

Semiconductor Sector Peak-Season Rally But Impressive Annual Gains Likely to Correct

The good news is that semiconductor industry business conditions are healthy and growing. And the better news is that sector share prices are up by some 20% so far this year after a nice rally last month. But the bad news is that business conditions have likely peaked consistent with seasonality exhibited over the last few years, and that share price rally is primed for a correction, in my opinion. While there are always opportunities and exceptions, I have turned downright bearish on the sector near-term on a macro basis.

Momentum Persists During July: Worldwide semiconductor industry revenue grew by a much-better-than-average +2.4% sequentially during July that was pretty close to what I had expected, according to statistics released by the Semiconductor Industry Association (SIA) earlier this week. This compares to an average gain of +1.3% with a high of +5.4%, a low of -6.3%, and declines only five times in the last 24 years—including two of the last 12. The Americas lead once again with growth of +3.0% followed closely by Europe with +2.9%, while Asia-Pacific and Japan posted solid gains of +2.3% and +2.0%, respectively. Recall June growth was also robust at +2.3% which was well above its average of +0.4%, although this month that number was revised downward from an initial +2.6%.

Next month's release of August data usually reflects even better growth: it has averaged a gain of +1.8% with a high of +5.2%, a low of -3.5%, and declines only four times in the last 24 years—including none of the last 12. I expect it to be above average—albeit less so than June and July were.

2Q Strength Diverges: The 2Q14 earnings season is virtually complete with only a couple of stragglers in the Tokeneke Universe left to report as of this writing. It was a solid quarter, although softer industry statistics were revised downward while my healthier Universe finished even stronger. My Tokeneke Universe is far from a perfect proxy for the chip industry, although I consider the divergence interesting and noteworthy. My guess is the Tokeneke Universe is benefiting from the inclusion of wafer foundry strength (TSMC); avoidance of international company weakness (Japan); and benefiting from the time-shifting inclusion of July-ended fiscal periods.

Semiconductor industry statistics reflected an above-average sequential quarterly gain of +4.8% last quarter, although this was revised downward from +5.4% last month. However, weighted average industry revenue growth by companies in the Tokeneke Universe reflect an even more robust sequential gain of +8.9%, up from +8.0% last month at this time, with the average company up by +9.7% (way up from +5.9%) ahead of guidance centered around +6%. All three metrics (industry stats, Universe, average company) are above the historical average around +4%.

Original weighted average management guidance from the Tokeneke Universe of companies for 2Q revenue finished at +6.2% sequentially and ranged from +3.3% to +9.1%, and 14 subsequent preannouncements slightly raised the mid-point to +6.4% and the range to +3.6% to +9.1%. The semiconductor industry has averaged a 2Q sequential gain of +3.9% with a high of +20.0% and a low of -19.9%, and has been negative only five of the last 24 years—including three of the last 12, according to industry statistics.

A slight plurality of companies reporting 2Q earnings exceeded investor expectations. Companies reporting results that 'met/exceeded' expectations totaled 43% (down from 44% last month), the 'mixed' category followed closely with 41% (down from 43%), and only 16% were in the 'missed-met' category of losers (up from 13%). Recall this metric compares investor expectations to reported results for 2Q revenue and EPS, as well as 3Q revenue guidance.

3Q Underperformance: The 3Q outlook based on management guidance across the Tokeneke Universe so far is reflecting a slightly below-average seasonal gain of +5%. While this isn't bad, it appears to be falling short of investor's expectations for a more robust second half. The specific weighted average guidance for revenue is currently centered at +4.9% ranging from +2.0% to +7.8%, up slightly from +4.7% ranging from +1.7% to +7.7% last month. The semiconductor industry has averaged 3Q sequential revenue growth of +6.4% with a high of +19.9% and a low of -11.7%, and has declined only twice in the last 24 years—including none of the last 10.

Chip Stocks Rally: Semiconductor sector stocks rallied sharply during August (after fading during the first week as an extension of July's weakness) and extended their gains and outperformance compared to broader equity markets year-to-date. The Philadelphia Semiconductor Index Option (SOX) gained +6.2% last month while the average

stock in the Tokeneke Universe grew by an even better +8.0% with 75 out of 92 issues advancing. This outpaced broader equity market increases the NASDAQ, S&P500 and DOW of +4.8%, +3.8%, and +3.2%, respectively. In addition, the chip sector is outperforming by an even wider margin so far this year with the SOX now up by +20.6% and 68 out of 92 Tokeneke stocks up by an average of +17.7% compared to those same three indices at +9.7%, +8.4% and +3.1%, respectively, as of the end of August.

| August | | | | QTD (3Q) | | | | YTD | | | | Indices | | | |
|-------------------------------|-------|--------|--------|-------------------------------|-------|--------|--------|---------------------------------|--------|--------|--------|---------|------|------|-------|
| Winners (75/92) | | Losers | | Winners (50/92) | | Losers | | Winners (68/92) | | Losers | | | Aug | QTD | YTD |
| PSMI | 84.7% | ANAD | -21.7% | PSMI | 81.5% | NPTN | -35.6% | TQNT | 147.8% | IKAN | -68.7% | SOX | 6.2% | 1.5% | 20.6% |
| IRF | 58.6% | PXLW | -15.8% | IRF | 41.2% | QUIK | -34.4% | RFMD | 141.7% | ANAD | -66.0% | SMH | 6.0% | 4.4% | 21.8% |
| HIMX | 30.1% | IKAN | -14.7% | VIMC | 40.5% | ADNC | -28.3% | TSEM | 100.3% | NPTN | -62.0% | NASDAQ | 4.8% | 3.9% | 9.7% |
| VIMC | 27.7% | NPTN | -13.8% | TSRA | 33.9% | ANAD | -22.6% | SWKS | 98.4% | ENTR | -44.0% | S&P500 | 3.8% | 2.2% | 8.4% |
| SQNS | 25.4% | MX | -12.0% | SIMO | 32.0% | AMCC | -21.6% | VIMC | 94.8% | HIMX | -43.4% | DOW | 3.2% | 1.6% | 3.1% |
| average stock +8.0% SOX +6.2% | | | | average stock +2.7% SOX +1.5% | | | | average stock +17.7% SOX +20.6% | | | | | | | |

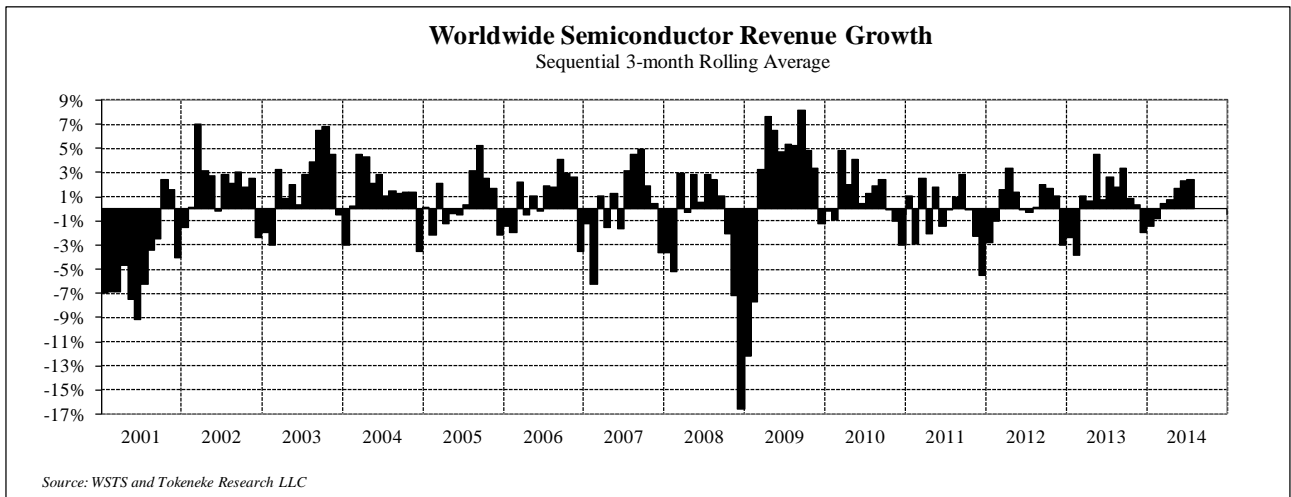
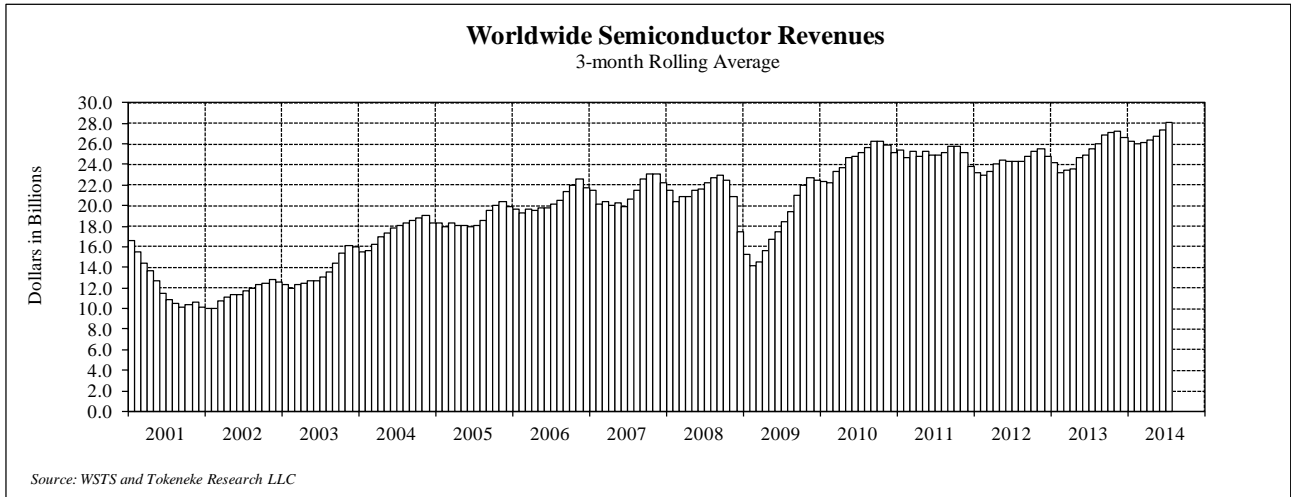
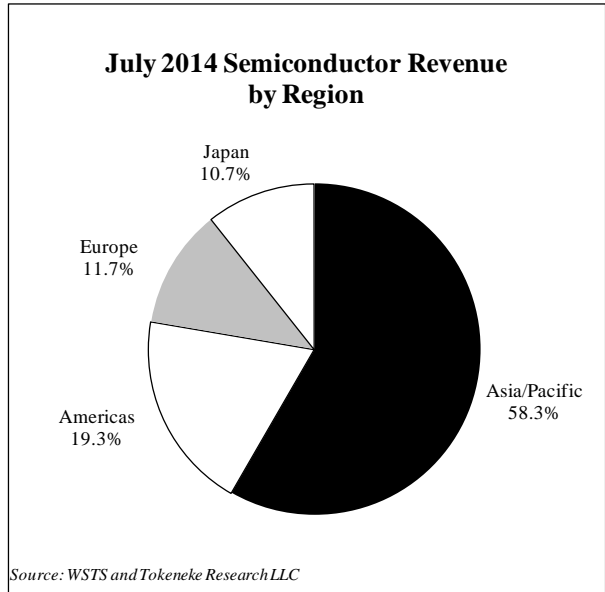
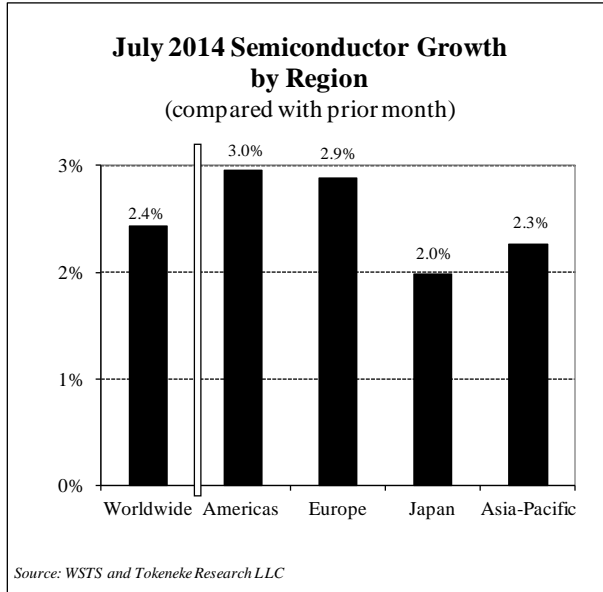
2014 Still Looking Familiar: I'm sticking with my forecast for 2014 since the beginning of the year: Semiconductor industry business conditions will continue to grow at the slow pace and pattern established over the last couple of years with annual growth in the mid-single digit percent range. In fact, the profile of business this year is strikingly similar to that we saw in the previous three years, as optimism for a strong second-half after a weak start fades when mid-year visibility disappoints.

Several years ago semiconductor industry seasonality largely tracked PC market supply characteristics, with a weaker first half of the year including a trough during 2Q, followed by a stronger second half with a 4Q peak. But the world changed after the financial crises in 2008: anemic worldwide macroeconomic conditions have accentuated the relative impact of seasonal business fluctuations; and the rise of the smartphone—and triumph over the PC in terms of total chip sales—has shifted industry seasonality to be more consistent with the traditional consumer market pattern of a 1Q trough, 2Q recovery, 3Q peak and then 4Q decline. While this is very much a gross over-simplification of a \$300B+ industry with many moving parts across a variety of products, geographies and markets, I also don't consider it necessarily inaccurate.

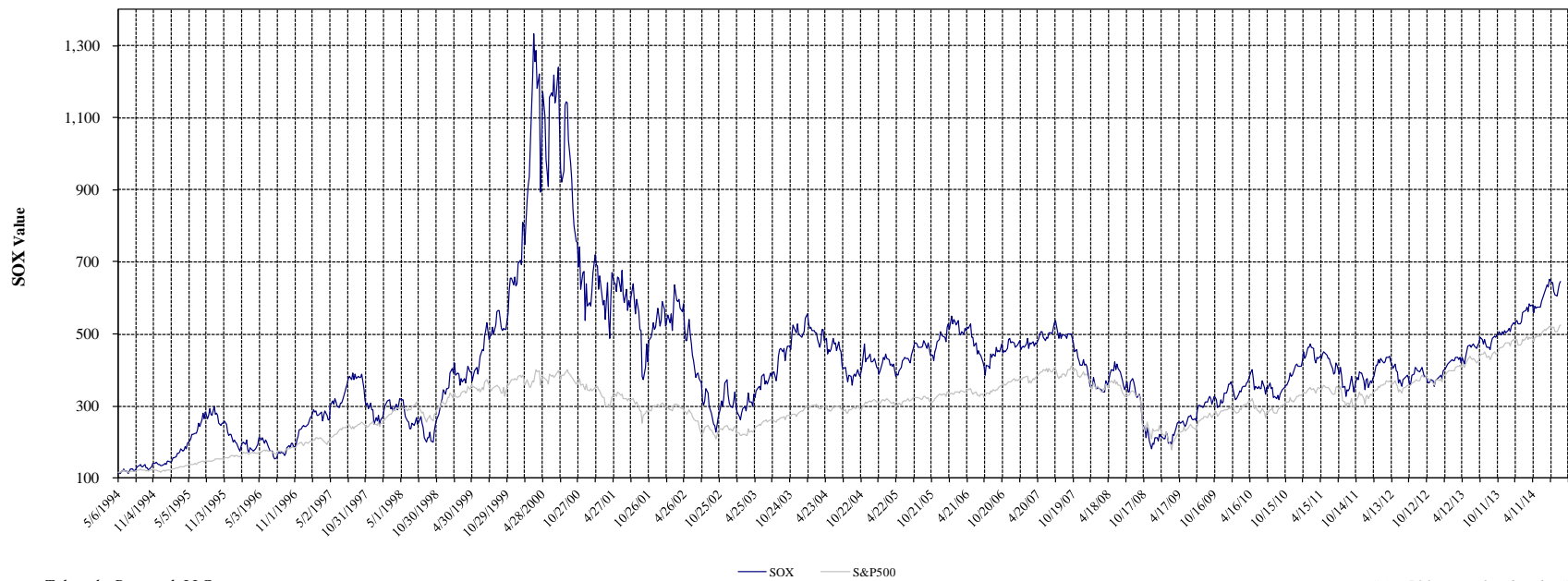
The general pattern of 'consumer market' seasonality has largely played out across the semiconductor industry over the last couple of years, and given persistently lackluster macroeconomic conditions I don't foresee much of a change to that pattern this year. In fact, disappointing and below-average guidance for 3Q appears to confirm it. The specific culprits this year are maturing tablet sales and violent smartphone market share shifts despite healthy automotive and industrial markets and marginal better-than-expected PC unit sales.

Take the Money and Run: I am surprised at the strength of chip sector share prices over the last month, and am uncomfortable with the magnitude of the rally so far this year—especially since I think business has probably peaked and is likely to decline sequentially 4Q consistent with seasonal trends in recent years. While there are always opportunities and exceptions, I have become downright bearish on the near-term prospects for semiconductor sector share prices from a macro perspective, and fear that a correction is considerably more likely than persistent upside. Nothing wrong with declaring victory at 20% gains on the year in this environment, in my opinion.

—Dan K. Scovel
Semiconductor Analyst

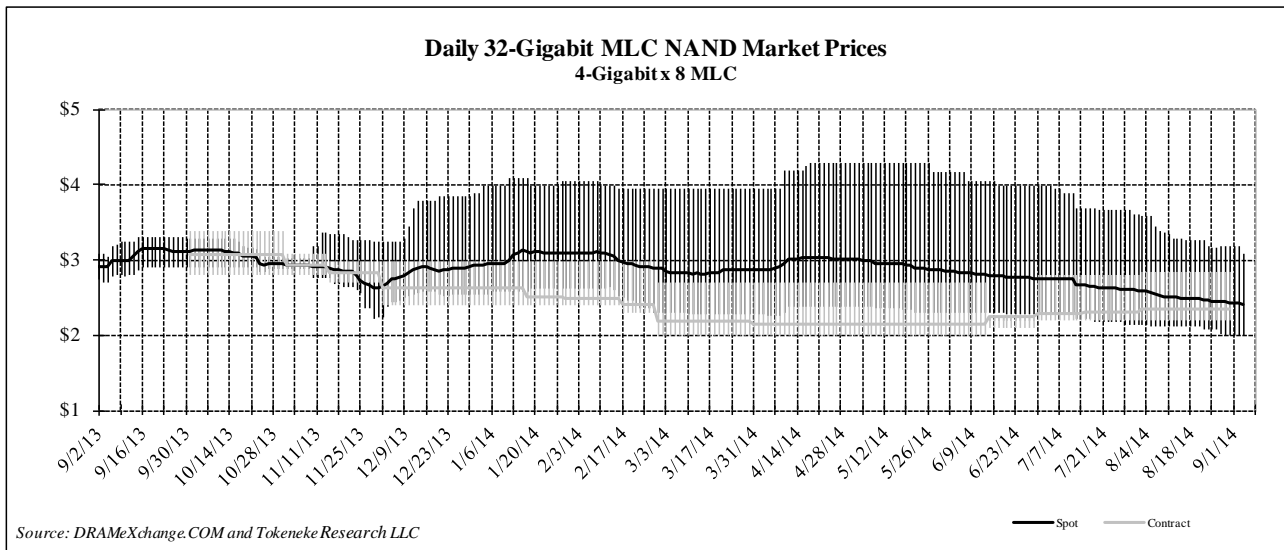
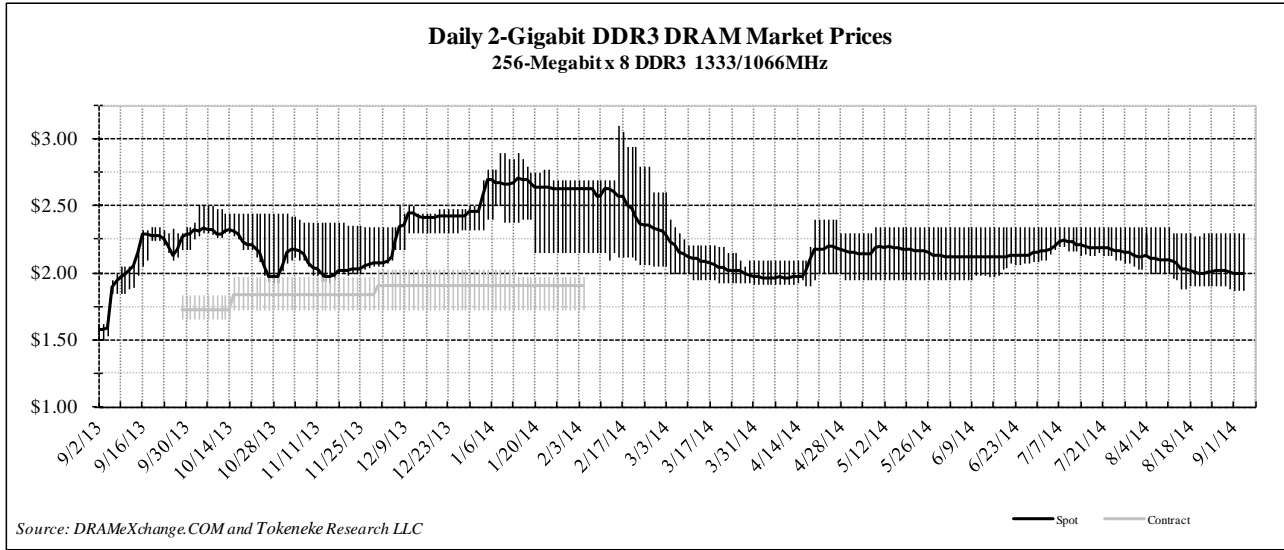


Weekly Philadelphia Semiconductor Index Option (SOX) vs. S&P 500

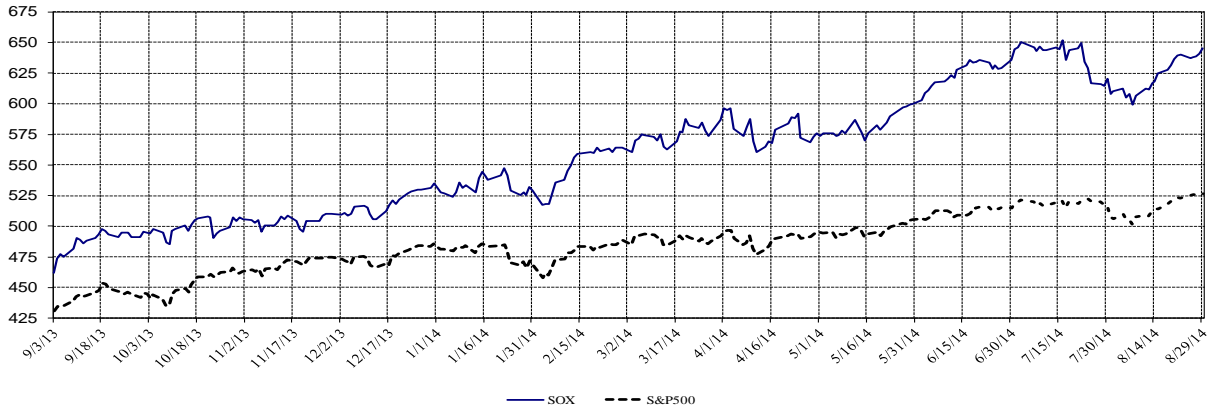


Source: Tokeneke Research LLC

*S&P 500 normalized to the SOX



Daily Philadelphia Semiconductor Index Option (SOX) vs. S&P500 Daily Close, Trailing 12-months



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 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

Tokeneke Research LLC

Rowayton, CT 06853

dscovel@tokenekeresearch.com

www.tokenekeresearch.com

203-554-4621

Copyright © 2014 Tokeneke Research LLC. All rights reserved. This report is for information purposes only and does not constitute a solicitation or an offer to buy or sell any security or to participate in any investment or trading strategy. Opinions expressed in this report reflect the judgment of Tokeneke Research LLC on the topics addressed as of the date of the report, and are subject to change without notice. Tokeneke Research LLC makes every effort to use reliable and comprehensive information but makes no representation that the information in this report is accurate or complete, nor does it undertake to update or revise this report at any time or for any reason. This report contains forward-looking statements that involve risks and uncertainties, both known and unknown, as well as assumptions that, if they do not fully materialize or prove incorrect, could cause actual results to differ materially from those expressed or implied by such forward-looking statements. Actual results and trends may differ materially from historical results or those projected in any such forward-looking statements depending on a variety of factors. This report does not provide individually tailored investment advice and has been prepared without regard to the specific individual financial situation, objectives and needs of those who receive it. Securities discussed in this report may not be suitable for the reader. Tokeneke Research LLC and/or Dan Scovel may have a long or short position in the securities of a company or companies mentioned in this report and, at any time, may change that position. Tokeneke Research LLC accepts no liability whatsoever for any loss or damage of any kind arising out of the use of any part, or all, of this report. All company and product names mentioned in this report may be trademarks or registered trademarks of their respective holders and are used for identification purposes only. Reproduction or distribution of this report, even for internal distribution, is strictly prohibited unless specifically authorized by Tokeneke Research LLC.