MACRO STRATEGY

Inflation Q&A Part I:

Is Hyperinflation Coming?

February 15, 2022

Key Takeaways

- After a recession, inflation typically rises, driven by a recovering labor market, growing consumption, and higher commodity prices, etc.
- Since 1990, U.S. inflation has correlated more closely with global inflation.
- Many secular, disinflationary forces remain at play: advances in technology, globalization, a lower dependency ratio, high private debt, well-anchored inflation expectations, and rising inequality.
- Given the record low levels of the velocity of money and M2 money multiplier, we do not expect sustained, high inflation.

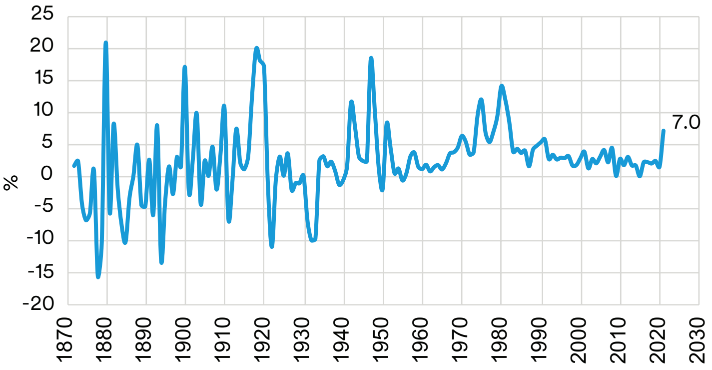
MetLife Investment Management

After years of a market focus on the risk of disinflation or deflation, inflation has reemerged as a hot topic. There are many inflation-related questions in investors' minds. Here are answers to a few of the most commonly-asked questions.

Q: Is inflation too high in the United States?

A: The answer is a resounding "IT DEPENDS." In looking at the longer-term picture of inflation from the 1870s until today (see Figure 1 below), one can see that inflation was more volatile before the 1960s. Inflation is much less volatile than in the past—and we suspect that this is due to the United States coming off the gold standard and the influence of the Federal Reserve from Chairman Volcker onward. From 1872 until 1982, the volatility of inflation was 6.8% per annum, as the gold standard effectively forced bouts of inflation and deflation. After the U.S. came off the gold standard in the 1970s, there was a nasty flare-up of inflation, but once the Volcker-led Federal Reserve raised interest rates, inflation expectations were choked off. From 1983 until today, the volatility of inflation has been 1.3% per annum. Average annual inflation has been about 2.7%. The most recent reading is 7.0%, which is the highest level in last 20 years, but remains relatively low and stable compared to its entire history.

Figure 1: U.S. Inflation (CPI – All Items, Annual)

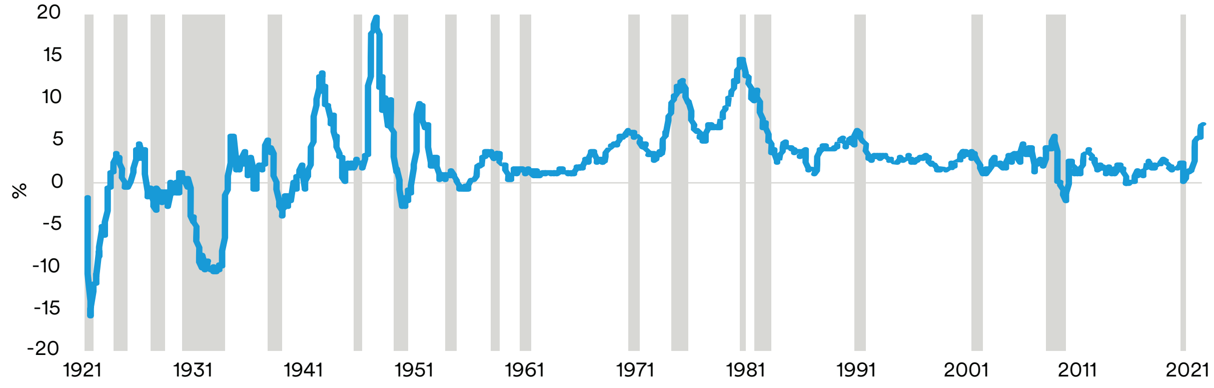


Source: Bureau of Labor Statistics, Haver Analytics, Yale University

Q: Is it common to experience a period of rising inflation after a recession?

A: Yes, it is. Once a recession occurs, the Federal Reserve and the government usually respond with stimulative monetary and fiscal policies, aiming to revive the economy, reduce unemployment, and stabilize financial markets. Subsequently, the economy enters a recovery phase, and the economy begins a new cycle. At that point, inflation typically rises, driven by a recovering labor market, growing consumption, and higher commodity prices, etc. Figure 2 shows the magnitudes and speeds of the inflation increases after the recessions. The current, rising inflation period rhymes well with historical patterns.

Figure 2: U.S. Inflation (CPI – All Items, Monthly, YoY% Change)

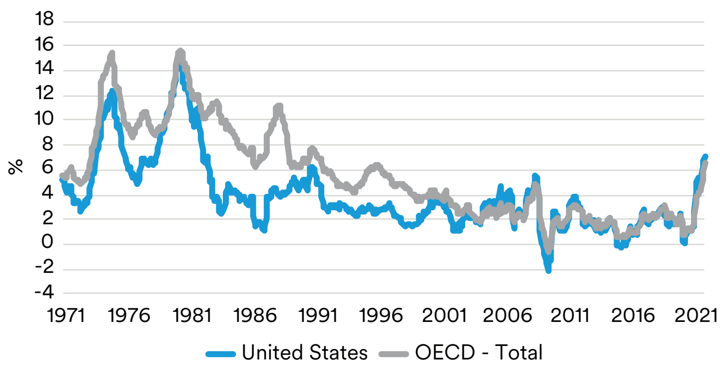


Source: Bureau of Labor Statistics, Haver Analytics, MetLife Investment Management (MIM)

Q: Is the current increase in the rate of inflation a global phenomenon?

A: We use the OECD-Total inflation index (including 37 countries) to represent global inflation. From Figure 3 we can see that U.S. inflation has correlated more closely with global inflation since the 1990s, when individual country's markets of capital, goods, services, and labor started to become more integrated. Basically, we see that inflation has gone global, and that globalization has added to the downward pressure on U.S. inflation seen in the past 20+ years. Both U.S. inflation and global inflation have been rising since last year and have passed their prior peaks formed around 2008. The two inflations remain highly correlated, with U.S. inflation being slightly higher than global inflation in the most recent readings. Global supply-chain disruption, labor shortages, and higher commodity prices, along with loose monetary policy and fiscal spending, are likely key factors for the inflation being experienced.

Figure 3: U.S. Inflation vs. Global Inflation (YoY %)



Source: OECD, MIM

Q: Why don't people think that inflation will be persistent?

A: The short answer is that many secular, disinflationary forces remain at play. Table 1 shows some of the key drivers for long-term inflation. Most of them are disinflationary and slow-moving. Advances in technology allow companies to produce goods at lower prices. Globalization/competition enable companies to source cheap labor and allocate resources more efficiently. A lower dependency ratio (the percentage of the population that is aged below 16 and above 65 versus the total working age population), is also disinflationary. High private debt, well-anchored inflation expectations, and rising inequality are all disinflationary forces as well, which are not likely to change their secular trends suddenly. Accommodative monetary policy and expansionary fiscal policy are inflationary. However, when the economy begins to overheat, inflation is above the Fed's 2% target, and the unemployment rate drops back to a normal level, the Fed is going to tighten its monetary policy, and the government will reduce fiscal stimulus, as has already been signaled.

Table 1: Factors for Inflation

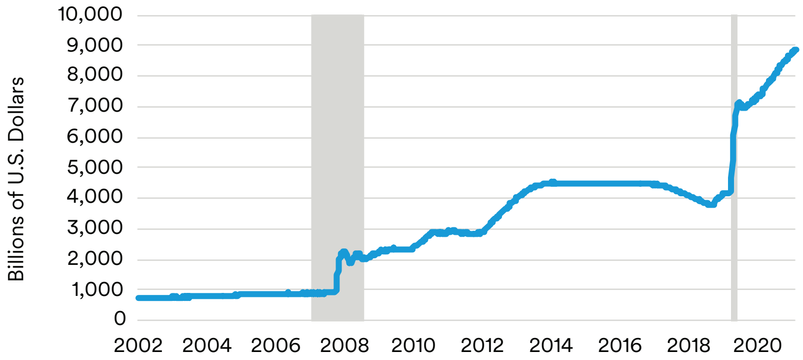
Factor	Disinflationary	Inflationary
Technology	✓	
Globalization/Competition	✓	
Demographics	✓	
High private debt	✓	
Well-anchored inflation expectations	✓	
Rising inequality	✓	
Accommodative monetary policy		✓
Expansionary fiscal policy		✓

Source: NDR, MIM

Q: How much money did the Fed "print" since the 2008 Great Financial Crisis?

A: The short answer is "a lot." One indicator to show the quantity of newly-printed money is total assets on the Federal Reserve's balance sheet, which has expanded and contracted over time. During the 2007-2008 financial crisis and subsequent recession, total assets increased significantly, from $870 billion in August 2007 to $4.5 trillion in early 2015. Then, reflecting the FOMC's balance-sheet normalization program that took place between October 2017 and August 2019, total assets declined to under $3.8 trillion. Beginning in September 2019, total assets started to increase again. Total assets surged from February 2020 to June 2020 as the Fed responded to the impact of the COVID-19 pandemic. The increasing trend has continued since then. Total assets are about $8.9 trillion as of January 2022 (shown in Figure 4).

Figure 4: Total Assets on the Federal Reserve's Balance Sheets

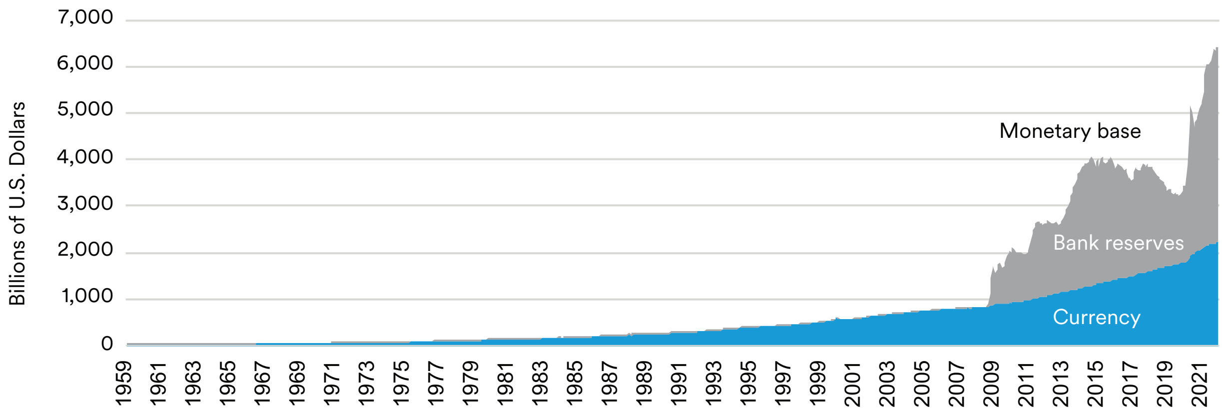


Source: Federal Reserve, MIM

Q: Where did the newly printed money go?

A: Most of the printed money ended up in “bank reserves,” i.e., returned to the Fed to be locked in the “basement.” The Fed injected the money into the financial system through open market operations, mainly via buying U.S. Treasury and Mortgage-Backed Securities. The money that investors received by selling these assets was deposited into banks. Instead of lending the money out, banks voluntarily chose to put the money into bank reserves (note: the amount is much more than required by law, which is called excess reserves). Two possible reasons are: first, there is less demand for loans; second, banks are not willing to take on credit risk, especially when they get paid interest on excess reserves. Therefore, most of the newly printed money ended up in “bank reserves,” as shown by the shaded area in Figure 5. The monetary base is the sum of bank reserves and currency in circulation. The currency in circulation increased as well since 2008, but at a much slower pace than that of bank reserves. It increased the liquidity of the financial system, since banks can withdraw the money from bank reserves held at the Fed if they want to. Another effect of the newly printed money is that it effectively pushes down long-term interest rates, which should theoretically stimulate the economy and push investors to take on more risks. Lastly, the Fed could alter the interest rate paid on excess reserves, which effectively created another tool for the Fed to conduct its monetary policies.

Figure 5: U.S. Monetary Base: Total, Bank Reserves, Currency in Circulation

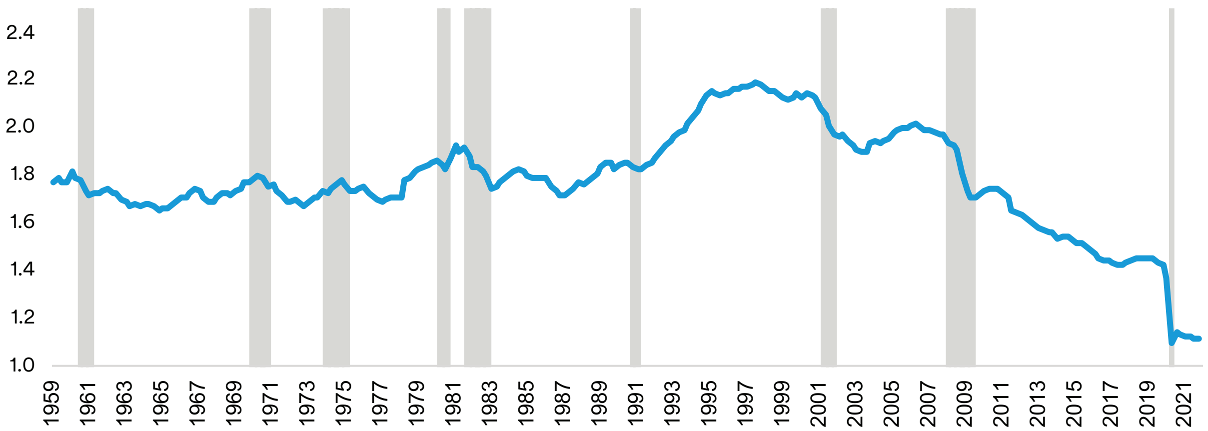


Source: Federal Reserve, MIM

Q: Should we expect hyperinflation, given the huge amount of money supply?

A: Since most of the newly printed money is not actively circulating, it does not create a situation where more money is chasing the same amount of goods and services. Actually, the velocity of money (defined as the ratio of GDP to monetary base—M2 is used in this study) shows the opposite. The velocity of money is the frequency at which one unit of currency is used to purchase domestically-produced goods and services within a given time period. In other words, it is the number of times one dollar is spent to buy goods and services per unit of time. As shown in Figure 6, the U.S. velocity of money has decreased steadily since 2008, which reflects the deleveraging by both corporations and consumers. This is consistent with what we have seen—that consumers are paying down their debts, saving more, and spending less. Under the near-zero policy rate and quantitative easing environment, corporations choose to conduct share buybacks and pay out dividends, instead of taking on more risky projects and making more investments.

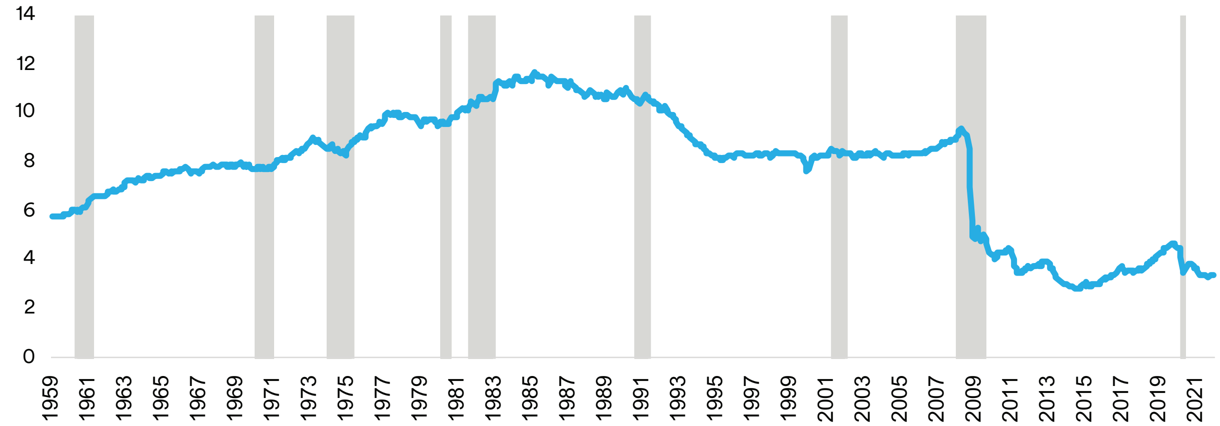
Figure 6: The U.S. Velocity of Money



Source: Federal Reserve, MIM

Another indicator to show that the printed money won't cause hyperinflation is the "money multiplier." The M2 money multiplier is the ratio of M2 to monetary base, i.e., the ratio of "commercial bank money" / "central bank money." If the M2 money multiplier is high(low), it implies more(less) bank lending, more(less) corporate borrowing, and more(less) economic activity. Figure 7 shows that the M2 money multiplier has been hovering around record low levels since 2008, which suggests relatively low borrowing/lending and slow economic activity.

Figure 7: M2 Money Multiplier



Source: Federal Reserve, MIM

In summary, until excess reserves are reduced and turned into loans, inflation pressures will be contained. Given the record low levels of the velocity of money and M2 money multiplier, we do not expect hyperinflation.

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