

## Semiconductors: structural strength meets cyclical gravity

- ▶ Semiconductor demand is powerful but is becoming dangerously narrow and front-loaded.
- ▶ Historic capex wave risks causing next glut; geopolitics and supply chain risks are rising.
- ▶ Stretched valuations and crowded positioning reflect a lot of good news is in the price.
- ▶ Sizing semis' allocations and rotating into AI hyperscalers and software is prudent.

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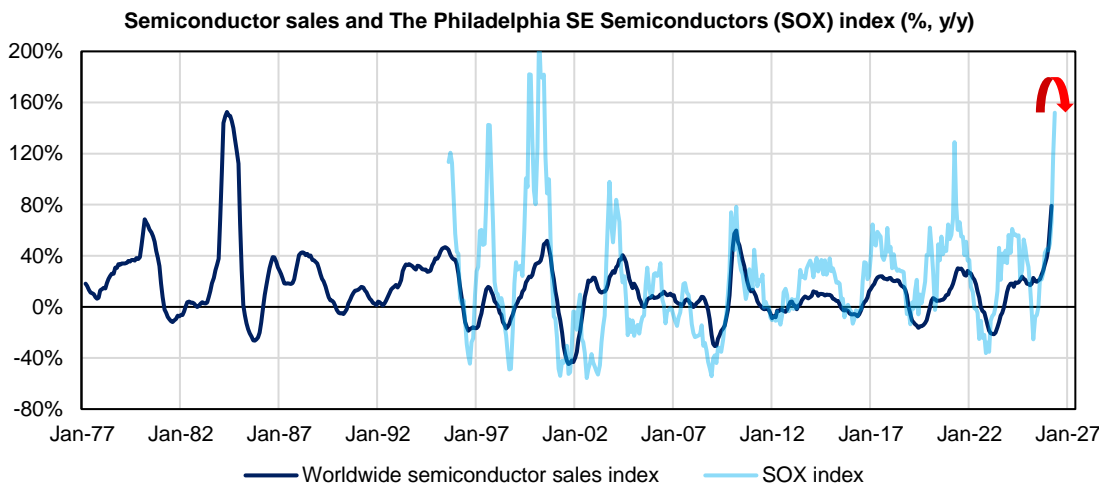
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## Semiconductor sector: why a bit of caution is warranted

The semiconductor story right now is fascinating: AI, data centres, edge computing, EVs, industrial automation, defence, all converging into a single, powerful demand narrative. Earnings beats from leading chipmakers and equipment suppliers, record capex plans from hyperscalers, and aggressive policy support in the US, Europe, South Korea, and Japan have reinforced the idea that we are in a multi-year "super-cycle." Major investment houses, industry bodies, and policy institutions all agree on the structural need for more compute, more memory, and more connectivity. It is indeed a textbook "long-duration growth" story with policy tailwinds and high barriers to entry.

But when you strip away the excitement, a more nuanced – and increasingly uncomfortable – picture begins to emerge. Semiconductors remain one of the most cyclical industries in global markets, with long, lumpy capex cycles, powerful inventory swings, and a history of over-investment following periods of euphoria. Even in the AI era, the sector is not immune to classic boom-bust dynamics. Recent performance numbers and the narrative highlight three things: the risk of over-concentration in a narrow set of AI-linked names, the possibility of over-building capacity in certain segments, and the vulnerability of the sector to policy, trade, and geopolitical shocks. In our view, that combination argues for a more measured stance than the current narrative might suggest.

**Exhibit 1: Semiconductors are notoriously cyclical causing significant volatility in the sector's equity prices**



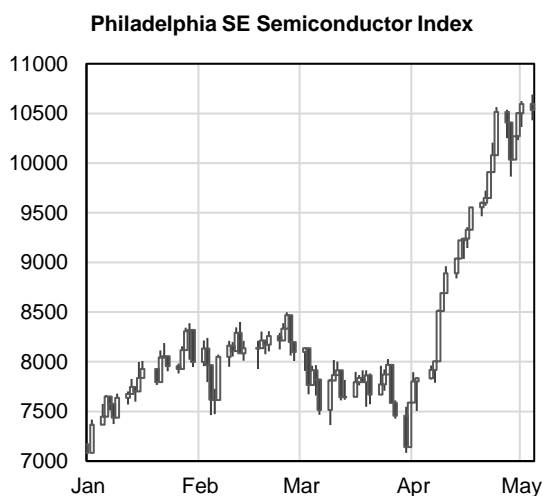
Source: World Semiconductor Sales statistics, Philadelphia Stock Exchange, LSEG Workspace, and ADCB Asset Management

## Demand: strong, but increasingly narrow and front-loaded

On the demand side, the AI and data centre story is real. Hyperscalers are committing enormous sums to GPU clusters, high-bandwidth memory, and advanced packaging. Industry forecasts point to double-digit growth in AI-related semiconductor revenues over the next several years (McKinsey projects that AI-related chips will grow at a 20%+ CAGR through 2030, reaching USD200-300bn in annual revenues – roughly one-third of the entire semiconductor market), and recent earnings calls have reinforced that AI infrastructure is now a board-level priority across big tech. Cloud, defence, and high-performance computing are all leaning into this theme. This is the core of the bullish case, and it is well-supported by both company guidance and industry projections.

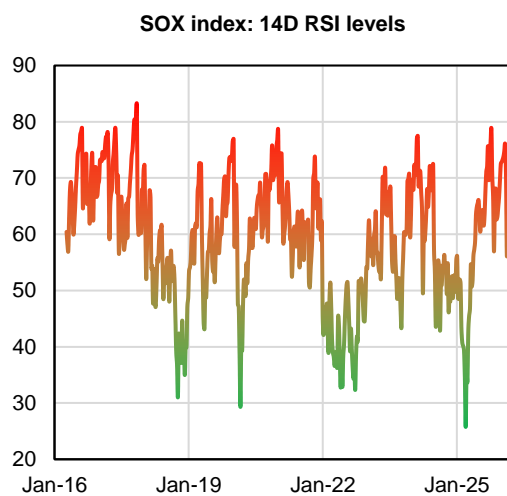
However, the demand profile is becoming increasingly narrow and front-loaded. A very large share of incremental growth is now tied to a small number of customers (US and Chinese hyperscalers, a handful of leading cloud and platform companies) and a small number of product categories (Graphics Processing Units (GPUs), High Bandwidth Memory (HBM), advanced logic, and associated equipment). Traditional drivers – smartphones, PCs, consumer electronics – are stabilising rather than booming. For example, IDC notes that 2025-2027 smartphone growth is expected to remain in the low single digits, driven mainly by replacement cycles rather than new demand; expects PC growth to average 2-4% annually through 2027, driven by refresh cycles and AI PCs, but not enough to create a broad-based boom. Auto and industrial are still supportive, but not enough to offset any future slowdown in AI capex. That concentration risk matters: if hyperscalers decide to slow the pace of build-out, optimise utilisation, or rotate from one vendor/architecture to another, the impact on specific names and sub-segments could be abrupt.

**Exhibit 2: SOX has risen c150% over the past year, and c40% over the past month\*....**



Source: Philadelphia Stock Exchange, LSEG Workspace, and ADCB Asset Management | Notes: \*Data as of May 05, 2026.

**Exhibit 3: .... pushing the index into the most overbought territory in many years**



Source: Philadelphia Stock Exchange, LSEG Workspace, and ADCB Asset Management

## Supply and capex: the seeds of the next down-cycle?

On the supply side, the sector is in the middle of a historic capex wave. Leading foundries and memory players are building new fabs across the US, Europe, and Asia, supported by generous subsidy programmes and “chips acts.” Equipment orders for advanced nodes, memory, and packaging have surged. Policy documents and company plans all point to a multi-year build-out of capacity, justified by national security, supply-chain resilience, and the AI demand story. In the near term, this supports growth and earnings for equipment makers and construction-linked names.



The risk is what happens when this capacity comes online. History suggests that when the industry simultaneously ramps capex across regions and technologies, it tends to overshoot. In memory, in particular, the cycle has repeatedly moved from shortage to glut as new capacity meets more normalised demand. The memory industry has a long history of overshooting: DRAM (Dynamic Random-Access Memory) and NAND (Flash Memory) both saw price collapses of 40-80% in 2001, 2008, 2012, 2019, and again in 2023 after periods of simultaneous global capex expansion. Each cycle followed the same pattern – shortage, aggressive investment, new capacity, and then a sharp correction once demand normalised.

Even in logic, the combination of onshoring, redundancy, and strategic stockpiling can create periods of underutilization and margin pressure. Several central banks and international organizations have quietly noted that large, policy-driven capex waves often lead to misallocation and excess capacity once the initial strategic urgency fades. The AI boom may well justify higher steady-state capacity, but the path from here to there is unlikely to be smooth.

## Valuations and positioning: a lot of good news in the price

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From a market perspective, valuations across key AI-linked semiconductor names have re-rated sharply. Price-to-sales, price-to-earnings, and enterprise-value-to-EBITDA multiples for leading GPU, HBM, and equipment suppliers are now at, or above, prior cycle peaks.

- ▷ Price-to-sales multiples for leading AI-accelerator suppliers have expanded to well above their 2020–2021 highs, reflecting the AI-infrastructure boom.
- ▷ Forward P/E ratios for several AI-centric semiconductor names have risen to levels last seen during the 2017–2018 data-centre cycle, and in some cases exceed them.
- ▷ EV/EBITDA multiples for advanced-node equipment suppliers are now at or above the peaks of the 2018 WFE (wafer-fab equipment) cycle, according to aggregated Bloomberg and FactSet data.
- ▷ The Philadelphia Semiconductor Index (SOX) is trading at one of the highest forward P/E multiples in its history, driven by AI-linked names. Especially in relation to the broader tech sector, semis sub-sector valuations look stretched.
- ▷ The WFE sub-index (equipment makers) is trading at premium multiples relative to its 10-year average, reflecting expectations of sustained AI-driven capex.

A growing share of semiconductor index performance in major equity benchmarks is being driven by a small cluster of AI-exposed chip and platform names. Investor positioning, judging by flows, options activity, and survey data, is heavily skewed toward the AI infrastructure theme. This is not inherently bearish, but it does mean the margin for error is shrinking.

The risk is that even a modest disappointment – slower AI capex growth, delays in new product ramps, regulatory pushback on power usage or data-centre build-outs – could trigger outsized price reactions. When expectations, valuations, and positioning are all aligned in one direction, the asymmetry of outcomes becomes more pronounced.

The sector is “priced for perfection” in the AI-linked segments, even as they remain constructive on the long-term structural story. Accordingly, this is exactly the environment that would argue for some caution at the margin.

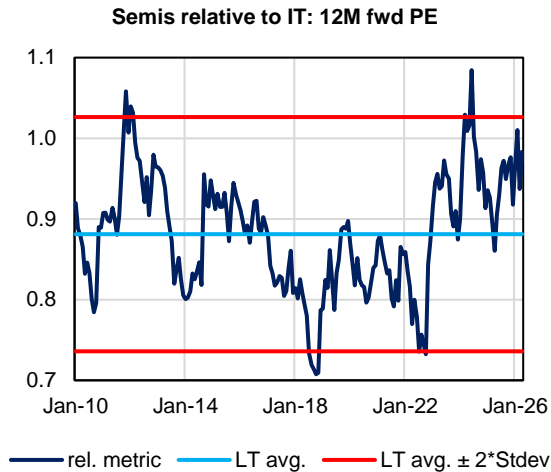
## Policy, geopolitics, and fragmentation risks

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Semiconductors sit at the intersection of technology, national security, and geopolitics. Export controls on advanced chips and equipment, restrictions on technology transfer, and competing subsidy regimes are now central features of the policy landscape. The US-China technology rivalry, tensions around Taiwan, and evolving rules on AI hardware exports all inject a layer of non-economic risk into the sector. Policy changes can be abrupt, binary, and highly specific to certain products or nodes, creating idiosyncratic shocks that are hard to hedge with broad macro tools.

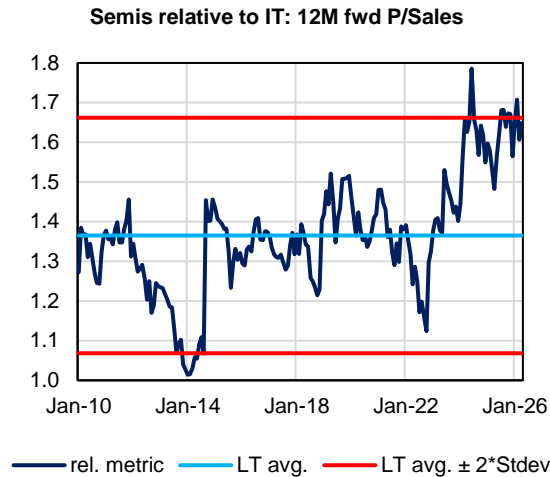
At the same time, the push for “resilience” and “strategic autonomy” is leading to a more fragmented global semiconductor ecosystem. Multiple regions are trying to build overlapping capacity, sometimes in locations that are not cost-optimal. Over time, this can weigh on industry profitability, as redundancy and political objectives prevail over pure efficiency. For investors, this means that headline revenue growth may not fully translate into sustainable margin expansion, especially if governments expect “national champions” to deliver both security and affordability.

**Exhibit 4: Semiconductors sector valuations are elevated ....**



Source: MSCI, I/B/E/S, LSEG Workspace, and ADCB Asset Management

**Exhibit 5: .... especially on a relative basis**



Source: MSCI, I/B/E/S, LSEG Workspace, and ADCB Asset Management

## Supply-chain disruption: The Iran conflict and Qatar’s helium exports

A new and under-appreciated risk is emerging from the Middle East conflict. Qatar supplies over 30% of the world’s helium, and helium is a critical input for semiconductor manufacturing, especially in advanced lithography, etching, and cooling processes. Any disruption to Qatar’s export routes – whether through the Strait of Hormuz or associated shipping lanes – poses a direct risk to semiconductor supply chains.

Helium is not easily substitutable. It is essential for maintaining the ultra-clean, ultra-cold environments required for chip fabrication. During past helium shortages, fabs faced production slowdowns, higher input costs, and in some cases temporary shutdowns. The current geopolitical environment raises the probability of renewed supply tightness, shipping delays, and price spikes. Semiconductor manufacturers typically hold strategic inventories, but these buffers are finite. A prolonged disruption could ripple through the industry, affecting both upstream equipment makers and downstream chip producers.

This is precisely the kind of exogenous shock that technical capacity expansions and AI-driven demand cannot hedge against. It introduces volatility into an already stretched supply chain and reinforces the argument for a more cautious stance.

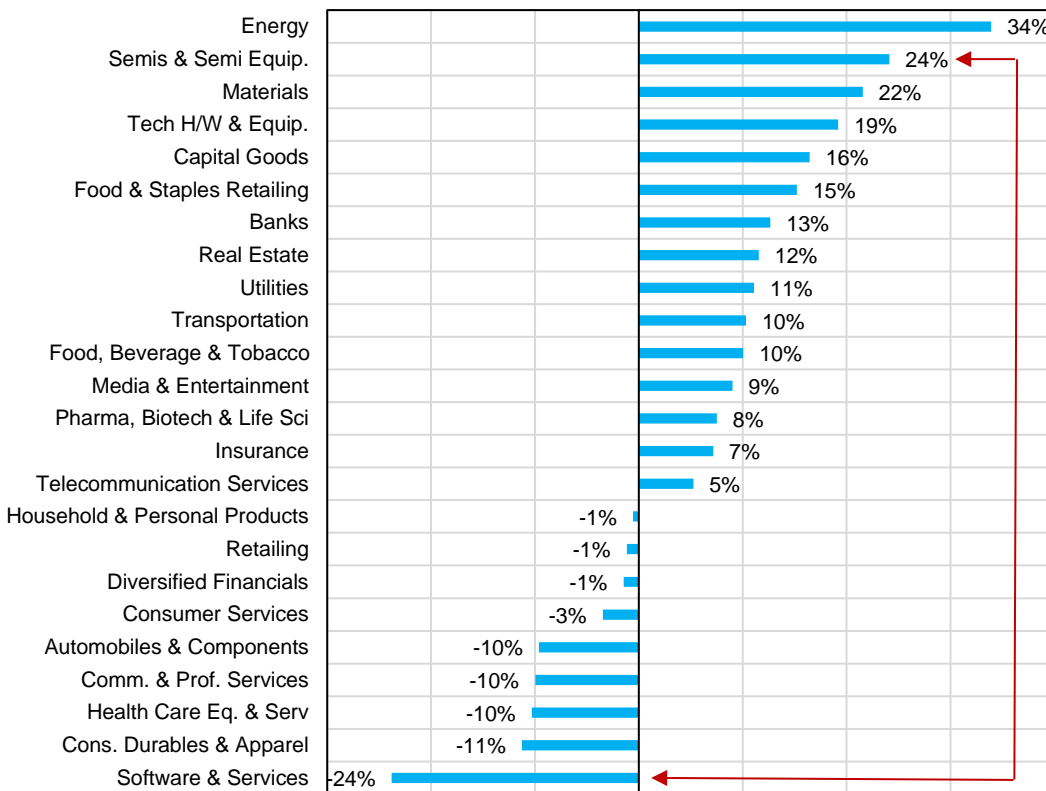
## A balanced stance: respect the structural story, price in the cyclicity

None of this is an argument to be structurally bearish on semiconductors. In fact, the long-term demand drivers – AI, cloud, connectivity, electrification, automation – are powerful and credible. Policy support is real, and the technological moat around leading players remains deep. But the combination of narrow, front-loaded demand, a historic capex wave, rich valuations, heavy positioning, and elevated policy/geopolitical risk suggests that the risk-reward is no longer one-way.

A sensible stance at this point in the cycle for semiconductor investors is to stay engaged, but more selectively and with a higher bar for valuation and quality. That can mean favouring balance sheet strength, diversified end-markets, and disciplined capex over pure AI beta; being more tactical around names most exposed to hyperscaler capex swings; and recognising that volatility around policy headlines and earnings seasons is likely to remain high. For broader tech investors, sizing the positions in the semiconductors space and rebalancing towards the laggards like the hyperscalers and software companies could add value. The structural story is intact – but the path will not be linear, and this is exactly when a bit of caution can add value.

**Exhibit 6: Performance trends of the past six months also point to the scope for rotation in the future: rotate out of the winners (semiconductors) into laggards (software)**

**Global Industry Group performance - last six months\***



Source: MSCI, LSEG Workspace, and ADCB Asset Management | Notes: \*Data as of May 05, 2026.

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