared with thermal spraying, plating takes more time, only allows for metals and alloys to be used as coating materials, and has an extremely large impact on the environment. Thermal spraying, on the other hand, is widely used as a coating technology in industrial circles despite its higher costs compared to plating, because the method coats quickly and is applicable to a wide range of coating materials, including metals, ceramics, plastics, and glass.

Coating thickness and film formation temperatures by type of surface treatment



Source: Shared Research based on company data

Comparison between electroplating and thermal spraying

Category	Method	
	Electroplating (hard chrome plating)	Thermal spraying (WC/12Co cermet)
Process	Wet	Dry
Coating characteristics	Difficult with complex shape	Difficult with complex shape
Deposition rate	Low	High
Coating material selection	Extremely limited	Very wide
Film adhesion	High	High
Film hardness	Hv800–900	Hv1100 or higher
Hydrogen embrittlement	Highly susceptible	None
Environmental impact	Very large	Small

Source: Shared Research based on data from the Japan Thermal Spray Society

Thermal spraying applications

Purpose	Sprayed material	Application
Corrosion resistance	Zinc, aluminum, aluminum-zinc alloy, plastics, stainless steel	Chemical plants, steel structures, marine structures
Abrasion resistance	Cemented carbide (WC/Co), self-fluxing alloy, Co-Cr-Al alloy, Al2O3-TiO2, stainless steel)	Hot-rolling hearth roll, press mold, hot-extrusion dies, pump shaft sleeves and seals, water wheel paddles, printer dampening rollers, various mechanical parts
Gap adjustment	Si-Al-polyester, Ni-C	Jet engine compressor sliding units, housing for turbo charger compressor
Heat resistance	Zirconia (ZrO2-Y2O3, ZrO2-CaO, ZrO2-MgO), M-Cr-Al-Y alloy, Ni-Cr alloy	Gas turbine blades, jet engine combustion chamber wall, rocket engine nozzles
Insulation property	Al2O3	Electric parts
Conductive property	Cu, Al, Ni-Cr alloy	Electric heaters
Decoration	Brass, various types of ceramics	Furniture, manhole covers
Biocompatibility	Pure titan, hydroxyapatite	Artificial bones, artificial hip prostheses, artificial tooth roots
Other	Zirconia	Oxygen sensors, electrolytes for solid oxide fuel cell

Source: Shared Research based on data from the Japan Thermal Spray Society

Thermal spraying equipment is categorized by the heat source it uses, which includes combustion gas, electricity, and laser. Based on the types of spraying material and gas pressure levels applied, equipment using combustion gas can be further broken down into wire, rod, or powder flame spraying equipment, high velocity flame spraying equipment (for high velocity oxy fuel [HVOF] and high velocity air fuel [HVAF] processes), and detonation spraying equipment (for D-gun treatment). Equipment using electricity as the heat source includes arc spraying equipment (for wire spraying that utilizes arc discharge) and plasma spraying equipment (for atmospheric plasma spraying, low-pressure plasma spraying, high-pressure plasma spraying, and underwater plasma spraying among others). Compared to atmospheric plasma spraying, low-pressure plasma spraying allows for faster spraying of molten particles, and can form a coating with higher density and bonding strength. It is widely used as an indispensable thermal spraying method in advanced fields such as high-performance coating for components of semiconductor and FPD manufacturing equipment.

Heat source	Spraying method		Material
Combustion gas	Flame spraying	Wire flame	Metal wire, ceramic-filled plastic tube
		Rod flame	Ceramic rod
		Powder flame	Metal, ceramics, plastic
	High velocity flame spraying	High velocity oxy fuel (HVOF)	Metal, cermet
		High velocity air fuel (HVAF)	Metal, cermet
	Detonation spraying	Detonation gun process	Metal, ceramics
Electric	Arc spraying		Metal wire, ceramic-filled metal tube
	Plasma spraying (direct current [D.C.])	Atmospheric	Oxide ceramics
		Low-pressure	Metal, cermet
		High-pressure	Ceramics, intermetallic compound
		Underwater	
		Water-stabilized	Oxide ceramics
	Radio frequency induction plasma spraying		Ceramics, metal
	Electromagnetic acceleration plasma spraying		Ceramic rod, metal rod
	Wire explosion spraying		Metal wire
	Electrothermally exploded power spray		Conductive ceramic powder, metal powder
Laser beam	Laser spraying		Metal wire, ceramics
Other	Laser plasma hybrid spraying		Ceramics, metal
	Cold spray		Metal, cermet, some ceramics

Source: Shared Research based on material from Japan Thermal Spray Society

Wire flame spraying method: Main characteristics are as follows (the same characteristics also apply to arc spraying):
1) The workpiece can be held at a low temperature during spraying, preventing undesirable thermal impact such as dimensional changes, deformation, cracking, or deterioration of strength.
2) Allows for a wide selection of coating thickness (normally 0.1–5.0 mm)
3) Produces a coating with excellent abrasion resistance because the particles that form the coating via this method achieve hardness beyond that of their raw material state. Hard materials, such as metallic oxide, nitride, and carbide are also interpositioned and dispersed within the coating for added strength.

Arc spraying method: Advantages over flame spraying that uses combustion gas are as below:
1) Thermal spraying capacity is more than twice as high and is more efficient when applied to articles with large surface areas
2) Has a higher degree of sectional adhesion, leading to stronger overall adhesiveness
3) Offers higher compressive strength, enabling use under heavy loads

Plasma spraying method: "Plasma" refers to ionized gases that form when gases are heated and their molecules separate into atoms and further break down into electrons and positive ions (electrolytic dissociation). Plasma spraying is a thermal spraying treatment that utilizes a high-temperature and high-speed gas jet, or "plasma jet," that gathers these gases and uses them to melt and spray out metals, alloys, and refractory materials including various types of ceramics, or cermet, which is a combination between ceramics and metals or alloys. Plasma spraying methods include atmospheric plasma spraying (APS), which is conducted in normal atmospheric air, and vacuum plasma spraying (VPS), which is conducted within a chamber with atmosphere and pressure controls.

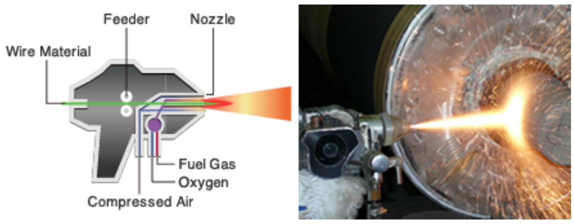
Wire flame spraying: A thermal spraying treatment in which metal or alloy wire is melted by an oxy acetylene (propane) flame, atomized to form a fine spray, and propelled to the substrate to form a coating. Both wire flame spraying and arc spraying are categorized as wire treatments. A wide range of wires can be used, including materials with low melting points such as aluminum, zinc, and babbit metals, as well as metals and alloys such as copper, bronze, monel, carbon steel, stainless steel, and molybdenum.

Rod flame spraying: A thermal spraying treatment in which ceramic rods molten by a combustion gas flame (primarily oxy acetylene) is atomized into particles and sprayed onto the substrate. Only particles that have been completely melted are propelled to the substrate using compressed air, forming a ceramic coating that is high density and highly adhesive.

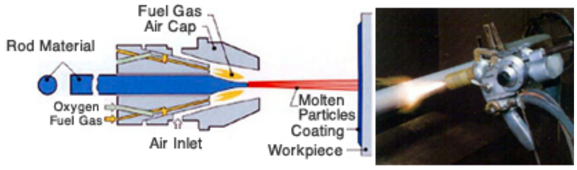
Powder flame spraying: A thermal spraying treatment in which self-fluxing alloys* in powder form are molten by an oxy acetylene (propane) flame. Particles of the molten material are then sprayed onto the substrate. The method also involves a fusing treatment performed after spraying (heating the applied coating to its melting point), which strengthens the bond between the coating and the substrate, forming a nearly nonporous coating that offers high degrees of adhesion and excellent corrosion resistance. In the fusing and solidifying process, the coating deposits a solid layer of boride and carbide, also adding high abrasion resistance to the coating. The treatment is also characterized by excellent resistance to corrosion from most chemical solutions, erosion resistance, cavitation erosion resistance, and hot hardness.
*Self-fluxing alloy: any alloy used in thermal spraying which does not require the addition of a flux in order to wet the substrate and coalesce when heated.

High velocity flame spraying: In high velocity oxy fuel (HVOF) spraying, a type of high velocity thermal spraying, the pressure inside the spray gun combustion chamber is raised to generate a high velocity flame that is comparable to a flame produced through explosive, detonative combustion. Spraying material in powder form, fed into the center of the jet stream generated by this flame, achieves a molten or semi-molten state; the resulting particles are then continuously sprayed onto the substrate at a high velocity. This method allows for the creation of an extremely dense and adhesive coating because it forces the sprayed particles to collide with the substrate at supersonic speeds. The true value of HVOF spraying lies in its capacity to form a carbide cermet coating that is particularly resistant to abrasion. This method produces coatings of more uniform quality than detonation spraying because it forms coatings continuously.
Source: Shared Research based on company data

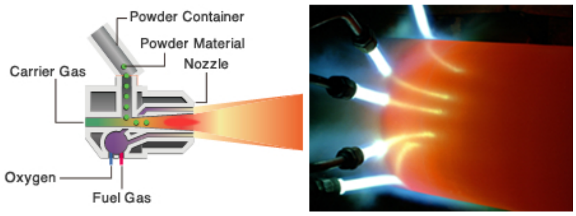
Wire flame spraying (combustion gas)



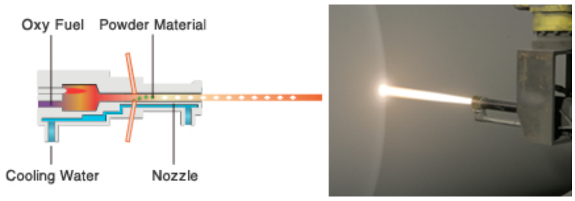
Rod flame spraying (combustion gas)



Powder flame spraying (combustion gas)



High velocity flame spraying (combustion gas)



Source: Company data

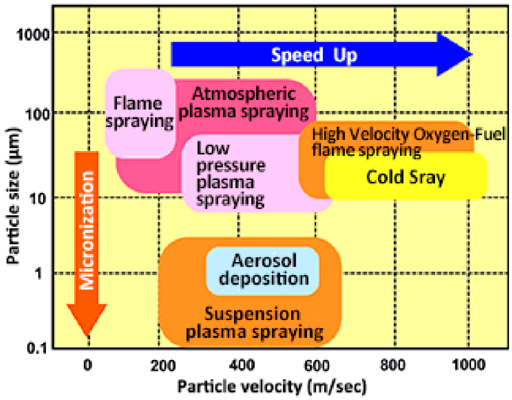
Arc spraying: This is a method that involves feeding two conductive wires (one positive and one negative) through to the gun head of a thermal spraying gun. The two wires meet at the tip of the gun (the nozzle), arc against each other, and create a molten material, which is then atomized into fine spray and propelled to the substrate using compressed air. Along with the wire flame spraying method, it is generally known as a wire treatment. All metals and alloys that can be processed into wires are compatible with electric arc spraying.

Plasma spraying: "Plasma" refers to ionized gases that form when gases are heated, and their molecules separate into atoms and then break down further into electrons and positive ions (electrolytic dissociation). A "plasma jet" is a high-speed gas jet formed by a convergence of plasma-state gases. "Plasma spraying" is a thermal spraying method that involves using a plasma jet with extremely high energy density and a temperature of over 10,000° Celsius to melt pulverized metals and alloys, ceramics that are refractory materials, or cermets (a combination between ceramics and metals or alloys). After being melted, these materials are sprayed onto the substrate. This method allows a high degree of freedom when selecting spraying materials and is characterized by the sprayed coating that is highly adhesive to the substrate.

Atmospheric plasma spraying (APS): a type of plasma spraying conducted under normal atmospheric pressure. APS coatings are a product of optimal material selection (i.e., studying the usage environment of the substrate and choosing the right material from a range of ceramics with varying characteristics), appropriate coating design, and stringent execution management, and are actively used in a variety of capacities. APS can also be simply referred to as "plasma spraying."

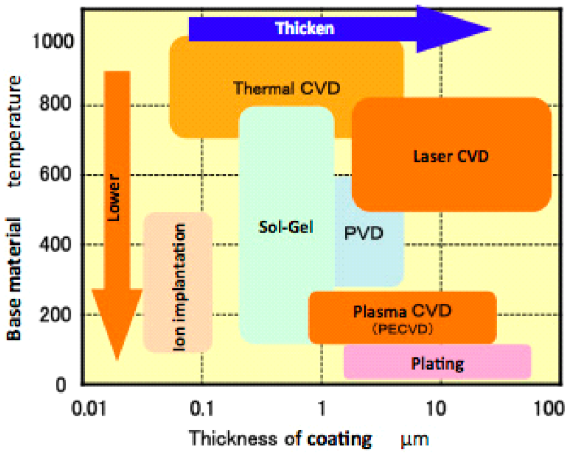
Low-pressure plasma spraying: A plasma spraying treatment that is conducted in an atmosphere- and pressure-controlled chamber. Prior to the spraying, the chamber is first evacuated, then filled with inert gas at a low pressure. The procedure is also referred to as vacuum plasma spraying (VPS). This thermal spraying method has three main characteristics: it does not damage material properties, and thus produces a coating with functionalities that are exactly as designed; active metals such as titanium can be used as coating material; and the molten particles that fly at a higher velocity than APS allow for a very dense coating with high bonding strength. This method is regarded as essential for the formation of high-performance coatings applied in advanced fields.
Source: Shared Research based on company data

Types of thermal spraying technology

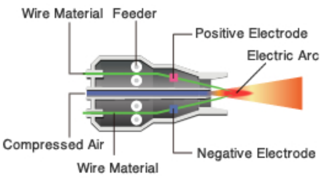


Source: Company data

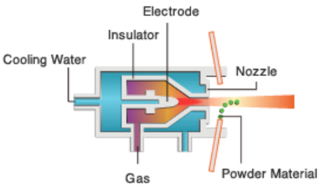
Types of coating technology

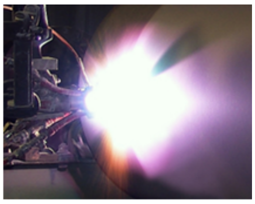


Arc spraying (electricity)

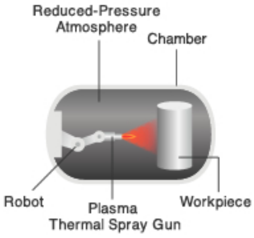


Atmospheric plasma spraying (electricity)



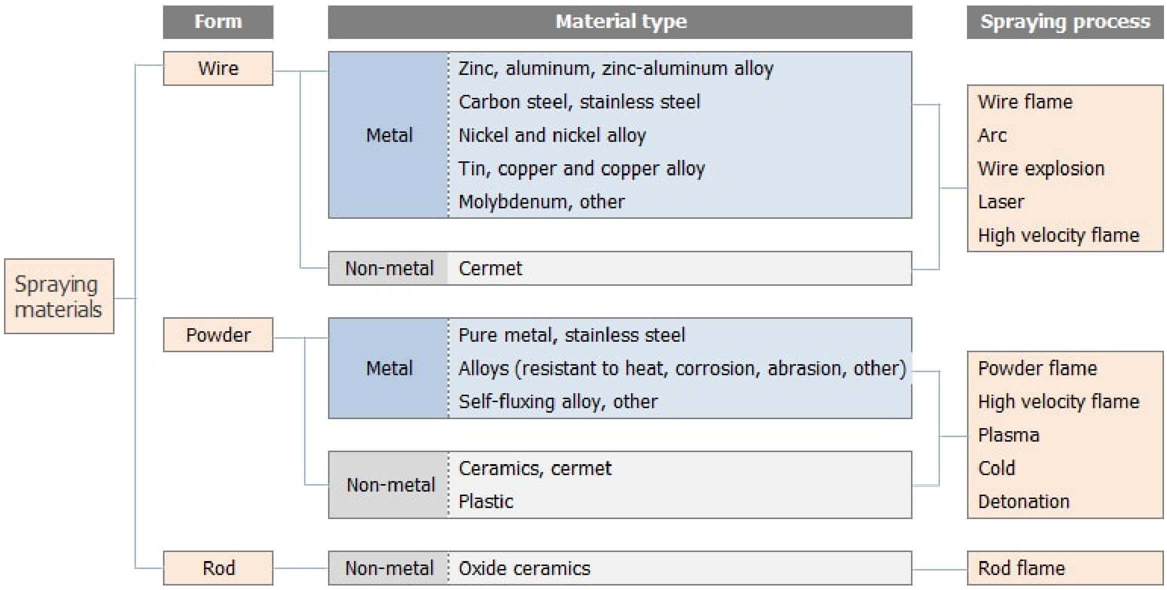


Low-pressure plasma spraying (electricity)



Source: Company data

Spraying materials—types and corresponding treatment methods



Source: Shared Research based on data from the Japan Thermal Spray Society

Surface treatments customized to individual orders

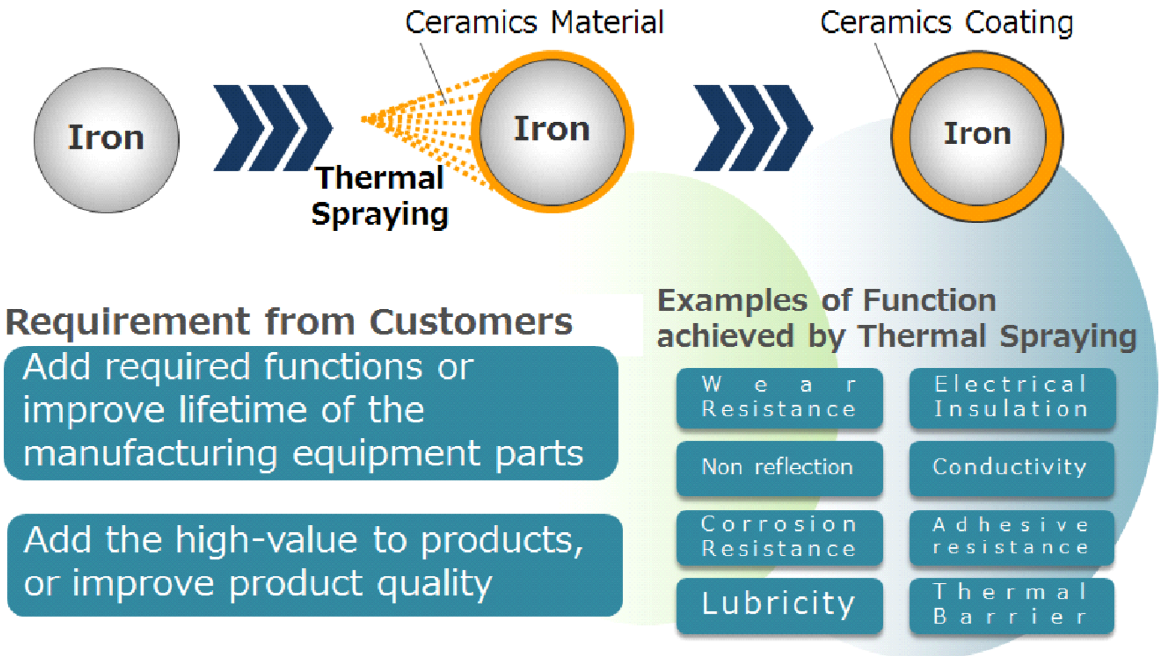
TOCALO conducts all of its surface treatments through a made-to-order production system. Accordingly, quantity is not a business priority. Once it receives an order from a customer, TOCALO has the workpieces (e.g., customers' goods and components of their manufacturing equipment) delivered to its factory, where they are kept while surface treatment is applied. The company procures the coating materials and generates sales by providing coating services. When the workpieces are too large to be removed from customer factories, as is the case with a yankee cylinder used in tissue paper production, TOCALO employees visit these factories to perform coating operations. As of end-FY03/23, the company had 1,300 full-time and directly hired temporary employees on a consolidated basis. When including temporary employees received on dispatch, staff totals are between 1,500 and 1,600 employees.

The company's operations include a mixture of semiautomated treatments, such as plasma spraying, and treatments that require human labor, such as flame spraying. Even the semiautomated treatments are considerably labor-intensive because the orders entail a wide variety of workpieces, each in small volume and requiring pretreatment, setting modification, and inspection processes done manually.

TOCALO specializes in surface treatments for industrial manufacturing equipment. Its surface treatment lines, mainly for thermal spraying, are designed to suit workpieces that have relatively large surface areas. Even in the case of handling small workpieces, the company responds to customer specifications that are becoming more diverse such as treatment on just specific parts of a component.

Among specific customer needs is the improvement of functionality and durability of the manufacturing equipment in their factories. For example, applying coatings to production line rolls in steel mills helps extend the lives of these rolls and raises the quality of the steel plates they produce. Customers also express the need to add value and enhance the qualities of their products through the application of functional coatings. Treatments of this nature include the coating for parts used in semiconductor equipment and gas turbine components. Cermet (ceramic metal) is a representative coating material. "Cermet" is a coined word that expresses both the hardness of ceramics and toughness of metal. The material's main components are titanium and tungsten, which give it excellent resistance to corrosion, make adhesion less likely, and allow for a clean finish of the surfaces. Thermal spraying treatment adds functional properties, such as abrasion resistance, seize resistance, corrosion resistance, lubricity, electric insulation, non-adhesiveness, water resistance, and heat resistance, in a relatively efficient manner.

Principle and effects of surface treatments



Source: Company data

Cost structure

In FY03/23, TOCALO reported a GPM of 36%, an SG&A ratio of 14%, and an OPM of 22%, on a consolidated basis. Labor cost and outsourcing cost accounted for 29% and 24% of total manufacturing costs at the parent respectively, while materials accounted for 14%, consumables 11%, utilities 5%, depreciation 7%, and other costs 10%. TOCALO's business is labor-intensive, with personnel expenses also accounting for 50% of SG&A expenses. We understand that full operational automation in the surface treatment business is difficult to attain because specifications are different for each customer and workpiece.

Cost of sales

Cost of sales	FY03/16	FY03/17	FY03/18	FY03/19	FY03/20	FY03/21	FY03/22	FY03/23	FY03/24
(parent, JPYmn)	Parent	Parent	Parent	Parent	Parent	Parent	Parent	Parent	Parent
Materials costs	2,404	2,178	2,542	3,110	2,794	2,844	3,249	3,781	3,453
% of total	15.0%	13.8%	13.3%	13.9%	13.0%	13.3%	13.7%	14.2%	13.1%
Labor costs	4,310	4,212	5,015	6,158	6,066	6,227	6,806	7,629	7,264
% of total	26.9%	26.6%	26.2%	27.6%	28.2%	29.1%	28.8%	28.6%	27.6%
Outsourcing costs	4,658	4,622	5,407	5,916	5,653	5,353	5,833	6,488	7,134
% of total	29.1%	29.2%	28.3%	26.5%	26.3%	25.0%	24.7%	24.3%	27.1%
Other costs	4,657	4,802	6,153	7,139	6,971	7,000	7,742	8,797	8,504
% of total	29.1%	30.4%	32.2%	32.0%	32.4%	32.7%	32.8%	33.0%	32.3%
Utility	780	734	890	1,006	995	899	1,051	1,388	1,163
% of total	4.9%	4.6%	4.7%	4.5%	4.6%	4.2%	4.4%	5.2%	4.4%
Consumables	1,404	1,518	1,931	2,149	1,936	2,130	2,539	3,013	2,832
% of total	8.8%	9.6%	10.1%	9.6%	9.0%	9.9%	10.7%	11.3%	10.7%
Depreciation	967	1,094	1,225	1,804	2,020	1,864	1,851	1,952	2,030
% of total	6.0%	6.9%	6.4%	8.1%	9.4%	8.7%	7.8%	7.3%	7.7%
Other	1,506	1,456	2,107	2,180	2,020	2,107	2,301	2,444	2,479
% of total	9.4%	9.2%	11.0%	9.8%	9.4%	9.8%	9.7%	9.2%	9.4%
Total cost of manufacturing	16,029	15,814	19,118	22,325	21,486	21,425	23,632	26,697	26,356

Source: Shared Research based on company data
Note: Figures may differ from company materials due to differences in rounding methods.

Changes in SG&A (consolidated)

SG&A expenses (cons., JPYmn)	FY03/16 Cons.	FY03/17 Cons.	FY03/18 Cons.	FY03/19 Cons.	FY03/20 Cons.	FY03/21 Cons.	FY03/22 Cons.	FY03/23 Cons.	FY03/24 Cons.
Directors' compensations	306	328	362	421	378	338	295	315	386
% of total	6.2%	6.7%	6.5%	7.0%	6.1%	5.7%	4.7%	4.6%	5.5%
Personnel expenses	2,311	2,290	2,504	2,660	2,791	2,788	3,036	3,257	3,170
% of total	47.0%	46.8%	45.2%	44.2%	44.8%	47.1%	48.0%	47.8%	45.0%
Personnel expenses	1,857	1,974	2,135	2,257	2,360	2,448	2,541	2,769	2,883
% of total	37.7%	40.4%	38.6%	37.5%	37.9%	41.3%	40.1%	40.7%	40.9%
Provision for bonuses	279	298	323	326	318	402	444	437	357
% of total	5.7%	6.1%	5.8%	5.4%	5.1%	6.8%	7.0%	6.4%	5.1%
Retirement benefit expenses	175	18	46	77	113	-62	51	51	-70
% of total	3.6%	0.4%	0.8%	1.3%	1.8%	-1.0%	0.8%	0.7%	-1.0%
Transportation and communication expenses	352	352	355	365	342	206	217	270	345
% of total	7.2%	7.2%	6.4%	6.1%	5.5%	3.5%	3.4%	4.0%	4.9%
Depreciation	52	60	138	224	273	273	209	247	237
% of total	1.1%	1.2%	2.5%	3.7%	4.4%	4.6%	3.3%	3.6%	3.4%
R&D expenses	740	719	771	844	974	1,068	1,080	1,143	1,267
% of total	15.0%	14.7%	13.9%	14.0%	15.6%	18.0%	17.1%	16.8%	18.0%
Other	1,160	1,141	1,406	1,505	1,471	1,251	1,492	1,575	1,641
% of total	23.6%	23.3%	25.4%	25.0%	23.6%	21.1%	23.6%	23.1%	23.3%
Total	4,921	4,890	5,536	6,019	6,229	5,924	6,329	6,807	7,046

Source: Shared Research based on company data
Note: Figures may differ from company materials due to differences in rounding methods.

Group structure

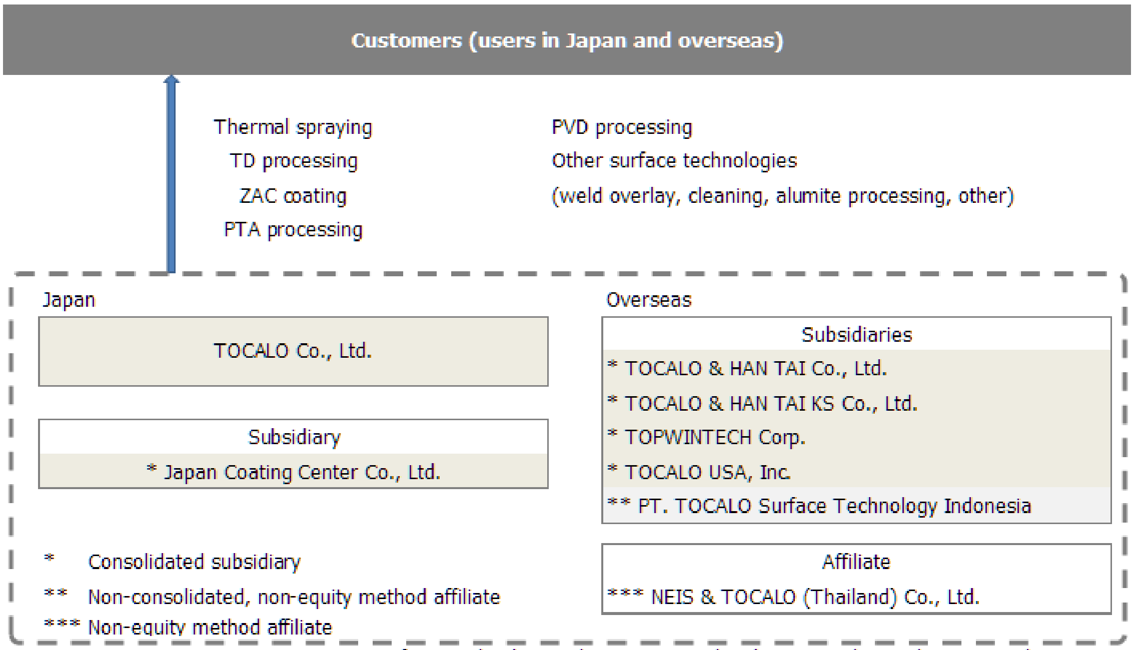
Overview

TOCALO includes a parent company, five consolidated subsidiaries, one unconsolidated subsidiary, and one affiliated company. It primarily conducts thermal spraying treatments but also performs services in peripheral fields, including the Toyota diffusion (TD) process, zinc alloy coating (ZAC), plasma transferred arc (PTA) process, and physical vapor deposition (PVD) process. All of these processes are types of surface treatments, which involve providing new functionality to workpieces by forming coatings on their surfaces that have different properties from their substrates (the material to which spraying deposit is applied).

In September 2004, the company entered the field of PVD process, a technique to form thin coatings, by acquiring all shares of Japan Coating Center Co., Ltd. (JCC).

Overseas sales accounted for 23.3% of the company's overall sales in FY03/23 and primarily came from Japanese companies that have expanded abroad. The company has concluded many licensing agreements with overseas companies but does not work to acquire customers locally overseas. Some competitors overseas sell thermal spraying materials and equipment in addition to providing contracted treatment services, but TOCALO only provides services.

Group companies



Note: In August 2019, PT. TOCALO Surface Technology Indonesia merged with PT. Tanaka Machinery in Indonesia, a non-equity method affiliated, in an absorption-type merger

Source: Shared Research based on company data

International network (licensees)

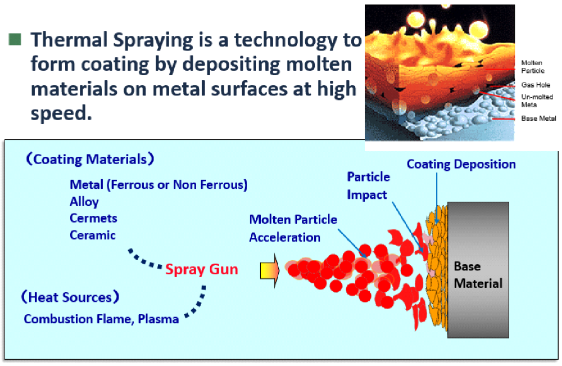
	Company	Fields of technology licenses
People's Republic of China	TOCALO & HAN TAI Co., Ltd.	Thermal spraying (steel, other)
	TOCALO & HAN TAI (KUNSHAN) Co., Ltd.	Thermal spraying(semiconductor and FPDs)
	BAOSTEEL Engineering & Technology Group Co., Ltd.	Thermal spraying (steel, other)
	High Shine Limited	TD process(steel, other)
	SMS Siemag Technology (Tianjin) Co., Ltd.	Thermal spraying (steel, other)
Taiwan	TOPWINTECH Co., Ltd.	Thermal spraying(semiconductor and FPDs)
	HAN TAI TECHNOLOGY Co., Ltd.	Thermal spraying (steel, other)
South Korea	DAE SHIN METALLIZING Co., Ltd.	Thermal spraying (steel, other)
	TOPWINTECH Corp.	Thermal spraying(semiconductor and FPDs)
ASEAN	NEIS & TOCALO (Thailand) Co., Ltd.	Thermal spraying (steel, other)
	PT. TOCALO Surface Technology Indonesia	Thermal spraying (steel, other)
	HAN TAI VIETNAM CO., LTD	Thermal spraying (steel, other)
India	ATS Techno Pvt. ltd	Thermal spraying (steel, other)
EU	Oerlikon Surface Solutions AG	Thermal spraying (steel, other)
	Duma-BandZink GmbH	Thermal spraying (steel, other)
United States	TOCALO USA,Inc.	Thermal spraying (semiconductor, other)
	SMS group Inc.	Thermal spraying (steel, other)
	NxEdge	Thermal spraying(semiconductor)
Russia	SMS GROUP LLC	Thermal spraying (steel, other)
Brazil	SMS group Metalurgia do Brasil Ltda.	Thermal spraying (steel, other)

Source: Shared Research based on company data

Thermal Spraying (Parent)

Thermal spraying treatment is a surface treatment method used to form coatings on industrial product parts such as components of semiconductor and FPD manufacturing equipment; power generating gas turbines; batteries used for power storage; a variety of bearings; factory machine pieces including rolls used in steel and paper mills; and parts used in chemical plants. It involves melting coating materials (e.g., metals, ceramics, and cermet) using high temperature heat sources (plasma or gas-based flames) and then spraying the molten material onto the target surface. Thermal spraying adds a variety of functions to the workpiece, including improved durability through higher abrasion and heat resistance; electrical characteristics such as conductivity and electric insulation; and thermal properties, including heat insulation and heat dissipation. A wide variety of thermal spraying treatment methods exist, but TOCALO primarily utilizes atmospheric plasma spraying and low-pressure plasma spraying, which both use plasma as a heat source; and high velocity flame spraying, wire flame spraying, and powder flame spraying which use combustion flame as a heat source. The company chooses which method is appropriate for any given workpiece.

Principle of thermal spraying technology



Thermal spraying process

Source: Company data

Surface treatment centered around thermal spraying has become a standard technology in a wide variety of fields, ranging from manufacturing to medical care, and its demand has been on the rise year by year. TOCALO has built a diverse customer base across many sectors, creating a customer mix that helps it navigate through changing economic climates. In particular, it has managed to acquire customers that are top-class companies in major growth industries. Breaking down the company's sales in FY03/23, 48% came from treatments on semiconductor and FPD manufacturing equipment parts; 8% industrial machinery parts; 7% furnishings and equipment used in the steel industry; 12% from other thermal spraying treatments; 6% from other types of surface treatments; 5% domestic subsidiary; and 14% overseas subsidiaries. In the past, most demand came from the steel and paper and pulp industries, but sales to customers in the semiconductor and FPD manufacturing equipment industries currently account for nearly 50% of sales. The company's most prominent customer is Tokyo Electron Limited, which accounted for 33.1% of consolidated sales in FY03/23.

Even in past cases in which profit fell short of initial forecasts or dropped YoY, TOCALO has maintained a stable, profitable structure with relatively few fluctuations in earnings, despite its high degree of reliance on semiconductor- and FPD-related sales. Shared Research believes that this stable, profitable structure is underpinned by TOCALO's robust customer base in the semiconductor and FPD fields as well as other industries, and repeat orders for functional surface treatments that offer high added value.

Sales to the Tokyo Electron group

Sales to large lot customers	FY03/14	FY03/15	FY03/16	FY03/17	FY03/18	FY03/19	FY03/20	FY03/21	FY03/22	FY03/23
(JPYmn)	Act.	Act.	Act.	Act.	Act.	Act.	Act.	Act.	Act.	Act.
Tokyo Electron group	2,804	4,794	5,004	7,867	10,719	13,291	11,615	13,543	15,631	15,946
Sales dependence	12.4%	18.4%	17.4%	27.2%	31.4%	33.6%	30.6%	34.7%	35.7%	33.1%
Semiconductor equipment (parent)	5,030	7,270	8,628	8,519	11,273	14,895	12,497	16,030	18,990	21,739
Tokyo Electron group as % of semis	55.7%	65.9%	58.0%	92.3%	95.1%	89.2%	92.9%	84.5%	82.3%	73.4%

Source: Shared Research based on company data
Note: Figures for the Tokyo Electron Group include both parent company and overseas subsidiary sales.

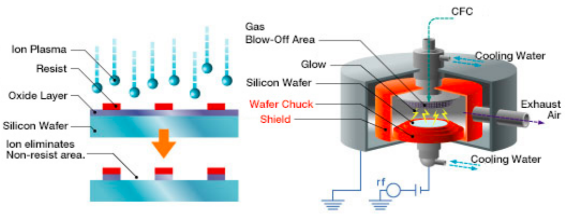
Surface treatment for semiconductor equipment parts

Thermal spraying is applied to parts of equipment used in silicon wafer processing (orange-colored components in the following diagrams). The procedure is utilized to achieve a range of objectives such as improving the components' resistance to plasma corrosion or giving electrical properties to the electrostatic chuck that holds the wafer during processing.
In the past, semiconductor equipment makers faced an urgent need to eliminate deposits inside their etching equipment chambers (making sure that particles scraped away during the etching process did not adhere to the chamber wall). In particular, chamber walls treated by aluminum alloy, alumite, or alumina were subject to corrosion in the plasma etching process, producing chemical compound particles, which became a significant cause of chip defects. TOCALO proposed a ceramic-based thermal spray coating for chamber walls that proved to be highly plasma resistant. The coating was quickly adopted as a standard for mass production in the semiconductor equipment industry accompanying its shift to 300mm wafers

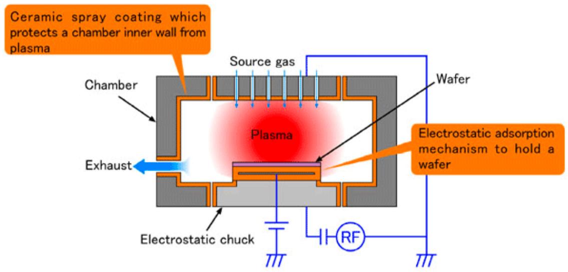
(the company also licenses technology to competitors).

The feature size of the most advanced semiconductors (very large-scale integrated circuits [VLSI circuits]) is becoming miniaturized, and the structure of these semiconductors multi-layered. Along with this trend, dry etching processes (use of plasmas or etchant gases to remove portions of substrate layers based on specific patterns defined by photoresist masks) are becoming increasingly more common. We understand more than half of the company's surface treatment on semiconductor equipment components is for dry etching equipment. TOCALO provides services to major semiconductor equipment makers in Japan and abroad, including Tokyo Electron, with which it has built a particularly close relationship and conducts joint development.

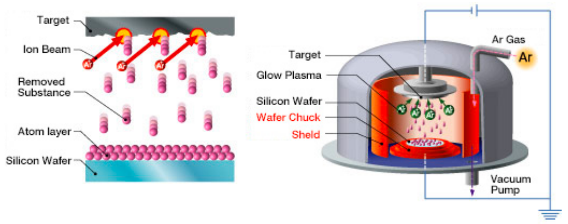
Dry etching equipment components



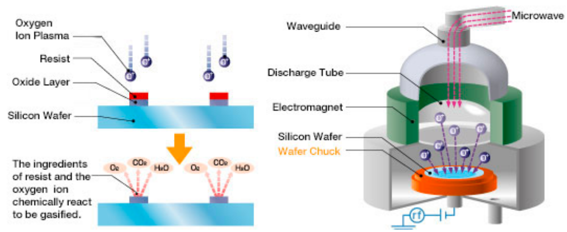
Dry etching equipment schematics



Sputtering equipment components



Ashing equipment components



Source: Company data

Surface treatment outside of the semiconductor and FPD fields (industrial equipment, steel, paper and pulp, energy, transportation, petrochemical, resins/films sectors)

The thermal spraying business for the steel and paper industries supported TOCALO's rapid progress during the 1980s and 1990s. The steelmaking industry was a standout driver of growth. Increased orders for thermal spraying on in-sink and processing rolls (tension bridles, deflector rolls, etc.) of continuous galvanizing lines (CGL) and hearth rolls of continuous annealing lines (CAL), continuous annealing and processing lines (CAPL), and CGL helped expand the company's earnings.

In the paper industry, TOCALO reached a technical cooperation agreement in 1989 with Vendor Machine Co., Ltd., which had a strong track record in Europe and the US, and began offering thermal spraying and polishing treatments for yankee dryer rolls. The yankee dryer roll is a core machine for paper manufacturers and determines the quality of paper products such as tissue paper and newspaper. The company's coating technology has been widely adopted as a standard thermal spraying treatment for rolls used by many paper manufacturers because of its excellent reputation for quality.

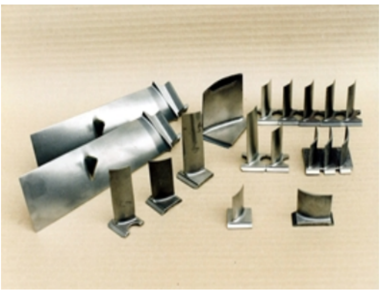
In industrial equipment, particularly noteworthy is the use of TOCALO's thermal spraying technology to insulate the bearings utilized in drive motors for bullet train cars (delivered by the company in 2001). Sometimes, minute electrical currents can leak from motors and generators attached to the surface of bearings, causing electrical discharge. This can cause (electrolytic) corrosion, which leads to early bearing deterioration. TOCALO was able to add insulation properties to the surface of these bearings and prevent the corrosion caused by electrical discharge. Leveraging the safety knowhow nurtured through the bullet train project, TOCALO developed low-cost, thermal-sprayed insulated bearings that are currently being widely utilized as industry standards in both Chinese railways and in the New York subway system. These bearings are also receiving attention for their application in wind power generators and are being progressively adopted in this capacity.

Thermal spraying is also essential for gas turbines that are powered by fossil fuels such as coal and oil. It is applied to vital components used in these gas turbines, including their blades, which must provide stable performance in harsh environments near combustor outlets that can reach temperatures of 1,500° C.

Surface treatment technology is also important in the automotive and aviation equipment industries. However, TOCALO's opportunities to provide contracted thermal spraying services in these industries are limited by major hurdles, such as restrictions aimed at meeting safety standards and capacity for mass production work. The company conducts the Toyota diffusion (TD) process, a surface treatment method developed by Toyota Central R&D Labs, Inc., on press molds used for automobiles.

In the aircraft industry, TOCALO had performed thermal spraying (recoating) on engine parts for ANA (TSE Prime: 9202) but was forced to pull out after about one year as ANA began performing this treatment internally. The company also works on components of the Mitsubishi SpaceJet passenger planes being developed by Mitsubishi Heavy Industries, Ltd. (TSE Prime: 7011) and wing flap components made by Embraer S.A. in Brazil, but these endeavors have apparently not achieved notable progress when compared to initial plan.

Gas turbines (industrial equipment, transportation equipment)

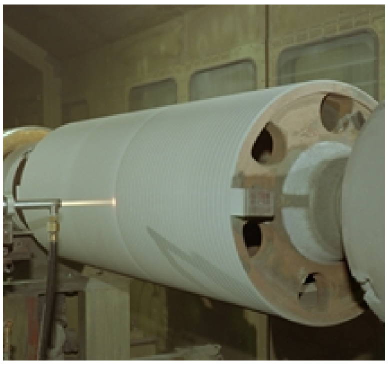


Bearings (industrial equipment)

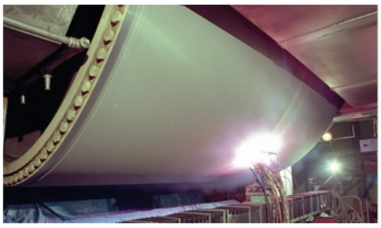
Boilers (energy, petrochemical)

Hearth rolls (steel industry, in-furnace rolls)

Sink rolls (steel industry, in-sink rolls)



Yankee dryer rolls (paper manufacturing)



Source: Company data

Primary business locations (parent)

TOCALO's main factories for the semiconductor and FPD fields are the Akashi Harima, Kitakyushu, and Tokyo factories. The company has also located its Miyagi Technical Service Center nearby the Miyagi factory of Tokyo Electron, a major customer. Its Nagoya and Mizushima factories focus primarily on the steel industry while its Kobe factory performs miscellaneous surface treatments, such as the TD process and ZAC coating.

Main business bases (non-consolidated)

List of offices and plants	Plant
Headquarters(Kobe, Hyogo prefecture)	Tokyo Plant Gyoda Workshop
Thermal Spraying Technology R&D Laboratories(Akashi, Hyogo prefecture)	Tokyo Plant Suzumi Workshop
	Miyagi Technical Service Center
Office	Nagoya Plant
Kitakanto Office	Kobe Plant
Kanagawa Office	Akashi Plant
Yamanashi Office	Akashi No.2 Plant
Shizuoka Office	Akashi No.4 Plant
	Akashiharima Plant
	Kurashiki Plant
	Kitakyushu Plant

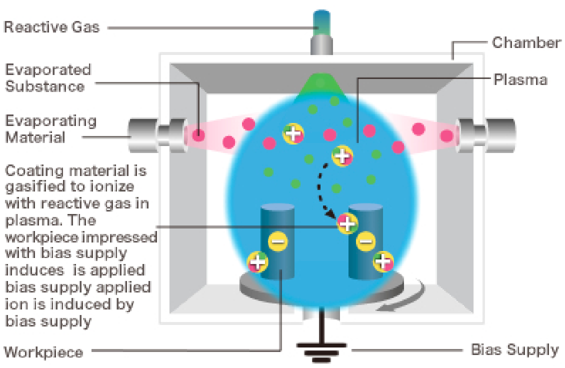
Source: Shared Research based on company data

Domestic Subsidiary

Domestic consolidated subsidiary Japan Coating Center Co., Ltd. (JCC) primarily performs physical vapor deposition (PVD) on cutting tools, edged tools, metallic molds, and other similar materials. The PVD process adds functionality, such as abrasion and corrosion resistance, to the workpieces by forming hard, dense, thin, and highly adhesive ceramic coatings on their surfaces. These coatings are generated by ionizing metals, including titanium and chromium, in a vacuum with reactive gases.

Among the various types of **PVD processes**, JCC utilizes the ion plating method, which stands out in deposition and adhesive properties. This process minimizes heat deformation of the workpiece because it allows for a wide selection of temperature ranges, enabling optimal treatment based on the type of substrate. It is also suitable for mass produced goods. The Mercury Coat offered by JCC is a new coating with high hardness, oxidation resistance, and abrasion resistance. An example of its application is the high-performance coating for hob cutters (components of hobbing machines to cut gears) that suit the changing specifications in gear cutting technology, which is shifting toward dry machining and high-speed/high-feed equipment.
Source: Shared Research based on company data

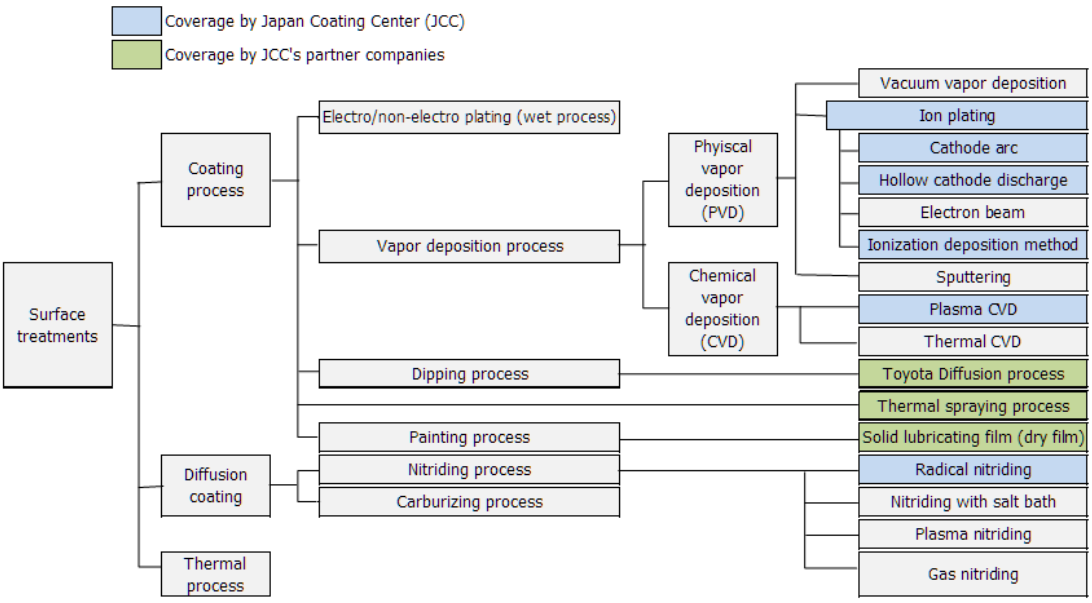
PVD process diagram



Application example: Cutting tools (hob cutters)

Source: Company data

Surface treatment technologies offered at Japan Coating Center Co., Ltd. (JCC)



Source: Shared Research based on company data

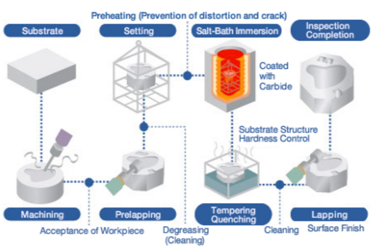
Other Surface Treatments

Toyota diffusion (TD) process (external sales of JPY803mn [2.8% of total sales] in FY03/16)

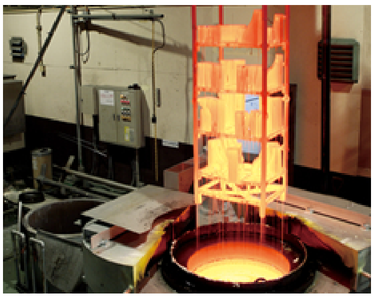
The TD process is a surface treatment method that forms extremely hard and thin carbide layer by immersing workpieces, such as molds for automobiles, components used in steelworking, and extruder parts, into molten salt baths, causing the diffusion and osmosis of substances such as vanadium and niobium. This carbide layer adds abrasion resistance and seize resistance to target surfaces.

TD- vanadium carbide (VC) coating is an extremely hard coating that can be produced using TD treatment, a type of high-temperature salt bath treatment. It has a cross-sectional hardness of between 3,200 and 3,800 Hv, which protects workpiece surfaces from abrasion and seizing. TD-VC coating also significantly improves the durability of components and is now highly regarded as an indispensable surface treatment technology in the die making industry. Furthermore, the salt bath treatment can be performed regardless of the shape of the subject, enabling uniform coating formation, even on unseen interior surfaces. The TD process has been used to add abrasion resistance and seize resistance properties to press molds used for automobiles, raising productivity and extending the lives of these metallic molds.
Source: Shared Research based on company data

TD process



TD-VC coating



Application example: molds used for automobiles

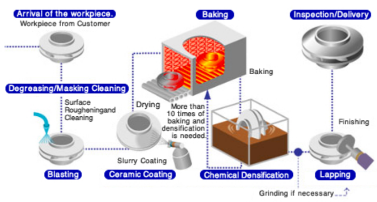
Source: Company data

Zinc alloy coating (ZAC) (external sales of JPY406mn [1.4% of total sales] in FY03/16)

ZAC treatment is a surface treatment method that forms extremely dense composite ceramic coatings whose main component is chromium oxide. The treatment is often applied to parts of equipment such as pumps, textile machinery, and wiredrawing machines, giving them corrosion and abrasion resistance properties.

> **ZAC coating** uses chemical reaction to form composite ceramic coatings primarily composed of chromium oxide (Cr_2O_3). The coating is characterized by properties such as high density, hardness, and adhesiveness, as well as a low frictional coefficient. It is extraordinarily powerful when used to enhance machine parts that require abrasion and corrosion resistance. ZAC coating treatment has been applied to a variety of pump components, forming ceramic coatings with superior corrosion resistance that extend their useful lives and eliminate the need for maintenance.
> Source: Shared Research based on company data

CDC-ZAC coating process



Furnace combustion treatment

Application example: pump components

Source: Company data

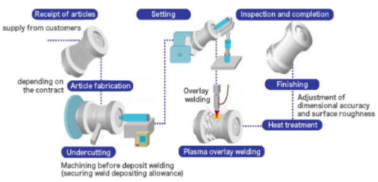
Plasma transferred arc (PTA) process (external sales of JPY364mn [1.3% of total sales] in FY03/16)

The PTA process, a type of overlay welding, is a surface treatment method that uses a high-energy plasma arc to melt a wide variety of pulverized materials and welds them onto the surfaces of equipment that requires high degrees of reliability, including pump and valve components and devices such as steelworking rolls. It provides the equipment with abrasion and corrosion resistance properties.

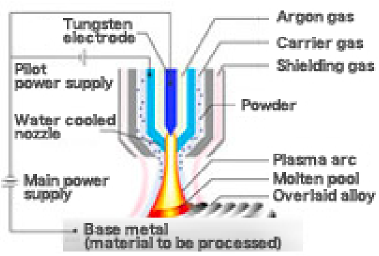
PTA process: A surface treatment technology that uses a high-energy transferred plasma arc to perform overlay welding. Since the overlay material can be applied in powder form, materials that cannot be processed into wires or rods, such as hard materials and ceramics, can be used in this treatment. Coatings that best suit the intended use of the workpiece are achieved by mixing a wide variety of powdered metal alloys and ceramics at controlled ratios. It is also possible to convert the coating created through this process into cermet after it has been overlaid onto the target surface. The bond between the coating and the substrate is metallurgic, causing superior peeling resistance. Since the PTA treatment uses overlay welding, it is quite capable of forming thicker coatings than other methods. In addition to these characteristics, the PTA coating maintains a high degree of hardness even when exposed to high temperatures, and sports superior abrasion, seize, and corrosion resistance. Its application is poised to expand to an increasingly large variety of equipment requiring first-class quality control, including petroleum-related equipment, ships, aircraft, transportation equipment, and nuclear power generation equipment.

Principle of PTA technology: The next figure (center) illustrates how overlay welding via the PTA process works. First, a pilot power supply is used to start an arc in an argon gas-filled space between a tungsten electrode and a water-cooled nozzle. Argon gas passing through this electric arc is ionized to form a hot plasma gas, which is then constricted through a thermal pinch effect produced by the water-cooled constrictor nozzle and discharged against the workpiece as a plasma arc with high energy density. Once this arc reaches the workpiece, the main power supply is activated to maintain contact between the arc and the substrate. The arc current flows through the substrate, forming a molten pool on its surface. Meanwhile, the powdered overlay material is pumped into a carrier gas, such as helium or argon gas, and fed into the plasma arc. It is thrown into the molten pool on the surface of the substrate in a melted state, forming an overlay. The figure (RHS) below compares the convergence properties of plasma arcs and gas tungsten arcs based on the differences between their temperature distributions. The plasma arc is narrowly constricted by the water-cooled nozzle, giving it high energy density. This is why the PTA process even allows for powders with high melting points to be used as overlay materials.
Source: Shared Research based on company data

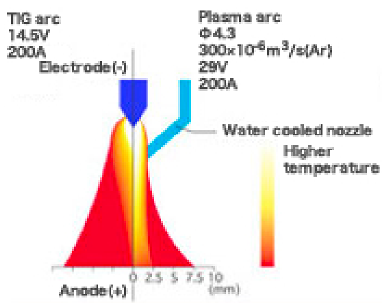
PTA overlay welding process



Principle of PTA technology



Temperature distribution of gas tungsten (TIG) arc and plasma arc



Source: Company data

Overseas Subsidiaries

Consolidated subsidiary TOCALO & HAN TAI Co., Ltd. (Guangzhou, Guangdong, China; established in April 2005) primarily performs thermal spraying and overlay welding within China.

TOCALO & HAN TAI KS Co., Ltd. (Kunshan, Jiangsu, China; established in May 2011) and TOCALO & HAN TAI TW Co., Ltd. (Tainan, Taiwan; established in June 2011), both consolidated subsidiaries, serve as bases for expanding the maintenance business for semiconductor and FPD manufacturing equipment in Chinese and Taiwanese markets. They perform surface treatments, including thermal spraying, cleaning, and anodizing treatment, on equipment components.

Consolidated subsidiary TOCALO USA, Inc. (California, USA; established in November 2015) was established to set up a service base for the maintenance of semiconductor equipment components in the US, which houses a number of prominent end users. However, operating rates remained low as the launch of operations was delayed because permits and approvals from state authorities took longer than expected to obtain. In FY03/21, the company booked an impairment loss on fixed assets of JPY349mn as an extraordinary loss as part of a sweeping overhaul, including dealing with prior-year losses all at once. The company decided to revamp its structure in anticipation of semiconductor growth from 2024 onward as major US semiconductor companies start operations at new factories.

Non-consolidated subsidiary PT. TOCALO Surface Technology Indonesia (established in June 2017) and affiliate NEIS & TOCALO (Thailand) Co., Ltd. (not subject to equity method; established in October 2012) perform surface treatments, such as thermal spraying and welding, primarily for Japanese steel manufacturers operating locally.

Group companies

Company	Established	Headquarters	Stake	Business
Consolidated subsidiaries				
Japan Coating Center Co., Ltd.	Apr. 1985	Kanagawa	100%	PVD processing
TOCALO & HAN TAI Co., Ltd.	Apr. 2005	Guangzhou, China	70%	Thermal spraying (steel, other)
TOCALO & HAN TAI KS Co., Ltd.	Nov. 2011	Jiangsu, China	90%	Thermal spraying (steel, semiconductor, FPD, other)
TOPWINTECH Co., Ltd.	Jun. 2011	Tainan, Taiwan	50%	Thermal spraying (steel, semiconductor, FPD, other)
TOCALO USA, Inc.	Jun. 2011	California, US	100%	Thermal spraying (semiconductor, other)
Other (non-cons., non-equity method)	One in Indonesia, another in Thailand			Thermal spraying (steel, other)

Source: Shared Research based on company data

Segment summary

Note: While the key figures in the description have been updated, we plan to revise certain figures at a later date based on market data.

By segment, Thermal Spraying (Parent) accounted for 72.4% of sales in FY03/24, while Domestic Subsidiary (JCC) made up 5.3%, Overseas Subsidiaries 15.5%, Other Surface Treatments 6.5%, and royalty income 0.4%. The segment profit margins (recurring profit basis) were 18.6% in Thermal Spraying (Parent), 20.0% in Domestic Subsidiary, 26.1% in Overseas Subsidiaries, and 17.7% in Other Surface Treatments. The company's segment profit margins are showing relatively stable improvement, despite being prone to the silicon cycle. Profitability in the Domestic Subsidiary segment (comprising Japan Coating Center Co., Ltd. [JCC]) is lower than in the Thermal Spraying (Parent) segment but has been improving notably. JCC managed itself independently for about ten years after becoming a TOCALO subsidiary in September 2004, but Shared Research observes JCC has produced synergy with the parent company over the past several years. However, JCC has been susceptible to the impact of trade friction and other macroeconomic factors because many of its transactions are in the automotive parts industry.

By region	FY03/15	FY03/16	FY03/17	FY03/18	FY03/19	FY03/20	FY03/21	FY03/22	FY03/23	FY03/24
(JPYmn)	Act.	Act.	Act.	Act.	Act.	Act.	Act.	Act.	Act.	Act.
Sales	**26,068**	**28,746**	**28,964**	**34,109**	**39,558**	**37,896**	**39,073**	**43,813**	**48,144**	**46,735**
YoY	15.4%	10.3%	0.8%	17.8%	16.0%	-4.2%	3.1%	12.1%	9.9%	-2.9%
Domestic	21,609	23,678	24,407	28,206	32,155	30,543	30,350	34,568	36,942	33,573
YoY	14.7%	9.6%	3.1%	15.6%	14.0%	-5.0%	-0.6%	13.9%	6.9%	-9.1%
% of total	82.9%	82.4%	84.3%	82.7%	81.3%	80.6%	77.7%	78.9%	76.7%	71.8%
Overseas	4,459	5,068	4,557	5,903	7,403	7,352	8,722	9,245	11,202	13,162
YoY	18.5%	13.7%	-10.1%	29.5%	25.4%	-0.7%	18.6%	6.0%	21.2%	17.5%
% of total	17.1%	17.6%	15.7%	17.3%	18.7%	19.4%	22.3%	21.1%	23.3%	28.2%

Source: Shared Research based on company data
Note: Figures may differ from company materials due to differences in rounding methods.

By segment	FY03/15	FY03/16	FY03/17	FY03/18	FY03/19	FY03/20	FY03/21	FY03/22	FY03/23	FY03/24
(JPYmn)	Act.	Act.	Act.	Act.	Act.	Act.	Act.	Act.	Act.	Act.
Sales	**26,068**	**28,746**	**28,964**	**34,109**	**39,558**	**37,896**	**39,073**	**43,813**	**48,144**	**46,735**
YoY	15.4%	10.3%	0.8%	17.8%	16.0%	-4.2%	3.1%	12.1%	9.9%	-2.9%
Thermal Spraying (Parent)	19,176	21,933	22,309	26,183	30,400	28,221	30,141	33,043	36,184	33,859
YoY	17.5%	14.4%	1.7%	17.4%	16.1%	-7.2%	6.8%	9.6%	9.5%	-6.4%
% of total	73.6%	76.3%	77.0%	76.8%	76.8%	74.5%	77.1%	75.4%	75.2%	72.4%
Domestic Subsidiary (PVD process)	1,949	1,978	2,111	2,312	2,493	2,364	2,018	2,399	2,414	2,457
YoY	6.7%	1.5%	6.8%	9.5%	7.8%	-5.2%	-14.6%	18.9%	0.6%	1.8%
% of total	7.5%	6.9%	7.3%	6.8%	6.3%	6.2%	5.2%	5.5%	5.0%	5.3%
Overseas Subsidiaries	3,185	3,262	2,806	3,642	4,460	4,925	4,800	5,695	6,622	7,257
YoY	19.8%	2.4%	-14.0%	29.8%	22.5%	10.4%	-2.5%	18.6%	16.3%	9.6%
% of total	12.2%	11.3%	9.7%	10.7%	11.3%	13.0%	12.3%	13.0%	13.8%	15.5%
Other Surface Treatments	1,758	1,572	1,736	1,971	2,204	2,384	2,112	2,502	2,745	3,019
YoY	-1.8%	-10.6%	10.4%	13.5%	11.8%	8.2%	-11.4%	18.5%	9.7%	10.0%
% of total	6.7%	5.5%	6.0%	5.8%	5.6%	6.3%	5.4%	5.7%	5.7%	6.5%
Royalty income	-	-	-	-	-	-	-	171	177	141
YoY	-	-	-	-	-	-	-	-	3.5%	-20.3%
% of total	-	-	-	-	-	-	-	0.4%	0.4%	0.3%
Segment profit (recurring profit)	**4,890**	**5,028**	**5,801**	**7,363**	**8,076**	**6,812**	**8,914**	**10,571**	**11,003**	**9,662**
YoY	33.7%	2.8%	15.4%	26.9%	9.7%	-15.7%	30.9%	18.6%	4.1%	-12.2%
Recurring profit margin	18.8%	17.5%	20.0%	21.6%	20.4%	18.0%	22.8%	24.1%	22.9%	20.7%
Thermal Spraying (Parent)	3,822	4,520	4,889	6,009	6,515	5,273	6,760	8,086	8,341	6,284
YoY	43.4%	18.3%	8.2%	22.9%	8.4%	-19.1%	28.2%	19.6%	3.2%	-24.7%
Recurring profit margin	19.9%	20.6%	21.9%	23.0%	21.4%	18.7%	22.4%	24.5%	23.1%	18.6%
% of total	80.1%	84.1%	82.8%	78.9%	78.7%	74.4%	78.6%	76.5%	77.1%	68.3%
Domestic Subsidiary (PVD process)	324	272	402	502	545	491	406	471	352	492
YoY	39.7%	-16.0%	47.8%	24.9%	8.6%	-9.9%	-17.3%	16.0%	-25.3%	39.8%
Recurring profit margin	16.6%	13.8%	19.0%	21.7%	21.9%	20.8%	20.1%	19.6%	14.6%	20.0%
% of total	6.8%	5.1%	6.8%	6.6%	6.6%	6.9%	4.7%	4.5%	3.3%	5.3%
Overseas Subsidiaries	542	589	491	974	1,064	1,056	1,297	1,537	1,653	1,892
YoY	82.5%	8.7%	-16.6%	98.4%	9.2%	-0.8%	22.8%	18.5%	7.5%	14.5%
Recurring profit margin	17.0%	18.1%	17.5%	26.7%	23.9%	21.4%	27.0%	27.0%	25.0%	26.1%
% of total	11.4%	11.0%	8.3%	12.8%	12.9%	14.9%	15.1%	14.5%	15.3%	20.6%
Other Surface Treatments	81	-4	122	126	152	266	135	468	468	534
YoY	-72.1%	-	-	3.3%	20.6%	75.0%	-49.2%	246.7%	0.0%	14.1%
Recurring profit margin	4.6%	-0.3%	7.0%	6.4%	6.9%	11.2%	6.4%	18.7%	17.0%	17.7%
% of total	1.7%	-	2.1%	1.7%	1.8%	3.8%	1.6%	4.4%	4.3%	5.8%
Adjustments	120	-349	-103	-249	-201	-275	314	7	188	457

Source: Shared Research based on company data
Note: Figures may differ from company materials due to differences in rounding methods.

Subsegment sales	FY03/15	FY03/16	FY03/17	FY03/18	FY03/19	FY03/20	FY03/21	FY03/22	FY03/23	FY03/24
(JPYmn)	Act.	Act.	Act.	Act.	Act.	Act.	Act.	Act.	Act.	Est.
Sales	**26,068**	**28,746**	**28,964**	**34,109**	**39,558**	**37,896**	**39,294**	**43,813**	**48,144**	**51,000**
YoY	15.4%	10.3%	0.8%	17.8%	16.0%	-4.2%	3.7%	11.5%	9.9%	5.9%
Thermal Spraying (Parent)	19,176	21,933	22,309	26,183	30,400	28,221	30,141	33,043	36,184	33,859
YoY	17.5%	14.4%	1.7%	17.4%	16.1%	-7.2%	6.8%	9.6%	9.5%	-6.4%
% of total	73.6%	76.3%	77.0%	76.8%	76.8%	74.5%	76.7%	75.4%	75.2%	66.4%
Semiconductor and FPD equipment parts	8,380	10,069	10,003	13,474	17,134	14,102	18,176	20,643	23,260	19,557
YoY	38.4%	20.2%	-0.7%	34.7%	27.2%	-17.7%	28.9%	13.6%	12.7%	-15.9%
% of total	32.1%	35.0%	34.5%	39.5%	43.3%	37.2%	46.3%	47.1%	48.3%	38.3%
Semiconductor equipment	7,270	8,628	8,519	11,273	14,895	12,497	16,030	18,990	21,739	18,019
YoY	44.5%	18.7%	-1.3%	32.3%	32.1%	-16.1%	28.3%	18.5%	14.5%	-17.1%
% of total	27.9%	30.0%	29.4%	33.0%	37.7%	33.0%	40.8%	43.3%	45.2%	35.3%
FPD equipment	1,110	1,441	1,484	2,201	2,238	1,604	2,145	1,653	1,520	1,537
YoY	8.5%	29.8%	3.0%	48.3%	1.7%	-28.3%	33.7%	-22.9%	-8.0%	1.1%
% of total	4.3%	5.0%	5.1%	6.5%	5.7%	4.2%	5.5%	3.8%	3.2%	3.0%
Industrial machinery	3,752	4,072	4,050	4,218	4,154	4,782	3,965	3,707	3,802	4,923
YoY	11.4%	8.5%	-0.5%	4.1%	-1.5%	15.1%	-17.1%	-6.5%	2.6%	29.5%
% of total	14.4%	14.2%	14.0%	12.4%	10.5%	12.6%	10.1%	8.5%	7.9%	9.7%
Steelmaking machinery	3,041	3,438	3,497	3,697	3,662	3,899	3,166	3,450	3,582	3,651
YoY	1.7%	13.1%	1.7%	5.7%	-0.9%	6.5%	-18.8%	9.0%	3.8%	1.9%
% of total	11.7%	12.0%	12.1%	10.8%	9.3%	10.3%	8.1%	7.9%	7.4%	7.2%
Other applications	4,001	4,353	4,758	4,793	5,449	5,437	4,832	5,242	5,539	5,727
YoY	2.3%	8.8%	9.3%	0.7%	13.7%	-0.2%	-11.1%	8.5%	5.7%	3.4%
% of total	15.3%	15.1%	16.4%	14.1%	13.8%	14.3%	12.3%	12.0%	11.5%	11.2%
Other Surface Treatments	1,758	1,572	1,736	1,971	2,204	2,384	2,112	2,502	2,745	3,019
YoY	-1.8%	-10.6%	10.4%	13.5%	11.8%	8.2%	-11.4%	18.5%	9.7%	10.0%
% of total	6.7%	5.5%	6.0%	5.8%	5.6%	6.3%	5.4%	5.7%	5.7%	5.9%
Domestic Subsidiary	1,949	1,978	2,111	2,312	2,493	2,364	2,018	2,399	2,414	2,457
YoY	6.7%	1.5%	6.8%	9.5%	7.8%	-5.2%	-14.6%	18.9%	0.6%	1.8%
% of total	7.5%	6.9%	7.3%	6.8%	6.3%	6.2%	5.1%	5.5%	5.0%	4.8%
Overseas Subsidiaries	3,185	3,262	2,806	3,642	4,460	4,925	4,800	5,695	6,622	7,257
YoY	19.8%	2.4%	-14.0%	29.8%	22.5%	10.4%	-2.5%	18.6%	16.3%	9.6%
% of total	12.2%	11.3%	9.7%	10.7%	11.3%	13.0%	12.2%	13.0%	13.8%	14.2%
Royalty income	-	-	-	-	-	-	-	171	177	141
YoY	-	-	-	-	-	-	-	-	3.5%	-20.3%
% of total	-	-	-	-	-	-	-	0.4%	0.4%	0.3%
Physical vapor deposition (PVD) process	1,949	1,978	2,111	2,312	2,493	2,364	2,018	2,399	2,414	2,457
YoY	6.7%	1.5%	6.7%	9.5%	7.8%	-5.2%	-14.6%	18.9%	0.6%	1.8%
% of total	7.5%	6.9%	7.3%	6.8%	6.3%	6.2%	5.1%	5.5%	5.0%	4.8%
Toyota Diffusion (TD) process	881	803								
YoY	-5.9%	-8.9%	-	-	-	-	-			
% of total	3.4%	2.8%	-	-	-	-	-			
Zinc-alloy coating (ZAC) process	449	406								
YoY	-1.5%	-9.6%	-	-	-	-	-			
% of total	1.7%	1.4%	-	-	-	-	-			
Plasma transferred arc (PTA) process	428	364								
YoY	7.8%	-15.0%	-	-	-	-	-			

% of total	1.6%	1.3%	-	-	-	-	-
Other	3,186	3,263					
YoY	19.8%	2.4%	-	-	-	-	-
% of total	12.2%	11.4%	-	-	-		

Source: Shared Research based on company data
Notes: Figures may differ from company materials due to differences in rounding methods.
PVD treatment is performed by domestic subsidiary JCC

Stability of earnings supported by repeat demand from domestic customers

In the past, even when profit has fallen below forecast or decreased YoY, the company has maintained stable profitability with relatively little deviation in terms of earnings, despite its high degree of reliance on semiconductor and FPD sales. Shared Research believes that these stable earnings are underpinned by a thick customer base in industries other than semiconductors and FPDs and repeat demand for functional surface treatments that provide high added value. Shared Research also holds the view that TOCALO has successfully gained customer loyalty by successively launching high-end products in response to customer needs.

Capital expenditures, depreciation, and R&D expenses

TOCALO made significant capital expenditures of around JPY6.0bn in each year over the FY03/17–FY03/19 accounting periods. The purpose of these investments was to respond to heightened production in the semiconductor and FPD fields as well as to increase the production capacity of its domestic subsidiary. In FY03/23, capital expenditures were JPY4.9bn (+10.7% YoY). Its FY03/24 plan calls for capital expenditures of JPY5.0bn. This includes JPY2.6bn to strengthen the production system and improve efficiency at the Tokyo, Akashi, and Kitakyushu plants and put in place equipment to deal with anticipated robust semiconductor demand in Japan. Overseas, it earmarked JPY2.1bn for the construction of a new plant in Taiwan. The company generally targets an R&D expenses-to-sales ratio of about 3%, but is looking for 3.1% in FY03/24.

	FY03/15	FY03/16	FY03/17	FY03/18	FY03/19	FY03/20	FY03/21	FY03/22	FY03/23	FY03/24
(JPYmn)	Cons.	Cons.	Cons.	Cons.	Cons.	Cons.	Cons.	Cons.	Cons.	Cons.
Capital expenditures	2,678	3,730	5,936	6,361	5,965	2,313	4,822	4,385	4,855	4,875
Depreciation	1,440	1,560	1,703	1,948	2,658	2,991	2,771	2,783	2,987	3,056
R&D expenses	746	862	834	905	1,003	1,159	1,296	1,296	1,400	1,534
R&D ratio	2.9%	3.0%	2.9%	2.7%	2.5%	3.1%	3.3%	3.0%	2.9%	3.3%

Source: Shared Research based on company data

R&D structure

TOCALO's R&D is supported by two pillars: preemptive research and product development in response to customer need. The company has also identified three priority areas for R&D: thermal spraying technology development (development of components for general industrial machinery and equipment, thermal spraying treatment development); semiconductor component technology (development of components used in semiconductor and FPD manufacturing equipment through thermal spraying and other technologies); and coating method development (laser application, PVD, CVD, DLC, TD, ZAC) and organic coating.

The group's R&D lab for thermal spraying technology is central to its R&D activities. While working to develop new treatments and coating films, improve understanding of technological trends, and strengthen industrial and academic collaboration, TOCALO aims to improve its R&D by raising its academic sensitivity by selecting and applying elemental technologies and gathering technical information. Meanwhile, the sales, manufacturing, and production technology departments at each of its factories and the R&D lab are collaborating to swiftly develop products that provide an immediate response to diversifying customer need and to resolve issues concerning production technology.

Furthermore, consolidated subsidiary Japan Coating Center Co., Ltd. is also lending its cooperation to R&D concerning physical vapor deposition (PVD), diamond-like carbon (DLC), and other thin coating treatments. In FY03/23, total R&D expenses for the entire group were JPY1.4bn. Details for each segment are indicated below (a segment-by-segment breakdown of the group's R&D expenses has not been included due to difficulty determining amounts that should be allocated to each segment).

(1) Thermal Spraying (Parent)

In pursuit of sustainable growth, the company is promoting the development of applications for surface treatment technology on high-performance components, focusing on fields such as semiconductors and FPD; new materials; environment and energy; transport aircraft; and medical care. In the semiconductor field, TOCALO is conducting ongoing development of electrostatic chucks and plasma-resistant coating technology for manufacturing equipment components. In particular, the company focuses on new coating materials and methods for the treatment of plasma etching equipment parts, as well as related evaluation technologies. Against a backdrop of active application of IoT and big data, this focus addresses the need for high-performance coating that can respond to production of integrated circuits with nano-level linewidth.

In the area of new materials, TOCALO helps blast furnace manufacturers by developing antifriction sprayed coatings for components that undergo severe stress from impact or other causes. The company is also developing a non-adhesive coating for conveyor rolls used by film manufacturers and the paper and pulp industry. In the environment and energy field, the company developed a high-performance, heat-shielding ceramic coating that protects high-temperature components in gas turbine generators and other equipment. This thermal spraying method is receiving worldwide attention, and the company is pursuing further development.

TOCALO is also actively working on developing a coating treatment that combines thermal spraying and laser technology. Thanks to these efforts, the company was able to trial manufacture a coating that offered dramatically improved adhesiveness and abrasion/corrosion resistance compared with the conventional thermal spray coating. The company began offering this coating to specific customers, and plans to conduct relevant product development while simultaneously evaluating its performance.

(2) Domestic Subsidiary

Through its domestic subsidiary, Japan Coating Center Co., Ltd., the company primarily develops PVD and DLC coatings. In FY03/20, it focused on developing a coating for semiconductor manufacturing equipment parts, which it has begun delivering to some customers. In addition, in the area of DLC coatings, it refined its existing Neo Slick series. In terms of production techniques, it installed automatic testing equipment, worked to automate in-process work, and began initiatives to improve quality and efficiency.

(3) Other businesses

Aside from thermal spraying, TOCALO conducts ongoing product development related to functional coatings produced through the TD process, ZAC, PTA process, and other methods. In terms of developing organic and inorganic coatings, the company is testing the application of functional thin coatings in the areas of medical care and food. Projects include the development of coatings that prevent adhesion with living organisms and blood; the application of coatings to both water-resistant and hydrophilic medical devices; and the development and evaluation of corrosion-resistant coatings. Additionally, in the area of laser cladding technology (a new coating method), aiming to establish it as repair technology for general industrial machinery, the company evaluated the electrochemical characteristics and residual stress of the coatings. It plans to continue the active development of coatings utilizing laser technology.

(4) Patents

The group actively submits patent applications to secure the rights to its technology and coating products. In FY03/23, it held 140 patents in Japan and 122 patents overseas. The company submitted 33 patent applications in FY03/23 and had 22 patents registered.

Profitability analysis

Profit margins	FY03/15	FY03/16	FY03/17	FY03/18	FY03/19	FY03/20	FY03/21	FY03/22	FY03/23	FY03/24
(JPYmn)	Cons.	Cons.	Cons.	Cons.	Cons.	Cons.	Cons.	Cons.	Cons.	Cons.
Gross profit	8,964	9,727	10,536	12,646	13,761	12,780	14,814	16,585	17,365	16,243
Gross profit margin	34.4%	33.8%	36.4%	37.1%	34.8%	33.7%	37.7%	37.9%	36.1%	34.8%
Operating profit	4,568	4,806	5,646	7,110	7,741	6,550	8,890	10,255	10,558	9,197
Operating profit margin	17.5%	16.7%	19.5%	20.8%	19.6%	17.3%	22.6%	23.4%	21.9%	19.7%
EBITDA	6,064	6,423	7,361	9,058	10,399	9,541	11,661	13,038	13,545	12,253
EBITDA margin	23.3%	22.3%	25.4%	26.6%	26.3%	25.2%	29.7%	29.8%	28.1%	26.2%
Net margin	11.6%	10.5%	14.1%	14.2%	13.8%	11.6%	13.9%	15.8%	15.3%	13.5%
Financial ratios										
ROA (RP-based)	13.9%	13.5%	14.1%	15.2%	14.7%	11.5%	14.2%	15.8%	15.3%	12.7%
ROE	12.2%	11.2%	13.9%	14.9%	15.2%	11.3%	12.9%	14.8%	14.3%	11.6%
Total asset turnover	0.74	0.77	0.70	0.70	0.72	0.64	0.63	0.66	0.67	0.61
Inventory turnover	9.8	10.1	9.7	8.9	8.5	8.7	9.0	8.5	7.4	6.2
Days in inventory	37.3	36.2	37.5	41.1	43.1	42.0	40.4	42.7	49.1	58.9
Working capital	7,329	7,953	10,694	13,113	13,647	13,136	12,218	14,310	15,808	17,192
Current ratio	256.8%	264.4%	258.9%	184.6%	207.7%	281.2%	271.8%	272.7%	272.1%	282.0%
Quick ratio	228.8%	235.6%	232.0%	164.4%	184.1%	258.6%	248.6%	246.3%	238.9%	246.6%
OCF / Current liabilities	0.58	0.56	0.63	0.66	0.59	0.54	0.90	0.77	0.72	0.55
Net debt / Equity	-26.4%	-26.0%	-15.7%	-18.4%	-20.4%	-20.4%	-21.7%	-24.4%	-24.2%	-19.7%
OCF / Total liabilities	0.5	0.5	0.4	0.5	0.5	0.4	0.6	0.6	0.6	0.4
Cash conversion cycle (days)	89.2	89.1	n.a.	56.4	54.0	74.2	70.4	62.7	69.0	79.6
Change in working capital	798	624	2,741	2,419	534	-511	-918	2,092	1,498	1,384

Cash conversion cycle	FY03/15	FY03/16	FY03/17	FY03/18	FY03/19	FY03/20	FY03/21	FY03/22	FY03/23	FY03/24
	Cons.	Cons.	Cons.	Cons.	Cons.	Cons.	Cons.	Cons.	Cons.	Cons.
Accounts receivable turnover	3.3	3.2	3.0	3.2	3.4	3.2	3.5	3.9	3.9	3.6
Days in accounts receivable	112.0	112.6	120.5	115.8	107.8	112.8	103.5	94.8	93.4	101.8
Inventory turnover	9.8	10.1	9.7	8.9	8.5	8.7	9.0	8.5	7.4	6.2
Days in inventory	37.3	36.2	37.5	41.1	43.1	42.0	40.4	42.7	49.1	58.9
Accounts payable turnover	6.1	6.1	n.a.	3.6	3.8	4.5	5.0	4.9	5.0	4.5
Days in accounts payable	60.1	59.7	n.a.	100.4	96.9	80.6	73.5	74.8	73.6	81.0
Cash conversion cycle (days)	89.2	89.1	n.a.	56.4	54.0	74.2	70.4	62.7	69.0	79.6

Note: Accounts payable turnover is calculated using the previous method (not including electronically recorded monetary obligations) through FY03/16 and the current method (including electronically recorded monetary obligations) from FY03/18.

Assets	FY03/15	FY03/16	FY03/17	FY03/18	FY03/19	FY03/20	FY03/21	FY03/22	FY03/23	FY03/24
(JPYmn)	Cons.	Cons.	Cons.	Cons.	Cons.	Cons.	Cons.	Cons.	Cons.	Cons.
Total current assets	21,527	20,830	23,000	25,941	27,749	31,837	33,140	36,365	38,827	40,342
(% of total assets)	58.7%	54.8%	51.9%	49.3%	48.4%	52.1%	51.6%	52.3%	52.3%	51.8%
Accounts receivable	8,593	9,138	9,986	11,654	11,716	11,712	10,571	12,176	12,476	13,587
(% of total assets)	23.4%	24.1%	22.5%	22.1%	20.5%	19.2%	16.5%	17.5%	16.8%	17.4%
Total fixed assets	15,120	17,163	21,332	26,722	29,529	29,285	31,043	33,152	35,436	37,597
(% of total assets)	41.3%	45.2%	48.1%	50.7%	51.6%	47.9%	48.4%	47.7%	47.7%	48.2%
Investment securities	240	682	684	1,015	886	1,317	1,322	1,324	1,325	1,331
(% of total assets)	0.7%	1.8%	1.5%	1.9%	1.5%	2.2%	2.1%	1.9%	1.8%	1.7%
Total assets	36,647	37,992	44,331	52,664	57,278	61,122	64,183	69,517	74,263	77,940
Total asset turnover (times/year)	0.74	0.77	0.70	0.70	0.72	0.64	0.63	0.66	0.67	0.61
Liabilities	**FY03/15**	**FY03/16**	**FY03/17**	**FY03/18**	**FY03/19**	**FY03/20**	**FY03/21**	**FY03/22**	**FY03/23**	**FY03/24**
(JPYmn)	Cons.	Cons.	Cons.	Cons.	Cons.	Cons.	Cons.	Cons.	Cons.	Cons.
Total current liabilities	8,383	7,877	8,884	14,054	13,362	11,323	12,193	13,334	14,272	14,308
Accounts payable	3,189	3,036	1,229	1,434	1,271	1,157	1,194	1,397	1,425	1,477
Short-term debt	943	511	905	879	1,218	2,153	1,802	1,460	1,490	1,989
Accounts payable turnover (times/year)	6.1	6.1	n.a.	3.6	3.8	4.5	5.0	4.9	5.0	4.5
Current ratio	256.8%	264.4%	258.9%	184.6%	207.7%	281.2%	271.8%	272.7%	272.1%	282.0%
Total liabilities	9,495	8,922	12,079	16,524	17,613	18,487	17,291	17,058	16,620	18,015
Total interest-bearing debt	1,227	628	3,324	2,580	4,555	8,198	6,069	4,285	2,939	5,103
Dependence on interest-bearing debt	3.3%	1.7%	7.5%	4.9%	8.0%	13.4%	9.5%	6.2%	4.0%	6.5%
Net debt	-7,177	-7,569	-5,063	-6,654	-8,105	-8,691	-10,158	-12,825	-13,973	-11,802
Dependence on net interest-bearing debt	-19.6%	-19.9%	-11.4%	-12.6%	-14.2%	-14.2%	-15.8%	-18.4%	-18.8%	-15.1%
Total liabilities and net assets	36,647	37,992	44,331	52,664	57,278	61,122	64,183	69,517	74,263	77,940
Shareholders' equity	**FY03/15**	**FY03/16**	**FY03/17**	**FY03/18**	**FY03/19**	**FY03/20**	**FY03/21**	**FY03/22**	**FY03/23**	**FY03/24**
	Cons.	Cons.	Cons.	Cons.	Cons.	Cons.	Cons.	Cons.	Cons.	Cons.
Shareholders' equity (JPYmn)	25,982	27,779	30,647	34,174	37,560	40,263	44,201	49,099	53,839	55,460
Equity ratio	71.5%	73.3%	69.1%	64.9%	65.6%	65.9%	68.9%	70.6%	72.5%	71.2%
Net interest-bearing debt (JPYmn)	1,227	628	3,324	2,580	4,555	8,198	6,069	4,285	2,939	5,103
Net debt / Equity ratio	0.05	0.02	0.11	0.08	0.12	0.20	0.14	0.09	0.05	0.09

Source: Shared Research based on company data

Note: Figures may differ from company materials due to differences in rounding methods.

Market and value chain

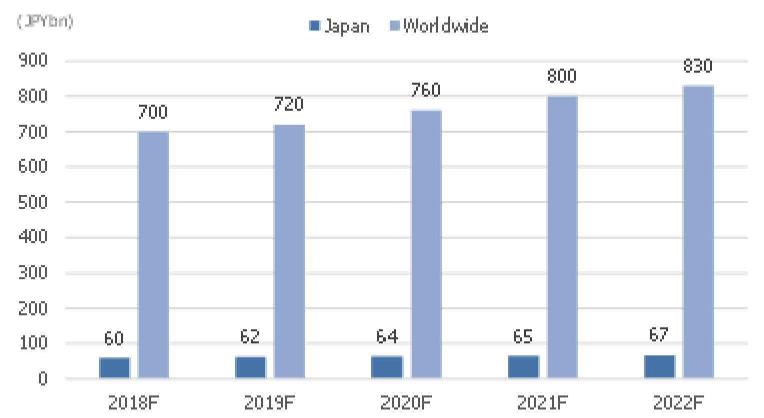
Note: The key figures in the tables and the description have not yet been updated. We will update them at a later date based on market data.

Scale of thermal spraying market

The thermal spraying industry broadly divides into companies that conduct thermal spraying internally and companies that perform thermal spraying as a contracted service. The market for contracted treatment in Japan was worth an estimated JPY60.0bn in 2018, while the global market was valued at about JPY700.0bn (Source: Yano Research Institute). We understand the company holds the top market share in Japan, at more than 40%.

Some competitors overseas sell thermal spraying materials and equipment in addition to providing contracted treatment services, but TOCALO specializes in services. Overseas sales accounted for 23.3% of the company's overall sales in FY03/23, primarily coming from Japanese companies that have expanded abroad. The company has concluded a number of licensing agreements with companies overseas.

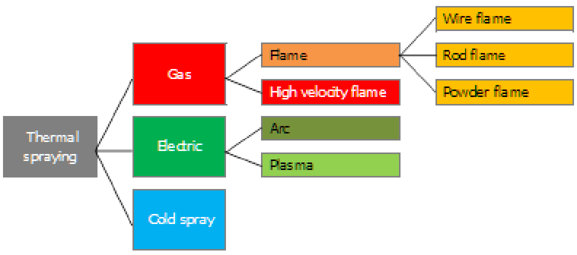
Thermal spraying market forecasts (Japan, worldwide)



Source: Shared Research based on data from the 2019 edition of *Thermal Spraying Market* from Yano Research Institute Ltd.

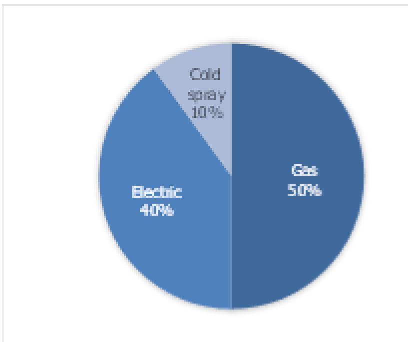
In 2018, gas-based thermal spraying methods accounted for 50% of the Japanese thermal spraying market, while electricity-based methods accounted for 40%, and cold-spray methods accounted for 10% (Source: Yano Research Institute).

Classification of thermal spraying methods



Source: Shared Research based on data obtained from the Japan Thermal Sprayers Association

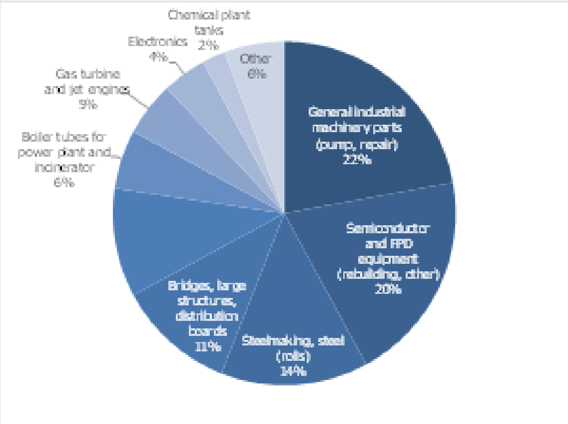
Breakdown of thermal spraying market (JPY60.0bn in FY2018) by method



Source: Shared Research based on data from the 2019 edition of Thermal Sprayers Association
Thermal Spraying Market from Yano Research Institut

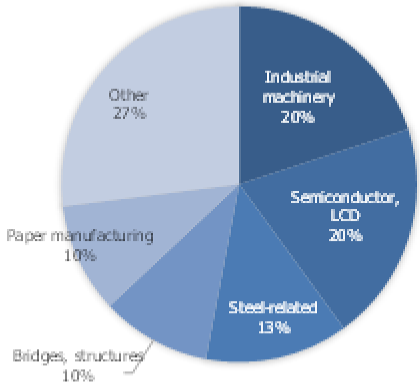
By areas of application, 20% of thermal spraying in Japan is associated with industrial equipment, 20% semiconductors and flat panel displays (FPDs), 13% steelmaking, 10% bridges and structures, 10% paper manufacturing, and 27% other uses (2018 actual; Yano Research).

Breakdown of FY2012 thermal spraying market (JPY43.5bn) by field of demand



Source: Shared Research based on data obtained from the 2013 edition of Status and Outlook of the *Thermal Spraying Market* from Digital Research, Inc.

Breakdown of FY2018 thermal spraying market (JPY60.0bn) by field of demand



Source: Shared Research based on data from the 2019 edition of *Thermal Spraying Market* from Yano Research Institute Ltd.

Sales of semiconductor equipment by Japan-based manufacturers (Source: Semiconductor Equipment Association of Japan [SEAJ]) are highly linked with TOCALO's sales in the semiconductor field. According to the SEAJ forecast announced in January 2022, sales of Japanese semiconductor equipment in FY2020 totaled JPY2.3tn (+7.9% YoY) and sales of Japanese FPD manufacturing equipment totaled JPY420.0bn (-11.7% YoY), for a total of JPY2.8tn (+7.9% YoY). At TOCALO (parent), sales in the semiconductor and FPD fields were JPY18.2bn (+28.9% YoY).

Japan-based manufacturing equipment sales (JPYmn)										Forecast		
(JPYmn)	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Semiconductor	1,127,800	1,292,100	1,308,900	1,564,200	2,043,600	2,247,900	2,073,000	2,383,500	3,443,000	3,684,000	3,499,800	4,199,700
YoY	9.7%	14.6%	1.3%	19.5%	30.6%	10.0%	-7.8%	15.0%	44.5%	7.0%	-5.0%	20.0%
FPD	348,500	271,700	299,300	485,700	491,600	536,400	475,800	463,800	480,900	452,000	361,600	542,500
YoY	66.8%	-22.0%	10.2%	62.3%	1.2%	9.1%	-11.3%	-2.5%	3.7%	-6.0%	-20.0%	50.0%
Total	1,476,300	1,563,800	1,608,200	2,049,900	2,535,200	2,784,300	2,548,800	2,847,300	3,923,900	4,136,000	3,861,400	4,742,200
YoY	19.3%	5.9%	2.8%	27.5%	23.7%	9.8%	-8.5%	11.7%	37.8%	5.4%	-6.6%	22.8%

TOCALO sales (JPYmn)	FY03/14	FY03/15	FY03/16	FY03/17	FY03/18	FY03/19	FY03/20	FY03/21	FY03/22	FY03/23	FY03/24
(JPYmn)	Act.	Act.	Act.	Act.	Act.	Act.	Act.	Act.	Act.	Act.	Est.
Semiconductor	5,030	7,270	8,628	8,519	11,273	14,895	12,497	16,030	18,990	21,739	19,400
YoY	-0.3%	44.5%	18.7%	-1.3%	32.3%	32.1%	-16.1%	28.3%	18.5%	14.5%	-10.8%
FPD	1,023	1,110	1,441	1,484	2,201	2,238	1,604	2,145	1,653	1,520	1,300
YoY	69.1%	8.5%	29.8%	3.0%	48.3%	1.7%	-28.3%	33.7%	-22.9%	-8.0%	-14.5%
Total	6,054	8,380	10,069	10,003	13,474	17,134	14,102	18,176	20,643	23,260	20,700
YoY	7.1%	38.4%	20.2%	-0.7%	34.7%	27.2%	-17.7%	28.9%	13.6%	12.7%	-11.0%

Source: Shared Research based on data obtained from the company and the Semiconductor Equipment Association of Japan

Competitive landscape

Note: Key figures in this section and the tables included therein remain unchanged and will be updated when the company announces its Q1 performance after annual securities reports (both its own and those of its competitors) have been issued for FY03/24.

Domestic competitors

TOCALO is the sole listed company in the Japanese thermal spraying market, and boasts a share over 40%. The rest of the market is crowded with small- and medium-sized companies that each hold shares of just a few percent. The market includes some affiliates of major listed companies such as Nippon Steel Hardfacing Corporation, but it also houses a large number of independent companies like TOCALO that provide contracted treatment services.

Praxair Surface Technologies K.K.

Praxair Surface Technologies K.K. was established in Japan in 1960. It is a Japanese subsidiary of Praxair Surface Technologies, Inc. in the United States, which is expanding on a global scale. Praxair's thermal spraying and surface treatment technologies cover a variety of fields, including aerospace, nuclear power, steelworking, petrochemical, plastics, electronics, and industries related to printing.

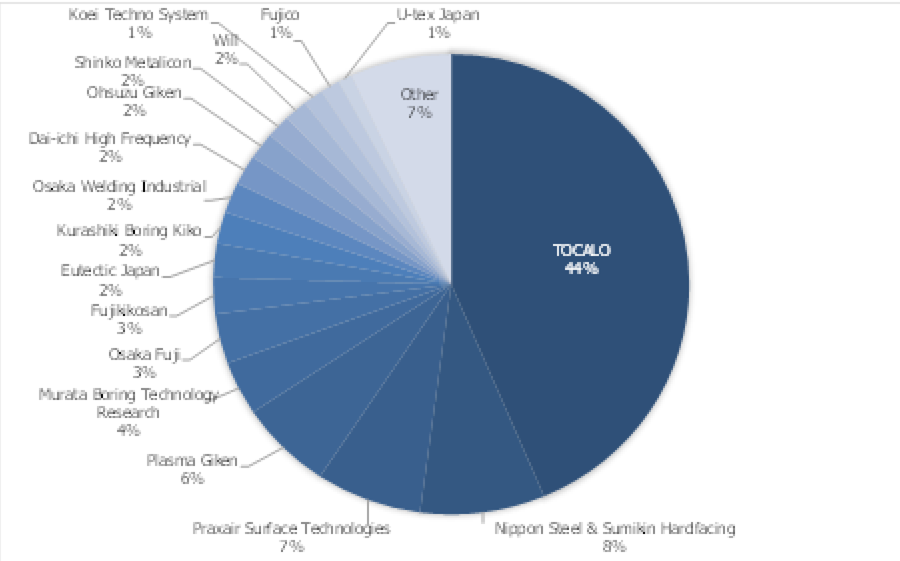
Nippon Steel Hardfacing Corporation (former name: Nippon Steel and Sumikin Hardfacing Co., Ltd.)

Nippon Steel Hardfacing Corporation came into existence in 1960 as the Nippon Hardfacing Co., Ltd., which was originally a part of the Yawata Iron & Steel Co., Ltd. (currently, the Nippon Steel Corporation [TSE Prime: 5401]) and specialized in surface hardening technology. Later, as the sole surface treatment provider in the Nippon Steel group, it worked to minimize lifecycle costs for rolls (excluding rolling mill rolls) and peripheral devices mainly used in the steel industry, with a core focus on the development of materials for welding and thermal spraying and relevant application techniques. In addition to its business activities in Japan, Nippon Steel Hardfacing began expanding globally in the 1990s, starting with North and South America. It is working to establish global supply systems primarily targeting the worldwide steel industry through a variety of efforts, including its 2012 establishment of a subsidiary in Thailand as a supply base for East Asia.

Plasma Giken Co., Ltd.

Established in 1980, Plasma Giken Co., Ltd. specializes in thermal spraying treatment. It principally provides contracted treatment services ranging from thermal spraying (plasma spraying, arc spraying, high velocity flame spraying, and detonation spraying) to cold spraying, from development to trial manufacturing, and from small- and medium-sized lots to mass production.

Shares of FY2012 cermet spraying market (JPY9.5bn)



Source: Shared Research based on data obtained from the 2013 edition of *Status and Outlook of the Thermal Spraying Market* from Digital Research, Inc.

Strengths and weaknesses

Strengths

A portfolio of diverse surface treatments that makes the company the leader in a niche market

One of TOCALO's strengths is its ability to handle a wide variety of surface treatments, ranging from thick coating (e.g., thermal spraying, TD process, ZAC coating, and PTA process) to thin coating (e.g., PVD process). Of the different categories in thermal spraying (metalized contact thermal spraying, maintenance thermal spraying, and functional thermal spraying), the company excels in functional thermal spraying, which is high value-added and has strong growth potential. It has captured more than 40% of the thermal spraying market in Japan (scale of about JPY60.0bn in 2018; source: Yano Research

Institute) and holds the top share, whereas its competitors are all small- and medium-sized companies with market shares of 10% or less. These companies specialize in specific fields, and thus, are unable to handle a wide range of surface treatments that span from thick to thin coatings, as TOCALO can.

Ability to acquire top-class customers in major industries through joint development focused on meeting future needs

Surface treatment centered around thermal spraying has become a standard technology in a wide variety of fields, ranging from steel to semiconductors, and its demand has been on the rise year by year. One of TOCALO's strengths is that it has acquired top-class customers in major industries through joint development focused on needs of the future. In the past, most demand came from the steel and paper and pulp industries, but sales from the semiconductor and FPD equipment industries currently account for nearly 48% of the company's sales in FY03/23. One of the largest drivers of its semiconductor-related business is Tokyo Electron, which accounted for 35.7% of consolidated sales in FY03/22. TOCALO and Tokyo Electron have established a close relationship through which they conduct joint development to further improve surface treatments in the semiconductor and FPD fields, both areas of intense technological innovation. The company's engineers make frequent visits to customer sites to uncover hidden needs, and work with the customers to jointly discover solutions.

Stable earnings due to high domestic repeat demand for technologies with added value

In the past, even when profit has fallen below forecast or decreased YoY, the company has maintained stable profitability with relatively little deviation in terms of earnings, despite its high degree of reliance on semiconductor and FPD-related sales. Shared Research believes that these stable earnings are underpinned by a thick customer base in industries other than semiconductors and FPDs and repeat demand for functional surface treatments that provide high added value. Recoating demand is generated when components and parts that have undergone thermal spraying or other types of surface treatments become worn or deteriorate over time. The company does not merely provide maintenance through its recoating services; it also captures repeat demand for higher added value by proposing and providing products and services with heightened functionality.

Weaknesses

A lack of peripheral technologies and mass production bases necessary to process large orders

TOCALO has adopted a labor-intensive, made-to-order production system through which it customizes all surface treatments to fit the specifications of individual customers. Some of the company's competitors overseas develop, manufacture, and sell thermal spraying materials and equipment in addition to providing contracted treatment services, but TOCALO specializes in services. TOCALO's surface treatment lines, mainly thermal spraying, are designed to suit workpieces that have relatively large surface areas, and are not geared toward mass processing of small components. Accordingly, the company is currently unable to handle high volume components such as automobile parts, which are generally processed in quantities as large as one million units per year. We think the company lacks the peripheral technologies (including internal production of thermal spraying materials and equipment) and mass production bases necessary to handle high volume orders.

Lackluster cultivation of overseas markets

The global thermal spraying market was valued at about JPY700.0bn in 2018 (Source: Yano Research Institute). Although TOCALO has the top market share in Japan, it has not yet cultivated much of the overseas market, which is at least ten times the size of Japan's market. In FY03/22, overseas sales only accounted for 21.1% of the company's sales, and mainly came from Japanese companies that had expanded overseas. The company has concluded many licensing agreements with overseas companies but rarely cultivates local customers on its own. Shared Research believes the company's market development abroad is somewhat lackluster compared with that of the many Japanese industrial machinery makers that have ventured overseas. Anticipating growth in its recoating business abroad, the company has expanded its overseas bases, primarily in Asia. However, it often misses out on repeat demand as recoating is often handled by local companies, particularly for low-end technologies where there is a large number of new market entrants (high-end technologies also apply in the case of South Korea). Shared Research surmises that TOCALO's strategy of obtaining royalty revenue through technological licensing is one factor lowering the barrier of entry for local companies.

Low profitability of the Other Surface Treatments business

The recurring profit margin (before segment adjustments) in Other Surface Treatments, which was 17.0% in FY03/23, paled in comparison to the 23.1% profit margin in Thermal Spraying, 14.6% in Domestic Subsidiary (Japan Coating Center), and

25.0% in Overseas Subsidiaries. Although Other Surface Treatments offers a variety of treatments (TD process, ZAC, and PTA process), their sales are only a few hundred million yen each. Despite this segment's involvement with the industrial equipment industry, it has not received enough orders to be able to demonstrate any volume efficiency. Shared Research believes that all of these treatment technologies are gradually becoming legacy technologies, which causes them to remain niche markets, inhibiting market expansion.

Historical results and financial statements

Income statement

Income statement	FY03/15	FY03/16	FY03/17	FY03/18	FY03/19	FY03/20	FY03/21	FY03/22	FY03/23	FY03/24
(JPYmn)	Cons.	Cons.	Cons.	Cons.	Cons.	Cons.	Cons.	Cons.	Cons.	Cons.
Sales	**26,068**	**28,746**	**28,964**	**34,109**	**39,558**	**37,896**	**39,294**	**43,813**	**48,144**	**46,735**
YoY	15.4%	10.3%	0.8%	17.8%	16.0%	-4.2%	3.7%	11.5%	9.9%	-2.9%
Cost of sales	17,104	19,020	18,428	21,462	25,797	25,116	24,479	27,227	30,778	30,491
Gross profit	**8,964**	**9,727**	**10,536**	**12,646**	**13,761**	**12,780**	**14,814**	**16,585**	**17,365**	**16,243**
YoY	18.5%	8.5%	8.3%	20.0%	8.8%	-7.1%	15.9%	12.0%	4.7%	-6.5%
Gross profit margin	34.4%	33.8%	36.4%	37.1%	34.8%	33.7%	37.7%	37.9%	36.1%	34.8%
SG&A expenses	4,396	4,921	4,890	5,536	6,019	6,229	5,924	6,329	6,807	7,046
YoY	7.7%	11.9%	-0.6%	13.2%	8.7%	3.5%	-4.9%	6.8%	7.6%	3.5%
SG&A ratio	16.9%	17.1%	16.9%	16.2%	15.2%	16.4%	15.1%	14.4%	14.1%	15.1%
Operating profit	**4,568**	**4,806**	**5,646**	**7,110**	**7,741**	**6,550**	**8,890**	**10,255**	**10,558**	**9,197**
YoY	31.2%	5.2%	17.5%	25.9%	8.9%	-15.4%	35.7%	15.4%	3.0%	-12.9%
Operating profit margin	17.5%	16.7%	19.5%	20.8%	19.6%	17.3%	22.6%	23.4%	21.9%	19.7%
Non-operating income	376	294	211	283	386	367	72	337	475	529
Non-operating expenses	54	71	55	30	52	105	48	21	29	63
Recurring profit	**4,890**	**5,028**	**5,801**	**7,363**	**8,076**	**6,812**	**8,914**	**10,571**	**11,003**	**9,662**
YoY	33.7%	2.8%	15.4%	26.9%	9.7%	-15.7%	30.9%	18.6%	4.1%	-12.2%
Recurring profit margin	18.8%	17.5%	20.0%	21.6%	20.4%	18.0%	22.7%	24.1%	22.9%	20.7%
Extraordinary gains	3	3	5	2	85	0	13	1	4	7
Extraordinary losses	51	342	3	198	83	17	361	124	18	13
Income taxes	1,646	1,467	1,540	2,008	2,273	2,038	2,675	3,091	3,150	2,731
Implied tax rate	34.0%	31.3%	26.5%	28.0%	28.1%	30.0%	31.2%	29.6%	28.7%	28.3%
Net income attributable to non-controlling interests	164	206	193	322	363	351	428	447	487	596
Net income attributable to owners of the parent	**3,031**	**3,016**	**4,070**	**4,836**	**5,441**	**4,404**	**5,463**	**6,909**	**7,350**	**6,326**
YoY	39.3%	-0.5%	34.9%	18.8%	12.5%	-19.1%	24.0%	26.5%	6.4%	-13.9%
Net margin	11.6%	10.5%	14.1%	14.2%	13.8%	11.6%	13.9%	15.8%	15.3%	13.5%

Source: Shared Research based on company data

Note: Figures may differ from company materials due to differences in rounding methods.

Non-operating income and expenditures

- For FY03/24, the company reported JPY466mn in non-operating income, roughly level (+JPY20mn) YoY. The primary decisive factors behind this result were an increase in foreign exchange gains (from JPY366mn in FY03/23 to JPY378mn in FY03/24), a decline in financial income (from JPY30mn in FY03/23 to JPY28mn in FY03/24), a rise in commission expenses (from JPY6mn in FY03/23 to JPY25mn in FY03/24), and an upturn in compensation expenses (from JPY13mn in FY03/23 to JPY33mn in FY03/24). For the 10 years beginning with FY03/14 and ending with FY03/23, the company reports average non-operating income of JPY251mn. Accordingly, non-operating income was JPY215mn higher than this average in FY03/24.

- Foreign exchange gains (or losses) are the most significant variable impacting the company's non-operating income (or expenses), and this metric fluctuates based primarily on end-of-period revaluations of foreign currency denominated receivables and payables. As the yen continues to weaken, foreign exchange gains booked as non-operating income have trended upward. Consequently, the company's non-operating income reached its highest level of the most recent 10-year-period (JPY466mn) in FY03/24. Previously, the company had booked its royalty income as non-operating income. However, the company began recording royalty income as sales starting in FY03/22. The company has published retroactively adjusted figures reflecting this change for FY03/21 but has not done so for FY03/20 or previous accounting periods. Therefore, the company's data concerning non-operating income (or expenses) over the most recent 10-year-period lacks continuity and the figures provided are for purposes of reference only.

Extraordinary profit and loss

- Tocalo reported extraordinary loss of JPY6mn for FY03/24, an improvement of JPY8mn compared to extraordinary loss of JPY14mn in FY03/23. The primary decisive factors behind this result were an increase in gains on the sale of non-current assets (JPY3mn; booked as extraordinary income) and a decrease in losses on the sale of non-current assets (JPY5mn; booked as extraordinary loss). For the 10-year period beginning with FY03/14 and ending with FY03/23, the company reports an average annual extraordinary loss of JPY106mn. The extraordinary loss reported for FY03/24 (JPY14mn) represents an improvement of JPY100mn compared to this average, but this metric does not have a particularly significant impact on the company's bottom line. Tocalo has previously reported annual extraordinary loss of over

JPY300mn when booking an impairment loss. However, the bottom-line impact of this extraordinary loss remained minimal during this accounting period as well.

Balance sheet

Balance sheet	FY03/15	FY03/16	FY03/17	FY03/18	FY03/19	FY03/20	FY03/21	FY03/22	FY03/23	FY03/24
(JPYmn)	Cons.	Cons.	Cons.	Cons.	Cons.	Cons.	Cons.	Cons.	Cons.	Cons.
Assets										
Cash and deposits	8,404	8,197	8,387	9,234	12,660	16,889	16,227	17,110	16,912	16,905
Notes and accounts receivable	8,593	9,138	9,986	11,654	11,716	11,712	10,571	12,176	12,476	13,587
Operational investment securities	2,000	1,000	2,000	2,000	0	0	3,000	3,000	4,000	4,000
Inventories	1,925	1,851	1,937	2,893	3,202	2,581	2,841	3,531	4,757	5,082
Deferred tax assets	486	489	499	0	0	0	0	0	0	0
Allowance for doubtful accounts	-67	-72	-50	-54	-48	-20	-10	-4	-19	-22
Other	186	227	241	214	219	675	511	552	701	790
Total current assets	**21,527**	**20,830**	**23,000**	**25,941**	**27,749**	**31,837**	**33,140**	**36,365**	**38,827**	**40,342**
Buildings and structures	5,433	6,325	6,247	9,871	12,974	12,416	12,273	14,866	14,210	13,816
Machinery, equipment and vehicles	2,275	2,321	2,484	3,941	4,476	4,207	3,644	3,815	3,559	3,979
Land	4,982	6,003	7,305	8,246	8,652	8,648	9,050	10,189	11,918	11,975
Lease assets	14	21	110	88	72	50	36	33	24	17
Construction in progress	1,038	1,200	3,828	2,014	670	742	2,849	866	2,223	4,170
Other fixed assets	313	281	332	426	548	720	739	969	1,100	1,165
Total tangible fixed assets	**14,055**	**16,151**	**20,305**	**24,589**	**27,395**	**26,786**	**28,594**	**30,740**	**33,037**	**35,125**
Total intangible assets	**467**	**97**	**115**	**260**	**295**	**338**	**264**	**231**	**235**	**257**
Investment securities	240	682	684	1,015	886	1,317	1,322	1,324	1,325	1,331
Deferred tax assets	92	100	112	712	819	668	606	592	557	288
Allowance for doubtful accounts	0	0	0	-28	-14	0	-5	0	0	-2
Other	265	132	115	172	147	175	260	264	280	596
Investments and other assets	**597**	**914**	**911**	**1,871**	**1,838**	**2,160**	**2,183**	**2,180**	**2,163**	**2,215**
Total fixed assets	**15,120**	**17,163**	**21,332**	**26,722**	**29,529**	**29,285**	**31,043**	**33,152**	**35,436**	**37,597**
Total assets	**36,647**	**37,992**	**44,331**	**52,664**	**57,278**	**61,122**	**64,183**	**69,517**	**74,263**	**77,940**
Liabilities										
Notes and accounts payable	3,189	3,036	1,229	1,434	1,271	1,157	1,194	1,397	1,425	1,477
Electronically recorded monetary obligations	0	0	3,157	5,991	5,004	3,660	3,849	4,721	4,869	5,770
Short-term debt	943	511	905	879	1,218	2,153	1,802	1,460	1,490	1,989
Short-term borrowings	571	165	151	155	112	47	15	0	0	646
Current portion of bonds	364	339	730	702	1,082	2,083	1,765	1,447	1,447	1,297
Lease obligations	8	7	24	22	24	23	22	13	43	46
Income taxes payable	1,043	922	965	1,353	1,361	737	1,722	1,816	1,726	921
Accounts payable-other, and accrued expenses	1,966	2,131	2,745	2,555	2,755	1,854	1,970	2,170	2,497	2,437
Provision for bonuses	768	836	891	993	1,084	1,018	1,277	1,366	1,488	1,323
Other	474	441	-1,007	849	669	744	379	404	777	391
Total current liabilities	**8,383**	**7,877**	**8,884**	**14,054**	**13,362**	**11,323**	**12,193**	**13,334**	**14,272**	**14,308**
Long-term debt	284	117	2,419	1,701	3,337	6,045	4,267	2,825	1,449	3,114
Long-term borrowings	273	100	2,324	1,628	3,282	6,015	4,249	2,802	1,355	3,058
Lease obligations	11	17	95	73	55	30	18	23	94	56
Deferred tax assets	297	116	29	0	0	0	0	0	0	61
Provision for directors' retirement benefits	502	0	0	0	0	0	0	0	0	0
Reserve for retirement benefits	0	790	724	745	876	1,085	789	853	839	468
Other	29	22	23	24	37	33	41	45	59	63
Total fixed liabilities	**1,112**	**1,045**	**3,195**	**2,470**	**4,250**	**7,163**	**5,097**	**3,723**	**2,347**	**3,706**
Total liabilities	**9,495**	**8,922**	**12,079**	**16,524**	**17,613**	**18,487**	**17,291**	**17,058**	**16,620**	**18,015**
Net assets										
Capital stock	2,659	2,659	2,659	2,659	2,659	2,658	2,658	2,658	2,658	2,658
Capital surplus	2,294	2,294	2,294	2,294	2,294	2,293	2,293	2,317	2,345	2,292
Retained earnings	21,273	23,187	26,117	29,547	33,165	35,898	39,841	44,166	48,628	51,061
Treasury stock	-773	-773	-774	-774	-774	-773	-773	-766	-757	-1,946
Shareholders' equity	25,453	27,365	30,296	33,726	37,343	40,076	44,020	48,377	52,874	54,066
Other	529	414	351	448	217	187	181	722	965	1,394
Non-controlling interests	1,170	1,291	1,606	1,965	2,105	2,371	2,690	3,360	3,804	4,464
Total net assets	**27,152**	**29,070**	**32,253**	**36,139**	**39,665**	**42,634**	**46,891**	**52,459**	**57,643**	**59,924**
Total liabilities and net assets	**36,647**	**37,992**	**44,331**	**52,664**	**57,278**	**61,122**	**64,183**	**69,517**	**74,263**	**77,940**
Working capital	7,329	7,953	10,694	13,113	13,647	13,136	12,218	14,310	15,808	17,192
Total interest-bearing debt	1,227	628	3,324	2,580	4,555	8,198	6,069	4,285	2,939	5,103
Net debt	-7,177	-7,569	-5,063	-6,654	-8,105	-8,691	-10,158	-12,825	-13,973	-11,802

Source: Shared Research based on company dataNote: Figures may differ from company materials due to differences in rounding methods.

Assets

- As of March 31, 2024, total assets amounted to JPY77.9bn, up JPY3.7bn compared to JPY74.3bn as of March 31, 2023. Current assets increased JPY1.5bn, and non-current assets rose JPY2.2bn. Current assets increased due primarily to growth in trade receivables (JPY1.1bn) and inventories (JPY325mn). Growth in non-current assets was mainly due to a rise in property, plant, and equipment (JPY2.1bn).

- As of March 31, 2024, cash and deposits stood at JPY16.9bn, down JPY7mn compared to JPY16.9bn as of March 31, 2023. Cash and deposits comprised 21.7% of total assets, down 1.1pp from 22.8% as of end-FY03/23. Over the 10-year period beginning with FY03/14 and ending with FY03/23, cash and deposits comprised an annual average of 23.4% of total assets. Accordingly, the share consisting of cash and deposits in FY03/24 was 1.7pp lower than this average. The share of total assets consisting of cash and deposits has been declining since reaching 27.6% in FY03/20. However, over the five-

- year period beginning with FY03/15 and ending with FY03/19, cash and deposits comprised on average 20.6% of total assets. Over the most recent 10-year period, the highest share of total assets consisting of cash and deposits was 30.4% (FY03/14) and the lowest was 17.5% (FY03/18).

Liabilities

- As of March 31, 2024, liabilities stood at JPY18.0bn, up JPY1.4bn compared to JPY16.6bn as of end-FY03/23. The company reported an increase of JPY36mn in current liabilities and growth of JPY1.4bn in non-current liabilities. The primary decisive factors behind this change in liabilities were growth in interest-bearing debt (JPY2.2bn), a decrease in income taxes payable (JPY805mn), and a downturn in retirement benefit liabilities (JPY371mn).

- As of March 31, 2024, interest-bearing debt (including lease liabilities) totaled JPY5.1bn, up JPY2.2bn compared to JPY2.9bn as of March 31, 2023. Growth in borrowings was the primary reason for the rise in interest-bearing debt. The company has on-hand liquidity (cash and deposits and securities booked as current assets) of JPY20.9bn and therefore operates virtually debt-free (with no net interest-bearing debt). Tocalo has remained virtually debt-free for at least 16 years dating back to FY03/08.

Capital

- As of March 31, 2024, the company's equity ratio stood at 71.2%, down 1.3pp compared to 72.5% as of March 31, 2023. Equity amounted to JPY55.5bn (+JPY1.6bn YoY), while total assets rose JPY3.7bn. Consequently, the company's equity ratio fell 1.3pp YoY. For the 10-year period beginning with FY03/14 and ending with FY03/23, the company reports an average equity ratio of 69.3%. Its equity ratio for FY03/24 (71.2%) is 1.9pp higher than this average. The company's equity ratio rose continuously after reaching a nadir of 64.9% in FY03/18, eventually hitting a near-record high of 72.5% in FY03/23. Tocalo reported a YoY decline of 1.3pp for FY03/24, but attributed this result primarily to an increase in its dividend payout ratio (implemented to strengthen shareholder returns) and the acquisition of treasury shares.

Cash flow statement

Cash flow statement	FY03/15	FY03/16	FY03/17	FY03/18	FY03/19	FY03/20	FY03/21	FY03/22	FY03/23	FY03/24
(JPYmn)	Cons.	Cons.	Cons.	Cons.	Cons.	Cons.	Cons.	Cons.	Cons.	Cons.
Cash flows from operating activities(1)	4,546	4,534	5,238	7,611	8,044	6,621	10,588	9,873	9,894	7,877
Pre-tax profit	4,841	4,689	5,803	7,167	8,078	6,794	8,566	10,448	10,989	9,655
Depreciation	1,440	1,561	1,703	1,948	2,658	2,991	2,771	2,783	2,987	3,056
Amortization of goodwill	56	56	12	0	0	0	0	0	0	0
Change in accounts receivable	-1,103	-586	-888	-1,607	-131	0	1,149	-1,418	-270	-1,002
Change in inventories	-318	54	-107	-925	-357	604	-252	-607	-1,191	-274
Change in accounts payable	733	-146	173	1,228	-24	-961	-70	812	202	696
Cash flows from investing activities (2)	-4,889	-895	-6,537	-4,681	-4,617	-4,217	-4,615	-5,044	-5,094	-4,634
Purchase of tangible fixed assets	-2,957	-3,588	-5,512	-4,312	-6,943	-3,641	-4,348	-4,562	-4,610	-4,785
Purchase of intangible assets	-18	-4	-55	-137	-135	-152	-25	-66	-93	-104
Purchase, sale, and redemption of investment securities	-2,000	-1,360	30	-333	114	-435	0	0	-500	0
Increase in investments affecting scope of consolidation	0	0	0	0	0	0	0	0	0	0
Free cash flow (1+2)	**-343**	**3,639**	**-1,299**	**2,930**	**3,427**	**2,404**	**5,973**	**4,829**	**4,800**	**3,243**
Cash flows from financing activities	-1,475	-1,743	1,581	-2,217	40	1,871	-3,798	-4,547	-4,561	-3,241
Change in short-term borrowings	-48	-394	0	0	-33	-63	-30	-17	0	631
Change in long-term borrowings	-564	-189	2,620	-730	2,042	3,734	-2,083	-1,766	-1,447	1,553
Acquisition of treasury stock	0	0	0	0	0	0	0	0	0	-1,999
Dividends paid	-797	-1,101	-1,142	-1,405	-1,822	-1,670	-1,520	-2,583	-2,888	-3,168
Depreciation and amortization (A)	1,496	1,617	1,715	1,948	2,658	2,991	2,771	2,783	2,987	3,056
Capital expenditures (B)	-2,957	-3,588	-5,512	-4,312	-6,943	-3,641	-4,348	-4,562	-4,610	-4,785
Change in working capital (C)	798	624	2,741	2,419	534	-511	-918	2,092	1,498	1,384
Simple FCF (NI + A + B - C)	**772**	**421**	**-2,468**	**53**	**622**	**4,265**	**4,804**	**3,038**	**4,229**	**3,213**

Source: Shared Research based on company dataNote: Figures may differ from company materials due to differences in rounding methods.

Cash flows from operating activities

- Net cash provided by operating activities in FY03/24 was JPY7.9bn, down JPY2.0bn from JPY9.9bn in FY03/23. Other than a decline in net income before income taxes (-JPY1.3bn YoY and in terms of YoY cash flow change), the primary deciding factors behind the change in operating cash flows were an increase in trade receivables (+JPY732mn YoY and -JPY732mn in terms of YoY cash flow change), a rise in trade payables (+JPY494mn YoY and in terms of YoY cash flow change), an increase in inventories (+JPY917mn YoY and +JPY917mn in terms of YoY cash flow change), and an increase in retirement benefit assets (+JPY528mn YoY and -JPY528mn in terms of YoY cash flow change).

Cash flows from investing activities

- Net cash used through investing activities in FY03/24 came to JPY4.6bn, down JPY460mn (+JPY460mn in terms of YoY cash flow change) from JPY5.1bn in FY03/23. The primary deciding factors behind the change in cash flows from investing activities were an increase in proceeds from the redemption of securities (+JPY500mn YoY and in terms of YoY cash flow change), growth in purchase of property, plant, and equipment due to capital investment (+JPY175mn YoY and -JPY175mn in terms of YoY cash flow change), and expansion in proceeds from the sale of property, plant, and equipment (+JPY91mn YoY and in terms of YoY cash flow change).

Cash flows from financing activities

- Net cash used through financing activities in FY03/24 was JPY3.2bn, down JPY1.3bn from JPY4.6bn in FY03/23 (+JPY1.3bn in terms of YoY cash flow change). The primary deciding factors behind this change in cash flows from financing activities were an increase in borrowings (+JPY3.6bn YoY and in terms of YoY cash flow change), growth in dividends paid (+JPY280mn YoY and -JPY280mn in terms of YoY cash flow change), and a rise in purchase of treasury shares (+JPY2.0bn YoY and -JPY2.0bn in terms of YoY cash flow change).

Historical performance

1H FY03/25 results (out October 31, 2024)

1H (April–September, six months) earnings overview

1H FY03/25 (April–September 2024) results are as follows.

- Sales: JPY25.9bn (+12.6% YoY; previous company forecast: JPY24.5bn)
- Operating profit: JPY5.4bn (+25.3% YoY; JPY5.0bn)
- Recurring profit: JPY5.5bn (+20.3% YoY; JPY5.0bn)
    - RPM: 21.3% (+1.3pp YoY; 20.4%)
- Net income attributable to owners of the parent: JPY3.6bn (+19.1% YoY; JPY3.3bn)

- Orders: JPY27.4bn (+12.7% YoY)
- Order backlog: JPY10.9bn (+11.5% YoY)

Sales

- Consolidated sales for 1H (April–September) rose 12.6% YoY to JPY25.9bn, exceeding the company's previous forecast of JPY24.5bn and marking a record high for 1H. By segment, sales from the Thermal Spraying segment (parent), which accounts for approximately 75% of consolidated sales, increased 15.4% YoY. This growth was primarily driven by a recovery in orders (+22.9% YoY) and sales (+17.0% YoY) for semiconductors and flat panel displays (FPDs), the mainstay sectors within the segment.
  Sales outside the semiconductor and FPD-related business within the Thermal Spraying segment also contributed, with industrial machinery-related sales up 6.6% YoY and steelmaking-related sales up 16.2% YoY.

- Among other segments, sales from the Overseas Subsidiaries segment (primarily in China and Taiwan) increased 13.7% YoY, while sales from the Domestic Subsidiary and Other Surface Treatments segments declined by 3.2% and 8.8% YoY, respectively.

Recurring profit and recurring profit margin (RPM)

- Consolidated recurring profit for 1H (April–September) grew 20.3% YoY to JPY5.5bn, exceeding the company's previous forecast of JPY5.0bn. However, it fell short of the record high of JPY6.0bn achieved in 1H FY03/23 (April–September 2022). RPM improved by 1.3pp YoY to 21.3% due to a shift in the sales mix, with an increase in high-margin semiconductor and FPD-related sales. By business segment, profit increased 36.4% YoY in the Thermal Spraying segment (parent) and 36.5% YoY in the Overseas Subsidiaries segment, while profit declined 44.7% YoY in the Domestic Subsidiary segment and 26.9% YoY in the Other Surface Treatments segment. The company's segment profit is linked to recurring profit in the income statement.

- The mainstay Thermal Spraying segment achieved profit growth driven by the recovery in high-margin semiconductor and FPD-related sales, which more than offset the weaker performance of other segments, including Domestic Subsidiary, and contributed to overall profitability improvements.

Orders

- In 1H FY03/25 (April–September), consolidated orders increased 12.7% YoY to JPY27.4bn, surpassing the previous record of JPY25.0bn in 1H FY03/23 (April–September 2022) and marking a new all-time high for 1H. The main factor was a 22.9% YoY recovery in orders for semiconductors and FPDs, the core business of the Thermal Spraying segment (parent), driven by the completion of inventory adjustments by key customers. According to the company, consolidated orders for 1H exceeded initial expectations. The notable recovery in semiconductor and FPD-related orders also enabled the Thermal Spraying segment to achieve its highest-ever orders for 1H.

- Orders in the Overseas Subsidiaries segment rose 17.4% YoY, reflecting a recovery in the semiconductor market. However, the Domestic Subsidiary segment experienced a 4.5% YoY decline due to reduced domestic automotive production. The Other Surface Treatments segment (e.g., agricultural machinery) also recorded an 8.1% YoY decrease. The breakdown of 1H FY03/25 (April–September) orders, totaling JPY27.4bn, is as follows. For detailed order information by segment, refer to the section "Results by segment (April–September, six months)" below.

  - Thermal Spraying segment (parent): JPY20.3bn (+14.7% YoY)
    - Semiconductor/FPD-related: JPY12.7bn (+22.9% YoY)
    - Industrial machinery-related: JPY2.5bn (+2.3% YoY)
    - Steelmaking-related: JPY2.0bn (+3.7% YoY)
    - Other businesses: JPY3.2bn (+4.3% YoY)
  - Domestic Subsidiary segment: JPY1.2bn (-4.5% YoY)
  - Overseas Subsidiaries segment: JPY4.4bn (+17.4% YoY)
  - Other Surface Treatments segment: JPY1.4bn (-8.1% YoY)

Order backlog

- As of end-Q2 FY03/25 (end-June 2024), the consolidated order backlog increased 11.5% YoY to JPY10.9bn, marking a quarterly record high. The breakdown of the JPY10.9bn order backlog as of end-Q2 is provided below.

  - Thermal Spraying segment (parent): JPY8.0bn (+14.9% YoY)
    - Semiconductor/FPD-related: JPY5.9bn (+30.5% YoY)
    - Industrial machinery-related: JPY506mn (-19.6% YoY)
    - Steelmaking-related: JPY902mn (-18.5% YoY)
    - Other businesses: JPY707mn (-1.5% YoY)

  - Domestic Subsidiary segment: JPY96mn (-4.0% YoY)
  - Overseas Subsidiaries segment: JPY2.4bn (+3.8% YoY)
  - Other Surface Treatments segment: JPY389mn (-0.5% YoY)

Order backlog reached a record-high level

- The order backlog for the mainstay Thermal Spraying segment rose 14.9% YoY, driven by a recovery in orders, with the semiconductor/FPD-related backlog increasing significantly by 30.5% YoY. Order backlogs for industrial machinery-related, steelmaking-related, and other businesses declined by 19.6%, 18.5%, and 1.5% YoY, respectively, but these decreases were more than offset by the strong performance in semiconductor/FPD-related orders. As a result, the order backlog for the Thermal Spraying segment exceeded JPY8.0bn for the first time, marking a record high. The company recognizes that efficiently managing and fulfilling the over-JPY8.0bn backlog is one of its immediate operational challenges.

- The Domestic Subsidiary segment's order backlog decreased by 4.0% YoY, the Overseas Subsidiaries segment's backlog increased by 3.8% YoY, and the Other Surface Treatments segment's backlog declined by 0.5% YoY. Combined, these segments brought the consolidated order backlog to JPY10.9bn (+11.5% YoY). This marks the second consecutive quarter where the backlog exceeded JPY10.0bn, following end-Q1 FY03/25 (end-June 2024).

The company expects that clearing the accumulated order backlog will drive earnings growth starting from Q3

- When excluding the impact from the Domestic Subsidiary segment, the order backlog expansion is essentially an indicator of future sales growth. The semiconductor/FPD-related order backlog, a core activity within the Thermal Spraying segment, reached near-record levels, at JPY4.7bn at end-Q3 (October—December 2023) and JPY4.6bn at end-Q4 (January—March 2024), despite the softening of the semiconductor market in FY03/24. However, due to temporary stagnation in the semiconductor market, the company had to adjust shipments for some customers. Additionally, the company reported a shift within its semiconductor/FPD-related order backlog: a decline in backlogged mass-produced product orders (which significantly impact business performance), an increase in backlogged development product-related orders (which have a relatively smaller impact on performance), and growth in backlogged orders for products in transition toward mass production (which have slightly later delivery dates). As a result, despite near-record order backlog levels during 2H FY03/24, these orders did not drive a recovery in the company's performance.

- However, according to the company, backlogged orders for mass-produced products, which significantly contribute to its performance, increased as of end-Q2 FY03/25. As a result, the company is confident that the current order backlog at end-Q2, combined with anticipated order growth from Q3 (October—December) onward, will drive continued recovery and expansion in earnings beyond Q3.

Factors affecting changes (YoY) in recurring profit

- Consolidated recurring profit, which is closely linked to segment profit in each segment, grew by JPY930mn YoY, from JPY4.6bn in 1H FY03/24 to JPY5.5bn. The following factors contributed to the change.

  - 1) Upward impact of JPY1.2bn due to an increase in sales
  - 2) Upward impact of JPY466mn due to a decrease in the variable cost ratio
  - 3) Downward impact of JPY398mn due to an increase in personnel expenses
  - 4) Downward impact of JPY83mn due to an increase in depreciation
  - 5) Upward impact of JPY75mn due to foreign exchange effects
  - 6) Downward impact of JPY219mn due to other factors

Increasing factors

- In 1H FY03/25 (April—September), profit increased by JPY1.2bn, driven by higher sales, primarily from a 17.0% YoY increase in semiconductor/FPD-related sales within the Thermal Spraying segment. This growth was attributed to a recovery in sales volumes and the impact of timely price revisions. Additionally, a decrease in the variable cost ratio (contributing JPY466mn to profit growth) was supported by the strong increase in highly profitable semiconductor/FPD-related sales, which improved the overall sales mix, despite persistently high manufacturing costs, including material and outsourcing expenses.

An increase in sales, coupled with a decline in the variable cost ratio, contributed to recurring profit growth

- In FY03/24, recurring profit fell 12.2% YoY to JPY9.7bn, marking the first profit decline in four years. This drop was primarily due to two negative factors: a decrease in sales and an increase in the variable cost ratio. However, in 1H FY03/25, these factors reversed—sales increased, and the variable cost ratio decreased. This double shift from negative to positive factors played a key role in the significant growth in recurring profit.

- The company expects these two factors, which had been negative in 1H FY03/24, to continue serving as positive drivers in Q3 (October—December) FY03/25 and beyond. Although the company anticipates continued increases in personnel costs, depreciation, and R&D expenses in Q3 and beyond, it believes that the dual positive impacts of sales growth and a lower variable cost ratio will be sufficient to absorb these negative factors.

Foreign exchange effects

- In 1H FY03/25 (April—September), foreign exchange effects were a negative factor for profit. The JPY75mn decline in profit due to forex impacts consisted of a JPY162mn reduction in foreign exchange gains recorded under non-operating income (negative factor) and an offsetting JPY87mn positive impact from exchange rate differences related to the conversion of overseas subsidiary results and other factors.

Decreasing factors

The rise in personnel expenses and depreciation was largely in line with the initial forecast

- In 1H FY03/25 (April–September), personnel expenses increased, resulting in a JPY398mn negative impact on profit. The rise stemmed from wage hikes, an increase in full-time employees, and higher operational activity for semiconductor/FPD-related production, including overtime costs. The company had accounted for wage increases and additional full-time staff in its initial forecast but incurred extra personnel expenses due to greater-than-expected operational activity in semiconductor-related production. However, the company successfully offset nearly all of these increased personnel costs through higher sales. Additionally, the initial forecast anticipated a YoY increase in depreciation costs of JPY144mn for FY03/25, which aligned with the observed rise.

Inventory valuation losses, R&D expenses, and electricity costs

- The "other factors," which had a JPY219mn negative impact on profit, included various elements. The primary contributors were an increase in inventory valuation losses and higher R&D expenses. Meanwhile, electricity costs, which were part of "other factors" in FY03/24 results, did not show significant YoY fluctuations in 1H FY03/25 as the company continued receiving government subsidies.

Results by segment (April–September, six months)

- Below is a breakdown of individual segment performances for 1H FY03/25. The sales shares provided for each segment represent percentages of the company's consolidated 1H FY03/25 sales of JPY25.9bn. Consolidated sales include royalty income (which is low and has minimal impact on overall sales performance); accordingly, these segment sales shares do not add up to 100% of consolidated sales. Segment profits do not reflect impact from consolidation adjustments. When consolidated adjustments are reflected, total profit generated through all segments directly corresponds to the company's consolidated recurring profit.

Thermal Spraying (handled by TOCALO, the parent company; 74.7% sales share)

- Sales: JPY19.3bn (+15.4% YoY)
- Segment profit: JPY4.3bn (+36.4% YoY)
  - Segment profit margin: 22.4% (+3.5pp YoY)

- Orders: JPY20.3bn (+14.7% YoY)
- Order backlog: JPY8.0bn (+14.9% YoY)

Orders

- In 1H FY03/25 (April–September), orders in the Thermal Spraying segment rose 14.7% YoY to JPY20.3bn, exceeding the 1H FY03/23 (April–September 2022) total of JPY18.8bn and setting a new record high for 1H. The primary driver was a 22.9% YoY increase in semiconductor/FPD-related orders to JPY12.7bn, reflecting the completion of inventory adjustments by key customers amid a recovering semiconductor market. Semiconductor/FPD-related orders not only achieved a record high for 1H but also surpassed the company's initial forecast.

- Other than semiconductor/FPD-related orders, all other categories saw growth: industrial machinery-related orders rose 2.3% YoY, steelmaking-related orders increased 3.7% YoY, and orders for other businesses grew 4.3% YoY.

Sales

- The Thermal Spraying segment (parent company), the company's largest segment, accounted for 74.7% of consolidated sales in 1H FY03/25 (April–September). Sales in this segment grew by 15.4% YoY to JPY19.3bn, marking a new record high for 1H. This significant increase in Thermal Spraying segment sales was the primary driver of the record-breaking consolidated sales in 1H FY03/25 (as mentioned earlier). The breakdown of the JPY19.3bn in Thermal Spraying segment sales is as follows.

- Semiconductors and FPDs: JPY11.4bn (+17.0% YoY)
  - Of which, semiconductors: JPY10.7bn (+18.9% YoY)
  - Of which, FPDs: JPY697mn (-5.8% YoY)

- Industrial machinery-related: JPY2.4bn (+6.6% YoY)
- Steelmaking-related: JPY2.0bn (+16.2% YoY)
- Other businesses: JPY3.5bn (+16.2% YoY)

Semiconductor and FPD-related orders and sales hit record-highs for 1H

- The record-high sales in the Thermal Spraying segment were primarily driven by a recovery in semiconductor/FPD-related sales, fueled by a recovery and expansion in orders from key customers. These sales, which accounted for 59.0% of the segment's total sales in 1H FY03/25, increased by 17.0% YoY to JPY11.4bn, marking a new record high for 1H. Notably, approximately 93% of semiconductor/FPD-related sales were semiconductor-related, reflecting a continued decline in the proportion of FPD-related sales.

- Sales to key customers grew further, driven by continued expansion in sales to foreign semiconductor production equipment manufacturers, which had already increased in FY03/24, and a recovery in sales to the largest domestic semiconductor production equipment manufacturer. The latter, the company's largest customer, had significantly impacted FY03/24 results due to shipment restrictions during inventory adjustments prompted by a semiconductor market slowdown. However, with the completion of these inventory adjustments and an upward revision of the customer's production plans, including adjustments to inventory levels, the company's orders rebounded sharply, contributing to increased sales.

Gradual expansion of production capacity underway

- Although 1H FY03/25 semiconductor/FPD-related sales of JPY11.4bn fell short of the record high of JPY12.1bn achieved in 1H FY03/23 (April–September 2022), the company expects sales to soon surpass previous records, as orders have already reached all-time highs (as detailed below).

  - According to the company, the primary reason sales have not yet caught up with the recovery in orders is a shortage of production capacity, which has not yet reached the level needed to meet the increased demand. This production capacity includes not only manufacturing equipment but also the workers (including temporary staff) involved in the production lines. While automation has progressed in thermal spraying processes for semiconductors and FPDs through the introduction and upgrading of production equipment, there remain significant labor-intensive processes reliant on manual work. The company is also working to increase the workforce while enhancing production equipment for semiconductor and FPD-related thermal spraying. However, a recent labor shortage has delayed efforts to bolster staffing. Moreover, workers on the manufacturing lines require a certain amount of time to reach the necessary skill level for operations, further contributing to delays in strengthening manpower.

  - Nevertheless, in response to the recovery in semiconductors and FPD-related orders, particularly from major customers, the company began ramping up production capacity early in FY03/25. Although workforce expansion faced delays in 1H (April–September), the company expects improvements starting in Q3 (October–December) and plans to gradually increase production capacity. Consequently, the company aims to align sales more closely with the recovery in orders in 2H (October–March), with a particularly strong expansion in sales anticipated in Q4 (January–March).

Trends in non-semiconductor and FPD-related categories

- Excluding semiconductor and FPD-related sales, industrial machinery-related sales (accounting for 12.3% of the Thermal Spraying segment) increased by 6.6% YoY to JPY2.4bn. Steelmaking-related sales (10.5%) grew by 16.2% YoY to JPY2.0bn, while sales from other businesses (18.3%) also rose by 16.2% YoY to JPY3.5bn. The increase in industrial machinery-related sales was attributed to growth in the bearing sector, a major customer base for the company. Steelmaking-related sales of JPY2.0bn also reached a record high for 1H, driven by growth in non-automotive sectors. Meanwhile, the rise in sales from other businesses was supported by orders for large-scale projects in power plant and energy-related areas.

- While the company focuses primarily on growth in semiconductor/FPD-related sales, which significantly contribute to overall performance, it aims to actively acquire orders in non-semiconductor/FPD areas to ensure that these areas also meet its recovery expectations.

Business plan for semiconductors and FPDs

Semiconductor/FPD-related sales growth drove record-high results for three consecutive years through FY03/23

- In order to keep up with robust thermal spraying demand for semiconductor/FPD-related products, the company has been increasing capacity in stages since FY03/22. This improved ability to handle the large volume of orders received

- has enabled the company to book over JPY6.0bn in sales in a single quarter for semiconductor/FPD-related products. Working closely with its customers, the company has avoided a sudden expansion in production capacity, which could directly increase costs and lower productivity. Instead, it has continued to increase sales while simultaneously leveling operations.

  The company's sales structure is such that an increase in semiconductor/FPD-related sales in the Thermal Spraying segment drives growth in consolidated results. Consequently, the company achieved record-high consolidated results for three consecutive years through FY03/23, with semiconductor/FPD-related sales growth serving as the primary driver. (Note: Only sales reached a record high for two consecutive years.)

Preparing for market recovery despite sales and profit decline for the first time in four years in FY03/24

- In FY03/24, the company experienced its first sales and profit decline in four years, impacted by inventory adjustments among key customers following the softening of the semiconductor market. However, the company viewed this market correction as temporary and anticipated a gradual recovery in demand for semiconductor manufacturing equipment. Based on this outlook, it did not downscale existing production capacity; rather, it proceeded with a modest expansion of production facilities. Nevertheless, during 1H FY03/25 (April–September 2024), order recovery exceeded the company's expectations, resulting in a production capacity shortfall. In particular, labor shortages have delayed the deployment of workers, including temporary staff, on manufacturing lines. Despite these challenges, the company remains committed to its medium- to long-term strategy of leveling operations while continuing to expand production capacity.

- Apart from its efforts to recover earnings during 1H, the company plans to continue expanding production capacity while aiming to establish a production structure capable of achieving quarterly sales of JPY6.5–7.0bn without overburdening operations. The company is placing greater emphasis on operational leveling, focusing on maintaining steady, "cruising speed" operations in close collaboration with key customers.

Segment profit, segment profit margins

- In the Thermal Spraying segment, segment profit (linked to recurring profit in consolidated income statements) in 1H FY03/25 (April–September) increased by 36.4% YoY to JPY4.3bn, supported by a recovery in highly profitable semiconductor/FPD-related sales. The segment profit of JPY4.3bn came close to the record high of JPY4.5bn achieved in 1H FY03/23 (April–September 2022).

  - Additionally, the segment profit margin improved by 3.5pp to 22.4%. However, the company recognizes that profitability has not yet fully recovered, as the margin consistently exceeded 23.0% prior to the semiconductor market adjustment, with a record high of 24.9% in 1H FY03/22 (April–September 2021). According to the company, the insufficient recovery in profitability is mainly due to increased manufacturing costs and SG&A expenses over the past two to three years, as well as expanded capital investments for future growth. Among these factors, it sees rising personnel expenses, such as direct labor costs in manufacturing and indirect personnel expenses under SG&A, as the largest obstacle to improving profitability.

  - However, the company regards these personnel expenses as human capital investment. It acknowledges that once personnel expenses rise, reducing them becomes challenging, particularly during periods of increasing production volumes driven by order recovery, which also makes workforce reductions difficult. Consequently, the company believes that boosting sales to absorb rising personnel expenses is critical for enhancing profitability. To achieve higher sales, it recognizes the need to expand production capacity. Furthermore, as utilization rates for semiconductor and FPD-related operations continue to climb, the company is concentrating on improving productivity by leveling operations while also working to enhance profitability.

Domestic Subsidiary (4.6% sales share)

- Sales: JPY1.2bn (-3.2% YoY)
- Segment profit: JPY157mn (-44.7% YoY)
  - Segment profit margin: 13.2% (-9.9pp YoY)

- Orders: JPY1.2bn (-4.5% YoY)
- Order backlog: JPY96mn (-4.0% YoY)

Orders

- Orders in the Domestic Subsidiary segment for 1H FY03/25 (April—September) decreased by 4.5% YoY to JPY1.2bn. The primary reason for this decline was the impact of a series of certification-related misconduct issues involving several automakers, which led to delays in capital investment plans due to the suspension of domestic production for affected vehicle models.

Sales

- The company's domestic subsidiary (Japan Coating Center Co., Ltd.) primarily uses physical vapor deposition (PVD) technology for surface modification of cutting tools, knives, molds, and other products. Among these, surface modification for cutting tools, the core business, is mainly targeted at the automotive industry. In 1H FY03/25 (April—September), sales decreased by 3.2% YoY to JPY1.2bn. The primary factor behind this decline was a reduction in orders due to decreased domestic automobile production. While the company made some recovery in non-automotive sectors, it was insufficient to fully offset the decline.

- Domestic automobile production fell by 6.0% YoY in 1H FY03/25 (April—September 2024; source: Japan Automobile Manufacturers Association) primarily due to fraudulent certification practices by Daihatsu Motor, a subsidiary of Toyota Motor Corporation (TSE Prime: 7203). This misconduct led to the suspension of domestic production for certain vehicle models. Additionally, from late May 2024 onward, similar issues of improper certification were uncovered among other automakers, including Toyota, further amplifying the decline in domestic production volumes. Since automotive-related sales in the Domestic Subsidiary segment are strongly correlated with domestic production volumes, this downturn had a substantial negative impact on its performance.

Segment profit, segment profit margin

- Segment profit in 1H FY03/25 (April—September) decreased by 44.7% YoY to JPY157mn, as the company was unable to fully offset the impact of lower sales. As a result, the segment profit margin declined by 9.9pp to 13.2%.

- The company responded to the reduction in orders caused by fraudulent certification testing at automakers (which led to the suspension of production for certain vehicle models) by implementing cost-cutting measures, such as reviewing personnel allocation, improving productivity, and adjusting prices. However, these efforts were insufficient to fully absorb the impact of declining sales. The company had introduced new production equipment at a factory established in FY03/22. While smaller in scale compared to those in the Thermal Spraying segment, the factory has steadily contributed to productivity improvements. Although the impact of reduced orders in 1H could not be fully mitigated, the company believes that performance will recover once the certification issues are resolved and orders rebound.

Overseas Subsidiaries (14.5% sales share)

- Sales: JPY3.9bn (+13.7% YoY)
- Segment profit: JPY1.2bn (+36.5% YoY)
    - Segment profit margin: 31.1% (+5.2pp YoY)

- Orders: JPY4.4bn (+17.4% YoY)
- Order backlog: JPY2.4bn (+3.8% YoY)

Orders

- Orders in the Overseas Subsidiaries segment for 1H FY03/25 (April—September) increased by 17.4% YoY to JPY4.4bn, achieving a record-high for 1H. This growth was primarily driven by a recovery in orders following the bottoming out of the semiconductor markets in overseas regions, including China and Taiwan. Additionally, exchange rate effects contributed to the increase in order value. It is worth noting that due to differences in fiscal year-end, the 1H FY03/25 results reflect orders received during January—June for overseas subsidiaries.

Sales

- This segment includes two subsidiaries in China, one in Taiwan, and one in the US, but essentially consists of subsidiaries in China and Taiwan, as the US business is not fully operational. Additionally, because China and Taiwan have a December fiscal year-end, the financial results of these subsidiaries for January—June are included in the company's 1H FY03/25 (April—September) results. In 1H FY03/25, sales from the Overseas Subsidiaries segment increased by 13.7% YoY to

- JPY3.9bn, achieving a record high for 1H. This growth was driven by the recovery in the global semiconductor market as the adjustment phase came to an end.

- Additionally, foreign exchange effects (a boost from conversion gains due to yen depreciation) contributed to the strong performance, making this segment's sales growth the second highest among all segments, following the 15.4% YoY increase in the Thermal Spraying segment. According to the company, even excluding the impact of foreign exchange gains, sales were higher YoY.

Segment profit, segment profit margin

- In 1H FY03/25 (April—September), segment profit increased by 36.5% YoY to JPY1.2bn, achieving a record high for 1H, as was the case for sales. This growth was driven by an improved sales mix, including an increase in semiconductor/FPD-related re-coating, as well as contributions from foreign exchange effects and growth in non-semiconductor-related sales. As a result, the segment profit margin improved by 5.2pp to 31.1%, maintaining profitability above that of the Thermal Spraying segment (parent).

Other Surface Treatments (5.3% sales share)

- Sales: JPY1.4bn (-8.8% YoY)
- Segment profit: JPY190mn (-26.9% YoY)
    - Segment profit margin: 13.8% (-3.4pp YoY)

- Orders: JPY1.4bn (-8.1% YoY)
- Order backlog: JPY389mn (-0.5% YoY)

Order backlog

- Orders in the Other Surface Treatments segment in 1H FY03/25 (April—September) decreased by 8.1% YoY to JPY1.4bn. The decline was primarily due to inventory adjustments by customers in the core agricultural equipment parts business.

Sales, segment profit, segment profit margin

- Sales in the Other Surface Treatments segment in 1H FY03/25 (April—September) declined by 8.8% YoY to JPY1.4bn. Segment profit also fell by 26.9% YoY to JPY190mn, as the company was unable to fully absorb the impact of lower sales.

    - The YoY decline in sales was primarily attributed to reduced orders for the Toyota Diffusion (TD) process applied to agricultural equipment parts, which had grown significantly in FY03/24. The TD process is a surface modification method that forms a functional film by immersing the target workpiece in a high-temperature molten salt bath and allowing vanadium and other carbides to diffusely permeate the surface of the base material. This drop in orders was largely driven by customer inventory adjustments. The company applies surface treatments (TD process) to agricultural equipment parts and supplies these to Japanese agricultural equipment makers, who then sell their products to the US and other markets. The company believes that it benefitted from the expansion of the agricultural industry in North America during FY03/24. Despite the decrease in sales and profit in 1H FY03/25, the company remains optimistic about future growth in the agricultural equipment parts business.

Q2 (July—September, three months) results

TOCALO reported the following results for Q2 FY03/25 (July—September 2024).

- Sales: JPY13.0bn (+16.2% YoY)
- Operating profit: JPY2.7bn (+33.0% YoY)
- Recurring profit: JPY2.6bn (+17.5% YoY)
    - RPM: 20.0% (+0.2pp YoY)
- Net income attributable to owners of the parent: JPY1.7bn (+15.5% YoY)

- Orders: JPY13.8bn (+14.7% YoY)

Overview

- Consolidated sales for Q2 (July–September) increased by 16.2% YoY to JPY13.0bn, marking the third consecutive quarter of YoY sales growth. Additionally, this was the highest quarterly sales ever recorded by the company.

  - By business segment, the Thermal Spraying segment (parent), which accounts for approximately 74% of consolidated sales, saw a 21.6% YoY increase in sales, driving the overall expansion in consolidated sales. This growth was primarily attributable to the recovery in orders (+22.9% YoY) and sales (+21.5% YoY) for the segment's core semiconductor and FPD-related operations. Among other segments, sales in the Overseas Subsidiaries segment (mainly China and Taiwan) grew by 11.8% YoY, while sales in the Domestic Subsidiary segment declined by 4.1% YoY, and sales in the Other Surface Treatments segment fell by 13.8% YoY.

- Consolidated recurring profit for Q2 (July–September) increased by 17.5% YoY to JPY2.6bn, marking the third consecutive quarter of YoY profit growth, similar to sales.

  - By business segment, profit in the Thermal Spraying segment increased by 52.2% YoY, while profit in the Overseas Subsidiaries segment grew by 29.9% YoY. In contrast, profit in the Domestic Subsidiary segment declined by 65.3% YoY, and profit in the Other Surface Treatments segment fell by 44.6% YoY. The company's segment profit is linked to recurring profit in the income statement. The significant profit growth in the core Thermal Spraying segment, driven by the recovery in high-margin semiconductor and FPD-related sales, offset the weaker performance of segments such as the Domestic Subsidiary segment. Although positive factors such as increased sales and a shift in the sales mix toward higher-margin semiconductor and FPD-related products contributed to the results, rising costs, including personnel expenses, weighed on profitability. As a result, RPM improved by only 0.2pp YoY to 20.0%.

Order trend

- In Q2 FY03/25 (July–September), consolidated orders increased by 14.7% YoY to JPY13.8bn, marking the third consecutive quarter of YoY growth and achieving a new record high for all quarters. The primary driver was a 22.6% YoY recovery in orders for semiconductors and FPDs, the core business of the Thermal Spraying segment (parent), which also set a new quarterly record. This recovery followed the completion of inventory adjustments by key customers.

- Outside the Thermal Spraying segment, orders in the Overseas Subsidiaries segment increased by 29.0% YoY, supported by a recovery in the semiconductor market. However, orders in the Domestic Subsidiary segment remained roughly flat YoY due to a decline in domestic automobile production. Orders in the Other Surface Treatments segment (e.g., agricultural machinery) remained sluggish, declining by 16.9% YoY due to the impact of customer inventory adjustments. The breakdown of Q2 FY03/25 (July–September) orders, which totaled JPY13.8bn, is as follows.

  - Thermal Spraying segment (parent): JPY10.0bn (+15.5% YoY)
    - Semiconductor/FPD-related: JPY6.4bn (+22.6% YoY)
    - Industrial machinery-related: JPY1.2bn (-7.2% YoY)
    - Steelmaking-related: JPY961m (+12.0% YoY)
    - Other businesses: JPY1.5bn (+11.3% YoY)
  - Domestic Subsidiary segment: JPY636m (flat YoY)
  - Overseas Subsidiaries segment: JPY2.5bn (+29.0% YoY)
  - Other Surface Treatments segment: JPY678m (-16.9% YoY)

Results by segment (July–September, three months)

- Below is a breakdown of individual segment performances for Q2 FY03/25 (July–September). The sales shares provided for each segment represent percentages of the company's consolidated Q1 FY03/25 sales of JPY13.0bn. Consolidated sales include royalty income (which is low and has minimal impact on overall sales performance); accordingly, these segment sales shares do not add up to 100% of consolidated sales. Segment profits do not reflect impact from consolidation adjustments. When consolidated adjustments are reflected, total profit generated through all segments directly corresponds to the company's consolidated recurring profit.

Thermal Spraying (handled by TOCALO, the parent company; 74.4% sales share)

- Sales: JPY9.7bn (+21.6% YoY)

- Segment profit: JPY2.1bn (+52.2% YoY)
  - Segment profit margin: 21.8% (+4.4pp YoY)

- Orders: JPY10.0bn (+15.5% YoY)

Overview

- The Thermal Spraying segment (parent), the company's largest segment, accounted for 74.4% of consolidated sales in Q2 FY03/25 (July–September). Sales in this segment increased by 21.6% YoY to JPY9.7bn, marking the second consecutive quarter of YoY growth and achieving a record high for all quarters. This growth was the primary driver of the recovery in consolidated sales. The segment's record-breaking performance was driven by strong sales growth in the segment's core semiconductor and FPD-related business, which increased by 21.5% YoY to JPY5.7bn. Steelmaking-related sales also contributed, growing by 15.6% YoY to JPY1.0bn, while sales from other businesses rose by 43.1% YoY to JPY1.8bn. Additionally, sales from industrial machinery-related business increased by 2.5% YoY to JPY1.1bn. The breakdown of the JPY9.7bn sales for the Thermal Spraying segment is as follows.

- Semiconductors and FPDs: JPY5.7bn (+21.5% YoY)
  - Of which, semiconductors: JPY5.4bn (+25.8% YoY)
  - Of which, FPDs: JPY316mn (-23.1% YoY)
- Industrial machinery-related: JPY1.1bn (+2.5% YoY)
- Steelmaking-related: JPY1.0bn (+15.6% YoY)
- Other businesses: JPY1.8bn (+43.1% YoY)

- Segment profit for Q2 (July–September) increased by 52.2% YoY to JPY2.1bn, primarily driven by higher sales and an improved sales mix. The segment profit margin also improved by 4.4pp YoY to 21.8%. However, despite these YoY increases in both segment profit and margin, they have not yet reached the levels achieved in Q2 FY03/23 (July–September 2022). According to the company, the gap compared to two years ago is mainly due to increased personnel costs and expenses related to production capacity expansion. Nevertheless, the company anticipates further improvements in profit and margin from Q3 (October–December) onward, supported by the expanding effects of higher sales.

Domestic Subsidiary (4.5% sales share)

- Sales: JPY582mn (-4.1% YoY)
- Segment profit: JPY59mn (-65.3% YoY)
  - Segment profit margin: 10.1% (-17.9pp YoY)

- Orders: JPY636mn (flat YoY)

Overview

- Sales in Q2 (July–September) decreased by 4.1% YoY to JPY582mn. This marked the second consecutive quarter of YoY sales decline. The primary factor behind this drop was a reduction in orders due to decreased domestic automobile production. Although the company made efforts to recover in non-automotive sectors, these were insufficient to fully offset the decline. The decline in domestic automobile production (-6.7% YoY in July–September) was largely due to issues involving fraudulent certification practices by multiple automakers, which led to the suspension of domestic production for certain vehicle models. Sales to the automotive sector in the Domestic Subsidiary segment, which are closely linked to domestic automobile production volumes, were significantly impacted by this decrease.

- Segment profit in Q2 (July–September) decreased by 65.3% YoY to JPY59mn, marking the second consecutive quarter of YoY profit decline. The segment profit margin also deteriorated by 17.9pp to 10.1%. The Q2 segment profit of JPY59mn was the second lowest on record for a Q2, following the JPY52mn recorded in July–September 2020, which was heavily impacted by the COVID-19 pandemic. However, the company expects the Domestic Subsidiary segment to recover once the issues related to automaker misconduct are resolved and domestic automobile production volumes rebound.

Overseas Subsidiaries (15.6% sales share)

- Sales: JPY2.0bn (+11.8% YoY)
- Segment profit: JPY664mn (+29.9% YoY)
  - Segment profit margin: 32.7% (+4.5pp YoY)

- Orders: JPY2.5bn (+29.0% YoY)

Overview

- This segment includes two subsidiaries in China, one in Taiwan, and one in the US, but essentially consists of subsidiaries in China and Taiwan, as the US business is not yet fully operational. Additionally, because China and Taiwan have a December fiscal year-end, the company's Q2 (July–September) financial results include the financial results of these subsidiaries for April–June. In Q2 FY03/25 (July–September), sales from the Overseas Subsidiaries segment increased by 11.8% YoY to JPY2.0bn, supported by the stabilization of the global semiconductor market and the positive effects of foreign exchange rates. This marked the 15th consecutive quarter of YoY sales growth and the first time that quarterly sales exceeded JPY2.0bn, setting a new record high.

- In Q2 (July–September), segment profit increased by 29.9% YoY to JPY664mn, marking the fifth consecutive quarter of YoY profit growth and setting a new record high for any quarter. This record-breaking profit was supported by an improved sales mix, including an increase in semiconductor/FPD-related re-coating, as well as contributions from foreign exchange effects and growth in non-semiconductor-related sales. The segment profit margin also improved by 4.5p YoY to 32.7%.

Other Surface Treatments (5.1% sales share)

- Sales: JPY664mn (-13.8% YoY)
- Segment profit: JPY72mn (-44.6% YoY)
    - Segment profit margin: 10.8% (-6.1pp YoY)

- Orders: JPY678mn (-16.9% YoY)

Overview

- Sales decreased by 13.8% YoY to JPY664mn, marking the second consecutive quarter of YoY decline. Segment profit dropped by 44.6% YoY to JPY72mn, marking the second consecutive quarter of YoY decline, as the impact of lower sales could not be fully offset. Consequently, the segment profit margin deteriorated by 6.1pp YoY to 10.8%.

- The double-digit YoY decline in sales (a drop exceeding 10%) was primarily due to reduced orders for the Toyota Diffusion (TD) process applied to agricultural equipment parts, caused by customer inventory adjustments. The TD process is a surface modification method that forms a functional film by immersing the target workpiece in a high-temperature molten salt bath and allowing vanadium and other carbides to diffusely permeate the surface of the base material.

Q1 FY03/25 results (out July 31, 2024)

Q1 (April–June, three months) results

TOCALO reported the following results for Q1 FY03/25 (April–June 2024).

- Sales: JPY12.9bn (+9.1% YoY)
- Operating profit: JPY2.7bn (+18.5% YoY)
- Recurring profit: JPY2.9bn (+22.9% YoY)
    - RPM: 22.7% (+2.5pp YoY)
- Net income attributable to owners of the parent: JPY1.9bn (+22.5% YoY)

- Orders: JPY13.6bn (+10.7% YoY)
- Order backlog: JPY10.0bn (+13.0% YoY)

Sales

- Thermal Spraying, which is handled by TOCALO, the parent company, and accounts for approximately 75% of consolidated sales, increased 9.8% YoY. This growth was primarily driven by a recovery in orders (+23.1% YoY) and sales (+12.8% YoY) for semiconductors and flat panel displays (FPDs), the mainstay customer field in the Thermal Spraying segment. Additionally, sales for industrial machinery (+10.7% YoY) and steel-related applications (+16.8% YoY) contributed to the sales increase. Sales from the Overseas Subsidiaries segment (mainly China and Taiwan) also rose YoY. However, sales from the Domestic Subsidiaries and Other Surface Treatments segments fell YoY. As a result of these factors,

- consolidated sales for Q1 (April–June) increased 9.1% YoY to JPY12.9bn, marking the second consecutive quarter of YoY sales growth.

Recurring profit and recurring profit margin (RPM)

- Segment profit increased 24.1% YoY for Thermal Spraying (Parent), 45.5% YoY for Overseas Subsidiaries, decreased 14.0% YoY for Domestic Subsidiaries, and decreased 9.2% YoY for Other Surface Treatments. The company's segment profit is linked to recurring profit in the income statement. The mainstay Thermal Spraying segment saw a 24.1% YoY increase in profit due to the recovery in sales from high-profit semiconductors and FPDs, effectively absorbing the weaker performance of Domestic Subsidiaries and Other Surface Treatments. As a result, consolidated recurring profit for Q1 (April–June) increased 22.9% YoY to JPY2.9bn, marking the first YoY profit increase in five quarters. Additionally, RPM improved by 2.5pp YoY to 22.7% due to changes in the sales mix, particularly the increase in high-profit semiconductors and FPDs.

Orders

- In Q1 (April–June), consolidated orders increased by 10.7% YoY to JPY13.6bn, marking the second consecutive quarter of YoY growth and setting a new quarterly record. The primary driver was a 23.1% YoY increase in orders for semiconductors and FPDs, the core business of the Thermal Spraying segment (parent), to a record-high, following a production rebound after key customers completed inventory adjustments. In addition to the strong recovery in semiconductor and FPD-related orders, industrial machinery-related orders also rose YoY, enabling the Thermal Spraying segment to achieve its highest-ever quarterly orders.

- Orders booked through the Overseas Subsidiaries segment increased YoY, driven by a recovery in the semiconductor market. However, the Domestic Subsidiary segment saw a YoY decline in orders due to a reduction in domestic automotive production. Meanwhile, the Other Surface Treatments segment (e.g., agricultural machinery) remained roughly in line with the previous year. The breakdown of Q1 (April–June) orders, which totaled JPY13.6bn, is provided below. For detailed order information, see the "Results by segment (April–June, three months)" section below.

  - Thermal Spraying (parent): JPY10.3bn (+14.0% YoY)
    - Semiconductor/FPD-related: JPY6.3bn (+23.1% YoY)
    - Industrial machinery-related: JPY1.3bn (+12.1% YoY)
    - Steel making-related: JPY994m (-3.2% YoY)
    - Other businesses: JPY1.7bn (-1.1% YoY)
  - Domestic Subsidiary: JPY601m (-8.8% YoY)
  - Overseas Subsidiaries: JPY1.9bn (+5.0% YoY)
  - Other Surface Treatments: JPY756m (+1.6% YoY)

Order backlog

- As of end-Q1 FY03/25 (end-June 2024), the consolidated order backlog increased 13.0% YoY to JPY10.0bn, marking a quarterly record high. The breakdown of the JPY10.0bn order backlog is provided below.

  - Thermal Spraying (parent): JPY7.7bn (+22.5% YoY)
    - Semiconductor/FPD-related: JPY5.2bn (+30.3% YoY)
    - Industrial machinery-related: JPY496mn (-1.2% YoY)
    - Steel making-related: JPY984mn (-14.5% YoY)
    - Other businesses: JPY999mn (+60.6% YoY)

  - Domestic subsidiary: JPY41mn (-41.4% YoY)
  - Overseas subsidiaries: JPY1.9bn (-12.2% YoY)
  - Other Surface Treatments: JPY376mn (+8.7% YoY)

Order backlog reached a record-high level

- The company's end-Q1 FY03/25 order backlog for its core Thermal Spraying segment expanded 22.5% YoY, driven by a recovery in orders. The rise in backlog was supported primarily by a 30.3% YoY increase in semiconductor/FPD-related order backlog. The industrial machinery-related order backlog declined 1.2% YoY, the steelmaking-related order backlog fell 14.5% YoY, and the order backlog for Other businesses grew 60.6% YoY. The increase in semiconductor/FPD-related order backlog absorbed the declines in other areas. As a result, the Thermal Spraying

- segment order backlog reached a record high of JPY7.7bn at end-Q1. Outside of the Thermal Spraying segment, the Domestic Subsidiary segment's order backlog decreased by 41.4% YoY, while the Overseas Subsidiaries segment's order backlog declined by 12.2% YoY. The Other Surface Treatments segment saw its order backlog increase by 8.7% YoY. Overall, the company's consolidated order backlog rose 13.0% YoY to JPY10.0bn at end-Q1, exceeding JPY10.0bn for the first time.

The company expects that clearing the accumulated order backlog will drive earnings growth starting from Q2

- When excluding the impact from the Domestic Subsidiary segment, the order backlog expansion is essentially an indicator of future sales growth. The semiconductor/FPD-related order backlog, a core activity within the Thermal Spraying segment, reached near-record levels, with JPY4.7bn at end-Q3 (October—December 2023) and JPY4.6bn at end-Q4 (January—March 2024), despite the softening of the semiconductor market in FY03/24. However, due to temporary stagnation in the semiconductor market, the company had to adjust shipments for some customers. Additionally, the company reported a shift within its semiconductor/FPD-related order backlog: a decline in backlogged mass-produced product orders (which significantly impact business performance), an increase in backlogged development product-related orders (which have a relatively smaller impact on performance), and growth in backlogged orders for products in transition toward mass production (which have slightly later delivery dates).

- However, according to the company, backlogged orders for mass-produced products began to increase at end-Q1 FY03/25. Given this end-Q1 backlog, the company is confident that earnings will recover and continue to expand in Q2 (July—September) and beyond.

Factors affecting changes (YoY) in recurring profit

- Consolidated recurring profit, which is closely linked to segment profit in each segment, grew by JPY544mn YoY, from JPY2.4bn in Q1 FY03/24 to JPY2.9bn. The following factors contributed to the change.

  - 1) Upward impact of JPY521mn due to an increase in sales
  - 2) Upward impact of JPY249mn due to a decrease in the variable cost ratio
  - 3) Downward impact of JPY149mn due to an increase in personnel expenses
  - 4) Downward impact of JPY29mn due to an increase in depreciation
  - 5) Upward impact of JPY162mn due to foreign exchange effects
  - 6) Downward impact of JPY211mn due to other factors

Increasing factors

- In Q1 (April—June), profit increased by JPY521mn, primarily due to higher sales driven by a 12.8% YoY rise in semiconductor/FPD-related sales within the Thermal Spraying segment. This growth resulted from both a recovery in sales volumes and the positive impact of the price revisions. Additionally, a decrease in the variable cost ratio (contributing JPY249mn to profit growth) was supported by the strong increase in highly profitable semiconductor/FPD-related sales, which improved the overall sales mix, despite persistently high manufacturing costs, including material and outsourcing expenses.

An increase in sales, coupled with a decline in the variable cost ratio, contributed to recurring profit growth

- The company's performance in FY03/24 saw a 12.2% YoY decline in recurring profit to JPY9.7bn, marking the first profit decline in four years. This drop was primarily due to two negative factors: a decrease in sales and an increase in the variable cost ratio. However, in Q1 FY03/25, these factors reversed—sales increased, and the variable cost ratio decreased. This double shift from negative to positive factors played a key role in the significant growth in recurring profit.

- The company expects these two factors, which had been negative in Q1 FY03/24, to continue serving as positive drivers in Q2 (July—September) FY03/25 and beyond. Although the company anticipates continued increases in personnel costs, depreciation, and R&D expenses in Q2 and beyond, it believes that the dual positive impacts of sales growth and a lower variable cost ratio will be sufficient to absorb these rising costs.

Foreign exchange effects

- In Q1 (April—June) FY03/25, foreign exchange effects also contributed positively to profit. Of the JPY162mn increase in profit due to forex impacts, JPY127mn came from an increase in foreign exchange gains recorded under non-operating income, while JPY35mn was attributed to exchange rate differences from the conversion of overseas subsidiary results and other related factors.

Decreasing factors

The rise in personnel expenses and depreciation was in line with the initial forecast

- In Q1 (April–June) FY03/25, wage hikes, an increase in the number of full-time employees, and higher operational activity for semiconductor/FPD-related production (e.g., overtime costs) drove up personnel expenses, resulting in a JPY149mn negative impact on profit. However, the company had accounted for both the wage increases and the additional full-time staff in the initial forecast, and absorbed the costs from higher operational activity through increased sales. The company also anticipated the rise in depreciation costs, projecting a JPY144mn YoY increase for FY03/25.

Inventory valuation losses, R&D expenses, and electricity costs

- The "other factors," which had a JPY211mn negative impact on profit, consisted of several elements. Roughly two-thirds (around 66%) of this decline came from increased inventory valuation losses, while nearly 20% was due to higher R&D expenses. As for electricity costs, which were included in "other factors" in FY03/24 results, the company continued receiving government subsidies, and so although electricity prices remained high, there was no notable YoY fluctuation in electricity costs during Q1 FY03/25.

Results by segment (April–June, three months)

- Below is a breakdown of individual segment performances for Q1 FY03/25. The sales shares provided for each segment represent percentages of the company's consolidated Q1 FY03/25 sales of JPY12.9bn. Consolidated sales include royalty income (which is low and has minimal impact on overall sales performance); accordingly, these segment sales shares do not add up to 100% of consolidated sales. Segment profits do not reflect impact from consolidation adjustments. When consolidated adjustments are reflected, total profit generated through all segments directly corresponds to the company's consolidated recurring profit.

Thermal Spraying (handled by TOCALO, the parent company; 75.1% sales share)

- Sales: JPY9.7bn (+9.8% YoY)
- Segment profit: JPY2.2bn (+24.1% YoY)
- Segment profit margin: 23.0% (+2.7pp YoY)

- Orders: JPY10.3bn (+14.0% YoY)
- Order backlog: JPY7.7bn (+22.5% YoY)

Sales

- The Thermal Spraying segment (parent company), the company's largest segment, accounted for 75.1% of consolidated sales in Q1 FY03/25. Sales in this segment grew by 9.8% YoY to JPY9.7bn, marking the first YoY growth in six quarters and setting a quarterly record high. This increase was the primary driver of the recovery in consolidated sales. Notably, Q1 consolidated sales also reached a quarterly record high, as mentioned earlier.

Semiconductor and FPD-related orders and sales hit quarterly record-highs

- The primary factor behind the record-high sales in the Thermal Spraying segment was the recovery in semiconductor/FPD-related sales, its core business. In Q1 (April–June) FY03/25, semiconductor/FPD-related sales increased by 12.8% YoY to JPY5.7bn, driven by a recovery in sales to key customers. This marked the first YoY increase in six quarters.

- Sales to key customers continued to grow, with sales to foreign semiconductor production equipment manufacturers, which had expanded in FY03/24, continuing to rise. Additionally, the recovery in sales to the largest domestic semiconductor production equipment manufacturer significantly contributed to the overall sales increase. This key customer, the company's largest, had a notable impact on its FY03/24 results, due to limited shipments to the customer caused by inventory adjustments during the semiconductor market slowdown. However, as the customer completed its inventory adjustments and revised its production plans upward, including restocking inventory, the company's orders recovered, resulting in a sales increase.

- Although Q1 semiconductor and FPD-related sales of JPY5.7bn fell short of the record high of JPY6.2bn achieved in Q2 FY03/23 (July–September 2022), the company expects sales to soon reach a new quarterly high, as orders have already

- hit record levels (as detailed below). Additionally, approximately 93% of semiconductor/FPD-related sales were to the semiconductor sector, with the proportion of sales to the FPD sector continuing to decline.

Trends in non-semiconductor and FPD-related categories

- Industrial machinery-related sales increased by 10.7% YoY to JPY1.2bn, while steelmaking-related sales grew by 16.8% YoY to JPY986mn, and other sales declined by 2.6% YoY to JPY1.7bn. The double-digit growth in industrial machinery-related sales was driven by steady performance in the bearing and energy sectors, both key customer bases for the company. Additionally, steelmaking-related sales of JPY986mn marked a return to Q1 levels not seen in four years, maintaining the recovery trend.

- However, the company noted that while industrial machinery-related and steelmaking-related sales increased YoY, they fell short of expectations. In particular, steelmaking-related sales were impacted by fraudulent activities involving certification testing at several automakers, which the company views as a contributing factor. Although the company focuses primarily on the recovery in semiconductor/FPD-related sales, which significantly contribute to overall performance, it aims to actively acquire orders in non-semiconductor/FPD areas to ensure these areas also meet its recovery expectations.

- The breakdown of the Thermal Spraying segment sales is as follows.

  - Semiconductors and Flat Panel Displays (FPDs): JPY5.7bn (+12.8% YoY)
    - Of which, thermal spraying for semiconductors: JPY5.3bn (+12.7% YoY)
    - Of which, thermal spraying for FPDs: JPY381mn (+15.8% YoY)
  - Industrial machinery-related: JPY1.2bn (+10.7% YoY)
  - Steel making-related: JPY986mn (+16.8% YoY)
  - Other purposes: JPY1.7bn (-2.6% YoY)

Business plan for semiconductors and FPDs

- In order to keep up with robust thermal spraying demand for semiconductor/FPD-related products, the company has been increasing capacity in stages since FY03/22, and the improved ability to fill the large volume of orders received resulted in it booking over JPY6.0bn in sales in a quarter for semiconductor/FPD-related products. Working closely with its customers, the company has been able to avoid a sudden expansion in production capacity that would directly increase costs and lower productivity, and has continued to increase sales while at the same time leveling operations. As a result, it achieved record-high consolidated results for the third consecutive year in FY03/23 (note: only sales were at a record high for the second consecutive year).

- The company views the adjustment phase in the semiconductor market, which significantly impacted FY03/24 earnings, as temporary. It expects demand for semiconductor manufacturing equipment to gradually recover. Even before the market adjustment began, the company had already implemented a medium- to long-term strategy focused on expanding production capacity while ensuring operational stability. The company confirms that this strategic direction remains unchanged.

- Apart from its efforts to recover earnings, the company plans to continue expanding production capacity while aiming to establish a production structure capable of achieving quarterly sales of JPY6.5bn without overburdening operations. The company is placing greater emphasis on operational leveling, focusing on maintaining steady, "cruising speed" operations in close collaboration with key customers.

Segment profit, segment profit margins

- In the Thermal Spraying segment, segment profit (which is linked to recurring profit in consolidated income statements) increased by 24.1% YoY to JPY2.2bn in Q1 (April–June), driven by a recovery in highly profitable semiconductor/FPD-related sales. This marked the first YoY profit growth in six quarters and was close to the record high of JPY2.3bn posted in Q1 FY03/23.

- Additionally, the segment profit margin improved by 2.7pp to 23.0%. However, the company acknowledges that the profitability recovery has only just begun, as the margin consistently exceeded 23.0% prior to the semiconductor market adjustment, with a record high of 26.1% in Q1 FY03/22. The company expects sales to continue increasing from Q2 (July–September) onward, supported by record-high semiconductor/FPD-related orders in Q1 (April–June). As the utilization rate for semiconductor/FPD-related production rises, the company plans to enhance productivity by leveling operations, aiming to further improve the profit margin in the Thermal Spraying segment.

Domestic Subsidiary (4.7% sales share)

- Sales: JPY609mn (-2.2% YoY)
- Segment profit: JPY98mn (-14.0% YoY)
- Segment profit margin: 16.1% (-2.2pp YoY)

- Orders: JPY601mn (-8.8% YoY)
- Order backlog: JPY41mn (-41.4% YoY)

Sales

- The company's domestic subsidiary (Japan Coating Center Co., Ltd.) mainly conducts physical vapor deposition (PVD) processing (a surface modification process for cutting tools, knives, and molds) and primarily serves clients in the automotive industry. Segment sales in Q1 (April—June) decreased by 2.2% YoY to JPY609mn, marking the first quarterly decline in sales in eight quarters. This drop was largely driven by a reduction in orders due to decreased domestic automobile production. While the company made efforts to recover in non-automotive sectors, these were insufficient to fully offset the decline.

- The decline in domestic automobile production, estimated to have fallen by approximately 5% YoY in Q1 (April—June), was primarily due to fraudulent practices involving automobile certification testing by Daihatsu Motor, a subsidiary of Toyota Motor Corporation (TSE Prime: 7203), which led to the suspension of domestic production for certain vehicle models. Furthermore, from late May onward, other automakers outside the Toyota group were also found to have obtained certifications improperly, further exacerbating the decline in domestic production. As the subsidiary's automotive-related sales are closely tied to domestic production volumes, this drop had a significant negative impact on its performance.

Segment profit, segment profit margin

- Segment profit in Q1 (April—June) decreased by 14.0% YoY to JPY98mn, marking the first quarterly profit decline in five quarters. This decline was driven by the inability to fully offset the impact of lower sales. Consequently, the segment profit margin also fell 2.2pp to 16.1%.

- The company responded to the reduction in orders caused by fraudulent certification testing at automakers (which led to the suspension of production for certain vehicle models) by implementing cost-cutting measures, such as reviewing personnel allocation, improving productivity, and adjusting prices. However, these efforts were insufficient to fully absorb the impact of declining sales. The company had introduced new production equipment at a factory established in FY03/22. While smaller in scale compared to those in the Thermal Spraying segment, the factory has steadily contributed to productivity improvements. Although the impact of reduced orders in Q1 could not be fully mitigated, the company believes that performance will recover once the certification issues are resolved and orders rebound.

Overseas Subsidiaries (14.5% sales share)

- Sales: JPY1.9bn (+15.8% YoY)
- Segment profit: JPY547mn (+45.5% YoY)
    - Segment profit margin: 29.4% (+6.0pp YoY)

- Orders: JPY1.9bn (+5.0% YoY)
- Order backlog: JPY1.9bn (-12.2% YoY)

Sales

- This segment includes two subsidiaries in China, one in Taiwan, and one in the US, but essentially consists of subsidiaries in China and Taiwan, as the US business is not fully operational. Also, because China and Taiwan have a December fiscal year-end, the company's Q1 (April—June) financial results include the financial results of Overseas Subsidiaries for the January—March period. In Q1 FY03/25, sales from the Overseas Subsidiaries segment rose by 15.8% YoY to JPY1.9bn, marking the 14th consecutive quarter of YoY sales growth, as the global semiconductor market's adjustment phase came to an end.

- Additionally, foreign exchange effects (boost from forex conversion gains due to the yen depreciation) contributed to the strong performance, with the segment posting the highest sales growth out of all segments. Sales growth for the segment surpasses the 9.8% YoY increase in the Thermal Spraying segment. According to the company, even excluding the impact of foreign exchange gains, sales were higher YoY.

Segment profit, segment profit margin

In Q1 (April—June), segment profit rose by 45.5% YoY to JPY547mn, marking the fourth consecutive quarter of YoY profit growth and a record high for any quarter. This record-breaking profit was driven by an improved sales mix, including an increase in semiconductor/FPD-related re-coating, along with contributions from foreign exchange effects and non-semiconductor-related sales. The segment profit margin also improved by 6.0pp to 29.4%, remaining higher than that of the Thermal Spraying segment (parent).

Other Surface Treatments (5.6% sales share)

- Sales: JP717mn (-3.8% YoY)
- Segment profit: JPY118mn (-9.2% YoY)
- Segment profit margin: 16.5% (-0.9pp YoY)

- Orders: JPY756mn (+1.6% YoY)
- Order backlog: JPY376mn (+8.7% YoY)

Sales, segment profit, segment profit margin

Segment sales decreased by 3.8% YoY to JPY717mn, marking the first YoY decline in five quarters. Segment profit also fell by 9.2% YoY to JPY118mn, as the company was unable to fully absorb the impact of lower sales. This also marked the first YoY profit decline in five quarters.

- The YoY decline in sales was primarily due to a slowdown in the Toyota diffusion (TD) process for agricultural equipment parts, which had seen growth in FY03/24. The TD process is a surface modification method that forms a functional film by immersing the target workpiece in a high-temperature molten salt bath and allowing vanadium and other carbides to diffusely permeate the surface of the base material. TOCALO applies surface treatments (TD process) to agricultural equipment parts and supplies these to Japanese agricultural equipment makers, who then sell their products to the US and other markets. TOCALO believes that it benefitted from the expansion of the agricultural industry in North America during FY03/24. Despite the decrease in sales and profit in Q1 FY03/25, the company remains optimistic about future growth in the agricultural equipment parts business.

Full-year FY03/24 results (out May 9, 2024)

FY03/24 (full-year, 12 months) results summary

Results for FY03/24 were as follows.

- Sales: JPY46.7bn (-2.9% YoY; previous forecast: JPY47.0bn)
- Operating profit: JPY9.2bn (-12.9% YoY; JPY8.7bn)
- Recurring profit: JPY9.7bn (-12.2% YoY; JPY8.7bn)
    - Recurring profit margin: 20.7% (-2.2pp YoY; 18.5%)
- Net income attributable to owners of the parent: JPY6.3bn (-13.9% YoY; JPY5.8bn)

Overview

- Sales and all profit items, including recurring profit, were lower than in FY03/23 due to adjustments in the semiconductor market. While sales were slightly below the previous forecast, all profit items exceeded the forecast. EPS was JPY105.5. The company raised its annual dividend forecast from JPY50.0 per share to JPY53.0 per share (JPY50.0 per share in FY03/23), and expects the payout ratio to be 50.2% (41.4%) based on the company forecast. In FY03/23, the company posted record-high sales for the second consecutive year and record-high recurring profit and other profit items for the third consecutive year. However, due to the prolonged adjustment of the semiconductor market, the company recorded its first sales and profit decline in four years in FY03/24.

Sales

- Thermal Spraying (handled by TOCALO, the parent company), which accounts for approximately 72% of consolidated sales, decreased 6.4% YoY. This was mainly due to a temporary adjustment phase in the semiconductor market, resulting in a roughly 15.9% decrease in sales for semiconductors and flat panel displays (FPDs), the mainstay customer fields. However, the increase in sales for applications other than semiconductors and FPDs (industrial machinery and steel-related) partially offset the decrease in sales for semiconductors and FPDs, and limited the decrease in Thermal Spraying (Parent) sales to 6.4%.

- Sales for Overseas Subsidiaries (mainly China and Taiwan), Domestic Subsidiary, and Other Surface Treatments segments also increased YoY, but could not fully offset the decrease in Thermal Spraying (Parent). As a result, FY03/24 consolidated sales decreased 2.9% to JPY46.7bn.

Recurring profit and recurring profit margin (RPM)

- Segment profit decreased 24.7% YoY for Thermal Spraying (Parent), but increased 14.5% YoY for Overseas Subsidiaries, 39.8% YoY for Domestic Subsidiary, and 14.1% YoY for Other Surface Treatments. The company's segment profit is linked to recurring profit in the income statement. The mainstay Thermal Spraying segment saw a 24.7% YoY decline in profit due to a decrease in sales from the high-profit semiconductors and FPDs, and increases in profit at Overseas Subsidiaries and other segments could not fully offset the profit decline at Thermal Spraying.

- Consequently, the consolidated recurring profit for FY03/24 decreased 12.2% YoY to JPY9.7bn. RPM fell 2.2pp YoY to 20.7% due to changes in sales mix (decrease in sales from the high-profit semiconductors and FPDs) and other factors, but remained above the 20% mark, one of the company's milestones.

Orders

- For FY03/24, the company reported JPY47.5bn in consolidated orders (-1.9% YoY). Orders declined YoY for the first time in four fiscal years in FY03/24. This downturn was primarily the result of a decrease in mainstay semiconductor/FPD-related orders booked through the Thermal Spraying segment (parent) that occurred due to an adjustment phase within the semiconductor market that became clearly evident from 2H FY03/23.

- Orders booked through the Overseas Subsidiaries segment remained mostly unchanged YoY due to deteriorating conditions in the semiconductor market. However, orders booked through the Domestic Subsidiary segment grew YoY due to a pickup in domestic production within the automotive industry, a key customer base. Meanwhile, the company also reported a double-digit rate of YoY expansion in orders booked through the Other Surface Treatments segment. Regardless, this performance was not extensive enough to offset the decline in orders booked through the Thermal Spraying segment (most notable was a downturn in semiconductor/FPD-related orders). Consequently, FY03/24 orders came to JPY47.5bn. A breakdown has been provided below.

    - Thermal Spraying (parent): JPY34.9bn (-3.7% YoY)
        - Semiconductor/FPD-related: JPY20.2bn (-11.0% YoY)
        - Industrial machinery-related: JPY4.9bn (+26.6% YoY)
        - Steel making-related: JPY3.7bn (-7.5% YoY)
        - Other businesses: JPY6.1bn (+7.8% YoY)
    - Domestic Subsidiary: JPY2.5bn (+3.0% YoY)
    - Overseas Subsidiaries: JPY7.2bn (+0.6% YoY)
    - Other Surface Treatments: JPY3.0bn (+11.2% YoY)

    - Semiconductor/FPD-related orders booked through the company's core Thermal Spraying segment incurred impact from inventory adjustments implemented among major semiconductor equipment manufacturers (the company's most critical customers) in response to an ongoing adjustment phase within the semiconductor market. Orders booked through the company's second-most critical customer group exceeded expectations, but this performance was not extensive enough to offset the decline in orders secured through major semiconductor equipment manufacturers, and FY03/24 semiconductor/FPD-related orders fell 11.0% YoY as a result. However, this rate of decline was lower than the cumulative rate the company reported for Q1–Q3 (April–December 2023; -14.8% YoY).

    - Industrial machinery-related orders booked through the Thermal Spraying segment rose 26.6% YoY and other orders (same segment; same applies) expanded 7.8% YoY. At the same time, steelmaking-related orders secured through the

- segment fell 7.5% YoY. Consequently, total orders booked through the Thermal Spraying segment fell for the first time in four fiscal years, dropping to JPY34.9bn (-3.7% YoY).

- Aside from Thermal Spraying, Domestic Subsidiary orders increased 3.0% YoY as domestic automobile production recovered, and Other Surface Treatments orders increased 11.2% YoY, mainly for agricultural machinery. Nevertheless, Overseas Subsidiaries orders rose only 0.6% YoY (remaining mostly level) despite contributions from the foreign exchange impact (exchange rate difference resulting from the depreciation of the yen), due to the impact from the adjustment phase of the semiconductor market.

Order backlog

- The order backlog grew 10.9% YoY to JPY9.3bn as of end-Q4 FY03/24 (end-March 2024). The breakdown of the JPY9.3bn order backlog as of end-Q4 is shown below.

  - Thermal Spraying (parent): JPY7.0bn (+16.7% YoY)
    - Semiconductor/FPD-related: JPY4.6bn (+17.3% YoY)
    - Industrial machinery-related: JPY379mn (-8.0% YoY)
    - Steel making-related: JPY976mn (+0.8% YoY)
    - Other businesses: JPY1.0bn (+51.1% YoY)

  - Domestic subsidiary: JPY50mn (+47.1% YoY)
  - Overseas subsidiaries: JPY1.9bn (-5.2% YoY)
  - Other Surface Treatments: JPY336mn (-2.9% YoY)

  - The company's end-FY03/24 order backlog for its core Thermal Spraying segment expanded 16.7% YoY due primarily to a 17.3% YoY increase in semiconductor/FPD-related orders. The company reported a YoY decline of 8.0% in its industrial machinery-related order backlog and observed YoY growth rates of 0.8% and 51.1% in its steelmaking-related and other businesses order backlogs, respectively. However, this impact was absorbed by expansion in the semiconductor/FPD-related order backlog. As a result, the Thermal Spraying segment order backlog amounted to a record-high JPY7.0bn at end-FY03/24. The Domestic Subsidiary segment order backlog grew 47.1% YoY, while the Overseas Subsidiaries segment backlog shrank 5.2% YoY and the Others segment backlog declined 2.9% YoY. However, these changes had only limited impact on the company's consolidated order backlog. Consequently, the company's consolidated order backlog also closed out FY03/24 at a record high of JPY9.3bn (+10.9% YoY).

  - When excluding impact from the Domestic subsidiary segment, order backlog expansion is essentially an indicator of future sales growth. However, weakening conditions in the semiconductor market forced the company to adjust semiconductor/FPD-related shipments (a core activity of the Thermal Spraying segment) for some customers. Furthermore, with regard to its semiconductor/FPD-related order backlog, the company reported a decline in backlogged mass-produced product orders (which contribute significantly to business performance), an increase in backlogged development product-related orders (which contribute relatively little to business performance), and growth in backlogged orders associated with products currently in transition toward mass production (which have slightly later delivery dates). However, according to the company, backlogged orders associated with mass-produced products had begun to increase at end-FY03/24. Due to this end-Q4 backlog, the company is confident that sales will begin to recover in FY03/25.

Factors affecting changes (YoY) in recurring profit

- Recurring profit, which is closely linked to segment profit in each segment, decreased by JPY1.3bn YoY, from JPY11.0bn in FY03/23 to JPY9.7bn. Factors contributing to the change are as follows.

  - 1) downward impact of JPY980mn due to a decrease in sales
  - 2) downward impact of JPY843mn due to a rise in the variable cost ratio
  - 3) upward impact of JPY335mn due to a decrease in personnel expenses
  - 4) downward impact of JPY58mn due to an increase in depreciation
  - 5) upward impact of JPY43mn due to foreign exchange effects
  - 6) upward impact of JPY162mn due to other factors

Decreasing factors

- In FY03/24, profit decreased by JPY980mn due to a decrease in sales, as the impact of a decrease in sales associated with thermal spraying for semiconductor/FPD-related applications (-15.9% YoY) was not offset by higher sales in other fields and for other products. The company partially compensated for the decrease in sales with price revisions (increases), but it could not fully absorb the negative impact due to the significant decrease in semiconductor/FPD-related sales. The increase in the variable cost ratio (negative profit impact of JPY843mn in terms of YoY change) was attributed to a rise in process material costs and outsourcing costs, as well as a change (deterioration) in the sales mix due to a decline in semiconductor/FPD-related sales, which have relatively high profitability.

- An increase in depreciation also had a negative profit impact of JPY58mn (in terms of YoY change), but according to the company, negative profit impact from these three factors (sales decline, rise in variable cost ratio, and growth in depreciation), along with downward profit impact from a decline in sales secured through semiconductor/FPD-related operations, was commensurate with the assumptions underlying its initial financial projections.

Increasing factors

- Recurring profit declined 12.2% YoY to JPY9.7bn in FY03/24. In terms of YoY change, the largest source of positive profit impact was a decrease in personnel expenses (positive profit impact of JPY335mn), but the company concludes that this impact was only temporary.

  - Generally, personnel expenses are growing, as many companies are raising wages (base salary increases, etc.) and expanding their staff sizes. In terms of YoY change, the company also reported downward personnel expense impact of JPY156mn from higher wages and an increase in full-time employees (rise in newly hired full-time employees and the conversion of part-time employees into full-time employees). However, personnel expenses ultimately declined JPY335mn YoY due to a one-time lump-sum amortization of actuarial gains stemming from retirement benefit accounting.

  - These actuarial gains (which the company amortized all at once) emerged in part because investment returns (valuation gains) on pension assets were higher than expected and in part because growth in interest rates drove a decline in future retirement benefit liabilities. According to the company, these factors resulted in an actuarial gain of approximately JPY500mn in FY03/24. Note that investment returns (valuation gains) on pension assets were not the sole determining factor resulting in actuarial gains of JPY500mn; other factors also impacted this result, including service costs, interest costs, and premium payments.

  - At the end of each fiscal year, the company amortizes all actuarial gains or losses in their entirety, and this accounting practice reduced personnel expenses by approximately JPY500mn in FY03/24. Therefore, the company converted what would have been negative profit impact of JPY156mn (in terms of YoY change) into positive profit impact of JPY335mn. Many companies amortize actuarial gains and losses that arise each accounting period evenly over the average remaining service periods for their workforces (which are generally 10 to 15 years). Few companies amortize these gains and losses in full at the end of each fiscal year, as the company does. According to the company, this positive profit impact of about JPY500mn (from lump-sum amortization), which reduced retirement benefit expenses by the same amount, is strictly temporary. Therefore, the company has concluded that its recurring profit for FY03/24 was inflated by about JPY500mn.

- In terms of YoY change, forex impact on profit was +JPY43mn (JPY12mn from foreign exchange gains recorded as non-operating income and JPY31mn stemming primarily from favorable exchange rate differences between the company and its foreign subsidiaries).

- The "other factors" category included a YoY decline in electricity costs, which had a positive impact on recurring profit. This decline, while limited, contrasts with FY03/23, when electricity costs rose markedly YoY. The decline occurred in part because semiconductor/FPD-related operations slowed down noticeably, leading to a commensurate downturn in power consumption. Despite the YoY dropoff, the company still views its energy costs (for electricity, etc.) as high.

- A decline in inventory valuation losses (recognized in FY03/23) also had a positive impact on recurring profit. R&D costs rose JPY134mn YoY, and dragged down recurring profit by the same amount in terms of YoY change. However, YoY decline in electricity costs and the YoY decrease in inventory valuation losses offset this rise in R&D costs. As a result of these circumstances, "other factors" had a positive recurring profit impact of JPY162mn (in terms of YoY change).

FY03/24 results by segment

- Included below is a breakdown of individual segment performances for FY03/24. The sales shares provided for each segment represent percentages of the company's consolidated FY03/24 sales of JPY46.7bn. Consolidated sales include royalty income (which is low and has minimal impact on overall sales performance); accordingly, these segment sales shares do not add up to 100% of consolidated sales. Segment profits do not reflect impact from consolidation adjustments. When consolidated adjustments are reflected, total profit generated through all segments directly corresponds to the company's consolidated recurring profit.

Thermal Spraying (handled by TOCALO, the parent company; 72.4% sales share)

- Sales: JPY33.9bn (-6.4% YoY)
- Segment profit: JPY6.3bn (-24.7% YoY)
- Segment profit margin: 18.6% (-4.5pp YoY)

- Orders: JPY34.9bn (-3.7% YoY)
- Order backlog: JPY7.0bn (+16.7% YoY)

Sales

- The Thermal Spraying segment (parent company), as the company's largest segment, generated 72.4% of consolidated sales in FY03/24. Sales generated through this segment's core semiconductor/FPD-related operations declined markedly due to a decrease in order intake that resulted from inventory adjustments implemented by major customers. The company reported growth in industrial machinery-related, steelmaking-related, and other sales, but this growth was not extensive enough to offset the decline in sales generated through semiconductor/FPD-related operations. Consequently, Thermal Spraying segment sales declined 6.4% YoY to JPY33.9bn. A breakdown of segment sales has been provided below.

- Semiconductors and Flat Panel Displays (FPDs): JPY19.6bn (-15.9% YoY)
  - Of which, thermal spraying for semiconductors: JPY18.0bn (-17.1% YoY)
  - Of which, thermal spraying for FPDs: JPY1.5bn (+1.1% YoY)
- Industrial machinery-related: JPY4.9bn (+29.5% YoY)
- Steel making-related: JPY3.7bn (+1.9% YoY)
- Other purposes: JPY5.7bn (+3.4% YoY)

Semiconductor/FPD-related sales

- Relatively high-margin semiconductor- and FPD-related sales decreased 15.9% YoY to JPY19.6bn, which was the main factor behind the overall decline in Thermal Spraying sales. In addition, about 92.0% of sales were for semiconductor/FPD-related applications in FY03/24, and the percentage of FPD-related sales is on a declining trend.

  - The decrease in semiconductor/FPD-related sales was mainly due to a global decrease in demand for semiconductors, which became noticeable from the latter half of the previous fiscal year (FY03/23). Thus, the company's largest customers—major semiconductor manufacturing equipment manufacturers, and other related companies carried out inventory adjustments (production adjustments), leading to a decrease in orders (see the previous section) and shipments for the company.

  - Semiconductor/FPD-related sales for Q4 FY03/23 (January–March 2023) declined 3.8% YoY, dropping for the first time in 13 quarters. In FY03/24, sales remained weak throughout the year. The rate of semiconductor/FPD-related sales decline for FY03/24 (-15.9% YoY) was lower than the rate observed for 1H (April–September 2023; -19.5% YoY), but decline only slowed to a limited extent. However, the company expects a marked recovery in semiconductor/FPD-related sales during FY03/25 (see the "Company forecast for FY03/25" section below).

  - In FY03/23, adjustment in the semiconductor market was already evident from 2H, but the company recorded sales based on a substantial backlog, resulting in record highs for semiconductor/FPD-related sales. The company believes that the expansion of the YoY rate of decrease in semiconductor/FPD-related sales to 15.9% in FY03/24 is partly due to comparison with the previous year's high sales, but the largest factor is the impact of inventory adjustments by customers due to a decrease in demand.

No change in business plan for semiconductors and FPDs

- In order to keep up with robust thermal spraying demand for semiconductor/FPD-related products, the company has been increasing capacity in stages since FY03/22, and the improved ability to fill the large volume of orders received resulted in it booking over JPY6.0bn in sales in a quarter for semiconductor/FPD-related products. Working closely with its customers, the company has been able to avoid a sudden expansion in production capacity that would directly increase costs and lower productivity, and has continued to increase sales while at the same time leveling operations. As a result, it achieved record-high consolidated results for the third consecutive year in FY03/23 (note: only sales were at a record high for the second consecutive year). However, in FY03/24, the company was forced to report its first sales and profit decline in four fiscal years due to a downturn in sales generated through core semiconductor/FPD-related operations.

- However, the company believes that the adjustment phase in the semiconductor market is temporary and that demand for semiconductor manufacturing equipment will gradually recover. Even before the adjustment began, the company had planned to continue expanding production capacity while pursuing operational leveling, as a medium- to long-term strategy. Although the temporary adjustment phase in the semiconductor market continues, the company says the direction of its strategy remains basically the same.

- While continuing to increase production capacity, it aims for a production structure that can achieve quarterly sales of JPY6.5bn while ensuring that operations do not come under too much stress. It is placing greater emphasis on operational leveling, and once the adjustment phase of the semiconductor market ends, its first priority will be to maintain operations at cruising speed while working with major customers.

Trends in businesses other than other than semiconductors and FPDs

Steel-making related

- In areas within the Thermal Spraying segment but other than the semiconductor/FPD-related business, steelmaking-related sales rose 1.9% YoY to JPY3.7bn in FY03/24. This was due to the company's aggressive efforts to win orders to minimize the impact of the decline in sales of semiconductor/FPD-related products, as well as certain contributions from the recovery of domestic production in the automobile industry (a major customer for the steel making-related business). As a result, steelmaking-related sales rose YoY, but the company believes it has not yet reached a satisfactory level due to the continued decrease in domestic crude steel production (1.2% decrease YoY in domestic crude steel production in FY03/24, according to the Japan Iron and Steel Federation). In fact, steelmaking-related orders also fell by 7.5% YoY. Accordingly, the company intends to continue focusing on order acquisition.

Industrial machinery-related

- Industrial machinery-related sales rose 29.5% YoY to JPY4.9bn in FY03/24. As with steelmaking-related products, this was due to the success of the company's aggressive efforts to win orders to minimize the impact of the decline in sales for semiconductor/FPD-related products. According to the company's analysis, in addition to the existing orders from the bearing industry and the industrial machinery-related industry, the acquisition of orders from the energy industry also contributed, and in particular, sales to the energy industry were higher than the company's expectations. Industrial machinery-related sales tend to fluctuate significantly from quarter to quarter, but sales growth continued in FY03/24 with no notable fluctuations. Meanwhile, performance in terms of orders has been solid, but the company anticipates a measurable reactionary decline in FY03/25.

Segment profit, segment profit margins

- Thermal Spraying segment profit (segment profit is linked to recurring profit in consolidated income statements) in FY03/24 decreased 24.7% YoY to JPY6.3bn due to the impact of the decrease in semiconductor/FPD-related sales, which are highly profitable in the Thermal Spraying segment. The segment profit margin also declined 4.5pp to 18.6%. The segment profit margin came in below 20% for the first time in four years since the 18.7% recorded in FY03/20.

- Although FY03/24 segment profit declined 24.7% YoY, the company believes this was generally within the expected range because semiconductor/FPD-related orders had already declined significantly since Q4 FY03/23 (January—March 2023). Based on the production forecasts of its major customers, the company anticipates profit recovery in its Thermal Spraying segment during FY03/25.

Domestic Subsidiary (5.3% sales share)

- Sales: JPY2.5bn (+1.8% YoY)

- Segment profit: JPY492mn (+39.8% YoY)
- Segment profit margin: 20.0% (+5.4pp YoY)

- Orders: JPY2.5bn (+3.0% YoY)
- Order backlog: JPY50mn (+47.1% YoY)

Sales

- The company's domestic subsidiary (Japan Coating Center Co., Ltd.) mainly conducts physical vapor deposition (PVD) processing (a surface modification process for cutting tools, knives, and molds) and primarily serves clients in the automotive industry. Segment sales increased 1.8% YoY to JPY2.5bn in FY03/24 due to order growth that accompanied a recovery in domestic automobile production (which expanded 7.1% YoY in FY03/24; source: Japan Automobile Manufacturers Association). However, the company recognizes that sales in Domestic Subsidiary segment in FY03/24 did not reach a level that commensurately reflects the recovery in automobile production (i.e., the rate of increase in production volume). Therefore, the company has indicated that it will closely monitor circumstances related to sales in FY03/25 and subsequent accounting periods.

Segment profit, segment profit margin

- While sales only increased by 1.8% YoY, segment profit increased by 39.8% to JPY492mn, and the segment profit margin improved by 5.4pp to 20.0%, recovering to the 20% range for the first time in three fiscal years. This was mainly due to the effect of cost reductions, such as a review of personnel allocation and productivity improvement, as well as the effects of price revisions, while the effect of the increase in sales was limited. Another factor was a decrease in the depreciation burden for new production equipment introduced with the establishment of a new factory in FY03/22. While the new plant is small compared to facilities in the Thermal Spraying segment, and its impact on overall earnings is therefore limited, it has had some effect on the Domestic Subsidiary segment.

Overseas Subsidiaries (15.5% sales share)

- Sales: JPY7.3bn (+9.6% YoY)
- Segment profit: JPY1.9bn (+14.5% YoY)
    - Segment profit margin: 26.1% (+1.1pp YoY)

- Orders: JPY7.2bn (+0.6% YoY)
- Order backlog: JPY1.9bn (-5.2% YoY)

Sales

- This segment includes two subsidiaries in China, one in Taiwan, and one in the US, but essentially consists of subsidiaries in China and Taiwan, as the US business is not fully operational. Also, because China and Taiwan have a December 31 year-end, the company's FY03/24 financial results include the financial results of Overseas Subsidiaries for the January–December 2023 period. As was the case with Thermal Spraying, Overseas Subsidiaries in FY03/24 were affected by inventory adjustments by customers due to the adjustment phase of the global semiconductor market, and semiconductor-related sales were sluggish. Nevertheless, sales in FY03/24 increased 9.6% YoY to JPY7.3bn, reaching a record high as the sluggish semiconductor-related sales were partially covered by other sales (steel making-related, etc.) and foreign exchange effects (increase in conversion due to yen depreciation) contributed.

    - However, while the company generated segment sales growth in FY03/24, it also reported weak semiconductor-related performance and therefore does not view this growth as sufficient.

Segment profit, segment profit margin

- Segment profit in FY03/24 increased 14.5% to JPY1.9bn. Despite a deterioration in the sales mix, such as a decrease in semiconductor/FPD-related re-coating, the company secured a higher profit than a year ago due to contributions from non-semiconductor-related sales. The segment profit margin improved by 1.1pp YoY to 26.1%, remaining higher than that of the Thermal Spraying segment (parent).

Other Surface Treatments (6.5% sales share)

- Sales: JPY3.0bn (+10.0% YoY)

- Segment profit: JPY534mn (+14.1% YoY)
- Segment profit margin: 17.7% (+0.7pp YoY)

- Orders: JPY3.0bn (+11.2% YoY)
- Order backlog: JPY336mn (-2.9% YoY)

Sales, segment profit, segment profit margin

- Segment sales increased 10.0% YoY to JPY3.0bn, reaching a record high and exceeding JPY3.0bn for the first time amid generally strong order bookings. Segment profit grew 14.1% YoY to JPY534mn, also reaching a record high, as increased sales absorbed higher costs.

  - The Toyota diffusion (TD) process for agricultural equipment parts (a surface modification method that forms a functional film by immersing the target workpiece in a high-temperature molten salt bath and allowing vanadium and other carbides to diffusely permeate the surface of the base material) grew and contributed to sales growth. TOCALO applies surface treatments (Toyota diffusion process) to agricultural equipment parts and supplies these to Japanese agricultural equipment makers. Agricultural equipment makers sell their products in the US and other locations, and TOCALO believes that it has benefitted from the expansion of the agricultural industry in North America.

- The company expects to expand its business related to agricultural equipment parts in the future. The contribution to profit is not yet significant, but the segment profit margin improved by 0.7pp to 17.7%.

Q4 performance overview (January–March 2024; three months)

Results for Q4 FY03/24 (January–March 2024) were as follows.

- Sales: JPY11.9bn (+1.8% YoY)
- Operating profit: JPY2.8bn (+19.7% YoY)
- Recurring profit: JPY2.9bn (+26.2% YoY)
  - Recurring profit margin: 24.6% (+4.8pp YoY)
- Net income attributable to owners of the parent: JPY2.0bn (+21.7% YoY)

Summary

- In Q4 (January–March 2024), consolidated sales rose 1.8% YoY to JPY11.9bn. Sales generated through semiconductor/FPD-related operations (which are central to the Thermal Spraying segment) remained weak, dropping 7.4% YoY as customers continued to adjust their inventories in response to declining demand within the semiconductor market. However, growth in sales generated through other Thermal Spraying segment operations (industrial machinery-related operations, etc.) and expansion in sales achieved through the Overseas Subsidiaries segment offset this weak performance, and in Q4, the company reported its first YoY quarterly consolidated sales increase in four fiscal quarters.

- At the same time, due to sales growth and a marked decline in retirement benefit expenses, operating profit rose 19.7% YoY to JPY2.8bn, while recurring profit expanded 26.2% YoY to JPY2.9bn and net income attributable to owners of the parent grew 21.7% YoY to JPY2.0bn. All profit categories grew YoY for the first time in five quarters, and the company's recurring profit margin improved 4.8pp to 24.6%.

- Decline in retirement benefit expenses was one of the major drivers of profit growth in Q4 (January–March 2023), and this decline occurred because the company fully amortized all FY03/24 actuarial differences arising through retirement benefit accounting (which had a positive profit impact of about JPY500mn) at the end of Q4. Therefore, operating profit and recurring profit were both commensurately inflated (by about JPY500mn). For details, see the "Factors affecting changes (YoY) in recurring profit" section for FY03/24 above.

Results by segment (January–March 2024; three months)

- Q4 results (January–March 2024) by segment are as follows. The sales share of each segment is the share of consolidated sales of JPY11.9bn in Q4. Consolidated sales include royalty income (which is low and has minimal impact on overall sales performance); accordingly, these segment sales shares do not add up to 100% of consolidated sales. Segment profits do not reflect impact from consolidation adjustments. When consolidated adjustments are reflected, total profit generated through all segments directly corresponds to the company's consolidated recurring profit.

Thermal Spraying (handled by TOCALO, the parent company; 71.8% sales share)

- Sales: JPY8.6bn (-0.0% YoY)
- Segment profit: JPY1.6bn (-7.4% YoY)
- Segment profit margin: 18.6% (-1.4pp YoY)

- Orders: JPY8.4bn (+7.9% YoY)

Sales

- Sales generated through the Thermal Spraying segment in Q4 (January–March 2024) were JPY8.6bn, remaining roughly level (-0.0%) YoY. Strictly speaking, consolidated sales declined YoY for the fifth consecutive quarter in Q4, but the company believes that its sales have reached a nadir and begun to recover. Semiconductor/FPD-related sales (which comprised about 58% of Thermal Spraying segment sales in FY03/24) were sluggish, declining 7.4% YoY to JPY5.0bn. However, overall segment sales remained roughly level YoY thanks to growth in other sales. Thermal Spraying segment performance received support from a YoY increase in industrial machinery-related sales, which rose 38.5% to JPY1.2bn, and YoY expansion in steelmaking-related sales, which grew 11.5% to JPY1.1bn. A breakdown of Thermal Spraying segment sales (JPY8.6bn) has been provided below.

  - Semiconductors and flat panel displays (FPDs): JPY5.0bn (-7.4% YoY)
  - Industrial machinery-related: JPY1.2bn (+38.5% YoY)
  - Steel making-related: JPY1.1bn (+11.5% YoY)
  - Other purposes: JPY1.3bn (-3.1% YoY)

  - In Q4 (January–March 2024), sales generated through core semiconductor/FPD-related operations fell 7.4% YoY to JPY5.0bn. Semiconductor/FPD-related sales fell more than 7.0% YoY due in part to an unfavorable comparison with Q4 FY03/23 (January–March 2023), when quarterly sales were still high at JPY5.5bn.

  - Thermal Spraying segment sales generated through industrial machinery-related operations grew 38.5% YoY to JPY1.2bn, while sales achieved through steelmaking-related operations rose 11.5% YoY to JPY1.1bn. According to the company, industrial machinery-related sales rose nearly 40% YoY due primarily to expansion in construction projects within the energy industry.

Orders

- Q4 (January–March 2024) orders in the Thermal Spraying segment rose 7.9% YoY to JPY8.4bn. Orders of JPY8.4bn broke down as follows.

  - Semiconductor and FPDs: JPY5.0bn (+7.1% YoY)
  - Industrial machinery-related: JPY1.0bn (+16.4% YoY)
  - Steelmaking-related: JPY816mn (-0.2% YoY)
  - Other purposes: JPY1.6bn (+9.9% YoY)

  - Thermal Spraying segment posted orders of JPY9.7bn in Q3 FY03/23 (October–December 2022), a quarterly record. However, since Q4 FY03/23 (January–March 2023), orders for the segment have continued to fall YoY, and Q3 FY03/24 marked the fourth consecutive quarter of YoY decline. The main reason for this is the lackluster semiconductor/FPD-related orders, the mainstay of Thermal Spraying, which have been declining for the fifth consecutive quarter.

  - According to the company, orders for Q1–Q3 (April–December 2023) included orders associated with newly developed products and prototypes from customers, and orders associated with currently mass-produced products (unrelated to newly developed products and prototypes) declined by a larger extent than their YoY rate of change suggests. However, the company maintains that qualitative change (i.e., growth in orders associated with mass-produced products) in orders reported for Q4 was strong.

  - With regard to Thermal Spraying segment orders not associated with semiconductor/FPD-related operations, steelmaking-related orders remained roughly level YoY at JPY816mn (-0.2%), while industrial machinery-related orders

- rose 16.4% YoY to JPY1.0bn and other orders grew 9.9% YoY to JPY1.6bn. As a result, overall quarterly Q4 Thermal Spraying segment orders rose 7.9% YoY to JPY8.4bn, increasing YoY for the first time in five fiscal quarters.

Segment profit

- Due primarily to the decline in sales generated through semiconductor/FPD-related operations (a significant source of earnings), Q4 Thermal Spraying segment profit (for January–March 2024) declined 7.4% YoY to JPY1.6bn. The segment profit margin also deteriorated 1.4pp YoY, dropping to 18.6%. The rate of YoY decline in segment profit contracted to 7.4% in Q4, compared to -21.6% YoY in Q1 (April–June 2023), -36.7% YoY in Q2 (July–September 2023), and -29.5% YoY in Q3 (October–December 2023). Based on various factors, including this contraction in the rate of YoY profit decline, the company suggested that Thermal Spraying segment performance has reached a nadir and will soon begin to recover.

Domestic Subsidiary (5.0% sales share)

- Sales: JPY598mn (+0.7% YoY)
- Segment profit: JPY72mn (-5.3% YoY)
- Segment profit margin: 12.0% (-0.8pp YoY)

- Orders: JPY540mn (-6.9% YoY)

Sales

- In Q4 (January–March 2024), Domestic Subsidiary segment sales increased 0.7% YoY to JPY598mn, remaining nearly level YoY. The sales performance of the Domestic Subsidiary segment incurs impact from fluctuations in the number of automobiles produced in Japan.

    - Segment sales performance for Q4 (January–March 2024) took a hit from a YoY decline of 14.4% in Q4 automobile production. This production decline occurred due primarily to the discovery of misconduct surrounding safety certification procedures at a Toyota Motor Corporation group company. In response to this scandal, Daihatsu Motor Co., Ltd. (unlisted), a wholly owned subsidiary of Toyota Motor Corporation (TSE Prime: 7203), suspended operations at all domestic plants from December 20, 2023. Meanwhile, in response to the discovery of misconduct related to engine certification procedures at Toyota Industries Corporation (TSE Prime: 6201), production of some Toyota vehicle models also came to a halt.

    - The Q4 decline in domestic vehicle production had a considerable impact on sales performance in the Domestic Subsidiary segment, but the company was able to generate recovery in sales secured through business activities unrelated to automobiles. Consequently, Q4 segment sales remained mostly level YoY, rising only 0.7%. Regardless, the company maintains that it will closely monitor relevant performance impact in FY03/25 because certification-related misconduct issues have spread to automakers other than Toyota Motor Corporation since June 2024.

Segment profit

- Quarterly segment profit for Q4 (January–March 2024) declined YoY for the first time in four quarters, dropping to JPY72mn (-5.3% YoY). The segment profit margin also fell 0.8pp YoY to 12.0%. The company did not specifically explain why segment profit decreased while segment sales remained nearly level YoY. However, it did imply that the YoY domestic automobile production decline of 14.4% in Q4 was partly responsible. Given that certification-related misconduct issues have spread to automakers other than Toyota Motor Corporation since June 2024, the company plans to closely monitor relevant performance impact in FY03/25.

Overseas Subsidiaries (16.5% sales share)

- Sales: JPY2.0bn (+8.7% YoY)
- Segment profit: JPY514mn (+23.0% YoY)
    - Segment profit margin: 26.1% (+3.0pp YoY)

- Orders: JPY1.7bn (+15.8% YoY)

Sales

- This segment encompasses two subsidiaries in China, one in Taiwan, and one in the US, but it effectively consists of just the subsidiaries in China and Taiwan (three companies) because the US subsidiary is not yet fully operational. Sales of the Overseas Subsidiaries segment in Q4 (January–March 2024) grew 8.7% YoY to JPY2.0bn.

  - On a quarterly basis, the company recorded a YoY increase in sales for the 12th consecutive quarter and achieved its highest sales ever across all quarters, surpassing the JPY1.9bn recorded in Q3 FY03/24 (October–December 2023). However, according to the company, actual sales were sluggish as its overseas subsidiaries were affected by adjustments in the semiconductor market, such as inventory adjustments by local customers of the semiconductor/FPD-related recoating business. On the other hand, the company maintained sales growth, backed by the steady steel making-related sales in China. Subsidiaries in China and Taiwan have fiscal years ending in December, which means their performance for October–December 2023 is reflected through Q4 (January–March 2024) results.

Segment profit

- In Q4 (January–March 2024), segment profit increased 23.0% YoY to JPY514mn, and the segment profit margin improved 3.0pp YoY to 26.1%. Similar to segment sales, Q4 segment profit (JPY514mn) reached a record high for all quarters. The previous record high was JPY511mn, set in Q2 (July–September 2023). However, the Q4 segment profit margin (26.1%) did not reach a record high due primarily to semiconductor-related inventory adjustments.

Other Surface Treatments (6.1% sales share)

- Sales: JPY733mn (+7.0% YoY)
- Segment profit: JPY124mn (+13.8% YoY)
  - Segment profit margin: 16.9% (+1.0pp YoY)

- Orders: JPY717mn (+8.5% YoY)

Sales and segment profit

- Q4 (January–March 2024) sales rose by 7.0% YoY to JPY733mn, hitting a Q4 record high. Segment profit increased by 13.8% YoY to JPY124mn, and the segment profit margin improved by 1.0pp to 16.9%. According to the company, this due to strong sales of surface treatments for agricultural equipment parts absorbing cost increases.

Cumulative Q3 FY03/24 results (out January 31, 2024)

Cumulative Q3 (April–December, nine months) results summary

Results for cumulative Q3 FY03/24 (April–December 2023) were as follows.

- Sales: JPY34.8bn (-4.4% YoY)
- Operating profit: JPY6.4bn (-22.1% YoY)
- Recurring profit: JPY6.7bn (-22.5% YoY)
  - Recurring profit margin: 19.3% (-4.5pp YoY)
- Net income attributable to owners of the parent: JPY4.3bn (-24.5% YoY)

- Orders: JPY36.2bn (-4.7% YoY)
- Order backlog: JPY9.8bn (+2.7% YoY)

Sales

- Sales in the Thermal Spraying segment (handled by TOCALO, the parent company), which accounts for approximately 73% of consolidated sales, decreased 8.4% YoY to JPY25.3bn. This was mainly due to a temporary adjustment phase in the semiconductor market, resulting in an 18.5% decrease in semiconductor/FPD-related sales, the mainstay customer fields in Thermal Spraying, to JPY14.5bn. However, the increase in sales for applications other than semiconductors/FPDs in Thermal Spraying (industrial machinery and other thermal spraying) partially offset the decrease in semiconductor/FPD-related sales, and limited the decrease in Thermal Spraying sales to 8.4%. Sales for Overseas Subsidiaries (mainly China and Taiwan), Domestic Subsidiary, and Other Surface Treatments segments also increased YoY, but could not fully offset the decrease in Thermal Spraying.

- As a result, cumulative Q3 (April–December) consolidated sales decreased 4.4% to JPY34.8bn.

Recurring profit and recurring profit margin (RPM)

- Segment profit decreased 29.1% YoY for Thermal Spraying (Parent), but increased 11.6% YoY for Overseas Subsidiaries, 52.2% YoY for Domestic Subsidiary, and 14.2% YoY for Other Surface Treatments. The company's segment profit is linked to recurring profit in the income statement. The mainstay Thermal Spraying segment saw a 29.1% YoY decline in profit due to a decrease in sales from the high-profit semiconductors and FPDs, and increases in profit at Overseas Subsidiaries and other segments could not fully offset the profit decline at Thermal Spraying.

- Consequently, consolidated recurring profit for cumulative Q3 (April–December) decreased 22.5% YoY to JPY6.7bn. RPM fell 4.5pp YoY to 19.3% due to changes in sales mix (decrease in sales from high-profit semiconductors and FPDs) and the impact of higher personnel and outsourcing costs. This is the first time in four years that cumulative Q3 RPM has fallen below 20%, since the 18.5% recorded in April–December 2019.

Orders

- Cumulative Q3 (April–December) FY03/24 orders decreased 4.7% YoY to JPY36.2bn. Orders for the Thermal Spraying segment's mainstay semiconductor- and FDP-related applications declined due to the adjustment phase in the semiconductor market, which became evident from the latter half of the previous fiscal year (FY03/23). While orders for the Overseas Subsidiaries segment declined YoY due to the deterioration of the semiconductor market conditions, orders for the Domestic Subsidiary segment increased due to the recovery of production in the automobile industry, which is its main customer base, and orders in the Other Surface Treatments segment also increased YoY. However, these were not enough to compensate for the decline in orders in the Thermal Spraying segment (a decline in semiconductor and FPD-related orders). The breakdown of the JPY36.2bn of orders received in cumulative Q3 FY03/24 is shown below.

  - Thermal Spraying (parent): JPY26.5bn (-6.8% YoY)
    - Semiconductor/FPD-related: JPY15.3bn (-15.6% YoY)
    - Industrial machinery-related: JPY3.9bn (+29.6% YoY)
    - Steel making-related: JPY2.8bn (-9.3% YoY)
    - Other businesses: JPY4.5bn (+7.2% YoY)
  - Domestic Subsidiary: JPY1.9bn (+6.1% YoY)
  - Overseas Subsidiaries: JPY5.4bn (-3.4% YoY)
  - Other Surface Treatments: JPY2.3bn (+12.1% YoY)

  - Orders for the semiconductor/FPD-related applications in the company's mainstay Thermal Spraying in cumulative Q3 declined 15.6% YoY due to inventory adjustments at major semiconductor manufacturing equipment manufacturers, the company's largest customers, against the backdrop of a full-scale adjustment phase in the semiconductor market.
    While the orders from customers other than the largest customer exceeded expectations, it was not enough to offset the decrease from the largest customer, resulting in an expanded decline compared to the 14.8% decline YoY in 1H (April–September).
    As for orders other than semiconductor/FPD-related applications in Thermal Spraying, orders for industrial machinery-related applications increased 29.6% and other businesses increased 7.2%, but steel making-related orders decreased 6.5%. As a result, the decline in orders for semiconductor/FPD-related applications could not be covered, and Thermal Spraying orders declined 6.8% YoY to JPY26.5bn, the first YoY drop in cumulative Q3 in four years.

  - Aside from Thermal Spraying, Domestic Subsidiary orders increased 6.1% YoY as domestic automobile production recovered, and Other Surface Treatments orders increased 12.1% YoY, mainly for agricultural machinery. Nevertheless, Overseas Subsidiaries orders decreased 3.4% YoY despite contributions from the foreign exchange impact (exchange rate difference resulting from the depreciation of the yen), due to the impact from the adjustment phase of the semiconductor market.

Order backlog

- The order backlog grew 2.7% YoY to JPY9.8bn as of end-Q3 FY03/24 (end-December 2023). The breakdown of the JPY9.8bn order backlog as of end-Q3 is shown below.

  - Thermal Spraying (parent): JPY7.2bn (+5.8% YoY)
    - Semiconductor/FPD-related: JPY4.7bn (-1.0% YoY)
    - Industrial machinery-related: JPY537mn (+39.1% YoY)
    - Steel making-related: JPY1.2bn (+10.9% YoY)

- Other businesses: JPY722mn (+30.6% YoY)

- Domestic subsidiary: JPY107mn (approx. 2.2x YoY)
- Overseas subsidiaries: JPY2.1bn (-7.8% YoY)
- Other Surface Treatments: JPY353mn (-4.6% YoY)

- Order backlog for the mainstay Thermal Spraying decreased 1.0% YoY, but order backlog for industrial machinery-related applications, steel making-related applications, and other businesses increased YoY. As a result, order backlog for Thermal Spraying of JPY7.2bn surpassed the JPY7.0bn recorded at end-September 2023, reaching a record high for two consecutive quarters. Furthermore, as order backlog for Domestic Subsidiary, Overseas Subsidiaries, and Other Surface Treatments segments also grew YoY, consolidated order backlog increased by 2.7% to JPY9.8bn. The JPY9.8bn order backlog exceeded the JPY9.7bn recorded at end-September 2023, reaching a record high for two consecutive quarters, as was the case for the Thermal Spraying segment.

- The increase in the order backlog essentially indicates future sales growth, excluding for Domestic Subsidiary. However, the company is adjusting shipments of its mainstay semiconductor/FPD-related products to some customers due to the impact of the weakening semiconductor market.
  In addition, in the semiconductor/FPD-related order backlog, the company has seen an increase in items for development products or those in transition to mass production (with slightly delayed delivery), which contribute less to the company's earnings, while mass production items, which contribute a great deal to earnings, have decreased. As a result, the company believes it will be difficult for sales to recover rapidly from Q4 (January—March) due to the existing order backlog.

Factors affecting changes (YoY) in recurring profit

- Recurring profit, which is closely linked to segment profit in each segment, decreased by JPY1.9bn YoY, from JPY8.7bn in cumulative Q3 FY03/23 to JPY6.7bn. Factors contributing to the change are as follows.

  - 1) downward impact of JPY1.1bn due to a decrease in sales
  - 2) downward impact of JPY539mn due to a rise in the variable cost ratio
  - 3) downward impact of JPY395mn due to an increase in personnel expenses
  - 4) downward impact of JPY25mn due to an increase in depreciation
  - 5) downward impact of JPY103mn due to foreign exchange effects
  - 6) upward impact of JPY195mn due to other factors

Decreasing factors

- In cumulative Q3 (April—December), profit decreased by JPY1.1bn due to a decrease in sales, as the impact of a decrease in sales associated with thermal spraying for semiconductor/FPD-related applications (-18.5% YoY) was not offset by higher sales in other fields and for other products. The company partially compensated for the decrease in sales with price revisions (increases), but it could not fully absorb the negative impact due to the significant decrease in semiconductor/FPD-related sales. The increase in the variable cost ratio was attributed to a rise in process material costs and outsourcing costs, as well as a change (deterioration) in the sales mix due to a decline in semiconductor/FPD-related sales, which have relatively high profitability.

- The increase in labor costs was mainly attributable to wage increases, including an increase in base pay, and an increase in the number of regular employees (from non-regular to regular employees, in addition to an increase in new hires). A decrease in overtime work due to reduced operations for semiconductor-related products (resulting in a decrease in overtime pay) resulted in a reduction in labor costs, but the rise in wages and other costs offset this. According to the company, the decrease in overtime work was not only due to a decrease in the utilization rate, but also to the effects of work-style reforms. The decrease in profit of JPY103mn due to foreign exchange effects broke down to a JPY120mn decrease in foreign exchange gains recorded as non-operating income and a positive JPY17mn in exchange rate differences at overseas subsidiaries. According to the company, these 1) to 5) factors behind the decline in profit were generally within expectations, excluding the foreign exchange impact.

Increasing factors

- Other factors (6 above), include various factors, among which, the YoY decline in the cost of electricity resulted in an increase in profit. This is because the cost of electricity had already significantly increased in cumulative Q3 FY03/23 (April—December 2022), resulting in some decrease in cumulative Q3 FY03/24. However, the company

- acknowledges that this is merely a YoY comparison, and that energy costs, such as electricity, remain high. The main factor behind the decrease in profit other than higher electricity costs was a decline in the loss on valuation of inventory recorded in cumulative Q3 FY03/23. Also, an increase in R&D expenses contributed to the decrease in profit, but the impact was limited. As a result, other factors provided a JPY195mn YoY boost to profit.

Results by segment (April—December, nine months)

- The results by business segment are as follows. The sales share of each segment is the share of cumulative Q3 consolidated sales of JPY34.8bn. We note that the total of segment sales share does not equal 100%, because royalty income (the impact is minimal due to the small amount) is also included under sales as well as segment sales. Profit of each business is linked to the company's consolidated recurring profit.

Thermal Spraying (handled by TOCALO, the parent company; 72.7% sales share)

- Sales: JPY25.3bn (-8.4% YoY)
- Segment profit: JPY4.7bn (-29.1% YoY)
- Segment profit margin: 18.6% (-5.4pp YoY)

- Orders: JPY26.5bn (-6.8% YoY)
- Order backlog: JPY7.2bn (+5.8% YoY)

Sales

- The Thermal Spraying segment (parent only) is TOCALO's largest segment, accounting for 72.7% of its consolidated net sales (cumulative Q3 result). Segment (parent) sales decreased 8.4% YoY to JPY25.3bn, as the sales of mainstay semiconductor/FPD-related applications significantly declined due to a decrease in orders caused by inventory adjustments by major customers, which could not be offset by increases in sales of industrial machinery-related applications and other businesses. The JPY25.3bn in sales generated through this segment breaks down as follows.

- Semiconductors and Flat Panel Displays (FPDs): JPY14.5bn (-18.5% YoY)
  - Of which, thermal spraying for semiconductors: JPY13.4bn (-19.4% YoY)
  - Of which, thermal spraying for FPDs: JPY1.1bn (-6.4% YoY)
- Industrial machinery-related: JPY3.7bn (+26.9% YoY)
- Steel making-related: JPY2.6bn (-1.7% YoY)
- Other purposes: JPY4.5bn (+5.4% YoY)

Trends in semiconductors and FPDs

- Relatively high-margin semiconductor- and FPD-related sales decreased 18.5% YoY to JPY14.5bn, which was the main factor behind the overall decline in Thermal Spraying sales. In addition, 92.4% of sales are for semiconductor/FPD-related applications (cumulative Q3 result), and the percentage of FPD-related sales is on a declining trend.

  - The decrease in semiconductor/FPD-related sales was mainly due to a global decrease in demand for semiconductors, which became noticeable from the latter half of the previous fiscal year (FY03/23). Thus, the company's largest customers—major semiconductor manufacturing equipment manufacturers, and other related companies have been carrying out inventory adjustments (production adjustments), leading to a decrease in orders (see the previous section) and shipments for the company.

  - Semiconductor/FPD-related sales decreased 3.8% YoY in Q4 FY03/23 (January—March 2023), marking the first decline in 13 quarters, and the sluggish trend continued in cumulative Q3 FY03/24 (April—December 2023) without recovery. The decline rate, which was 19.5% in 1H FY03/24 (April—September 2023), showed a slight improvement with a decrease of 18.5% in cumulative Q3 FY03/24. However, the contraction was not as significant as expected by the company, and the company predicts that it will still take time for semiconductor/FPD-related sales to turn around and start increasing.

  - In cumulative Q3 FY03/23 (April—December 2022), while the adjustment in the semiconductor market was evident, the company recorded sales based on a substantial backlog, resulting in record highs for semiconductor/FPD-related sales. The company believes that the expansion of the YoY rate of decrease in semiconductor/FPD-related sales to

- 18.5% in cumulative Q3 is partly due to comparison with the previous year's high sales, but the largest factor is the impact of inventory adjustments by customers due to a decrease in demand. Taking into account the recent decrease in orders and the continuation of shipment adjustments, the company finds it difficult to expect semiconductor/FPD-related sales to recover from Q4 (January—March).

No change in business plan for semiconductors and FPDs

- In order to keep up with robust thermal spraying demand for semiconductor/FPD-related products, the company has been increasing capacity in stages since FY03/22, and the improved ability to fill the large volume of orders received resulted in it booking over JPY6.0bn in sales in a quarter for semiconductor/FPD-related products. Working closely with its customers, the company has been able to avoid a sudden expansion in production capacity that would directly increase costs and lower productivity, and has continued to increase sales while at the same time leveling operations. As a result, it achieved record-high consolidated results for the third consecutive year in FY03/23 (note: only sales were at a record high for the second consecutive year). However, due to a decrease in sales of the company's mainstay semiconductor/FPD-related products, it expects to see a decline in sales and profit for the first time in four fiscal years in FY03/24.

- However, the company believes that the adjustment phase in the semiconductor market is temporary and that demand for semiconductor manufacturing equipment will gradually recover. Even before the adjustment began, the company had planned to continue expanding production capacity while pursuing operational leveling, as a medium- to long-term strategy. Although the temporary adjustment phase in the semiconductor market continues, the company says the direction of its strategy remains basically the same. While continuing to increase production capacity, it aims for a production structure that can achieve quarterly sales of JPY6.5bn while ensuring that operations do not come under too much stress. It is placing greater emphasis on operational leveling, and once the adjustment phase of the semiconductor market ends, its first priority will be to maintain operations at cruising speed while working with major customers.

Trends in businesses other than other than semiconductors and FPDs

Steel-making related

- In areas other than the semiconductor/FPD-related business in Thermal Spraying, steel making-related sales declined 1.7% YoY to JPY2.6bn in cumulative Q3 FY03/24 (April—December 2023). This was due to the company's aggressive efforts to win orders to minimize the impact of the decline in sales of semiconductor/FPD-related products, as well as certain contributions from the bottoming out of domestic production in the automobile industry (a major customer for the steel making-related business). As a result, steel making-related sales remained largely flat YoY, but the company believes it has not yet reached a satisfactory level due to the continued decrease in domestic crude steel production (a 1.3% decrease YoY in domestic crude steel production in April—December 2023, according to the Japan Iron and Steel Federation). In fact, steel making-related orders also fell by 9.3% YoY.

- However, order backlog increased by 10.9% to JPY1.2bn, reaching the highest out of all quarters since FY03/18 (the previous highest was JPY1.2bn at end-Q1 FY03/24). Therefore, the company expects sales growth from Q4 (January—March) onward, and at the same time, plans to strengthen measures focused on acquiring orders.

Industrial machinery-related

- Industrial machinery-related sales rose 26.9% to JPY3.7bn in cumulative Q3 (April—December). As with steel making-related products, this was due to the success of the company's aggressive efforts to win orders to minimize the impact of the decline in sales for semiconductor/FPD-related products. According to the company's analysis, in addition to the existing orders from the bearing industry and the industrial machinery-related industry, the acquisition of orders from the energy industry also contributed, and in particular, sales to the energy industry were higher than the company's expectations. Industrial machinery-related sales tend to fluctuate significantly from quarter to quarter, but the sales growth continued in cumulative Q3, without any notable fluctuations. Based on current order trends, the company expects this steady performance to continue into Q4 (January—March).

Segment profit, segment profit margins

- Thermal Spraying segment profit (segment profit is linked to recurring profit in consolidated income statements) in cumulative Q3 (April—December) decreased 29.1% YoY to JPY4.7bn due to the impact of the decrease in semiconductor/FPD-related sales, which are highly profitable in the Thermal Spraying segment. The segment profit margin also declined 5.4pp to 18.6%. The segment profit margin came in below 20% in cumulative Q3 for the first time in four years since the 18.5% recorded in April—December 2019.

- Although segment profit declined 29.1% YoY, the company believes this was generally within the expected range because semiconductor/FPD-related orders had already declined significantly from Q4 FY03/23 (January–March 2023). However, the company predicts that a recovery in the Thermal Spraying segment will not take place until FY03/25 or later, as a recovery in the semiconductor market will be difficult in FY03/24.

Domestic Subsidiary (5.3% sales share)

- Sales: JPY1.9bn (+2.1% YoY)
- Segment profit: JPY420mn (+52.2% YoY)
- Segment profit margin: 22.6% (+7.4pp YoY)

- Orders: JPY1.9bn (+6.1% YoY)
- Order backlog: JPY107mn (roughly 2.2x YoY)

Sales

- The company's domestic subsidiary (Japan Coating Center Co., Ltd.) mainly conducts physical vapor deposition (PVD) processing (a surface modification process for cutting tools, knives, and molds) and primarily serves clients in the automotive industry. In cumulative Q3 (April–December), sales increased 2.1% YoY to JPY1.9bn due to an increase in orders following the recovery in domestic automobile production (domestic automobile production in April–November 2023 increased 16.5% YoY [December figure has not been disclosed yet]; source: Japan Automobile Manufacturers Association). However, the company recognizes that sales in Domestic Subsidiary in cumulative Q3 have not reached the level commensurate with the level to which automobile production has recovered (production increase rate), and it expects sales growth from Q4 (January–March) onward.

Segment profit, segment profit margin

- While sales only increased by 2.1% YoY, segment profit increased by 52.2% to JPY420mn, and the segment profit margin improved by 7.4pp to 22.6%, a level close to the 24.1% recorded in April–December 2018. This was mainly due to the effect of cost reductions, such as a review of personnel allocation and productivity improvement, as well as the effects of price revisions, while the effect of the increase in sales was limited. Another factor was a decrease in the depreciation burden for new production equipment introduced with the establishment of a new factory in FY03/22. While the new plant is small compared to facilities in the Thermal Spraying segment, and its impact on overall earnings is therefore limited, it has had some effect on the Domestic Subsidiary segment.

Overseas Subsidiaries (15.2% sales share)

- Sales: JPY5.3bn (+9.9% YoY)
- Segment profit: JPY1.4bn (+11.6% YoY)
    - Segment profit margin: 26.0% (+0.3pp YoY)

- Orders: JPY5.4bn (-3.4% YoY)
- Order backlog: JPY2.1bn (-7.8% YoY)

Sales

- This segment includes two subsidiaries in China, one in Taiwan, and one in the US, but essentially consists of subsidiaries in China and Taiwan, as the US business is not fully operational. Also, because China and Taiwan have a December 31 year-end, the company's cumulative Q3 (April–December) financial results include the financial results of Overseas Subsidiaries for the January–September period. As was the case with Thermal Spraying, Overseas Subsidiaries in cumulative Q3 were affected by inventory adjustments by customers due to the adjustment phase of the global semiconductor market, and semiconductor-related sales were sluggish. Nevertheless, sales in cumulative Q3 increased 9.9% YoY to JPY5.3bn as the sluggish semiconductor-related sales were partially covered by other sales (steel making-related, etc.) and foreign exchange effects (increase in conversion due to yen depreciation) contributed.
    - While it secured increased sales in cumulative Q3, the company concluded that the results were not sufficient as semiconductor-related sales were sluggish and overall sales were generally flat YoY on a local currency basis, excluding the impact of foreign exchange effects.

Segment profit, segment profit margin

- Segment profit in cumulative Q3 (April–December) increased 11.6% to JPY1.4bn. Despite a deterioration in the sales mix, such as a decrease in semiconductor/FPD-related re-coating, the company secured a higher profit than a year ago due to contributions from non-semiconductor-related sales. The segment profit margin improved by 0.3pp YoY to 26.0%, remaining higher than that of the Thermal Spraying segment (parent).

Other Surface Treatments (6.6% sales share)

- Sales: JPY2.3bn (+11.0% YoY)
- Segment profit: JPY410mn (+14.2% YoY)
- Segment profit margin: 17.9% (+0.5pp YoY)

- Orders: JPY2.3mn (+12.1% YoY)
- Order backlog: JPY353mn (-4.6% YoY)

Sales, segment profit, segment profit margin

- Segment sales increased 11.0% YoY to JPY2.3bn, reaching a record high for cumulative Q3 (April–December), amid generally strong order bookings. Segment profit grew 14.2% YoY to JPY410mn, also reaching a record high for cumulative Q3, as increased sales absorbed higher costs.

  - The Toyota diffusion (TD) process for agricultural equipment parts (a surface modification method that forms a functional film by immersing the target workpiece in a high-temperature molten salt bath and allowing vanadium and other carbides to diffusely permeate the surface of the base material) grew and contributed to sales growth. TOCALO applies surface treatments (Toyota diffusion process) to agricultural equipment parts and supplies these to Japanese agricultural equipment makers. Agricultural equipment makers sell their products in the US and other locations, and TOCALO believes that it has benefitted from the expansion of the agricultural industry in North America.

- The company expects to expand its business related to agricultural equipment parts in the future. The contribution to profit is not yet significant, but the segment profit margin improved by 0.5pp to 17.9%.

Q3 performance overview (October–December 2023, three months)

Results for Q3 FY03/24 (October–December 2023) were as follows.

- Sales: JPY11.8bn (-4.8% YoY)
- Operating profit: JPY2.1bn (-20.2% YoY)
- Recurring profit: JPY2.1bn (-19.1% YoY)
  - Recurring profit margin: 18.1% (-3.2pp YoY)
- Net income attributable to owners of the parent: JPY1.3bn (-26.0% YoY)

Summary

- In Q3 (October–December) FY03/24, consolidated sales decreased by 4.8% YoY to JPY11.8bn. This was the third consecutive quarter of YoY decline in sales due to the sluggish semiconductor-related performance, including customer inventory adjustments. However, the rate of decline in sales contracted from a 7.5% decrease in Q2 (July–September) to a 4.8% decrease in Q3.

- Mainly due to the decline in sales, operating profit fell by 20.2% YoY and recurring profit decreased by 19.1% YoY. The recurring profit margin—which TOCALO considers a key management indicator—declined 3.2pp YoY to 18.1%. On a quarterly (three-month) basis, recurring profit declined in Q3 for the fourth consecutive quarter. As with sales, the rate of decrease in recurring profit also slowed from a 28.4% decline in Q2 to a 19.1% decline in Q3. However, since the timing of the recovery in semiconductor-related sales is uncertain, the company does not view this as a sign of earnings improvement.

Results by segment (October–December, three months)

- Q3 results (October–December) by segment are as follows. The sales share of each segment is the share of consolidated sales of JPY11.8bn in Q3. We note that the total of segment sales share does not equal 100%, because royalty income (the impact is minimal due to the small amount) is also included under sales as well as segment sales. Each business's segment profit is linked to the company's consolidated recurring profit.

Thermal Spraying (handled by TOCALO, the parent company; 72.2% sales share)

- Sales: JPY8.5bn (-9.2% YoY)
- Segment profit: JPY1.5bn (-29.5% YoY)
- Segment profit margin: 17.8% (-5.2pp YoY)

- Orders: JPY8.8bn (-8.9% YoY)

Sales

- In Q3 (October–December), semiconductor/FPD-related sales, which account for about 64% of Thermal Spraying sales (FY03/23), declined 16.4% YoY, leading to segment sales of JPY8.5bn, a 9.2% decline YoY. Although industrial machinery-related sales recovered, increasing by 25.4% YoY, steel making-related sales and other thermal spraying sales decreased 1.7% YoY and 13.4% YoY, respectively, resulting in a lack of factors to compensate for the decline in semiconductor/FPD-related sales. In addition, on a quarterly basis, sales of the Thermal Spraying segment decreased YoY for four consecutive quarters. The breakdown of the JPY8.5bn sales in the Thermal Spraying segment is as follows.

  - Semiconductors and flat panel displays (FPDs): JPY4.8bn (-16.4% YoY)
  - Industrial machinery-related: JPY1.5bn (+25.4% YoY)
  - Steel making-related: JPY817mn (-1.7% YoY)
  - Other purposes: JPY1.4bn (-13.4% YoY)

  - In Q3 (October–December), sales generated by thermal spraying for semiconductors and FPDs, the company's mainstay business, fell by 16.4% YoY to JPY4.8bn. This was mainly because customers adjusted their inventories in response to deteriorating semiconductor market conditions, and the company also saw a decline in orders and adjusted shipments to customers. Although it was the fourth consecutive quarter of YoY decline in semiconductor/FPD-related sales, the rate of decrease slowed from a 24.5% decline in Q2 (July–September) to a 16.4% decrease in Q3. However, the company acknowledges that this is still a significant decrease of over 16% YoY and has had a negative impact on its performance.

  - The over 16% YoY decrease is partly due to the fact that the high quarterly sales (JPY5.7bn) were recorded in Q3 FY03/23 (October–December 2022). However, the company recognizes that the fundamental reason is the impact of adjustments in the semiconductor market.

  - In terms of businesses other than semiconductor/FPD-related applications, industrial machinery-related sales increased 25.4% YoY, while steel making-related sales and other sales declined 1.7% and 13.4% YoY, respectively. The sluggish steel making-related sales were due to continued declines in crude steel production, and the increase in industrial machinery-related sales was mainly due to the fact that energy industry construction projects continued to grow.

Orders

- Q3 (October–December) orders in the Thermal Spraying segment fell 8.9% YoY to JPY8.8bn. Orders of JPY8.8bn broke down as follows.

  - Semiconductor and FPDs: JPY5.0bn (-17.3% YoY)
  - Industrial machinery-related: JPY1.4bn (+27.4% YoY)
  - Steel making-related: JPY958mn (-14.5% YoY)
  - Other purposes: JPY1.4bn (+2.3% YoY)

- Thermal Spraying segment posted orders of JPY9.7bn in Q3 FY03/23 (October–December 2022), a quarterly record. However, since Q4 FY03/23 (January–March 2023), orders for the segment have continued to fall YoY, and Q3 FY03/24 marked the fourth consecutive quarter of YoY decline. The main reason for this is the lackluster semiconductor/FPD-related orders, the mainstay of Thermal Spraying, which have been declining for the fifth consecutive quarter.

  - Semiconductor/FPD-related orders in Q3 (October–December) decreased by 17.3% YoY to JPY5.0bn, but this level is not notably low when compared to past trends. However, the company recognizes that the Q3 results represent a larger drop than the numbers indicate, as it had obtained semiconductor/FPD-related orders of around the JPY6.0bn level for five consecutive quarters from Q3 FY03/22 to Q3 FY03/23.

  - The company also implied that the orders, which include prototypes and newly developed products from customers, are even lower for current mass-produced products (excluding prototypes and newly developed products). The company believes that it will be difficult to continue leveling operations as it did through FY03/23, as it will adjust shipments after discussions with its customers in Q4 (January–March) and later.

Segment profit

- In Q3 (October–December), the Thermal Spraying segment profit fell 29.5% YoY to JPY1.5bn, mainly due to the decrease in semiconductor/FPD-related sales, the main source of earnings. The segment profit margin deteriorated 5.2pp to 17.8%. The 17.4% segment profit margin in Q2 (July–September) was the first time in 14 quarters that the segment profit margin fell below 20% on a quarterly basis, since it fell to 19.3% in January–March 2020. In Q3, the segment profit margin was below 20% for the second consecutive quarter. Up until Q1 (April–June), the company had managed to maintain a profit margin of 20% through productivity improvements and other cost reductions, although decreased semiconductor/FPD-related sales and increased energy costs, such as electricity and personnel expenses, led to a decline in profit. However, in Q2 and Q3, the impact of the sales decrease intensified, and cost reduction and price revisions were not sufficient to offset it.

Domestic Subsidiary (5.3% sales share)

- Sales: JPY629mn (+1.0% YoY)
- Segment profit: JPY136mn (+34.7% YoY)
- Segment profit margin: 21.6% (+5.4pp YoY)

- Orders: JPY638mn (+3.6% YoY)

Sales

- In Q3 (October–December), sales of the Domestic Subsidiary segment rose 1.0% YoY to JPY629mn as automobile production recovered in Japan (+14.6% YoY in October–November 2023 [December figure has not been disclosed yet]; source: Japan Automobile Manufacturers Association).

  - However, orders did not reach the company's expectations (Q3 orders were up 3.6% YoY), and sales increased by only 1.0% compared with the increase in domestic automobile production. The company recognizes that there will be a time lag before the effects of increased automobile production manifest in the cutting tool-related business, the mainstay business of the Domestic Subsidiary segment. The company expects the sales in this segment to fully recover in Q4 (January–March) FY03/24 or later.

Segment profit

- Segment profit for Q3 (October–December) increased by 34.7% YoY to JPY136mn, marking the third consecutive quarter of YoY profit growth. Despite sales remaining flat YoY, segment profit increased by 34.7%, primarily due to cost reductions, such as a review of personnel allocation and productivity improvements, and the effects of price revisions. Also, the decrease in depreciation costs due to new production equipment installed in a new factory established in FY03/22 also contributed to this increase. In line with the increase in segment profit, the segment profit margin improved by 5.4pp to 21.6%, which is still lower than the 26.0% achieved in October–December 2020 before the significant reduction in domestic automobile production.

Overseas Subsidiaries (15.8% sales share)

- Sales: JPY1.9bn (+11.6% YoY)

- Segment profit: JPY491mn (+40.3% YoY)
    - Segment profit margin: 26.3% (+5.4pp YoY)

- Orders: JPY1.7bn (-12.6% YoY)

Sales

- This segment encompasses two subsidiaries in China, one in Taiwan, and one in the US, but it effectively consists of just the subsidiaries in China and Taiwan (three companies) because the US subsidiary is not yet fully operational. Sales of the Overseas Subsidiaries segment in Q3 (October–December) grew 11.6% YoY to JPY1.9bn

    - On a quarterly basis, the company recorded a YoY increase in sales for the 12th consecutive quarter and achieved its highest sales ever across all quarters, surpassing the JPY1.8bn recorded in Q2 FY03/24 (July–September 2023). However, according to the company, the performance was virtually sluggish as its overseas subsidiaries were affected by adjustments in the semiconductor market, such as inventory adjustments by local customers of the semiconductor/FPD-related recoating business. On the other hand, the company maintained sales growth, backed by the steady steel making-related sales in China and the effects of foreign exchanges (a boost to sales due to the exchange rate difference resulting from the depreciation of the yen). Subsidiaries in China and Taiwan have fiscal years ending in December, which means their results for July–September are reflected in Q3 (October–December) results.

Segment profit

- Segment profit in Q3 (October–December) increased 40.3% YoY to JPY491mn, and the segment profit margin improved by 5.4pp to 26.3%. The increase in segment profit margin was due to the rebound from a temporary decline to 20.9% in Q3 FY03/23 (October–December 2022). In fact, the company recorded a segment profit margin of 28.3% in Q3 FY03/22 (October–December 2021). The company indicated that the lingering effects of semiconductor-related inventory adjustments are still impacting its overseas operations.

Other Surface Treatments (6.5% sales share)

- Sales: JPY771mn (+11.3% YoY)
- Segment profit: JPY150mn (+30.4% YoY)
    - Segment profit margin: 19.5% (+2.9pp YoY)

- Orders: JPY732mn (+5.5% YoY)

Sales and segment profit

- Q3 (October–December) sales rose by 11.3% YoY to JPY771mn, hitting a quarterly record high. Segment profit increased by 30.4% YoY to JPY150mn, and the segment profit margin improved by 2.9pp to 19.5%. According to the company, this due to strong sales of surface treatments for agricultural equipment parts absorbing cost increases.

Other information

History

Date	Description
June 1973	Established as Kizai Service Co., Ltd. in Yokohama, Kanagawa, with a capital of JPY10mn; started marketing industrial chemicals and chemical machinery equipment, offering related technical services
July 2000	Stopped operation, and became a dormant company
January 2001	Became wholly owned by JAFCO Buyout Number One Investment Limited Partnership operated by JAFCO Co., Ltd.; renamed to JAFCO SIG Co., Ltd; changed the registered location of head office to Chiyoda, Tokyo; started tender offer of shares in TOCALO Co., Ltd. as a part of management buyout by the management of the substantial surviving company (TOCALO Co., Ltd., a OTC company)
March 2001	Completed tender offer of TOCALO Co., Ltd., making it a 97.9% subsidiary of JAFCO SIG.; changed registered location of the head office to Kobe, Hyogo
August 2001	Merged with TOCALO Co., Ltd. in an absorption-type merger, and renamed the new company as TOCALO Co., Ltd.
December 2003	Listed shares on the Second Section of the Tokyo Stock Exchange
September 2004	Acquired all shares in Japan Coating Center Co., Ltd. (now a consolidated subsidiary) and made it a subsidiary
March 2005	Listed shares on the First Section of the Tokyo Stock Exchange

Former TOCALO Co., Ltd.

Date	Description
July 1951	Toyo Calorizing Industry Co., Ltd. established in Kobe, Hyogo, with a capital of JPY1mn; established Kobe Plant and started marketing calorize processing
March 1958	Started research on metal thermal spraying
November 1959	Established Tokyo Plant in Funabashi, Chiba
October 1960	Started full-scale operation of metal thermal spraying
September 1981	Changed name to TOCALO Co., Ltd.
February 1996	New head office building completed
October 1996	Registered shares as an Over-The-Counter stock at Japan Securities Dealers Association
August 2001	Absorbed by JAFCO SIG Co., Ltd. in an absorption-type merger and delisted the OTC shares

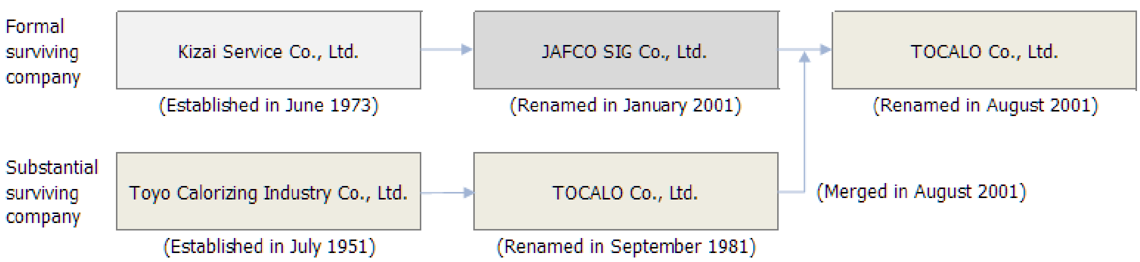
Source: Shared Research based on company data

MBO history

TOCALO Co., Ltd. (the formal surviving company) was founded in June 1973 as Kizai Service Co., Ltd., a company that sold chemical machinery and provided associated technical services. Kizai Service suspended its business activities in July 2000. In January 2001, JAFCO Buyout No. 1 Investment Limited Partnership (operated by JAFCO Co., Ltd. [now, JAFCO Group Co., Ltd.; TSE Prime: 8595]) acquired 100% of the outstanding shares in Kizai Service and changed its name to JAFCO SIG Co., Ltd. Between late January and early March of 2001, JAFCO SIG made a tender offer to the former TOCALO Co., Ltd. (the substantial surviving company), and acquired 97.9% of its outstanding shares. In August 2001, JAFCO SIG absorbed this new subsidiary and renamed itself TOCALO Co., Ltd.

The tender offer and the absorption-type merger were part of an MBO the management team of the former TOCALO Co., Ltd. conducted in a bid to maintain its independence from a potential takeover by an overseas heavy machinery manufacturer (Sulzer Metco). The shares of former TOCALO Co., Ltd. were mainly acquired from the then parent, Nittetsu Shoji Co., Ltd. (currently, Nippon Streel Trading Corporation [TSE Prime: 9810]).

MBO overview



Source: Shared Research based on company data

Corporate governance and top management

Top management

Noriyuki Mifune, Chairman and Representative Director (born May 1955)

Apr. 1978	Joined the company
Apr. 2001	Plant manager, Kitakyushu Plant
June 2007	Director, and plant manager, Akashi Plant
June 2009	Director, and deputy general manager of manufacturing
June 2012	Managing director, general manager of manufacturing
Jun. 2013	President and representative director
June 2021	President and representative director
June 2023	Chairman and representative director (current)

Kazuya Kobayashi, Representative Director, President and CEO (born December 24, 1964)

April 1989	Joined the company
April 2014	Plant manager, Kitakyushu Plant
April 2017	General manager, Quality Control Department
April 2018	Plant manager, Akashi Plant
June 2019	Director, Plant manager, Kitakyushu Plant
April 2020	Director, Deputy general manager, Manufacturing Department
June 2021	Senior executive officer, General manager, Manufacturing Department
June 2023	Representative Director, President and CEO (current)

Source: Shared Research based on company data

Corporate governance

Form of organization and capital structure	
Form of organization	Company with Audit & Supervisory Board
Foreign shareholding	30%
Controlling shareholder	None
Directors and Audit & Supervisory Board members	
Number of directors under Articles of Incorporation	15
Number of directors	9
Directors' term of office under Articles of Incorporation	2 years
Chairperson of the Board of Directors	President
Number of outside directors	4
Number of independent outside directors	4
Number of members of Audit & Supervisory Board	4
Number of outside members of Audit & Supervisory Board	2
Other	
Participation in electronic voting platform	Yes
Providing convocation notice in English	Yes
Implementation of measures regarding director incentives	Performance-linked compensation
Eligible for stock option	None
Disclosure of directors' compensation	None
Policy to determine amount and calculation method of remuneration	Yes
Corporate takeover defenses	None

Source: Shared Research based on company data

Dividend policy

TOCALO considers returning profit to shareholders an important management policy. The company intends to actively improve shareholder returns while placing an emphasis on ensuring continuously stable dividends grounded in distribution that is backed by business results. The company's policy until FY03/23 was to pay a stable dividend, aiming for dividends equivalent to about one third of net income (net income attributable to owners of the parent). However, in order to further enhance the return of profits to shareholders, it changed its policy to aim for a dividend payout ratio of around 50% from FY03/24. In FY03/25, the company expects to pay dividends of JPY63.0 per share (versus JPY53 per share in FY03/24), including an interim dividend of JPY30.0 per share (versus JPY25.0 per share in FY03/24), for a consolidated payout ratio of 49.9%.

	FY03/15	FY03/16	FY03/17	FY03/18	FY03/19	FY03/20	FY03/21	FY03/22	FY03/23	FY03/24
(JPY)	Cons.	Cons.	Cons.	Cons.	Cons.	Cons.	Cons.	Cons.	Cons.	Cons.
Dividend per share	15.0	18.8	21.3	26.3	30.0	25.0	35.0	45.0	50.0	53.0
Payout ratio	30.1%	37.8%	31.7%	33.0%	33.5%	34.5%	38.9%	39.6%	41.4%	50.2%
DOE	3.7%	4.2%	4.4%	4.9%	5.1%	3.9%	5.0%	5.9%	5.9%	5.8%
ROE	12.2%	11.2%	13.9%	14.9%	15.2%	11.3%	12.9%	14.8%	14.3%	11.6%

Source: Shared Research based on company data

Major shareholders

Top shareholders	Shares held(000 shares)	Shareholding ratio
The Master Trust Bank of Japan, Ltd.	10,282	17.30%
Custody Bank of Japan, Ltd.	6,902	11.61%
BBH Co., Ltd.FOR FIDELITY LOW-PRICED STOCK FUND (PRINCIPAL ALL SECTOR SUBPORTFOLIO) (Standing proxy: MUFG Bank, Ltd.)	2,813	4.73%
TOCALO Employees Shareholding Association	2,632	4.43%
NORTHERN TRUST CO.(AVFC) RE FIDELITY FUNDS (Standing proxy: The Hongkong and Shanghai Banking Corporation, Ltd. Tokyo Branch)	2,008	3.38%
STATE STREET BANK AND TRUST COMPANY 505001 (Standing proxy: Mizuho Bank, Ltd. Settlement Sales Department)	1,283	2.16%
GOVERNMENT OF NORWAY (Standing proxy: Citibank Japan, Ltd., N.A Tokyo Branch)	1,242	2.09%
Kumiko Saijo	1,036	1.74%
STATE STREET BANK WEST CLIENT - TREATY 505234 (Standing proxy: Mizuho Bank, Ltd. Settlement Sales Department)	908	1.53%
KIA FUND F149 (Standing proxy: Citibank Japan, Ltd., N.A Tokyo Branch)	858	1.45%
SUM	29,968	50.42%

Source: Shared Research based on company data
As of end-March 2024

Employees

Number of employees, other	FY03/15	FY03/16	FY03/17	FY03/18	FY03/19	FY03/20	FY03/21	FY03/22	FY03/23	FY03/24
(JPYmn)	Act.	Act.	Act.	Act.	Act.	Act.	Act.	Act.	Act.	Act.
No. of employees (ex. temp. employees)	**824**	**857**	**898**	**955**	**1,021**	**1,060**	**1,121**	**1,176**	**1,300**	**1,389**
Thermal Spraying (Parent)	418	430	449	504	538	553	569	611	683	751
Domestic Subsidiary (PVD process)	88	100	112	113	120	125	142	156	163	176
Other	256	263	265	275	292	309	328	327	376	324
Adjustments	62	64	72	63	71	73	82	82	78	99
Avg. number of temporary employees	**243**	**239**	**245**	**236**	**251**	**263**	**253**	**265**	**164**	**148**
Thermal Spraying (Parent)	115	117	111	108	114	128	139	147	127	114
Domestic Subsidiary (PVD process)	67	65	71	70	67	62	43	34	26	26
Other	54	50	56	52	60	61	60	71	4	0
Adjustments	7	7	7	6	10	12	11	13	7	2
Segment sales per employee	**24.4**	**26.2**	**25.3**	**28.6**	**31.1**	**28.6**	**28.4**	**30.4**	**32.9**	**30.4**
Thermal Spraying (Parent)	36.5	40.6	40.3	43.3	47.3	42.3	43.4	44.4	45.8	40.1
Domestic Subsidiary (PVD process)	13.4	13.2	13.0	14.5	15.2	14.7	13.2	14.8	15.2	15.1
Other	16.1	15.6	14.3	17.4	19.2	20.0	17.9	21.0	25.0	31.9
Segment profit per employee	**4.6**	**4.6**	**5.1**	**6.2**	**6.3**	**5.1**	**6.5**	**7.3**	**7.5**	**6.3**
Thermal Spraying (Parent)	7.2	8.3	8.7	9.8	10.0	7.7	9.5	10.7	10.3	7.3
Domestic Subsidiary (PVD process)	2.1	1.6	2.2	2.7	2.9	2.6	2.2	2.5	1.9	2.4
Other	2.0	1.9	1.9	3.4	3.5	3.6	3.7	5.0	5.6	7.5
No. of employees (parent	517	534	560	605	648	667	695	752	811	889
Avg. number of temporary employees	132	137	131	123	132	148	158	165	138	122
Average age	38.5	38.7	38.7	38.3	38.1	38.3	38.4	38.2	39.2	39.0
Average years of service	13.2	13.4	13.4	12.7	12.5	12.3	13.1	13.2	12.7	12.5
Average annual salary (JPY'000)	6,890	7,068	6,992	7,104	7,264	7,389	7,164	7,499	7,493	7,550

Source: Shared Research based on company data
Note: Sales and operating profit per employee figures are reference values calculated based on the combined total of full-time employees and the average number of temporary workers (not including temporary workers received on dispatch)

News and topics

Revisions to full-year FY03/25 earnings and dividend forecasts

2024-10-31

TOCALO Co., Ltd. announced revisions to its full-year earnings and dividend forecasts for FY03/25.

On October 31, 2024, the company announced an upward revision to its FY03/25 forecast, along with an increase in the annual dividend forecast. The revised forecasts are as follows.

- Sales: JPY53.0bn (+13.4% YoY; previous forecast: JPY51.0bn)
- Operating profit: JPY11.5bn (+25.0% YoY; JPY10.5bn)
- Recurring profit: JPY11.5bn (+19.0% YoY; JPY10.5bn)
    - RPM: 21.7% (+1.0pp YoY; 20.6%)
- Net income attributable to owners of the parent: JPY7.5bn (+18.6% YoY; JPY6.9bn)
- EPS: JPY126.2 (previous forecast: JPY115.8)
- Annual dividend: JPY63.0 per share (JPY58.0 per share)

Reasons for the revisions

The company cited its stronger-than-expected 1H results (April–September) and anticipated continued strong orders in Thermal Spraying, particularly in the semiconductor sector, during 2H (October–March) as the primary reasons for the upward revision of its consolidated earnings forecast for FY03/25. Additionally, the company raised its annual dividend forecast by JPY5, increasing the interim dividend by JPY2 and the year-end dividend by JPY3, in line with the revised earnings forecast. Based on the updated forecast, the company expects the dividend payout ratio to be 49.9% (compared to 50.2% in FY03/24 and the previous forecast of 50.1%).

Tocal has been recognized as a Green Partner by Tokyo Electron

2024-10-04

Tocalo Co., Ltd. announced that it has been recognized as a Green Partner by Tokyo Electron Ltd. (TSE Prime: 8035).

On October 3, 2024, Tokyo Electron, the largest domestic manufacturer of semiconductor production equipment, recognized the company as a Green Partner for FY2023 (April 1, 2023–March 31, 2024).

- The Green Partner program is an initiative by Tokyo Electron, implemented through its "E-COMPASS" framework aimed at building a sustainable supply chain. This program recognizes suppliers who have made significant contributions and cooperated in enhancing environmental supply chain management, including compliance with environmental regulations, over the course of a year. In FY2023, Tokyo Electron recognized 68 companies including Tocalo, which was recognized for the first time, under this program. The company believes that its efforts in promoting environmental initiatives and its proactive response to product environmental surveys were key factors in its earning this recognition.

- Tokyo Electron is Tocalo's largest customer, accounting for 27.0% of the company's consolidated sales of JPY46.7bn in FY03/24 (including sales to Tokyo Electron's group companies).

Acqusition of shares in Terada Kosakusho Co., Ltd. to make it a subsidiary

2024-08-23

Tocalo Co., Ltd. announced the acquisition of shares in Terada Kosakusho Co., Ltd. to make it a subsidiary.

On August 23, 2024, the company announced that it would acquire all shares of Terada Kosakusho Co., Ltd. (unlisted, hereafter "Terada Kosakusho"), making it a wholly owned subsidiary (100% ownership).

Reason for acquisition

- Terada Kosakusho possesses advanced machining technology, which enables the production of precision components using various materials. Tocalo determined that by integrating Terada Kosakusho's machining expertise with its own

- surface modification technology, it could further enhance the value provided to customers.

Acquisition price

- The acquisition price is set at JPY800mn, with the share transfer scheduled for August 26, 2024. Tocalo anticipates that the impact on its FY03/25 performance will be minimal.

Policies aimed at achieving management focused on capital costs and stock prices

2024-03-22

Tocalo Co., Ltd. has announced policies aimed at achieving management focused on capital costs and stock prices.

The company has analyzed its capital costs and profitability and decided upon policies aimed at establishing management mindful of capital costs and stock prices.

Current status analysis

The company recognizes that it has maintained appropriate capital profitability, as ROE over the most recent nine fiscal years up to FY03/23 has exceeded the cost of shareholder equity (approximately 8–10%). This achievement has contributed to a certain level of market recognition, with the company's PBR being stably maintained at more than 1x. However, the expansion of equity capital from increased earnings has led to the ROE falling short of the company's 15% target over the most recent four fiscal years. Consequently, the company recognizes the need for action concerning its asset holdings to enhance capital efficiency.

Specific initiatives

To stably achieve an ROE of 15%, the company plans to focus on three key strategies: 1) improving profitability, 2) optimizing its cash and deposit levels (gradual reduction), and 3) enhancing shareholder returns.

1) Improving profitability

- Expand business by developing new films and creating new markets instead of merely relying on existing markets
- Enhance quality control and improve productivity by promoting automation and IoT and developing new coating equipment to modernize and streamline the manufacturing process
- Continuously perform capital investment (annually JPY5–7bn) and development investment (approximately 5% of sales) to secure technological superiority and improve profitability

2) Optimizing cash and deposit levels (gradual reduction)

- While maintaining financial conditions that support proactive investment in production enhancement and technological development, pursue optimal cash and deposit levels to improve capital efficiency
- Utilize operating cash flow and surplus cash and deposits for growth investment (such as capital investment, development, human capital, and M&A) and profit dividends. If no immediate need for remaining funds can be found, consider additional shareholder returns

3) Enhancing shareholder returns

- To continue stable dividend payments, target a consolidated dividend payout ratio of approximately 50% and a DOE of more than 5%
- Consider flexible approach toward share buybacks

Profile

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Listed On

Tokyo Stock Exchange, Prime Market

Established

1951-07-01

Exchange Listing

2003-12-19

IR Contact

https://www.tocalo.co.jp/contact/ir.html

Fiscal Year-End

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