

AFTER DISCONNECTING, WILL MONEY SUPPLY GROWTH AND INFLATION RECONNECT?

Since the Great Recession, the monetary base in several advanced economies has seen a considerable increase, driven by the creation of bank reserves at the central bank. Yet, contrary to what had been observed in previous decades, this has not been followed by a significant pick-up of inflation. Following the global financial crisis, the demand of the banking system for central bank reserves increased a lot. This was a reflection of the dire state of the economy and money markets as well as tighter liquidity requirements. Subsequently, quantitative easing caused an increase in reserves on the initiative of the central bank. Going forward, as the economy strengthens, money supply growth and inflation could reconnect on the back of an increase in money velocity or faster credit demand growth. Central banks have the tools to address this, if need be. Clearly, asset markets might be less relaxed about such a prospect.

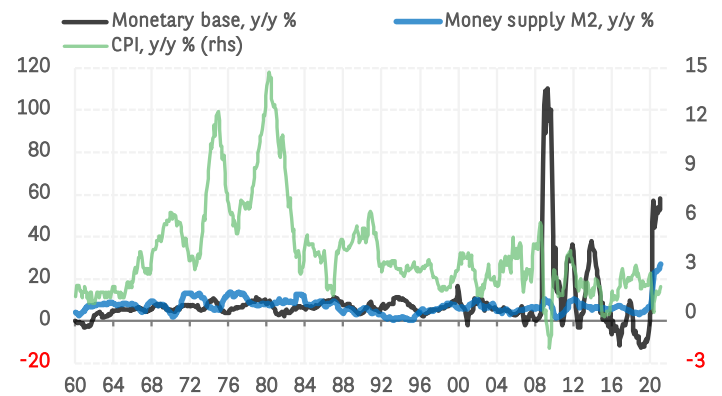
Why has the massive expansion of central bank balance sheets in advanced economies not succeeded in lifting inflation? It's a frequently asked question that reflects a feeling that an increase in the monetary base¹ and broader money aggregates will inevitably lead to higher inflation.

This view may be based on common sense: in a fiat-based monetary system, money is created 'out of nothing' so when a lot of it is created and used to buy goods, it may lead to more inflation. It could also be based on reading about hyperinflation in the Weimar republic or, more recently, in certain developing economies. Economists have learned at school about Milton Friedman's observation in 1970 that *"Inflation is always and everywhere a monetary phenomenon in the sense that it is and can be produced only by a more rapid increase in the quantity of money than in output."*² This was confirmed by empirical research conducted by the 1995 Nobel Prize winner Robert Lucas: *"The prediction that prices respond proportionally to changes in money in the long run ... has received ample — I would say, decisive — confirmation in data from many times and places."*³

Things have evolved since the mid-nineties and the huge increase in the monetary base in the United States, Japan and the euro area since the Great Recession has not been followed by a significant increase of inflation. In explaining this disconnect, the origin of the creation of reserves plays a key role. In normal times, the growth of central bank reserves is determined by the demand by banks, which in turn depends on the evolution of banks' short-term liabilities (deposits and debt securities with a residual maturity of up to two years)⁴. For the banking system as a whole, the growth of deposits is largely driven by the growth of bank credit ('loans create deposits'), which means that the money multiplier – the ratio of broader monetary aggregates to the monetary base – is rather stable.

In the aftermath of the global financial crisis in 2008-2009, money markets were no longer functioning smoothly and many banks were facing pressures on liquidity, so central banks reacted by supplying abundant reserves: *"the expansion in base money was instrumental in avoiding fire sales and a curtailment of credit with potentially severe consequences for the real economy"*⁵. The demand of banks for central bank reserves did not reflect gathering strength of the economy and credit demand, rather it was a manifestation of considerable uncertainty about the outlook, economic weakness, a poorly functioning interbank market and new regulations in terms of liquidity⁶.

US MONEY SUPPLY AND INFLATION



SOURCE: FEDERAL RESERVE, BLS, BNP PARIBAS

1. The monetary base, also called base money, corresponds to notes and coins in circulation and bank reserves held at the central bank.

2. Milton Friedman, *The Counter-Revolution in Monetary Theory*, 1970.

Source: <https://onlinelibrary.wiley.com>.

3. Robert E. Lucas Jr., *Monetary neutrality*, Nobel Prize Lecture, December 7, 1995, www.nobelprize.org.

4. "Base money, broad money and the APP," ECB Economic Bulletin, Issue n° 6, 2017.

5. ECB (2017)

6. This concerns the Liquidity Coverage Ratio. Before its introduction, bank reserves more or less corresponded to the reserves that banks were required to hold at the central bank. Reserves held by banks at the central bank increased significantly following the introduction of the LCR. "The objective of the LCR is to promote the short-term resilience of the liquidity risk profile of banks. It does this by ensuring that banks have an adequate

Money supply growth and inflation can reconnect but for inflation to spin out of control, it would require central banks to acquiesce this.



The same happened in the US: "banks would rather hold reserves safely at the Fed instead of lending them out in a struggling economy loaded with risk⁷. The opportunity cost of holding reserves is low, while the risks in lending or investing in other assets seem high. Thus, at near zero rates, demand for reserves can be extremely elastic."⁸

In addition, the introduction of quantitative easing caused a supplied increase in bank reserves as well as in bank deposits. When a central bank conducts asset purchases, banks act as an intermediary between the central bank and the owner of the bonds which are bought, giving rise to an increase of the assets (reserves) and liabilities (client deposits) of banks' balance sheets. Reserves are injected in the banking system on the initiative of the central bank, which is able to do so by paying a sufficiently attractive price for the assets it wishes to acquire. The creation of reserves via QE has, at its origin, nothing to do with increased credit demand. To stimulate economic growth, QE seeks to trigger a variety of transmission mechanism: confidence effects, signalling effects -'current policy rates will be maintained for a long time'-, declining government bond yields via a reduction in the term premium, lower corporate bond spreads, wealth effects, a weaker currency. It can also stimulate banks to extend more credit to increase their return on assets, which have increased due to QE. Many of these channels only have a very indirect influence on growth and inflation, and provide a monetary explanation for the very loose relationship between money supply and price developments.

Should one be concerned about the possibility that these two variables would reconnect? No, quite to the contrary, such a development should be welcomed. It would mean that economic agents would use their deposits to finance spending, so money would circulate more quickly. This increase in money velocity would be testimony to a better economic environment and outlook. Should this cause somewhat higher inflation, central banks would be relieved as well, given where they currently are versus their inflation target. An improving economy could also boost credit demand, which well-capitalised banks would be happy to meet considering their high level of excess reserves at the central bank. If this would end up creating concern about too quick an increase in inflation, central banks would be well-equipped to address it by using forward guidance, hiking their deposit rate or draining liquidity by shrinking their balance sheet. Clearly, asset markets might be less relaxed about such a prospect. After all, the disconnect between money supply growth and consumer price inflation has gone hand in hand with rising asset price inflation.

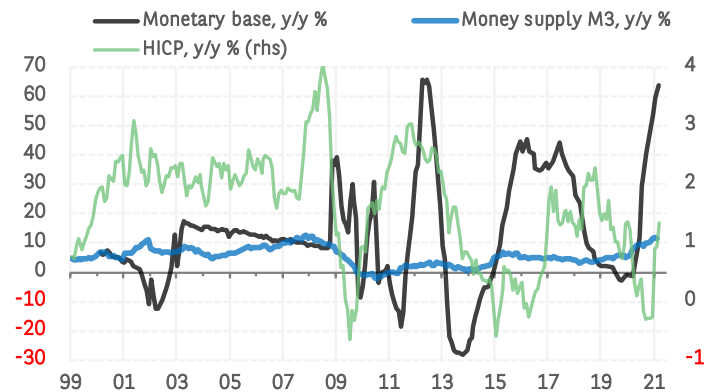
William De Vijlder

stock of unencumbered high-quality liquid assets (HQLA) that can be converted easily and immediately in private markets into cash to meet their liquidity needs for a 30 calendar day liquidity stress scenario." (Source: BIS, The Liquidity Coverage Ratio and liquidity risk monitoring tools, January 2013).

7. Concretely speaking, during difficult economic times, banks may be reluctant to use their reserves as a basis for extending credit. As a consequence, the money multiplier declines.

8. John C. Williams, "Monetary policy, money and inflation", Presentation to the Western Economic Association, 2 July 2012.

EURO AREA: MONEY SUPPLY AND INFLATION



SOURCES: ECB, EUROSTAT, BNP PARIBAS

