

Does the Fed control interest rates?

In recent months, the reference rate of the US Fed has come the closest it has been to the upper limit of its target range since 2009. Is this a technical fault not worth paying attention to? Or, on the other hand, is it a sign that the tools currently used by the Fed to regulate its monetary policy are becoming obsolete? These questions, which we analyse below, may shed some light on the future of US monetary policy.

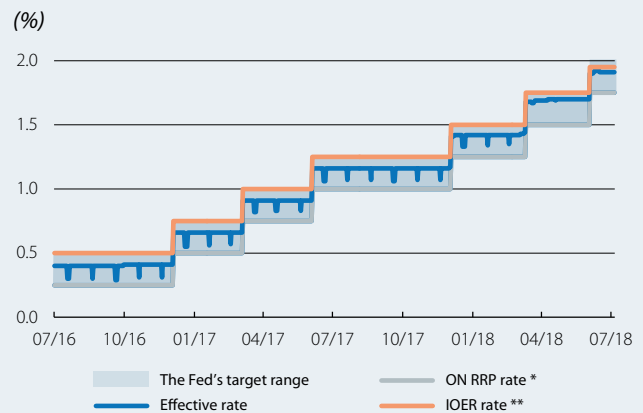
To answer these questions, we need to know how the Fed has implemented its monetary policy in recent years and explore whether, in the current context in which the central bank is reducing the size of its balance sheet, the instruments it has used to date remain effective. In the years prior to the financial crisis, the Fed established the desired interest rate by adjusting the volume of reserves that banks held in the central bank by acquiring or selling assets in the secondary market. For example, if the Fed wanted to decrease the interest rate, it had to increase the supply of reserves. To do so, it would acquire securities in the secondary market, thus increasing liquidity in the market and exerting downward pressure on the interest rate. This mechanism was effective at times when banks held relatively few reserves in the Fed, since slight adjustments by the Fed affected the market's supply and demand for federal funds in the very short term (where financial institutions lend themselves reserves), as well as pushing the interest rate (the effective federal funds rate, or EFFR) towards its target.

However, the irruption of non-conventional monetary policy measures following the outbreak of the financial crisis, in particular the large-scale purchase of assets by the Fed¹, caused an increase in liquidity the likes of which had never been seen before. This, in turn, boosted the level of bank reserves, reducing the effectiveness of the traditional implementation of monetary policy. As a result, the Fed had to find new ways to adjust interest rates. These new methods included the interest on excess reserves (IOER), which is the rate the Fed uses to remunerate banks for holding their reserves in the central bank, and the overnight reverse repurchase agreement (ON RRP), an agreement between the Fed and non-banking financial institutions through which they receive remuneration for lending their funds to the Fed overnight.² These two

1. In August 2008, the Fed's balance sheet amounted to 0.9 trillion dollars, while at its peak it exceeded 4.5 trillion dollars.

2. Examples of non-banking financial institutions include hedge funds, money market funds and public mortgage agencies. These institutions have access to ON RRP facilities, but they cannot hold their reserves in the Fed and benefit from the IOER, while the reverse is the case for banking institutions. For a more detailed description of these tools, see the Focus «Monetary normalisation in the US: the Fed's new toolbox» in MR07/2015.

US: official interest rates



Notes: * ON RRP: overnight reverse repurchase agreement.

** IOER: interest rate on excess reserves.

Source: CaixaBank Research, based on data from Bloomberg.

interest rates limit the Fed's target range in the federal funds market, in which banks finance their reserves. On the one hand, players that can access ON RRP facilities have no incentive to lend at an EFFR below that at which the Fed remunerates its funds (ON RRP). On the other hand, banks with excess reserves in the Fed have no incentive to borrow at an EFFR higher than that at which the Fed remunerates them (IOER), although they would like to receive financing at a lower rate, either to achieve the minimum level of liquidity required by the central bank or to finance excess reserves from which they will obtain a return greater than the cost of financing through the IOER.³ Therefore, in the federal funds market, the former (players with access to the ON RRP but not the IOER) provide the supply, while the latter (banks with access to the IOER but not to the ON RRP) participate in the demand side. In the first chart, we can see how the EFFR has historically remained within the Fed's target range. However, since the end of 2017, the EFFR has come very close to the upper limit. Does this mean that imbalances have begun to emerge in the implementation of the Fed's monetary policy?

The EFFR is determined, like almost all goods and services, according to supply and demand. Thus, if the interest rate in this market has increased, it could be due to an increase in demand for this type of financing or a reduction in the supply of funds. There are solid

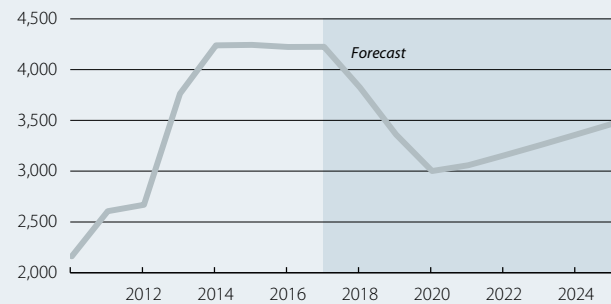
3. In relation to this arbitrage opportunity, the former Chairman of the Fed, Ben Bernanke, argues in his article «The Fed's interest payment on banks» that it is very small, given the various transaction costs associated with these transactions.

arguments⁴ that suggest it is a decrease in supply that is causing the EFFR to approach the upper limit of the Fed's target range. The closing of the gap between the EFFR and the IOER is occurring in a context in which the issuance of US sovereign debt (treasuries) is increasing due to the fiscal expansion policies of the US Administration. This trend, together with the decrease in treasuries held by the Fed (due to the reduction of its balance sheet), has caused the yield of these bonds to increase. Furthermore, given how important this asset is for the financial system, this increase has been transmitted to all the other interest rates in the economy.

There are also signs that suggest that demand is also putting upward pressure on the EFFR (and that this pressure will increase even further in the coming quarters). The Fed is putting an end to its unconventional monetary policy measures by choosing not to renew assets when they reach their maturity, which means there will be a reduction in the reserves that banks hold in the central bank. In this situation, banks with less excess of reserves will find it harder to comply with the Fed's minimum liquidity requirements and will seek financing in the federal funds market, increasing demand and thus the EFFR. As we can see in the second chart, the reduction of the Fed's balance sheet has been scarcely notable to date, but it is expected to be accentuated over the next few quarters. Therefore, although banks have not had to worry about the minimum reserve requirements in the current context of excess liquidity, this will change as the decrease in the Fed's balance sheet drains the excess liquidity and reserves diminish. Specifically, banks with fewer excess reserves will go to the federal funds market to finance their minimum requirements, increasing the demand for federal funds and driving the EFFR upwards. In fact, according to estimates by economists from the New York Fed,⁵ during this process the reference rate could even rise above the IOER, something which has not happened since these tools were introduced.

For the time being, the Fed has reacted to this by placing the IOER 5 basis points below the upper limit of its target range since June, thus managing to bring the EFFR closer to the centre of its desired range. Nevertheless, as we have seen, the withdrawal of the excess liquidity will continue to drive the EFFR upwards. Therefore, due to the interaction between the various instruments of monetary

US: expectations of the size of the Fed's balance sheet (USD billions)



Note: Up to 2017, we show historical year-end data. From 2018 onwards, the chart shows the results of the survey conducted by the New York Fed among various financial institutions regarding what size they expect the Fed's balance sheet to be in the coming years. The median value of the answers is shown.

Source: CaixaBank Research, based on data from the Federal Reserve Bank of New York.

policy we have analysed, the withdrawal of the unconventional measures opens the door to the possibility of the US monetary authority once again revising the tools it uses to implement its monetary policy at some point in the future. What's more, communication will once again be key in order to prevent this realignment of the tools from generating a sense of lack of control on the part of the Fed over interest rates.

4. In the minutes of the Fed's June meeting, the senior vice president of the Fed's Markets Group, Lorie K. Logan, stated that the surge in the repo interest rates associated with treasuries were behind the rise in the EFFR.

5. G. Afonso, R. Armenter, and B. Lester (2018) «Size is not all: Distribution of Bank Reserves and Fed Funds Dynamics» Federal Reserve Bank of New York Liberty Street Economics.