What the Smartphone Giveth, the PC Taketh Away

Not All Boats Catching the Tide, Stock-picking Remains Critical

Semiconductor industry business conditions have entered a cyclical and seasonal trough and visibility to a recovery is impaired. At the same time the rally in chip sector equities since the beginning of the year has stalled and the group is now underperforming in equity markets that have reached nominal new highs amid a plethora of potential economic and political risks. This combination turns me bearish at the macro level, although a mix-master of business conditions within the group continues to offer attractive investment opportunities—albeit on a very selective basis. Let's designate it an environment calling for 'extreme stock picking.'

Lackluster March: March is seasonally a fairly healthy month, but this year it underperformed. Semiconductor industry statistics for world-wide sales released by the Semiconductor Industry Association (SIA) reflected a three-month rolling average gain of +1.1% compared to average growth of +2.6% over the last 23 years with a high of +7.0%, a low of -6.9%, and declines only three times across those two decades—none of which occurred during the last 11 years. Europe led for the third month with a gain of +5.7% followed by Asia-Pacific at +1.7%, Japan down by -1.6%, and The Americas bringing up the rear again with a decline of -1.9%.

Next month's release of April data is usually pretty anemic as a new quarter begins. It has averaged a gain of +1.4% with a high of +7.6%, a low of -4.7%, and has declined only eight times in the last 23 years, although five of those declines occurred over the last eight years.

Weak 1Q, as Expected: 1Q declined sequentially by a fairly weak -5%—almost exactly consistent with guidance from companies in the Tokeneke Universe going into the period. Industry statistics reported a decline of -5.1% with Europe up by +8.3% followed by declines from Asia-Pacific at -3.8%, The Americas at -11.3%, and Japan a -12.1%. The first quarter even underperformed to its typical weakness that has averaged a decline of -1.9% with a high of +8.8%, a low of -19.4%, and has only been positive during nine of the last 22 years including only twice in the last eight years. Weighted revenue guidance from companies in the Tokeneke Universe during the 4Q earnings season originally called for a below-average decline of -5.2% with a range of -8.0% to -2.4% and the trickle of preannouncements and updates barely moved the needle.

2Q is typically a growth period as consumer market seasonal strength offsets the PC market trough. It has averaged a gain of +3.8% with a high of +20.0%, a low of -19.9%, and has declined only five times in the last 23 years, although three of those declines occurred over the last eight years. Tokeneke Universe guidance from 1Q earnings calls for a near-average gain of +4.3% with a range of +1.4% to +7.2%. Market researchers continue to forecast mid-single-digit sales growth for the chip industry this year with strength expected from smartphones, tablets and automotive markets while PCs remain weak.

Chip Sector Retreats: Semiconductor sector stocks largely retreated during April after healthy gains during the first quarter as I had feared, although the SOX managed an incremental gain consistent with broader equity markets.

The Philadelphia Semiconductor Index Option (SOX) gained +1.8% last month—that much is good. Unfortunately, the average stock in the Tokeneke Universe declined by -1.9% and only 37 out of 101 of those issues posted gains. Why the inconsistency? Aside from the semiconductor capital equipment issues that make up nine of the 30 equities behind the SOX index, it is more heavily weighted to highly liquid large cap issues that offer dividends compared to my Universe. Only about one-quarter of the Tokeneke Universe offers dividends, while about half of the SOX do.

The April gain of the SOX at +1.8% was consistent with broader equity market performance with the NASDAQ, S&P500 and DOW posting gains of +1.9%, +1.8%, and +1.8%, respectively. Year-to-date the gains improved for the SOX which is now up by +15.7% compared to those same three indices with gains of +10.2%, +12.0% and +13.3%, respectively. However, this SOX advantage is not shared by my Universe. The average stock in the Tokeneke Universe is up by +7.8% so far this year with only 58 out of 101 posting gains, which is clearly underperforming to the broader equity market.

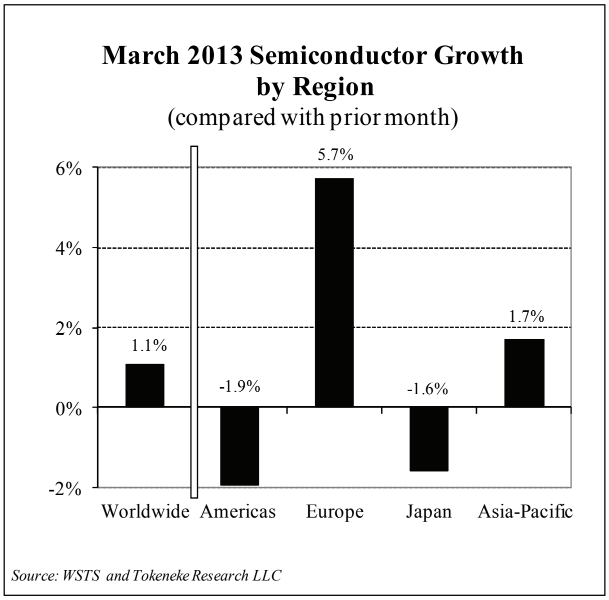
April				YTD				Indices		
Winners *(37/101)*		**Losers**		**Winners** *(58/101)*		**Losers**			***Apr***	***YTD***
MEMS	49.6%	MSPD	-31.0%	SPWR	141.8%	MSPD	-51.1%	SOX	1.8%	15.7%
ACTS	29.1%	NLST	-29.5%	HIMX	129.2%	GIG	-48.7%	SMH	4.3%	14.6%
SMI	24.7%	CAVM	-19.0%	ACTS	105.5%	PSMI	-36.9%	NASDAQ	1.9%	10.2%
RMBS	24.1%	IKAN	-18.5%	MU	48.6%	SQNS	-33.8%	S&P500	1.8%	12.0%
INFN	20.3%	AOSL	-18.5%	MRVL	48.2%	CRUS	-33.3%	DOW	1.8%	13.2%
average stock -1.9%		*SOX +1.8%*		*average stock +7.8%*		*SOX +15.7%*				

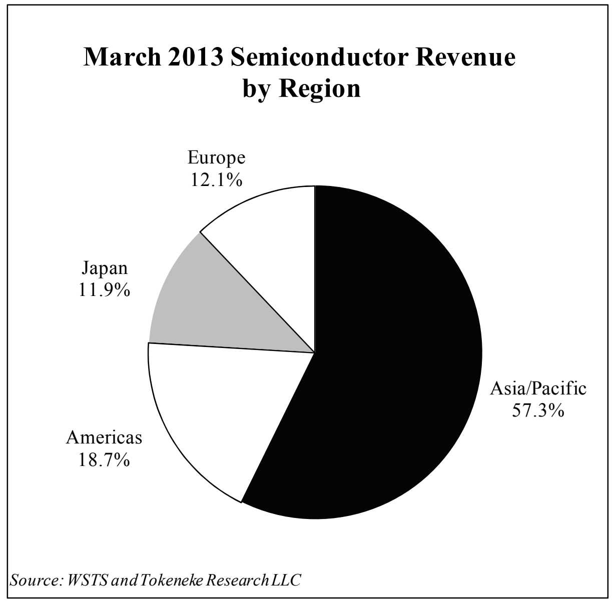
Chip Sector Outlook 'Depends': I continue to have a very difficult time generalizing semiconductor industry business conditions. PCs are weak and entering a seasonal trough, but DRAMs are strong. Smartphones and tablets are strong, but the market is heavily concentrated and not all chip suppliers are benefiting. Consumer markets are entering seasonal strength, but end-markets for video games, TVs, camera and toys are subdued. Wireless infrastructure markets promise strength pending the LTE roll-out, but actual purchase orders are elusive.

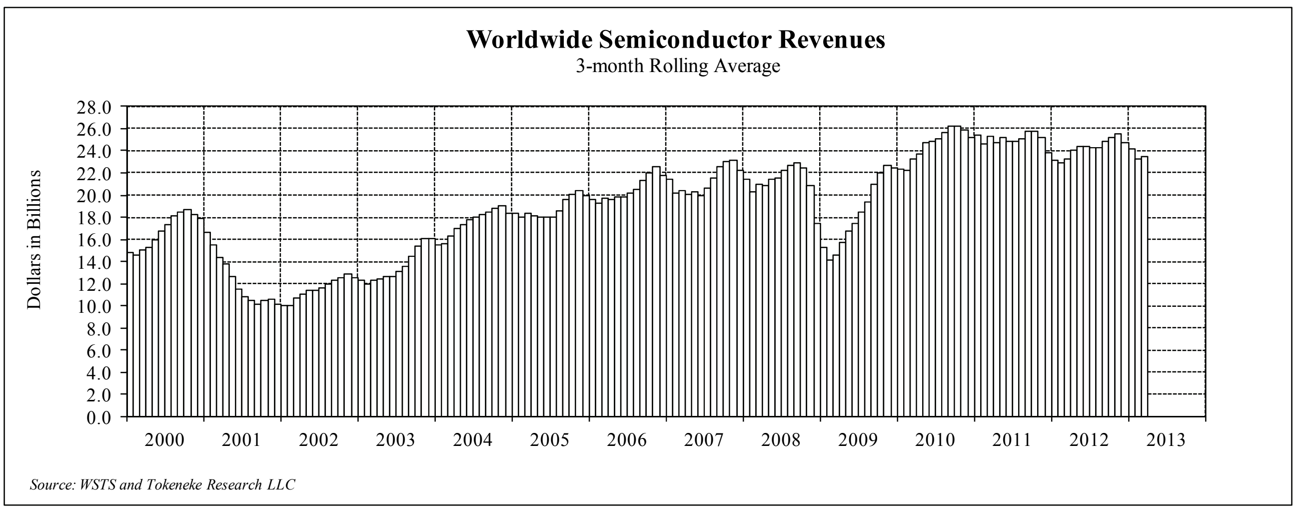
So how do I expect share prices to respond? Well, it depends: it depends on the stock; it depends on the share price valuation; it depends on earnings; it depends on guidance; it depends on investor expectations; it depends on end-market health; and it depends on competitive supply dynamics. So, how to play this mix-master? Pick stocks. Specifically, stocks with favorable business and share price valuation fundamentals.

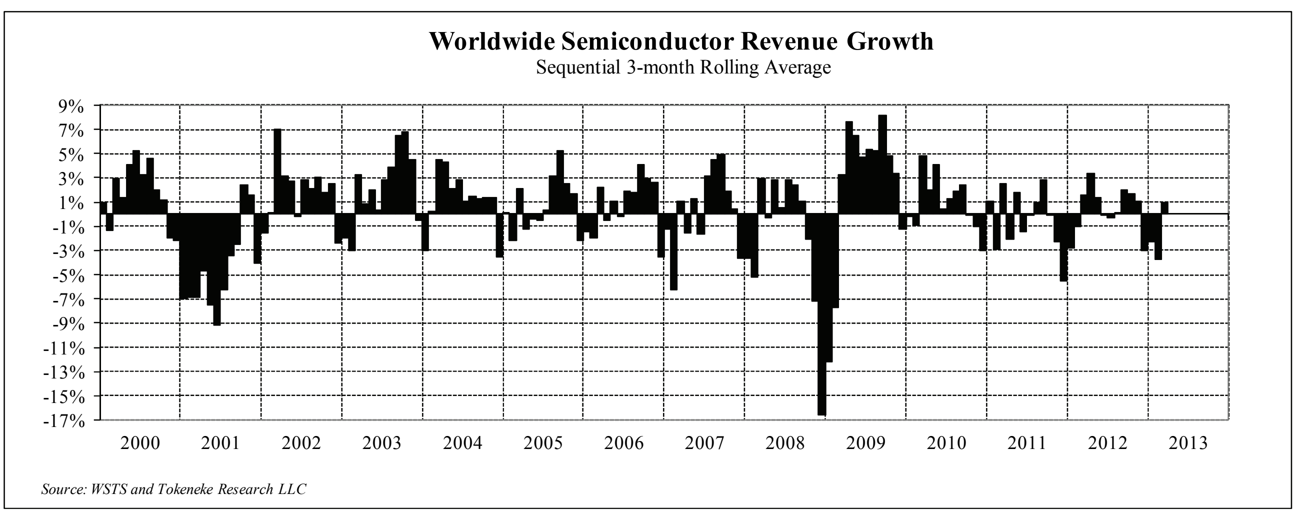
Skew the Odds More Heavily in Your Favor: Semiconductor industry business conditions are weak overall, but pockets of strength exist. While the risk-reward trade-off has shifted unfavorably over the last month, attractive investment opportunities continue to exist in the sector as noted in my latest Chip Investment Ideas publication, in my opinion. I recommend to carefully pick stocks with even more pronounced attractive fundamental valuations to mitigate potential downside risk—but only so much as discomfort will allow for your particular situation.

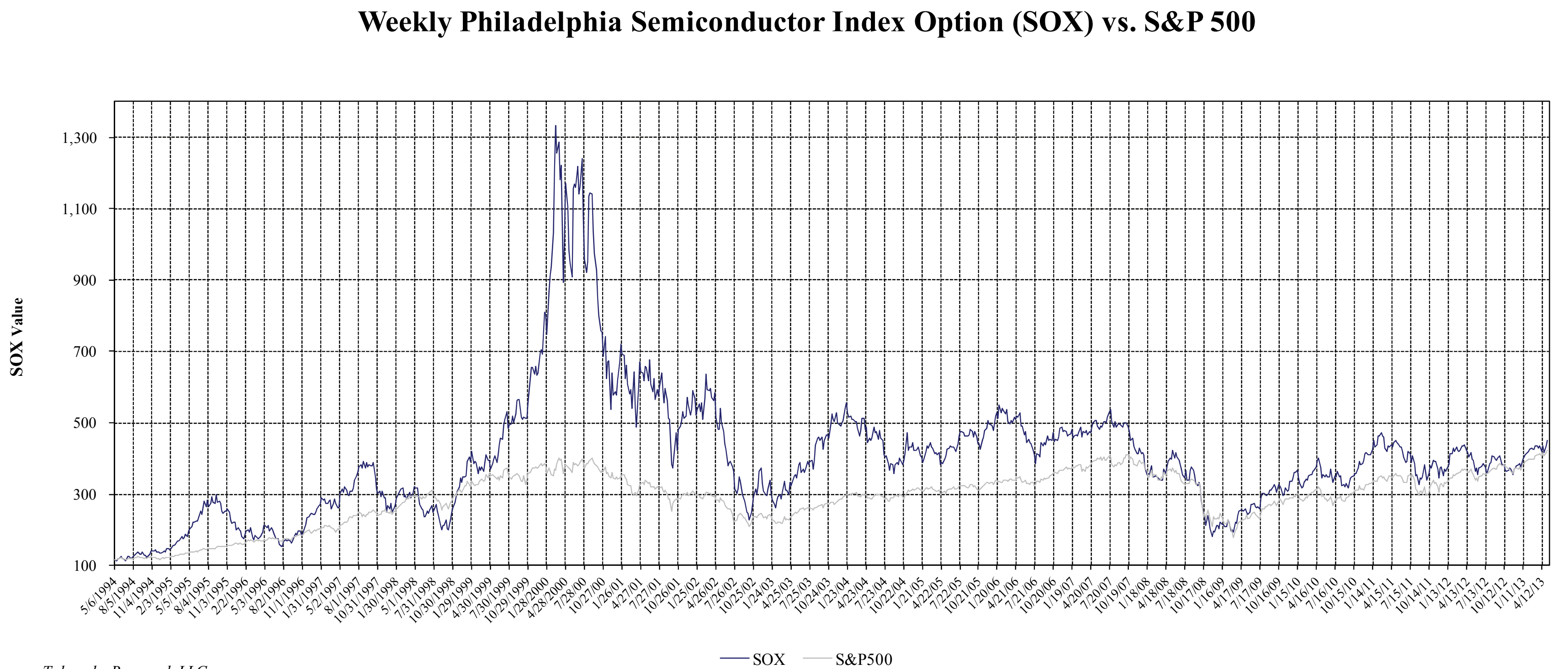
—Dan K. Scovel
Semiconductor Analyst


March 2013 Semiconductor Growth by Region
(compared with prior month)
6%
4%
2%
0%
-2%
1.1%
-1.9%
5.7%
-1.6%
1.7%
Worldwide
Americas
Europe
Japan
Asia-Pacific
Source: WSTS and Tokeneke Research LLC


March 2013 Semiconductor Revenue by Region
Europe 12.1%
Japan 11.9%
Americas 18.7%
Asia/Pacific 57.3%
Source: WSTS and Tokeneke Research LLC

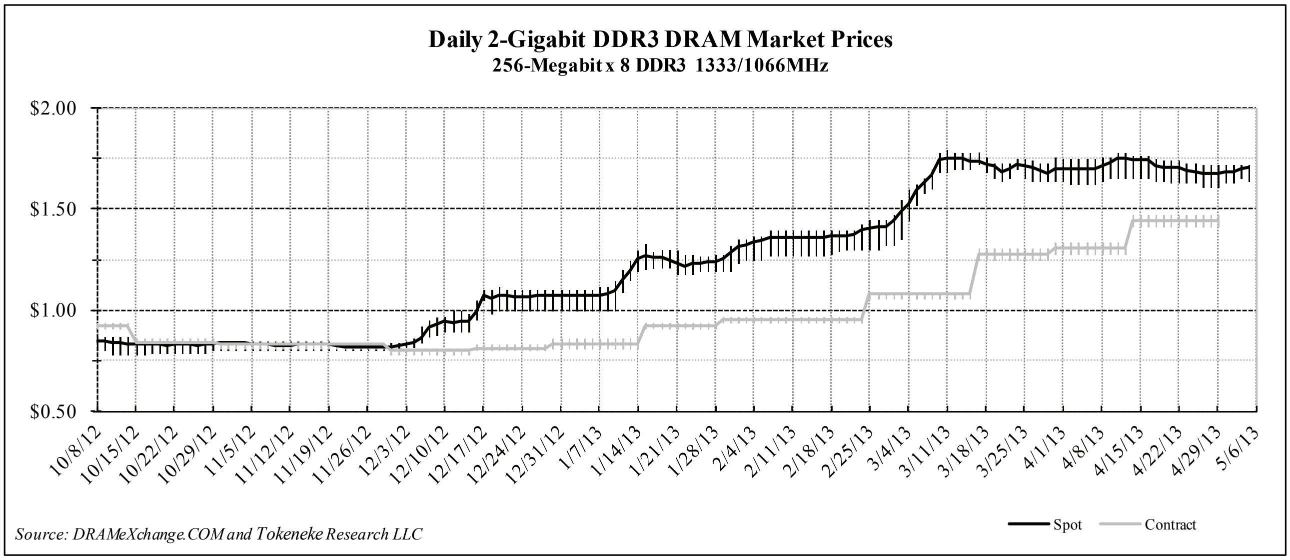

Worldwide Semiconductor Revenues
3-month Rolling Average
Dollars in Billions
28.0
26.0
24.0
22.0
20.0
18.0
16.0
14.0
12.0
10.0
8.0
6.0
4.0
2.0
0.0
2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013
Source: WSTS and Tokeneke Research LLC

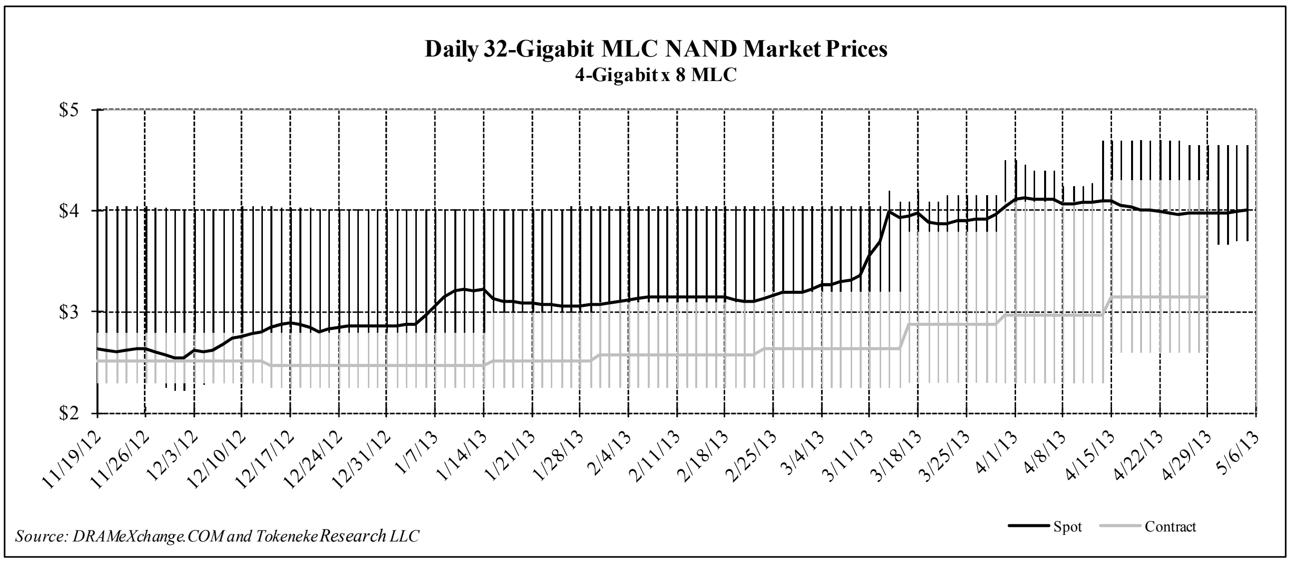

Worldwide Semiconductor Revenue Growth
Sequential 3-month Rolling Average
9%
7%
5%
3%
1%
-1%
-3%
-5%
-7%
-9%
-11%
-13%
-15%
-17%
2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013
Source: WSTS and Tokeneke Research LLC

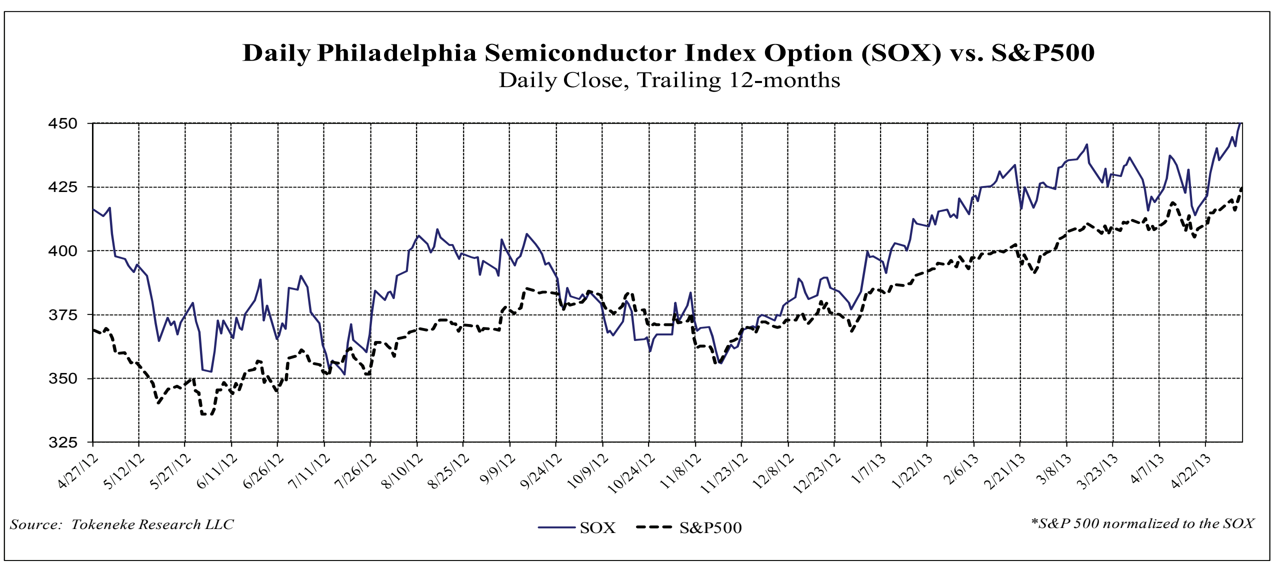


Source: Tokeneke Research LLC

**S&P 500 normalized to the SOX*


Daily 2-Gigabit DDR3 DRAM Market Prices
256-Megabit x 8 DDR3 1333/1066MHz
$2.00
$1.50
$1.00
$0.50
10/8/12
10/15/12
10/22/12
10/29/12
11/5/12
11/12/12
11/19/12
11/26/12
12/3/12
12/10/12
12/17/12
12/24/12
12/31/12
1/7/13
1/14/13
1/21/13
1/28/13
2/4/13
2/11/13
2/18/13
2/25/13
3/4/13
3/11/13
3/18/13
3/25/13
4/1/13
4/8/13
4/15/13
4/22/13
4/29/13
5/6/13
Spot
Contract
Source: DRAMeXchange.COM and Tokeneke Research LLC


Daily 32-Gigabit MLC NAND Market Prices
4-Gigabit x 8 MLC
$5
$4
$3
$2
11/19/12
11/26/12
12/3/12
12/10/12
12/17/12
12/24/12
12/31/12
1/7/13
1/14/13
1/21/13
1/28/13
2/4/13
2/11/13
2/18/13
2/25/13
3/4/13
3/11/13
3/18/13
3/25/13
4/1/13
4/8/13
4/15/13
4/22/13
4/29/13
5/6/13
Spot
Contract
Source: DRAMeXchange.COM and Tokeneke Research LLC


Daily Philadelphia Semiconductor Index Option (SOX) vs. S&P500
Daily Close, Trailing 12-months
450
425
400
375
350
325
4/27/12
5/12/12
5/27/12
6/11/12
6/26/12
7/11/12
7/26/12
8/10/12
8/25/12
9/9/12
9/24/12
10/9/12
10/24/12
11/8/12
11/23/12
12/8/12
12/23/12
1/7/13
1/22/13
2/6/13
2/21/13
3/8/13
3/23/13
4/7/13
4/22/13
Source: Tokeneke Research LLC
SOX
S&P500
*S&P 500 normalized to the SOX

The Company

Tokeneke Research is an independent research firm specializing in semiconductor industry business issues, providing fundamental research focused on US equities across all market capitalizations within the sector to investors. The company was founded in 2005 and is based in Connecticut.

The Offering

- *Monthly Newsletter:* A summarized review of noteworthy industry business developments, sales statistics, and sector equity market performance, as well as a near-term and annual outlook for sector business fundamentals and share prices. This report typically includes two pages of text and a handful of recurring charts and tables. It is intended for relatively broad-based distribution.
- *Industry Reports:* Publications offering insight and perspective to industry-wide, multi-year forecast updates; periodic sub-sector product type and end-market reviews; fundamental and valuation perspectives on sector equity relationships; and industry introductory overview. These are more detailed reports with varying shelf-lives, and are intended for narrow distribution to interested clients.
- *Company Reports:* Fundamental equity research including earnings estimates and customized valuation analysis.
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My Background

I have an electrical engineering background, nearly 12 years of semiconductor industry experience, and was on Wall Street for nearly eight years where I was selected as the Best On The Street semiconductor analyst for 2002 by The Wall Street Journal, and third-rated Best of the Best across all sectors.

I obtained my undergraduate BS degree in electrical engineering from the University of Washington, and my MBA from Santa Clara University. My industry experience consists of nearly 12 years in various technical sales and marketing roles at four different semiconductor firms located in Silicon Valley beginning with Advanced Micro Devices in 1984, followed by two small start-up companies, and ending at Cirrus Logic where I supported the firm's Japanese market development. I joined Fahnestock & Co. as a senior semiconductor analyst in 1996 and was recruited by Needham & Co. in April 2000.

My formal coverage list as a sell-side analyst included the following equities: AMD, ALSC, ALTR, ARTI, ATML, CUBE, CY, ESST, GNSS, INTC, ISSI, LSI, MOSY, MU, OIIM, OVTI, RMTR, SIII, SMSC, STEC, SVTG, TDFX, TSRA, TXN, and ZRAN.

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