

# EX FORUM

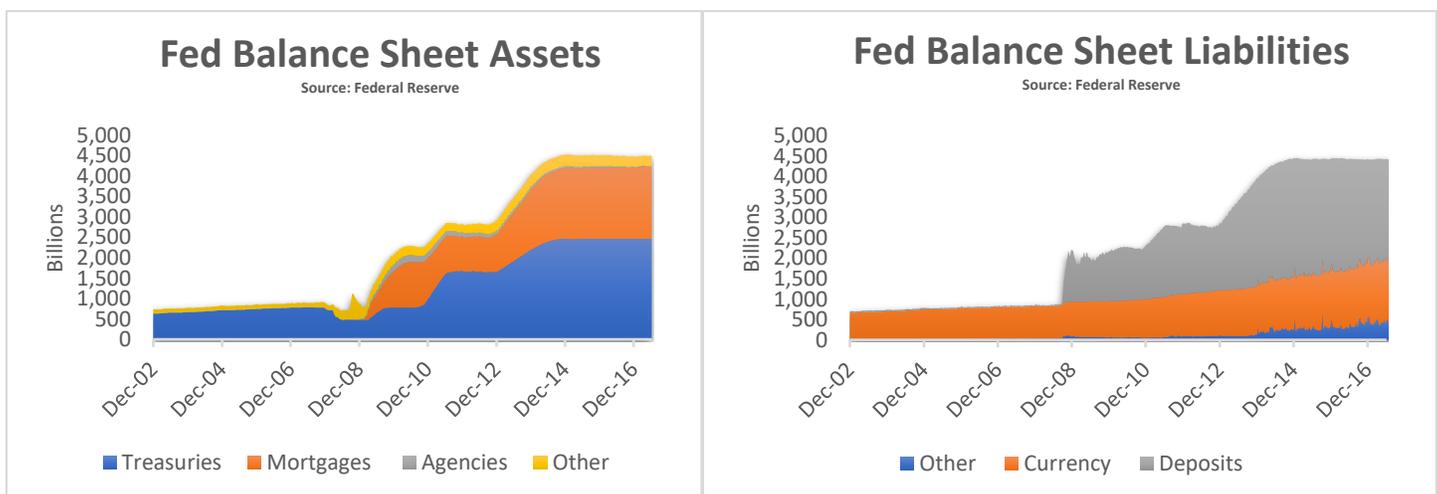
*Of Markets and Market Participants*

## ON THE FED'S BALANCE SHEET, AND THE ACTIONS THAT SWELLED IT.

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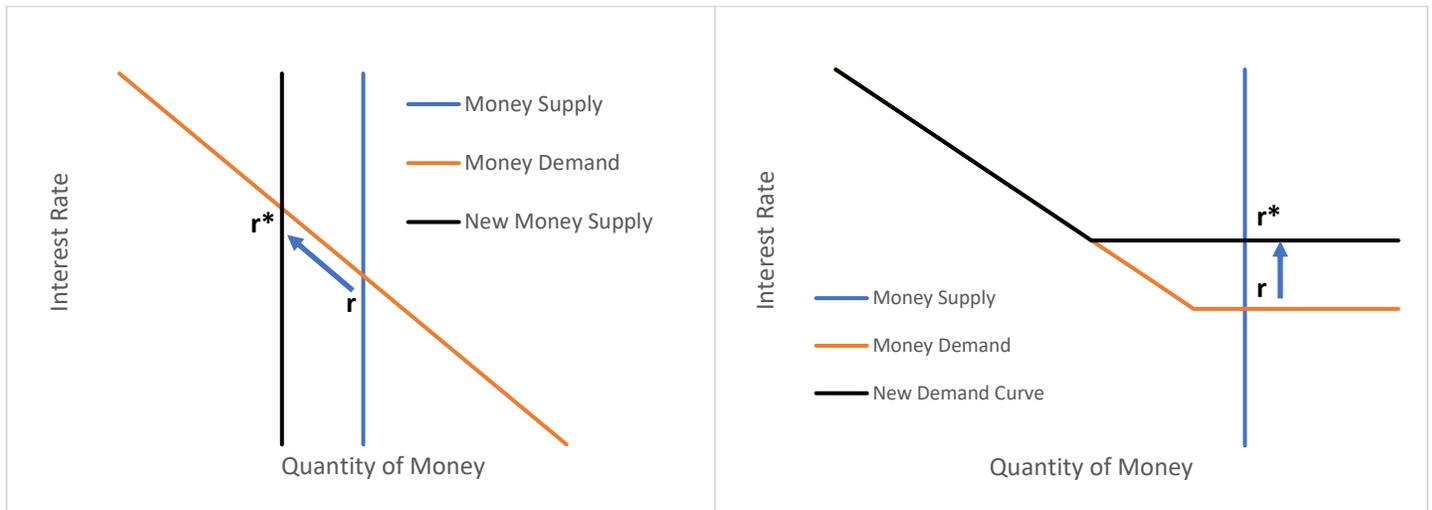
Historically, the Fed has targeted the Fed Funds rate by buying and/or selling Treasuries and transacting in Repurchase Agreements (Repos) to control the money supply in the overnight markets, thereby setting the clearing interest rate through supply and demand. Their stated goal is to influence the cost of money, and therefore the general demand for goods and services. After lowering this target rate during the 2008-2009 financial crisis to effectively zero, the Fed opted to manipulate other interest rates rather than take their chances with a negative Fed Funds target. They did this via “quantitative easing” (QE, defined as a process where a central bank creates deposits, a liability, for its own use to purchase assets). The Fed's influence on longer-term interest rates has always had its limits, and mainly rested upon expectations and the perception of their control of inflation. The Fed decided to be more explicit in its manipulation of longer-term interest rates. As they started buying securities, Chairman Bernanke stated that their intent was to influence longer-term rates and excess reserves with hopes that it would lead to “credit easing”, and therefore an uptick in aggregate demand.<sup>1</sup> The outright buying of Treasuries and Mortgage-Backed Securities not only provided continual demand but it also increased the Fed’s assets and liabilities.

Their balance sheet looks very simple. The asset side is comprised of securities while their liability side is mostly deposits from banks and the currency in circulation. They have a small equity component: \$41 Billion on \$4.4 Trillion in assets equating to .95% capital ratio (Needless to say, a stressful ratio for any private sector bank examiner). These reserve balances are electronic entries into primary dealers; As they are created on the liability side at the Fed, they become a primary dealer’s asset, which it could lend against or simply go out and buy the bond sold to the Fed, which then puts the money into the hands of someone else. Ideally, the Fed has painted a scenario where they create a deposit as dealers sell them securities and this money ends up in the entity that sold this asset to invest in higher-risk assets. This scenario may never happen in such a simple fashion, but the result is more money in the system which can be allocated.



As you can see from the above chart, the Fed has been a major buyer of Treasuries and Mortgage-Backed Securities issued by government agencies. Although it is hard to pinpoint the exact influence they had over credit easing, it is fair to say, that it has helped spur economic activity to some degree. Studies by the Fed estimate that they drove yields down by up to 100bps at the height of their program.<sup>2</sup> Even if this were accurate, it does not come without costs. By increasing their balance sheet, they have increased the risk in the system for which they serve as the loadstar. They have also increased the overall base of money via their liabilities. This leads to continued excess money in the system as well as artificial demand for the aforementioned assets.

With the surplus of funds in the system, the Fed cannot resort to traditional methods to control overnight rates. With the system awash with liquidity, to achieve their goals, they cannot rely on a shift in supply to determine market rates; They need an artificial setting to determine the price. They are using Interest on Excess Reserves (IOER) and Overnight Reverse Repos (ON RPP) to do this. Without getting further into the minutia, the point is to set a floor in the market by giving a risk-free interest rate that the Fed will pay for overnight money. By providing interest paid on a nearly unlimited amount of funds, they create a minimum level on rates, giving them price control of the overnight markets. This recalibrates the demand curve to be inelastic to supply if there is excess liquidity in the system.



**Fed's Traditional Method: Controlling a fixed Money Supply (Vertical Blue Line) to determine interest rates. A reduction in supply would make money more expensive-higher rates (r to r\*).**

**Fed's Normalization Method: Controlling the demand for money by setting floors, i.e. regardless of where money supply stands, the ability to pay a minimum interest rate controls the cost of money (r to r\*)**

This normalization has been underway with the Fed gradually increasing its target rate. Its next step is reducing their balance sheet to reduce excess liquidity and operate in the traditional method. With the Fed Balance Sheet reduction now widely anticipated, and the ramifications and process subjects of intense current debate, we will take a closer look at the normalization process next month.

<sup>1</sup> Bernanke, Chairman Ben S. "The Crisis and the Policy Response" (2009) At the Stamp Lecture, London School of Economics, London, England <https://www.federalreserve.gov/newsevents/speech/bernanke20090113a.htm>

<sup>2</sup> Engen, Eric M., Thomas Laubach, and David Reifschneider (2015). "The Macroeconomic Effects of the Federal Reserve's Unconventional Monetary Policies," Finance and Economics Discussion Series 2015-005. Washington: Board of Governors of the Federal Reserve System, <http://dx.doi.org/10.17016/FEDS.2015.005>