

**Market Forecast Report**  
**-Semiconductor and FPD Manufacturing Equipment-**  
**[2011-2013 fiscal year]**

**Published in January 5th, 2012**

**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 Dr. Hidehito Obayashi), and as the result of market trend research from both the Board of Directors and auditors (total 18 companies) by SEAJ consensus.

For Semiconductor manufacturing equipment, semiconductor manufacturers have postponed investments from the second half of fiscal year 2011 due to the EU debt crisis leading to the slowdown in the global economy sales. The fiscal year sales in 2011 are forecasted to decrease by 5.9 percent to 1,168.2 billion yen. In 2012, the fiscal year sales are estimated to decrease by 3.8 percent, so resulting in negative growth for two consecutive years. In 2013, the fiscal year sales are forecasted to increase by 20.0 percent to 1,348.6 billion yen due to the economic growth turning positive from the second half of the calendar year 2012. This number shows the recovery more than in the fiscal year of 2010.

For FPD manufacturing equipment, 2011 fiscal year sales are forecasted to decrease by 18.0 percent to 315 billion yen due to postponed investments for large panel TV production, although high-definition, the small and medium sized type panel and OLED panels are contributing to equipment sales. In 2012, the fiscal year sales are estimated to decrease by 36.5 percent, thus meaning large negative declines for two consecutive years. In 2013, the fiscal year sales are forecasted to increase by 50.0 percent to 300 billion yen because of new large business investments in China for front-end production line.

**(1) Forecast period:** the fiscal year of 2011 to 2013 for three years

**(2) Forecast items:** Japanese Equipment and Japanese Market for Semiconductor and Japanese Equipment for FPD manufacturing equipment

### **(3) Forecast Background**

#### **(Semiconductor Industry)**

The International Monetary Fund (IMF) World Economic Outlook in September 2011 marked that global economic activity is forecasted to show mild slowdown of 4.0 percent. Global economic activity had been strong in 2010, but shows a declined in 2011. The global growth will moderate to about 4.0 percent through 2012. In 2013, global economic activity is estimated to increase continuously by 4.5 percent. The growth is estimated to recover from the second half of 2012, though the Euro area continues to encounter major financial turbulence and downside risks are growing.

Slow growth is forecasted for electronics market. While demand for appliances, which had previously led in market such as PC, 1G/2G mobile phones and TV are slowing, high performance products such as smart phones, media tablets, ultra book and SSD lead the current market.

According to World Semiconductor Trade Statistics (WSTS) Semiconductor Market Forecast Autumn 2011, the semiconductor market is expected the worldwide market to surpass US\$302 billion by end of 2011 for the first time in semiconductor history, yet reflects a less-than-average growth of 1.3% over the 2010. The worldwide semiconductor market will grow by 2.6% in

2012 followed by 5.8% growth in 2013.

In 2011, the results of semiconductor companies in Japan are expected to remain flat or decline. Performance in the foundry business that had recovered rapidly will enter a correction phase. DRAM makers suffer from poor performance due to the balance of supply and demand downturn involving declining price rate for the first time in history. At the same moment, companies prepare the next-generation technology in strong growth market such as smart phones, media tablets, SSD and industrial applications.

#### **(FPD Industry)**

The global TV market, which is the largest application for large flat panels, showed a sharp decrease and resulted in a rapid decline of pricing in large-size TVs from the latter half of 2010 for the panel manufacturers. On the other hand, it is expected that the panel sales will continuously make the next leap forward because of the growing smart phone and tablet PC sales and demand for both high-definition viewing and small and medium-sized type panel applications. Progress also continues for inorganic EL displays with production are planned not only in Korea but also in Taiwan and China. The large-sized TV production is expected to expand its business.

A difficult situation is forecasted for FPD panel manufacturing because of long-term slowdown in the large panel market and the rise of manufacturers in East Asia because of decreasing transition from CRT TV to FPD TV in the world.

#### **(4) Summary**

##### **[Forecast of Japanese Equipment Billings for Combined Semiconductor and FPD Manufacturing Equipment]**

In 2011, total semiconductor and FPD equipment sales are forecasted to sharply decrease by 8.8 percent to 1,483.2 billion yen. In 2012, sales are expected to decline by 10.7 percent to 1,323.8 billion yen because FPD equipment sales will pull down semiconductor equipment sales. In 2013, sales are forecasted to rapidly increase by 24.5 percent to 1,648.6 billion yen.

##### **[Forecast of Japanese Equipment Billings for Semiconductor Manufacturing Equipment]**

In 2011, equipment sales will decrease by 5.9 percent to 1,168.2 billion yen. In 2012, sales are forecasted to go down by 3.8 percent to 1,123.8 billion yen. It means negative growth in two consecutive years. In 2013, sales are estimated to grow rapidly by 20.0 percent to 1,348.6 billion yen.

##### **[Forecast of Japanese Market Billings for Semiconductor Manufacturing Equipment]**

In 2011, sales are expected to increase by 7.2 percent to 446.2 billion yen. In 2012, sales are forecasted to decrease by 17.4 percent to 368.4 billion yen. In 2013, sales are estimated to grow by 10.0 percent to 405.3 billion yen because of the restart of large investments.

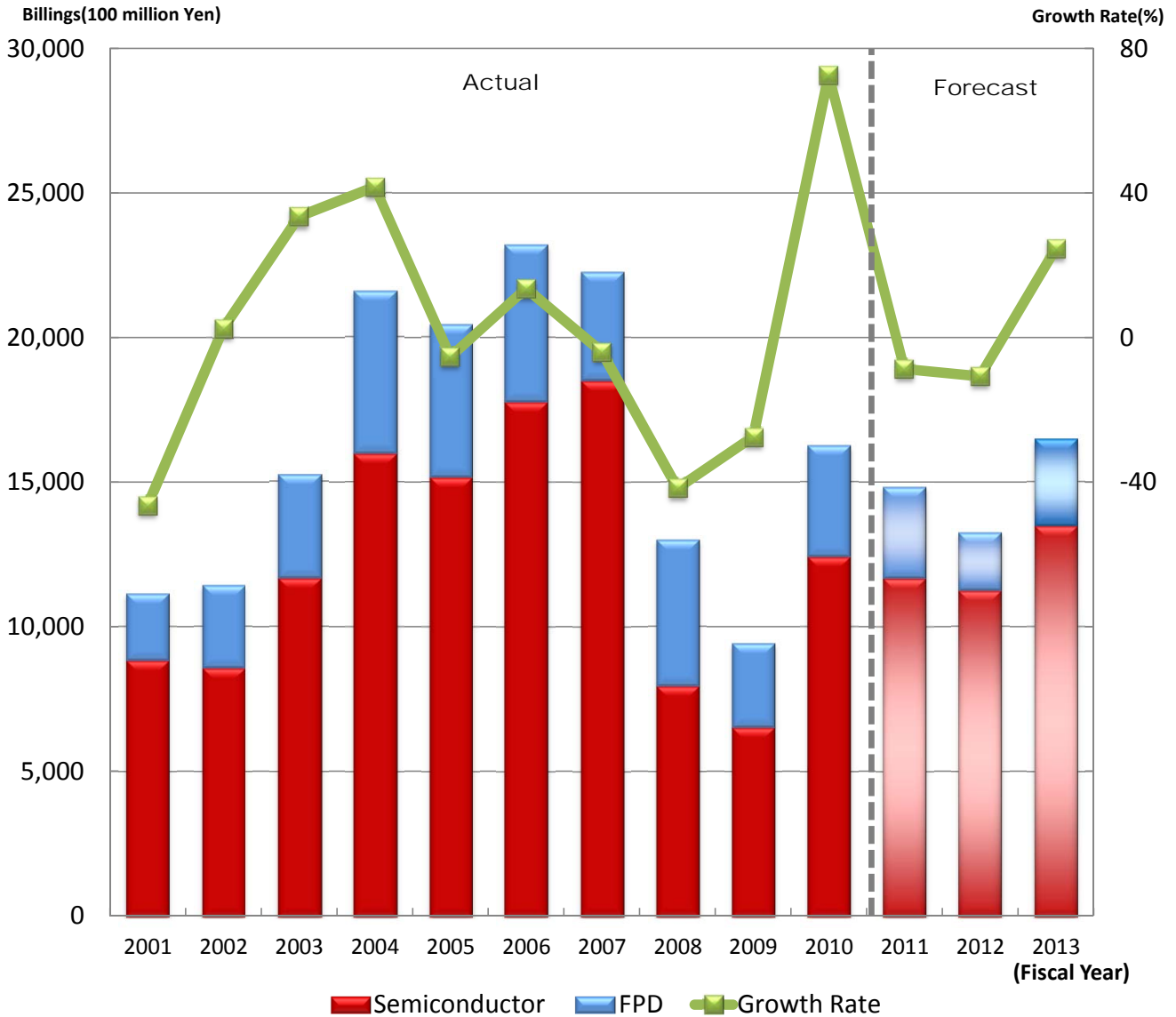
##### **[Forecast of Japanese Equipment billings for FPD Manufacturing Equipment]**

In 2011, FPD equipment sales are estimated to decrease by 18.0 percent to 315 billion yen. In 2012, sales will decline by 36.5 percent to 200 billion yen. It means negative growth in two consecutive years at double-digits. In 2013, sales are forecasted to sharply increase by 50.0 percent to 300 billion yen driven by investments of the large-sized type panels and new business investments in China.

# January 2012 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 : 2010-2013)

Fiscal Year	Actual										Forecast			CAGR
	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	
Semiconductor	8,834	8,575	11,671	15,981	15,169	17,778	18,510	7,954	6,528	12,415	11,682	11,238	13,486	0.5%
FPD	2,306	2,847	3,575	5,614	5,272	5,429	3,761	5,031	2,887	3,840	3,150	2,000	3,000	
Total (100 million yen)	11,140	11,422	15,246	21,596	20,441	23,206	22,271	12,985	9,415	16,255	14,832	13,238	16,486	
Growth Rate (%)	-46.4	2.5	33.5	41.6	-5.3	13.5	-4.0	-41.7	-27.5	72.7	-8.8	-10.7	24.5	

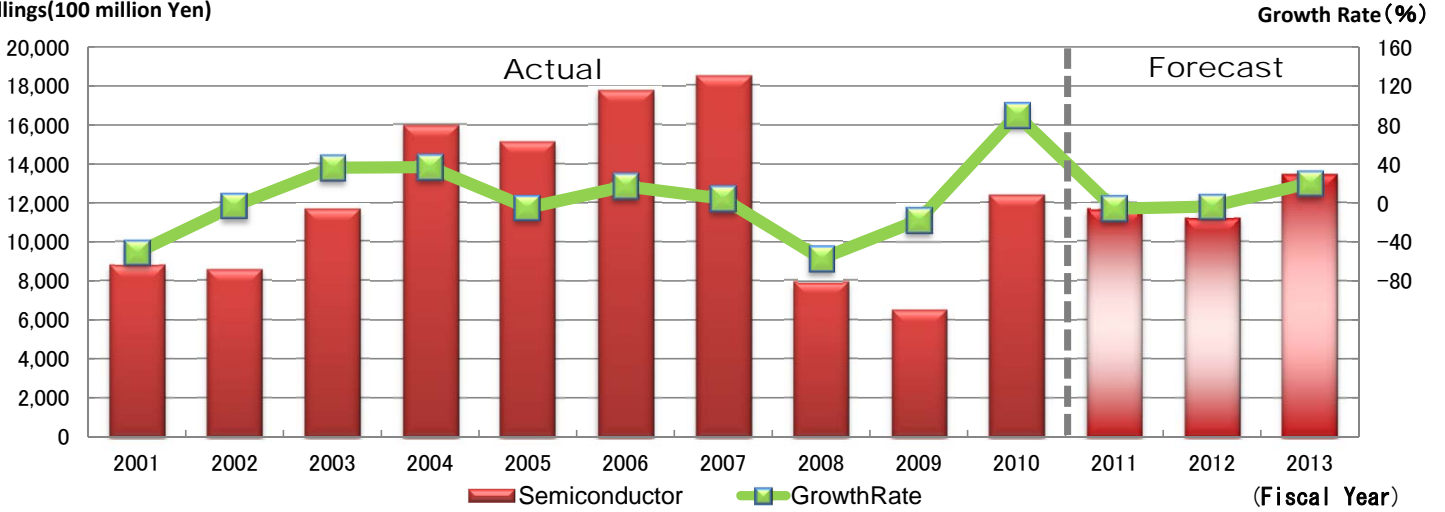
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# January 2012 Forecast for Semiconductor Manufacturing Equipment

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

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

Billings(100 million Yen)



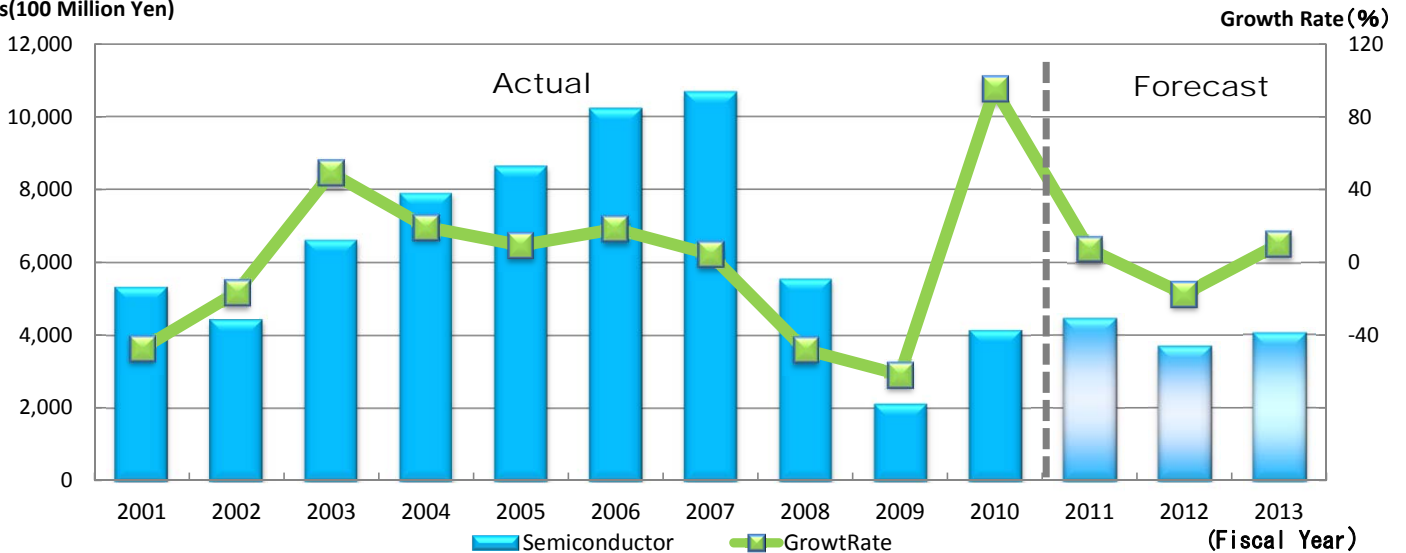
(CAGR : 2010-2013)

Fiscal Year	Actual										Forecast			CAGR
	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	
Total (100 million yen)	8,834	8,575	11,671	15,981	15,169	17,778	18,510	7,954	6,528	12,415	11,682	11,238	13,486	
Growth Rate (%)	-51.0	-2.9	36.1	36.9	-5.1	17.2	4.1	-57.0	-17.9	90.2	-5.9	-3.8	20.0	2.8%

## 【Forecast for Japanese Market Billing】

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

Billins(100 Million Yen)



(CAGR : 2010-2013)

Fiscal Year	Actual										Forecast			CAGR
	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	
Total (100 million yen)	5,338	4,452	6,634	7,918	8,658	10,241	10,694	5,567	2,130	4,162	4,462	3,684	4,053	
Growth Rate (%)	-47.4	-16.6	49.0	19.4	9.3	18.3	4.4	-47.9	-61.7	95.4	7.2	-17.4	10.0	-0.9%

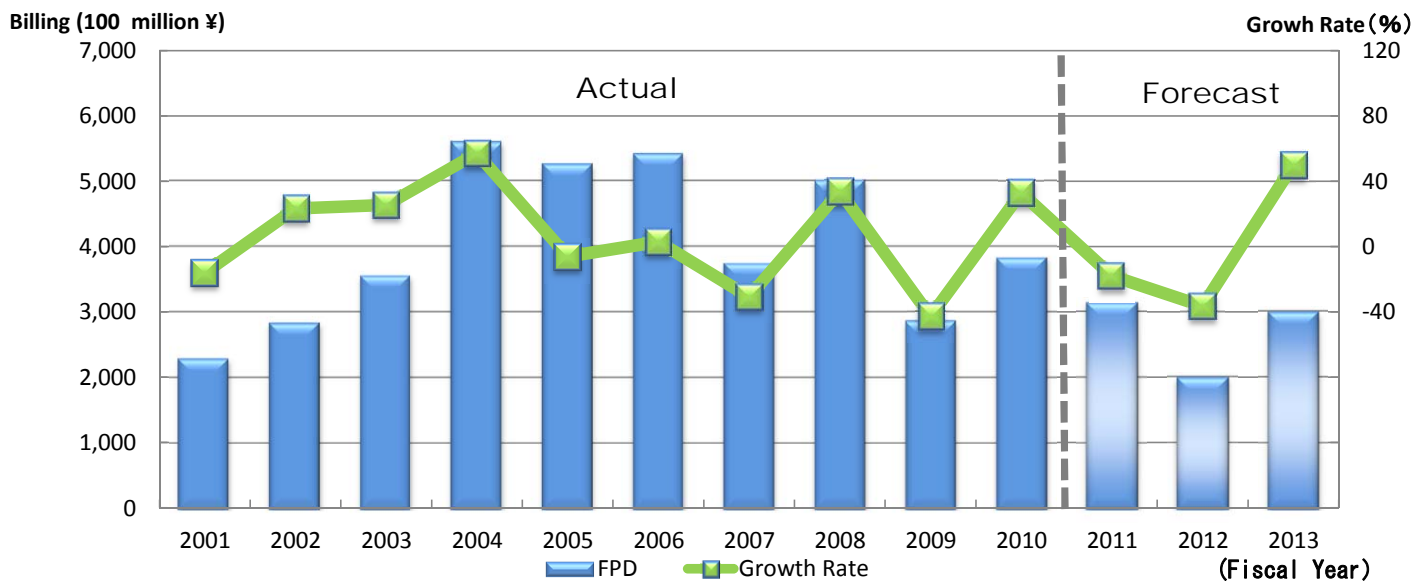
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# January 2012 Forecast for Semiconductor and FPD Manufacturing Equipment

## ■ 3. FPD Manufacturing Equipment

### 【Forecast for Japanese Equipment Billing】

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



(CAGR : 2010-2013)

	Actual										Forecast			
Fiscal Year	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	GAGR
Total (100 million yen)	2,306	2,847	3,575	5,614	5,272	5,429	3,761	5,031	2,887	3,840	3,150	2,000	3,000	
Growth Rate (%)	-16.0	23.5	25.6	57.1	-6.1	3.0	-30.7	33.8	-42.6	33.0	-18.0	-36.5	50.0	-7.9%

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