

# RESEARCH BULLETIN

SEPTEMBER 12, 2017

## The Adversarial Relationship of the DRAM User and Producer Continues

*Over the full market cycle, each side presses its advantage as much as possible.*

Historically, the DRAM market has been the most volatile of the major IC product segments. Figure 1 reinforces that statement by showing that the average selling price (ASP) for DRAM has more than doubled in just one year.

***In fact, the September Update to The McClean Report will discuss IC Insights' forecast that the 2017 price per bit of DRAM will register a greater than 40% jump, its largest annual increase ever!***

### MORE INFORMATION CONTACT

Bill McClean  
 President  
 Phone: +1-480-348-1133  
 Email: bill@icinsights.com

Just one year ago, DRAM buyers took full advantage of the oversupply (excess capacity) portion of the cycle and negotiated the lowest price possible with the DRAM manufacturers, regardless of whether the DRAM suppliers lost money on the deal. Now, with tight capacity in the market, DRAM suppliers are getting their "payback" and charging whatever the market will bear, regardless of whether the price increases hurt the users' electronic system sales or causes it to lose money.

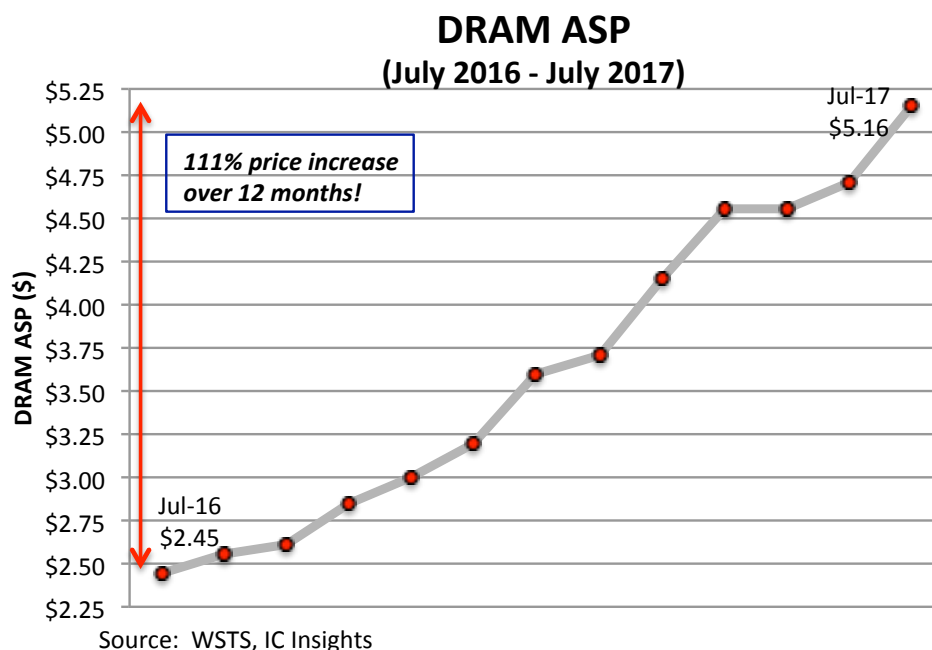


Figure 1

The three remaining major DRAM suppliers—Samsung, SK Hynix, and Micron—are each currently enjoying record profits from their memory sales. For example, Micron reported net income of \$1.65 billion on \$5.57 billion in sales—a 30% profit margin—in its fiscal 3Q17 (ending in May 2017). In contrast, the company *lost* \$170 million in its fiscal 4Q16 (ending August 2016). A similar turnaround has occurred at SK Hynix. In 2Q17, SK Hynix had a net profit of \$2.19 billion on sales of \$5.94 billion—a 37% profit margin. In contrast, SK Hynix had a net profit of only \$246 million on \$3.39 billion in sales one year ago in 2Q16.

Previously, when DRAM capacity was tight and suppliers were enjoying record profits, one or more suppliers eventually would break rank and begin adding additional DRAM capacity to capture additional sales and marketshare. At that time, there were six, eight, or a dozen DRAM suppliers. If the supplier was equipping an existing fab shell, new capacity could be brought on-line relatively quickly (i.e., six months). A greenfield wafer fab—one constructed on a new site—took about two years to reach high-volume production. Will the same situation play out with only three DRAM suppliers left to serve the market?

Recently, Micron stated that it does not intend to add DRAM wafer capacity in the foreseeable future. Instead, it will attempt to increase its DRAM output by reducing feature size that, in turn, reduces die size. Eventually, as the company moves down the learning curve, it will be able to ship an increasing number of good die per wafer. However, SK Hynix, in its 2Q17 financial analyst conference call, stated that it plans to begin adding DRAM wafer capacity since it is not able to meet increasing demand by technology advancements alone. Samsung has been less forthcoming in its plans for future DRAM production capacity.

Although Samsung and Micron may tolerate SK Hynix's DRAM expansion efforts for a short while, IC Insights believes that both companies will eventually step up and add DRAM wafer start capacity to protect their marketshare—and DRAM ASPs will begin to fall. As the old saying goes, it only takes two companies to engage in a price war—and there are still three major DRAM suppliers left.

### **Report Details: *The 2017 McClean Report***

Details on the DRAM market and other trends within the IC industry are provided in *The McClean Report—A Complete Analysis and Forecast of the Integrated Circuit Industry* (released in January 2017). A subscription to *The McClean Report* includes **free** monthly updates from March through November (including the *Mid-Year Update*), and **free** access to subscriber-only webinars throughout the year. 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.

To review additional information about IC Insights' new and existing market research products and services please visit our website: [www.icinsights.com](http://www.icinsights.com)

#### **About IC Insights**

IC Insights, Inc., based in Scottsdale, Arizona USA, is dedicated to providing high-quality, cost-effective market research for the semiconductor industry. Founded in 1997, IC Insights offers coverage of global economic trends, the semiconductor market forecast, capital spending and fab capacity trends, product market details, and technology trends, as well as complete IC company profiles and evaluations of end-use applications driving demand for ICs.

**Web Site:** [www.icinsights.com](http://www.icinsights.com) • **Phone:** +1-480-348-1133 • **E-mail:** [info@icinsights.com](mailto:info@icinsights.com)