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Rising US Inflation: Reasons, Prospects, and Impacts

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The rapidly rising inflation in the United States has triggered market concerns and worries. In addition to the low base effect, this round of inflation is also due to the loose monetary policies and aggressive fiscal policies that have greatly expanded demand, exceeding the constrained supply under the bottleneck of the supply chain. Although the Fed has repeatedly emphasized that the current high inflation is only temporary, we believe that inflation in the United States will remain at a high level in the second half of 2021, and the annual CPI may be close to 5%. Looking forward to next year, driven by the lagging effect of high housing price, the center tendency of inflation will also rise in 2022. It is expected that under high inflationary pressures, the United States may have to accelerate the pace of its withdrawal from QE, and capital market needs to be wary of the potential risks of inflationary pressures lasting longer than expected.

1. U.S. inflation continues to rise

Recently, as the pandemic in the United States has stabilized, people's demand for consumer goods and other production materials has increased, and inflation has risen rapidly. In June 2021, CPI increased by 5.4% YoY, a record high in the past 13 years; CPI increased by 0.9% MoM, the largest since 2009. Excluding volatile food and energy items, the core CPI increased by 4.5% YoY in June, setting a new record since 1992. PCE, which better reflects the actual purchases of American consumers, increased by 4.0% YoY in June, which was also the highest since the Global Financial Crisis. Meanwhile, the core PCE increased by 3.5% YoY, registering the fastest growth rate in the past 30 years. In the context of the overall rise in the prices of consumer goods such as gasoline, food, cars, housing, and computers, the lives of the middle and lower classes in the United States have been significantly affected.

Although CPI and PCE are different, their trends are quite consistent, indicating the rising inflation has become a general trend from different angles. Consumer Price Index (CPI) and Personal Consumption Expenditure (PCE) are both indicators that measure changes in consumer prices in the United States. The two are highly correlated, but there are still differences. CPI is a relative number that measures the price level of a group of representative consumer goods and services over time, and is used to reflect the changes in the price level of consumer goods and services purchased by households. The specific calculation method of CPI is to first determine the weight of a basket of consumer goods and services, and then calculate the price change of each item, and take its weighted average. A major disadvantage of CPI is that the weight of a basket of goods is not adjusted frequently, while it is difficult for consumers to keep constant consumption habits for a long period of time.

PCE is an index that measures the degree of changes in the overall level of personal consumption expenditure in different periods, and is a commonly used indicator for calculating the inflation in the United States. PCE focuses on how consumers allocate their own income, specific expenditure items, and it measures personal consumption behavior. PCE is usually divided into three index categories, namely durable goods, which include products with longer life spans such as cars and televisions; non-durable goods, including clothing and gasoline; and services, including health care and housing expenditures. The inflation contribution of each category is approximated by multiplying its inflation by its consumption share.

PCE and CPI mainly have the following two differences. One is that the proportion of expenditure in PCE is different from that in CPI. The weights of housing and transportation in PCE are much smaller than those in CPI, while the weight of medical care is much higher than that in CPI; the second is that PCE can reflect the fact that consumers buy alternative products due to price changes, while CPI is based on a basket of fixed commodities. Excluding factors such as brand loyalty and low price sensitivity, a rational consumer will pursue cheaper alternatives when goods price rises. The Fed believes that PCE is better than CPI, precisely because PCE can better reflect current prices and actual consumer spending patterns.

From historical data, PCE is often lower than CPI because consumers tend to buy cheaper alternatives when commodity prices rise. In addition, PCE's announcement time is usually half a month later than the current month's CPI and PPI, but based on the data of CPI and PPI, the current month's PCE can be accurately estimated. We use the monthly CPI and PPI to run a simple regression on PCE, and find that the coefficient of determination (R-square) is as high as 0.975, indicating the estimation is quite good. In view of the high correlation between CPI and PCE, the discussion in this article afterwards will focus on CPI.

Accelerating inflation has triggered market concerns about future inflation trends. A recent survey by the US "Fortune" magazine found that 58% of the respondents were "very panicked" about future inflation in the United States. In addition, according to a survey of consumers by the New York Federal Reserve, the median expectations of the Americans for 1-year and 3-year inflation have jumped to 4.8% and 3.6%, respectively, which is the highest value since the record in 2013, also much higher than 2%, the level Fed considers healthy for economic growth. Specifically, consumers expected gasoline price to jump by 9.2%, food price by 7.1%, medical expense by 9.3%, college education price by 7.0%, and rent price by 9.7% in the coming year. At the Fed FOMC meeting in June, attendees raised the PCE forecast for the fourth quarter of 2021 by 1 percentage point to 3.4%.

2. Reasons for inflation rising

The low base effect caused by the pandemic last year is an important reason for the sharp increase of inflation in recent months. Affected by the COVID-19 pandemic, the United States paused the economic activities in the second quarter of last year, and consumer activities contracted sharply, leading to a lower inflation. CPI in April and May 2020 were only 0.3% and 0.1%, respectively, which were the lowest values for the whole year of 2020. This is an important reason for the sharp increase in the U.S. inflation in April and May this year. In June 2020, CPI rose by 0.6%, still at a relatively low level, which also contributed to the high CPI in June this year. PCE is similar. From the perspective of CPI sub-items, the items that contributed a lot to CPI increase in June 2021 were transportation and energy. Among them, the transportation inflation was 21.5%, and the energy inflation was as high as 24.5%. The high inflation of these two items are also closely related to the low base under the impact of the pandemic in the same period last year.

Loose monetary policies pushed up inflation. Under the impact of the COVID-19 pandemic, the unlimited quantitative easing policy has become the last straw for the United States debt, and trillions of debt deficits have started the process of monetization. The latest data shows that the Fed's balance sheet has exceeded US$8 trillion, twice the amount when it launched its large-scale asset purchase program in March 2020. The huge amount of currency brought about by the unlimited quantitative easing monetary policy has greatly pushed up asset prices. Take housing price as an example. Since the pandemic, a large amount of money has flowed into the real estate market in the United States. The S&P CoreLogic Case-Shiller National Home Price Index rose 16.6% YoY in May 2021, the fastest growth rate since the Global Financial Crisis. In addition, quantitative easing has also caused the prices of physical commodities to rise rapidly. As of the end of July, international crude oil price has risen by nearly 50% during this year, and copper price has risen by about 30%. The commodity market has been in a bull market so far in 2021. Stronger asset and physical commodity prices have jointly pushed up U.S. inflation.

The aggressive fiscal policy has greatly expanded demand. In 2020, the United States introduced multiple rounds of fiscal stimulus bills with a total amount of US$3.8 trillion, causing the fiscal deficit to jump to a record high of US$3.35 trillion. Since Biden came to power this year, US has also actively launched a series of fiscal stimulus plans, including the US$1.9 trillion "American Rescue Plan", the US$2.25 trillion "American Jobs Plan", and the US$1.8 trillion "American Family Plan". These funds are used to provide financial support to enterprises and local governments, to improve the infrastructure and economic structure of the United States, and to make up for the personal economic losses of residents due to the pandemic, including providing paid vacation, tax credits, food assistance, unemployment benefits, etc. After rounds of radical fiscal stimulus, the overall demand of American society has risen sharply, which has intensified the inflationary pressure in the United States.

Supply chain bottlenecks restrict supply. Since the pandemic outbreak, the temporary interruption of production and the dislocation of the supply chain have led to restrictions on the production capacity of international commodities. The supply of crude oil and other commodities has been hit hard, which is the main reason for pushing up their prices. The industry represented by semiconductors has experienced supply chain disruptions or delays in delivery globally, which has greatly affected the production of final consumer goods such as automobiles, leading to rising prices of related products. In addition, global trade has also been severely blocked due to the impact of the pandemic, and shipping prices have soared. The current container freight rate has risen 10 times compared with the same period last year, but it is still hard to find a container. In May 2021, US import price rose 11.6% YoY, the fastest since 2012. At the same time, the pandemic has caused a structural problem in the US labor market that is unbalanced between supply and demand. Many companies are forced to increase salaries or increase benefits in order to retain or attract qualified employees, but output has still dropped a lot compared to before the pandemic.

All in all, in addition to the low base effect, the recent rise in US inflation is also due to the loose monetary policies and aggressive fiscal policies that led to a substantial expansion of demand, exceeding the constrained supply under the bottleneck of the supply chain.

3. Prospects for inflation trends

Changes in market inflation expectations may accelerate the rise in actual inflation. Inflation expectations are people's psychological expectations for the inflation. In the real world, the inflation expectations of various economic participants will have an impact on the current demand and supply decisions. Once consumers and investors form strong inflation expectations, they will change their consumption and investment behaviors, thereby intensifying inflation and causing an upward inflation spiral. The Federal Reserve has been emphasizing the factors that caused the current rise in inflation in the United States are temporary, inflationary pressures will not continue, and there will be no hyperinflation in the United States. Markets largely believe this judgment. However, if inflation continues to remain high or rise afterwards, it may change market's inflation expectations, and there is a risk of even greater inflation.

Inflation in the United States will remain high during this year. Although the base effect will weaken in the second half of 2021, it will still be very obvious overall. From the perspective of fiscal and monetary policy, the possibility of the United States withdrawing from the quantitative easing policy within this year is very low. The minutes of the Fed meeting in June show that the first rate hike will not occur until 2023. The Biden administration focuses on infrastructure and industry. A series of fiscal stimulus plans will continue to be released during this year. In addition, as far as the global supply chain is concerned, the current pandemic is still spreading in many countries, and it is difficult to fully recover the global supply chain in a short period of time. It will also need more time for some production capacity to be effectively repaired. Especially in terms of crude oil supply, OPEC+'s newest production plan is still restrained. In the second half of 2021, the tight balance of global oil supply and demand may keep oil price at a relatively high level. CPI in the United States is expected to remain at a high level during this year, and we expect CPI for the whole year of 2021 to be close to 5%.

High housing price growth will drive up the center tendency of inflation in the United States in 2022. Looking forward to next year, base effect will fade and commodity prices may stabilize, but the lagging effect of high housing price on inflation will gradually appear. The S&P CoreLogic Case-Shiller National Home Price Index rose 16.6% YoY in May 2021, marking the 11th consecutive month of rise. We use the CS housing price index, which is one year lagging behind, to perform regression analysis on the U.S. CPI residential item, and find that the Beta coefficient between the two is roughly 0.091, that is, a 10 pp increase in housing price will drive CPI residential item up by 0.91 pp. Since housing accounts for 42.1% of the U.S. CPI, a 10 pp increase in housing price will drive the overall CPI to rise by 0.38 pp. The average growth of the CS housing price index in the United States from 2011 to 2020 is 4.7%. It is expected that the growth of housing price this year will be between 10% and 20%. Calculated by an average of 15%, it may drive up the center tendency of the U.S. CPI by about 0.4 pp.

In the long run, high inflation may not be sustainable. The relationship between supply and demand is the most important factor that determines the long-term trend of inflation. When production and supply are lower than effective demand, prices will generally go up and inflation will rise; on the contrary, inflation will go down. In the past few decades, global inflation has continued to decline. There are three main reasons: first, the application of technological innovation has greatly increased production capacity; second, the production efficiency has improved dramatically under globalization; third, asset and real estate inflation replaced physical inflation in the traditional way. In the medium and long term, high energy consumption and high emission production capacity will continue to be under pressure due to the global carbon peak and carbon neutral targets, which will affect the supply side of certain industries; expansion plans such as the US infrastructure construction plan will also increase the overall social demand. Those factors will pull up the inflation center tendency to a certain extent. But on the whole, the production capacity of human society has greatly exceeded the effective demand. As long as the global supply chain is not widely decoupled, there will be no basis for a sustained increase in inflation.

4. Impacts of high inflation

High inflation may accelerate the pace of withdrawal from QE. For now, markets still believe in the Fed's "temporary inflation theory". If high inflation lasts longer than expected and "temporary inflation theory" weakens, the Fed may accelerate the pace of its withdrawal from QE. In particular, in recent months, the recovery of U.S. employment and the continued rise in inflation have triggered official Taper talk. In July, the Fed Chairman Powell mentioned the need to see more relevant data to confirm the economic recovery, and then Fed will adopt following steps. In the context of rising inflationary pressures, the Fed may announce Taper in coming months, and may begin to reduce asset purchases in the first half of next year, and the first interest rate hike may be advanced from 2023 to 2022.

Different inflation trends in Europe and the United States will lead to a periodical strengthening of DXY. Unlike the situation where inflation continues to rise in the United States, the current Eurozone inflation is roughly around 2%, and the inflation in July was only 2.2%. The European Central Bank issued a new monetary policy strategy recently, adjusting the medium-term inflation target from the previous "below but close to 2%" to "a 2% target", indicating that the euro zone's tolerance for higher inflation indicators has increased. This eliminates the market's concerns about the European Central Bank's excessively fast tightening of policy after inflation rises. It is expected that in the context of differences in inflation trends, the United States and Europe will have very different paces of withdrawing from QE. The United States may withdraw from QE before Europe, and may lead to a periodical strengthening of DXY. A stronger U.S. dollar will also accelerate the flow of global funds to the United States, and emerging markets may encounter exchange rate risks.

Under high inflation, U.S. bond interest rates may return to an upward channel, while U.S. stock is facing correction pressures. Because loose monetary policy has provided huge liquidity for the capital market, the current real interest rate in the United States is already negative, causing the U.S. bond market, stock market, and property market to be at historical highs. If inflation remains high, the Fed will have to withdraw from the loose monetary policy earlier, which may cause a significant correction in global asset prices. Specifically, the Fed's acceleration of its withdrawal from QE will cause investors to demand higher risk compensation for interest rate changes, which will push up the maturity premium of U.S. Treasuries, superimpose the rise in inflation expectations, the U.S. bond interest rates may return to the upward channel. For the stock market, investors' risk appetite under high inflation will decline significantly, and the valuation of US stocks will face considerable correction pressures.

主要經濟指標 (Key Economic Indicators)

一. 本地生產總值 GDP	**2019**	**2020**	**2020/Q4**	**2021/Q1**
總量(億元) GDP($100 Million)	27,997	26,277	7,138	6,975
升幅(%) Change(%)	-1.2	-6.1	-2.8	8.0
二. 對外貿易 External Trade			**2021/6**	**2021/1-6**
外貿總值(億元) Total trade($100 Million)				
總出口 Total exports	40,961	39,275	4,066	22,915
進 口 Total imports	45,714	42,698	4,471	24,371
貿易差額 Trade balance	-4,753	-3,422	-405	-1,656
年增長率(%) YOY Growth(%)				
總出口 Total exports	-5.6	-1.5	33.0	30.0
進 口 Imports	-8.1	-3.3	31.9	26.8
三. 消費物價 Consumer Price				
綜合消費物價升幅(%) Change in Composite CPI(%)	2.9	0.3	0.7	1.0
四. 樓宇買賣 Sale & Purchase of Building Units				
合約宗數(宗) No. of agreements	74,804	73,322	9,381	50,336
年升幅(%) Change(%)	-5.5	-2.0	13.7	53.7
五. 勞動就業 Employment			**2021/3-2021/5**	**2021/4-2021/6**
失業人數(萬人) Unemployed(ten thousands)	139	259.1	23.3	21.3
失業率(%) Unemployment rate(%)	2.9	5.5	6.0	5.5
就業不足率(%) Underemployment rate(%)	1.1	3.1	2.8	2.5
六. 零售市場 Retail Market			**2021/6**	**2021/1-6**
零售額升幅(%) Change in value of total sales(%)	-11.1	-24.3	5.8	8.4
零售量升幅(%) Change in volume of total sales(%)	-12.3	-25.5	2.8	7.1
七. 訪港遊客 Visitors				
總人數(萬人次) arrivals (ten thousands)	5,590	356.9	6.2	33.7
年升幅(%) Change(%)	-14.2	-93.6	-57.6	-99.0
八. 金融市場 Financial Market			**2021/5**	**2021/6**
港幣匯價(US$100=HK$) H.K. Dollar Exchange Rate (US$100 = HK$)	779.3	775.2	776.2	776.7
貨幣供應量升幅(%) change in Money Supply(%)				
M1	2.6	30.1	29.6	36.2
M2	2.8	5.8	7.1	7.5
M3	2.7	5.8	7.1	7.5
存款升幅(%) Change in deposits(%)				
總存款 Total deposits	2.9	5.4	7.3	7.9
港元存款 In HK$	2.5	6.2	8.9	11.5
外幣存款 In foreign currency	3.2	4.6	5.7	4.2
放款升幅(%) in loans & advances(%)				
總放款 Total loans & advances	6.7	1.2	0.9	5.2
當地放款 use in HK	7.1	1.7	2.1	8.6
海外放款 use outside HK	5.8	0.1	-1.9	-2.6
貿易有關放款 Trade financing	-0.7	-6.2	3.0	14.5
最優惠貸款利率(%) Best lending rate (%)	5.0000	5.0000	5.0000	5.0000
恒生指數 Hang Seng index	28,189	27,231	29,152	28,828