In the Middle of a Couple of Flat Years

Downturn Hits Bottom, But the Recovery Profile is Unclear

The bad news is the semiconductor industry is in the midst of a cyclical downturn as industry statistics have confirmed that 4Q11 was the second-worst in terms of its sequential decline in the last 21 years and 4Q11 earnings season announcements have included guidance for a 1Q12 reflecting a decline at a rate twice that of its seasonal norm—both aggravated by the Thai flood disk drive shortage. However, there is good news: the cyclical decline has appears to have bottomed, indicating that 2012 will be a year of steadily improving business conditions; and sector share prices have been rallying on industry and business fundamentals in recent weeks rather than oscillating to macroeconomic and banking crises fears. While investment opportunities persist across the sector, my optimism remains constrained given the devastating impact those bigger picture issues have had on equities in recent years.

Pretty Bad December: Semiconductor industry statistics for December world-wide sales released earlier this month by the SIA (Semiconductor Industry Association) reflected worse-than-seasonal weakness with a decline of -5.5% on a three-month rolling average basis, or more than double its seasonally weak norm. In the last 21 years December has declined an average of -2.5% with a high of +3.3%, a low of -16.6%, and growth only twice during that period. Europe declined the most at -8.2%, followed by Japan with -5.9%, Asia-Pacific at -5.0% and then The Americas with -4.9%.

Weakness Drag's On: Next month's release of January data is unlikely to be much better, in my opinion, as both seasonal and cyclical weakness is further aggravated by an early Chinese New Year of the Dragon. January has averaged a decline of -2.5% with a high of +1.0%, a low of -12.2%, and growth only three times during the last 21 years—rendering it pretty close to December on a statistical basis. The Lunar New Year this year fell on January 23 and pretty much shut down greater-Chinese manufacturing for the whole week. Based on the data in the adjacent table, the absolute performance of January should be inferior to that of February, regardless of however strong or weak either one is. This year I would not be surprised to see a weaker-than-normal decline in January followed by a stronger-than-normal February—that may even eke a gain.

	Chinese	3-mo rolling avg		Annual Rev	
Year	New Year	JAN	FEB	% APAC	Correlate?
1991	15-Feb	-3.19%	-0.62%	15.0%	no
1992	4-Feb	-0.56%	-1.28%	17.7%	yes
1993	23-Jan	-2.42%	0.60%	18.3%	yes
1994	10-Feb	-0.03%	0.35%	18.8%	no
1995	31-Jan	-0.17%	1.91%	20.5%	not really
1996	19-Feb	-2.91%	-3.75%	20.9%	yes
1997	7-Feb	-2.96%	-2.17%	22.0%	not really
1998	28-Jan	-7.30%	-3.93%	24.9%	sort of
1999	16-Feb	-1.81%	-1.79%	24.9%	not really
2000	5-Feb	0.91%	-1.31%	21.7%	yes
2001	24-Jan	-7.02%	-6.90%	28.7%	sort of
2002	12-Feb	-1.58%	0.10%	36.4%	no
2003	1-Feb	-1.97%	-2.98%	37.8%	yes
2004	22-Jan	-2.98%	0.23%	41.7%	yes
2005	9-Feb	0.07%	-2.13%	45.4%	yes
2006	29-Jan	-1.49%	-1.94%	47.0%	yes
2007	18-Feb	-1.22%	-6.23%	48.3%	yes
2008	7-Feb	-3.64%	-5.24%	49.9%	yes
2009	26-Jan	-12.19%	-7.67%	52.9%	yes
2010	14-Feb	-0.16%	-0.92%	53.6%	yes
2011	3-Feb	1.02%	-2.92%	54.7%	yes
2012	23-Jan				
	Average:	-2.46%	-2.31%		

Bad End to a Flat Year: Last year was whacked by a counter-seasonal cyclical slowdown 4Q, resulting in world-wide industry sales squeaking out a very small gain for the year of +0.4% to $299.5B. According to industry statistics, 4Q declined by -7.7% reflecting the second-worst performance for that period since 1990 where the quarter has averaged a gain of +2.1%, a high of +16.0%, a low of -24.2%, but has fallen into negative territory one-third of the time. Regional weakness was lead by Europe down by -11.3%, followed by Asia-Pacific down by -8.2% and both Japan and The Americas down by -5.4% each. This weakness was also reflected in 4Q earnings announcements by companies in the Tokeneke Universe, albeit not nearly as pronounced, with sales declining by -3.2% on a weighted-revenue basis and by -5.6% on an average company basis.

Slow Start to Another Flat Year: Continuing the drum-beat of depressing news, 1Q12 is also shaping up to be a disappointment as it kicks-off a year of annual sales growth expected to be limited to the low-single digits. First quarter is seasonally pretty weak having averaged a decline of -1.9% with a high of +8.8%, a low of -19.4%, and falling during 12 of the last 21 years. And this year it appears positioned to significantly under-perform to average with management revenue guidance for 1Q offered up during 4Q earnings season centered at -4.5% on a weighted-average sales basis across the Tokeneke Universe, ranging from -7% to -2%. Why? Three reasons: a cyclical trough, seasonal weakness, and a lingering shortage of disk drives from Thai flooding last October.

Hitting Bottom: The 4Q earnings season has largely delivered bad news in terms of 4Q performance and 1Q outlook, although there actually is some good news amid the carnage. First of all are the exceptions to current weakness, including suppliers to Apple iPhones and iPads, and Samsung Android smartphones. And secondly, sales and/or customer orders on a broader basis have stopped declining on a weekly and/or monthly basis, meaning the current cyclical business downtown has bottomed out. While different companies are reporting slightly differing timing and characteristics, it generally appears that orders bottomed in the December/January timeframe and that quarterly sales probably won't be any worse than expected for 1Q for the rest of this year. And while the profile of a recovery is not yet apparent, confidence appears fairly high among industry executives that business conditions have stabilized and are no longer deteriorating. While 2012 is unlikely to reflect much growth on an annual basis, it is likely to progressively improve as the months unfold. Why? Three reasons: the cyclical downturn has bottomed, meaning that lean channel inventories will require replenishment; the disk drive shortage will largely be alleviated by the end of 2Q; and seasonality will turn favorable about the same time.

Stocks Rally: The even better news concerns equity share prices across the sector: stocks finally appear to be trading consistent with business fundamentals rather than the macroeconomic and banking crises news *du jour*; and those stocks have rallied nicely in recent weeks.

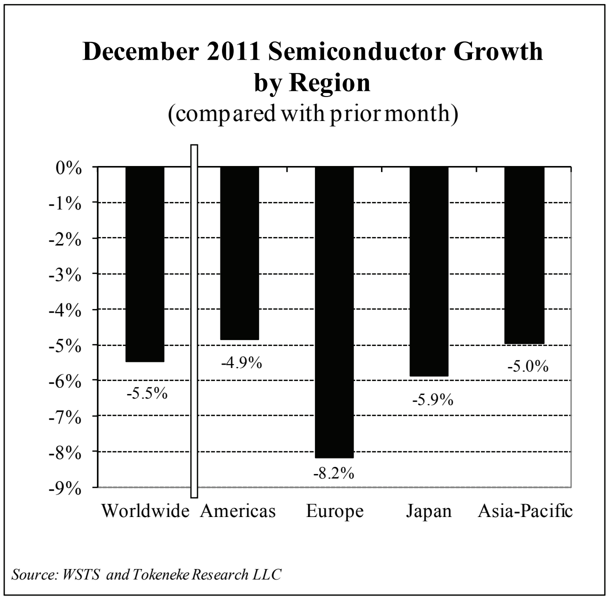
As a fundamental analyst I have been extremely frustrated with equity market gyrations since the banking crises in 2008. Therefore, I have been encouraged with share price action across the sector over the last several weeks that have largely been consistent with business conditions compared to investor expectations. Why did this happen? First of all, tempered investor expectations appear to have intersected with business level expectations that are no longer deteriorating, achieving a balance of sorts. Secondly, macroeconomic and banking crises news has been relatively benign and unsurprising (at least compared to last year). And finally, two extreme examples of fundamental company business success captured the attention of investors: Apple's record earnings and the Facebook IPO application. Suddenly, fundamentals have been thrust back on to center stage.

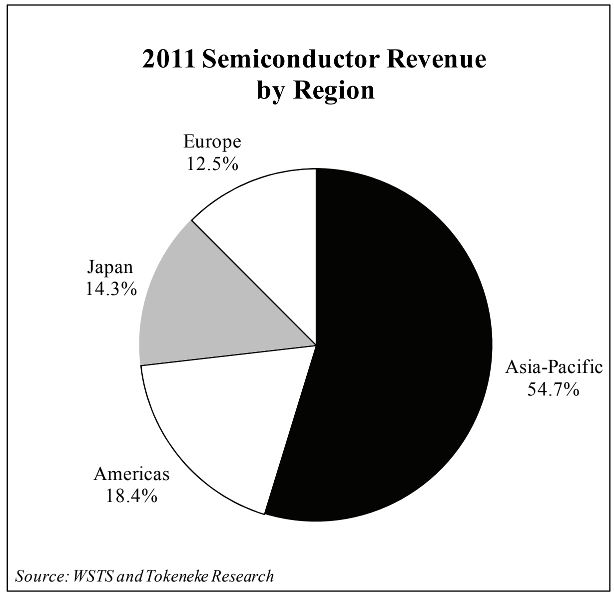
January					Indices	
Winners *(90/102)*		**Losers**				***Jan***
INVN	65.6%	SPRD	-25.9%		SOX	12.2%
MSPD	40.0%	IDCC	-14.4%		SMH	10.2%
HIMX	39.0%	CEVA	-10.7%		NAS	8.0%
NXPI	38.1%	TXCC	-10.6%		S&P500	4.4%
VSH	36.6%	RFMD	-7.6%		DOW	3.4%
average stock +13.0%		*SOX +12.2%*				

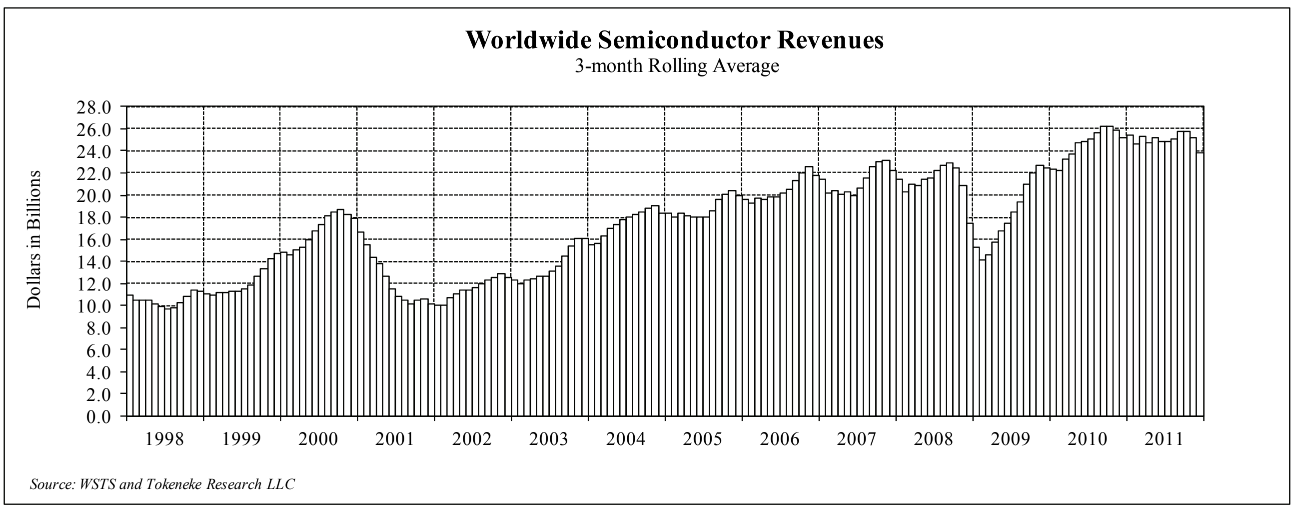
Notice the significant out-performance of chip sector share prices as the 4Q11 earnings season ramped to its peak near the end of January, per the table above. The Semiconductor Index Option (SOX) with growth of +12.2% significantly exceeded the NASDAQ gains of +8.0% and the S&P500 of +4.4%. Also notice the breadth and magnitude of the sector's strength, with nearly 90% of the issues in the Tokeneke Universe posting gains, the average stock gaining even more than the SOX at +13%, and the high-double digit gains of the top five performers.

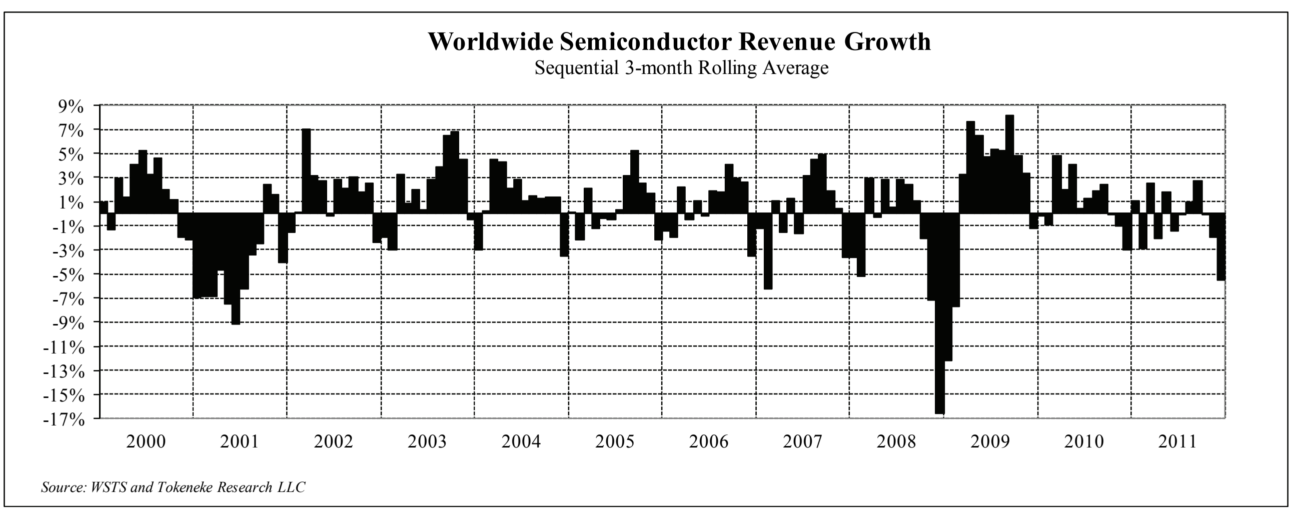
Terrified Optimism: The bad news is that semiconductor industry business conditions suck amid the trough of a cyclical downturn. But the good news is that chip sector business conditions appear to have reached a cyclical bottom and equity market share prices have rallied consistent with business fundamentals and investor expectations. In addition, there are still a number of investment opportunities across the sector as noted in my weekly Chip Investment Ideas publication, although the magnitude and quantity of those potential opportunities have narrowed amid the return of investing fundamentals. Nevertheless, my optimism is significantly constrained by fears that macroeconomic weakness and banking crises fears may once again resurface to the forefront of investor's concerns—especially given the devastating impact those factors have had on equity markets over the last few years.

—Dan K. Scovel
Semiconductor Analyst

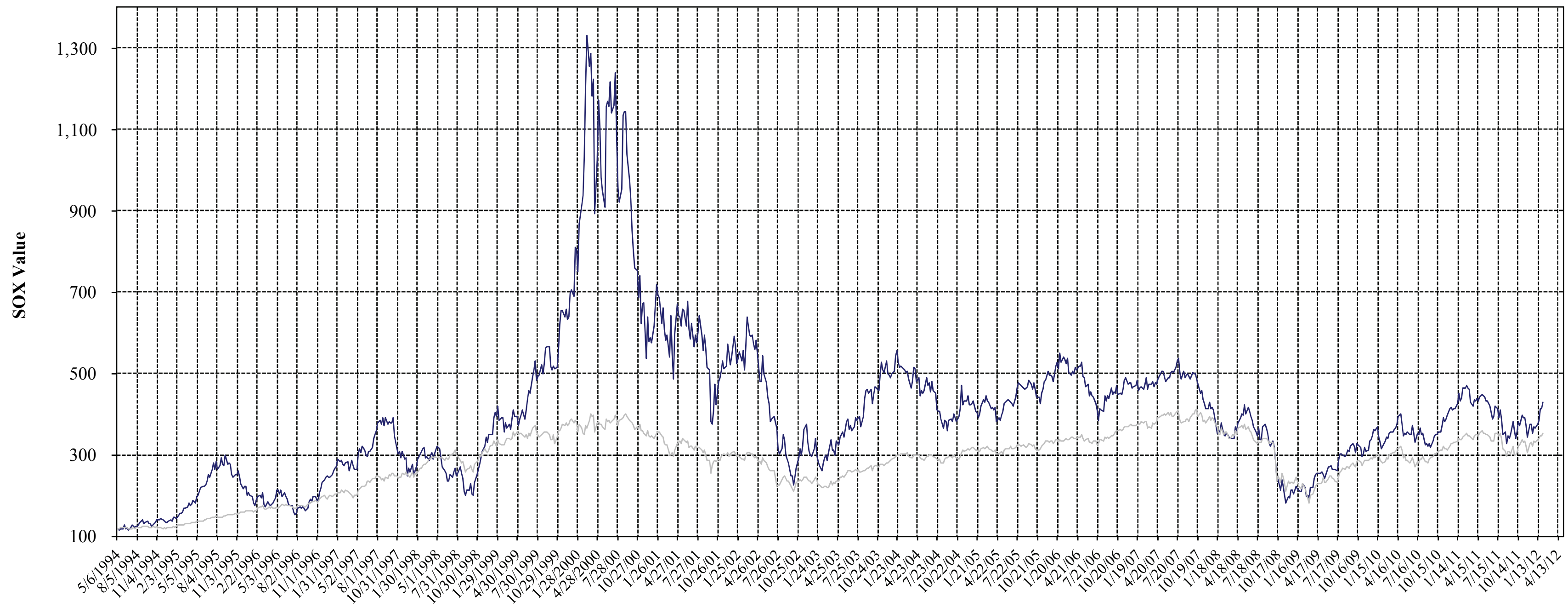

December 2011 Semiconductor Growth by Region
(compared with prior month)
0%
-1%
-2%
-3%
-4%
-5%
-6%
-7%
-8%
-9%
-5.5%
-4.9%
-8.2%
-5.9%
-5.0%
Worldwide
Americas
Europe
Japan
Asia-Pacific
Source: WSTS and Tokeneke Research LLC


2011 Semiconductor Revenue by Region
Europe 12.5%
Japan 14.3%
Asia-Pacific 54.7%
Americas 18.4%
Source: WSTS and Tokeneke Research

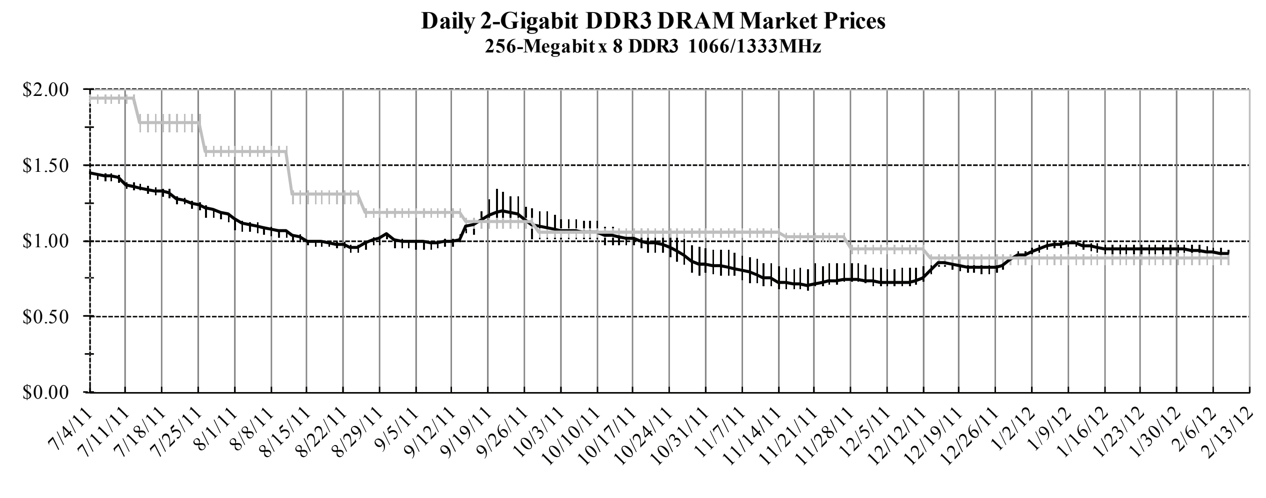

Worldwide Semiconductor Revenues
3-month Rolling Average
Dollars in Billions
28.0
26.0
24.0
22.0
20.0
18.0
16.0
14.0
12.0
10.0
8.0
6.0
4.0
2.0
0.0
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
Source: WSTS and Tokeneke Research LLC


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
Source: WSTS and Tokeneke Research LLC

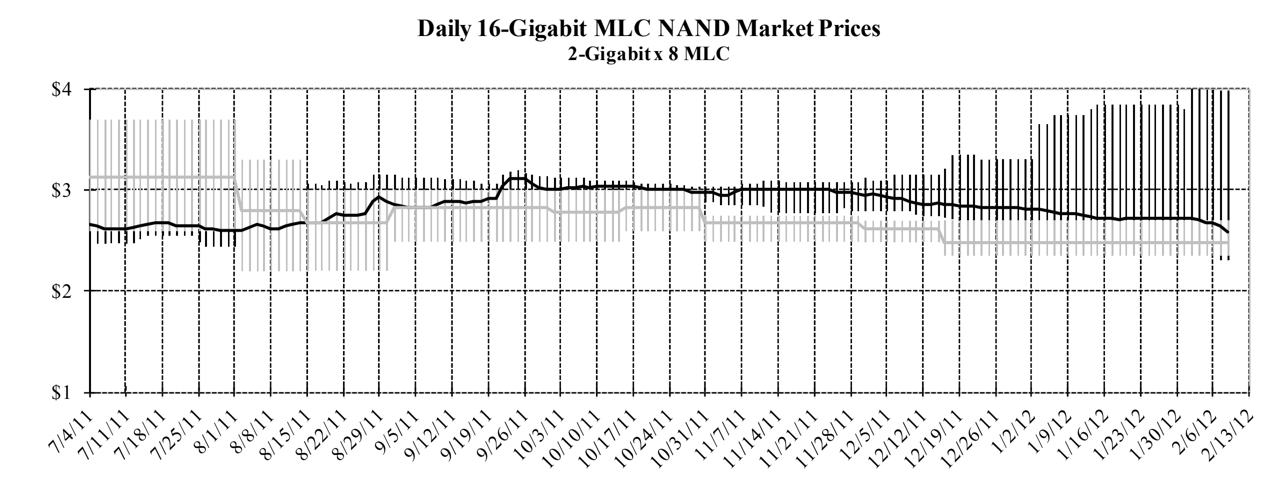
Weekly Philadelphia Semiconductor Index Option (SOX) vs. S&P 500



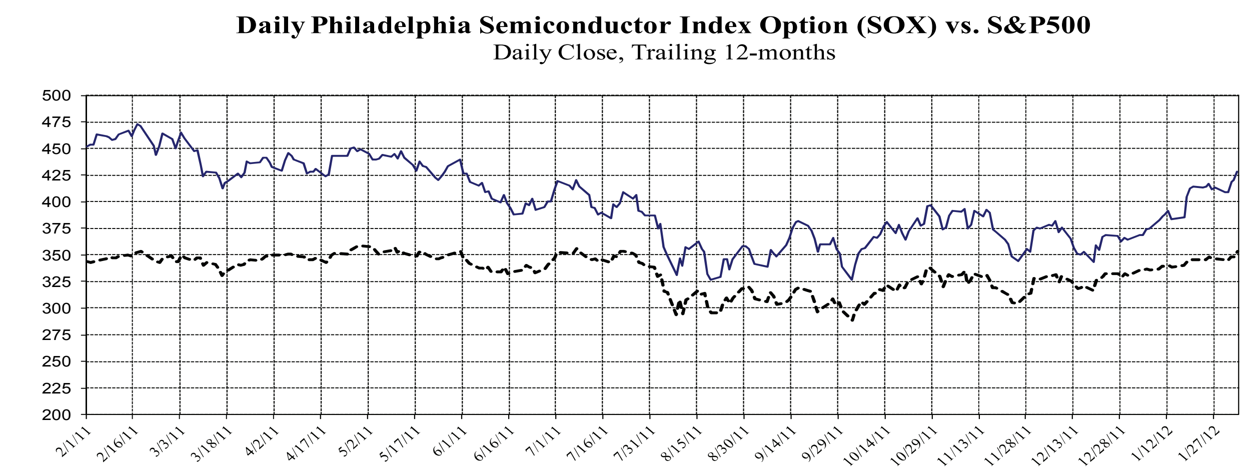
Source: Tokeneke Research LLC — SOX — S&P500 **S&P 500 normalized to the SOX*



Source: DRAMeXchange.COM and Tokeneke Research LLC



Source: DRAMeXchange.COM and Tokeneke Research LLC



Source: Tokeneke Research LLC

**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.
- *Consulting:* Special projects of limited or extended duration, as well as periodic access of varying frequency.

Publications are distributed via email in .pdf format, unless otherwise requested. Client confidentiality and customized research exclusivity accommodated. Rates vary with the nature, duration, and terms of offerings.

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.

—Dan K. Scovel
Semiconductor Analyst

Tokeneke Research LLC
Rowayton, CT 06853
203-554-4621
dscovel@tokenekeresearch.com
www.tokenekeresearch.com