

A STORY OF SUPPLY AND DEMAND: THE REPO MARKET

Despite a market that was seemingly flush with cash, the last two weeks of September saw a sharp spike in the repurchase agreement (repo)¹ rate due to unusually high demand for money in the financial system. On the surface, it would seem obvious that the elevated demand was driven by the settlement of the U.S. Treasury auction as well as quarterly corporate tax payments coming due, but the mismatch between supply and demand hints at larger issues within the market that have previously been overlooked.

As background, the \$1 trillion repo market provides short-term liquidity through overnight collateralized loans between market participants. In today's market these loans should bear interest at the rate of 2.0% - 2.25%, but on the days in question, a shortage of lenders (i.e., supply of money) pushed the rate to 9%+.²

The Fed's Policy of Stopping Quantitative Easing and Reducing Portfolio Reinvestment Resulted in Shrinking Reserves and Excess Liquidity

The Federal Reserve's Balance Sheet

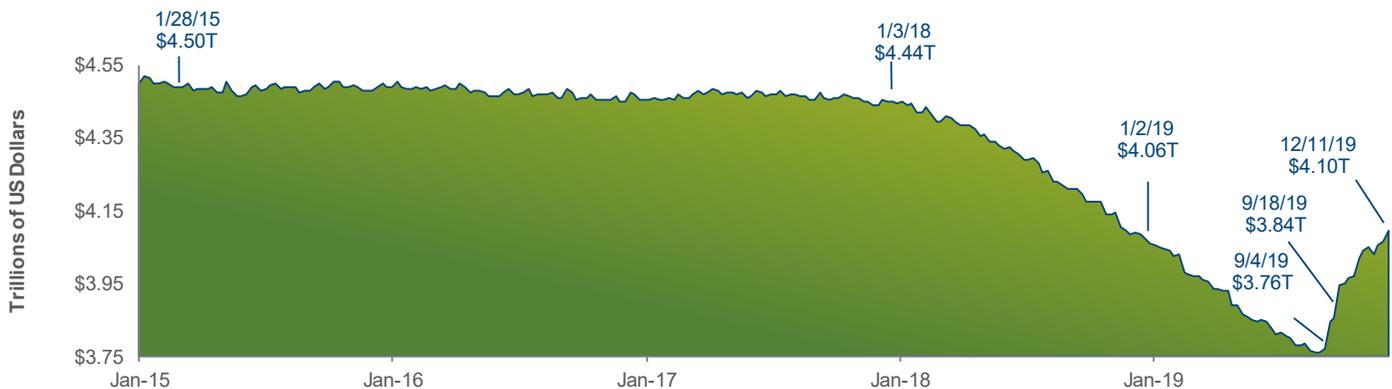
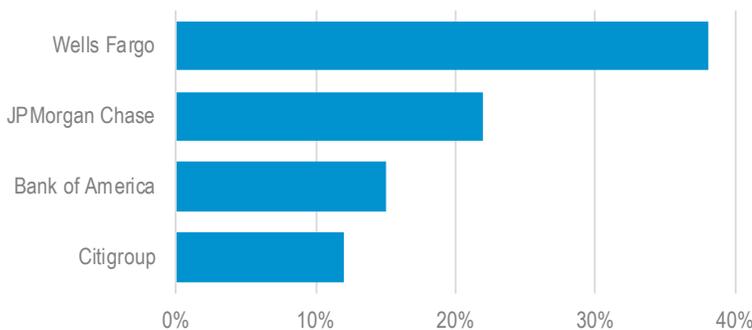


Chart data source: Federal Reserve, Bloomberg. Chart data from 1/1/2015-12/11/2019.

Every Large Bank Has Its Own Cash Strategy

Reserves held at the Fed as a percentage of high-quality liquid assets



Source: Bianco Research LLC, Chart data source: Federal Reserve. Chart data as of 9/30/19.

As of 9/18/2019, the U.S. banking system had about \$1.4 trillion in excess reserves,³ an amount that ostensibly gave the Federal Reserve comfort that the banking system had excess liquidity. For the reasons outlined below, however, that liquidity has proven to be illusory:

Concentrated Supply:

It is estimated that upwards of 50% of those excess reserves are housed in four systemically important financial institutions: Wells Fargo, JPMorgan Chase, Bank of America, and Citigroup. That means market liquidity is dictated by the decisions and the situational idiosyncrasies of the few, rather than the decisions of many.

¹ A repo is a short-term loan typically collateralized by government securities.

² The 9%+ interest rate only was felt by some borrowers.

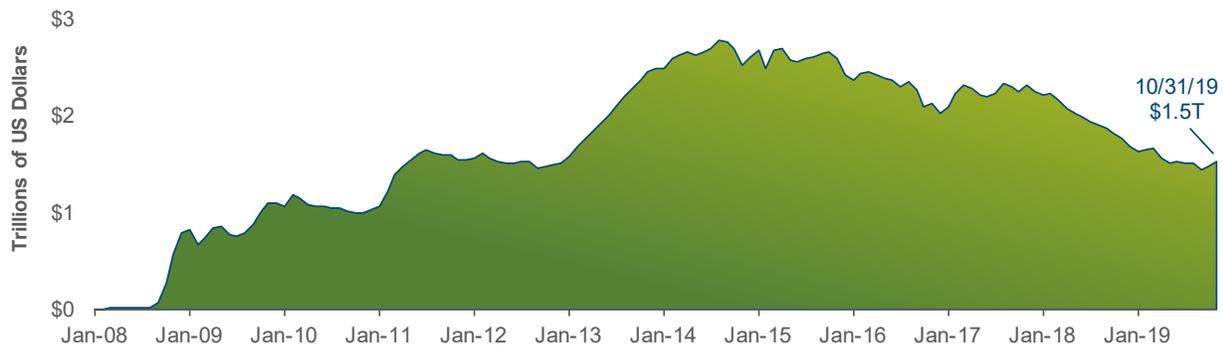
³ Source: The Federal Reserve.

Available Interest on Excess Reserves:

Interest on excess reserves (IOER), which is the interest rate the Federal Reserve offers to banks on their excess reserves, was 1.8% as of September 19th.⁴ That makes it worthwhile for some would-be lenders to keep their money with the Fed rather than make it available to the market.

Reserve Balances

Reserves have fallen to an eight-year low. Fed officials must now decide whether to expand its balance sheet to prevent further declines.



Source: Bianco Research LLC, Chart data source: Federal Reserve, Bloomberg. Bank reserves are the cash minimums that must be kept on hand by financial institutions in order to meet central bank requirements. In the U.S., the Federal Reserve dictates the amount of cash reserves each bank must maintain.

New Bank Regulations Regarding Excess Reserves

New bank regulations such as Dodd-Frank and Basel III mandating specified amounts of high-quality liquid assets (HQLA) sop up excess reserves because these reserves count as HQLA. That further limits the availability of money to the market. The result is that the estimated \$1 trillion in excess reserves are in fact not excess—they may be needed to fulfill these new regulatory requirements.

To add liquidity and address the mismatch between supply and demand, the Federal Reserve Bank created overnight and term repo facilities as a short-term fix.

Long-term Fix

Looking forward, as a long-term fix, there are three options:

- 1) Ease bank regulations;
- 2) Create a permanent repo facility; or
- 3) Use Quantitative Easing (“QE”)⁵: where the Fed purchases securities from the market to increase the money supply and encourage lending and investment.

Easing bank regulations seems like a long shot (at least in the near term), so the Federal Reserve is left with options 2 and 3, creating a permanent repo facility or using QE. In October, the Fed chose option 3.

In an attempt to avoid impacting asset prices and to dispel the perception that the central bank is funding the government through bond purchases, Federal Reserve Chairman Jerome Powell clarified that the Fed would purchase Treasury bills. He also went to great lengths to explain that this tool was not a reengagement of QE but just a means to inject short-term liquidity into the financial system. As a side note, by purchasing Treasury Bills, the Fed may also help steepen the yield curve.⁶ Conversely, if the Fed purchased longer maturity Treasury notes or bonds it could make it harder to steepen the yield curve.

⁴ Source: FRED (Federal Reserve Economic Data); <https://fred.stlouisfed.org/series/IOER>.

⁵ Quantitative Easing (“QE”) is an unconventional monetary policy in which a central bank purchases government securities or other securities from the market in order to lower interest rates and increase the money supply.

⁶ A steepening yield curve typically indicates that investors expect rising inflation and stronger economic growth.

Conclusion and Questions Raised:

Despite over 10 years of economic expansion and a multi-trillion-dollar QE program, the financial system still seems fragile in certain areas. This is surprising given all that has been done to make the financial system supposedly resilient to financial shocks. Are we at a point where the central bank is permanently involved as a primary provider of liquidity to the system because the system itself can't provide it at a reasonable price? Further, if the financial system has periods of illiquidity now during times of solid economic activity, what will happen if/when the economy takes a downturn and there is a significant repricing of credit risk? This situation – and the seeming passivity of the Fed—does not give us comfort. The reasons for the surge in demand for money (e.g., Treasury bond purchases and tax payments) are not surprising events, and in fact, had been identified in advance by multiple market participants. The tax payments happen every quarter and the size and timing of the Treasury auction settlement has been known for some time given the visibility of large fiscal deficits, yet the Fed appeared unprepared for the spike in repo rates. In fact, the repo facility announcement had to be delayed because of technical problems in implementing the facility. We see these problems as warning signs of potential future liquidity problems. Therefore, we strive to have sufficient liquidity to weather the liquidity shortage that could occur during the next economic downturn.

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