

# RESEARCH BULLETIN

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## Leading Edge Leads the Way in Pure-Play Foundry Growth

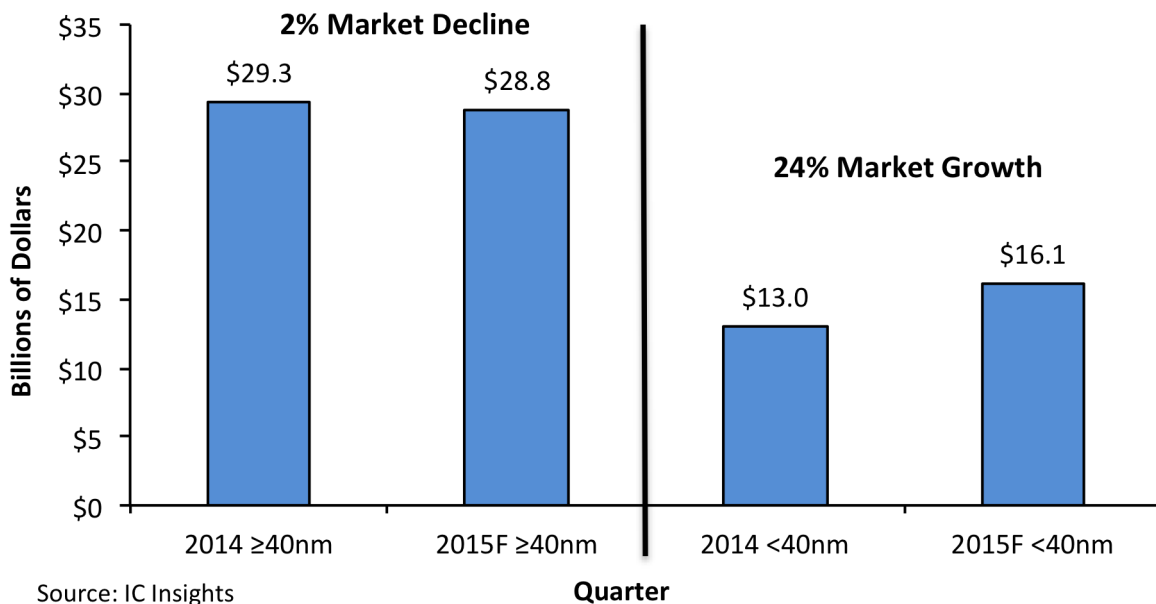
*ICs built using <40nm technology forecast to account for all of the pure-play foundry sales growth in 2015.*

The total pure-play foundry market is forecast to grow 6.1% to \$44.9 billion in 2015. The entire increase in pure-play foundry sales is forecast to be due to sales of devices built using leading edge (<40nm) feature sizes. The <40nm pure-play foundry market is expected to increase 24% to \$16.1 billion in 2015 compared to \$13.0 billion in 2014 (Figure 1). In contrast, pure-play foundry sales of ≥40nm devices are forecast to decline 2% to \$28.8 billion, based on findings presented in IC Insights' September *Update to the 2015 McClean Report*.

### MORE INFORMATION CONTACT

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**Figure 1**

Figure 2 shows sales of  $\leq 45\text{nm}$  devices from the Big 4 pure-play foundries on a quarterly basis for 2014 and 2015. IC Insights forecasts that 63% of TSMC's 2015 sales will be based on ICs built using  $\leq 45\text{nm}$  technology. Furthermore, TSMC is forecast to have about \$5.7 billion in sales of  $\leq 20\text{nm}$  devices in 2015 (\$5.1 billion from 20nm and about \$0.6 billion from 16nm devices). That would be 2.7x more than the \$2.1 billion worth of  $\leq 20\text{nm}$  product the company sold in 2014. The company began volume shipments of its 16nm devices in 3Q15 and stated, "The ramping of our 16nm will be very steep, even steeper than our 20nm."

### Major Pure-Play Foundries' $\leq 45\text{nm}$ Revenue

Timeperiod	TSMC		GlobalFoundries		UMC		SMIC		Total
	Sales (\$M)	% of Total Sales	Sales (\$M)	% of Total Sales	Sales (\$M)	% of Total Sales	Sales (\$M)	% of Total Sales	Sales (\$M)
1Q14	\$2,669	55%	\$545	58%	\$201	20%	\$44	10%	\$3,459
2Q14	\$3,377	56%	\$629	60%	\$238	22%	\$67	13%	\$4,311
3Q14	\$4,153	60%	\$750	63%	\$302	27%	\$54	10%	\$5,259
4Q14	\$4,590	64%	\$776	66%	\$315	28%	\$53	11%	\$5,734
<b>Total 2014</b>	<b>\$14,789</b>	<b>59%</b>	<b>\$2,700</b>	<b>62%</b>	<b>\$1,056</b>	<b>24%</b>	<b>\$218</b>	<b>11%</b>	<b>\$18,763</b>
1Q15	\$4,267	61%	\$704	66%	\$376	33%	\$82	16%	\$5,429
2Q15	\$4,044	61%	\$748	68%	\$396	33%	\$84	15%	\$5,272
3Q15F	\$4,152	63%	\$906	63%	\$358	32%	\$95	17%	\$5,511
4Q15F	\$4,016	66%	\$873	63%	\$352	33%	\$102	19%	\$5,343
<b>Total 2015F</b>	<b>\$16,479</b>	<b>63%</b>	<b>\$3,231</b>	<b>64%</b>	<b>\$1,482</b>	<b>33%</b>	<b>\$363</b>	<b>17%</b>	<b>\$21,555</b>

Source: Company reports, IC Insights

Figure 2

As shown, the portion of  $\leq 45\text{nm}$  sales at GlobalFoundries is expected to decrease five percentage points from 2Q15 to 3Q15. This drop is due to the inclusion of IBM's chip sales, much of which is large feature size RF devices, in GlobalFoundries' sales figures beginning in 3Q15 (the acquisition was finalized in July of this year).

One-third of UMC's total sales are forecast to come from  $\leq 45\text{nm}$  technology in 2015 and SMIC is expected to sell only \$363 million worth of  $\leq 45\text{nm}$  ICs in 2015, or only 2% of the level of TSMC's  $\leq 45\text{nm}$  sales forecast for this year.

## **Report Details: *The 2015 McClean Report***

Further details on the pure-play foundry market forecast are included in the *September Update to The McClean Report—A Complete Analysis and Forecast of the Integrated Circuit Industry*. A subscription to *The McClean Report* includes **free** monthly updates from March through November, and **free** access to subscriber-only webinars throughout the year. An individual-user license to the 2015 edition of *The McClean Report* is priced at \$3,590 and includes an Internet access password. A multi-user worldwide corporate license is available for \$6,590.

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