

# Supply base consolidation complicates supplier management

Some purchasers are concerned that the wave of consolidation that has swept over the electronics supply base, especially among semiconductor manufacturers, will result in less competition and make it harder to negotiate favorable terms with suppliers.

Others say consolidation will have little impact on competition because a lot of the mergers and acquisitions involve companies looking to broaden their product portfolios, not necessarily to eliminate their competitors. They say the reduction in the number of suppliers will make the supply base financially secure and result in more investment in technology development and capacity.

Purchasers and analysts say the components industry, including semiconductors, is consolidating because the industry has matured and the days of double-digit annual sales growth are over. Acquiring other companies is a way to grow revenue, achieve economies of scale to become more profitable and add complementary product lines to attract new customers. (see related story p19)

In fact, the impact that consolidation will have on purchasing and buyers' ability to source and negotiate is not clear. It depends on the types of products the merging companies make and whether the parts are low-value standard commodity products or more specialized higher-end semiconductors that use the latest technology.

"For commodities like resistors, we welcome consolidation, as it would imply we would have to manage fewer part numbers and suppliers and the supply chain risks are minimal with these types of parts," said Seth Choi, vice president of global supply chain management and procurement for electronics manufacturing services (EMS) provider SMTC, based in Markham, Ontario, Canada. "For semiconductors the answer is a bit more complicated," he said.

For instance, Altera was acquired by Intel and remains the main competitor to Xilinx. Intel's

acquisition "does not change the fact that Altera and Xilinx continue to remain the main players in the FPGA market," he said.

He said Avago's acquisition of Broadcom is similar. "There is little overlap in their respective offerings, therefore the concern around its effects on the supply base would seem to be minimal," said Choi.

However, for acquisitions where there is an overlap of product lines, consolidation would increase the chance that the acquiring company phases out some of the product lines of the company it acquired, said Choi. "This could prove challenging and definitely reduces our options," he said.

Choi added that consolidation can make it more challenging to have a multi-source strategy for some parts. If two suppliers merge "we would have one less set of benchmarking data around price and lead time, which could reduce our leveraging capabilities" said Choi. In some cases SMTC's "overall relationship and spend puts us in a favorable situation with one supplier over another." With a consolidation SMTC's leverage could be impacted depending on whether the supplier is the acquirer or the acquired," said Choi.

## Harder to negotiate

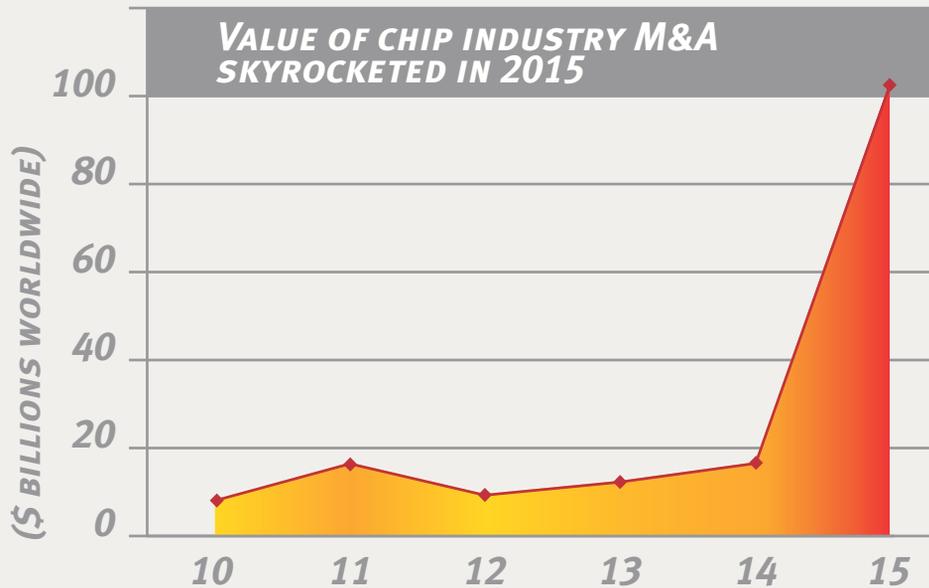
Consolidation can make it more difficult to negotiate advantageous terms with suppliers and could impact pricing, he said. "If the consolidation is between organizations offering similar or overlapping products and they are major players in their market segment, it would create an environment which makes it unfavorable to negotiate," he said. Even if the consolidation was between organizations that didn't have overlapping products, it could still impact negotiations, according to Choi. The acquiring company may have a business strategy that focuses "more on gaining market share, or they may have a need to increase their margins. These are also factors that could also affect negotiations and pricing," said Choi.

There is also a concern consolidation could result in an increase in component obsolescence

Consolidation will reduce sourcing options for buyers, but it could also result in a healthier base that is better able to make investments in technology development and capacity  
By James Carbone



"For commodities like resistors, we welcome consolidation, as it would imply we would have to manage fewer part numbers and suppliers and the supply chain risks are minimal with these types of parts," said Seth Choi, vice president of global supply chain management and procurement for SMTC Corp.



Consolidation creates scale for the remaining players, which in turn improves financial strength and their ability to invest in innovation," said John Gannfors, vice president PC and enterprise product group procurement for Lenovo

because merged companies may cease making overlapping products.

"This is definitely a concern especially for low-volume, non-IoT type of products we produce," he said. "That is why we monitor product change notifications carefully and proactively communicate to our customers in a timely basis so that a contingency plan can be made as soon as possible."

Consolidation can have an impact on research and development and capacity expansion by suppliers. "Many of the consolidations in the semiconductor industry are due to the high expense of producing their devices," said Choi. The costs of keeping up with the latest technologies are becoming prohibitive even for relatively large companies. "So many of these acquisitions are aimed at expanding their offerings without having to invest in their own R&D," he said.

However, some purchasing executives say consolidation will result in more financially stable companies that can make the necessary investments in technology development and capacity.

"Consolidation creates scale for the remaining players, which in turn improves financial strength and their ability to invest in innovation," said John Gannfors, vice president PC and enterprise product group procurement for computer manufacturer Lenovo. "So in this regard consolidation can provide more financial incentives for R&D investment, as well as capacity expansion," he said.

Gannfors added while consolidation results in fewer suppliers, "the strongest remaining players" can satisfy the key requirements of customers and maintain a competitive balance in the components markets."

## Chipmakers merge to boost sales, cut costs, acquire technology

In 2015, there were more than 20 major mergers and acquisitions in the semiconductor industry involving some of the biggest names in the industry, including Intel, Avago, Broadcom, NXP and Lattice among others.

The value of all the consolidation totaled more than \$103.6 billion compared to \$16.9 billion in 2014, according to researcher IC Insights. Some of the largest deals included Avago's buying of Broadcom for \$37 billion; Western Digital's purchase of SanDisk for \$19 billion, Intel's acquisition of Altera for \$16.7 billion and NXP's purchase of Freescale for \$11.8 billion.

There are multiple reasons for the unprecedented wave of mergers and acquisitions, including slower semiconductor sales and the rising cost of product development. Some chipmakers are acquiring other suppliers to enhance their product offerings to sell into the burgeoning Internet of Things market.

Some companies see consolidation as a way to cut costs. They say they can reduce costs by hundreds of millions of dollars by leveraging "synergies" between the two companies. That often means plant closings and job cuts, which result in higher levels of productivity

and value in two merged businesses, according to a report by IC Insights.

China's desire to become a bigger player in the semiconductor industry is also contributing to consolidation. China is looking to reduce semiconductor imports, the researcher said. Chinese companies acquired three semiconductor manufacturers in 2015, including ISSI and OmniVision in the U.S. and NXP's power unit in the Netherlands. In a bid to obtain DRAM and flash memory technology, China tried unsuccessfully to acquire Micron Technology last year.

In addition to the purchase of complete semiconductor companies, there were also many acquisitions of divisions, business units, product lines, and manufacturing plants, said IC Insights.

Sony announced in October 2015 that it would acquire Toshiba's 300mm wafer fab in Oita, Japan. The fab manufactures CMOS image sensors and memory controllers. Advanced Micro Devices said it would transfer its IC assembly and test operations in China and Malaysia to a new joint venture with Nantong Fujitsu Microelectronics, a Chinese subcontractor of back-end manufacturing services for \$371 million in cash and a 15 per cent stake in the new venture, the researcher said.

There is still “strong competition in all of our component categories and we have been successful at negotiating market competitive terms,” said Gannfors. “That is why we continue to see very competitive pricing.”

**Consolidation was overdue**

Gannfors and other purchasing executives say that consolidation in the industry was inevitable. Consolidation is a “natural outgrowth of the economic forces on the electronics markets,” he said, adding mergers and acquisitions have been going on for some time. But the supply base is “very healthy now and there are strong, financial stable players in all the key component segments,” said Gannfors.

“Consolidation in the semiconductor industry was overdue,” said David Zullo, senior director procurement for NCR, based in Duluth, Georgia. NCR makes self-service kiosks, point of sale terminals, automated teller machines, barcode scanners and other products for businesses.

With a lot of suppliers vying for business “it was a race to the bottom” with prices, said Zullo, who previously worked for several semiconductor companies including Agere, LSI Logic and Avago.

Consolidation reduces such cutthroat pricing competition among suppliers. While buyers may lament the loss of stiff pricing competition, consolidation results in a healthier supply base that is in a better position to make investments in new product innovation, said Zullo.

Zullo added that the consolidation that has occurred may result in fewer suppliers, but the remaining ones often end up with a more diverse product portfolio and are better able to compete in more customer segments.

“For instance if you’re a one-trick pony and you just ship products into the hard drive industry, you ride the PC wave up and down,” said Zullo. “But if you have chips that support the PC industry and networking equipment industry, volumes may be a little lower, but business will not be as cyclical,” he said.

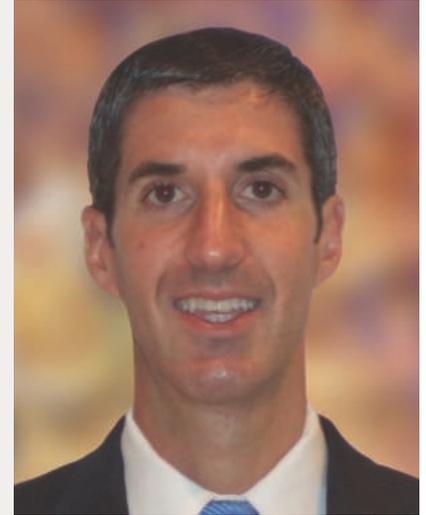
“I think the companies that are consolidating are trying to find complementary industries so the revenue doesn’t tank because of a swing when certain markets go up and down,” said Zullo.

Zullo said despite consolidation over the last two years he has not seen less competition or reduced leverage with suppliers.

“If you have something that you can source from two suppliers I think you are in a good position,” he said. “If there’s three you’re better off, but at some point time there are diminishing returns,” he said. “If you have two suppliers that can play in the market and you can bounce back and forth between those two, I would say you could probably drive just as good of a deal as if there were five or six players,” Zullo said.

He added consolidation in the semiconductor industry will continue because there are “opportunities for suppliers that have complementary relationships and there’s always opportunities for scale,” he said.

Many industry analysts and executives agree. They say more consolidation in the industry is likely although the rate of mergers and acquisitions won’t be nearly as high as it was in 2015.



“If you have something that you can source from two suppliers, I think you are in a good position,” said David Zullo, director procurement for NCR.

## Top 20 semiconductor company acquisitions in 2015

1	Avago	Broadcom	\$37 billion
2	Western Digital	SanDisk	\$19 billion
3	Intel	Altera	\$16.7 billion
4	NXP	Freescale	\$11.8 billion
5	Dialog	Atmel	\$4.6 billion
6	Microsemi	PMC-Sierra	\$2.5 billion
7	On Semi	Fairchild	\$2.4 billion
8	Hua Capital	OmniVision	\$1.9 billion
9	JAC Capital	NXP RF Power	\$1.8 billion
10	MediaTek	Richtek	\$887 million
11	Microchip	Micrel	\$839 million
12	Mellanox	EZchip	\$811 million
13	Uphill	ISSI	\$731 million
14	Lattice	Silicon Image	\$607 million
15	Diodes	Pericom	\$413 million
16	Microsemi	Vitesse	\$389 million
17	Intel	Lantiq	\$383 million
18	IDT	ZMDI	\$307 million
19	MaxLinear	Entropic Com.	\$297 million
20	Parade Tech.	Cypress touchscreen	\$100 million
	Autoliv	MACOM Auto unit	\$100 million

Source: IC Insights