

Above Average May Chip Growth

Chip Stocks Outperform as 1Q Results Beat Lowered Expectations

The good news is that AI continues to drive growth across the semiconductor industry, May industry statistics were well above average, and chip sector share prices have rallied as most companies reported 1Q results that exceeded previously lowered expectations. The bad news is that AI growth is tempering amid lackluster 2Q guidance for revenue growth, and the share price rally over the last two months offset a correction that I had hoped would offer at least some attractive fundamental equity valuations. And, oh yeah—don't forget geopolitical economic uncertainty.

AI single-handedly accounts for chip industry revenue growth expected at +11% this year driven by NVDA and I continue to hope that AI cap ex euphoria ahead of revenue streams and profits lasts long enough for PCs, smartphones, automotive and the rest of the semiconductor end-markets to return to growth. In the meantime, the SOX index remains over-extended versus the S&P500 and most fundamental valuations across the sector are not attractive. I would still be extremely selective considering potential chip sector opportunities at this time.

Geopolitical Gymnastics: One of the more entertaining Geopolitical Gymnastic performances over the last month came from EDA supplier Synopsys (SNPS) who announced April-ending FY2Q earnings on May 28, suspended July-quarter guidance the following day due to US export restrictions to China, and then announced those restrictions had been rescinded on July 2—but did not reinstate quarterly guidance. Hence, geopolitical uncertainty.

Recall the new normal chaos is every semiconductor company preserving its supply chain and sales in a variety of ad hoc fashions by skipping around ever-evolving US, Chinese and European technology sanctions, embargoes and tariffs. 'De-Sinicization' describes Chinese and Taiwanese companies expanding operations to more politically neutral countries like Singapore, while 'Geopolitically Dependable Capacity' describes TI's strategy to support various customer supply requirements from a variety of locales. 'Indigenization' includes government grants and loans incentivizing domestic semiconductor operations that includes multiple billions of dollars from the US, China, Japan, India, South Korea, Malaysia, Taiwan and Spain. The Chinese grow-your-own category is referred to as 'Huawei-ization' due to that company's political isolation from the US—and this phenomenon appears to have accelerated the most in the last couple of months.

Universe Deviations: Recall that my US-equity-based Tokeneke Universe does *not* include very large international players (Samsung, SK Hynix, Kioxia, MediaTek, Infineon, Renesas, Rohm, Winbond, Macronix, Nanya, Novatek, Realtek) although it does include wafer foundries (TSMC, UMC, GlobalFoundries, Skywater Tech, Tower Semi) and IP companies (Rambus, Ceva, InterDigital, Arm, Adeia) that count as costs associated with manufacturing rather than industry sales. Note my Universe on Page 5. I also normalize fiscal quarters to the best fitting two out of three months, and I don't segregate non-semiconductor corporate revenue. Unreported acquisition stub periods and mergers exiting the sector can also make a difference.

While these differences compared to semiconductor industry sales are significant, most US-based investors experience the sector from the Tokeneke Universe perspective. The Philadelphia Semiconductor Index Option (SOX) also includes wafer foundries, IP companies and equipment firms as well.

So, what does this mean? Well, near-term it means that my Universe and US equities will likely outperform industry sales statistics due to AI 'double-dipping' as NVDA and other chip company sales are boosted by suppliers that include wafer foundries (TSMC), IP firms, assembly and test providers, and equipment suppliers.

Above Average May Growth: Worldwide chip industry revenues for May grew by an above average +3.5% sequentially on a three-month rolling average basis, according to statistics released by the Semiconductor Industry Association (SIA) on Monday. I am surprised at the relative strength given the lackluster 2Q guidance across my Universe during the 1Q earnings season announcements, although the strength is consistent with reports expecting strength earlier in the season. May has averaged growth of +1.9% with a high of +6.5%, a low of -7.5%, and six declines in the last 39 years including only one in the last 20 according to industry statistics. Asia-Pacific led with growth of +6.0% followed by China at +5.4% and Europe at +4.0%. The Americas and Japan lagged with gains of +0.5% and +0.2%, respectively.

August's release of June and 2Q statistics should fall below average given my somewhat anemic 2Q Universe outlook. June has averaged growth of +0.7% with a high of +5.3%, a low of -9.2%, and 16 declines in the last 39 years including six in the last 17 according to industry statistics.

2Q Outlook Below Average: The specific weighted average guidance for revenue across my Universe during 1Q earnings announcements calls for a sequential increase of +3.4% this quarter (2Q), ranging from +0.9% to +5.9%, although the expected mid-point of growth steadily eroded from an initial +6.9% as the earnings season progressed. The 2Q is seasonally a period of recovery for the year with average revenue growth of +4.2%, a high of +20.0%, a low of -19.9%, and only eight declines in the last 39 years—including two of the last 13, per industry statistics.

Offerings, an Acquisition and a Bankruptcy Restructuring: Last month SiTime closed a follow-on offering of just over 2M shares at \$200 each netting \$387M for the company, Netlist announced a \$12M registered direct offering of 17M shares and warrants for twice as many shares at \$0.70 each (after winning \$445M in damages from Micron Technology from a long running patent infringement case), Qualcomm announced the acquisition of Alphawave Semi out of the UK for \$2.4B, and Wolfspeed reorganized debt and equity under a pre-packaged plan (bankruptcy?) to sustain operations. On the more creative side, Western Digital will exchange 18.5M shares of SNDK equity from its recent spin-out of Sandisk to pay off certain WDC debt, and Sequans Communications announced a \$384M offering of debt and equity private offerings to buy Bitcoin for a treasury initiative.

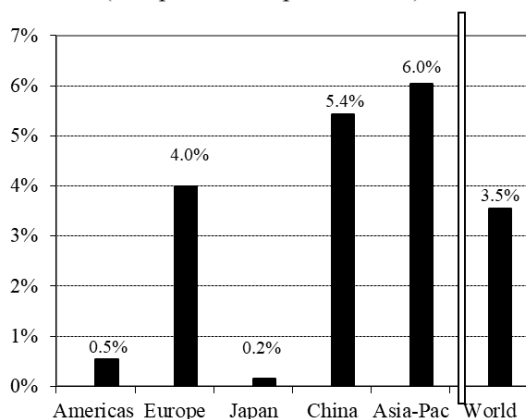
June Chip Sector Rally Leads to Outperformance: June semiconductor sector share prices outperformed broader equity markets for the second month in a row as most companies exceeded previously lowered expectations during 1Q earnings season announcements allowing the SOX to (finally) outperform year-to-date, although my Universe continues to lag. During June the Philadelphia Semiconductor Index Option (SOX) gained +16.6% while 52 out of 57 stocks in my Universe advanced by an average of +13.5%. The NASDAQ, S&P500 and DOW were up by +9.6%, +6.2%, and +3.9%, respectively.

June				2Q				YTD				Indices			
Winners (52/57)		Losers		Winners (48/57)		Losers		Winners (29/57)		Losers			Jun	2Q	YTD
ALGM	34.9%	WOLF	-66.5%	NVTS	219.5%	WOLF	-87.0%	NVTS	83.5%	WOLF	-94.0%	SOX	16.6%	29.9%	11.4%
INDI	34.3%	SQNS	-14.6%	INDI	74.9%	SQNS	-30.0%	ALGM	56.4%	SQNS	-57.9%	SMH	16.3%	31.9%	15.2%
MU	30.5%	NLST	-3.6%	GSIT	65.5%	NLST	-27.5%	MU	46.4%	QUIK	-45.5%	NASDAQ	6.6%	17.7%	5.5%
ARM	29.9%	PI	-2.6%	AVGO	64.6%	CEVA	-14.2%	SIMO	39.1%	ALAB	-31.7%	S&P500	5.0%	10.6%	5.5%
MRVL	28.6%	ALAB	-0.3%	ALAB	51.5%	PXLW	-7.1%	ARM	31.1%	AOSL	-30.7%	DOW	4.3%	5.0%	3.6%
average stock +13.5%				average stock +23.9%				average stock -0.3%				SOX +11.4%			

Chip Stocks Still Scary: AI is a huge opportunity but growth is tempering while the rest of the semiconductor industry's markets remain moribund as hope for a recovery from a bottoming is complicated by geopolitical uncertainty. In the meantime, the SOX index remains way over-extended versus the S&P500 (note the relative premium in the chart on Page 4), and most fundamental valuations across the sector are not attractive. I had hoped chip sector underperformance earlier this year would offer potential equity opportunities. But then shares rallied last quarter as most companies exceeded lowered expectations. Hence, I would remain extremely selective considering chip sector opportunities at this time.

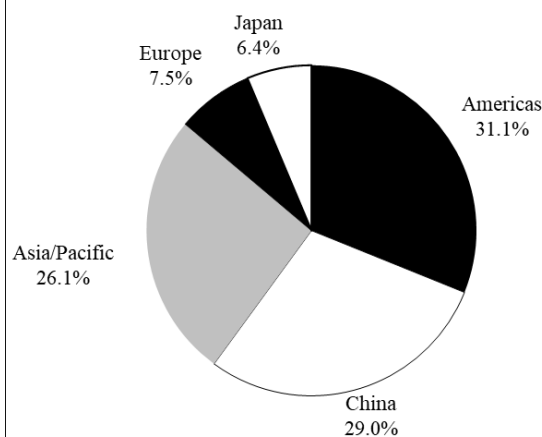
—Dan K. Scovel
Semiconductor Analyst

May 2025 Semiconductor Growth by Region
(compared with prior month)



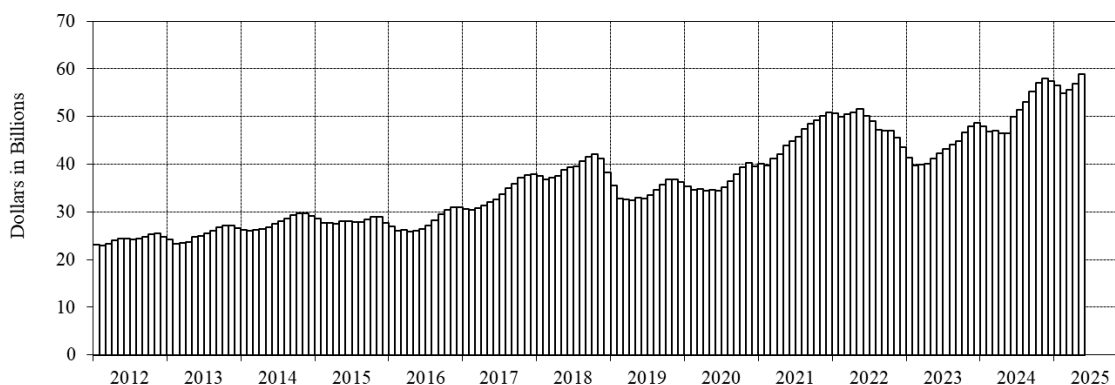
Source: WSTS and Tokeneke Research LLC

May 2025 Semiconductor Revenue by Region



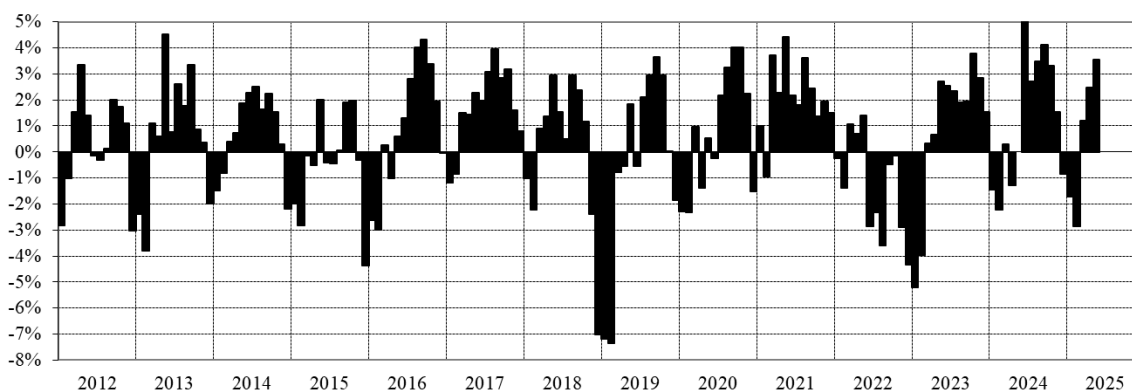
Source: WSTS and Tokeneke Research LLC

Worldwide Semiconductor Revenues
3-month Rolling Average



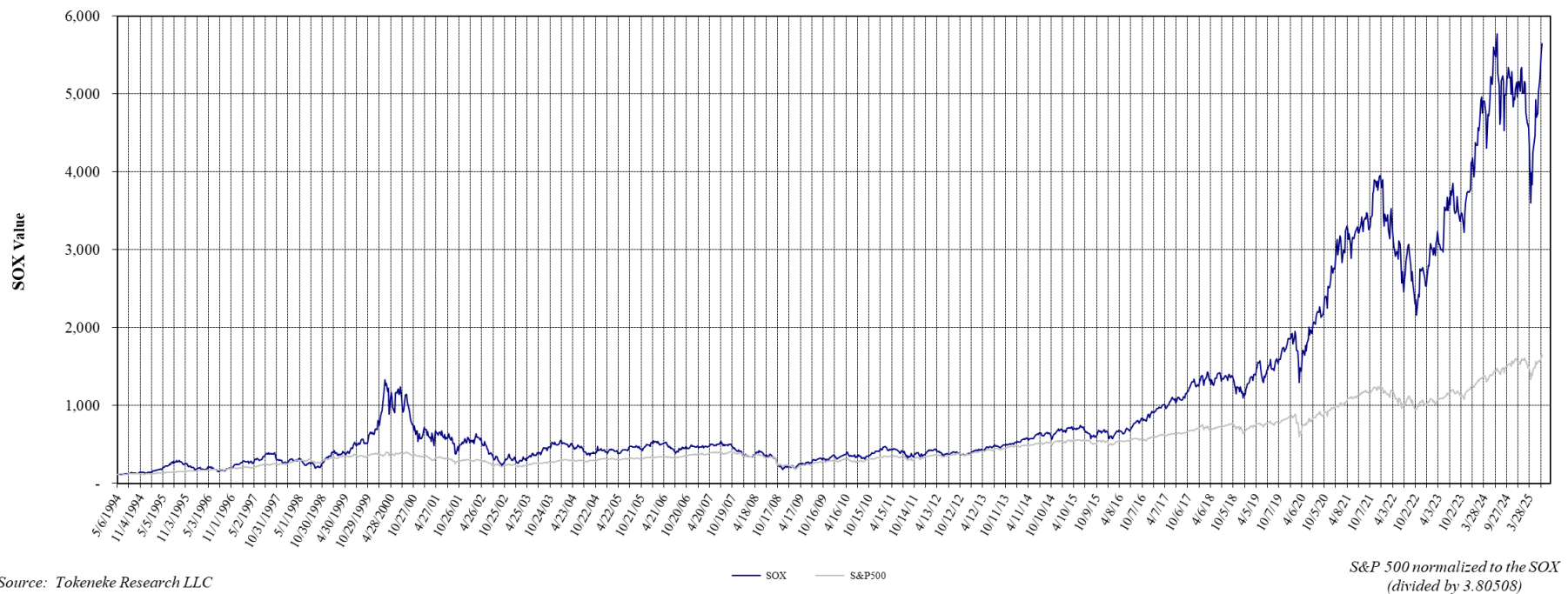
Source: WSTS and Tokeneke Research LLC

Worldwide Semiconductor Revenue Growth
Sequential 3-month Rolling Average



Source: WSTS and Tokeneke Research LLC

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



The Tokeneke Universe:

57 companies/tickers as of 6/10/25.

Company	Ticker	Company	Ticker	Company	Ticker
Adeia	ADEA	Mobileye Global	MBLY	QuickLogic	QUIK
Analog Devices	ADI	Microchip Technology	MCHP	Rambus	RMBS
Astera Labs	ALAB	Monolithic Power Systems (MPS)	MPWR	Silicon Motion	SIMO
Allegro Microsystems	ALGM	Everspin Technologies	MRAM	SiTime	SITM
Amberella	AMBA	Marvell	MRVL	SkyWater Technology	SKYT
Advanced Micro Devices (AMD)	AMD	M/A-COM Technology	MTSI	Silicon Laboratories	SLAB
Alpha Omega Semiconductor	AOSL	Micron Technology	MU	Semtech	SMTC
Arm Holdings	ARM	MagnaChip	MX	Sandisk	SNDK
Broadcom	AVGO	MaxLinear	MXL	Sequans Communications	SQNS
CEVA	CEVA	Netlist	NLST	STMicroelectronics	STM
Cirrus Logic	CRUS	NVIDIA	NVDA	Skyworks Solutions	SWKS
Diodes	DIOD	Navitas Semiconductor	NVTS	Synaptics	SYNA
GlobalFoundries	GFS	NXP Semiconductors	NXPI	Tower Semiconductor (TowerJazz)	TSEM
GSI Technology	GSIT	ON Semiconductor	ON	Taiwan Semiconductor Mfg. Corp. (TSMC)	TSM
Himax Technologies	HIMX	Impinj	PI	Texas Instruments (TI)	TXN
InterDigital	IDCC	Power Integrations	POWI	United Microelectronics Corp. (UMC)	UMC
Indie Semiconductor	INDI	Pixelworks	PXLW	Valens Semiconductor	VLNS
Intel	INTC	QUALCOMM	QCOM	Vishay Intertechnology	VSH
Lattice Semiconductor	LSCC	Qorvo	QRVO	Wolfspeed	WOLF

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.

My Background

I have an electrical engineering degree, nearly 12 years of semiconductor industry experience, and was on Wall Street for nearly eight years where I was selected as Best On The Street semiconductor analyst by The Wall Street Journal in 2002.

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 as a sell-side analyst included the following: AMD, ALSC, ALTR, ARTI, ATML, CUBE, CY, ESST, GNSS, INTC, ISSI, LSI, MOSY, MU, OIIM, OVTI, RMTR, SHI, SMSC, STEC, SVTG, TDFX, TSRA, TXN, and ZRAN.

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