Flash Economics

N° 49
December 3rd, 2024

If doubts arise about the profitability of investment in artificial intelligence, the US economy will suffer

Financial markets' optimism about the profitability of investments in artificial intelligence (AI) has been very favorable in the United States, since it has caused:

- A sharp rise in technology stock market indices, making investors richer;
- A strong attractiveness of the United States for non-resident investment, resulting in capital inflows that largely financed the current account deficit;
- A sharp rise in investment in new technologies, supporting both the demand and supply of goods.

If this optimism on the part of financial markets about the benefits of artificial intelligence were to wane (either because of a downward revision of expectations of AI-generated productivity gains, or because of the enormous size of the investments required), the consequences would be very negative for the United States: impoverishment of wealth, lower capital inflows and difficulties in financing the external deficit, and lower investment in new technologies.

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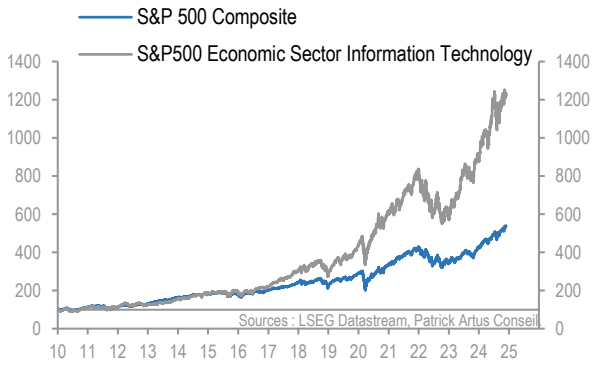
The consequences of financial market optimism about the effects of artificial intelligence

On average, investors **are very optimistic about the effects of artificial intelligence** on labor productivity and corporate profitability.

This optimism has led to:

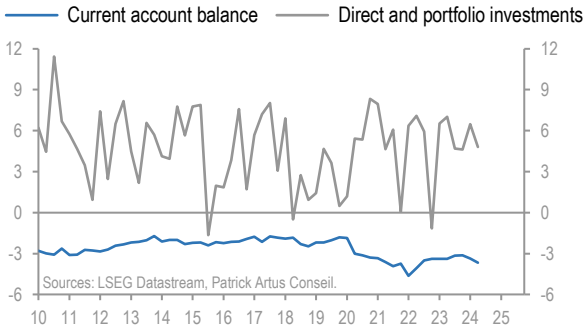
- **A sharp rise in US technology stock indices** (**Chart 1**);

Chart 1
United States: Stock market indices (01.01.2010 = 100)



- **A strong attraction of the United States for non-resident investors**, leading to strong inflows of long-term capital into the United States, which largely finance the current account deficit (**Chart 2**);

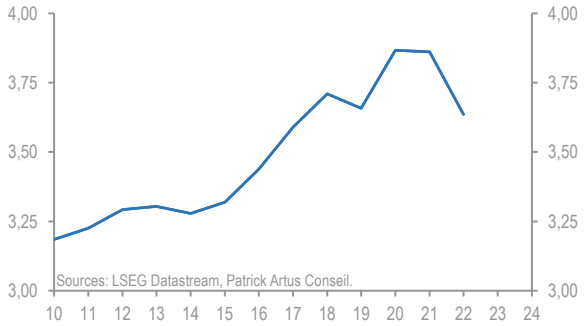
Chart 2
United States: Current account balance, direct and portfolio investment inflows* (as % of nominal GDP)



(*) Direct and portfolio investment inflows are capital inflows leading to an increase in liabilities (in this case for the United States) and therefore have a positive sign.

- **A sharp rise in investment in new technologies (Chart 3)**, supporting both demand and supply of goods.

Chart 3
United States: ICT investment including software
(in value terms, as % of nominal GDP)



But investors' optimism about the effects of artificial intelligence is undoubtedly exaggerated.

Some studies conclude that the introduction of artificial intelligence will have very significant positive effects on productivity (e.g. Goldman Sachs (2023)[1], M. Baily, E. Brynjolfsson, A. Korinek[2]).

But other studies, in particular D. Acemoglu[3], **show that while artificial intelligence will boost labor productivity and overall factor productivity rapidly** (27% increase for labor productivity, 14% increase for overall factor productivity) in sectors whose efficiency is greatly enhanced by AI (coding, business services, finance), the weight of tasks affected is low (4.6% of all tasks) and consequently **the overall effect of AI on productivity is small** (+0.06% per year for 10 years).

Research by the OECD[4] highlights an additional risk: that AI will result in the transfer of jobs destroyed by AI to sectors where labor productivity is low. This study also shows that few sectors are currently adopting AI.

What's more, we know that deploying AI requires very substantial investments that will only generate profits in the fairly distant future.

It's therefore possible that investor optimism about the effects of AI will fall sharply.

What would be the consequences of a decline in this optimism for the US economy?

- **A fall in the stock prices of technology companies, leading to a loss of wealth;**
- **A decline in capital inflows, leading to difficulties in financing the external deficit**, and a depreciation of the dollar (**Chart 4**);

[1]Goldman Sachs Research (2023), Generative AI could raise global GDP by 7%, https://www.goldmansachs.com/insights/articles/generative-ai-could-raise-global-gdp-by-7-percent.html
[2] Baily, M., Brynjolfsson, E., & Korinek, A. (2023). Machines of mind: The case for an AI-powered productivity boom, Brookings Institution.
[3] Acemoglu, D. (2024). The Simple Macroeconomics of AI (No. w32487). National Bureau of Economic Research.
[4] Filippucci, F., et al. (2024), The impact of Artificial Intelligence on productivity, distribution and growth : Key mechanisms, initial evidence and policy challenges, *OECD Artificial Intelligence Papers*, n° 15, Éditions OCDE, Paris, https://doi.org/10.1787/8d900037-en.

Chart 4
Euro/dollar exchange rate (EUR 1 = USD...)



- a decline in investment in new technologies.

Summary: much depends on the effects of artificial intelligence

Depending on whether the introduction of AI will have a strongly positive or only a weak effect on productivity in the USA, we will see:

- The continued rise or, on the contrary, decline of technology stock market indices;
- The continuation of substantial capital inflows into the US, or conversely a halt to capital inflows, causing difficulties in financing the external deficit and a depreciation of the dollar.

Investors whose strategy today is to invest in the USA, particularly in technology stocks, therefore need to form an opinion on the size of the positive effects of artificial intelligence.

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