

Global Fixed Income Thematic Viewpoint

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Why now is the time to discuss Labor Productivity and the lessons we have learned from the 90's.

It seems likely that the higher-than-expected decline in inflation is not only due to a decline in demand caused by sustained high interest rates, but also that improvements in labor productivity may be contributing more than expected - if this is true, there is potential for significant market moves

From an economics perspective, what is likely to happen in the world (particularly in the United States)? We will intentionally avoid rigorous academic discussion and commentary, but use examples to paint a picture for our readers

In economics, the following Cobb-Douglas equation is often used to explain the factors of a country's production.

Y (Output) = A (Production Efficiency resulting from technological innovation, regulations, etc.)

$$\times K^{\alpha}(\text{Capital input}) \times L^{1-\alpha}(\text{Labor input})$$

To illustrate; as a manager, if you want to make more of your product, you need to increase your work efficiency, utilize tools, and hire people. α here is also called the capital share rate ($1-\alpha$ is the labor share rate) - if the manager thinks it is better to hire people than to invest in equipment (tools/automation), capital share will become smaller and capital investment will be reduced as labor input increases.

In the US, the current price of goods (CPI) is around 3.4% and annual wage growth is over 4%. Accounting for a stable working environment, the rational choice is to invest in equipment and automate rather than hire people - if there is demand. This is likely to happen on a micro level.

So what about labor productivity? Since productivity is the output per unit of labor, it can be derived by dividing both sides of equation 1 above by the labor input $L^{1-\alpha}$. i.e.

Labor Productivity; Y (Output) / $L^{1-\alpha}$ (labor input)

= A (production efficiency due to technological innovation, regulations, etc.) $\times K^{\alpha}$ (amount of input capital)

When we think of labor productivity, what comes to mind is technological innovation but it turns out that the amount of input capital also makes a substantial contribution. The 'Economic Report of President (2001)' concluded that the productivity improvement due to the IT revolution that occurred in the United States in the late 1990s was due to IT investment in the amount of input capital not Production Efficiency.

Regarding Production Efficiency, there is an argument that even if highly functional tools and automation are introduced, productivity will not increase unless the people using them improve their skills and are able to implement efficiencies effectively (Solow's productivity paradox). Accordingly it is safer to assume that technological innovation Production Efficiency will increase with a lag of 1 to 2 years.

The Employment Cost Index that we often hear about is the nominal employee remuneration per unit of output, and can be expressed as Nominal Employee Remuneration/Y (real output as above). If output and labor productivity increase due to increases in Production Efficiency and Capital Input, the Output and Labor Productivity will increase as in our first two equations and the Employment Cost Index will decrease. Of course, it will also decrease if compensation decreases.

Announced on December 6, US labor productivity for the third quarter of 2023 was an annualized rate of 5.2% compared to the previous quarter, the highest level in three years, and the employment cost index was down 1.2% compared to the previous quarter. Hourly labor compensation increased by 3.9% compared to the previous quarter. Despite the strong economy and labor market, prices are falling at a faster pace than expected. We believe that post-Coronavirus investments in automation and changes in business practices have raised labor productivity in the United States, making it possible to increase supply to meet high demand, which is why prices have begun to fall more than expected.

We started thinking about this because of the sense of balance between these indicators and the changes in the post-Coronavirus environment. There is talk that AI such as ChatGPT is improving productivity, but it is a bit premature to think that this is having an impact on actual productivity as IT companies' AI-related sales have not yet materially increased.

On the other hand, now that 1-2 years have passed since normalization after Coronavirus, it is possible that we have come to understand and utilize technology, such as the spread of unmanned systems and the use of online and face-to-face technologies, and it is possible that productivity has improved.

Of course, at present there is not enough data to make a firm judgement on the above hypothesis. Furthermore, data on labor productivity is frequently updated and subject to large fluctuations. At least two more quarters of data are needed, and if this discussion becomes meaningful, it could take at least three to six months.

Finally, we should consider briefly what happened in the latter half of the 1990s as an example of how improved labor productivity contributed to lowering inflation.

- From 1994 to 1995, US inflation was around 3% and the economy was robust, so Greenspan preemptively raised the policy interest rate from 3% to 5%, and then maintained the policy rate at around 5.5% until late 1998.
- Even as interest rates were raised, the economy remained strong and the unemployment rate declined. Due to improved labor productivity, the CPI didn't rise above 3%, and it was widely hailed as the new economy. The 1994 hiking cycle remains a famous example of not causing a recession during a period of interest rate hikes or more commonly, a soft landing.
- The market reaction at that time was favourable and had far reaching consequences. As interest rate hikes were halted, interest rates fell sharply, stock prices rose steeply, and the dollar rapidly appreciated. This coincided with the peaking of the Japanese and European economies, and the US became the most powerful economy. The stronger dollar was then to become a contributing factor to the Asian currency crisis. Partly in response to the Asian crisis and with room to cut following lower domestic inflation, in 1999 the Fed lowered rates to the 4% range. This was at a time when US tech stocks were attracting serious investor attention and the lower rate environment contributed to the Dot Com bubble that burst in early 2000

Market expectations are for a lower US interest rate environment and a weaker US Dollar in 2024. That expectation comes with associated risk and we remain cautious of stretched equity market levels, risk asset valuations and risk sentiment currencies. The soft landing may yet have a rougher road ahead than some investors are expecting.

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