Cougar Global Viewpoints

A U.S. productivity surge: What's causing it, and will it endure?

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Takeaways:

- The U.S. economy is showing its strongest productivity growth in more than a decade.
- Businesses are benefitting from lower unit labor costs while output per hour surges.
- Other advanced economies are seeing weaker productivity.
- It's too early to conclude that artificial intelligence is the cause, but we can't rule it out.
- A sustainable increase in productivity would provide major benefits to the U.S. economy.

In the fourth quarter of 2023, U.S. non-farm labor productivity increased by 2.6% year over year. This was the strongest annual reading in more than a decade – well above the annual average of 1.5% since the end of the Great Recession (2010-2021) – excluding the brief surge in the early stages of the pandemic. Productivity surged artificially in 2020 because of restrictions on service-sector activity, which reversed by the end of 2021.

In the second half of 2023, labor productivity expanded at an exceptional annualized pace of 4%. The surge in productivity has supported corporate earnings because the combination of slowing nominal wage growth and accelerating productivity growth brought unit labor costs back down to their pre-pandemic growth rate (see chart on next page).

Other advanced economies, where productivity has been generally weak or negative in recent quarters, have not had the same experience. The European Central Bank reported that labor productivity fell 1.2% in the euro area and the UK Office for National Statistics reported that the UK's productivity dropped 0.3% year over year in the fourth quarter of 2023.

Is the U.S. productivity increase a sign that the artificial intelligence (AI) revolution is already bearing fruit? Based

on past technological breakthroughs, it might take years or decades for the benefits to fully feed through. However, we should be open to the possibility that they could show up sooner, with the United States likely to see the largest economic benefits.

The recent productivity pickup is encouraging, and it supports a "soft landing" narrative, but U.S. Federal Reserve officials have been cautious about concluding that it is evidence of a new productivity pattern. Labor productivity, measured by the U.S. Bureau of Labor Statistics as output per hour, tends to be volatile on a quarterly and even yearly basis.

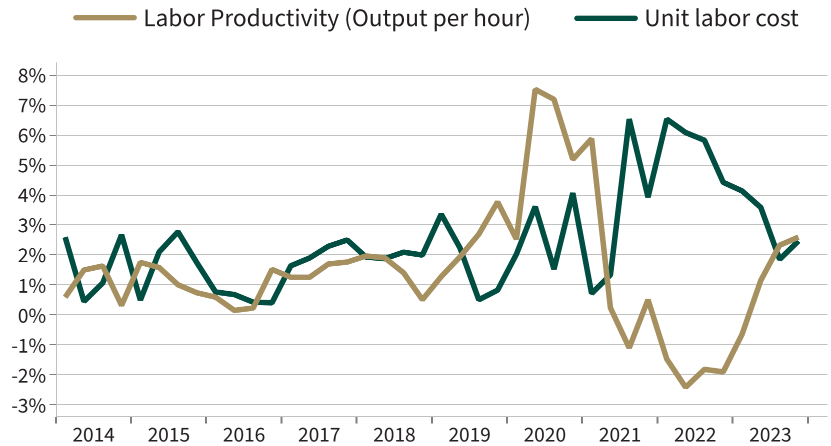
Accurate and timely data on AI are still relatively hard to access. Available data show no obvious correlation between the sectors reporting the highest usage of AI and those experiencing the strongest productivity growth, according to Capital Economics. The only sector that stands out is the information sector, which reported a concomitant increase in output per hour and a higher adoption of AI compared to other sectors. Most likely, this explains the notable investment increase in information technology equipment in the fourth quarter, particularly for computers and peripheral equipment. It could also indicate surging spending for the computing infrastructure required to run large language models. However, there is no evidence for the widespread use of new technology across many sectors that would be associated with a major AI-driven boost to productivity. It is too soon to tell whether the benefits of generative AI have started feeding through, but we can't rule out this scenario.

Other than generative AI, what might be causing the rebound in productivity? The upturn in productivity could be a response to tight labor markets. The scarcity of workers has prompted firms to boost sales without more hiring, for example, by increasing automation or increasing the efficiency of their existing labor forces. Employment indicators are moving toward more normal levels, and productivity may not enjoy the same boost from labor market conditions down the road. However, the recent acceleration in productivity can still have room to run for as long as companies experience difficulty filling jobs.

If AI ultimately boosts productivity in a more meaningful way, there could be similarities with the late 1990s, when the U.S. economy grew without generating greater inflationary pressure. Higher productivity could help firms create more products per worker and pay higher wages without having to raise prices, which could resemble a "Goldilocks" environment.

Final word: We are intrigued by the idea that the recent U.S. productivity boost is the fruit of AI-driven improvements in technology, especially after the rally in tech stocks. Although this may be possible, the volatility in productivity data and the limited availability of AI data make it too soon to tell. Other advanced economies have experienced weaker productivity growth, and U.S. productivity could be increasing for other reasons, such as tightness in the labor market. Regardless of the cause, a sustainable improvement in productivity growth would be a big positive for the economy.

United States, Labor Productivity and Unit Labor Costs, Nonfarm Business, SA, year-over-year change, %



Source: Macrobond Research, Cougar Global Investments, as of 3/7/2024

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DEFINITIONS

Generative artificial intelligence (AI) is a form of artificial intelligence that can create new content that includes text, audio, code, video, and images

Labor productivity, as measured by the U.S. Bureau of Labor Statistics, describes the relationship between real output and the labor time involved in its production. Measures of labor productivity growth show the changes from period to period in the amount of goods and services produced per hour worked. They reflect the joint effects of many influences, including changes in technology; capital investment; level of output; utilization of capacity, energy, and materials; the organization of production; managerial skill; and the characteristics and effort of the work force.

Large language models (LLMs) are artificial intelligence algorithms that can recognize, summarize, translate, predict, and generate text, as well as respond to questions in a conversational manner, by massively large sets of data. Large language models learn context and meaning by tracking relationships in sequential data, such as words in a sentence.

A soft landing is a cyclical slowdown in economic growth that avoids a recession. A hard landing is a significant economic slowdown or downturn, that could include a recession, following a cycle of rapid growth.

Unit labor costs describes the relationship between compensation per hour and labor productivity, or real output per hour, and can be used as an indicator of inflationary pressure on producers. Increases in hourly compensation increase unit labor costs; labor productivity increases offset compensation increases and lower unit labor costs.

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