

**Seasonality Lacks Recovery Upside in Fragile Economy**  
**3Q Guidance May Not Support 2H Growth Expectations, Risk is to the Downside**

Overall semiconductor industry business conditions are expanding within the range of historical seasonal norms. However, the industry does not seem to be getting any kind of meaningful boost from a cyclical recovery or overall macroeconomic conditions that I would describe as ‘fragile.’ And against this backdrop, the sector has enjoyed a nice rally and outperformed broader equity markets so far this year—although variance within the sector appears to be increasing. So how should investors participate in such an environment? Pick stocks. Specifically, stocks with both favorable business situations and share price valuation fundamentals, in my opinion.

**Robust May:** May was unusually strong this year. Chip industry statistics for world-wide sales released by the Semiconductor Industry Association (SIA) earlier this month reflected a three-month rolling average gain of +4.6% compared to average growth of +1.4% over the last 23 years with a high of +6.5%, a low of -7.5%, and declines five times across those two decades—but only once in the last 11 years. Asia-Pacific led with growth of +5.9% followed by a similarly strong Americas at +5.6%. Japan and Europe lagged with growth of +0.8% and +0.3%, respectively.

Next month’s release of June data is usually much weaker than May. It has averaged a gain of +0.4% with a high of +5.3%, a low of -9.2%, and has declined 11 times in the last 23 years—including five of the last eight.

**Average 2Q Growth:** The 2Q13 earnings season begins this week in earnest, and I expect reported results to largely meet and/or somewhat exceed expectations for seasonally average growth. 2Q is typically a growth period as consumer market seasonal strength offsets a 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 called for a near-average gain of +4.3% with a range of +1.4% to +7.2%, and the limited number of preannouncements to-date have maintained the mid-point but narrowed the range to +1.6% to +7.0%. The good news is that the chip industry is growing consistent with seasonal norms after its recent downturn. Unfortunately, the subsequent rebound appears to be missing.

Preannouncements for 2Q have been limited in quantity and magnitude and off-setting in terms of total sales. Nevertheless, a short handful of companies have significantly raised guidance due to Chinese smartphone strength (SPRD and MediaTek) as well as broader industrial health (POWI and MCHP, to a lesser degree).

**2Q13 Preannouncement Scorecard**  
*management guidance revisions*

| Ticker                     | Revenue Growth |             | 1Q Sales<br>(\$ mil) | Comments                                                     |
|----------------------------|----------------|-------------|----------------------|--------------------------------------------------------------|
|                            | Updated        | Previous    |                      |                                                              |
| <b>Raised</b>              |                |             |                      |                                                              |
| IDCC                       | +43+44%        | no guidance | 47.4                 | trimmed the high-end revision on shift to 'other income'     |
| MCHP                       | +4+7%          | +2+6%       | 430.1                | broad-based strength                                         |
| MediaTek                   | +38.8%         | +25+32%     | 804.0                | only the number reported, assumes constant currency          |
| POWI                       | +13+14%        | +3+10%      | 77.0                 | broad-based strength                                         |
| SPRD                       | +43+47%        | +16+21%     | 189.0                | low-cost smartphone strength in China and emerging markets   |
| UMC                        | +14.8          | +12+14%     | 941.0                | only the number reported, assumes constant currency          |
| <b>Lowered</b>             |                |             |                      |                                                              |
| CODE                       | +2+4%          | +6+16%      | 189.6                | market softness, particularly in Japan                       |
| SIMO                       | flat           | +5+10%      | 57.4                 | controller demand strong, but NAND shortage to module makers |
| SPWR                       | -15-7%         | no guidance | 635.4                | annual growth, quarter weakness, analyst day presentation    |
| <b>Narrowed/Reiterated</b> |                |             |                      |                                                              |
| DIOD                       | +19+23%        | +16+23%     | 177.0                | no specifics, both estimates include BCD acquisition         |
| ENTR                       | -6%            | -6-2%       | 74.5                 | announced with 10% layoff restructuring plan                 |
| QLGC                       | -6-1%          | -6-1%       | 116.9                | announced with restructuring amid interim CEO                |
| RMBS                       | -16-13%        | -21-13%     | 66.9                 | fine-tuning after Hynix and STMicro license agreements       |
| TSM                        | +15.9%         | +15+16%     | 4,509.0              | only the number reported, assumes forecasted currency        |
| TXN                        | +4+8%          | +2+10%      | 2,885.0              | ind/auto/comm strength, consumer/PC/legacy wireless weakness |

**3Q Fears:** While I am largely comfortable that the vast majority of chip companies are likely to meet and/or slightly exceed 2Q expectations, I am sorely lacking confidence that guidance for 3Q is likely to support expectations for strong 2H growth. Why? Because the worldwide economy remains fragile; PC markets have been deteriorating off of no-growth expectations; consumer markets are being cannibalized by smartphones (think digital cameras); and higher-growth expectations for both China (in general) and smartphones and tablets (in particular) are tempering. I consider seasonally normal 3Q sequential growth across the semiconductor industry in the range of +6% to be supported by new video game platforms, continued strength from automotive and industrial markets, persistent inertia from smartphones and tablets, and possible incremental gains from communication infrastructure and PCs. Unfortunately I do not expect any turbo-charging of growth above such seasonal norms largely due to weak macroeconomics and PC markets. Also, recall that most market researchers lowered chip industry annual revenue growth rate estimates over the last several weeks that now range in the low- to mid-single digit percentages.

**June Falls Flat:** Semiconductor sector stocks generally outperformed declining equity markets during June, although performance within the group varied considerably. The Philadelphia Semiconductor Index Option (SOX) was flat last month and the average stock in the Tokeneke Universe actually gained +1.4%, but only 43 out of 101 advanced. This compares to broader equity market declines in the NASDAQ, S&P500 and DOW of -1.5%, -1.5%, and -1.4%, respectively. Year-to-date the SOX is now up by +22.0% compared to those same three indices with gains of +12.7%, +12.6% and +13.8%, respectively. However, the SOX advantage is not quite as pronounced across my Universe where the average stock is up by +18.0% so far this year with 73 out of 101 posting gains.

| June                |       |          |        | 2Q                  |       |           |        | YTD                  |        |            |        | Indices |       |      |       |
|---------------------|-------|----------|--------|---------------------|-------|-----------|--------|----------------------|--------|------------|--------|---------|-------|------|-------|
| Winners (43/101)    |       | Losers   |        | Winners (58/101)    |       | Losers    |        | Winners (73/101)     |        | Losers     |        | Jun     | 2Q    | YTD  |       |
| STEC                | 89.8% | TXCC     | -29.4% | SPWR                | 79.4% | TSEM      | -32.1% | SPWR                 | 268.3% | TXCC       | -41.0% | SOX     | 0.0%  | 7.3% | 22.0% |
| NLST                | 44.3% | HIMX     | -27.5% | NPTN                | 70.1% | TXCC      | -25.8% | MU                   | 126.0% | CRUS       | -40.1% | SMH     | -1.6% | 6.1% | 16.6% |
| NPTN                | 35.1% | GIG      | -26.5% | AMD                 | 60.0% | IKAN      | -25.5% | HIMX                 | 117.5% | TSEM       | -39.9% | NASDAQ  | -1.5% | 4.2% | 12.7% |
| SPRD                | 34.9% | TSEM     | -22.9% | PXLW                | 54.1% | CRUS      | -23.7% | INFN                 | 83.7%  | SQNS       | -35.5% | S&P500  | -1.5% | 2.4% | 12.6% |
| MU                  | 22.7% | FSL      | -14.9% | RMBS                | 53.1% | VIMC      | -23.2% | ACTS                 | 79.9%  | MSPD       | -30.8% | DOW     | -1.4% | 2.3% | 13.8% |
| average stock +1.4% |       | SOX 0.0% |        | average stock +7.6% |       | SOX +7.3% |        | average stock +18.0% |        | SOX +22.0% |        |         |       |      |       |

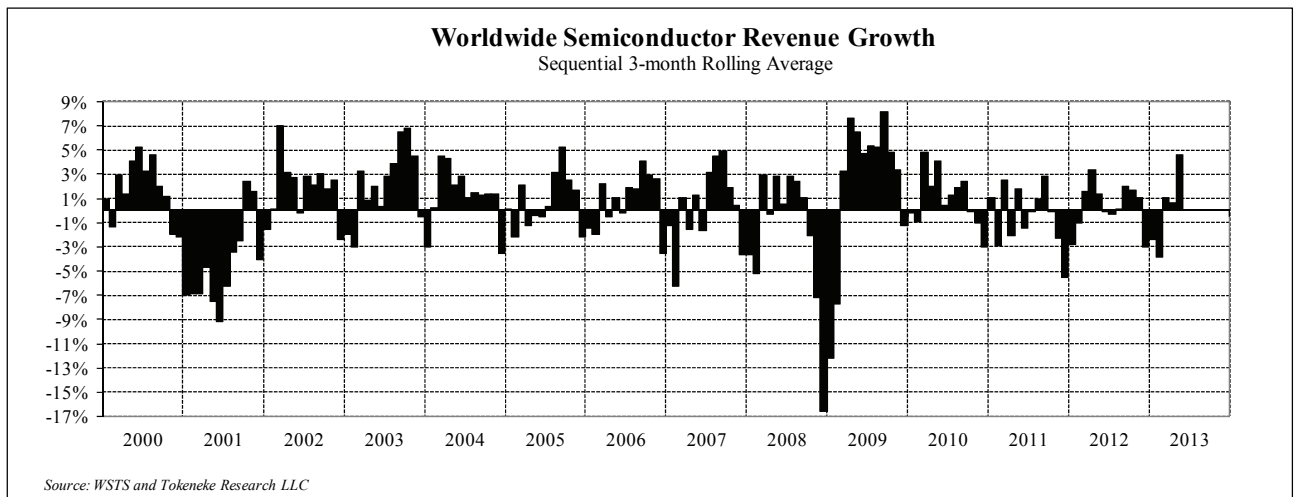
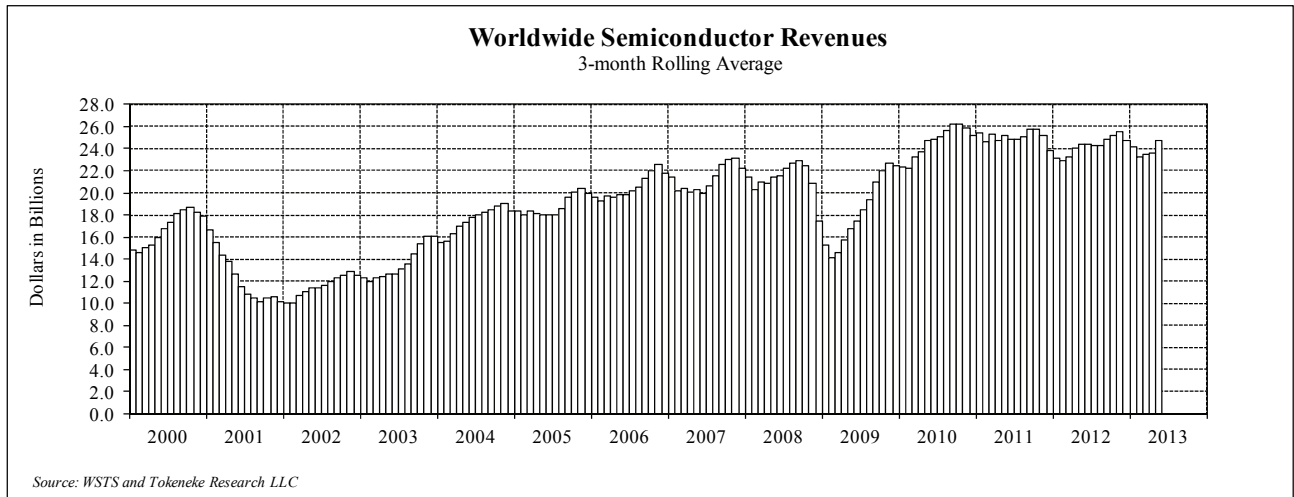
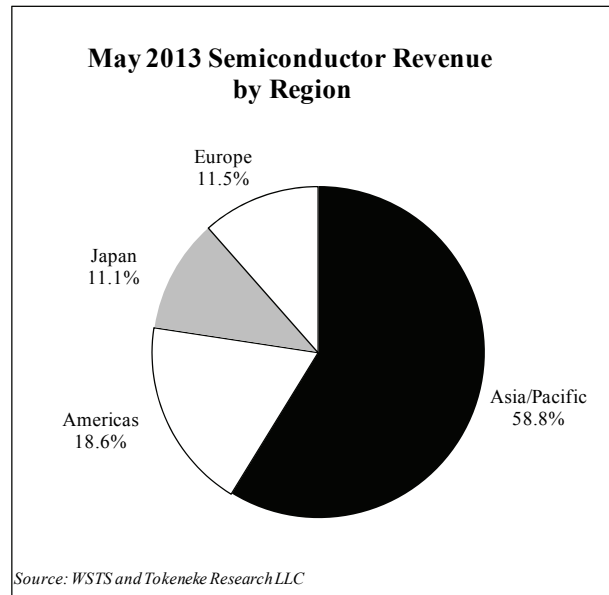
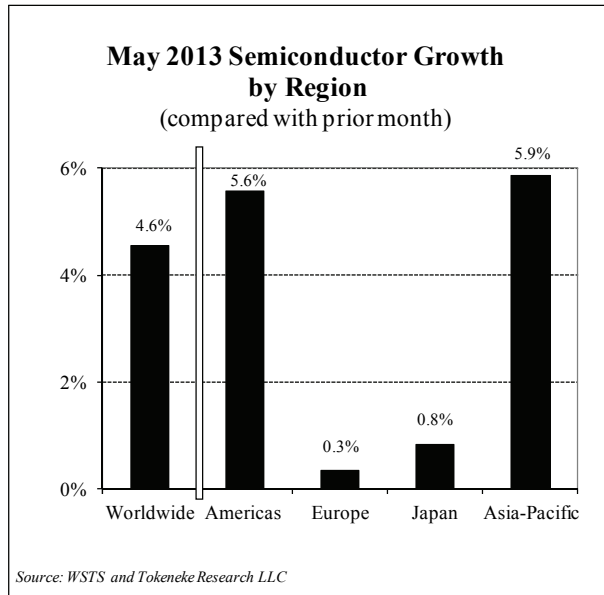
**Divergent Sector Rally:** Chip sector share prices rallied and outperformed broader equity markets during 2Q, although it was strength during May that compensated for more ambiguous fluctuations during April and June. First, the good news: the SOX index rallied by +7.3% 2Q and the average stock in the Tokeneke Universe did even better at +7.6% with 58 out of 101 advancing, compared to the S&P500 gaining only +2.4%. Most of this strength occurring during May with the SOX gaining +5.5% and the average stock up by +8.7% with 78 advancing compared to the S&P's +2.1%. But the chip sector arguably underperformed during the first month of earnings season in April when the SOX matched the S&P gain of +1.8% but my average stock declined by -1.9% and only 37 advanced. Recall that I previously attributed that inconsistency to nine semiconductor capital equipment issues included in the 30 making up the SOX as well as a heavier weighting to highly liquid large cap issues offering dividends compared to the Tokeneke Universe. June was also weak, as noted above. I am calling the 2Q rally 'divergent' due to the lack of sector homogeneity as characterized by its performance during April and June.

**Pick Stocks:** Overall semiconductor industry business conditions are expanding, albeit within the range of historical seasonal norms. However, the industry does not seem to be getting any kind of meaningful boost from a cyclical recovery or overall macroeconomic conditions that I would describe as 'fragile.' And against this backdrop, the sector has enjoyed a nice rally and outperformed broader equity markets so far this year—although variance within the sector appears to be increasing.

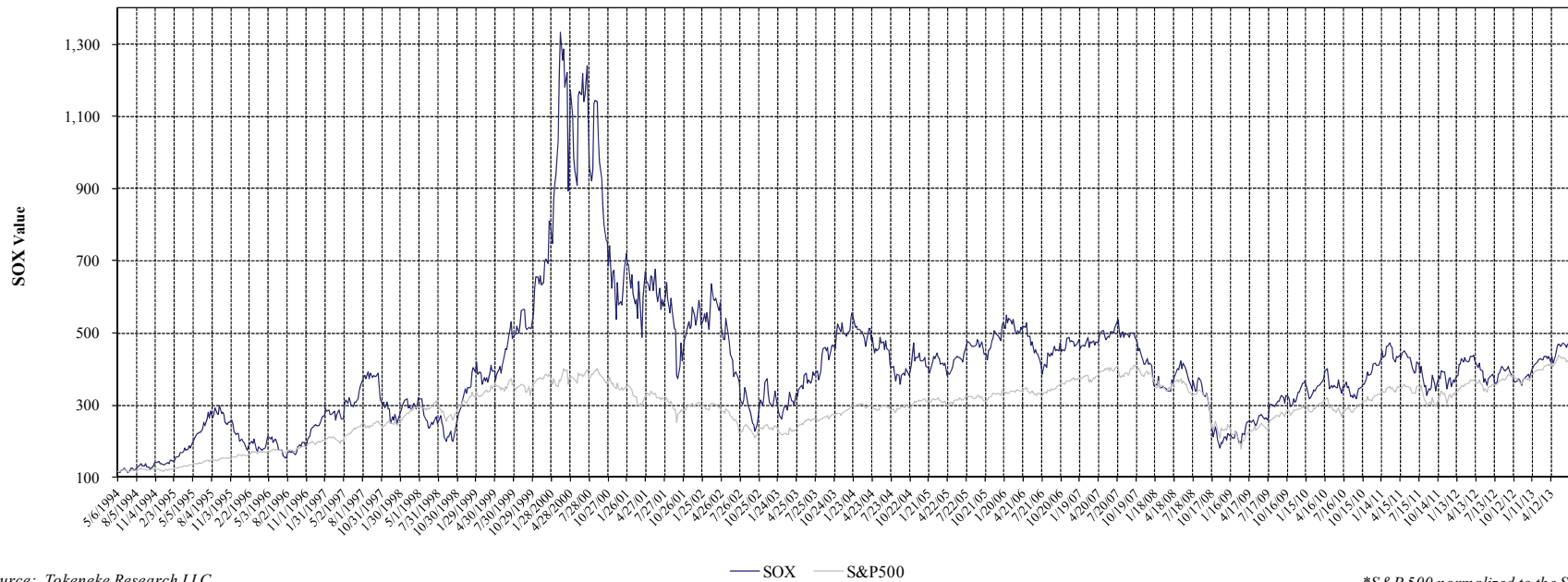
So how does an equity investor entertain the semiconductor sector in this kind of environment? Short answer: pick stocks. Specifically, stocks with both favorable business and share price valuation fundamentals, in my opinion.

**Skew the Odds Heavily in Your Favor:** Semiconductor industry business conditions are growing modestly amid a diverse collection of end-market strengths and weaknesses. While the risk-reward trade-off has shifted unfavorably so far this year following the rally across the sector, attractive investment opportunities continue to exist as noted in my latest Chip Investment Ideas publication, in my opinion. I recommend to carefully pick stocks with 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

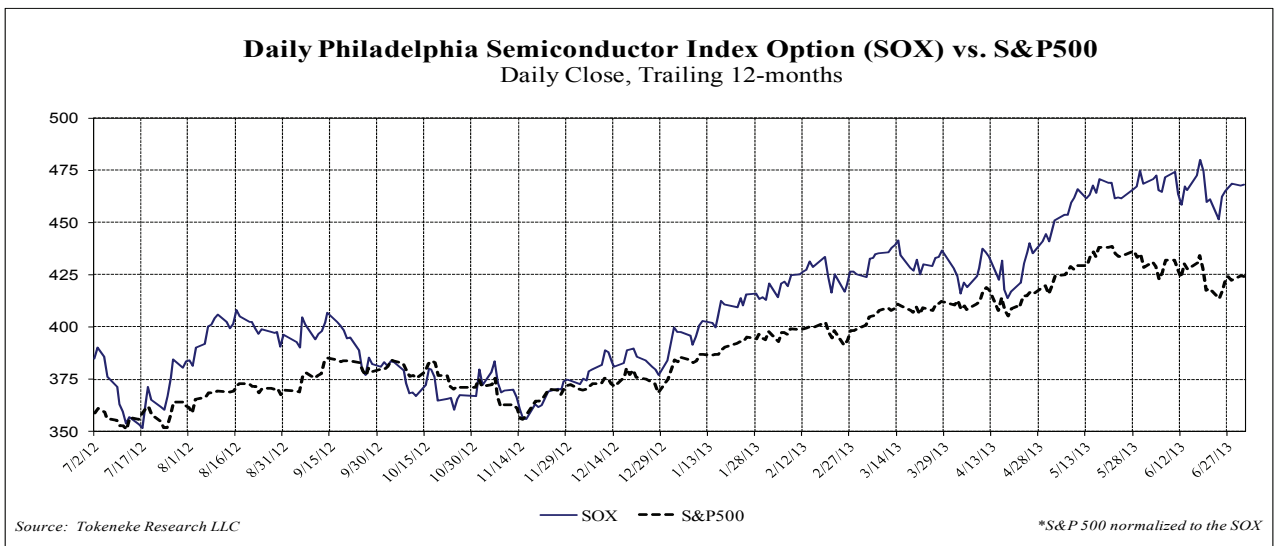
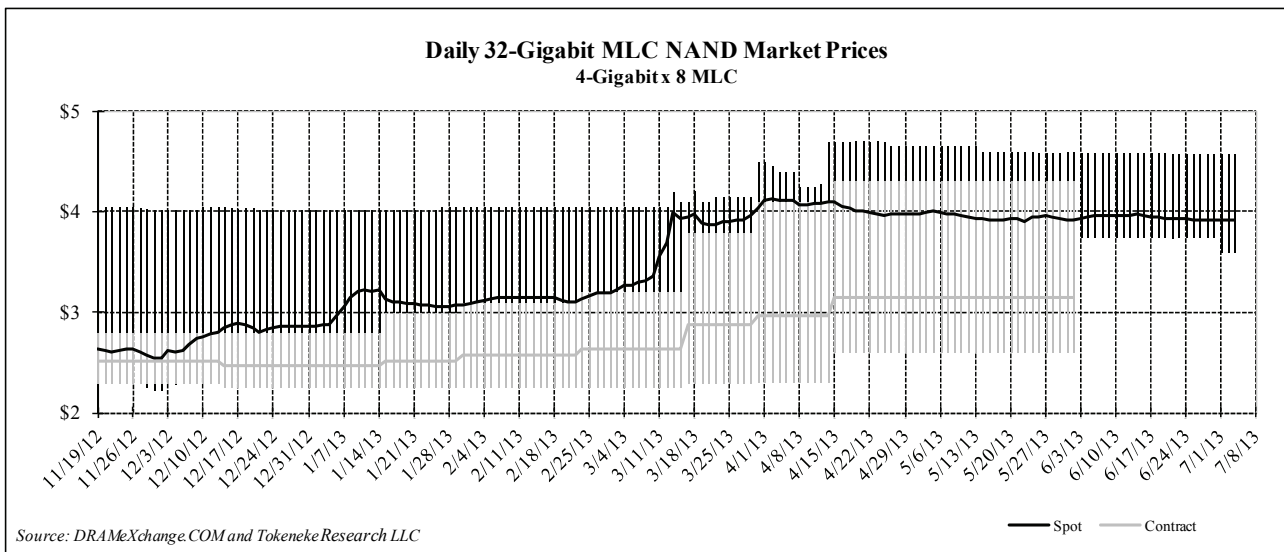
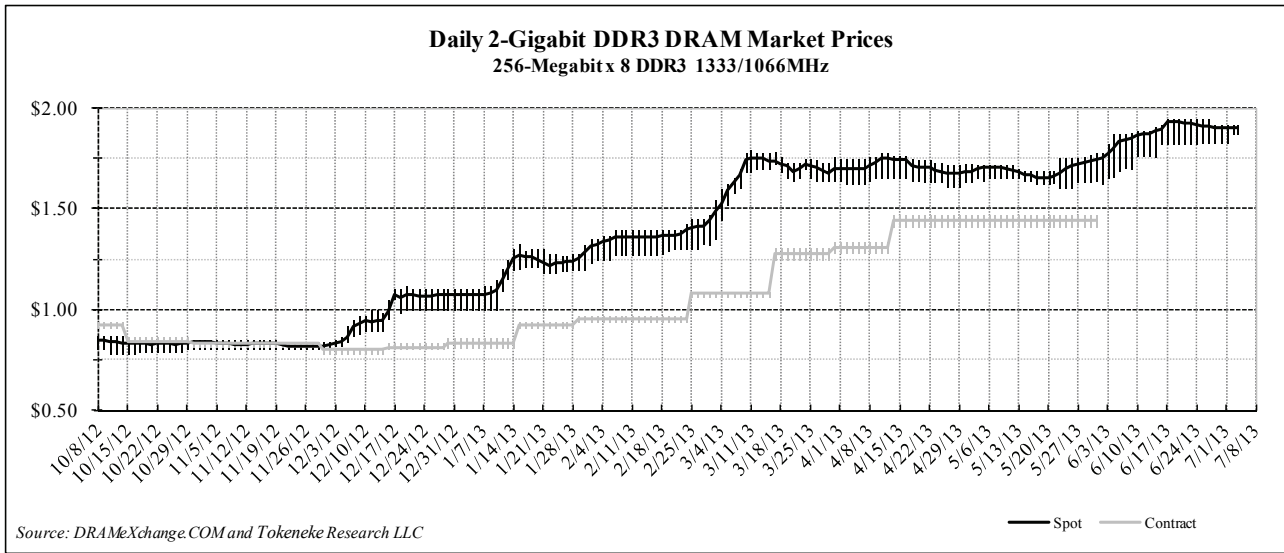


### Weekly Philadelphia Semiconductor Index Option (SOX) vs. S&P 500



Source: Tokeneke Research LLC

\*S&P 500 normalized to the SOX



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## **The Offering**

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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 Fahnstock & 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*

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