RESEARCH BULLETIN

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Pure-Play Foundry Market Surges 11% in 2016 to Reach $50 Billion!

X-Fab, SMIC, and TowerJazz each grew by ≥30% last year.

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The pure-play foundry market is forecast to play an increasingly stronger role in the worldwide IC market during the next five years, according to IC Insights' new 2017 *McClean Report*, which becomes available later this month. The 20th anniversary edition of the *McClean Report* forecasts that the 2016-2021 pure-play IC foundry market will increase by a compound annual growth rate (CAGR) of 7.6%; growing from $50.0 billion in 2016 to $72.1 billion in 2021.

IC foundries have two main customers—fabless IC companies (e.g., Qualcomm, Nvidia, Xilinx, AMD, etc.) and IDMs (e.g., ON, ST, TI, Toshiba, etc.). The success of fabless IC companies as well as the movement to more outsourcing by existing IDMs has fueled strong growth in IC foundry sales since 1998. Moreover, an increasing number of mid-size companies are ditching their fabs in favor of the fabless business model. A few examples include Fujitsu, IDT, LSI Corp. (now part of Avago), Avago (now Broadcom Ltd.), and AMD, which have all become fabless IC suppliers over the past few years.

Figure 1 shows the ranking of the top 10 pure-play foundries in 2016. In 2016, the "Big 4" pure-play foundries (i.e., TSMC, GlobalFoundries, UMC, and SMIC) held an imposing 85% share of the total worldwide pure-play IC foundry market. As shown, TSMC held a 59% marketshare in 2016, the same as in 2015, and its sales increased by $2.9 billion last year, more than double the $1.4 billion increase it logged in 2015. GlobalFoundries, UMC, and SMIC's combined share was 26% in 2016, the same as in 2015.

The three top-10 pure-play foundry companies that displayed the highest growth rates in 2016 were X-Fab (54%), which specializes in analog, mixed-signal, and high-voltage devices and acquired pure-play foundry Altis in 3Q16 to move into the top 10 for the first time, China-based SMIC (31%), and analog and mixed-signal specialist foundry TowerJazz (30%). In contrast to X-Fab's 2016 growth spurt, TowerJazz and SMIC have been on a very strong growth curve over the past few years. TowerJazz went from $505 million in sales in 2013 to $1,249 million in 2016 (a 35% CAGR) while SMIC more than doubled its revenue from 2011 ($1,220 million) to 2016 ($2,921 million) and register a 19% CAGR over this five-year timeperiod.

Seven of the top 10 pure-play foundries listed in Figure 1 are based in the Asia-Pacific region. Europe-headquartered specialty foundry X-Fab, Israel-based TowerJazz, and U.S.-headquartered GlobalFoundries are the only non-Asia-Pacific companies in the top 10 group.

Top 10 Pure-Play Foundry Companies

2016 Rank	2015 Rank	Company (Headquarters)	2014 Sales ($M)	14/13 % Change	2014 Share of Total	2015 Sales ($M)	15/14 % Change	2015 Share of Total	2016 Sales ($M)	16/15 % Change	2016 Share of Total
1	1	TSMC (Taiwan)	25,138	25%	59%	26,574	6%	59%	29,488	11%	59%
2	2	GlobalFoundries (U.S.)1	4,355	6%	10%	5,019	15%	11%	5,545	10%	11%
3	3	UMC Group (Taiwan)	4,331	9%	10%	4,464	3%	10%	4,582	3%	9%
4	4	SMIC (China)2	1,970	0%	5%	2,236	14%	5%	2,921	31%	6%
5	5	Powerchip (Taiwan)	1,291	9%	3%	1,268	-2%	3%	1,275	1%	3%
6	6	TowerJazz (Israel)	828	64%	2%	961	16%	2%	1,249	30%	2%
7	7	Vanguard (Taiwan)	790	11%	2%	736	-7%	2%	800	9%	2%
8	8	Hua Hong Semi (China)	665	14%	2%	650	-2%	1%	712	10%	1%
9	9	Dongbu HiTek (S. Korea)	541	20%	1%	593	10%	1%	672	13%	1%
10	11	X-Fab (Europe)	330	14%	1%	331	0%	1%	510	54%	1%
—	—	Others	2,280	3%	5%	2,405	5%	5%	2,251	-6%	<1%
—	—	Total	42,519	18%	100%	45,237	6%	100%	50,005	11%	100%

1. Includes $740 million in 2H15 sales from IBM purchase. 2. Partially owned by TSMC.

Source: IC Insights, company reports

Figure 1

Further trends and analysis relating to the IC market are covered in the 400-plus page 2017 edition of *The McClean Report.*

Report Details: *The 20th Anniversary 2017 McClean Report*

Additional details and forecasts for the worldwide IC market through 2021 are included in the new 20th anniversary 2017 edition of IC Insights' flagship report, *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 (including a 250+ page *Mid-Year Report*), and **free** access to subscriber-only webinars throughout the year. Moreover, **free** attendance to IC Insights' half-day *McClean Report* Seminar is also included in the subscription price. The seminars will be held in the following locations:

January 24, 2017, Scottsdale, Arizona

January 26, 2017, Sunnyvale, California

January 31, 2017, Boston, Massachusetts

An individual-user license to the 2017 edition of *The McClean Report* is priced at $4,090 and includes an Internet access password. A multi-user worldwide corporate license is available for $7,090.

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