Market Forecast Report
Semiconductor and FPD Manufacturing Equipment
Released in July 2023
(Fiscal years 2023-2025)

July 6, 2023

SEAJ

Semiconductor Equipment Association of Japan

Overview

This report provides trend forecasts for semiconductor and FPD manufacturing equipment. The comprehensive results included in this forecast report are based on demand forecasts by the Semiconductor Research and Statistics subcommittee and the FPD Research and Statistics subcommittee of the Semiconductor Equipment Association of Japan (hereinafter called SEAJ, Chairman: Mr. Toshiki Kawai) as well as market trend research by the 20 companies represented on the Board of Directors and auditors.

We forecast sales of semiconductor manufacturing equipment made in Japan for fiscal 2023 to be 3.2 trillion yen, a decrease of 23% from the previous year, reflecting the current situation where recovery of capital investment, particularly in Memory, will take considerable time. For fiscal 2024, we forecast sales of 3.93 trillion yen, an increase of 30%, as we expect to achieve a full-fledged recovery in Memory and a robust investment in logic/foundries. For fiscal 2025, we forecast sales of 4.32 trillion yen, an increase of 10%, owing to persistent sound investment.

As for FPD manufacturing equipment, we forecast sales of 343 billion yen in fiscal 2023, a decrease of 20%, since large-scale investments will literally be few, same as commented in January. For fiscal 2024, we forecast sales of 445 billion yen, an increase of 30%, expecting demands owing to launch of Organic Light Emitting Diode (OLED) investment using new technology on G8 substrates. For fiscal 2025, we expect investment in G8-class OLEDs to continue, with a sales forecast of 468 billion yen, an increase in 5%.

(1) Forecast period	Three years from fiscal year 2023 to 2025 (FY2023: From April 2023 to March 2024)
(2) Forecast items	Sales of Japanese-made semiconductor manufacturing equipment and sales for the Japanese market Sales of Japanese-made FPD manufacturing equipment
(3) Forecast background	

(Semiconductor Manufacturing Equipment)

In 2023, the electronic equipment market will face macroeconomic concerns such as rising inflation mainly in Europe and the United States, rising interest rates in many countries in response to this, and soaring energy prices due to the prolonged invasion of Ukraine by Russia. Consumers' willingness to purchase is declining due to Under such circumstances, the number of shipments of PCs and smartphones, which has come full circle due to the corona crisis, is expected to fall below the previous year. Inventories of the semiconductors used in these products, mainly memory, have been stagnating, and adjusting production cuts are continuing as prices drop sharply. In addition, the semiconductor manufacturing equipment market in fiscal 2023 is expected to see a reduction in capital investment in logic foundries and memory, even taking into account the continued capital

investment for the mature generation, mainly in China,. As a result, market shrinkage is expected to be inevitable.

In 2024, due to the release of new CPUs and the expansion of the use of generative AI represented by ChatGPT, investment in new and replacement servers for data centers is expected to increase, and demand for PCs and smartphones will recover along with the recovery of the macro economy. can be expected. In the semiconductor manufacturing equipment market as well, in addition to the recovery in logic and memory markets, policy support from the governments of various countries is expected to boost investment recovery.

The semiconductor manufacturing equipment market in 2025 is also expected to continue growing, supported by the growth of various applications such as AR/VR, EV/autonomous driving, etc., in addition to the demand for PCs, smartphones, and servers for data centers.

WSTS (World Semiconductor Trade Statistics) released the latest semiconductor market forecast in June. The global semiconductor market size in 2023 is expected to decline by 10.3% from the previous year, reflecting the drop in memory prices, which is the first negative growth since 2019. In 2024, it is expected to recover to 576 billion US dollars, an increase of 11.8%, and set a record high.

(FPD Manufacturing Equipment)

Panel prices peaked in the summer of 2021 due to demand for remote work during the coronavirus crisis. Since then, the unit prices of both IT products (for PCs and tablets) and TV panels have continued to decline, but the decline has almost bottomed out around the fall of 2022. Especially, prices for TVs have been rising since the spring of 2023 due to an upturn in supply and demand. However, it lacks the strength to spur capital investment, and the outlook for capital investment in FY2023 remains bleak.

In contrast, investment in G8 substrates for OLEDs is expected to begin into full swing from 2024. OLED panels are being considered for use in various IT products; however, since the panel size per unit will be larger than conventional OLEDs for smartphones, it will be necessary to manufacture the panels on G8 substrates that have high production efficiency. Development for mass production is already underway at equipment manufacturers, but since the technological hurdles for some processes are different from those for G6 substrates, Japanese manufacturing equipment, which is relatively ahead of other manufacturers in this field, is expected to play an active role.

(4) Forecast results

【Sales forecasts for semiconductor/FPD manufacturing equipment and equipment made in Japan】

For fiscal 2023, assuming that sales of semiconductor manufacturing equipment will fall by 23% and sales of FPD manufacturing equipment will decrease by 20%, we forecast overall sales of 3.36 trillion yen, a decrease by 22.7%. For fiscal 2024, both semiconductors and FPDs are expected to

recover significantly, as we forecast overall sales of 4.37 trillion yen, an increase of 30%. Fiscal 2025 is also expected to see solid growth, with a 10% increase in semiconductors and a 5% increase in FPDs, as we forecast overall sales of 4.79 trillion yen, an increase of 9.5%.

【Sales forecasts for semiconductor manufacturing equipment and equipment made in Japan】

In fiscal 2023, we forecast a 23% decrease from the previous fiscal year to 3.02 trillion yen, factoring the impact of changes in advanced factory plans due to the US export restrictions on China and the impact of reduced capital investment due to the decline in memory prices. In fiscal 2024, we forecast a 30% increase to 3.93 trillion yen in addition to the recovery of memory investment, the logic foundry will also recover, and large-scale capital investment is planned under the support of the governments of each country, and strong investment is expected. In fiscal 2025, we forecast a 10% increase to 4.32 trillion yen due to a further increase in equipment demand.

【Sales forecasts for semiconductor manufacturing equipment and the Japanese market】

In fiscal 2023, we forecast sales of 1.36 trillion yen, a 19% increase, based on the expectations for the development of new business areas including power semiconductors and for the investments by major foundries partly attributed from the beginning of 2024. In fiscal 2024, we forecast sales of 1.59 trillion yen, a 17% increase, as major foundries continue to invest into full swing and memory investment will be revived and added on top of that. The sales forecast for fiscal 2025 is 1.67 trillion yen, an increase in 5%, owing to expectations for continued investments by major foundries.

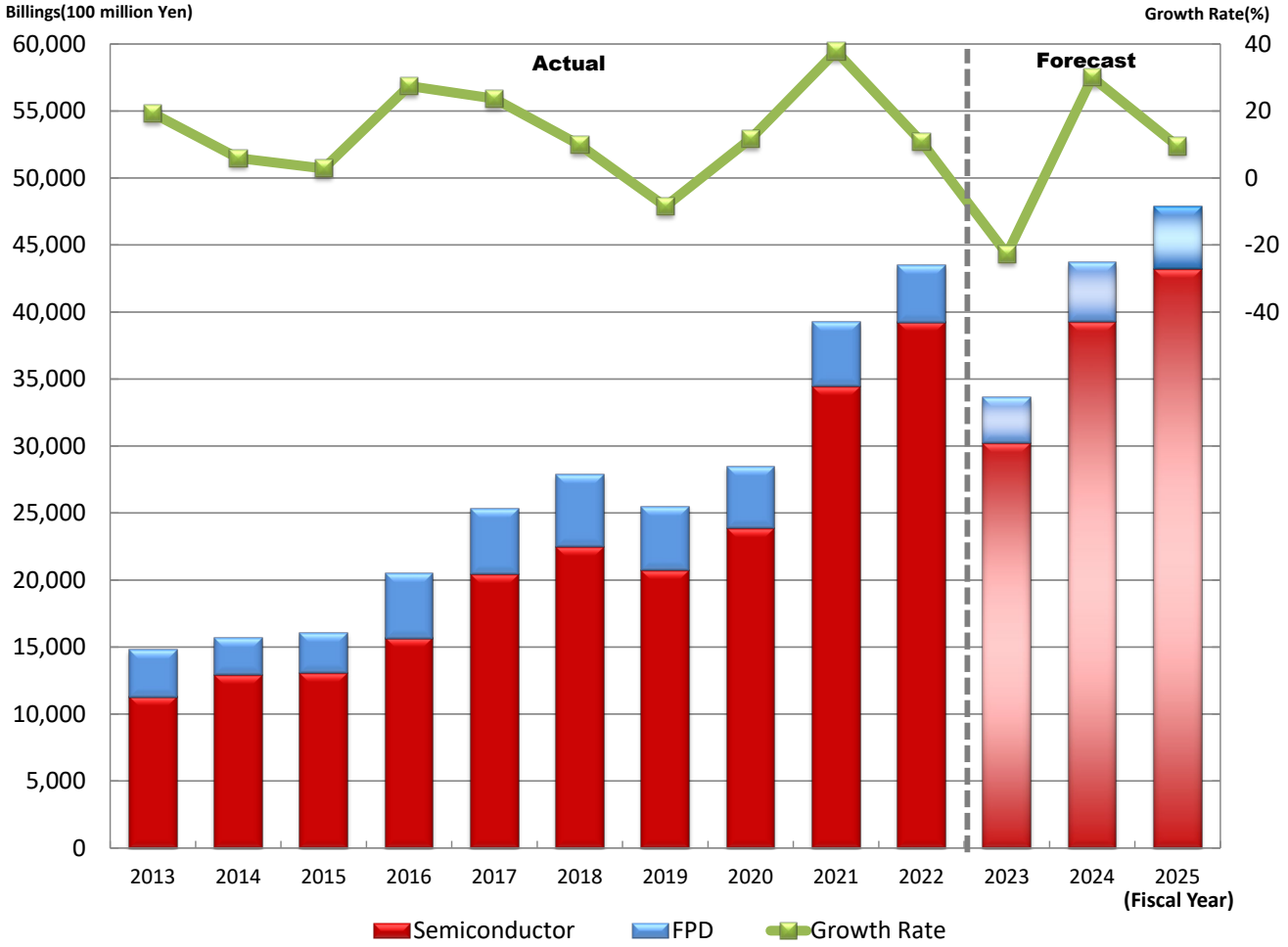
【Sales forecasts for FPD manufacturing equipment and equipment made in Japan】

In fiscal 2023, we forecast a 20% decrease to 343 billion yen since there will be very few large-scale investment projects. In fiscal 2024, we forecast sales of 445 billion yen, a 30% increase, due to the start of OLED investment using new G8 substrates, as well as investment in the TV market for a shift to new high-end products. In fiscal 2025, we expect continued investment in G8-class OLEDs, with a sales forecast of to 468 billion yen, a 5% increase.

July 2023 Forecast for Semiconductor and FPD Manufacturing Equipment

■1. Semiconductor and FPD Manufacturing Equipment
【Forecast for Japanese Equipment Billing】

* "Japanese Equipment Billing " = Japanese manufacturers Domestic and Oversea Billing.



(CAGR : 2022-2025)

	Actual										Forecast			
Fiscal Year	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	CAGR
Semiconductor	11,278	12,921	13,089	15,642	20,436	22,479	20,730	23,835	34,430	39,222	30,201	39,261	43,187	
FPD	3,485	2,717	2,993	4,857	4,916	5,364	4,758	4,638	4,809	4,282	3,425	4,453	4,676	
Total (100 million yen)	14,763	15,638	16,082	20,499	25,352	27,843	25,488	28,473	39,239	43,504	33,626	43,714	47,863	
Growth Rate (%)	19.3	5.9	2.8	27.5	23.7	9.8	-8.5	11.7	37.8	10.9	-22.7	30.0	9.5	3.2%

* FPD statistics participating companies have changed since FY2019.

* The names and amounts of the companies participating in the statistics are not disclosed.

July 2023 Forecast for Semiconductor and FPD Manufacturing Equipment

■２． Semiconductor Manufacturing Equipment

【Forecast for Japanese Equipment Billing】

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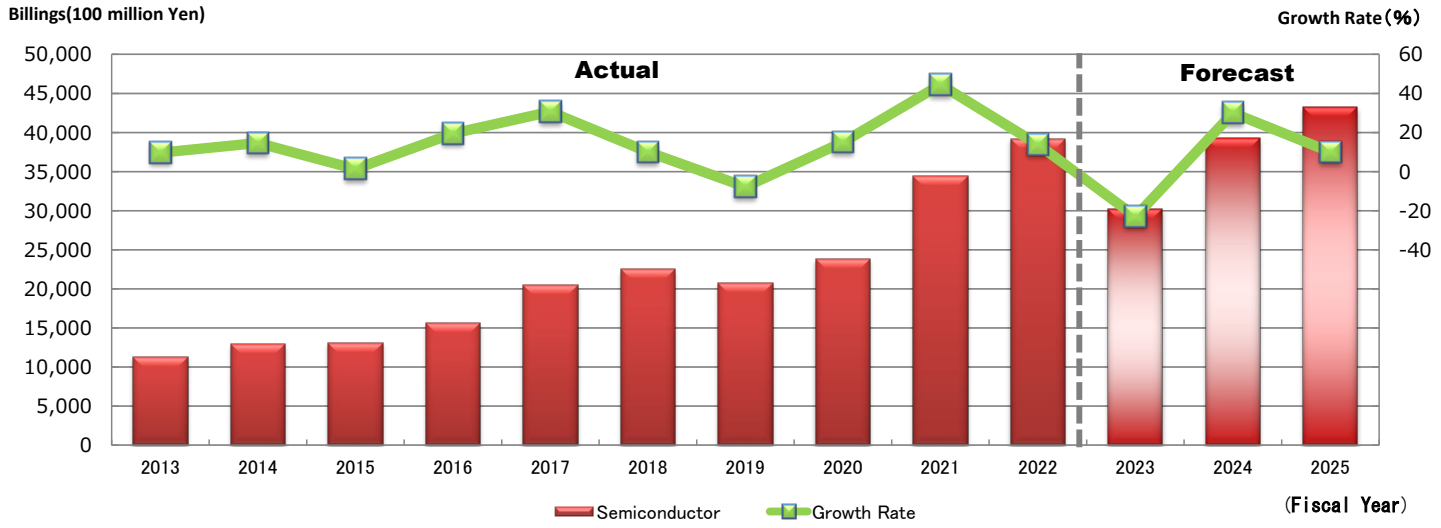
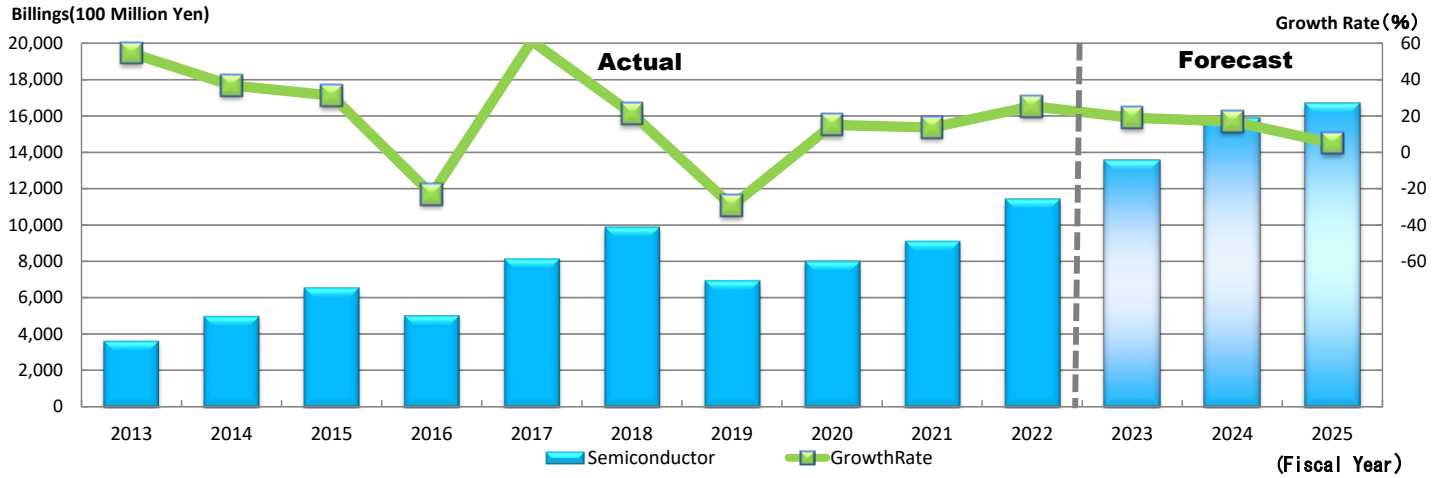


(CAGR : 2022-2025)

	Actual										Forecast			
Fiscal Year	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	CAGR
Total (100 million yen)	11,278	12,921	13,089	15,642	20,436	22,479	20,730	23,835	34,430	39,222	30,201	39,261	43,187	
Growth Rate (%)	9.7	14.6	1.3	19.5	30.6	10.0	-7.8	15.0	44.4	13.9	-23.0	30.0	10.0	3.3%

【Forecast for Japanese Market Billing】

* "Japanese Market Billing" = Domestic Billing of Japanese and Foreign manufacturers.



(CAGR : 2022-2025)

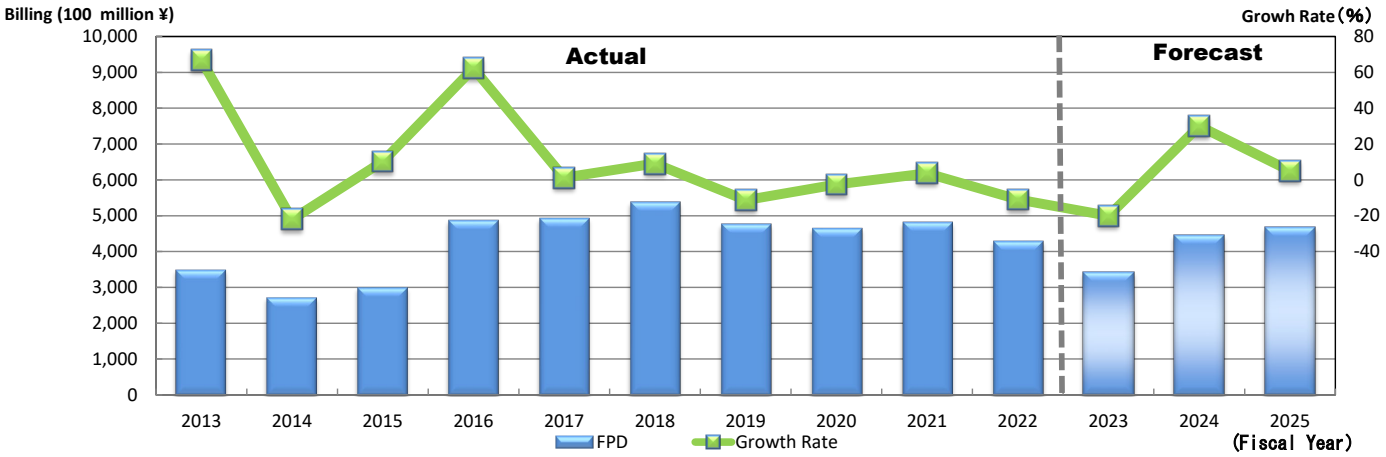
	Actual										Forecast			
Fiscal Year	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	CAGR
Total (100 million yen)	3,653	5,000	6,562	5,047	8,138	9,878	6,961	8,009	9,103	11,410	13,578	15,887	16,681	
Growth Rate (%)	54.6	36.9	31.2	-23.1	61.3	21.4	-29.5	15.1	13.7	25.3	19.0	17.0	5.0	13.5%

July 2023 Forecast for Semiconductor and FPD Manufacturing Equipment

■3. FPD Manufacturing Equipment

【Forecast for Japanese Equipment Billing】

* "Japanese Equipment Billing " = Japanese manufacturers Domestic and Oversea Billing.



(CAGR : 2022-2025)

	Actual										Forecast			
Fiscal Year	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	CAGR
Total (100 million yen)	3,485	2,717	2,993	4,857	4,916	5,364	4,758	4,638	4,809	4,282	3,425	4,453	4,676	
Growth Rate (%)	66.8	-22.0	10.2	62.3	1.2	9.1	-11.3	-2.5	3.7	-11.0	-20.0	30.0	5.0	3.0%

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