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Demand Concerns Threaten a Flash Fizzle

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With Apple (AAPL:Nasdaq) iPod's white earphones such a common sight on city streets, there's no doubt that flash memory is hot.

Consumers can't seem to get enough, as they increasingly turn to digital gadgets such as MP3 players, cameras and cell phones.

But as strong as this demand is, it may not be enough to soak up all the flash memory chips coming to market. After the recent announcement by a few companies that they would aggressively cut prices, some investors are wondering whether the flash market's stellar growth is set to slow down.

The latest sales figures from the big flash-makers hardly suggest waning demand. Hynix Semiconductor reported that its fourth-quarter profit quadrupled thanks to flash chip sales, and SanDisk (SNDK:Nasdaq) saw a 37% year-over-year jump in its fourth-quarter sales.

In commodity markets, today's demand can quickly become tomorrow's supply glut. And flash memory, despite its attractive profit margins, is at heart a commodity business.

In fact, many of the big flash memory makers are also major producers of DRAM memory -- the textbook semiconductor commodity known for its wild price swings and volatility. DRAM prices are just now beginning to recover from a steep decline caused by overcapacity of the chips.

"You've got the same players in DRAM as in NAND [flash] , and they're playing by the same set of rules," says Semico Research analyst Jim Handy.

In a conference call after the release of its earnings report Thursday, SanDisk CEO Eli Harari detailed the company's plan to sharply cut flash prices in the current quarter.

According to Harari, the idea is to stoke demand for higher-capacity flash chips that store gigabytes, rather than megabytes, of data. But he said that failure to stimulate demand for the higher-end products could cause problems.

"This move is to really stimulate new demand for all suppliers, so that the new capacity coming on board does not become excess capacity," said Harari.

There is plenty of new manufacturing capacity in the pipeline. According to industry research firm iSupply, Samsung, the world's largest flash-maker, began producing flash chips at one of its few remaining DRAM-only fabs in the third quarter of 2005.

In addition, a new 300mm fab, slated to come online in the second half of this year, is expected to be entirely dedicated to flash production.

Hynix, the No. 2 player in flash, is expected to transition part of its DRAM fab to flash production this year. Moreover, IM Flash, the new joint venture between Intel (INTC:Nasdaq) and Micron Technology (MU:NYSE) , is expected to aggressively ramp up NAND flash production in the second half of the year.

The move has raised flags among some industry watchers.

"We are taking a more bearish view on the NAND environment in C07, given a likely steep ramp of capacity from IMFT (Intel-Micron), and Hynix (which is spending \$3.6 billion in CapEx in C06)," wrote Deutsche Bank analyst Ben Lynch in a note to investors lowering his earnings estimates on SanDisk.

Deutsche Bank or an affiliate owns 1% of more of SanDisk shares and holds a trading position in SanDisk.

Though Lynch is bullish on the medium- and long-term outlook for the NAND flash segment, "the market is too focused on this secular outlook, and not the commodity aspects of NAND flash," he writes.

Chipmakers have become much more disciplined in recent years when it comes to adding manufacturing capacity. But with flash memory market boasting the highest growth rates in the semiconductor industry -- flash sales were up 79% year over year in October, according to the Semiconductor Industry Association vs. an 8% decline for microprocessors -- the temptation to cash in may prove hard to resist.

"So far demand has been growing faster than people can throw capacity at it," says Semico's Handy. But he acknowledges that there is a risk that could change.

Wielding the price ax is a practice that has served flash memory makers well thus far, allowing flash sales to continue growing at a phenomenal rate.

The goal of the price cuts is not just to get consumers to buy more flash, says Handy, but to entice them to use flash for different applications -- much as people now rely on USB flash drives rather than floppy discs to back up their computer files.

"By lowering the price, they're causing new markets to happen," says Handy.

While flash has already gained acceptance in digital cameras, cell phones and MP3 players, there is potential for flash to make strides as an alternative to rewriteable compact discs, as well as to gain a foothold within notebook PCs, say analysts.

So long as flash memory can find new markets to invade, consumers may continue to find ways to use all the chips being produced.

But once the field of opportunity runs dry, flash-makers' luck may run out.
