Furiously Digging for That Pony

At Least 2012 Ended With Some Good News

I approached this month's report with dread: chip industry business conditions are dismal; the economy is sputtering just above stall-speed; the US government is broke and strangling the economy with taxes, regulations and uncertainty; Europe is a basket case; emerging markets are slowing; financial markets remain under stress; equity trading volumes continue to deteriorate; my local bar ran out of my favorite craft brew during the holidays; and my kid's team lost its first basketball game after the break. And the stock market rallied on *THAT* fiscal/tax cliff deal?!? So in the Christmas spirit of hope and an effort to boot-strap my depression I decided to keep digging until I found some good news.

Lo, and behold—I found some. It turns out that recently reported November chip industry sales were pretty good and semiconductor sector stocks rallied in December and ended positive on the year. The US probably is the best house in a bad neighborhood. While equities as an asset class may not be that attractive, bonds may have finally become downright unattractive and commodities may finally have been played out. DRAM market prices are on the rise and Micron Technology is poised to benefit from industry consolidation due to its pending acquisition of Japanese competitor Elpida. My plot of the SOX index compared to a normalized S&P500 is screaming 'Buy' for the chip sector, and many issues are trading at attractive price levels based on valuation fundamentals. My favorite craft beer finally did get restocked and my son's team has two chances to redeem itself this week.

Above-Average November: November was a solid month of sales across the chip industry and the first posting above-average growth since April. Semiconductor industry statistics for world-wide sales released by the Semiconductor Industry Association (SIA) last week reflected a three-month rolling average gain of +2.0% compared to average growth of +1.7% over the last 22 years with a high of +6.3% and a low of -7.2%. October has been a down month only four times during the last 22 years, although three of those occurred during the last four years. The Americas continued strong with a gain of +5.1%, followed by Asia-Pacific at +2.7% and Europe up by +0.4%. Japan lagged once again with a decline of -3.4%.

Next month's release of December data will be down, as always—and probably even worse than normal given the current 4Q outlook. December is traditionally a soft month averaging a loss of -2.6% with a high of +3.3%, a low of -16.6%, and growth only *twice* in the last 22 years.

Lackluster 4Q: The 4Q12 earnings season of company reporting begins next week and it is likely to be pretty discouraging given company guidance and eight negative preannouncements to-date. This is 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. The weighted average growth for the Tokeneke Universe this quarter based on management guidance during 3Q earnings announcements called for a range of -3.75% to +2.74% centered on -0.50% off a cumulative revenue base of $54.4B. And as of this writing some 14 companies have preannounced revised expectations, including: eight that lowered revenue guidance (SQNS, PSEM, SIMG, MLNX, OIIM, TSRA, LSCC, SUPX); four that reiterated or narrowed their range (DIOD, TXN, BRCM, ALTR); and only two that raised expectations (DSPG and MSPD). These changes narrow the range to -3.65% to +2.48% and soften the center to -0.59%. Most of the shortfall is being attributed to broad-based market weakness.

And the outlook for 1Q13 is unlikely to offer investors any comfort, either. This is a quarter that has averaged a sequential decline of -1.9% and fallen negative 13-times over the last 22 years—never mind the current lack of customer order visibility and macroeconomic uncertainty.

Chinese New Year Volatility: Chinese New Year falls on February 10 this year, which means the holiday will create a hole in February shipments due to factory closures and the month of January will outperform February. Frankly, that's about all it tells us—just volatility, not necessarily any strength or weakness. However, one of the few healthy markets for semiconductors right now is smart phones to China, and holiday sell-through could well turn out to be a critical factor that makes or breaks the quarter.

2013 Outlook: While 2013 is off to a slow start, most market researchers are forecasting mid-single-digit growth in sales for the worldwide semiconductor industry this year. Assumptions generally include GDP growth of a couple percent and a seasonally stronger second half to the year. From an end-market perspective continued strength is expected from smart phones, tablets and automotive markets while PCs are expected to remain weak.

Industry Sales Growth Forecasts

Source	2013
SIA/WSTS	4.5%
IDC	4.9%
Gartner	4.5%
IHS iSupply	8.2%
IC Insights	6.0%

December Rally: Semiconductor sector share prices ended 2012 on a high note with a strong month of December that outperformed broader market indices and salvaged the quarter. The Philadelphia Semiconductor Index Option (SOX) gained +2.6% last month, outperforming the NASDAQ, S&P500 and DOW which posted gains of +0.3%, +0.7%, and +0.6%, respectively. Nearly 70% of semiconductor issues also advanced last month, with the average stock in the Tokeneke Universe adding +5.3%. December strength also lead to chip sector outperformance for 4Q, although it ended-up lagging overall equity markets for the year as noted in the tables below. It also appears the magic number for chip stocks was +5% last year with the average stock up by +5.3% in December, up by +4.8% in 4Q, up by +4.8% in 2012, and the SOX up by +5.4% on the year. (And yes, I did double and triple check this numerical coincidence.)

December

Winners *(70/102)*		**Losers**	
BCDS	86.7%	PLXT	-20.9%
SQNS	58.1%	MLNX	-18.5%
ANAD	39.2%	TXCC	-16.0%
MSPD	28.9%	MRVL	-14.2%
MX	26.3%	EZCH	-12.8%
average stock +5.3%		*SOX +2.6%*	

4Q

Winners *(56/102)*		**Losers**	
BCDS	110.6%	TXCC	-44.0%
MEMS	110.1%	NLST	-43.1%
ANAD	81.3%	MLNX	-41.5%
ADNC	67.6%	PLXT	-36.9%
AMCC	66.4%	AMD	-28.8%
average stock +4.8%		*SOX +0.5%*	

2012

Winners *(51/102)*		**Losers**	
HIMX	140.0%	TXCC	-80.9%
MX	112.8%	NLST	-70.5%
IKAN	100.0%	AMD	-55.6%
BCDS	89.9%	CEVA	-48.0%
CRUS	82.8%	MRVL	-47.6%
average stock +4.8%		*SOX +5.4%*	

Indices

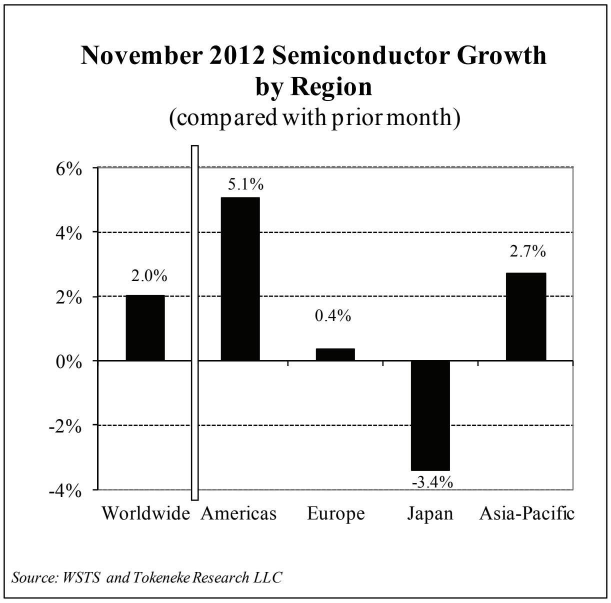
	Dec	***4Q***	***2012***
SOX	2.6%	0.5%	5.4%
SMH	0.9%	2.2%	6.2%
NASDAQ	0.3%	-3.1%	15.9%
S&P500	0.7%	-1.0%	13.4%
DOW	0.6%	-2.5%	7.3%

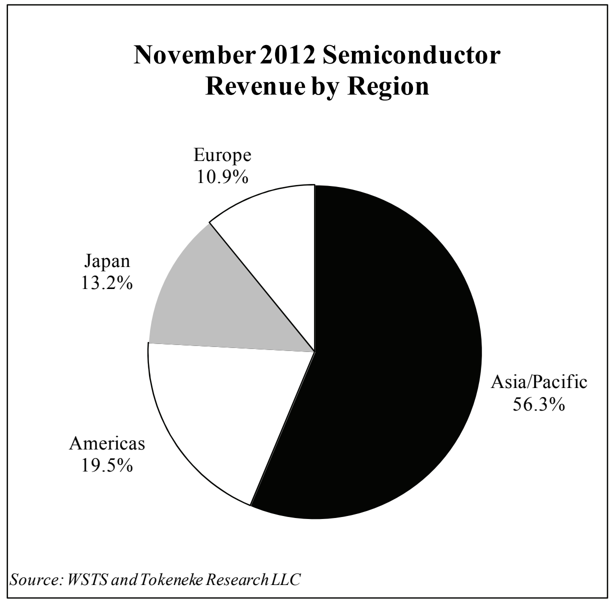
Attractive Valuations: As I noted last month, there is a sizable set of attractive share price valuations on a fundamental basis, in my opinion. While historical valuations do not appear to carry much weight amid the current appetite for equities as an asset class, companies with disproportionate exposure 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 latest Chip Investment Ideas publication for a complete list, as well as company specific reports for more gory detail.

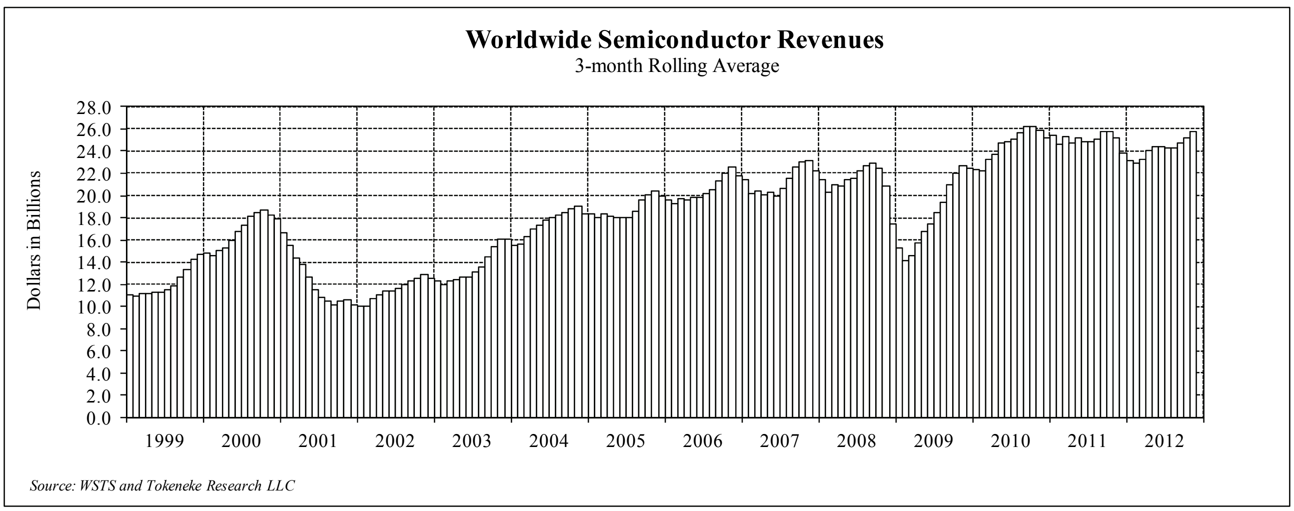
SOX Rocks: On Pages 4 and 5 of this report are stock charts comparing the SOX index against a normalized S&P500, meaning I divide the S&P500 index by 3.9-something so that it equaled the SOX value of 100 at inception in 1994. Two observations of this data: first, when the SOX is trading at three-times a normalized S&P it is a very strong signal to SELL the sector; and second, when the SOX is trading at par or below the normalized S&P it is a pretty reliable signal to Buy the chip sector—albeit with some variance of timing to realize those gains. October and November of last year were extremely good times to accumulate, but now isn't so bad either with the SOX trading just a bit above the normalized S&P.

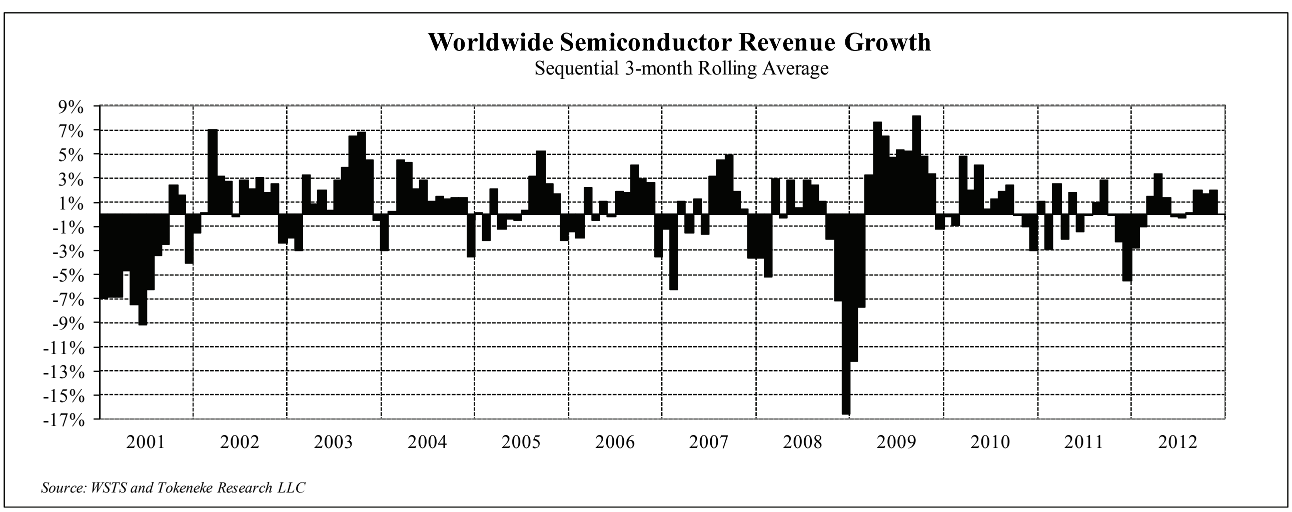
Just Lengthen Your Time Horizon: Share prices are attractive on a fundamental valuation basis across many issues in the chip sector at this time. But deteriorating near-term fundamentals on a macro basis render any argument for opportunistic, value-based investment opportunities problematic. With any luck, positive share price action over the last few weeks may have marked the beginning of a recovery—but a longer investment time horizon of at least a couple of quarters makes for a much more comfortable bet at this juncture, in my opinion.

—Dan K. Scovel
Semiconductor Analyst


November 2012 Semiconductor Growth by Region
(compared with prior month)
6%
4%
2%
0%
-2%
-4%
2.0%
5.1%
0.4%
-3.4%
2.7%
Worldwide
Americas
Europe
Japan
Asia-Pacific
Source: WSTS and Tokeneke Research LLC


November 2012 Semiconductor Revenue by Region
Europe 10.9%
Japan 13.2%
Americas 19.5%
Asia/Pacific 56.3%
Source: WSTS and Tokeneke Research LLC

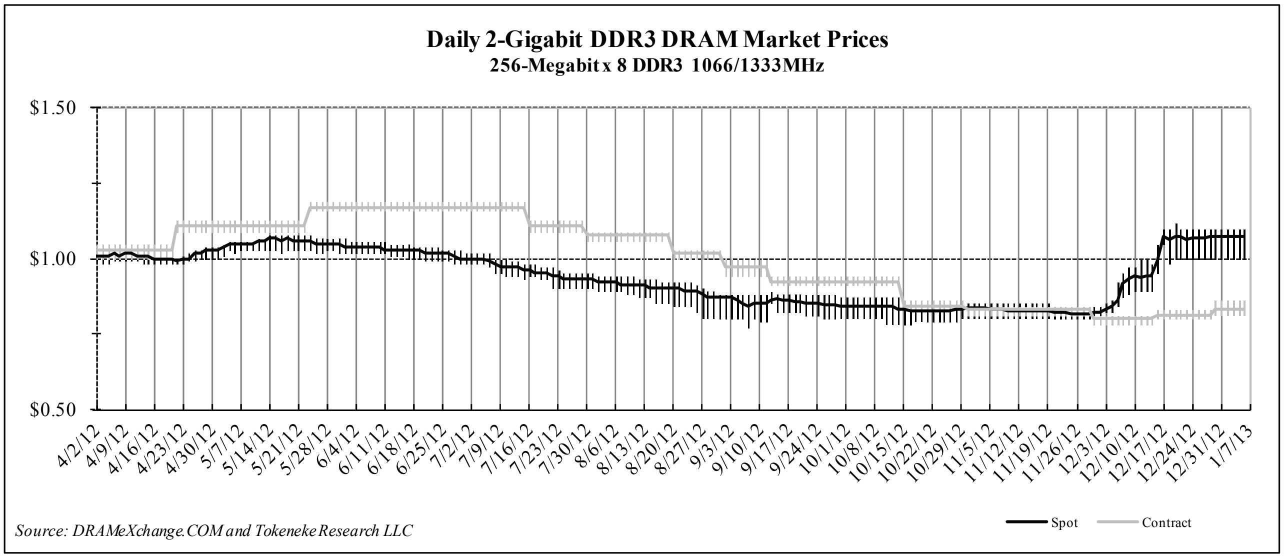

Worldwide Semiconductor Revenues
3-month Rolling Average
Dollars in Billions
28.0
26.0
24.0
22.0
20.0
18.0
16.0
14.0
12.0
10.0
8.0
6.0
4.0
2.0
0.0
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
Source: WSTS and Tokeneke Research LLC

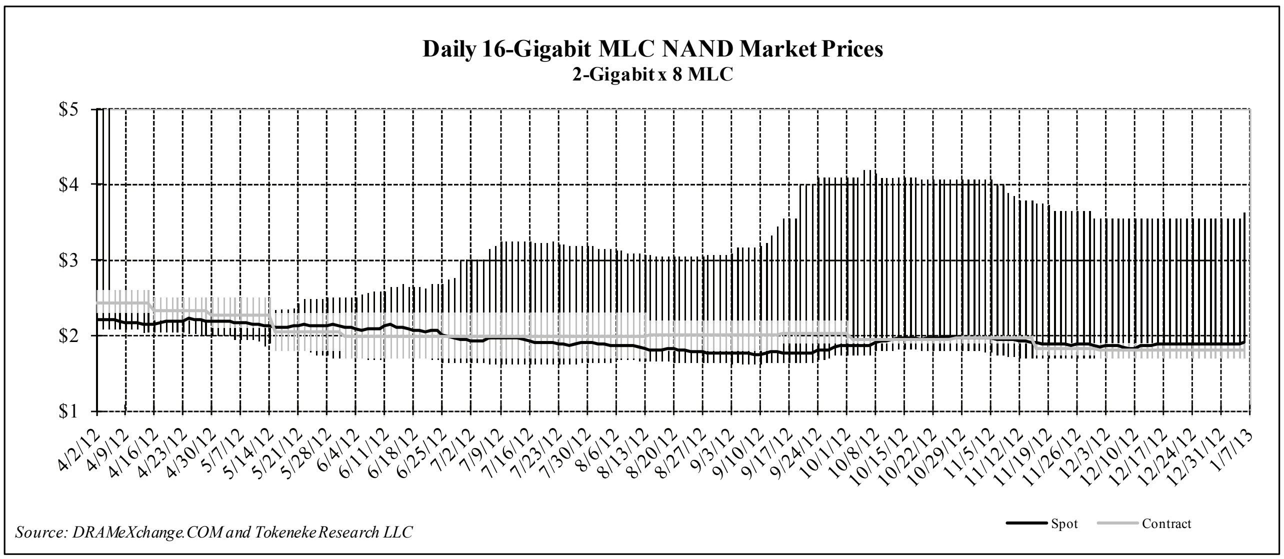

Worldwide Semiconductor Revenue Growth
Sequential 3-month Rolling Average
9%
7%
5%
3%
1%
-1%
-3%
-5%
-7%
-9%
-11%
-13%
-15%
-17%
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
Source: WSTS and Tokeneke Research LLC

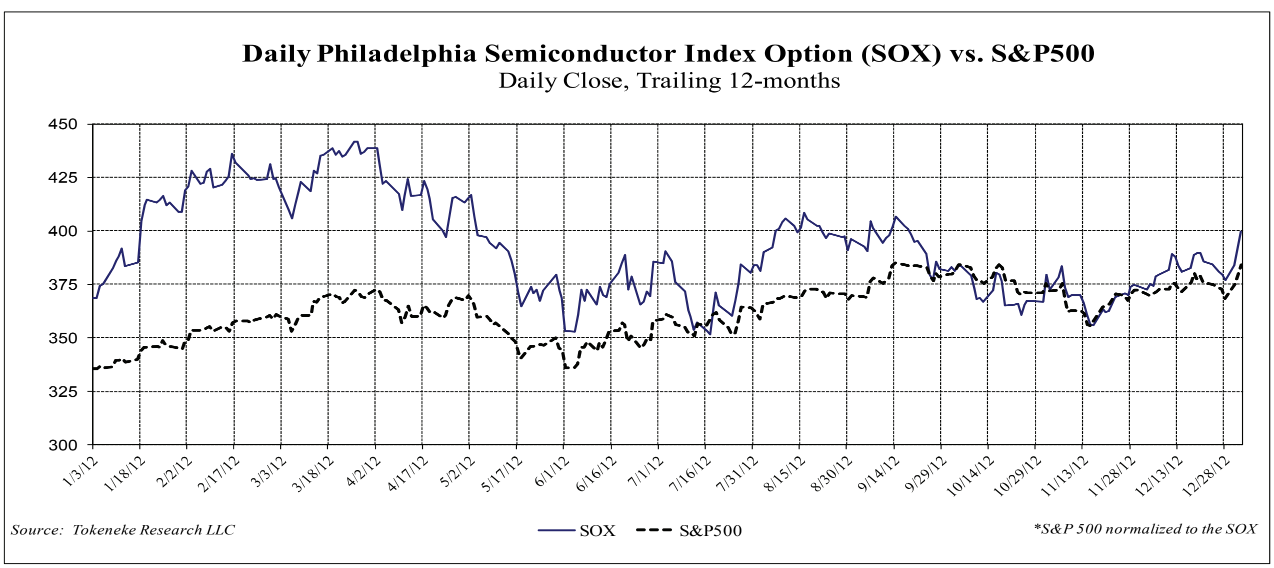
Weekly Philadelphia Semiconductor Index Option (SOX) vs. S&P 500

Source: Tokeneke Research LLC

**S&P 500 normalized to the SOX*


Daily 2-Gigabit DDR3 DRAM Market Prices
256-Megabit x 8 DDR3 1066/1333MHz
$1.50
$1.00
$0.50
Spot
Contract
Source: DRAMeXchange.COM and Tokeneke Research LLC


Daily 16-Gigabit MLC NAND Market Prices
2-Gigabit x 8 MLC
$5
$4
$3
$2
$1
Spot
Contract
Source: DRAMeXchange.COM and Tokeneke Research LLC


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

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