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How Much Does US Growth Depend on AI Investment?

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Abstract

AI investment matters less for US growth than the dominant market narrative suggests. The bigger risk lies in falling AI company valuations and the impact on household consumption.

Zusammenfassung

KI-Investitionen tragen weniger zum US-Wachstum bei als oft behauptet. Das größere Risiko liegt in fallenden KI-Bewertungen und einem schwächeren Konsum.



According to the prevailing market narrative, US economic growth, currently above two percent, depends largely on investment in artificial intelligence.¹ A decline in such investment would therefore pose a major recession risk. The data support this narrative only partly. The greater risk lies with private consumption.

What Exactly Is “AI Investment”?

The national accounts do not provide a clear definition of “AI investment.” Investment is classified by type of asset, not by its purpose. A server used to train a language model and a server used to run a company’s accounting system fall into the same category.

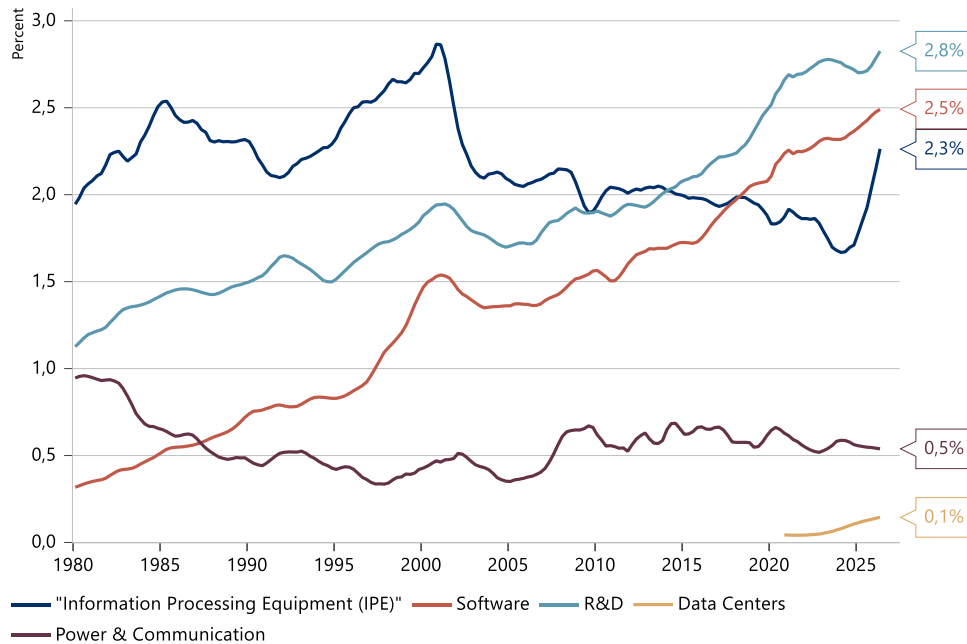
The available investment categories allow for at least five definitions. The narrowest includes hardware investment. The Bureau of Economic Analysis (BEA), which compiles US gross domestic product (GDP), classifies this as “Information Processing Equipment.” It includes computers, servers, high-performance computing equipment and networking technology, but also medical instruments, copiers and office equipment.

The second, broader definition adds software investment and corresponds to the standard measure published by the BEA. Between the bursting of the dot-com bubble in 2000 and 2023, hardware investment tended to lose weight as a share of GDP, while software investment gained weight (Figure 1). Since 2023, hardware investment has reversed its downward trend. It reached 2.3 percent of GDP in the second quarter of 2026, up from 1.7 percent at the end of 2023. Software investment continued its upward trend. Together, hardware and software now account for 4.8 percent of GDP.

¹ The Financial Times column “Unhedged” has followed this market narrative since last year. See, for example, [„AI and real GDP: how big and how fast?”](#) und [„Does GDP growth minus AI capex equal zero?”](#)



Figure 1: AI Investment by Definition, Percent of GDP



Source: Flossbach von Storch Research Institute, Macrobond, BEA. Data as of Q2 2026. Rolling sum of investment over the previous four quarters as a share of nominal GDP.

The third definition adds investment in research and development, since artificial intelligence as a new technology requires substantial R&D spending (Rubinton and Patro 2026). This category, however, also includes research spending in all other fields. R&D investment amounted to 2.8 percent of GDP over the past year, bringing this definition to 7.6 percent of GDP.

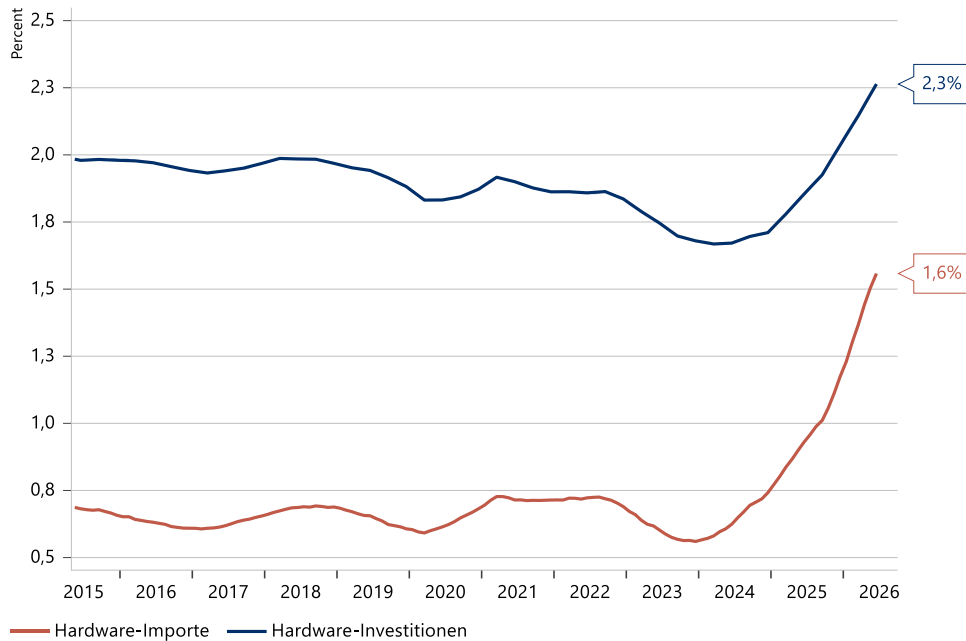
The broadest definition expands the measure further to include the construction of data centers as well as electricity and communications infrastructure. On this basis, AI-related investment accounts for 8.2 percent of GDP. Depending on the definition, therefore, AI investment ranges from 2.3 to 8.2 percent of US GDP.

As a contribution to GDP, however, these figures are biased upward because some of the investment goods are imported. GDP counts only what is produced domestically. Imports are therefore deducted from consumption, government spending, exports and investment.² A large share of the hardware comes from abroad, particularly servers and graphics processors from Taiwan, Mexico and Vietnam. Since 2024, hardware imports have risen from 0.5 percent to 1.6 percent of GDP (Figure 2). Domestic hardware investment as a share of GDP is therefore below 2.3 percent.

² GDP is defined as the sum of household spending (C), investment spending (I), government spending (G), and exports (X) minus imports (M).



Figure 2: Hardware Imports vs. Hardware Investment as a Share of GDP



Source: Flossbach von Storch Research Institute, Macrobond, BEA. Sum of the merchandise import categories “Computers” and “Computer accessories, peripherals and parts,” rolling four-quarter sum divided by nominal GDP over the same four quarters. Data as of Q2 2026.

AI Investment and Its Contribution to Growth

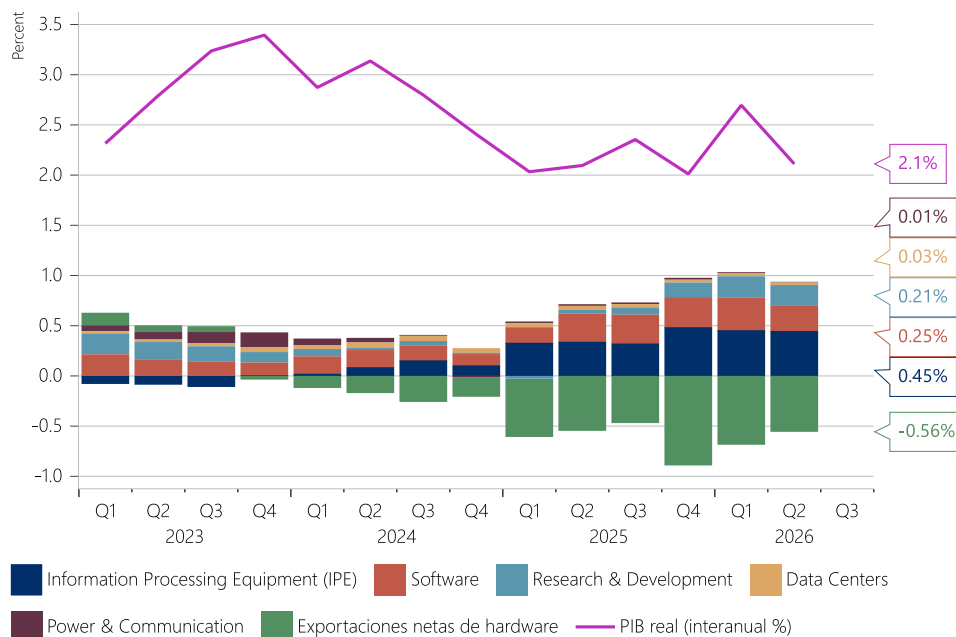
Since 2023, real GDP has grown by more than two percent year on year, although momentum has slowed. Despite disruptive tariff policy and higher energy prices following the Iran war, the US economy grew by 2.1 percent year on year in the second quarter of 2026.

Depending on the definition, I estimate the contribution of “AI investment” to growth at between 0.45 and 0.94 percentage points (Figure 3). Hardware is the only category that shows a clear change in trend. It still made a negative contribution to growth in 2023. Today, it contributes 0.45 percentage points, slightly more than one fifth of total growth.³

³ The growth contribution of AI investment can be approximated by multiplying its share of GDP in the previous quarter by its annualized real growth rate. Investment in “Information Processing Equipment,” for example, accounted for 2.3 percent of GDP in the first quarter of 2026 (Figure 1). At an annualized real growth rate of 8.31 percent, this implies a contribution of 0.19 percentage points to growth in the following quarter. The annual figure of 0.45 percentage points shown in Figure 3 is the average of the four most recent quarterly contributions.



Figure 3: Contribution of AI Investment to Annual Growth



Source: Flossbach von Storch Research Institute, Macrobond, BEA, own calculations. Data as of Q2 2026.

The growth contributions shown in Figure 3 are also biased upward because investment, unlike GDP, is not adjusted for imports. Net hardware imports reduced growth by 0.56 percentage points over the past year. If they are fully netted against hardware investment, the contribution of hardware and software falls from 0.70 to 0.14 percentage points. Under the broadest definition, it falls to 0.38 percentage points. The true figure probably lies somewhere in between.

Carpinelli, Natoli and Taboga (2026), as well as Soto, Thieu and Allen (2026), reach similar conclusions for 2025. The claim that US growth is being driven by AI investment alone therefore looks exaggerated.

Recession Risk: Valuations Before Investment?

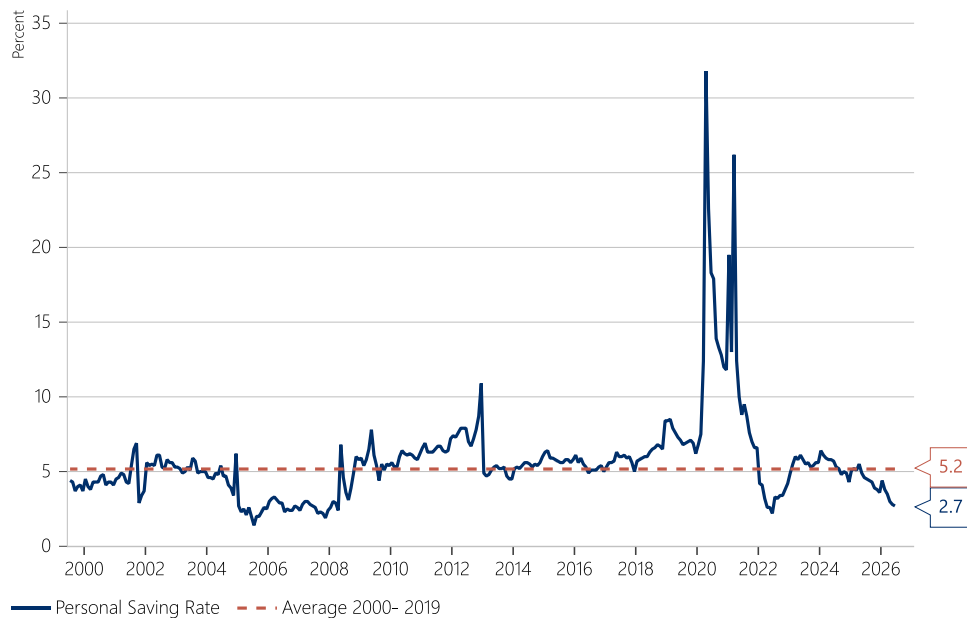
If AI investment stopped growing, the direct damage would be limited. Hardware and software currently make a gross contribution of 0.70 percentage points to real GDP growth. But if hardware imports also stopped rising, their negative contribution of 0.56 percentage points would disappear at the same time. Growth would therefore be about 0.14 percentage points lower.

More important may be the effect of AI investment on consumption. US households currently save 2.7 percent of their disposable income, well below the average of 5.2 percent between 2000 and 2019 (Figure 4). This keeps consumption high. One explanation for why the saving rate remains so low despite more expensive energy is the rise in household financial wealth (Chodorow-Reich, Nenov and Simsek 2021).



That wealth, in turn, has benefited from rising share prices among AI-related companies. Their valuations reflect high expectations about the returns on the billions of dollars of announced AI investment.

Figure 4: US Household Saving Rate



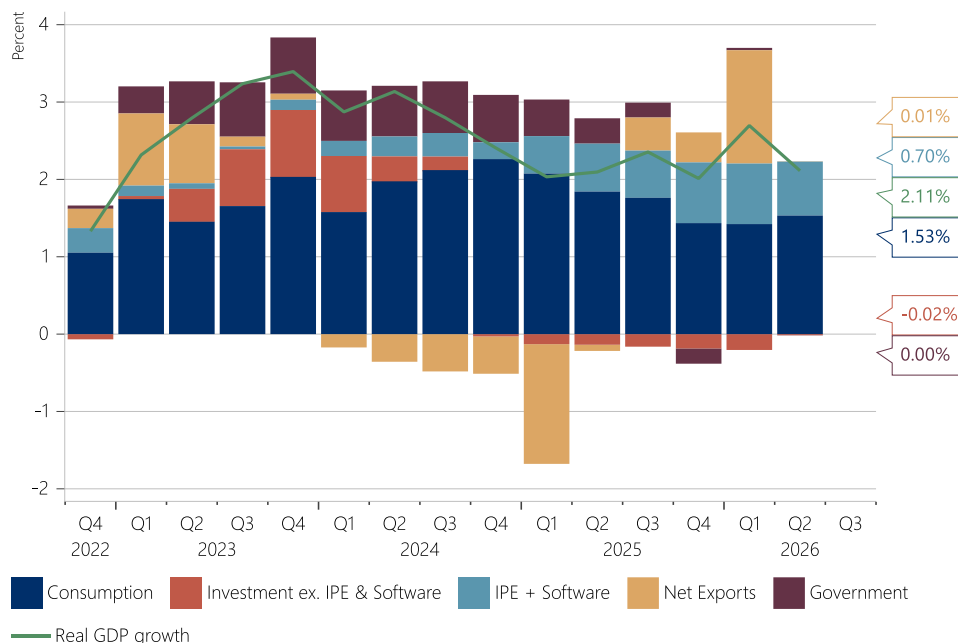
Source: Flossbach von Storch Research Institute, Macrobond, BEA. Data as of June 2026.

If these investment plans were scaled back because expected returns fell, equity prices could correct sharply as well. Consumption could then weaken, although the size of this effect is difficult to forecast. If the saving rate returned to its average between 2000 and 2019, households would have to save almost twice as much as they do today.

Private consumption contributed 1.53 percentage points to growth over the past year, more than twice the unadjusted contribution of hardware and software (Figure 5).



Figure 5: Contributions to Growth by GDP Component, Year on Year



Source: Flossbach von Storch Research Institute, Macrobond, BEA, own calculations. Four-quarter moving average. Data as of Q2 2026. Note: Investment has been adjusted for changes in inventories.

Conclusion

Depending on the definition, investment related to artificial intelligence accounts for between 2.3 and 8.2 percent of US GDP. It contributed between 0.45 and 0.94 percentage points to annual real GDP growth of 2.1 percent. After adjusting for the import content of hardware, the contribution of hardware and software investment falls to about 0.14 percentage points. The US economy therefore appears to depend less directly on this investment than the prevailing narrative suggests.

For investors, the main risk is not that spending on data centers may stop growing as rapidly. The more important risk is that a correction in expectations, and therefore in AI-related equity prices, could trigger a negative wealth effect. If that happened, the large contribution of private consumption to growth could fall sharply, pulling down real US growth with it.



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