



# OBJECTIVE ANALYSIS

## Semiconductor Market Research

### OBJECTIVE ANALYSIS ALERT!

February 3, 2009

#### SPANSION PRESIDENT RESIGNS

On February 2<sup>nd</sup> Spansion announced “changes to the executive management team.” These changes consisted of the resignation of current president and CEO Bertrand Cambou, and the appointment of Boaz Eitan, former president of Saifun, to the post of interim president.

This is quite a shake-up for the world’s leading NOR maker, who has been taking significant share over the past year from their leading competitor.

Typically the company reports fourth quarter and annual results by the end of January. As far as we know the 2008 fourth quarter earnings call has not been scheduled.

A release Spansion issued two weeks ago, on January 15, contained some words whose ominous meaning at first escaped us, and thus didn’t trigger the issuing of an Alert: “Spansion has decided to delay making the interest payment on its outstanding 11.25% Senior Notes due 2016, which is due January 15, 2009. Under the indenture governing the 11.25% Notes, a failure to make an interest payment is subject to a 30-day cure period.” We found later that if Spansion could not pay these notes by the end of the cure period the company would be forced to file for bankruptcy. Today we are halfway through the cure period.

#### ***What is Likely to Happen from Here?***

Should the company be forced into bankruptcy several alternatives are available, the best of which will be chosen by the bankruptcy arbitrator. One would simply be for the company’s debt to be restructured and business would continue as before. The most dramatic opposite stance would be for the company to be liquidated – all the employees would be furloughed and assets would be sold off. We see neither of these as likely.

This is good news for the company’s customers, who, in a liquidation, would be forced to redesign several products to use competitors’ parts.

Spansion has world-class manufacturing capacity in Aizu-Wakamatsu Japan and Austin, Texas. These are unlikely to appeal as intact fabs to anyone who is not involved in the NOR business. The company has key charge-trapping intellectual property that is likely to be needed by all flash makers, both NAND and NOR, at 25nm and tighter processes. Spansion has a skilled and very productive workforce. Finally, they have a large customer base with significant and important design wins.

Although an argument can be made for the sale of Spansion's manufacturing capacity since it consists of hard assets, Objective Analysis believes that the asset that is most likely to be sold to the company's advantage would be their intellectual property. It is quite possible that some licensing agreement will gather Spansion enough cash to see the company through its current difficulties, however any purchaser would be a visionary with the patience to wait a year or two before seeing any revenue stream.

### ***Vision for Future Harmed by NAND Glut***

Under Cambou's guidance Spansion has focused significant attention on the future. As the leading supplier to a stagnant market, Spansion has been trying to blaze new trails for their NOR technology, developing ORNAND, a cross between NOR and NAND flash, and focusing on using MirrorBit flash as a power-saving replacement for DRAM in servers. It's too early to tell whether this last will be accepted – that process is likely to take another two years or more since the approach is revolutionary and acceptance will be slow. ORNAND could have done very well in a typical NAND market, one where NAND makers dropped their lower-density product in pursuit of sales of more profitable high-density devices. The trouble is, there's such a huge NAND glut today that all NAND makers are taking orders for low density parts that they would have otherwise abandoned. It's better to sell an unprofitable part than to leave their fabs idle.

This is not the only way that the NAND market's glut has harmed Spansion. Major NOR makers profit by selling their highest-density parts. These parts are under extreme price pressure since their key market is camera phones, and these designs can be worked to either use a large NOR, or the combination of a small NOR plus a large NAND. Some designs are even converting to NAND alone. Unless the NOR is sold at a very low price, today's cheap NAND is likely to capture the bulk of the design's flash revenues.

### ***NOR Will Change Over the Long Term***

Objective Analysis expects to see some very dramatic changes the NOR market over the long term. If Spansion's visions for the future fail to become significant market drivers NOR could lose many of its high density markets to NAND/NOR combinations or NAND-alone designs. NOR would then take on the role of the low-density chip sold at a low price point. Once this happened, then density increases would slow and a growing number of devices would become pad limited when migrated to more advanced processes. This would drive the market toward serial, rather than parallel, NOR chips.

Anyone who has been in the memory business for more than 20 years will notice that this is exactly the same process EEPROM followed.

Today's NAND oversupply has accelerated difficulties that were already in store for NOR. This is a very difficult time for all NOR companies, and especially for Spansion.

Our best wishes go to Dr. Cambou and all the Spanision employees during this time of great uncertainty.

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