Asia Markets: Which Companies Will Benefit From DeepSeek? Pt 1

Not all semiconductor and other AI-related firms will see equal tailwinds from the rise of DeepSeek.

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Key Takeaways

- The rise of DeepSeek should increase demand for semiconductors despite cheaper costs to train models due to Jevons Paradox, which is our house view, suggesting that greater efficiency should lead to greater adoption of semiconductors.
- Our top pick remains Taiwan Semiconductor, which should benefit from all things artificial intelligence given that it manufactures chips for graphics processing units, ASICs, and other leading-edge chips needed to build more servers and other computing infrastructure.
- SK Hynix, a pure-play on high-bandwidth memory, also remains a preference given its working relationship with Nvidia and leading technology ahead of its competitors.
- Semiconductor equipment and silicon wafer suppliers could also see tailwinds from increased AI demand, given their important positioning in the supply chain.
- Some names are now overvalued as they lack the leading-edge technology to build out AI infrastructure, but they have seen their share prices increase since DeepSeek's launch.
- We recommend a pair trade strategy with TSMC as the long and SMIC as the short given the latter's frothiness in valuation.
- We believe foundation models are likely commoditized in the long term given the industry's fast-moving pace, and thus, the differentiation comes from function-specific applications that are built on top of these models.

Companies Mentioned

Name/Ticker	Economic Moat	Currency	Fair Value Estimate	Current Price	Uncertainty Rating	Morningstar Rating	Market Cap (Bil)
ASMPT (00522)	Narrow	HKD	90.00	71.00	High	★★★★	29.6
GlobalWafers (6488)	Narrow	TWD	620.00	317.00	High	★★★★★	151.6
Hon Hai Precision (2317)	None	TWD	190.00	179.00	Medium	★★★	2,481.2
MediaTek (2454)	Narrow	TWD	1,400.00	1,510.00	High	★★★	2,406.7
Samsung Electronics (005930)	Narrow	KRW	75,000.00	55,700.00	Medium	★★★★	369,999.4
Semiconductor Manufacturing	None	HKD	14.00	45.30	High	★	485.0
SK Hynix (000660)	None	KRW	270,000.00	199,700.00	High	★★★★	137,666.0
Taiwan Semiconductor	Wide	TWD	1,800.00	1,110.00	High	★★★★★	28,785.3
United Microelectronics Corporation (2303)	None	TWD	60.00	40.40	High	★★★★	507.5
Xiaomi Technology (01810)	None	HKD	22.60	42.55	High	★	1,066.2

Rise of DeepSeek Should Increase Chip Demand as Usage Rises

As DeepSeek has provided new insights on how models are trained and their cost structure, we examine which companies have benefited from its rise and whether some of the names still have further room to appreciate in share price within our Asia coverage universe. DeepSeek was released on Jan. 20, and while some names have appreciated prior to DeepSeek, such as TSMC and SK Hynix, there are others, such as Xiaomi and SMIC, that are more China-centric and have seen their share prices increase due to DeepSeek's launch. The first part of our two-part report focuses on semiconductors and equipment companies, while the second part looks at closely related companies such as telecoms, data centers, language models, and other derivatives such as electric vehicles.

Given our Asia coverage, we focus on different AI-related companies that are regionally based and strategically meaningful in the AI supply chain, from upstream chipmakers to downstream AI models. Our report provides a brief overview of each company within each AI-related sector, the role they play, and whether AI is expected to be a large part of its operations and revenue in the long term. We also believe there could be some fringe technology names that are benefiting from AI but may have a low correlation with the industry as well.

Recent Share Price Movements of Tech Names May Not Reflect Fundamentals

We believe that there are several companies whose share prices have risen sharply and may be capturing investor momentum rather than seeing improvements in long-term fundamentals. Among them are SMIC, Alibaba, Baidu, and Xiaomi, which we will explore in the second part of the report on non-chip companies. Regarding SMIC, the stock has increased about 15% since Jan. 20, likely reflecting investor enthusiasm and increased excitement over the use of SMIC chips for computing power in more servers being built. We would like to remind investors that certain semiconductor makers, such as SMIC, do not stand to benefit from AI tailwinds as much, given that SMIC is incapable of producing profitable 7nm chips and requires government subsidies for its 7nm production. In comparison, TSMC has been providing 3nm chips to Apple for some time, and it's moving on to 2nm nodes, which suggests that TSMC likely remains the contract winner from hyperscalers and other clients looking to win the AI race in the long run. Therefore, we believe the price movement for SMIC is frothy and based on momentum rather than an increased demand that would lead to greater profitability. As momentum investing wanes, we believe TSMC remains the leader, while SMIC could see shares lag if investors approach a pair-trade strategy.

Just as we caution investors about the overvaluation of semiconductor companies, we also believe other AI-related companies are seeing upticks based on headlines rather than fundamentals. With regards to the newest iterations of foundation models that have been recently built, such as DeepSeek, Qwen, and Ernie, our view is that large language models are likely commoditized in the long term, and the differentiation comes from function-specific applications that are built on top of these models. This is akin to different software that is built on open-source computing languages today. In addition, the industry is fast evolving with different and new versions of models being released at a quick pace. While there could be fundamental cash flow improvements as people shift toward cheaper model training methods, we note that many companies have already declared free use of their models.

Many of the companies are hoping that the free use of their models will lead to greater activity and traffic for their other businesses, which may not be realized. Therefore, we caution investors against jumping into companies that have seen their share prices appreciate solely because of newly launched foundation models.

Semiconductors and Semiconductor Equipment

DeepSeek's "distillation" method to train the model has lowered the cost of training large language models. Still, we do not believe that the costs are as low as DeepSeek has claimed, nor does it account for the continuous computing or inference costs required to satisfy usage at a much greater scale. Regardless, we believe that DeepSeek has increased computing efficiency to a degree and view its benefits based on the Jevon Paradox, postulating that greater efficiency in the use of any given resource should result in increased demand for that resource. This should lead to greater adoption of AI-related chips. Therefore, we believe there will be continued demand and spending on chips and their derivatives required for the long-term buildout of AI infrastructure.

Chips are the clear beneficiary of continued AI demand, and the supply chain starts with semiconductor manufacturing and the equipment used to make the semiconductors. There are several companies in this space, but we expect Taiwan Semiconductor to be at the forefront of demand. Exhibit 1 provides a brief summary of the key semiconductor companies that are affected by DeepSeek, accompanied by a brief description and their returns as of Jan. 20, which was the release date of DeepSeek.

Exhibit 1 Semiconductor Names in Our Report, Along With Key Commentary and Returns

Company	Ticker	AI specialization	Return since 1/20	Quick Comment
Taiwan Semiconductor	TAI: 2330	Semiconductor manufacturer	-0.9%	Remain the industry leader by wide margin. Moving to 2nm nodes and should benefit from advanced packaging demand.
UMC	TAI: 2303	Semiconductor manufacturer	-5.5%	Exposed to communication and consumer sectors but could produce low-power, lower-performance chips at 12nm in future with Intel.
SMIC	HKG: 00981	Semiconductor manufacturer	15.0%	Produces 14nm comfortably but has unprofitable yields at 7nm. Should see continued govt subsidies.
SK Hynix	KRX: 000660	High-bandwidth memory maker	-5.8%	Pure memory supplier and its HBM business is in a leading position with strong relationships with Nvidia.
Samsung Electronics	KRX: 005930	High-bandwidth memory maker	4.3%	Also a beneficiary from HBM and advanced packaging capacity, but the incremental positive will be smaller. No business with Nvidia.
GlobalWafers	ROCO: 6488	Silicon wafer manufacturer	-9.4%	Proxy for Samsung but without the phones and home appliances portion. Exposure to data centers, artificial intelligence, and automotive electronics.
MediaTek	TAI: 2454	System-on-a-chip maker	4.5%	Should likely benefit from AI indirectly through greater AI enabling on smartphones.
ASMPT	HKG: 00522	Semiconductor tools maker	-7.4%	Provides equipment to make advanced packaging and HBMs. Has new order for thermal compression bonders for HBM w/ SK Hynix.
Hon Hai Precision	TAI: 2317	Server modules and components	0.6%	Previously tied to the low-growth smartphone market, but has managed to forge a leading position in producing NVIDIA's AI servers.

Source: PitchBook, Morningstar. Data as of Feb. 11, 2025.

Taiwan Semiconductor (★★★★★) remains a top pick in our coverage and is a direct beneficiary of all things AI. AI accounted for about a midteens percentage of revenue in 2024, which includes graphic processing units and high-bandwidth memory controllers. TSMC clients include major North American fabless customers, including Nvidia, Broadcom, AMD, Marvell, Qualcomm, and Apple. TSMC also buys HBM chips from SK Hynix and Micron and incorporates them with other computing chips into a subsystem.

We believe that as the AI model deals with specific use cases, they may prefer more application-specific integrated circuits and fewer GPUs. This explains the share outperformance of other companies outside of Nvidia, such as Marvell and Broadcom, which are ASIC-related. Regardless of chip preference, GPU and ASIC companies will require TSMC to manufacture chips for them. We see TSMC at the top of the supply chain and should benefit from the broad-based demand for AI.

SK Hynix (★★★★) is the direct beneficiary of AI servers, with 40% of its DRAM sales coming from HBM. Regardless of chip restrictions being driven by geopolitics, we believe that there will be server capacity constraints that will lead to the necessity of more servers being built. Our view is that the two key bottlenecks are packaging capacity and HBM. SK Hynix is a pure memory supplier, and its HBM business is in a leading position with strong relationships with Nvidia. TSMC will also benefit from advanced packaging demand. While Samsung and Micron are struggling with 8-layer HBM3E production, Nvidia is asking memory suppliers to launch 16-layer HBM3E in the second half of this year and HBM4 early next year. Amid this intense development cycle, we believe it will not be easy for them to catch up with SK Hynix.

Samsung Electronics (★★★★) is also a beneficiary of HBM and its advanced packaging capacity. Still, the incremental positive will be smaller as Samsung is a conglomerate with a consumer electronics business, meaning that AI should contribute less to overall revenue. In addition, Samsung has not started any business with Nvidia. In addition, Samsung expects a temporary slowdown in HBM sales in the March quarter due to the impact of US export restrictions, which means that Samsung's HBM business is partially exposed to China. This differs from SK Hynix, which we estimate derives most of its sales from chipmakers in the US, mainly Nvidia.

While Samsung struggles to get certification from Nvidia for 8-layer HBM3E production, Nvidia is asking memory suppliers to launch 16-layer HBM3E in the second half of this year and HBM4 early next year. Amid this intense development cycle, we believe it will not be easy for Samsung to catch up with SK Hynix in terms of Nvidia business.

GlobalWafers (★★★★★) is a wafer producer and a proxy for Samsung but without the phones and home appliances portion. Its share price has been beaten down by sluggish auto/industrial demand. The company is on our Best Ideas List and we expect outsize benefits for the firm once auto/industrial picks up and Samsung begins shipping new generations of HBM.

We foresee the semiconductor silicon wafer market to grow at 6% per year in the next decade in terms of area, and another 2% in pricing coming from more advanced semiconductors. Like other semiconductor companies, wafer producers benefit from demand growth in data centers, artificial intelligence, and automotive electronics.

ASMPT (★★★★) provides equipment to make advanced semiconductor packaging and HBMs. The company is winning orders for its newer thermal compression bonding equipment, which bodes well for gross margins and long-term forecasts. We see a new client order for thermal compression bonders for high-bandwidth memory as very positive. We understand that the order has come from high-bandwidth memory industry leader SK Hynix, which plans to use ASMPT's equipment to produce HBM3E 12H, at least partially replacing equipment from ASMPT's competitor, Hanmi Semiconductor. HBM3E 12H will be used with Nvidia's Blackwell and AMD's MI325 and MI350, and other major GPU AI accelerators. According to TrendForce, HBM3E is expected to account for 80% of HBM's bit demand in 2025. Half of that will come for 12-stack HBMs. If ASMPT's equipment can get a foothold with SK Hynix, we believe there could be opportunities for the company with other memory manufacturers.

United Microelectronics (★★★★) will less likely benefit from near-term AI tailwinds, given it remains a technological laggard and is driven mostly by y the Internet of Things, Wi-Fi, specialty memory, radio frequencies, display drivers, image sensing, and power management applications for the next five years. However, over the longer term, we view UMC's partnership with Intel and the next wave of artificial intelligence bearing fruit should support post-2027 earnings. UMC is cooperating with Intel on 12nm and some legacy nodes, and we believe that 12nm is enough to create low-power, low-performance chips for AI inference in the future.

MediaTek (★★★) is more thematic and should likely benefit from AI indirectly. Although it is a semiconductor maker, it will benefit more from the increase of AI content on smartphones which should increase the need for chips that can provide better on-device AI function. We believe DeepSeek's efficiency is a plus as it means smartphones can support better on-device AI functions without breaking the battery or the bank which should increase the demand for MediaTek chips which has fortified its market share in midrange smartphones. We also expect long-term tailwinds from its enterprise data center business as management has high confidence and projects US$1b+ revenue in 2026 coming from the segment.

Hon Hai Precision (★★★) produces networking products and components for AI servers. Management commentary pointed toward this AI driven growth continuing in 2025 and likely beyond. Until 2024, most of Hon Hai's revenue was tied to the low-growth smartphone market, but the company has managed to forge a leading position in producing NVIDIA's AI servers, which has driven explosive growth in 2024. In 2024, Hon Hai's AI server revenue has more than doubled. Management forecasts significant growth in each quarter of 2025 from NVIDIA's GB line of servers and Hon Hai should achieve at least 40% market share in this space. AI servers should reach over 50% of total server revenue in 2025.

Semiconductor Manufacturing International Corporation (★) share prices are overvalued and have run up with investors believing that AI will help the company see greater chip sales. Our view is that while the company has made progress on 7 and 5nm nodes, mass production remains elusive which is needed for AI. We believe mass production at and beyond 7nm is unprofitable given current US rules banning SMIC from buying extreme ultraviolet lithography machines, and the company is racing against time to stockpile less-advanced equipment to brace for possible new US restrictions. SMIC is competing at 14 nm comfortably, but its 7 nm chips still have low yields. SMIC remains overvalued as we have little confidence in its long-term profitability given its heavy capital spending in the next few years. The company's long-term growth driver is to ride on China's massive investments in data centers, artificial intelligence, autonomous driving, and automation. However, we prefer Taiwanese foundries TSMC for its dominance in cutting-edge nodes and UMC for its disciplined approach balancing utilization and profitability.

In our next publication, we will look at non-semiconductor companies that may benefit from AI tailwinds, including data centers, platforms that have built large language models, telecoms, and other loosely related industries such as EVs.

Research Methodology for Valuing Companies

Overview

At the heart of our valuation system is a detailed projection of a company's future cash flows, resulting from our analysts' research. Analysts create custom industry and company assumptions to feed income statement, balance sheet, and capital investment assumptions into our globally standardized, proprietary discounted cash flow, or DCF, modeling templates. We use scenario analysis, in-depth competitive advantage analysis, and a variety of other analytical tools to augment this process. We think analyzing valuation through discounted cash flows presents a better lens for viewing cyclical companies, high-growth firms, businesses with finite lives (mines, for example), or companies expected to generate negative earnings over the next few years. That said, we don't dismiss multiples altogether but rather use them as supporting cross-checks for our DCF-based fair value estimates. We also acknowledge that DCF models offer their own challenges (including a potential proliferation of estimated inputs and the possibility that the method may miss short-term market-price movements), but we believe these negatives are mitigated by deep analysis and our long-term approach.

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Four key components drive the Morningstar rating:

- our assessment of the firm's economic moat.
- our estimate of the stock's fair value.
- our uncertainty around that fair value estimate.
- the current market price.

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Market Price

The market prices used in this analysis and noted in the report come from exchanges on which the stock is listed, which we believe is a reliable source.

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