

**Market Forecast Report**  
**Semiconductor and FPD Manufacturing Equipment**

**[2017-2019 fiscal year]**

**July 6, 2017**

**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 19 companies) by SEAJ consensus.

Due to a growth in the FPD manufacturing equipment market thought to have carried over from fiscal year 2016, in addition to a growth in the semiconductor manufacturing equipment market, we forecast overall sales of 2.2663 trillion yen for fiscal year 2017, an increase of 10.6%. 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 4.3% to 2.3631 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 a consolidation phase, so we have forecasted that overall sales will decrease 1.5% to 2.3278 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 1.7363 trillion yen, an 11.0% increase, for fiscal year 2017 anticipating investments in 3D-NAND and DRAM in addition to a continued investment by logic manufacturers and foundries. We have forecasted that sales will increase 5.0% to 1.8231 trillion yen for fiscal year 2018 as well assuming increased investments against the backdrop of the expansion of demand for semiconductors, and for fiscal year 2019, we have forecasted that sales will also increase 3.0% to 1.8778 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 30.0% to 656.1 billion yen. Anticipating continued investments in respective markets in fiscal year 2018, we have forecasted that sales for fiscal year 2017 will increase 2.3% to 670.9 billion yen. In expectation of expansion of demand for equipment, we have forecasted that sales for fiscal year 2019 will increase 0.2% to 672.2 billion yen.

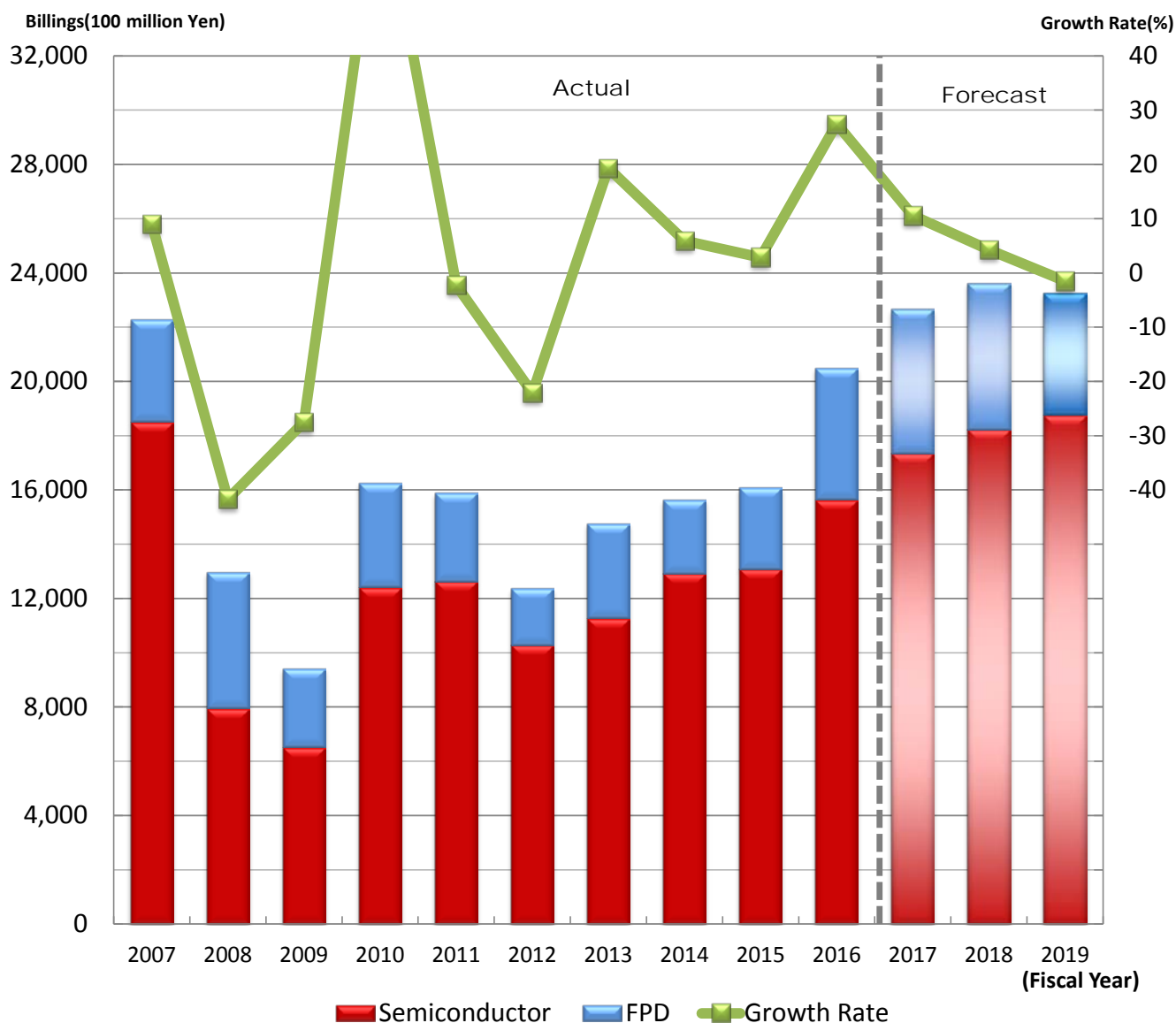
### **[Forecast of Japanese Equipment billings for FPD Manufacturing Equipment]**

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 9.1% to 530 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 1.9% to 540 billion yen. As for fiscal year 2019, assuming that the investment in G10.5 will continue while the investment in small to midsize panels will slow down and continue to be at a high level, we have forecasted that sales will decrease 16.7% from the previous fiscal year to 450 billion yen.

# July 2017 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 | 17,363   | 18,231 | 18,778 | 4.3% |
| FPD                     | 3,761  | 5,031  | 2,887 | 3,840  | 3,250  | 2,089  | 3,485  | 2,717  | 2,993  | 4,857  | 5,300    | 5,400  | 4,500  |      |
| Total (100 million yen) | 22,271 | 12,985 | 9,415 | 16,255 | 15,887 | 12,373 | 14,763 | 15,638 | 16,082 | 20,499 | 22,663   | 23,631 | 23,278 |      |
| Growth Rate (%)         | 9.0    | -41.7  | -27.5 | 72.7   | -2.3   | -22.1  | 19.3   | 5.9    | 2.8    | 27.5   | 10.6     | 4.3    | -1.5   |      |

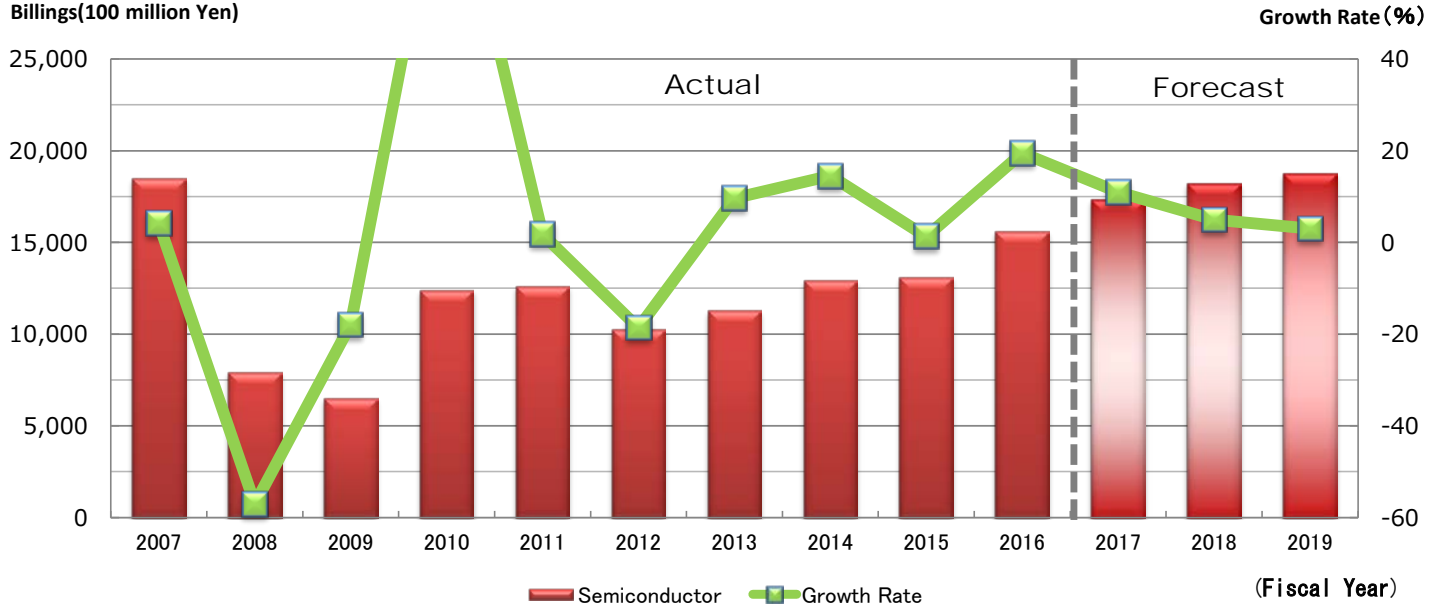
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# July 2017 Forecast for Semiconductor Manufacturing Equipment

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

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

Billings(100 million Yen)



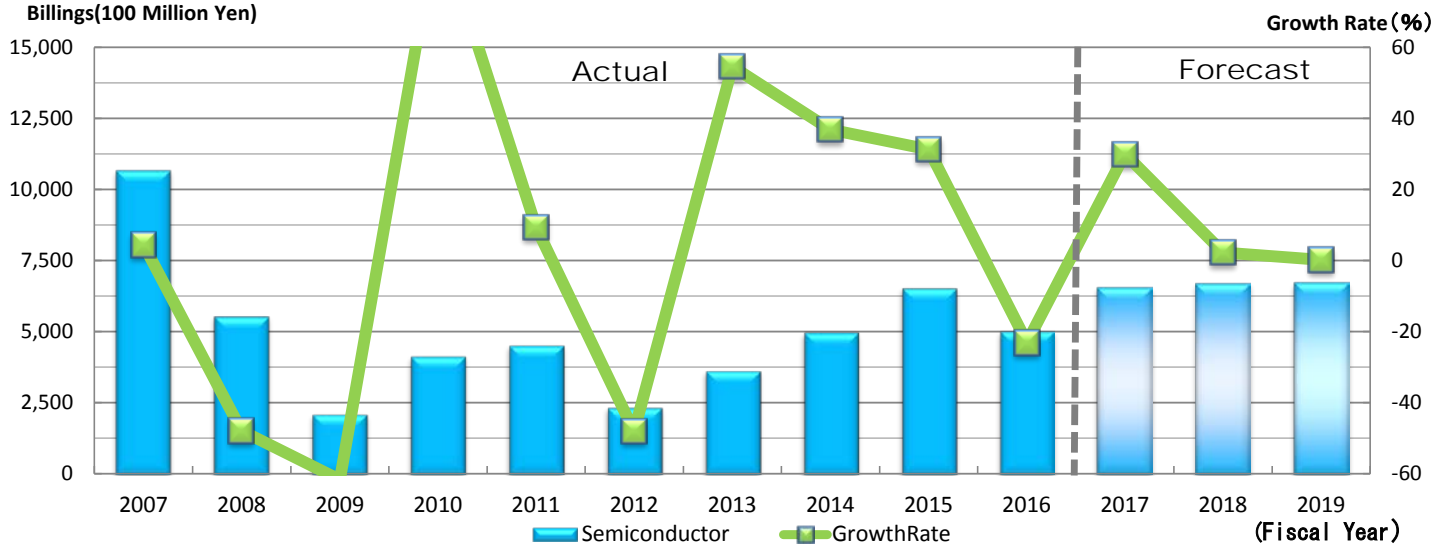
(CAGR : 2016-2019)

| 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 | 17,363   | 18,231 | 18,778 | 6.3% |
| Growth Rate (%)         | 4.1    | -57.0 | -17.9 | 90.2   | 1.8    | -18.6  | 9.7    | 14.6   | 1.3    | 19.5   | 11.0     | 5.0    | 3.0    |      |

## 【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 | 6,561    | 6,709 | 6,722 | 10.0% |
| Growth Rate (%)         | 4.4    | -47.9 | -61.7 | 95.4  | 9.4   | -48.1 | 54.6  | 36.9  | 31.2  | -23.1 | 30.0     | 2.3   | 0.2   |       |

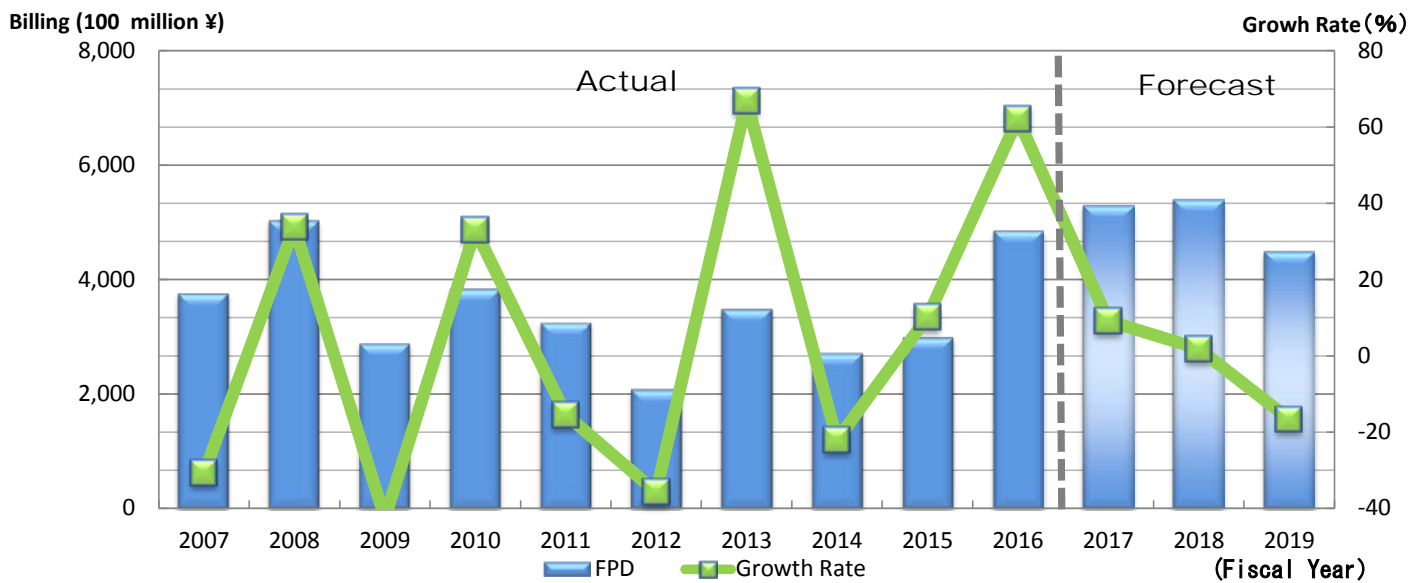
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# July 2017 Forecast for Semiconductor and FPD Manufacturing Equipment

## ■3. FPD Manufacturing Equipment

### 【Forecast for Japanese Equipment Billing】

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



(CAGR : 2016-2019)

| Fiscal Year             | Actual |       |       |       |       |       |       |       |       |       | Forecast |       |       | CAGR  |
|-------------------------|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|----------|-------|-------|-------|
|                         | 2007   | 2008  | 2009  | 2010  | 2011  | 2012  | 2013  | 2014  | 2015  | 2016  | 2017     | 2018  | 2019  |       |
| Total (100 million yen) | 3,761  | 5,031 | 2,887 | 3,840 | 3,250 | 2,089 | 3,485 | 2,717 | 2,993 | 4,857 | 5,300    | 5,400 | 4,500 |       |
| Growth Rate (%)         | -30.7  | 33.8  | -42.6 | 33.0  | -15.4 | -35.7 | 66.8  | -22.0 | 10.2  | 62.3  | 9.1      | 1.9   | -16.7 | -2.5% |

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