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RESEARCH NOTE

Why Quantitative Tightening Could Make Quick Work on Inflation – Speed Trap Ahead!

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If inflation is primarily a monetary phenomenon, then we should spend far less time examining supply and demand dynamics and instead focus on the global money supply. Under the Fed's current quantitative tightening (QT) plans, global money supply is likely to shrink dramatically, reversing the effects of quantitative easing (QE) undertaken in 2020. Inflation will evaporate faster than anyone currently expects.

That latest round of QE during 2020 was significantly more effective at increasing the rate of inflation than all prior attempts since 2008. While QE was far from the only policy used to push the economy to full employment and higher inflation, a pure monetary analysis goes a long way to better understand why the latter round was more effective than prior ones—and why its undoing will likely result in a sharp slowdown in inflation and economic growth.

The Federal Reserve and the European Central Bank create reserves by expanding their balance sheets. Commercial banks then transform these reserves into inside money. One of the most common money aggregates created by commercial banks make up M2, defined as the bills in circulation plus checking and savings accounts, i.e. a close proxy for what the public considers cash.

The 2020 quantitative easing experiment, while fundamentally the same as those that preceded it since 2008, was significantly more effective in creating inflation because commercial banks were not in the midst of a crisis. As shown in Graph 1 below,[1,2] the size of reserves created by central banks in 2020 was similar to those that followed 2008. The green shaded area shows the expansion in reserves measured in percentage points. As illustrated, the spike in 2009 was about the same as in 2020, or approximately a 25% increase, i.e. global central banks—the Fed and the ECB expanded the total stock of global reserves by about one-quarter. The effect on global money, as measured by M2, was however very different. While global M2 expanded 10% (blue line in the same chart) in 2008, in 2020 it grew 15%. Quantitative easing in 2020 was more powerful in creating money because, unlike 2008, there was no banking crisis and banks did not destroy reserves as they did back in 2008.

Could the 5 percentage point difference in the growth of the global money stock between post-2008 and post-pandemic be enough to cause such a different inflation rate?

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1. All global indicators to which we make reference in this piece are calculated using the GDP weighted average of the 17 largest economies in the world, namely, the United States, the eurozone, Japan, the United Kingdom, China, Russia, Brazil, Canada, Mexico, Australia, South Korea, Turkey, Poland, Switzerland, Indonesia, Switzerland, and Sweden.
2. The last data point in graphs 1-5 is the June 2023 forecast. All other information in these charts are actual data.

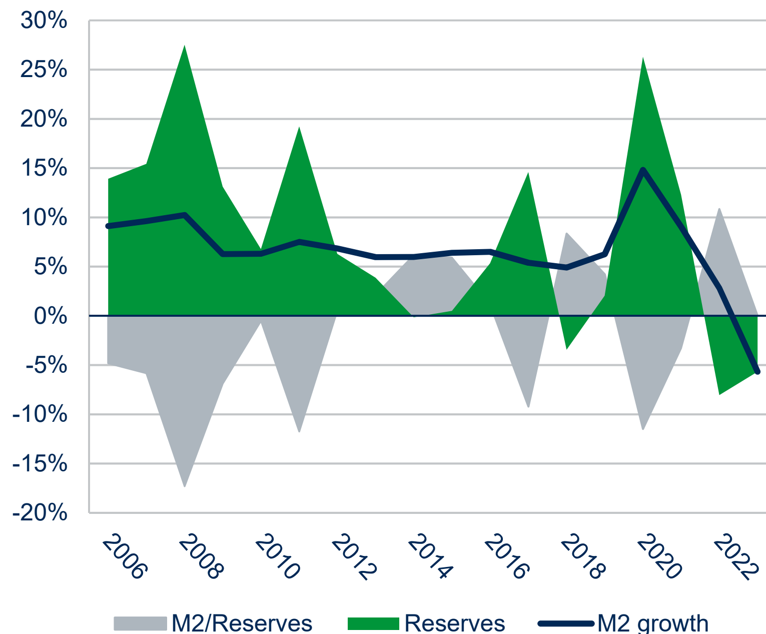
While recognizing that there is more than the stock of money that affects the pace at which prices rise (or fall), using the quantity of money theory in its simplest formulation can go a long way in understanding the most recent phenomena.

The monetary theory identity:

$M \times V = P \times Y$

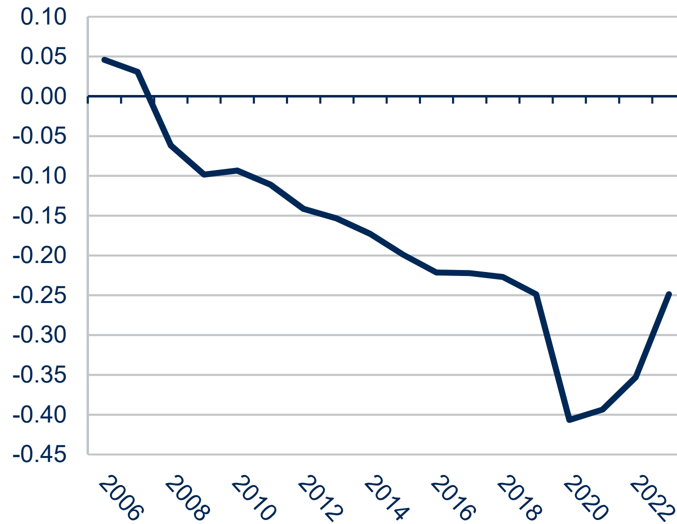
Where M = money stock, V = velocity of money circulation, P = price level, and Y = real GDP.

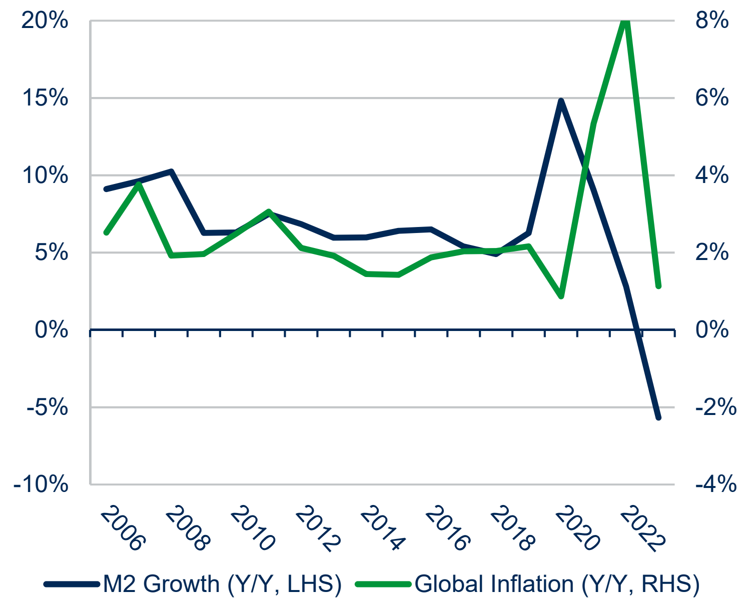
This identity incorporates all relevant economic influences, such as fiscal dynamics, climate change, COVID, the Ukraine war, demographics, secular stagnation, etc., into a simple analytical framework in which three of the four variables (M, P, and Y) are reported by almost every economy in the world, and V can therefore be derived from the above-mentioned identity.

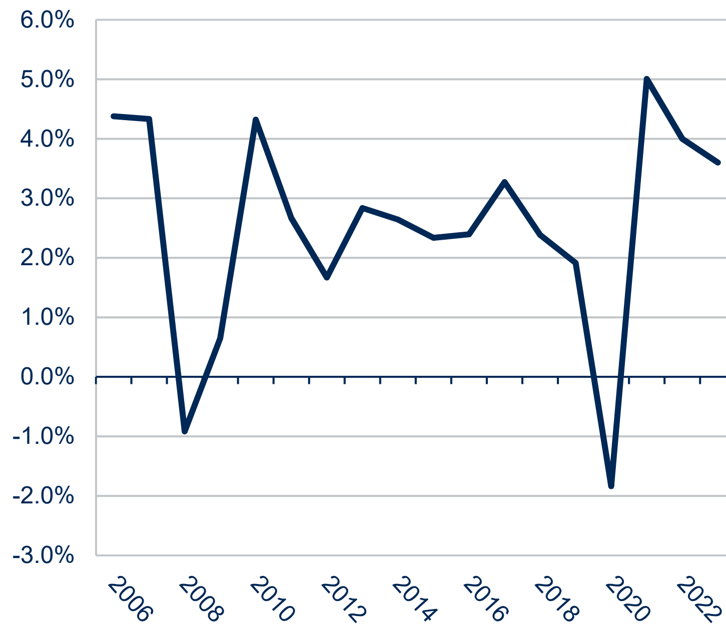


Source: Haver. As of August 9, 2022.

Global inflation in the 2010-2019 period averaged 2.1%, and was remarkably stable; since the 2020 experiment, inflation has accelerated and had reached 8.2% as of June 2022. This is the result of macroeconomic policy actions, fiscal and monetary expansions, and global shocks related to COVID and the Russian invasion of Ukraine, that this framework summarizes in a sharp initial drop in money velocity followed by a relatively large rebound, as seen in Graph 2.


GRAPH 2: GLOBAL MONEY VELOCITY
(IN LOGS)
0.10
0.05
0.00
-0.05
-0.10
-0.15
-0.20
-0.25
-0.30
-0.35
-0.40
-0.45
2006
2008
2010
2012
2014
2016
2018
2020
2022


GRAPH 3: GLOBAL MONEY GROWTH & INFLATION
20%
15%
10%
5%
0%
-5%
-10%
8%
6%
4%
2%
0%
-2%
-4%
2006
2008
2010
2012
2014
2016
2018
2020
2022
M2 Growth (Y/Y, LHS)
Global Inflation (Y/Y, RHS)



Source: Haver. As of August 9, 2022.

Back in 2020, the money put in the pockets of individuals and companies could not initially be spent because of lockdowns, and velocity dropped. As economies opened up and people started using the money they had saved, money velocity started to recover and reaccelerate. As of June 2022, global money velocity had recovered half of the loss it suffered since December 2019, and global inflation jumped to 8.2% more than a year earlier (Graph 3).

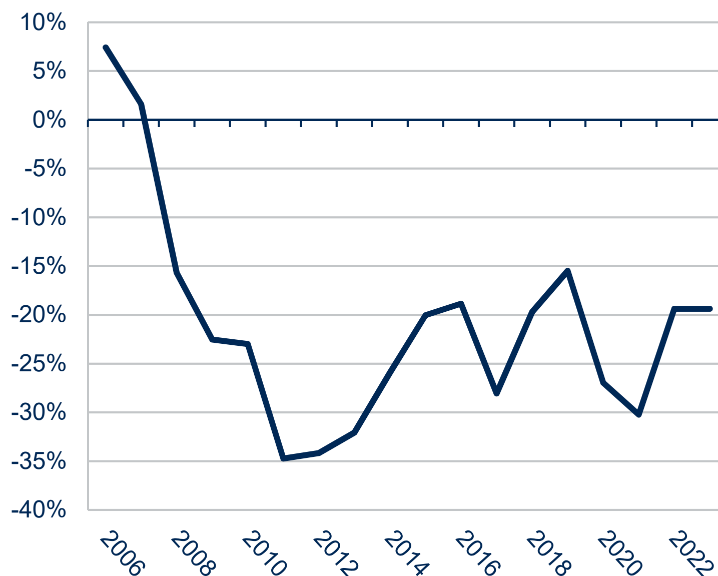
What's in store given the Fed announcement of Quantitative Tightening?

On May 4 this year, the Fed announced its quantitative tightening program, which called for a $47.5 billion monthly reduction in its balance sheet for June, July, and August, followed by a $95 billion monthly reduction starting in September. Under plausible assumptions detailed below, **the Fed's QT decision will shrink the stock of global reserves by 5 percentage points—enough to cause inflation to fall below 2% by late 2023.** The conventional view is that the Fed interest rate policy is a more powerful tool than QE/QT, but academic work that would prove it is lacking, partly because QE/QT policies are such a recent phenomenon.

While our conclusions that inflation will fall so sharply in just over a year is well outside market expectations, we will let the reader judge if our assumptions seem unreasonable:

a. GDP real growth of 3.6%, in line with the latest IMF forecasts for 2022 and 2023
b. Only the Fed conducts a balance sheet reduction; the ECB leaves its balance sheet unchanged

c. Global banks neither create nor destroy inside money in the next 12 months (Graph 5)
d. Velocity of money circulation reaccelerates back to pre-pandemic levels by June 2023 (Graph 2)



Source: Haver. As of August 9, 2022.

Conclusion: The risk of a major policy mistake by the Fed could be in the works. The effects of quantitative tightening do not appear to be well understood and the source of the ongoing inflation acceleration even less so. Should inflation be primarily a monetary phenomenon, as assumed in our very simple framework, disinflation will be lurking around the corner.

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