

Highlights of Semiconductor Production Equipment Manufacturers' Financial Results for Fiscal Year Ended March 2024

The following are Japan Credit Rating Agency, Ltd. (JCR)'s perception of the current status and highlights for rating concerning the financial results for the fiscal year ended March 2024 (FY2023) and earnings forecasts for FY2024 of three semiconductor production equipment manufacturers (the three "Companies"): DISCO CORPORATION ("DISCO"), SCREEN Holdings Co., Ltd., ("SCREEN") and Tokyo Electron Limited ("Tokyo Electron").

1. Industry Trend

According to Semiconductor Equipment and Materials International ("SEMI") and other data, net sales of semiconductor production equipment ("SPE") for 2023 were USD 106.2 billion (down 1% year-on-year). Yet, they decreased for the first time in four years, still remained high. Looking back, the net sales of SPE for 2022 hit a record high for three consecutive years in a row, but the trend adversely changed from the middle of the year. This was because there was a growing trend, mainly among memory manufacturers, of restraining capital investments in response to deterioration in the semiconductor memory market. While memory manufacturers were working to expand their supply capacity, demand for smartphones, PCs, and other devices declined. This demand decline seems to be attributable to a reactionary decline following the stay-home demand during the COVID-crisis and deterioration in consumer sentiment due to the ongoing inflation, etc. In 2023, major memory manufactures continued to restrain their capital investments. As opposed to demand for capital investments was extremely strong in China, which intends to produce semiconductors domestically as a national policy to increase the degree of self-sufficiency. The impact of U.S. export restrictions on China announced in October 2022 was concerned; however, demand for SPE rather expanded in 2023 in China because it more obviously shifted the target of capital investments to mature nodes, which were out of scope of the restrictions. It can be said that sales of SPE in 2023 were supported by the strong demand in China as mentioned above. Looking at the sales of SPE in 2023 by region, China saw a substantial increase of 29% year-on year and became the largest market for four years in a row. On the other hand, South Korea, where leading memory manufacturers are located, decreased sales by 7% year-on-year. The current memory slump was considerably serious, but memory prices are now beginning to rise in the market. For DRAM, particularly demand for HBM for generative AI is rapidly expanding, contributing to the market upturn.

SEMI announced the forecast in December 2023 that sales of SPE will make a small rate of recovery in 2024 assuming recovery in capital investments in the memory field. By region, China will see a slight decrease and areas other than China will increase. Furthermore, SEMI predicts that the sales of SPE will show strong recover in 2025. Capital investments both for memory field and the logic / foundry field are expected to grow in 2025.

On the other hand, in response to a rise in geopolitical risk and shortage of semiconductors once became a serious issue, moves toward attracting semiconductor factories using subsidies to their own counties/regions have also been expanded in the regions/countries other than China. Semiconductors are now positioned as indispensable strategic materials for economic security and their significance has been recognized again. They are also drawing attention as a key device toward realizing a digital society and decarbonized society.

2. Financial Results

In this section, JCR primarily mentions the total figures of the three Companies of DISCO, SCREEN and Tokyo Electron. Among the three Companies, the business size of Tokyo Electron is large and the total figures of the three are susceptible to those of Tokyo Electron. Tokyo Electron, one of the world's leading SPE manufacturers, produces a wide-range of products mainly in semiconductor front-end process and is a symbol for the domestic SPE industry.

For FY2023, the three Companies' total net sales were 2,642.9 billion yen (down 10.5% year-on-year) and operating income was 671.9 billion yen (down 16.5% year-on-year), both net sales and operating income decreased for the first time in four fiscal years. This is mainly because of the adverse change in the trend in business environment as mentioned above. As for individual companies, two companies, DISCO and SCREEN, increased sales and operating income, consecutively marked record high net sales and operating income. In contrast, Tokyo Electron decreased both net sales and operating income. This is because Tokyo Electron's sales ratio of products for the memory field was relatively high and was strongly hit by the impact of slump in memory. DISCO has a large portion of net sales in foreign currency, and the performance was boosted by the weaker yen in some aspect. Total performance of the three Companies combined on a semi-annual basis, it hit the lowest for the moment in the first half of FY2023. In terms of individual companies, this trend is also commonly recognized in the three Companies.

For FY2023, the total operating cash flow for the three Companies remained at a high level, grew 8.0% year-on-year to 628.4 billion yen, and the total financial structure of the three Companies also continues to be favorable. The equity ratio has been maintained in the 60% range since the end of FY2007, stood at 68.4% at the end of FY2023 (66.8% a year before). In addition, liquidity on hand increased further, and interest-bearing debt seemed to be maintained at an extremely low level.

3. Highlights for Rating

SCREEN and Tokyo Electron, which disclosed full-year earnings forecast for FY2024, are both project an increase in sales and operating income. Of which SCREEN expects to post the highest ever for the net sales and operating income for four fiscal years in a row. Tokyo electron expects net sales and operating income to reach near-highest ever levels though not achieving record highs. DISCO only announced earnings forecasts for a quarter ahead as in the past. For the first quarter of FY2024, it forecasts a year-on-year increase of 39.5% and 59.7% in net sales and operating income respectively. DISCO also discloses a forecast of amount of shipments, which is useful in measuring customers' investment appetite. For the first quarter of FY2024, DISCO plans to increase the amount of shipments by 37.9% year-on-year.

In SPE market, capital investment has begun for DRAM in the memory field, which was exposed to the serious slump. As opposed to, recovery is slow for NAND flash memory. For DRAM, demand for HBM for generative AI is strong. Under such circumstances, capital investments for DRAM are expected to recover mainly in the second half of FY2024. However, some predict that full swing recover in capital investments for NAND flash memory will take place in FY2025. Mixed forecasts are made by the market watchers as indicated that some says a sign of slowdown is recognized in capital investments for power semiconductors, which were active.

In comparison between SCREEN and Tokyo Electron, they have different expectations in the future business performances as shown that SCREEN projects a 6.2% increase in operating income while Tokyo Electron projects a 27.6% increase in operating income. Furthermore, SCREEN's forecast indicates that the performance for the first half and the second half are almost the same, but Tokyo Electron expects stronger performance for the second half against the first half. This seems to be attributable to the effects of the sales ratio of products for the memory field and other factors. SCREEN has smaller sales ratio of products for the memory field and the slump in memory was limited on the performance for FY2023. In contrast, Tokyo Electron's performance for FY2024 is expected to be contributed by the effects of capital investment recovery in the memory field centering on DRAM rectifying the effects of the slump in memory it strongly affected for FY2023. DISCO's TSV (Through Silicon Via) technology has been adopted in mass production of HBM and this will be one of the factors to boost the performance and amount of shipments. JCR will watch whether the trends in each of SPE manufacturers throughout the current fiscal year will be the year deriving full swing performance recovery for FY2025.

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(Chart 1) Business Performance

(Unit: Yen in 100 mn)

		FY2022			FY2023			FY2024		
		Actual	1st half	2nd half	Actual	1st half	2nd half	Forecast	1st half	2nd half
DISCO (Security code: 6146)	Net Sales	2,841	1,392	1,448	3,075	1,262	1,812	-	-	-
	Operating Income	1,104	548	555	1,214	450	764	-	-	-
	Operating Income Margin(%)	38.9	39.4	38.3	39.5	35.6	42.2	-	-	-
	Net Income	828	406	422	842	327	514	-	-	-
SCREEN (Security code: 7735)	Net Sales	4,608	2,184	2,424	5,049	2,232	2,816	5,600	2,760	2,840
	Operating Income	764	381	382	941	385	556	1,000	480	520
	Operating Income Margin(%)	16.6	17.5	15.8	18.6	17.3	19.7	17.9	17.4	18.3
	Net Income	574	296	278	705	263	442	720	320	400
Tokyo Electron (Security code: 8035)	Net Sales	22,090	11,828	10,261	18,305	8,195	10,109	22,000	10,000	12,000
	Operating Income	6,177	3,501	2,675	4,562	1,785	2,776	5,820	2,430	3,390
	Operating Income Margin(%)	28.0	29.6	26.1	24.9	21.8	27.5	26.5	24.3	28.3
	Net Income	4,715	2,673	2,042	3,639	1,374	2,264	4,450	1,850	2,600
Total of the three Companies	Net Sales	29,539	15,405	14,134	26,429	11,690	14,739	-	-	-
	Operating Income	8,045	4,432	3,613	6,719	2,621	4,097	-	-	-
	Operating Income Margin(%)	27.2	28.8	25.6	25.4	22.4	27.8	-	-	-
	Net Income	6,119	3,377	2,742	5,187	1,965	3,222	-	-	-

(Source: Prepared by JCR based on the financial materials of the above companies)

(Chart 2) Cash Flows & Financial Conditions

(Unit: Yen in 100 mn)

		End-FY2022	End-FY2023
DISCO	Operating Cash Flow	817	975
	Interest-bearing Debt	0	N.A.
	Ready Liquidity	1,630	2,154
	Equity Capital	3,467	4,052
	Equity Ratio (%)	74.0	72.9
	D/E Ratio (times)	0.00	N.A.
SCREEN	Operating Cash Flow	739	962
	Interest-bearing Debt	288	71
	Ready Liquidity	1,755	1,972
	Equity Capital	2,998	3,718
	Equity Ratio (%)	53.3	54.9
	D/E Ratio (times)	0.10	0.02
Tokyo Electron	Operating Cash Flow	4,262	4,347
	Interest-bearing Debt	132	N.A.
	Ready Liquidity	4,730	4,725
	Equity Capital	15,875	17,468
	Equity Ratio (%)	68.7	71.1
	D/E Ratio (times)	0.01	N.A.
Total of the three Companies	Operating Cash Flow	5,819	6,284
	Interest-bearing Debt	420	N.A.
	Ready Liquidity	8,117	8,853
	Equity Capital	22,342	25,239
	Equity Ratio (%)	66.8	68.4
	D/E Ratio (times)	0.02	N.A.

(Note 1) Assuming DISCO and Tokyo Electron did not have any outstanding balance of bonds and loans as of end-FY2023
(Source: Prepared by JCR based on the financial materials of the above companies)

<Reference>

Issuer: DISCO CORPORATION

Long-term Issuer Rating: AA- Outlook: Stable

Issuer: SCREEN Holdings Co., Ltd.

Long-term Issuer Rating: A Outlook: Stable

Issuer: Tokyo Electron Limited

Long-term Issuer Rating: AA Outlook: Positive

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