October Extends 3Q Strength

But Seasonality is Turning Unfavorable after Two Share Price Rallies

The good news is that business is growing and share prices have rallied. Semiconductor industry revenue growth strength exhibited during the third quarter has spilled into the beginning of the fourth, and sector share prices extended their 3Q outperformance after the election—with only a brief hiatus in between. Oh, and election uncertainty is finally over. Unfortunately, I think semiconductor sector share price valuations are stretched relative to broader equity markets and we are now entering a period of seasonal weakness in a no-growth environment. While mergers and acquisitions will continue and specific opportunities exist, I continue to look for a share price trough for the sector in the March/April timeframe ahead of a seasonal 2Q recovery.

October Strength: Worldwide semiconductor industry revenue increased by a better-than-seasonal +3.4% sequentially on a three-month rolling average basis during October, according to statistics released by the Semiconductor Industry Association (SIA) earlier this week. This is the fifth consecutive above-average month. October's performance compares to its average gain of +2.4% with a high of +6.8%, a low of -2.0%, and only three declines in the last 26 years—all in the last eight years. The Americas led the pack with a gain of +6.5% followed by China at +3.2% and Japan at +3.0%. Europe and Asia-Pacific trailed with gains of +2.2% and +2.0%, respectively.

I view October's strength as an extenuation of the 3Q that was very strong compared to both expectations and seasonal norms. The 3Q sequential quarterly revenue gain of +11.5% was the fifth highest in the last 26 years, compared to the average revenue increase of +6.2% with a high of +19.9% and a low of -11.7%. It declined only twice—and grew in each of the last 14 years. The Americas led sequential growth for the quarter at +15.0% followed by China at +14.2%, Japan at +10.8% and Asia-Pacific at +9.5%. Europe brought up the rear at +3.0%. Weighted revenue for my Tokeneke Universe finished up by a similar +11.7% after original guidance calling for +7.4% that skewed upward to +9.2% after only six mostly positive preannouncements. At 49%, nearly half of the 66 companies reporting met or exceeded expectations for a combination of 3Q revenue and earnings and 4Q revenue outlook. Only 12% missed or met expectations, with the balance offering mixed results.

Next month's release of November data typically reflects softer seasonal gains: It has averaged a gain of +1.5% with a high of +6.3%, a low of -7.2%, and only five declines in the last 26 years—including four in the last eight years. I expect to see a possible decline next month, given company guidance for a flat sequential 4Q.

Flat 4Q: The 4Q revenue outlook based on management guidance across the Tokeneke Universe is currently reflecting a flat quarter, with the weighted average guidance for a sequential revenue decline centered at -0.3% ranging from -3.2% to +2.5%, The semiconductor industry has averaged a 4Q sequential revenue gain of +1.3% with a high of +16.0% and a low of -24.2%, but has declined 12 times in the last 26 years—including eight of the last nine years, according to industry statistics. I have only seen three preannouncements as of this writing: two lowering guidance and one narrowing its range, for a minimal rounding error change to the statistics.

Chip Stocks Rally: Semiconductor sector stocks rallied and outperformed broader equity markets during November, after gains during the third quarter that account for the vast majority of year-to-date performance. Last month the Philadelphia Semiconductor Index Option (SOX) advanced by +6.8% while the average stock in the Tokeneke Universe gained +6.6% with 52 out of 68 issues advancing, compared to gains from the NASDAQ, S&P500 and DOW of +2.5%, +3.4% and +5.4%, respectively. Year-to-date the chip sector is significantly outperforming broader equity markets with the SOX up by +32.6% and 55 out of 68 Tokeneke stocks up by an average of +28.7% compared to those same three indices with gains of +6.3%, +7.6%, and +9.7%, respectively.

November			
Winners *(52/68)*		**Losers**	
MTSI	35.5%	MOSY	-37.6%
MSCC	30.0%	IOTS	-12.2%
NVDA	29.6%	NPTN	-7.7%
AMD	23.2%	HIMX	-6.1%
IPHI	21.8%	SQNS	-4.9%
average stock +6.6%		*SOX +6.8%*	

QTD *(4Q)*			
Winners *(40/68)*		**Losers**	
NVDA	34.6%	MOSY	-56.7%
MSCC	30.4%	PI	-27.0%
AMD	28.9%	MX	-22.7%
AMCC	25.9%	NPTN	-20.9%
STM	25.3%	IOTS	-18.2%
average stock +2.4%		*SOX +5.3%*	

YTD			
Winners *(55/68)*		**Losers**	
AMD	210.5%	IOTS	-76.7%
NVDA	179.7%	MOSY	-70.2%
AOSL	136.7%	INFN	-53.0%
PI	95.1%	INVN	-25.3%
CRUS	86.3%	QUIK	-22.1%
average stock +28.7%		*SOX +32.6%*	

Indices	*Nov*	*QTD*	*YTD*
SOX	6.8%	5.3%	32.6%
SMH	4.1%	2.3%	33.4%
NASDAQ	2.6%	0.2%	6.3%
S&P500	3.4%	1.4%	7.6%
DOW	5.4%	4.5%	9.7%

Yet Another Flat Year: The chip industry is looking at another flat year in 2016—gone are the years of double-digit growth. This year market researchers are forecasting industry revenue growth around a range of -1% to +1%, although recent revisions have inched to the higher side of the range. The Semiconductor Industry Association

(SIA) recently endorsed the WSTS Autumn update calling for a slight industry annual revenue decline of -0.1% to $335B this year, up from the Spring forecast calling for a decline of -2.4%. This means that seasonality continues to govern business conditions more so than any possible cyclicality at a macro level across the industry: 1Q is a trough, 2Q is a recovery, 3Q is a peak, and 4Q retreats.

Sectors expected to outperform the industry this year include the Asia-Pacific and Japan regions as well as discrete, sensor, analog and microprocessor product groups—and a recent turn-around in DRAMs. From an end-market perspective, data centers, automotive, industrial and internet-of-things (IoT) are showing nice growth while networking and smartphones are hanging in there. Unfortunately such strengths are pretty much being offset by declining PCs and tablets amid lumpy telecom and stagnant overall cell phones. The problem is that PCs and cell phone markets are huge, while automotive is just starting to emerge as meaningful and the grab bag of emerging IoT is fairly tiny. I am as excited as anyone about drones, wearables, smart homes, VR and AR, but these market opportunities are going to take years to reach enough critical mass to move the needle across the entire semiconductor industry. Thank goodness for automotive between now and then.

M&A Crap Shoot Continues: Mergers and acquisitions have been running at a fever pitch driven primarily by the lack of overall sector and macroeconomic growth, in my opinion. And I think it will continue until growth resumes. Pending takeovers in my Universe include: ACTS going private, AMCC going to MTSI, ISIL going to Renesas, LLTC going to ADI, LSCC going private, and NXPI going to QCOM. While the argument for a tempering of M&A activity due to the loss of targets is not a bad one (my Tokeneke Universe of US equities has shrunk to 68 from over 130 ten years ago), we have already seen a pre-empting of IPOs due to the acquisition of small private companies, as well as a vertical moves in the supply chain (SanDisk to Western Digital, and Brocade to Broadcom/AVGO)—both of which remain target-rich environments. I think we will continue to see consolidation amongst the fittest for at least the next several months—although the specifics in terms of buyers, targets, timing and price will be difficult to forecast with any accuracy or precision.

Entering Seasonal Weakness: Seasonality is now turning adverse across the chip sector, and will not turn favorable until spring with the seasonal 2Q recovery. The 3Q is done and we can now look forward to an anemic 4Q and the seasonal trough of the 1Q. Not exactly a recipe to drive share prices from a fundamental business perspective. Bottom line: wait for a trough in the March/April timeframe.

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 cell phone—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. This pattern has largely played out across the semiconductor industry over the last few years, and I don't see much of a change anytime soon.

Relative Sector Correction: Another problem is the relative outperformance of the chip sector compared to broader equity markets, as noted above in the year-to-date performance of equity indices and the graph on Page 4. The spread between the SOX and S&P500 is starting to get a bit stretched: not dangerously so, but some—and I don't see any favorable near-term sector fundamentals strong enough to drive the spread farther.

Macro Optimism: The good news is that equity market action since the election seems to indicate investors are more excited about the potential for economic growth associated with regulatory and tax cuts than fears of a slowdown associated with potential international trade wars.

Springtime for Semiconductors: Opportunities are still out there, but my take on the semiconductor sector is one of caution as we exit the seasonal business peak and approach the seasonal trough. We'll see what the new administration brings, but until growth emerges I think waiting for seasonality to turn favorable is the best bet.

—Dan K. Scovel
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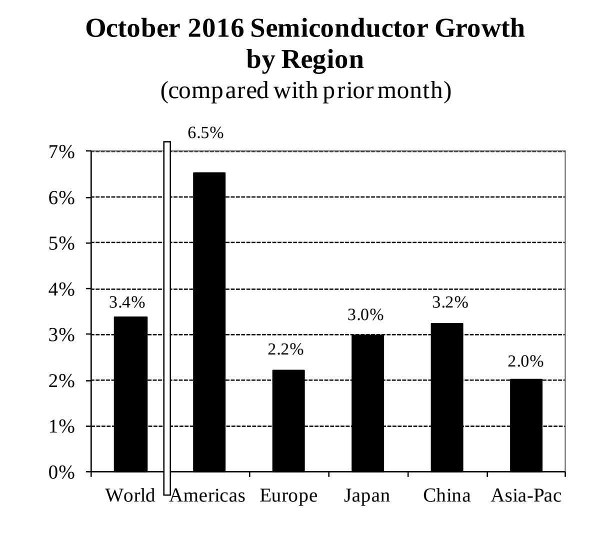
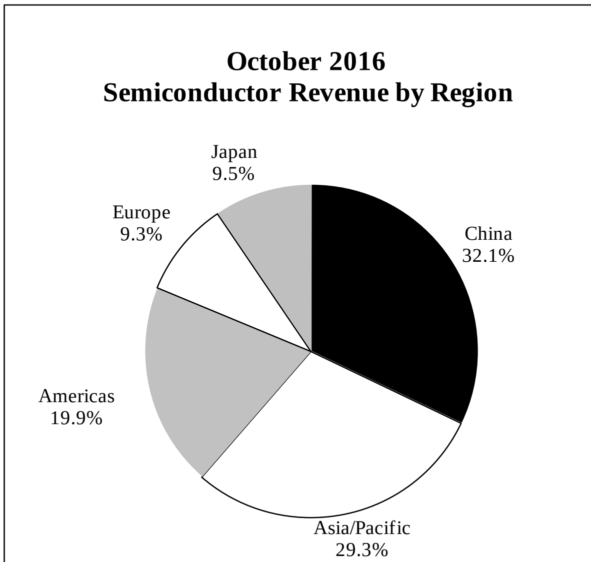


Source: WSTS and Tokeneke Research LLC



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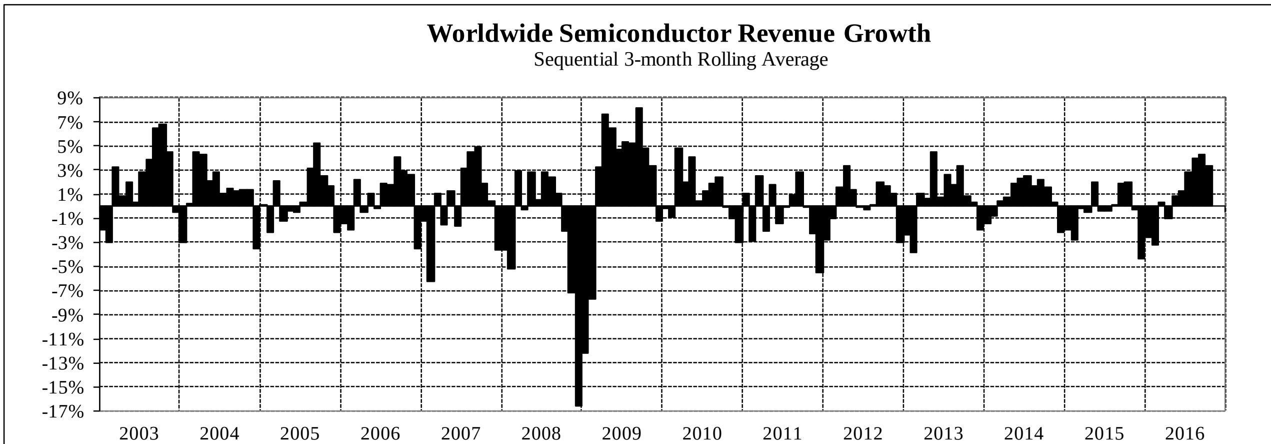
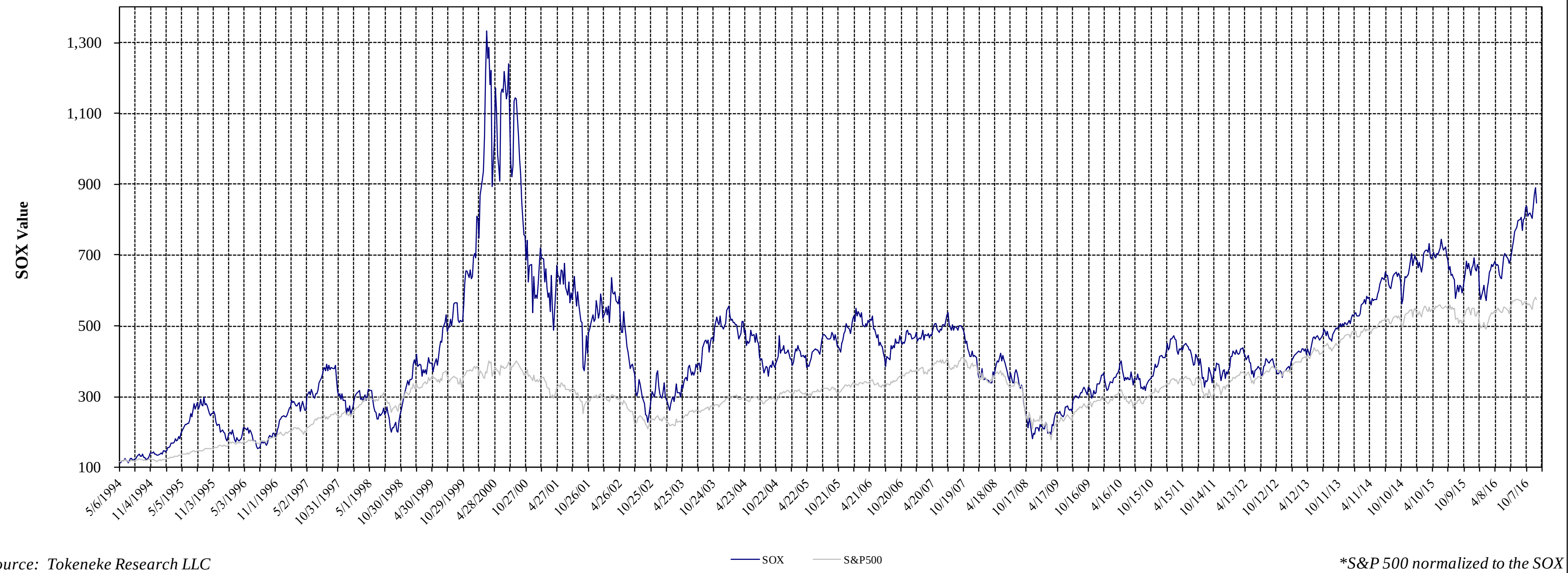


Source: WSTS and Tokeneke Research LLC

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



Source: Tokeneke Research LLC

**S&P 500 normalized to the SOX*

The Company

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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 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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