

What's hot: CPUs Return to the AI Spotlight

Pubblicato il 1 maggio 2026

Baoqi Zhu

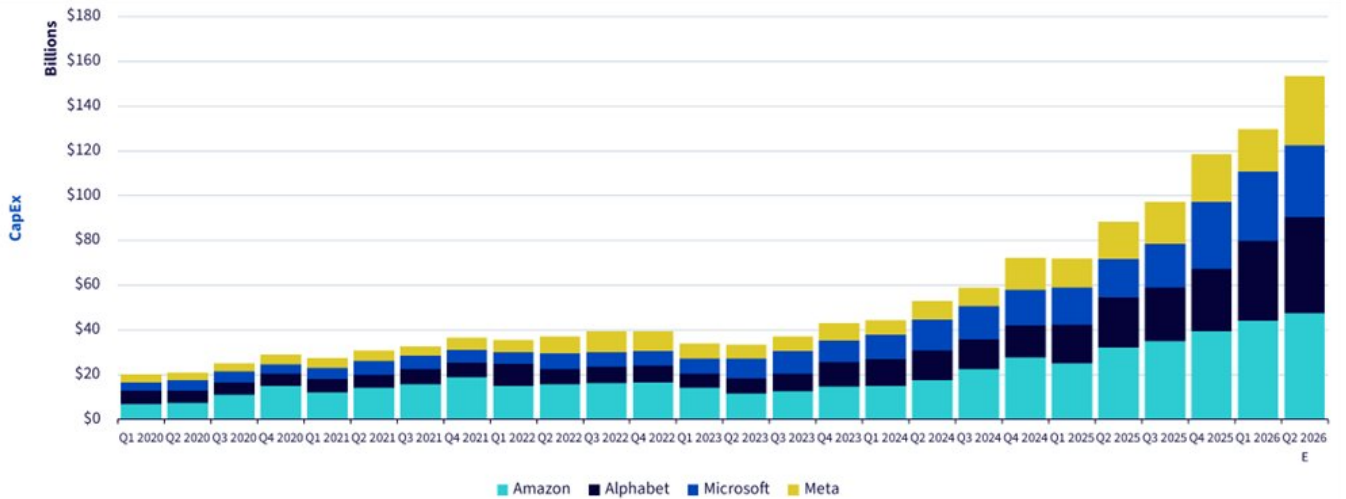
Associate Director, Quantitative Research & Multi Asset Solutions

Punti chiave

- Evolving AI training needs more CPUs as reinforcement learning requires external environments to test, verify and score model outputs.
- AI agent inference is more CPU-intensive because agents involve planning, routing, retrieval, tool calls, execution and repeated workflow loops.
- Leading CPU players are showing early momentum, with Intel and AMD benefiting from renewed attention to data-centre CPU demand.
- The AI semiconductor landscape is still evolving, as bottlenecks shift across GPUs, memory, CPUs, networking and advanced packaging.
- Related Products [WisdomTree Artificial Intelligence UCITS ETF – USD Acc](#) Find out more

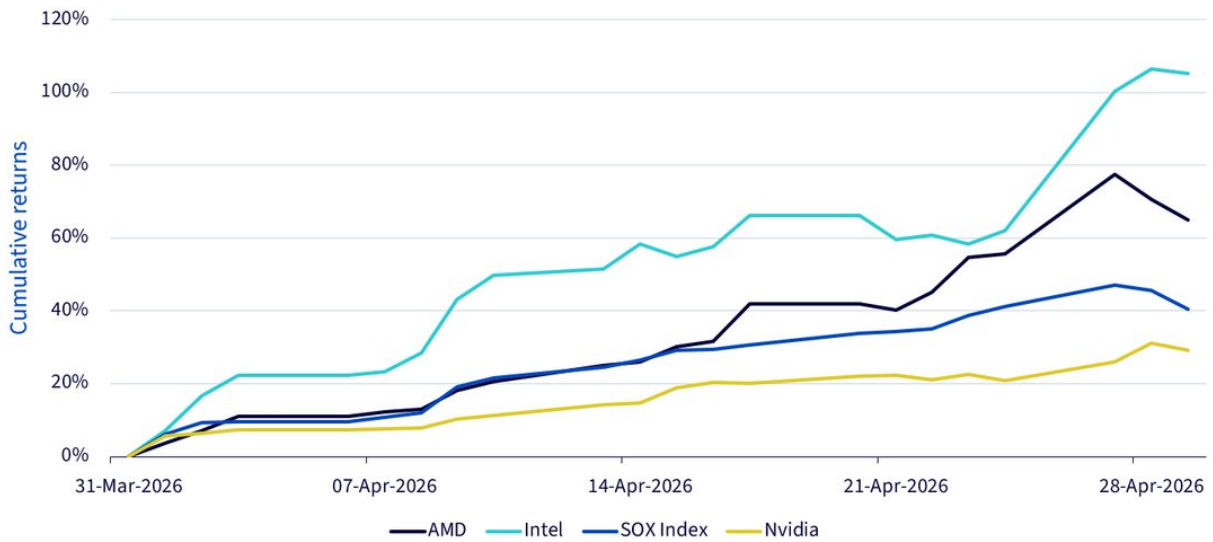
In 2025, Amazon, Alphabet, Meta and Microsoft planned to spend more than \$300bn on AI infrastructure and data-centre build-outs. The broader hyperscaler capex cycle could reach around \$700bn in 2026.¹ The picks and shovels narrative remains intact: NVIDIA has continued to report record data-centre revenue, while memory-chip makers have gained strong momentum as AI demand tightens HBM and DRAM supply. More recently, CPUs have also started to stand out. The recent rally in AMD and Intel, the two leading CPU suppliers, suggests investors are beginning to reassess the role of CPUs in the AI infrastructure stack.

Figure 1: Hyperscalers' capex since Q1 2020



Source: WisdomTree, Bloomberg. As of 29 April 2026. Figures for Q2 2026 are averages of analysts' estimates available on Bloomberg. **Historical performance is not an indication of future performance and any investments may go down in value.**

Figure 2: AMD and Intel outperformed Nvidia and broad semiconductor index



Source: WisdomTree, Bloomberg. From 31 March 2026 to 29 April 2026. SOX index denotes Philadelphia Stock Exchange Semiconductor Index. **You cannot invest directly in an index. Historical performance is not an indication of future performance and any investments may go down in value.**

AI Training Is Raising CPU Demand

The focus of generative AI was mostly on pre-training large models. That work is highly parallel and heavily dependent on matrix multiplication, which is why GPUs became the centre of the AI compute stack. However, CPUs remain important in AI model training. They help store, shard, index data that are fed into GPU clusters. As models become larger and datasets move into petabyte scale, this supporting layer becomes harder to ignore.

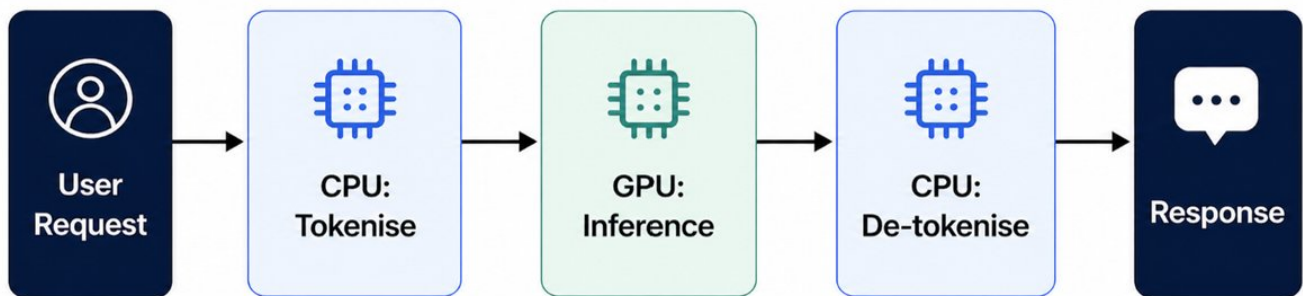
The CPU role becomes even more important when reinforcement learning (RL) is added to the training loop. RL helps models improve by rewarding better outputs and penalising weaker ones. In this process, AI models often generate actions on GPUs, while CPUs run the external environments that execute those actions, test and verify the outputs, and calculate rewards before feeding the results back into the GPU-driven training loop. As GPUs become more powerful, the CPU-side environment also needs to scale. If the CPU-side cannot keep up, expensive GPUs can sit idle while they wait for the next batch of work. A future GPU generation such as Rubin may require an even higher ratio of CPU to GPU power than 1:6 ratio.²

Agentic AI Makes Inference More CPU-Intensive

The CPU opportunity is even clearer on the inference side, especially as Agentic AI marks a structural shift from compute to orchestration.

A simple chatbot may follow a relatively straightforward path: the CPU receives a request, the GPU runs the model, and the CPU returns the answer.

Figure 3: Chatbot inference workflow



Source: WisdomTree.

An AI agent is different. It can involve multiple steps: planning, routing, retrieving data, calling tools, checking outputs etc. Much of this workflow is not pure GPU computation. It is branch-heavy, latency-sensitive and closely tied to orchestration, APIs, execution etc. Those are generally better suited to CPUs rather GPUs. Repeated agent loops also increase the amount of CPU-side work per request. As workflows become more complex and involve more steps, CPUs may be increasingly needed to support AI inference at scale.

Figure 4: Agentic inference workflow

Source: WisdomTree.

That helps explain why CPUs are returning to the AI infrastructure debate. The more AI systems become agentic, the more compute is needed around the model, not just inside the model.

Evidence from leading players

Intel and AMD are the two dominant suppliers of x86 server CPUs, with Intel Xeon and AMD EPYC widely used across data centres. Their recent results suggest CPUs are starting to re-enter the AI infrastructure story.

Intel offers the clearest signal. Its data center and AI segment revenue rose 22% year on year in Q1 2026,³ and management said investments in CPUs are accelerating as AI evolves from foundational training to inference and agentic workloads. This suggests Intel may benefit not only from its manufacturing turnaround, but also from renewed CPU demand in the AI cycle.

AMD's signal is also positive, although less pure. Its data centre segment revenue rose 39% year on year in Q4 2025,⁴ driven by strong demand for EPYC CPUs and the continued ramp of Instinct GPUs. This shows AMD is benefiting across the AI compute stack, but the CPU-only contribution is harder to isolate.

The competitive landscape of CPUs is still evolving

Intel and AMD dominate the x86 CPU market, but the AI-era CPU opportunity is not limited to x86. Hyperscalers are increasingly designing their own Arm-based CPUs to optimise cost, power efficiency and workload fit. AWS Graviton, Google Axion and Microsoft Cobalt are examples of this shift.

In addition, Nvidia's Grace and Vera CPUs are also based on ARM and they are head-node CPUs which mean they are attached to GPU systems and tightly coupled to the accelerator platform to host GPUs.

The competitive landscape of CPUs is still evolving. Although AMD and Intel are in the leading position for now, others still may catch up.

Conclusion

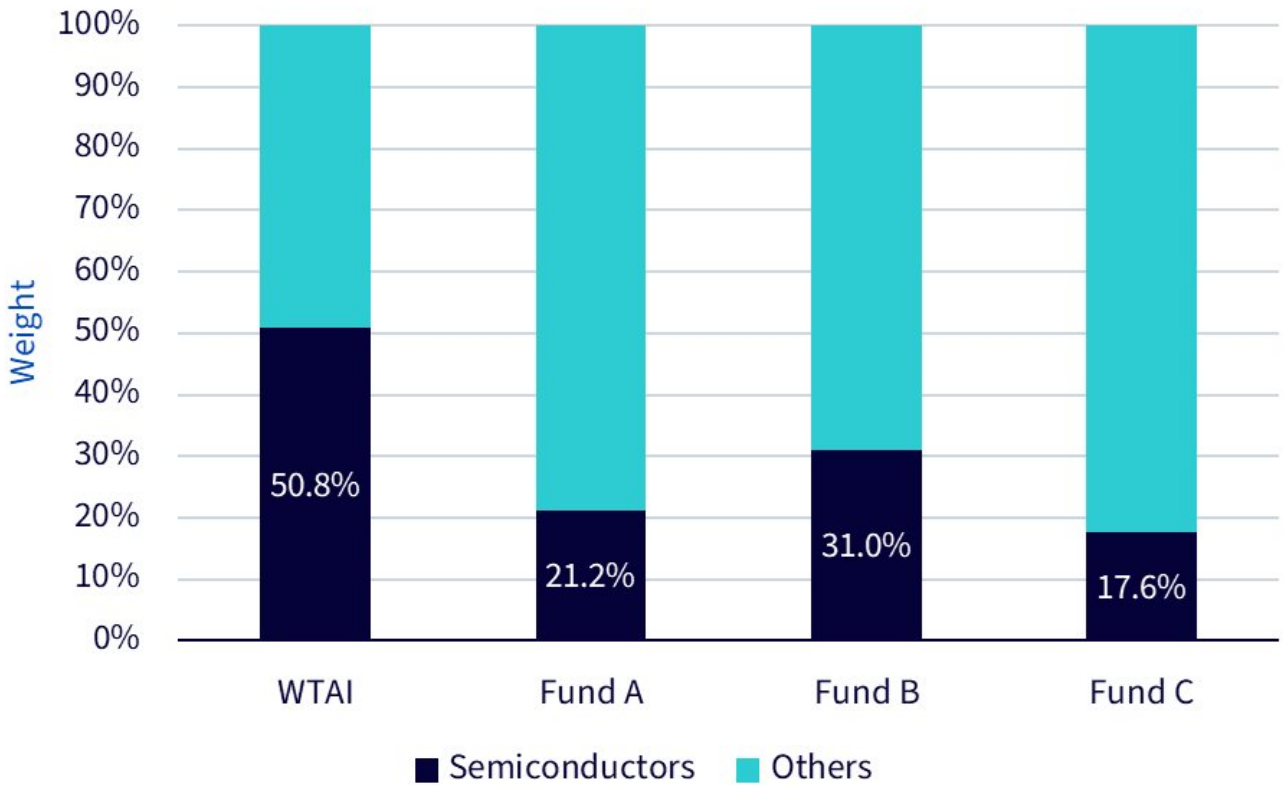
AI infrastructure expansion is not just a GPU story. GPUs remain central, but as AI systems scale from model training to agentic deployment, the supporting semiconductor ecosystem becomes increasingly important. CPUs are one example of this shift, as reinforcement learning and agentic inference require more general-purpose compute to coordinate, test and support workloads around GPU clusters. This is raising demand across multiple layers of the chip value chain. For investors, a more diversified semiconductor strategy may better reflect how the AI ecosystem is developing.

What WisdomTree offers

The [WisdomTree Artificial Intelligence UCITS ETF \(WTAI\)](#) was launched in November 2018 and is developed in partnership with industry experts, the Consumer Technology Association (CTA).

Compared with its major peers, WTAI has a higher allocation to semiconductors and covers a broader range of semiconductor companies across the AI ecosystem, providing wider exposure to the chip value chain supporting AI infrastructure expansion.

Figure 5: Semiconductors exposure comparison: WTAI vs Major European AI ETFs



Source: WisdomTree, Bloomberg. As of 29 April 2026. Semiconductor exposure is represented by weights allocated in GICS industry group “Semiconductors & Semiconductor Equipment”. Fund A, B, C are the AI Themed ETFs domiciled in Europe (AUM > \$1bn, as of 29/04/2026). GICS is the Global Industry Classification Standard. **Historical performance is not an indication of future performance and any investments may go down in value.**

1Source: Bloomberg: [US Big Tech Ratchets Up AI Spending Past \\$700 Billion This Year](#)

2SemiAnalysis

3Nasdaq: [Intel Reports First-Quarter 2026 Financial Results](#)

4AMD: [AMD Reports Fourth Quarter and Full Year 2025 Financial Results](#)

Important Risks Related to this Article

Important Information

Marketing communications issued in the European Economic Area (“EEA”): This document has been issued and approved by WisdomTree Ireland Limited, which is authorised and regulated by the Central Bank of Ireland. **Marketing communications issued in jurisdictions outside of the EEA:** This document has been issued and approved by WisdomTree UK Limited, which is authorised and regulated by the United Kingdom Financial Conduct Authority. WisdomTree Ireland Limited and WisdomTree UK Limited are each referred to as “WisdomTree” (as applicable). Our Conflicts of Interest Policy and Inventory are available on request. This marketing communication is intended for all investors; however, the WisdomTree products described in this document and related materials may be restricted in certain jurisdictions and may only be available to particular categories of investors in accordance with applicable laws and regulations. Where a product is not authorised or its distribution is restricted in your jurisdiction, it is the responsibility of any person or entity in possession of this information to inform themselves of, and comply with, all relevant restrictions. Before making any investment, investors should seek appropriate legal, regulatory, tax and investment advice to assess the suitability and implications of investing in these products. Information about WisdomTree products is available at [wisdomtree.eu](https://www.wisdomtree.eu). WisdomTree does not offer investment advice tailored to individual circumstances. Past performance is not a reliable indicator of future performance. Any historical performance included in this document may be based on back testing. Back testing is the process of evaluating an investment strategy by applying it to historical data to simulate what the performance of such strategy would have been. Back tested performance is purely hypothetical and is provided in this document solely for informational purposes. Back tested data does not represent actual performance and should not be interpreted as an indication of actual or future performance. The value of any investment may be affected by exchange rate movements. Any decision to invest should be based on the information contained in the appropriate prospectus and after seeking independent investment, tax and legal advice. The content of this document does not constitute investment advice nor an offer for sale nor a solicitation of an offer to buy any product or make any investment. An investment in exchange-traded products (“ETPs”) is dependent on the performance of the underlying index, less costs, but it is not expected to match that performance precisely. ETPs involve numerous risks including among others, general market risks relating to the relevant underlying index, credit risks on the provider of index swaps utilised in the ETP, exchange rate risks, interest rate risks, inflationary risks, liquidity risks and legal and regulatory risks. The information contained in this document is not, and under no circumstances is to be construed as, an advertisement or any other step in furtherance of a public offering of shares in the United States or any province or territory thereof, where none of the issuers or their products are authorised or registered for distribution and where no prospectus of any of the issuers has been filed with any securities commission or regulatory authority. No document or information in this document should be taken, transmitted or distributed (directly or indirectly) into the United States. None of the issuers, nor any securities issued by them, have been or will be registered under the United States Securities Act of 1933 or the Investment Company Act of 1940 or qualified under any applicable state securities statutes. This document may contain independent market commentary prepared by WisdomTree

based on publicly available information. Although WisdomTree endeavours to ensure the accuracy of the content in this document, WisdomTree does not warrant or guarantee its accuracy or correctness. Any third party data providers used to source the information in this document make no warranties or representation of any kind relating to such data. Where WisdomTree has expressed its own opinions related to product or market activity, these views may change. Neither WisdomTree, nor any affiliate, nor any of their respective officers, directors, partners, or employees accepts any liability whatsoever for any direct or consequential loss arising from any use of this document or its contents. This document may contain forward looking statements including statements regarding our belief or current expectations with regards to the performance of certain assets classes and/or sectors. Forward looking statements are subject to certain risks, uncertainties and assumptions. There can be no assurance that such statements will be accurate and actual results could differ materially from those anticipated in such statements. WisdomTree strongly recommends that you do not place undue reliance on these forward-looking statements. Product Comparison This document contains a comparison of financial products contained within the relevant prospectus and/or based on publicly available information, some of which has been prepared by third parties. While such sources are believed to be accurate as at their date of publication, WisdomTree does not warrant, guarantee or otherwise confirm the accuracy or correctness of any information contained herein and any information or opinions related to the products detailed herein may change over time. Any third parties used to source the information in this document make no warranties or claims of any kind relating to such data. Investors should read the prospectus and other applicable offering documents for each product and consider the investment objectives, risks, charges and expenses carefully before investing.

WisdomTree Issuer ICAV Certain funds referred to in this document are issued by WisdomTree Issuer ICAV ("WT Issuer"). WT Issuer is an open-ended, umbrella-type Irish Collective Asset-management Vehicle with segregated liability between sub-funds and is authorised by the Central Bank of Ireland ("CBI") as an Undertaking for Collective Investment in Transferable Securities ("UCITS") under Irish law. Each fund is represented by a separate class of shares (the "Shares") issued by WT Issuer. The Fund is described in a Key Information Document (KID) or Key Investor Information Document (KIID) for UK investors, and the prospectus of WT Issuer ("WT Prospectus"). A copy of the WT Prospectus and the KID / KIID is available, for EEA/UK only, in English at www.wisdomtree.eu. Where required under national rules, the KID will also be available in the local language of the relevant EEA Member State. Investors should read the WT Prospectus before investing and should refer to the section of the WT Prospectus entitled »Risk Factors¼ for further details of risks associated with an investment in the Shares. The [summary of investor rights](#) associated with an investment in the fund is available in English on WisdomTree Europe's website. WisdomTree Management Limited may decide to terminate the arrangements made for the marketing of its collective investment undertakings. In such circumstances, shareholders in the affected EEA Member State will be notified of this decision and will be provided with the opportunity to redeem their shareholding in the fund free of any charges or deductions for at least 30 working days from the date of such notification.

For Investors in Switzerland: This document constitutes an advertisement of the financial product(s) mentioned herein. The prospectus (in English only) and the key investor information documents (KID) (in Ger-

man, French and Italian) are available from WisdomTree's website <https://www.wisdomtree.eu/en-ch/resource-library/prospectus-and-regulatory-reports>

For WisdomTree UCITS products only: the representative and paying agent of the ETPs in Switzerland is Société Générale Paris, Zurich Branch, Talacker 50, PO Box 5070, 8021 Zurich, Switzerland. The prospectus, the key investor information documents (KIID), the articles of association and the annual and semi-annual reports of the sub-funds are available free of charge from the representative and paying agent. As regards distribution in Switzerland, the place of jurisdiction and performance is at the registered seat of the representative and paying agent. Some of the sub-funds referred to in this document may not have been registered with the Swiss Financial Market Supervisory Authority ("FINMA"). In Switzerland, such sub-funds that have not been registered with FINMA may only be available to Qualified Investors. For Investors in France: The information in this document is intended exclusively for professional investors (as defined under the MiFID) investing for their own account and this material may not in any way be distributed to the public. The distribution of the Prospectus and the offering, sale and delivery of Shares in other jurisdictions may be restricted by law. WT Issuer is a UCITS governed by Irish legislation, and approved by the Financial Regulatory as UCITS compliant with European regulations although may not have to comply with the same rules as those applicable to a similar product approved in France. The Fund has been registered for marketing in France by the Financial Markets Authority (Autorité des Marchés Financiers) and may be distributed to investors in France. Copies of all documents (i.e. the Prospectus, the Key Investor Information Document, any supplements or addenda thereto, the latest annual reports and the memorandum of incorporation and articles of association) are available in France, free of charge at the French centralizing agent, Societe Generale at 29, Boulevard Haussmann, 75009, Paris, France. Any subscription for Shares of the Fund will be made on the basis of the terms of the prospectus and any supplements or addenda thereto. For Investors in Malta: This document does not constitute or form part of any offer or invitation to the public to subscribe for or purchase shares in the Fund and shall not be construed as such and no person other than the person to whom this document has been addressed or delivered shall be eligible to subscribe for or purchase shares in the Fund. Shares in the Fund will not in any event be marketed to the public in Malta without the prior authorisation of the Maltese Financial Services Authority. For Investors in Monaco: This communication is only intended for duly registered banks and/or licensed portfolio management companies in Monaco. This communication must not be sent to the public in Monaco.