

## Elpida Files for Bankruptcy



# OBJECTIVE ANALYSIS SEMICONDUCTOR MARKET RESEARCH



### Japan's Only DRAM Firm Seeks to Reorganize Debt

Japan's Elpida, the nation's only DRAM maker and the world's third largest, has filed for bankruptcy. According to Bloomberg this is the largest bankruptcy in Japan since the filing of Japan Airlines (JAL) two years ago.

The filing says that the company has debts of ¥448 billion (about \$5.6 billion) after having lost money for the past five quarters.

#### Background

Elpida was formed by the merger of the DRAM businesses of the major Japanese DRAM makers: NEC, Hitachi, and later Mitsubishi. In the 1980s Japan ruled the DRAM market - NEC rose to become the world's largest semiconductor manufacturer based on its DRAM strength before Intel took that distinction from the company in 1992.

Elpida, while strong technically, has suffered because of the 2011 DRAM price collapse and Japan's strong yen. An export driven economy has to keep its currency undervalued to remain competitive in the world economy. The success of the Japanese economy raised the value of the yen. Elpida has good technology, but is simply unable to compete in an oversupplied world market using prices that are yen-based.

Since Elpida is Japan's only DRAM manufacturer many industry watchers and participants expected Japan's government to keep the company afloat out of national pride. This seems not to be the case.

#### What Happens Next?

Over the life of the DRAM industry companies that have exited the business have remained in production under a different organization. In some cases, like Elpida's predecessors, smaller firms have banded together to create a larger firm. In other cases one company acquires the DRAM business of other firms. This has largely been the case with Micron Technology, who took over the DRAM businesses of Texas Instruments and Toshiba, and Qimonda's interest in Inotera.

Certain companies exit the business by converting DRAM capacity to manufacture other products. Intel, National Semiconductor, Fujitsu, STMicroelectronics, Motorola, and many others have taken this route. These were all companies that had a large enough semiconductor business outside of DRAM that they could effectively execute such a plan. Even companies that are strong in both NAND and DRAM can convert DRAM capacity to NAND flash

relatively inexpensively. Elpida does not have this luxury.

There has only been one case in which a DRAM manufacturer has been liquidated - that was Qimonda in 2009.

Of the remaining DRAM manufacturers, Micron is the only one that is likely to take over other companies' DRAM businesses. Hynix and Samsung build all their own capacity themselves. The Taiwanese players are in a position similar to Elpida's, so they are unable to acquire the firm. In fact, it would not be surprising to hear of other consolidation or similar drastic actions occurring shortly in Taiwan's biggest three DRAM makers: Nanya, Powerchip, and ProMOS. In fact, Elpida is today the sole outlet for Powerchip's DRAM wafers, which account for about half of Powerchip's production, so there is significant cause for concern here.

DRAM makers are all anxious for the market to shift from an oversupply to an undersupply, but the high level of capital spending in 2010 indicates that a supply/demand balance is unlikely to arrive until 2013. Should DRAM growth slow due to the use of NAND caches in PCs (as explained in detail in a recent [Objective Analysis report](#)) a DRAM recovery could be postponed even further.

### **Will Prices Stabilize?**

Some industry watchers theorize that prices will stabilize either by Elpida being immediately taken offline or through the market becoming an oligopoly. We find neither of these to be likely.

Elpida will stay in business as various options are decided. The purpose of the bankruptcy is to shield the company from actions its creditors could legally take to seize assets. The intent is to continue to operate. This means that there will be no change to the current oversupply until a decision has been made.

It is also unlikely that an Elpida exit from the market would create an oligopoly leading to stable prices stemming from a lack of competition. DRAM is still an undifferentiated product in which capital costs dominate the cost structure, so oversupplies will result in a price collapse as long as there are two or more vendors.

In short, this move is unlikely to impact DRAM prices over the near term, as Elpida sorts out its future and the market remains oversupplied.

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