



# AI Chips: Highlights From Recent Earnings

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Semiconductors or “chips” are playing a major role in the artificial intelligence (AI) revolution we are experiencing today. Responsible for handling the vast computational demands of AI, these technological enablers are powering the increasingly intelligent devices and applications that are transforming our world.

Recently, a number of AI chip companies have posted quarterly earnings, offering investors a glimpse into the current state of the industry. In this blog, we’ll dive into some of these earnings reports, unpacking the numbers and highlighting key trends, challenges, and future outlooks.

## TSMC: Strong Growth in High-Performance Computing

First up is chip manufacturing powerhouse Taiwan Semiconductor Manufacturing Company or TSMC. A pure-play foundry business, this company manufactures chips for just about every chip designer out there including Nvidia, AMD, Samsung, Qualcomm, and Broadcom. Currently, it produces over 80%<sup>1</sup> of the advanced chips needed for AI applications. So, it’s playing a pivotal role in the AI ecosystem.

TSMC was one of the first chip companies to post its earnings (in mid-April) and its results were encouraging. For the quarter<sup>2</sup> ended March 31, revenue was T\$839.25 billion, up 42% year on year, and slightly ahead of the consensus forecast<sup>3</sup> of T\$835.13 billion. Net income increased 60.3% year on year to T\$361.56 billion, beating the estimate of T\$354.14 billion.

One key driver of the strong performance here was TSMC’s high-performance computing<sup>4</sup> (HPC) division, which encompasses AI and 5G applications. In Q1, sales in this segment were up 7% from the previous quarter. For the period, this division accounted for 59% of total revenue.

On TSMC’s Q1 earnings call, CEO C.C. Wei said that although there are risks from US tariffs, the company had not seen any change in customer behavior so far. He added that in the near term, he expects the business to be supported by robust demand for AI chips.

*We continue to observe robust AI related demand from our customers.*

TSMC CEO C.C. Wei

In terms of guidance, the company said that it is expecting revenue growth of around 25% in US dollar terms for 2025. Meanwhile, from 2024 to 2029, it expects annualized revenue growth to approach 20% in US dollar terms.

It's worth noting that in March, TSMC announced plans to invest an additional \$100 billion in the US to build more fabrication plants in Arizona. These plants are intended to produce advanced semiconductors including 5nm, 4nm, and 3nm chips. In April, Nvidia announced that it has already started production of its Blackwell chips at TSMC's Arizona plants. In a statement, the chip designer said that it plans to produce up to half a trillion dollars<sup>5</sup> of AI infrastructure in the US over the next four years through partners including TSMC.

## AMD: Substantial Data Center Growth

Let's now take a look at Advanced Micro Devices or AMD. It's a global semiconductor company that is known for producing high-performance processors and powerful graphics cards (GPUs). This company is the closest competitor to Nvidia when it comes to high-powered AI GPUs. Back in October, it launched the Instinct MI325X – an AI chip designed to rival Nvidia's Blackwell.

AMD's Q1 earnings, posted on May 6, topped expectations. For the quarter ended March 31, the company reported revenue of \$7.44 billion<sup>6</sup>, up 36% year on year. Earnings per share came in at 96 cents, up from 63 cents a year earlier. Analysts had been expecting<sup>7</sup> revenue and earnings per share of \$7.13 billion and 94 cents respectively, according to LSEG.

One highlight of AMD's earnings was its data center segment, which includes AI GPUs. Here, sales were up 57% year on year to \$3.67 billion. On the earnings call<sup>8</sup>, CEO Dr. Lisa Su told investors that several hyperscalers have expanded their use of Instinct accelerators to cover an increasing range of generative AI use cases. She also said a major AI model developer is using Instinct GPUs for inference (where a trained AI model uses its learned knowledge to make predictions or generate outputs based on new, previously unseen data).

*We delivered an outstanding start to 2025 as year-over-year growth accelerated for the fourth consecutive quarter driven by strength in our core businesses and expanding data center and AI momentum. Against this backdrop, we remain confident we can deliver strong double-digit percentage revenue growth in 2025.*

AMD Chair and CEO Dr. Lisa Su

Looking ahead, AMD said that it expects \$7.4 billion in sales for the current quarter (versus \$5.8 billion in Q2 FY2024). Going into the print, Wall Street had been expecting \$7.25 billion in sales for Q2, so this guidance was better than expected. The company noted that it expects about \$700 million in lost revenue during the current quarter from export controls, and \$1.5 billion in total through the end of the fiscal year. However, Su stated that while the company faces some headwinds from the regulatory environment, these should be offset by the strength of the company's differentiated product portfolio.

## Arm Holdings: Moving Into the Data Center

Finally, we have Arm Holdings, which is a global leader in the design of power efficient central processing units or CPUs (a CPU is the electronic circuitry within a computer that executes instructions comprising a computer program). In the past, Arm has had a lot of success in the smartphone market (99% of all smartphones have Arm technology). However, it's now turning its attention to data centers and AI.

Arm delivered a solid quarter (Q4 FY2025) when it posted its earnings on May 7. For the period, revenue came in at \$1.24 billion, up 34% year on year and slightly above the consensus forecast of \$1.23 billion. This represented the first quarter in history where revenue was in excess of \$1 billion. Non-GAAP net income was \$584 million, compared to \$376 million a year earlier, while non-GAAP fully diluted EPS was \$0.55 (+53% year on year), above the consensus forecast of 52 cents.

*Arm delivered record-breaking results for both the fourth quarter and the full fiscal year ending 2025. We surpassed \$1 billion in revenue for the first time in Q4, driven by increased deployment of our CSS platforms across AI data center, cloud compute and mobile. As AI growth from the cloud to the edge creates demand for more energy efficient compute, Arm will enable AI everywhere.*

Arm Holdings CEO Rene Haas

In its letter to shareholders, Arm noted that new AI developments, such as AI agents, are unlocking new use-cases in data centers. This is increasingly resulting in a migration of AI workloads (especially inference) from the cloud to the edge, driven by the need for faster response times and reduced energy consumption. Arm believes that it is uniquely positioned to benefit from this shift. Already, it is enabling AI inference at scale across cloud and edge environments.

Arm also pointed out that today, major hyperscalers such as Amazon Web Services (AWS), Google Cloud, and Microsoft Azure are pairing Armv9-based custom silicon with their own accelerators to run AI workloads. And it said that with more AI software being written first for Arm-based chips, it expects close to 50% of all new server chips shipped to top hyperscalers this year to be Arm-based.

In terms of guidance for the current quarter, Arm forecast revenue of between \$1 billion and \$1.1 billion and earnings per share of between 30 cents and 38 cents. Wall Street had been expecting \$1.1 billion in revenue and earnings per share of 42 cents though, which resulted in some share price weakness after the earnings report was posted. Given the uncertain macro environment, Arm did not issue guidance for the full year. However, it reiterated its confidence in achieving healthy growth in the coming year and years to come.

**Footnotes:**

<sup>1</sup>CSIS, A Strategy for The United States to Regain its Position in Semiconductor Manufacturing, as of February 13, 2024

<sup>2</sup>TSMC Reports First Quarter, as of April 17, 2025

<sup>3</sup>CNBC, TSMC sticks with its revenue forecast after profit tops estimates despite Trump trade worries, as of April 17, 2025

<sup>4</sup>TSMC 1Q2025 Quarterly Management Report, as of April 17, 2025

<sup>5</sup>NVIDIA to Manufacture American-Made AI Supercomputers in US for First Time, as of April 14, 2025

<sup>6</sup>AMD Reports First Quarter 2025 Financial Results, as of May 6, 2025

<sup>7</sup>CNBC, AMD beats on earnings but will take \$1.5 billion hit to revenue from chip restrictions to China, as of May 6, 2025

<sup>8</sup>Investing.com, Earnings call transcript: AMD Q1 2025 earnings exceed expectations, as of May 6, 2025

<sup>9</sup>ARM.com, as of May 12, 2025

<sup>10</sup>ARM, Results for quarter ending March 31, 2025, as of March 31, 2025

<sup>11</sup>CNBC, Arm shares drop on weak forecast, as of May 7, 2025

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