APIS CAPITAL

Global Small Caps & Supply Chains

Using AI as an illustrative example of supply chains and the importance of global small caps in this dynamic ecosystem

A study of 409 companies across the global artificial-intelligence supply chain, May 24th, 2023, to September 24th, 2026

October 2026

Executive summary

On May 24th, 2023, NVIDIA reported a quarter that ignited the entire technology complex. The three-plus years that followed produced one of the largest capital-formation events in market history. This paper asks a narrow question about that period: where, precisely, did the value accrue and what investment strategies were best positioned to benefit?

We built a map of the global AI supply chain consisting of 409 publicly traded companies, each with an estimated AI revenue exposure of 10% or more, across multiple supply chains. These supply chains included power generation & electrical grid equipment, semiconductors, advanced packaging, memory, and optics & servers among others. For each of those companies, we have market capitalization at both the start (May 24th, 2023) and end of the window (September 24th, 2026). We observed that:

- Returns were strongest at the bottom of the size scale. Companies below $1bn in May 2023 delivered a median/mean share-price gain of 262%/572%. With one exception, returns were lower in each successively larger market-cap bucket. Companies above $50bn delivered a median/mean return of 114%/242%.
- The opportunity was overwhelmingly non-US. Among companies under $10bn, the median US name gained 175%. South Korea returned 387%, Taiwan 369%, China 332% — roughly twice the US outcome.
- 108 companies graduated from under $10bn (a common threshold used to define small cap) to over $10bn during the time window — 36% of those that began below the line. 73% of them were listed outside the United States. Together they went from a total market capitalization of $475bn to $3.3trn. The typical graduate started at about $4.2bn, so it had to more than double before most institutional investors would consider it.
- Very few institutional investors are able to take this approach to investing. By our estimate, dedicated global small cap managers whose mandates allow them to follow these supply chains

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across borders and down the market-cap scale oversee only about $100bn. That compares with more than $30trn of investable market value in companies below the $10bn market cap threshold.

- Research coverage is a direct function of size. The median sub-$1bn company had three analysts; the median company above $50bn had 32. Sixty-nine percent of the smallest cohort had five analysts or fewer.

Thin coverage did not itself predict returns. It did, however, establish the environment for the biggest returns to occur. Small caps are structurally under-resourced by the sell-side (and buy-side). They often cannot be accessed by consuming published research, because published research often doesn't exist. Research and discovery must be performed through primary work.

That is the argument of this paper. The AI build-out is a very current and prominent example of a more general proposition: following supply chains can lead investors into small, non-US stocks where the best investment opportunities, long and short, often reside.

1. The size gradient

We sorted all 409 companies with complete history into five buckets by their market capitalization on May 24th, 2023, then measured the change in share price to September 24th, 2026. The buckets are deliberately uneven, narrowing at the bottom, to highlight the substantial number of names clustered below $10bn and the meaningful variance in returns.

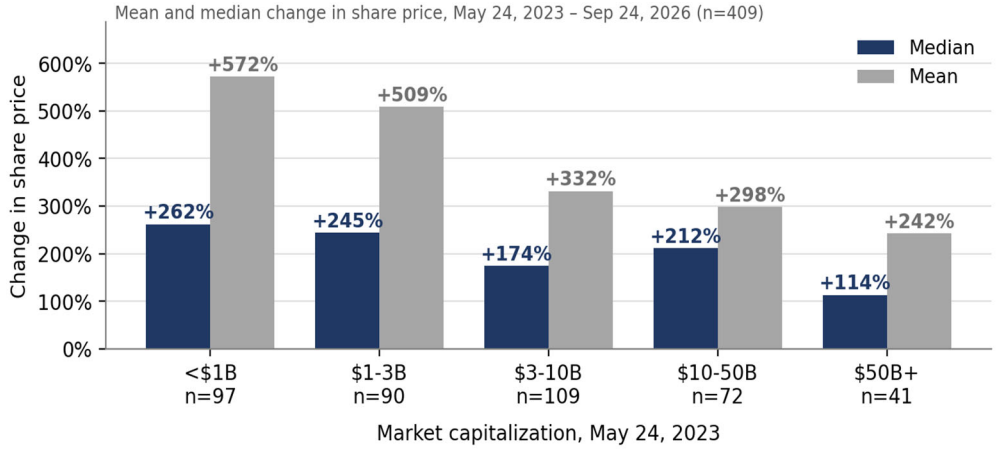


Exhibit 1. Median and mean change in share price by starting size. See Appendix A for important details regarding selection criteria, survivorship and measurement.

There are a couple of points to highlight from this chart. First, the chance of finding an outsized winner was simply a lot higher under the $10bn market cap level. It is where about ¾ of the companies in this supply chain resided, so for the investor who is following AI, they would be missing most of the opportunity set by ignoring these names. Second, while median returns were strong across the various sizes, they were strongest at the sub $3bn level and the size factor was especially strong when looking at mean returns. In the largest cohort, companies like NVIDIA, Alphabet, Microsoft, Broadcom and TSMC dominate and are the reasons everyone is looking at AI. These megacaps did well; however, they significantly underperformed the smallest cohorts.

One qualification: this is a map drawn in 2026 of companies that matter to AI today, so companies that failed or faded between 2023 and 2026 are under-represented by construction due to survivorship bias. This caveat notwithstanding, we believe the data is broad and robust enough that our conclusions

still hold. The study is also limited to companies whose AI exposure we estimate at 10% or more. We discuss both considerations in the Appendix.

2. Geography: the opportunity was better outside the US

Below, we split the sub-$10bn cohort by domicile. Each bar is the median outcome for companies that began the window below $10bn, grouped by country of domicile; only countries with at least fifteen such companies are shown.

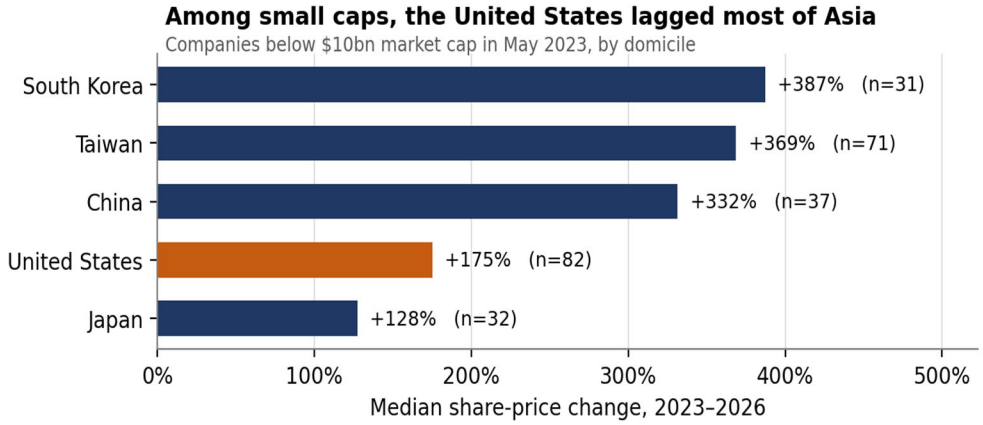


Exhibit 2. Median change in share price for companies below $10bn in May 2023, by country of domicile. Countries with at least fifteen companies.

South Korea, Taiwan, and China each delivered roughly 1.9 to 2.2 times the median US outcome. Japan, at 128%, was the only major market to trail the US.

The physical layers of the AI supply chain — substrates, printed circuit boards, test interfaces, thermal management, transformers, optical components — are largely manufactured in Taiwan, South Korea, Japan, and China. The companies that make them are mostly small, listed locally, and largely absent from global benchmarks. An investor restricted to US listings was structurally excluded from the majority of the opportunity set, however well they understood the theme.

What makes this more striking is the size of the economies involved. Taiwan and South Korea together supplied 102 of the sub-$10bn companies in our map, about a quarter more than the 82 from the United States, from a combined economy about one-eleventh the size. Taiwan alone, with GDP of roughly $0.9trn or just 3% of the US, produced nearly the same number of opportunities as the US while significantly outperforming the US. Add Japan and the three economies account for more than 1.5 times as many names as the US with just a quarter of US GDP. These are relatively small economies with an outsized role in the physical supply chain.

> *An allocator could have held every US beneficiary of the AI build-out and would still have missed most of the companies that benefited from it.*

3. By the time it's big enough, the discovery is over

Most actively managed money is allocated to companies above $10bn in market cap, a common line between small and large caps. Of the 296 companies in our map that began the period under $10bn market value, 108 finished above it (36% of the 296), and together they grew from $475bn to $3.3trn. Nearly three-quarters were outside the United States. The typical graduate started at about $4.2bn market value, so it had to more than double before most institutional investors would consider it, and it ended the period near $20bn. An investor who waits for size can still make money, but they risk buying a company the market has already found after the first, and often easiest, leg of the move.

4. Analyst Coverage: part of why this opportunity exists

Analyst coverage tracks market capitalization almost mechanically. The correlation between 2023 market cap and the number of covering analysts is 0.79. The graph below illustrates this relationship succinctly.

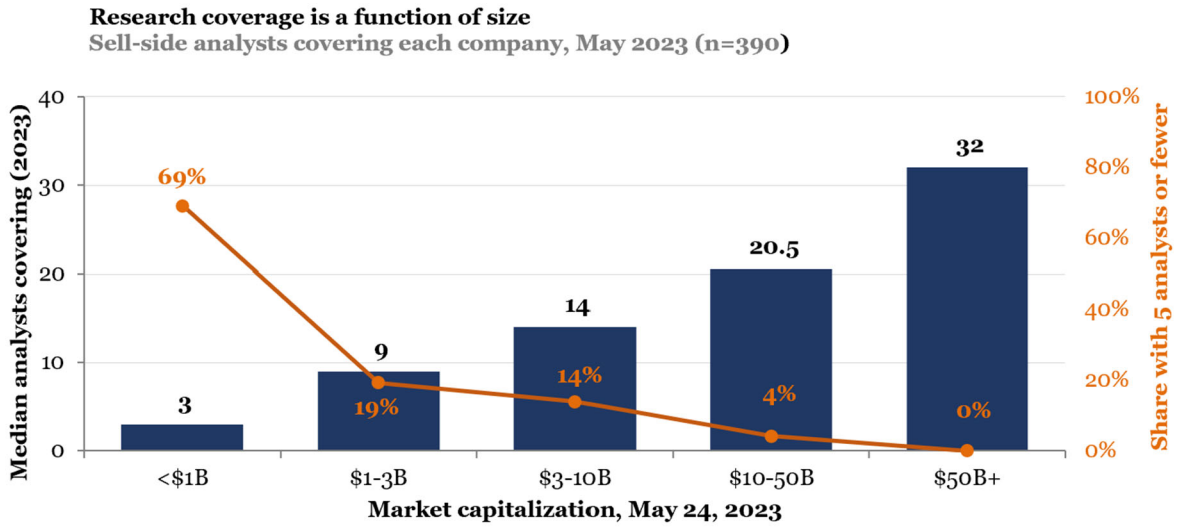


Exhibit 3. Median number of sell side analysts by company size (bars, left axis) and share of each cohort with five analysts or fewer (line, right axis).

A company above $50bn commands roughly ten times the research attention of one below $1bn. More than two-thirds of the smallest cohort had five analysts or fewer, and in that group the analysts present are typically regional brokers publishing in the local language.

The segment in which the greatest returns occurred is the one where institutional research capacity is scarce in absolute terms. For a large share of these smaller companies there is no maintained model, no earnings preview, no easy access to management, and often no English-language research at all. This isn't predictive of returns by itself but it sets the table for the inefficiencies that lead to opportunities.

The buy side is thin too

Thin sell side coverage is only half the picture; buy side attention is just as scarce. Following a supply chain like this one requires two things at once. The first is a global remit, because the physical layers are built and listed across Taiwan, South Korea, Japan, China, Europe, and the US. The second is a willingness to go down the market-cap scale, because that is where many of the critical suppliers sit. Few mandates allow for both. By our estimate, dedicated global small-cap managers whose mandates

let them do this work thoroughly oversee only about $100bn in assets. Compare that with the tens of trillions of dollars under active management worldwide, and with the more than $30trn of market value we believe is investable in companies below $10bn market cap, and it is a very small pool of capital. In practice, very few investors look at the world as a connected set of supply chains. Most see it one country, one index, or one size band at a time.

5. Conclusion

The AI "trade" is now well into its fourth year. Hundreds of companies have been impacted and many trillions of dollars of market cap have shifted. While a relatively few megacap stocks have captured the lion's share of this dollar shift, a long list of smaller companies has actually seen a far greater percentage change in share price. To access these, the investor must be willing to look at both the smaller cap and non-US portion of the market. Because these names are often poorly researched, it requires traditional, primary fundamental research to find these stocks and, specifically, an in-depth understanding of their supply chains. We believe a fundamental global small cap strategy is a well suited strategy for identifying the types of opportunities illustrated in this paper. AI offers a timely example of this investment approach but it is hardly the only example where supply chain analysis in the global small cap arena can reveal overlooked opportunities. Today, several other examples look well suited to this global small cap supply chain analysis, such as critical minerals, robotics, space and defense.

This approach is also not limited to just buying stocks. The work that finds a supplier early in a shortage also shows when that shortage is ending: new capacity arrives, prices soften, and profit margins that looked permanent start to fade. Following supply chains turns up short ideas as well as long ones, occasionally in the same companies at different points in the cycle.

6. Implications for investors

The greatest leverage to a theme can be, and often is, somewhere far up the supply chain in obscure components where supply is tight and competition is minimal. Nobody described 2023–26 as a substrate cycle or a transformer cycle, yet these niche supply chains produced better convexity than many of their larger cap customers sitting further downstream. These are the areas where bottlenecks were most severe for a variety of reasons.

A US-only mandate excluded most of the opportunity set. Roughly three-quarters of the companies that crossed the $10bn market cap threshold were listed outside the United States.

Benchmarking misses the point. Many, if not most, of the companies discussed here were absent from established indices. Furthermore, given the sheer volume of small caps globally, any desired exposure is likely to be diluted away in an index. An investor whose exposure is defined by tilting benchmark weights could easily have missed a lot of these opportunities.

Accessing these names is about capability, not information. Many of the most desirable opportunities came from being able to underwrite companies for which the mainstream research infrastructure — analyst coverage, financial models, language, personal networks, local market access — is poorly developed. This capability is tedious and time-consuming to build.

The method that produced this map is not specific to artificial intelligence. We began with a popular theme and followed the supply chains outward, going layer by layer, until we reached the companies with the most desirable investment profiles. Those companies were, more often than not, small, far from the headlines, and located somewhere else.

Appendix A. Study Limitations & Construction

Survivorship and selection

This map was constructed in September 2026 to describe the companies that matter to the AI supply chain today. Companies that were part of this supply chain in 2023 and subsequently failed, were delisted, or stopped being relevant are absent from the map.

The study includes only companies whose AI revenue exposure we estimate at 10% or more, using the midpoint of each company's estimated range. Those estimates describe each company's business in 2026, not 2023, so a company that built an AI business during the period is more likely to pass the filter than one that tried and failed. We have attempted to be as objective as possible while recognizing that this 10% threshold is ultimately a judgement call. Using our own manually built proprietary database along with broker research, Bloomberg, and web searches, we used AI to process this information to estimate a high/low range of AI exposure with exposure being defined as current revenue. For companies that may be pre-revenue, we used backlog or orders, and for a small minority of companies, we ultimately used their anticipated revenues to make this judgement. All conclusions, selections, and analyses were reviewed and validated by Apis Capital Advisors.

There can be no assurance that future investment opportunities will exhibit similar characteristics or that this analytical approach will successfully identify attractive investments.

The composition of the study universe reflects proprietary assumptions, classifications, and selection criteria. Different methodologies may have produced different results.

Measurement

- Returns are based on the change in share price, sourced from Bloomberg in US dollars over the measurement period.
- All figures are in US dollars.
- All 409 companies in the study have market capitalization and share prices at both dates.
- AI exposure estimates are analytical judgments, not reported figures. They are independently derived, but they are not audited and reasonable analysts could disagree at the margin. The 10% cutoff is applied to the midpoint of each company's estimated range.
- Analyst coverage counts, sourced from Bloomberg, are as of the two measurement dates and cover 390 companies.
- Market capitalization for this study was sourced from Bloomberg on May 24th, 2023 and September 24th, 2026.

Appendix B. Supply Chain Universe

The Apis AI Supply Chain Map is a maintained research database covering companies across multiple supply chains within the artificial-intelligence value chain: power and energy, datacenter physical infrastructure, semiconductors, advanced packaging and test, memory and storage, networking and optics, servers and hardware, cloud and compute platforms, AI models and applications, AI infrastructure software and data, and adjacent enablers.