Semiconductor Business Still Sucks

But Bright Spots and Attractive Valuations Kindle Hope

The overall semiconductor industry business environment remains weak as we exit what has traditionally been the seasonally strong second-half of the year, and soon begin to enter the softer first half. Nevertheless, there are a few bright spots amid the carnage: smart phone and tablet end-market strength, the relative outperformance of sector share prices in recent weeks, and a number of attractive fundamental share price valuations throughout the group—at least in my opinion. But I still consider it a bit early to fully embrace these emerging potential opportunities, and advise extreme caution before diving in.

Anemic October: Chip industry sales growth during October was below average once again. Semiconductor industry statistics for world-wide sales released by the Semiconductor Industry Association (SIA) last week reflected a three-month rolling average gain of +1.7% compared to average growth of +3.6% over the last 22 years with a high of +6.8% and a low of -2.0%. October has only been a down month during three of the last 22 years, although all three of those occurred during the last four years. The Americas continued strong with a gain of +8.1%, followed by Asia-Pacific at +1.3% and Europe up by +0.2%. Japan lagged once again with a decline of +3.1%.

Next month's release of November is likely to be similarly weak (i.e. pretty flattish) given the 4Q outlook provided by companies during the current 3Q earnings season. November is traditionally an okay growth period averaging a sequential gain of +1.7% with a high of +6.3%, a low of -7.2%, and declines only four times during the last 22 years—although three of them occurred during the last four years.

Bright Spots Amid 3Q Disappointments: The 3Q earnings season reflected chip industry business weakness and disappointment to investor expectations, although there were some bright spots that persisted as the season progressed. For a while and thanks in a large part to QCOM and its size and exposure to the growing smart phone market: the 3Q became a bit stronger; a few more companies actually exceeded investor expectations in both absolute numbers and on a percentage-reporting basis; the sector outperformed the broader equity markets; and the outlook for 4Q turned somewhat 'less-worse.' But this good news also had its limits: the books closed on the 3Q with sequential worldwide industry sales growth of +1.8%, well below the seasonal average of +6.5%; companies that exceeded expectations remained in the minority at 34.0%; the SOX outperformance is still negative on an absolute basis quarter-to-date; and the marginal gains to the 4Q outlook still left it flat-to-down sequentially.

4Q Weakness: The lackluster 4Q outlook was the primary factor accounting for the shortfall to investor expectations during the 3Q reporting season. Specifically, the weighted sales growth range for 4Q based on management guidance across the Tokeneke Universe is -4+3% for a quarter that has expanded sequentially by an average of +1.7% over the last 22 years, albeit also having turned negative eight times during that period. And preannouncements to-date have not been very inspiring, with ALTR, BRCM and TXN narrowing their original ranges (low-end, high-end, mid-range, respectively); SUPX lowering expectations; but MSPD raising them. Seasonal 2H business strength is simply not occurring for the second year in a row.

Forecast Revised: The SIA recently updated its twice-yearly industry forecast, as summarized in the adjacent table. The bad news is that expected growth for this year and next has fallen; the worse news is that the uninspiring four-year CAGR has been cut in half to +2.1% from +4.0%; but the good news is that there are areas expected to experience meaningful growth—specifically the optoelectronics, logic and sensors product sectors as noted, as well as tablet, smart phone, automotive, and certain networking and communications end-market segments. The tide may not be favorable, but there are certainly some good waves to catch.

SIA Forecast November 2012

	Percentage Growth Rate			
	Year			CAGR
Product Type	**2012**	**2013**	**2014**	**'11-'14**
Optoelectronics	12.5	6.9	6.1	8.5%
Logic	2.2	6.1	5.7	4.7%
Sensors	-0.4	7.4	7.2	4.6%
Analog	-6.3	3.6	5.8	0.9%
Discretes	-9.7	5.4	5.8	0.2%
Microprocessors	-7.5	2.9	4.6	-0.1%
Memory	-7.5	2.8	3.5	-0.5%
Total Semiconductor	-3.2	4.5	5.2	2.1%
previous forecast	*0.4*	*7.2*	*4.4*	*4.0%*

Share Prices Edge Up: More good news in that the chip sector has recently been outperforming broader market indices on a relative basis in a down market, coincident with those 3Q bright spots. The Philadelphia Semiconductor Index Option (SOX) gained +2.0% last month, outperforming the NASDAQ, S&P500 and DOW which posted gains of +1.1%, +0.3%, and a loss of -0.5%, respectively. A solid majority of semiconductor issues also advanced last month, with the average stock in my Universe adding +3.5%. While the SOX is running with the pack in marginally negative territory compared to these indices on a quarter-to-date basis, it continues to lag year-to-date—although it has at least turned positive, as noted in the tables below.

November 2012			
Winners *(67/102)*		Losers	
MEMS	84.0%	NLST	-28.9%
HIMX	34.8%	TXCC	-26.7%
SMI	26.5%	CRUS	-23.2%
ANAD	24.0%	QUIK	-21.4%
EZCH	22.3%	MOSY	-20.8%
average stock +3.5%		*SOX +2.0%*	

QTD *(4Q)*			
Winners *(48/102)*		Losers	
MEMS	102.5%	NLST	-39.8%
ADNC	39.5%	AMD	-34.7%
AMCC	35.0%	TXCC	-33.4%
SMI	32.8%	MLNX	-28.2%
VIMC	32.7%	STEC	-27.3%
average stock -0.9%		*SOX -2.1%*	

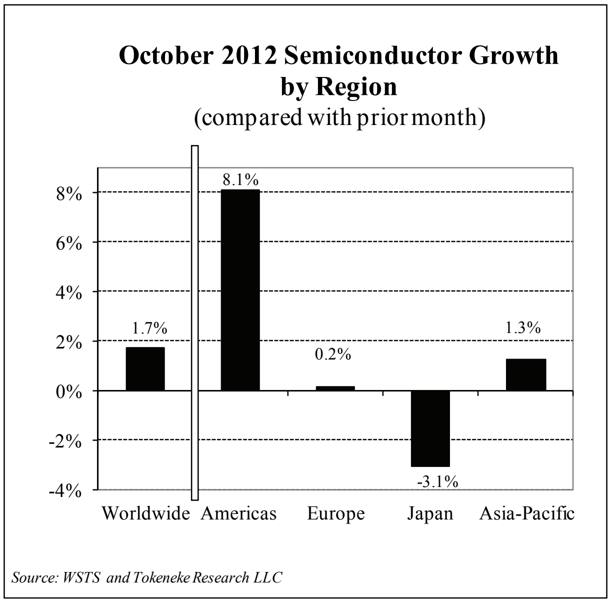
YTD			
Winners *(46/102)*		Losers	
HIMX	144.0%	TXCC	-77.3%
MLNX	124.3%	NLST	-68.8%
CRUS	97.6%	AMD	-59.3%
MIPS	69.1%	CEVA	-50.1%
MX	68.4%	ADNC	-49.1%
average stock +0.4%		*SOX +2.7%*	

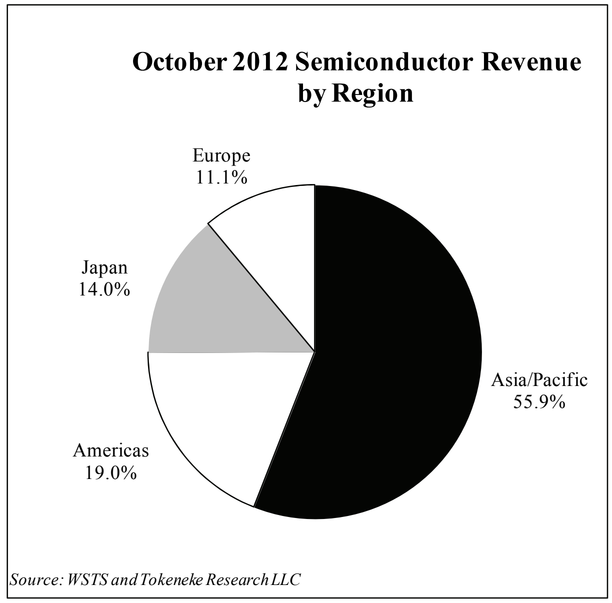
Indices	*Nov*	*QTD*	*YTD*
SOX	2.0%	-2.1%	2.7%
SMH	3.1%	1.3%	5.3%
NASDAQ	1.1%	-3.4%	15.5%
S&P500	0.3%	-1.7%	12.6%
DOW	-0.5%	-3.1%	6.6%

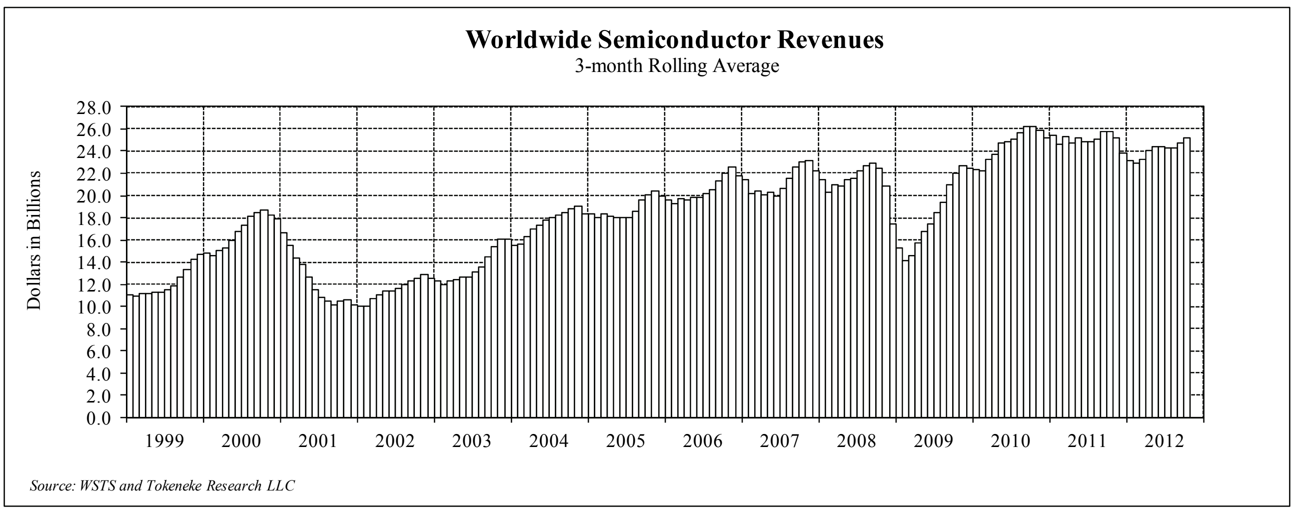
Attractive Valuations: But the best news amid all these depressing statistics is the large and growing set of attractive share price valuations on a fundamental basis, in my opinion. While historical valuations do not appear to carry much weight amid the current appetite for equities as an asset class (or lack thereof), companies with disproportionate exposure to popular end-markets such as smart phones and tablets continue to grow nicely, and several company-specific turn-around stories are making for extremely attractive risk-reward trade-offs—despite equity and broader financial market stress and uncertainty. Once again, in my opinion. Please note my Chip Investment Ideas publication for a complete list, as well as company specific reports for more gory detail.

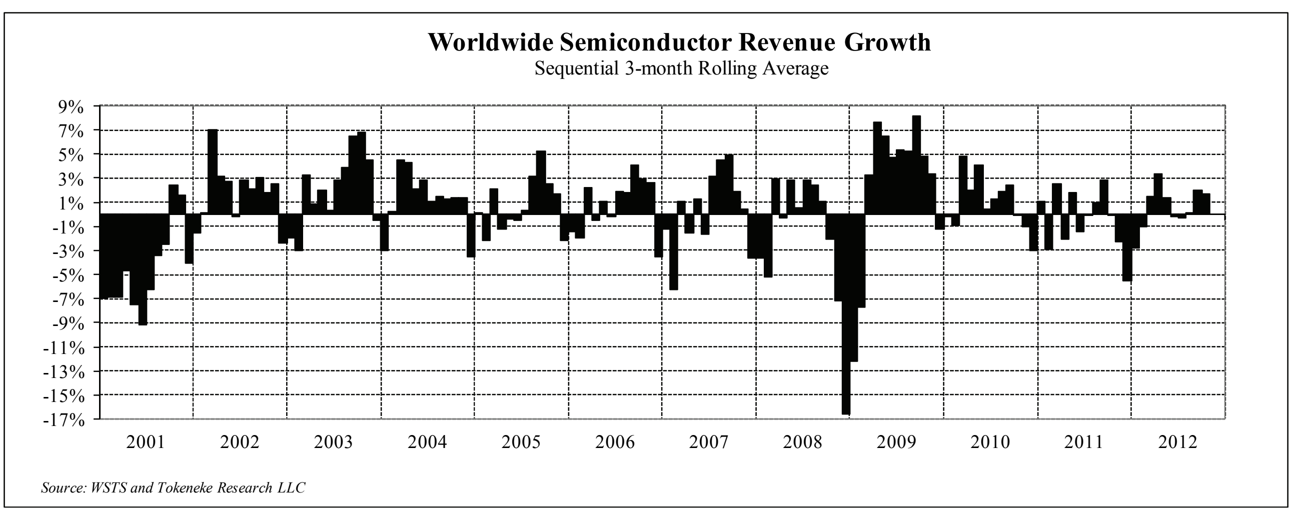
But Proceed with Caution—if You Dare: Share prices are certainly attractive on a fundamental valuation basis across the vast majority of issues in the sector. But clearly, deteriorating fundamentals on a macro basis render any argument for opportunistic, value-based investment opportunities problematic. With any luck, positive share price action over the last few weeks may have marked the beginning of a recovery—but I think it may still be too early to make that call.

—Dan K. Scovel
Semiconductor Analyst

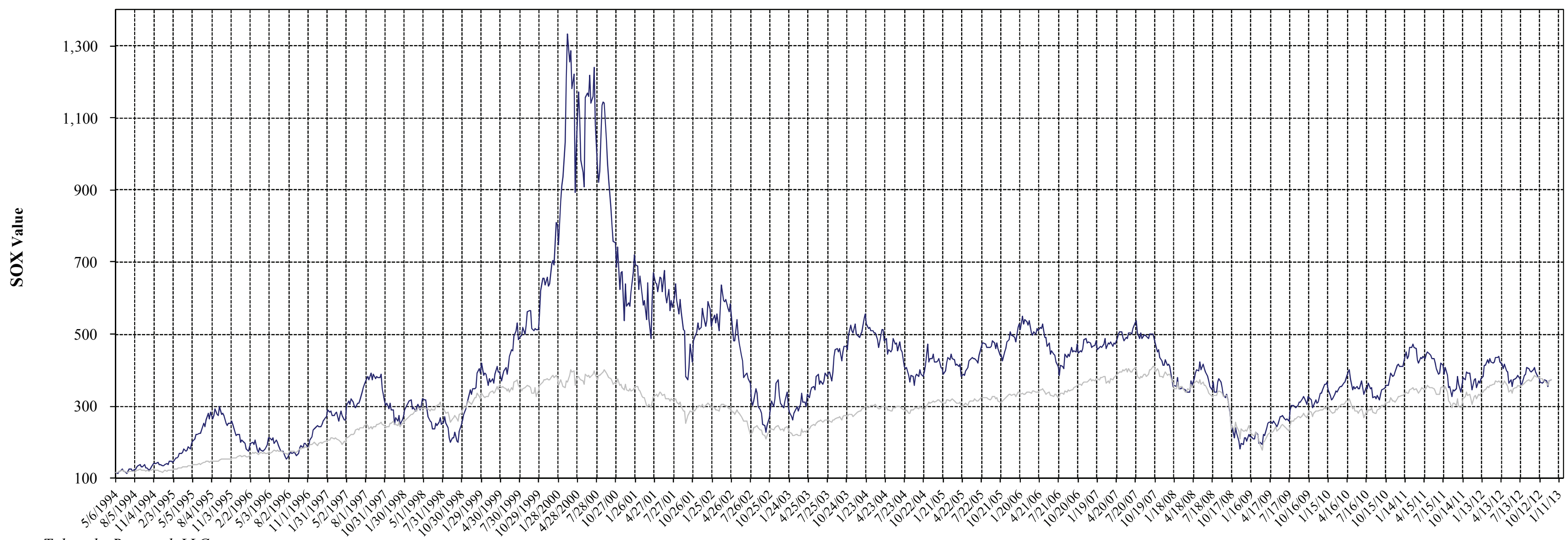

October 2012 Semiconductor Growth by Region
(compared with prior month)
8%
6%
4%
2%
0%
-2%
-4%
1.7%
8.1%
0.2%
-3.1%
1.3%
Worldwide
Americas
Europe
Japan
Asia-Pacific
Source: WSTS and Tokeneke Research LLC


October 2012 Semiconductor Revenue by Region
Europe 11.1%
Japan 14.0%
Americas 19.0%
Asia/Pacific 55.9%
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
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
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%
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
Source: WSTS and Tokeneke Research LLC

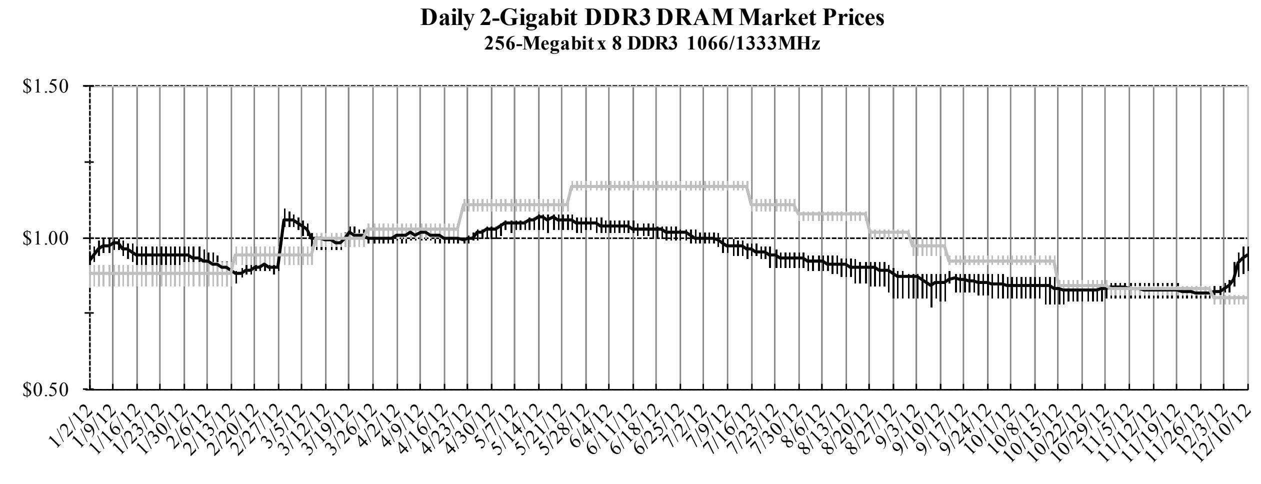
Weekly Philadelphia Semiconductor Index Option (SOX) vs. S&P 500



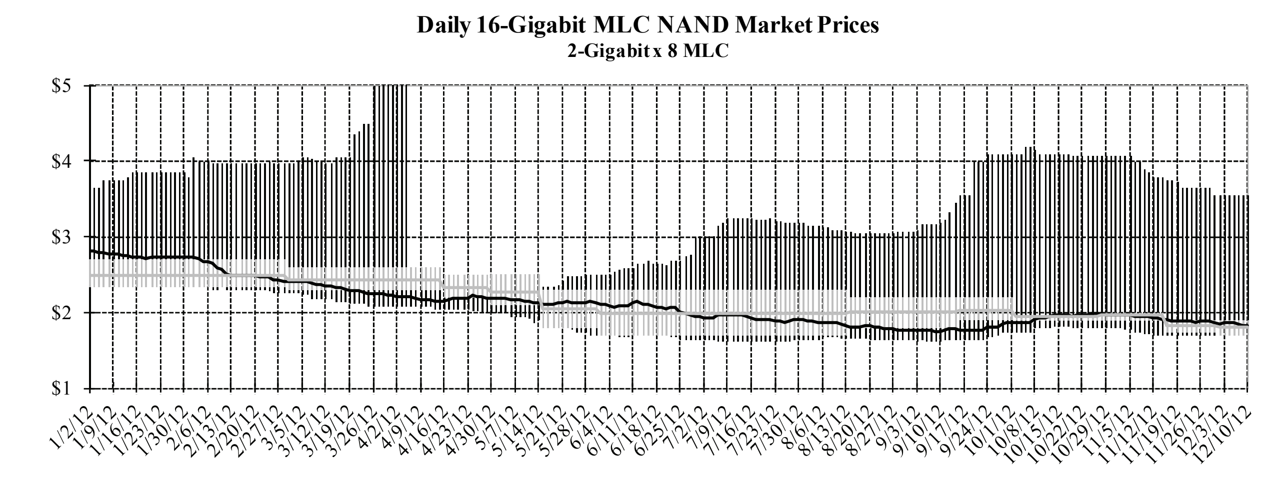
Source: Tokeneke Research LLC

**S&P 500 normalized to the SOX*

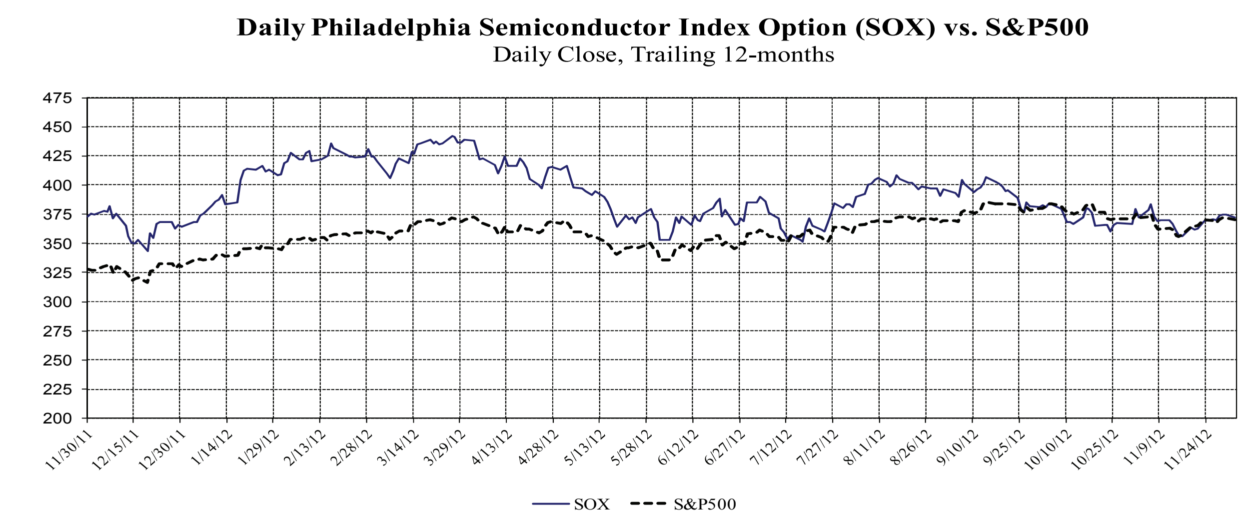
SOX S&P500



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