

## Timing is Everything for 2014

### Share Prices Rally Amid Business Weakness: Near-term Risk is to the Downside.

The bad news is that semiconductor sector share prices are poised for a near-term correction, in my opinion. But the good news is that the recovery following that correction could amply reward investors who most correctly identify that trough. The 4Q earnings season beginning next week is likely to disappoint investors given guidance for an expected decline as well as equally uninspiring 1Q seasonality. But subsequently improving business conditions—not to mention increasingly attractive fundamental valuations—could very well prove to be both attractive and rewarding to investors over the course of the rest of the year, in my opinion. Timing is everything for 2014.

**November Ekes a Gain:** Worldwide semiconductor industry revenue grew only slightly during November, similar to the prior month. Statistics released by the Semiconductor Industry Association (SIA) last week reflected a three-month rolling average gain of +0.6% compared to average growth of +1.7% with a high of +6.3%, a low of -7.2%, and only four declines over the last 23 years—although three of those occurred during the last six years. The Americas kept its lead with growth of +4.2% followed by Europe at +2.0%. Japan was nearly flat at +0.1% and Asia-Pacific trailed with a decline of -1.0%.

Next month's release of December data is usually pretty bad: it has averaged a loss of -2.6% with a high of +3.3%, a low of -16.6%, and has declined 21-times in the last 23 years—including every one of the last 13 years.

**4Q Decline Expected:** The 4Q outlook based on management guidance is calling for a sequential decline across the semiconductor industry of -1.7% which is well below historical average growth of +1.5%. The chip industry has averaged a 4Q sequential gain of +1.5% with a high of +16.6% and a low of -24.2%, but has been negative nine times in the last 23 years including five of the last six years. The specific range of weighted sales from my Universe from the 3Q earnings season called for a decline centered at -1.7% ranging from -4.5% to +1.1%, and preannouncements to-date have retained the mid-point but narrowed the range to -4.3% to +0.9%. Eight companies have preannounced so far, including five that narrowed or reiterated original guidance (DIOD, MCHP, RMBS, SIMO and TXN); two that lowered guidance (IDCC and SMTC); and one that raised expectations (BRCM, although it still expects a sequential decline approximating -6%).

Over the last several months the worldwide economy has been fragile—but growing at a slow pace; PC markets have been declining; consumer markets have been lackluster (think flat TVs and smartphones cannibalizing digital cameras); and higher-growth expectations for both China (in general) and smartphones and tablets (in particular) have largely tempered. Respectable 3Q sequential growth that exceeded original expectations was supported by continued strength from automotive and industrial markets, new video game platform introductions, persistent inertia from smartphones and tablets, as well as gains from communication infrastructure markets. DRAMs have also accounted for noticeable strength as market prices rallied following supplier consolidation with the Micron acquisition of Elpida, and a production shortfall due to a fire in a large manufacturing facility at supplier Hynix.

**Chip Sector Stocks Rally and Outperform:** Semiconductor sector stocks rallied last month and this time outperformed broader equity markets. The Philadelphia Semiconductor Index Option (SOX) launch a gain of +4.9% during December and the average stock in the Tokeneke Universe grew by a comparable +4.4% with a solid 67 out of 97 issues advancing. This performance bested broader equity market gains from the NASDAQ, S&P500 and DOW of +2.9%, +2.4%, and +3.0%, respectively. While the chip sector slightly underperformed during 4Q, for the year it retained the early lead it had established over broader equity market indices. The SOX ended 2013 with a gain of +39.3% with the average stock in my Universe up by an even better +40.5% with 72 out of 97 advancing, compared to NASDAQ, S&P500 and DOW gains of +38.3%, +29.6%, and +26.5%, respectively.

December				4Q				2013				Indices					
Winners (67/97)		Losers		Winners (63/97)		Losers		Winners (72/97)		Losers		Dec		4Q		2012	
HIMX	47.1%	GIG	-20.3%	AMBA	73.7%	IDCC	-21.0%	HIMX	512.9%	PSMI	-51.6%	SOX	4.9%		9.0%		39.3%
TSEM	39.0%	PSMI	-19.7%	QUIK	50.2%	SONS	-18.4%	SPWR	430.4%	MLNX	-32.7%	SMH	3.0%		6.4%		31.2%
LSI	36.7%	SIGM	-15.9%	MOSY	48.4%	PSMI	-17.4%	MU	243.1%	CRUS	-29.5%	NASDAQ	2.9%		10.7%		38.3%
AMBA	36.7%	SMTM	-14.9%	HIMX	47.1%	CAVM	-16.0%	AMBA	203.9%	IDCC	-28.2%	S&P500	2.4%		9.9%		29.6%
MXL	22.7%	IDCC	-13.0%	LSI	41.0%	SMTM	-15.7%	PXLW	115.2%	ANAD	-27.0%	DOW	3.0%		9.6%		26.5%
average stock +4.4%				SOX +4.9%				average stock +40.5%				SOX +39.3%					

**2014 Outlook:** Here is how I think 2014 will play out: Semiconductor industry business conditions will continue to grow at the slow pace and pattern established over the last couple of years, but chip sector share prices will experience a correction before recovering throughout the balance of the period.

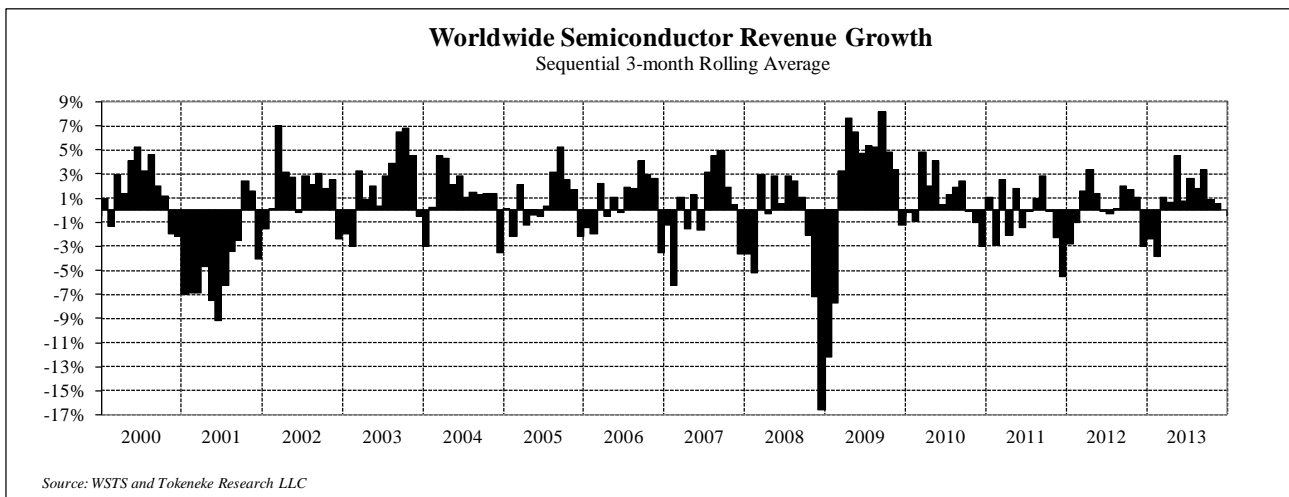
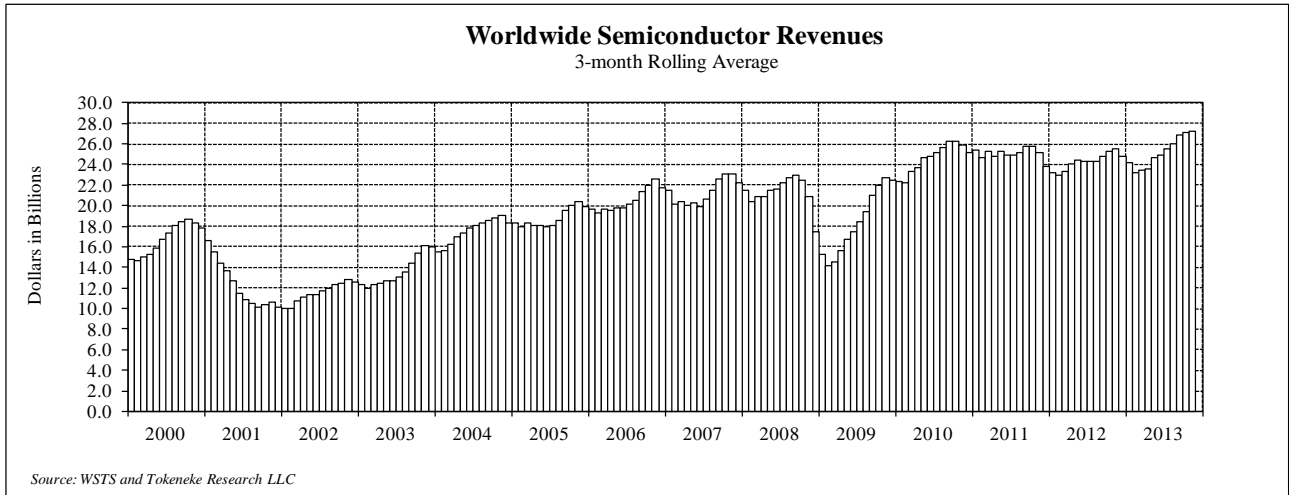
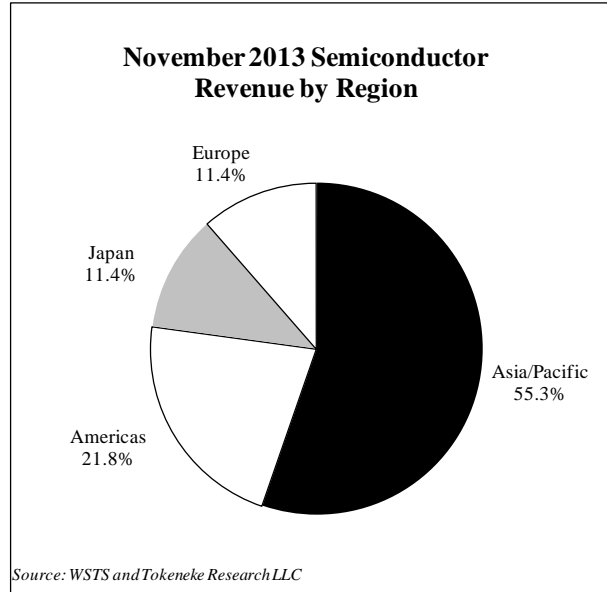
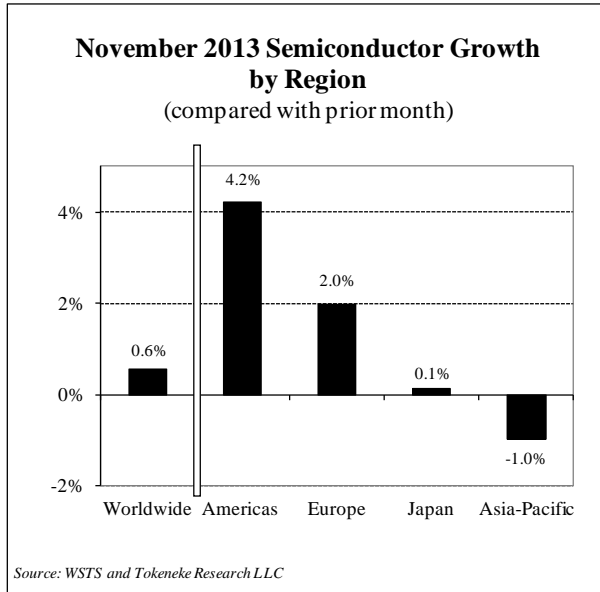
Several years ago semiconductor industry seasonality largely tracked PC market supply characteristics, with a weaker first half of the year including a trough during 2Q, followed by a stronger second half with a 4Q peak. But the world changed after the financial crises in 2008: anemic worldwide macroeconomic 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.

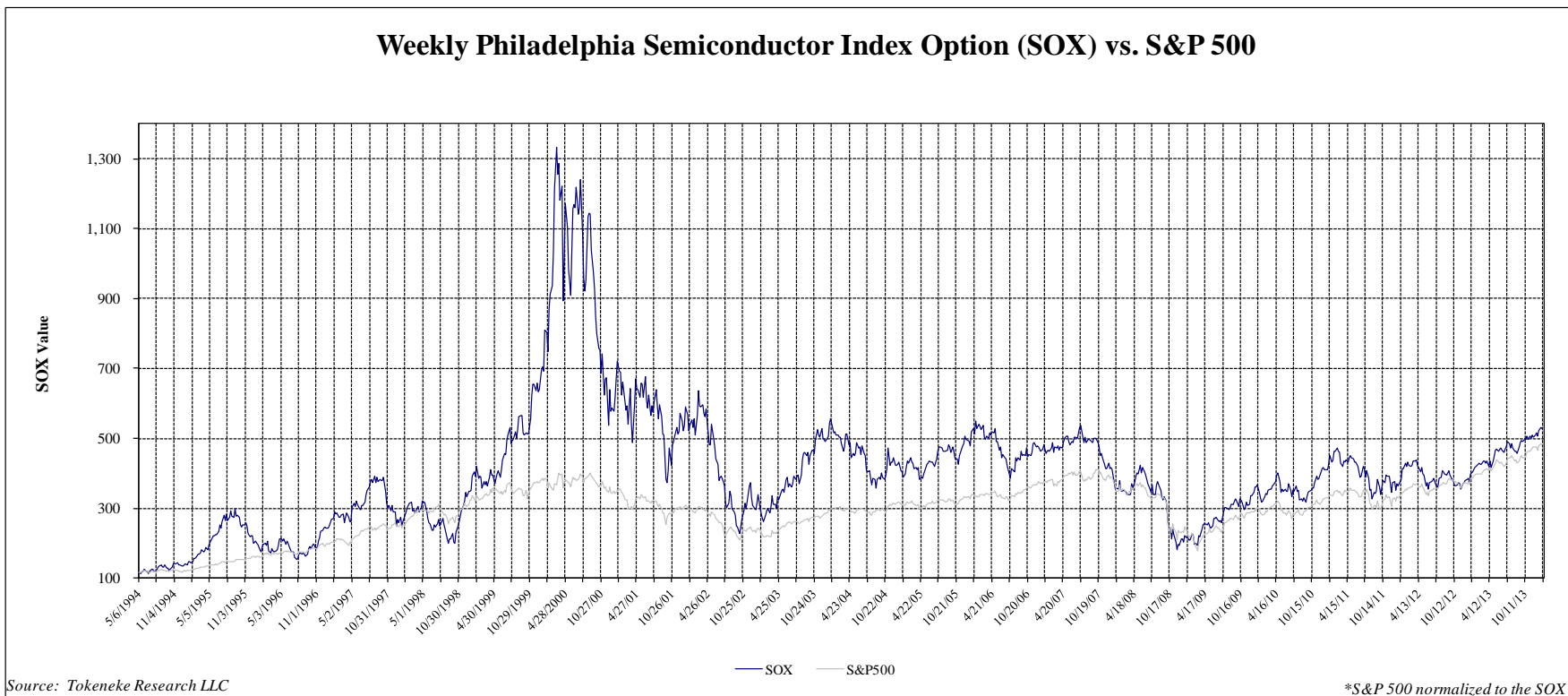
The general pattern of 'consumer market' seasonality has largely played out across the semiconductor industry over the last couple of years, and given persistently lackluster macroeconomic conditions I don't foresee much of a change to that pattern this year. 4Q guidance is already calling for a decline and 1Q has averaged a drop of -2.1% over the last 23 years with 14 of them declining—including seven of the last nine. Given this pattern and the lack of any noticeable sector of strength (okay, other than DRAMs), I don't think the 4Q earnings season beginning next week will prove to be very inspiring.

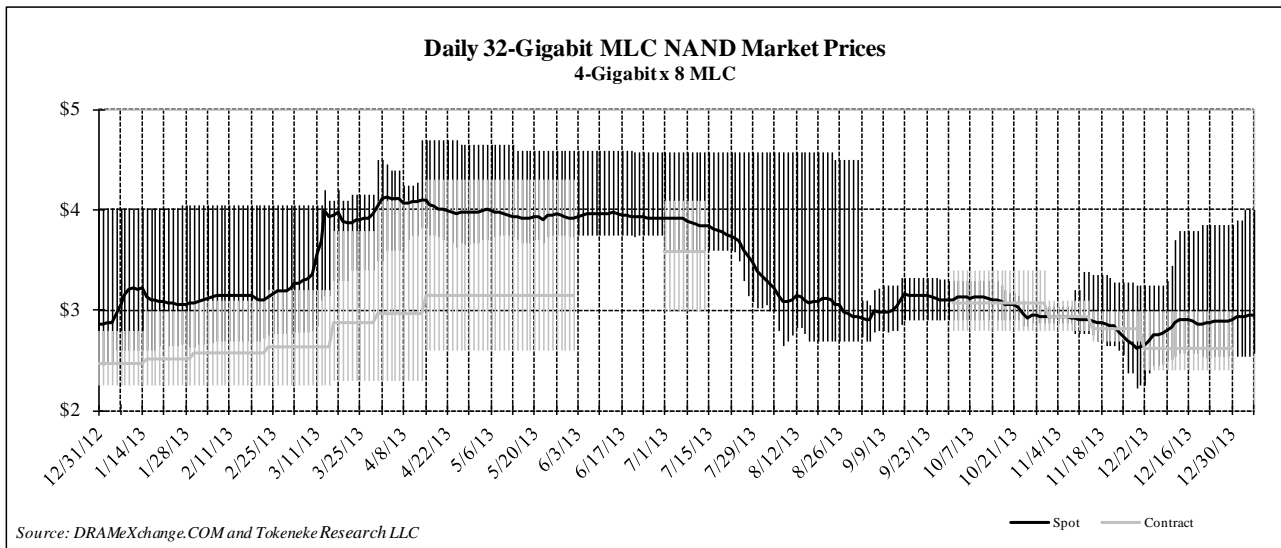
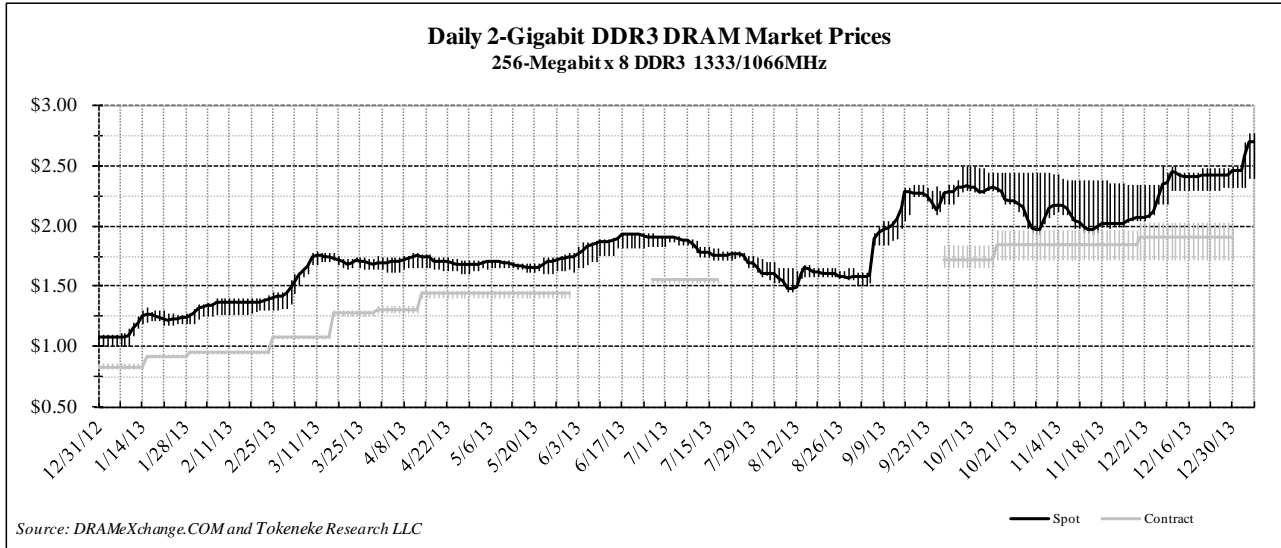
My sector view on share price dynamics is pretty straightforward given the recent rally and outperformance amid deteriorating business conditions. As a fundamental analyst, I simply don't expect recent growth and valuation premiums experienced by chip sector equities to persist. The bad news is that I believe the sector is poised for a likely correction over the next few months. But the good news is that I also believe the trough of that correction will prove to be a very attractive entry point. Chip sector share price gains this year probably won't prove to be very noteworthy—but the incremental gains following the correction could well be.

**Timing is Everything:** 2014 can be a year of opportunity for chip sector equities, but we need to wait for the storm to pass first, in my opinion. The 4Q earnings season that begins next week is likely to disappoint investors given guidance for an expected decline as well as equally uninspiring 1Q seasonality. But subsequently improving business conditions—as well as increasingly attractive fundamental valuations—could very well prove to be both attractive and rewarding to investors over the rest of the year, in my opinion. Timing is everything for 2014.

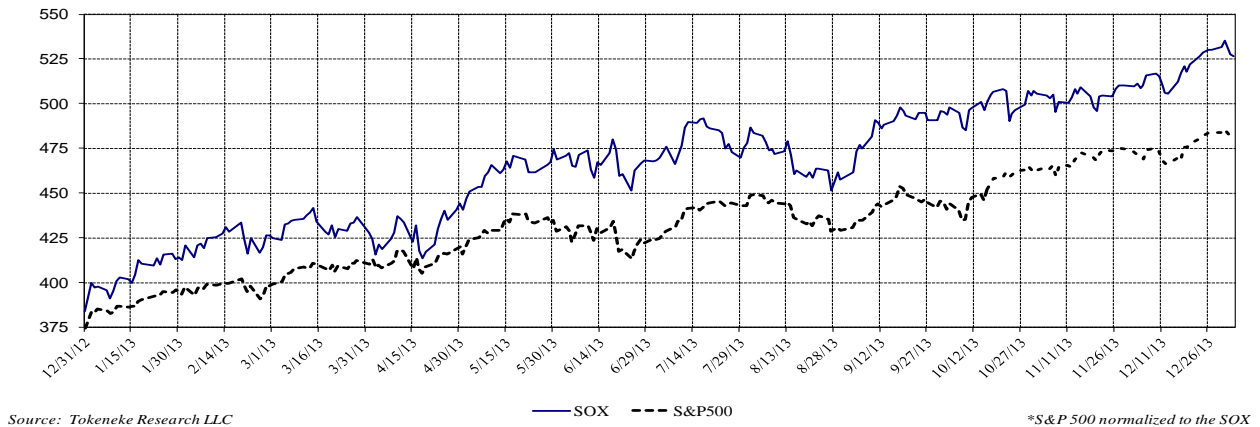
—Dan K. Scovel  
Semiconductor Analyst







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



## **The Company**

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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.

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