

Market Forecast Report
Semiconductor and FPD Manufacturing Equipment

[2017-2019 fiscal year]

January 11, 2018

SEAJ

Semiconductor Equipment Association of Japan

[Overview]

This report provides a forecast trend for Semiconductor and FPD manufacturing equipment. The fully-considered results made in this forecast report are by the Semiconductor Research and Statistics sub-committee and the FPD Research and Statistics sub-committee of the Semiconductor Equipment Association of Japan (hereinafter called SEAJ, Chairman Mr. Manabu Tsujimura), and as the result of market trend research from both the Board of Directors and auditors (total 20 companies) by SEAJ consensus.

In fiscal year 2017, while semiconductor manufacturing equipment continues to grow significantly following fiscal year 2016, FPD manufacturing equipment will grow steadily also, we forecast a total increase of 21.9% to 2.4996 trillion yen. Assuming there will be a robust growth both in the semiconductor manufacturing equipment market and the FPD manufacturing equipment market, we have forecasted that sales for fiscal year 2018 will increase 8.3% to 2.7072 trillion yen. As for fiscal year 2019, we anticipate that the sales of the semiconductor manufacturing equipment will slightly increase and the FPD manufacturing equipment enter adjustment phase, so we have forecasted that overall sales will decrease 1.6% to 2.6641 trillion yen.

- (1) **Forecast period** The fiscal year of 2017 to 2019 for three years
- (2) **Forecast items** Japanese Equipment and Japanese Market for Semiconductor and
 Japanese Equipment for FPD manufacturing equipment
- (3) **Forecast results**

[Forecast of Japanese Equipment Billings for Semiconductor Manufacturing Equipment]

We have forecasted sales of 1.9702 trillion yen, a 26.0% increase, for fiscal year 2017 anticipating investments in 3D-NAND and DRAM in addition to a continued investment by logic manufacturers. In fiscal year 2018, we also anticipate sustained investment by memory makers expanding to DRAM, increasing by 10.0% to 2.1672 trillion yen, and for fiscal year 2019, we have forecasted that sales will also increase 2.0% to 2.2105 trillion yen anticipating continued investments from China and expansion of demand for equipment.

[Forecast of Japanese Market Billings for Semiconductor Manufacturing Equipment]

Since investment in 3D-NAND, DRAM and image sensors is anticipated, we have forecasted that sales for fiscal year 2017 will increase 48.6% to 750.1 billion yen due to the additional investment. Anticipating continued investments in respective markets in fiscal year 2018, we have forecasted that sales will increase 10.0% to 825.1 billion yen. In expectation of expansion of demand for equipment, we have forecasted that sales for fiscal year 2019 will increase 2.0% to 841.7 billion yen.

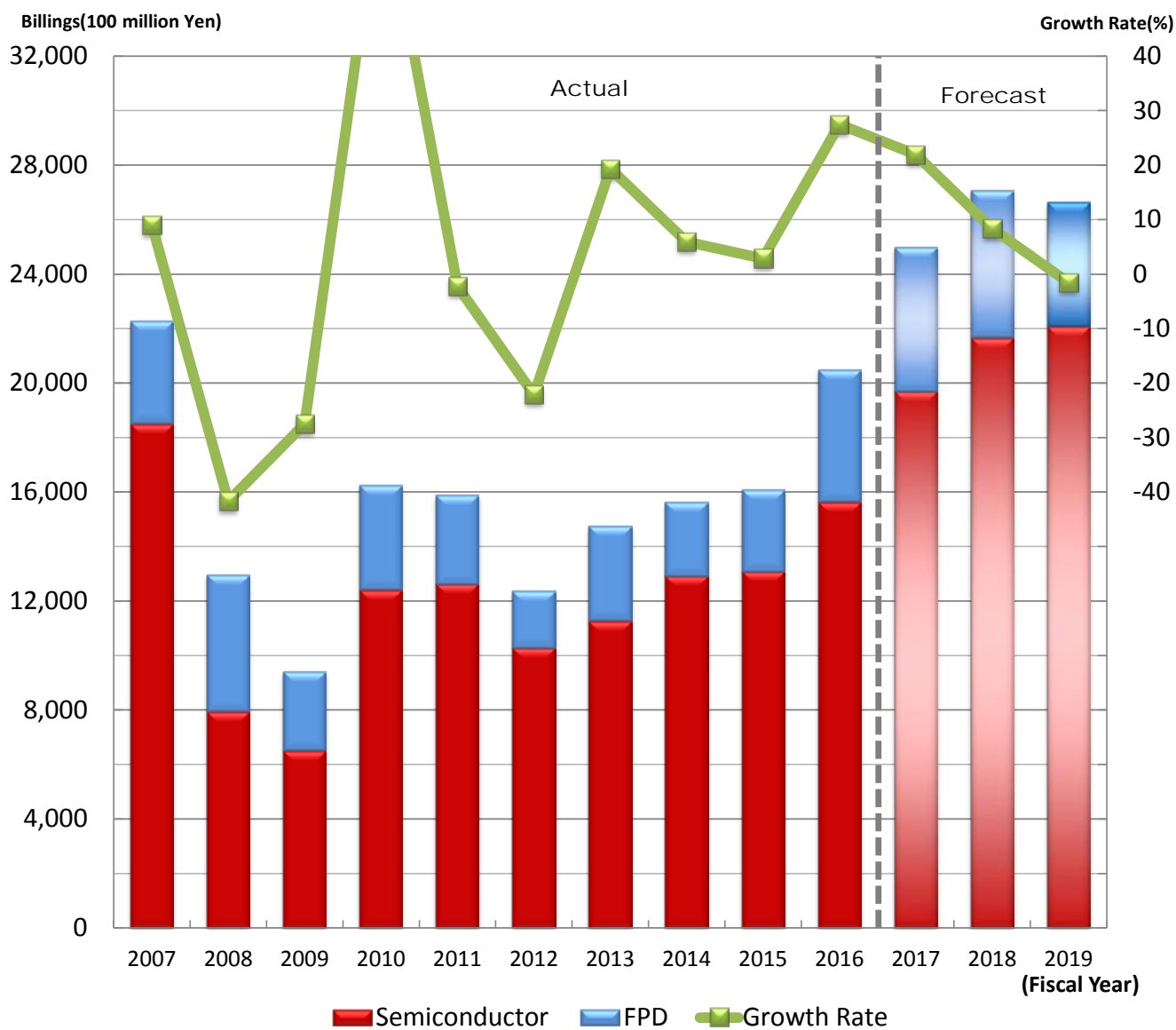
[Forecast of Japanese Equipment billings for FPD Manufacturing Equipment]

As for fiscal year 2017, considering the investment in large-size panels in the Chinese market in addition to the continued investments in small to midsize OLED panels mainly in the Korean market, we have forecasted that sales will increase 9.0% to 529.4 billion yen. As for fiscal 2018, assuming that the investment in G10.5 in China will get momentum and the investment in equipment for small to midsize OLED panels will continue, we have forecasted that sales will increase 2.0% to 540 billion yen. As for fiscal year 2019, while the investment in small to midsize panels will slow down, assuming that the investment in G10.5 will continue to be at a high level, we have forecasted that sales will decrease 16.0% from the previous year to 453.6 billion yen.

January 2018 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 : 2016-2019)

Fiscal Year	Actual										Forecast			CAGR
	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	
Semiconductor	18,510	7,954	6,528	12,415	12,637	10,284	11,278	12,921	13,089	15,642	19,702	21,672	22,105	9.1%
FPD	3,761	5,031	2,887	3,840	3,250	2,089	3,485	2,717	2,993	4,857	5,294	5,400	4,536	
Total (100 million yen)	22,271	12,985	9,415	16,255	15,887	12,373	14,763	15,638	16,082	20,499	24,996	27,072	26,641	
Growth Rate (%)	9.0	-41.7	-27.5	72.7	-2.3	-22.1	19.3	5.9	2.8	27.5	21.9	8.3	-1.6	

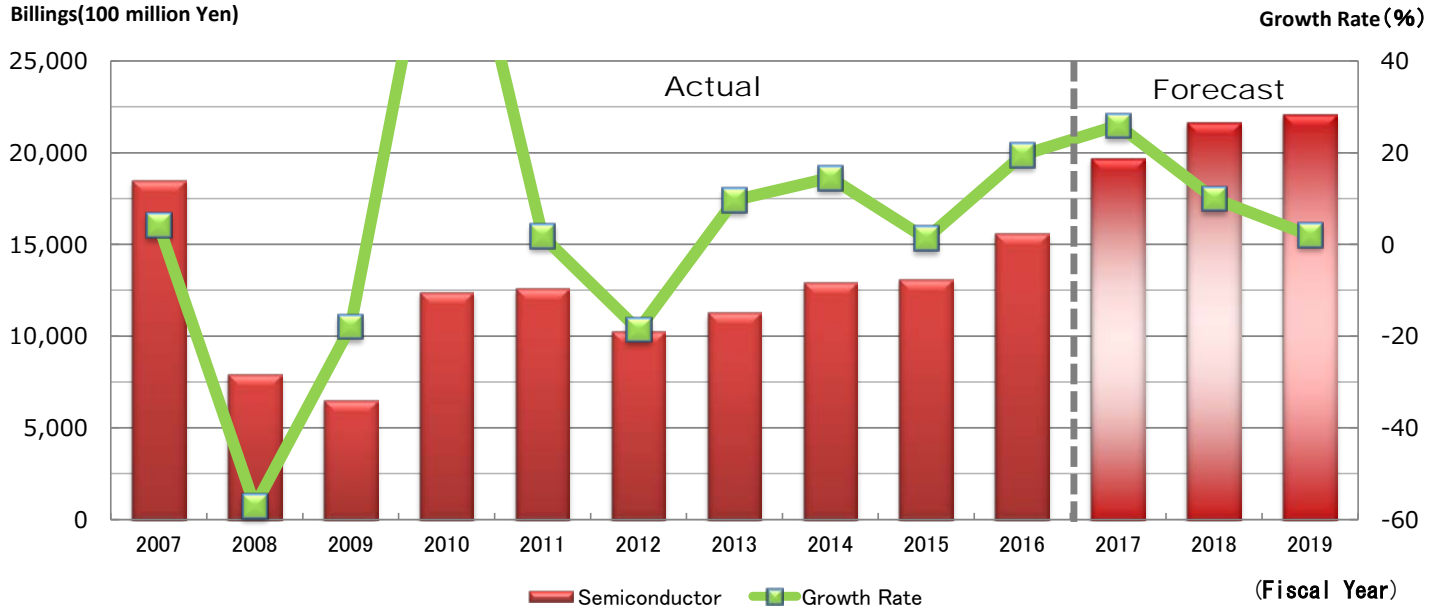
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January 2018 Forecast for Semiconductor Manufacturing Equipment

2. Semiconductor Manufacturing Equipment 【Forecast for Japanese Equipment Billing】

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

Billings(100 million Yen)



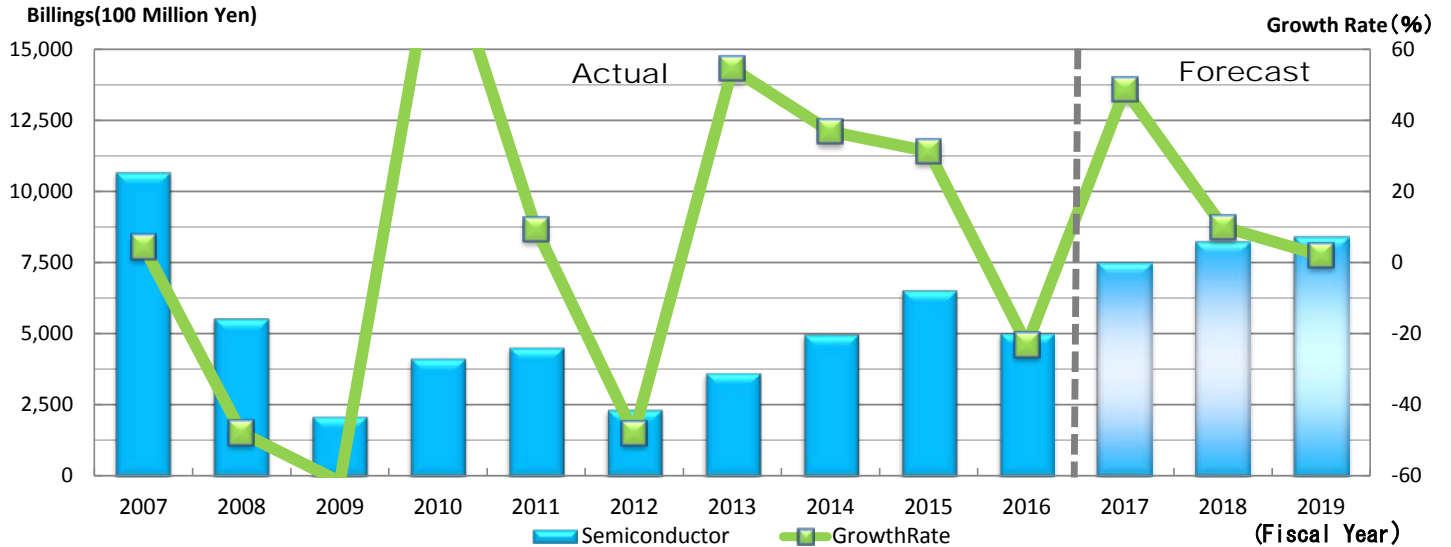
(CAGR : 2016-2019)

Fiscal Year	Actual										Forecast			CAGR
	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	
Total (100 million yen)	18,510	7,954	6,528	12,415	12,637	10,284	11,278	12,921	13,089	15,642	19,702	21,672	22,105	12.2%
Growth Rate (%)	4.1	-57.0	-17.9	90.2	1.8	-18.6	9.7	14.6	1.3	19.5	26.0	10.0	2.0	

【Forecast for Japanese Market Billing】

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

Billings(100 Million Yen)



(CAGR : 2016-2019)

Fiscal Year	Actual										Forecast			CAGR
	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	
Total (100 million yen)	10,694	5,567	2,130	4,162	4,552	2,363	3,653	5,000	6,562	5,047	7,501	8,251	8,417	18.6%
Growth Rate (%)	4.4	-47.9	-61.7	95.4	9.4	-48.1	54.6	36.9	31.2	-23.1	48.6	10.0	2.0	

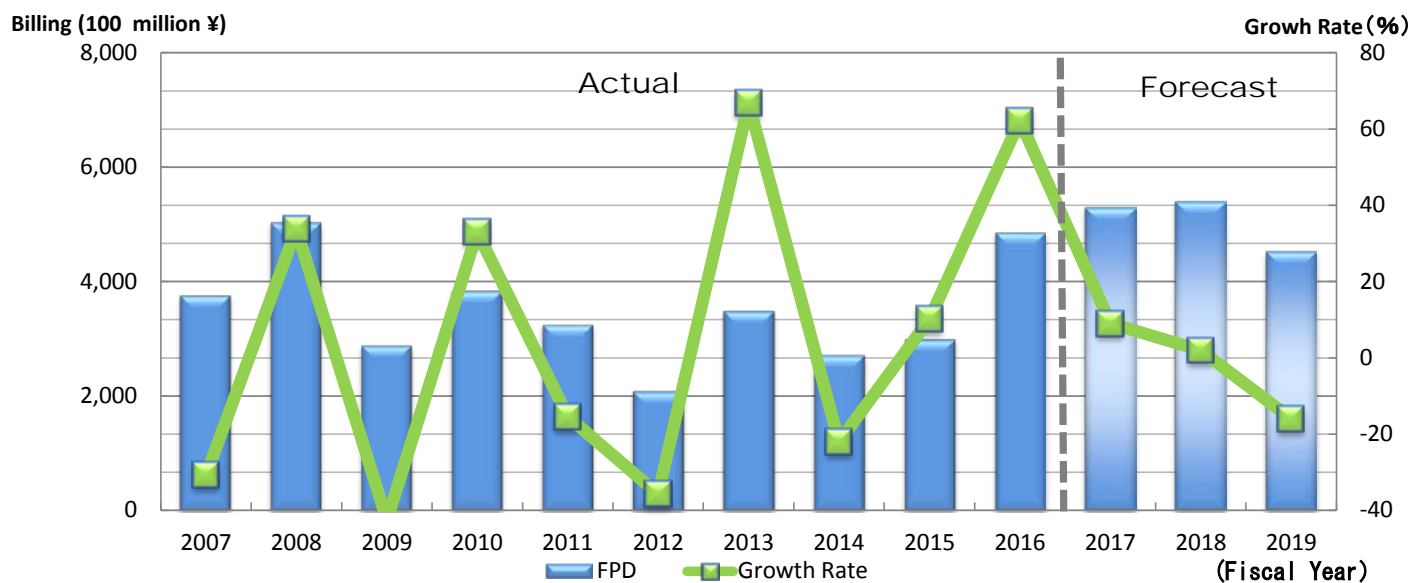
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January 2018 Forecast for Semiconductor and FPD Manufacturing Equipment

■3. FPD Manufacturing Equipment

【Forecast for Japanese Equipment Billing】

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



(CAGR : 2016-2019)

	Actual										Forecast			
Fiscal Year	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	CAGR
Total (100 million yen)	3,761	5,031	2,887	3,840	3,250	2,089	3,485	2,717	2,993	4,857	5,294	5,400	4,536	
Growth Rate (%)	-30.7	33.8	-42.6	33.0	-15.4	-35.7	66.8	-22.0	10.2	62.3	9.0	2.0	-16.0	-2.3%

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