Taiwan and the Fragile Monopoly

TSMC, AI Capex Concentration, and the Single Point of Failure in the Asian Supply Chain

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April 2026

Abstract

Taiwan sits at the center of the most important industrial monopoly of the modern era. Taiwan Semiconductor Manufacturing Company fabricates the overwhelming majority of the world's leading-edge logic chips, and the artificial-intelligence capital-expenditure boom has made that concentration more acute, not less. J.P. Morgan estimates that roughly 30% of global AI capex now flows to Taiwan and South Korea, driving 12 to 13% EPS growth for Asia ex-Japan and anchoring the region's earnings cycle. We hold a high-conviction constructive view on the TSMC franchise itself, whose pricing power, node leadership, and customer lock-in are structurally durable. We hold an equally high-attention view on the tail risk: a supply chain with a single geographic point of failure, exposed to cross-strait geopolitics, concentrated end-demand, and a currency, the TWD, that has become a macro pressure valve. This paper argues the franchise is a buy and the fragility is real, and that the two views are not contradictory. We size the exposure, map the failure modes, and set the catalysts that would force a reassessment.

1. The Monopoly Is Real, and It Is Widening

Semiconductor manufacturing has bifurcated into two worlds. In mature nodes, the world is oversupplied, Chinese fabs are adding capacity aggressively, and pricing is soft. In leading-edge logic, the world has one dominant supplier. TSMC produces close to nine in ten of the most advanced logic chips manufactured on the planet, and its share of the sub-5-nanometre frontier is higher still. Samsung Foundry and Intel Foundry Services remain years behind on yield and density at the leading edge, and the practical result is that the compute powering the AI build-out is fabricated on a single island.

The AI capex cycle has widened rather than diluted this concentration. Every incremental hyperscaler dollar committed to accelerated compute, every Nvidia, AMD, Broadcom, or in-house custom accelerator, is manufactured at TSMC on its N4, N3, and forthcoming N2 processes, and packaged using its CoWoS advanced-packaging capacity, which through 2025 and into 2026 remained the binding constraint on GPU supply. The franchise does not merely participate in the AI boom. It is the physical bottleneck through which the boom must pass.

This matters for the macro because it converts a company-specific story into a regional and global one. When 30% of AI capex, on J.P. Morgan's estimate, lands in Taiwan and South Korea, the earnings of Asia ex-Japan become a levered call on a capital-spending decision made in a handful of US boardrooms. That is the source of both the 12 to 13% EPS growth the region is enjoying and the fragility we spend the rest of this paper mapping.

Our view: The advanced-node monopoly is not a temporary artifact of the cycle. It is a structural feature that widens with each capital-intensity step up in chipmaking. We are constructive on the TSMC franchise with high conviction. The moat is real, the pricing power is real, and the customer captivity is real.

2. Sizing the AI Capex Concentration

The scale of the concentration is best understood through the earnings channel. Asia ex-Japan is set to deliver 12 to 13% EPS growth in 2026, and the technology and semiconductor complex supplies the majority of that. J.P. Morgan's estimate that roughly 30% of global AI capital expenditure flows to Taiwan and South Korea is the single most important number for regional equity strategy this year, because it defines both the upside engine and the downside vulnerability.

Taiwan is the logic side of that flow and South Korea is the memory side. High-bandwidth memory, produced principally by SK Hynix and Samsung, sits on the same accelerator packages as TSMC-fabricated logic, which is why the two economies move together in the AI trade despite their very different macro pictures. South Korea's 2025 was a lost year, growth collapsed to 1.1% amid a constitutional and political crisis, with a 2026 recovery to only around 1.8%. Taiwan carried the AI baton through that period, and the memory cycle is now the swing factor for Korean high-beta exposure.

2.1 Where the earnings come from

Vector	Reading	Read-through
Share of global AI capex to Taiwan + Korea	~30% (J.P. Morgan)	Regional earnings levered to US hyperscaler spend
Asia ex-Japan 2026 EPS growth	12 to 13%	Majority sourced from tech/semis complex
TSMC share of leading-edge logic	~90% of sub-5nm frontier	Single-supplier structure at the frontier
CoWoS advanced packaging	Binding GPU supply constraint	Bottleneck within the bottleneck
Taiwan 2026 GDP growth	~3.5 to 4.0%, export/AI led	Above regional average, concentration-driven
Korea 2026 GDP growth	~1.8% (from 1.1% in 2025)	Memory cycle plus post-crisis base effect

Figures are Darmine estimates synthesized from J.P. Morgan Asia equity strategy, company disclosure, and house baseline. AI capex share is the J.P. Morgan estimate cited in the assignment framework.

Our view: The concentration cuts both ways with equal force. It is the reason Asia ex-Japan earns 12 to 13% EPS growth while WTO global merchandise trade volume grows only around 0.5% in 2026. It is also the reason a single-name or single-geography shock would transmit straight to the regional index. Own the franchise, but do not mistake concentrated strength for diversified strength.

3. The Single Point of Failure

Supply-chain fragility is usually a story about too many links. Taiwan's is the opposite. It is a story about too few. The advanced-node supply chain has collapsed onto one company, on one island, drawing power from one strained grid, using water from a periodically drought-prone catchment, and shipping through a small number of ports and the airspace of one of the most militarily contested regions on earth. Redundancy has been engineered out of the system in pursuit of scale economies and yield learning that only concentration can deliver.

3.1 The failure modes

- Geopolitical: cross-strait escalation, blockade, quarantine, or kinetic conflict that halts or degrades production and logistics. This is the tail, low probability in any given quarter, catastrophic in impact.
- Physical and natural: Taiwan sits on an active seismic zone. A major earthquake near the Hsinchu, Taichung, or Tainan science parks could disrupt the most advanced fabs, where sub-nanometre alignment tolerances make even brief interruptions costly.
- Resource: leading-edge fabs are extraordinarily water and power intensive. Drought and grid stability are recurring constraints, and the AI-driven capacity build raises the baseline draw.
- Concentration of demand: the same accelerators are bought by a handful of US hyperscalers. A capex air pocket at the customer level would hit utilization and pricing even with no supply disruption at all.

The diversification response, TSMC's Arizona, Japan (Kumamoto), and Germany (Dresden) fabs, is real and accelerating, but it does not resolve the fragility on the relevant time horizon. Overseas fabs run at higher cost, lag Taiwan on node leadership, and depend on a Taiwan-based engineering and R&D core that cannot be relocated wholesale. For the remainder of this decade, the leading edge stays overwhelmingly in Taiwan. Reshoring is a 2030s hedge, not a 2026 one.

> **Our view:** We treat cross-strait risk as a genuine tail, not a base case. Our modal path assumes no kinetic conflict in the forecast horizon. But the correct portfolio response to a fat, catastrophic tail on a concentrated position is not to avoid the position. It is to own it with sizing discipline, hedges, and pre-defined reassessment triggers. Fragility that cannot be diversified away must be managed, not ignored.

4. Cross-Strait Risk as a Priced and Unpriced Tail

Markets are structurally poor at pricing low-probability, high-severity events with no clean historical frequency. Cross-strait risk is the archetype. It rarely shows up in day-to-day valuation, which trades on node roadmaps and hyperscaler order books, and then episodically dominates everything when headlines spike. The result is a risk that is chronically underpriced in calm periods and violently repriced in stressed ones.

Two features make this more than an abstract concern in 2026. First, the semiconductor supply chain is now explicitly a theatre of US-China strategic competition, with export controls, entity lists, and the CHIPS-era subsidy race all raising the stakes around who controls advanced compute. Second, the US effective tariff on China now sits at 47.5% and Chinese exports are fading, which sharpens the economic backdrop against which any political miscalculation would land. The macro and the geopolitical are no longer separable.

We would caution against two symmetric errors. The permabull error is to treat the tail as so remote it can be ignored, sizing Taiwan exposure as if it were diversified developed-market tech. The permabear error is to treat conflict as imminent and forgo years of compounding in the best franchise in global technology. Both mis-size the position. The disciplined stance holds the exposure while respecting that the distribution of outcomes has a fat, dark left tail that ordinary volatility measures understate.

> **Our view:** Cross-strait conflict is not our base case and we do not position for it as a probable event. We position for it as a low-probability, high-severity contingency: sized so that a catastrophic outcome is survivable, hedged where hedges are cheap, and monitored through concrete escalation markers rather than headline noise.

5. The TWD as a Macro Pressure Valve

The New Taiwan dollar has become one of the more revealing prices in Asian macro. Taiwan runs a large and persistent current-account surplus, powered by the same export machine that drives its equity market, and its life-insurance sector holds an enormous stock of foreign, largely US-dollar, assets. That combination makes the TWD a barometer for two things at once: the health of the AI export cycle and the hedging behavior of a systemically important pool of domestic institutional capital.

When the export cycle is strong and repatriation and hedging flows turn, the TWD can appreciate sharply and in a concentrated fashion, as episodes through 2025 demonstrated, feeding back into the earnings translation of Taiwan's exporters. The central bank, wary of both exporter competitiveness and financial-stability spillovers from the insurers' hedging books, manages the currency with a heavier hand than a pure float. The TWD is therefore less a clean price and more a managed pressure valve, releasing stress from the export and capital accounts in bursts.

This matters within the region's central-bank divergence. The BOJ is normalizing and tightening, the PBoC is easing into persistent deflation, the Fed is cutting, and the MAS is on gradual S NEER appreciation. Taiwan's currency management sits alongside these as a distinct regime, one keyed to the AI export cycle rather than to a domestic inflation target. For a cross-asset investor, the TWD is a useful read on the durability of the AI trade and a reminder that the franchise's fortunes are transmitted through the currency as well as through earnings.

> **Our view:** We watch the TWD as a coincident indicator of AI export-cycle health and a lead indicator of insurer hedging stress. Abrupt, non-fundamental TWD moves are a signal to check positioning and hedging flows, not to chase. The currency is a valve, and valves release pressure that has built up elsewhere.

6. Regional Read-Through and Relative Positioning

Taiwan's concentration reframes how we rank the rest of Asia. The AI trade is powerful but narrow, and it does not diversify the risks embedded in the house baseline. Against a backdrop of Asia-Pacific 2026 growth around 4.4%, Asia contributing roughly 60% of world GDP growth, and global merchandise trade volume growth of only about 0.5%, the concentration of earnings in a single fragile node argues for pairing Taiwan exposure with structurally uncorrelated engines.

India is the primary counterweight. At roughly 6.5% growth, the fastest major economy, domestic-demand driven, with an S&P upgrade to BBB from BBB- and a median age of 28, it offers structural compounding that is essentially uncorrelated with the semiconductor cycle. It is our highest structural conviction and the natural ballast to a concentrated Taiwan position. Singapore, growing an upgraded 2.0 to 4.0% in 2026 with MAS gradual appreciation and a heavy construction pipeline, is our quality-defense overweight and a low-beta way to stay long the region.

Within the chip complex itself, we distinguish sharply between franchise and beta. South Korea is the high-beta memory expression, tactical and cyclical, recovering to around 1.8% in 2026 from a crisis-hit 1.1% in 2025, and we hold it underweight and tactical rather than as a core position. Malaysia is a packaging beneficiary but carries China oversupply risk in mature nodes, hence market weight. The Philippines, with roughly 5.6% growth on remittances and consumption and low chip-cycle correlation, is a constructive diversifier. The point is not to avoid Taiwan. It is to ensure the portfolio does not become an undiversified bet on one island's continuity.

> **Our view:** Taiwan is a conviction long that must be held inside a barbell. Pair the concentrated AI franchise with India's structural domestic-demand compounding and Singapore's quality defense. The correct exposure to a fragile monopoly is a sized position flanked by uncorrelated ballast, not a maximal one.

7. What Would Change Our Mind

A constructive-with-high-attention view is only disciplined if its reassessment triggers are explicit. On the bullish franchise thesis, we would grow more cautious if the AI capex cycle showed a genuine air pocket: hyperscaler capital-expenditure guidance cut materially, CoWoS bookings softening from full allocation, or evidence that accelerator demand is being pulled forward rather than sustained. Utilization and pricing at the leading edge, not headlines, are the real tell.

On the tail risk, we monitor concrete escalation markers rather than rhetoric: changes in military posture and exercise tempo around the strait, shifts in US strategic-ambiguity policy, insurance and freight-rate signals for Taiwan-linked shipping, and any move by TSMC's largest customers to accelerate qualification of non-Taiwan capacity, which would be an early institutional read on perceived risk. On the currency, abrupt TWD moves decoupled from the export cycle would flag insurer hedging stress worth acting on.

> **Our view:** We reassess the franchise long on evidence of an AI capex air pocket, and we reassess the tail-risk sizing on concrete escalation markers, not on noise. Absent those, we stay constructive on the franchise and disciplined on the fragility.

Portfolio Positioning Summary

Overweight: India (highest structural conviction, uncorrelated domestic-demand compounding, S&P upgrade to BBB, median age 28) and Singapore (quality defense, upgraded 2.0 to 4.0% 2026 growth, MAS gradual appreciation). The TSMC franchise itself is a high-conviction constructive hold within a sized, hedged Taiwan allocation, not a maximal one.

Market weight: Taiwan at the index level, held as a conviction franchise long but sized with tail-risk discipline and uncorrelated ballast. Malaysia (packaging beneficiary offset by China mature-node oversupply risk). Japan selective financials under BOJ normalization.

Underweight: South Korea (tactical high-beta memory expression, 2026 recovery to ~1.8% from a crisis-hit 1.1%, own the cycle not the structure). China domestic demand (deflation, fading exports, 47.5% US effective tariff, property overhang). Thailand (regional laggard).

Key catalysts to reassess: Reassess on: (1) a genuine AI capex air pocket, hyperscaler guidance cuts or CoWoS bookings softening; (2) concrete cross-strait escalation markers, military posture, US ambiguity-policy shifts, Taiwan-shipping insurance and freight signals; (3) customers accelerating non-Taiwan capacity qualification; (4) abrupt non-fundamental TWD moves flagging insurer hedging stress.

Conclusion

Taiwan is the site of the most consequential industrial monopoly in the world, and the AI capex cycle has made that monopoly wider and more load-bearing. We are constructive on the TSMC franchise with high conviction: the advanced-node moat, the CoWoS bottleneck, the pricing power, and the customer captivity are structural and durable, and they are the engine behind the 12 to 13% EPS growth Asia ex-Japan is enjoying while global trade barely grows. That is a franchise worth owning.

It is also a single point of failure. The same concentration that produces the returns produces a fat, catastrophic left tail, geopolitical, physical, and demand-side, that ordinary volatility measures understate and that reshoring will not resolve this decade. The two views are not in tension. The right response to a fragile monopoly is to own the franchise, size for survivability, flank it with uncorrelated ballast in India and Singapore, watch the TWD as the pressure valve it has become, and hold explicit triggers for when conviction or fragility should force a change. High conviction on the franchise, high attention on the tail. Both, at once, and deliberately.

Sources and Further Reading

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