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Fed Report (Abridged)

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Quotes

Quotes or book excerpts that I find particularly insightful…

"Our emergency liquidity lending took many novel forms. When Congress created the Fed in 1913, it envisioned us lending to banks in a panic, thereby serving as lender of last resort. Changes in the financial system over the subsequent hundred years required us to counter a run by wholesale lenders and other short-term creditors, not depositors, and so to lend to a broad array of financial institutions, not just banks. Our efforts, often drawn from our blue-sky thinking, were widely seen as creative, even daring. But, in essence, we did what Congress had intended when it created the Federal Reserve, what Walter Bagehot had advised a century and a half earlier, and what central banks had always done in the midst of panics. When financial institutions lose their funding, central banks replace it by lending against collateral, thereby reducing the pressure to dump assets at fire sale prices. Bagehot never heard of an asset-backed security or a repurchase agreement, but I think he would have understood the principles we applied to damp contagion.

Bagehot probably had not considered the possibility that a central bank would serve as lender of last resort beyond the borders of its own country. But the global role of the dollar meant that turmoil abroad could spill over into U.S. markets. So, through swap lines with fourteen other central banks, we supported dollar-denominated funding markets in Europe, Asia, and Latin America. The swap lines were our largest single program, with nearly $600 billion outstanding at their peak. They would prove crucial in containing global contagion."

Ben Bernanke, in The Courage to Act: A Memoir of a Crisis and Its Aftermath

"We had a huge problem we had to deal with to prevent a run on the money market funds… the average American thought the money that they put into money market funds was money good, equivalent to a savings deposit. But the fact was those funds provided short term commercial paper funding for a big part of corporate America, to fund their basic operations. Plain as day I saw this so quickly moving… If big companies can't fund their short-term operations then the smaller companies who are their suppliers have to cut back and you get this vicious cycle as thing this ripples through America. Both the policy team and the legal team, within twenty-four hours, came up with a plan to guarantee the money market funds."

-Hank Paulson, in Hank: Five Years from the Brink (2013)

The Fed's monetary policy has important implications for the bond, stock, and currency markets, and the economic cycle generally. In this report my goal is to track the data that I think Fed officials, and Chair Powell specifically, are most focused on based on ongoing public communications.

Fed's Dual Mandate

Established Objectives of Federal Reserve Monetary Policy:

Stable Prices ("Price Stability"): 2 percent inflation rate as measured by the annual change in the price index for personal consumption expenditures (Headline PCE YoY). The Powell Fed views the core (excluding food and energy) PCE as a better indication of future inflation. It is worth noting that the Fed interprets the inflation objective as symmetric, meaning they are trying to prevent persistent deviations, either above or below, from their 2 percent inflation target. **Maximum Employment**: The highest utilization of labor resources that is sustainable over time, generally viewed as the unemployment rate that is consistent with low and stable inflation over the longer term- often estimated as the "natural rate of unemployment." The natural rate of unemployment comprises both the "frictional" unemployment of people who are temporarily between jobs or searching as they have reentered the labor force and the more "structural" unemployment of people whose skills or physical location are not a good match for the jobs available. In other words, the Fed aims to reduce "cyclical" unemployment. As Powell likes to point out, the unemployment rate that is consistent with maximum employment is largely determined by nonmonetary factors (i.e., not heavily influenced by Fed policy). The Fed has no fixed goal for this rate, the current longer run estimate for unemployment is 4.2%, from Fed's Summary of Economic Projections.

Fed Policy Tools

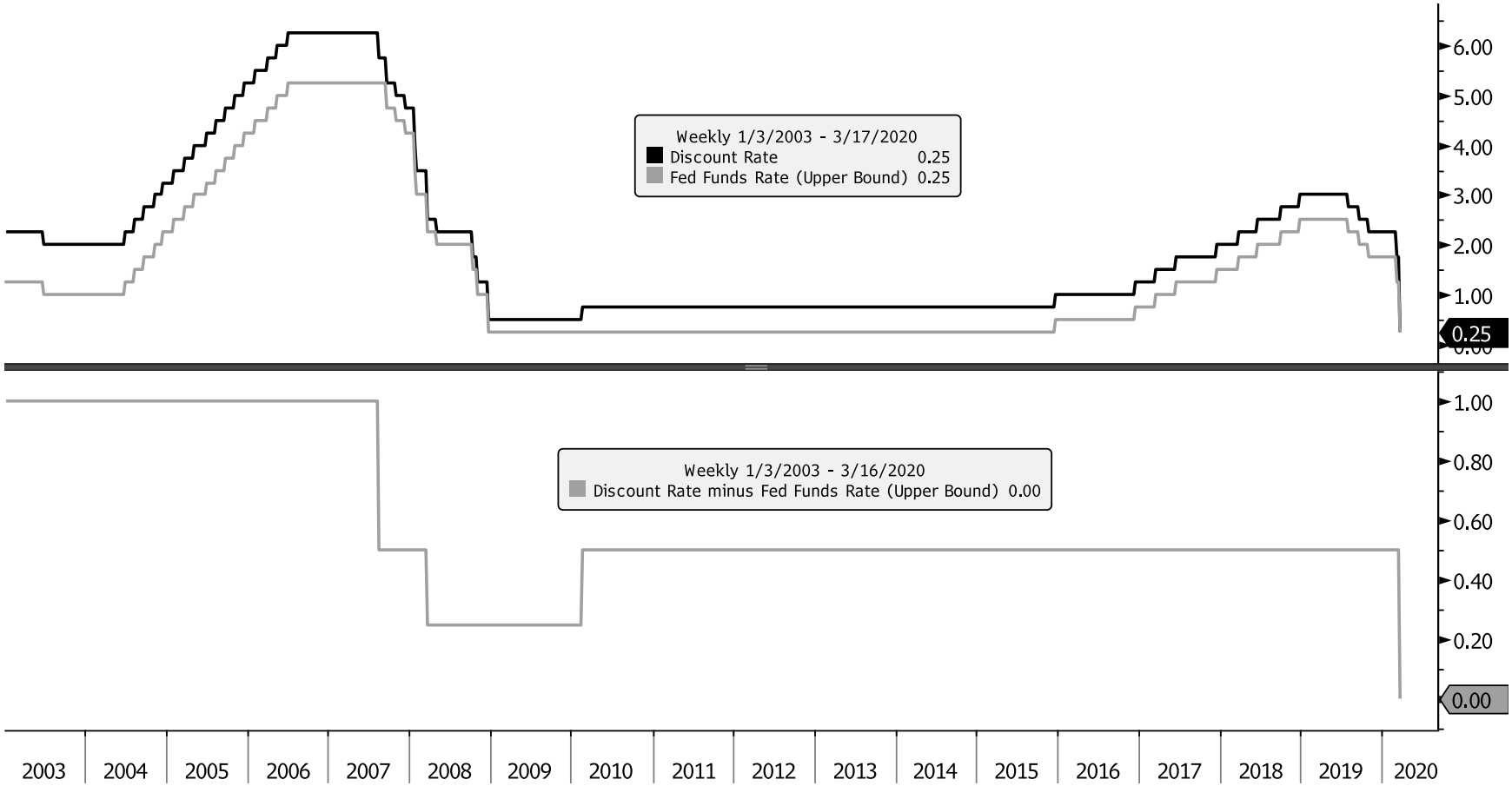
Fed Funds Rate: The rate at which banks can borrow overnight reserves from each other. It's the primary policy tool of the Fed. The Powell Fed aims for this rate to be at the estimated normal longer-run level when the policy objectives are met (i.e., when inflation is running at the target rate of 2% and the economy is operating at maximum employment). **Quantitative Easing ("QE")** is Fed asset purchases (usually U.S. Treasuries and Mortgage Backed Securities), which increase reserves in the system," Quantitative Tightening ("QT") is essentially the opposite. **Forward Guidance**: a commitment to hold rates at a certain level (e.g., zero) over a certain period of time. **The Discount Rate**: the rate at which banks can borrow directly from the Fed (against high quality collateral). Discount window loans create new reserves. **Foreign Central Bank Swap Lines**: the means by which the Fed can lend U.S. dollars to foreign central banks (e.g., to the European Central Bank or the Bank of Japan) to alleviate dollar funding stress in those economies. **Other Emergency Measures**: these might include things like the 2008 Commercial Paper Funding Facility, set up to backstop commercial paper markets.

Fed Key Concepts

Data Dependency: The Fed describes its policy making process as data dependent, which might be best summarized by Chair Powell's words: "Our views about appropriate monetary policy in the months and years ahead will be informed by incoming economic data and the evolving outlook. If the outlook changes, so too will monetary policy." Many of the following charts represent the relevant data followed by the Fed, and specifically by Chair Powell. **Lender of Last Resort**: central to the founding of the Fed in 1913 was the idea that the country needed a central lender of last resort to work in the public good and alleviate bank panics.

Fed Funds Rate and Discount Rate

Fund funds rate (grey) and Discount Rate (black) and spread (lower panel)

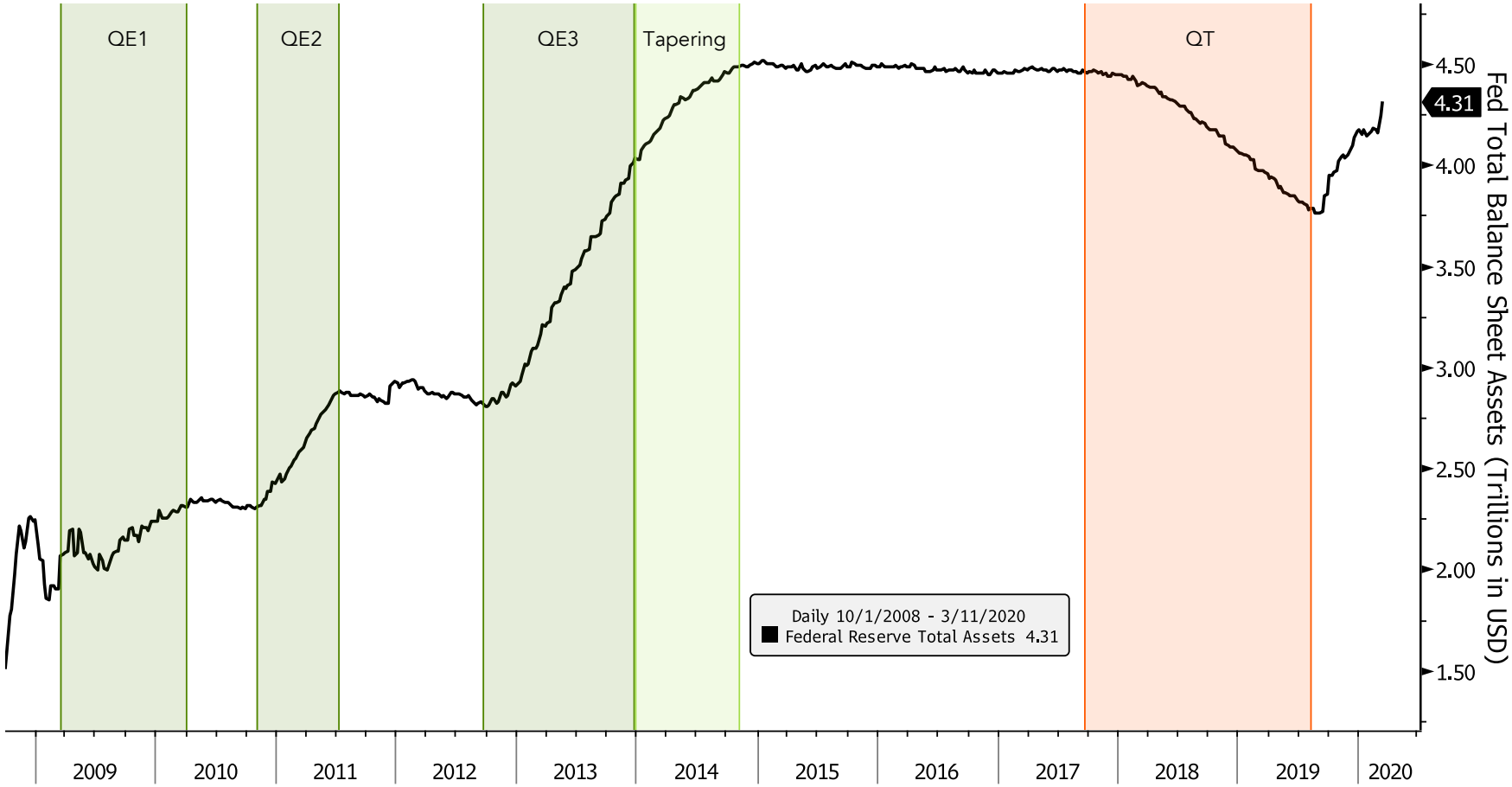


Source: © Merk Investments, Bloomberg

Analysis: The Fed has cut rates back to zero (0.00% - 0.25%). And lowered the discount rate to 0.25%, no spread over the upper end of the Fed funds rate (unprecedented). Banks can borrow for periods up to 90 days. When a bank borrows at the discount window they are borrowing directly from the Fed, and so create new reserves. The Fed is encouraging banks to use the discount window. Saying in a statement on Monday (3/16) [they] "encourage depository institutions to use the discount window to meet demands for credit from households and businesses at this time." They go onto say that "Providing liquidity in this way is one of the original purposes of the Federal Reserve System."

Fed Balance Sheet

Federal Reserve Balance Sheet Total Assets (Trillions) and QE/QT Operation Phases

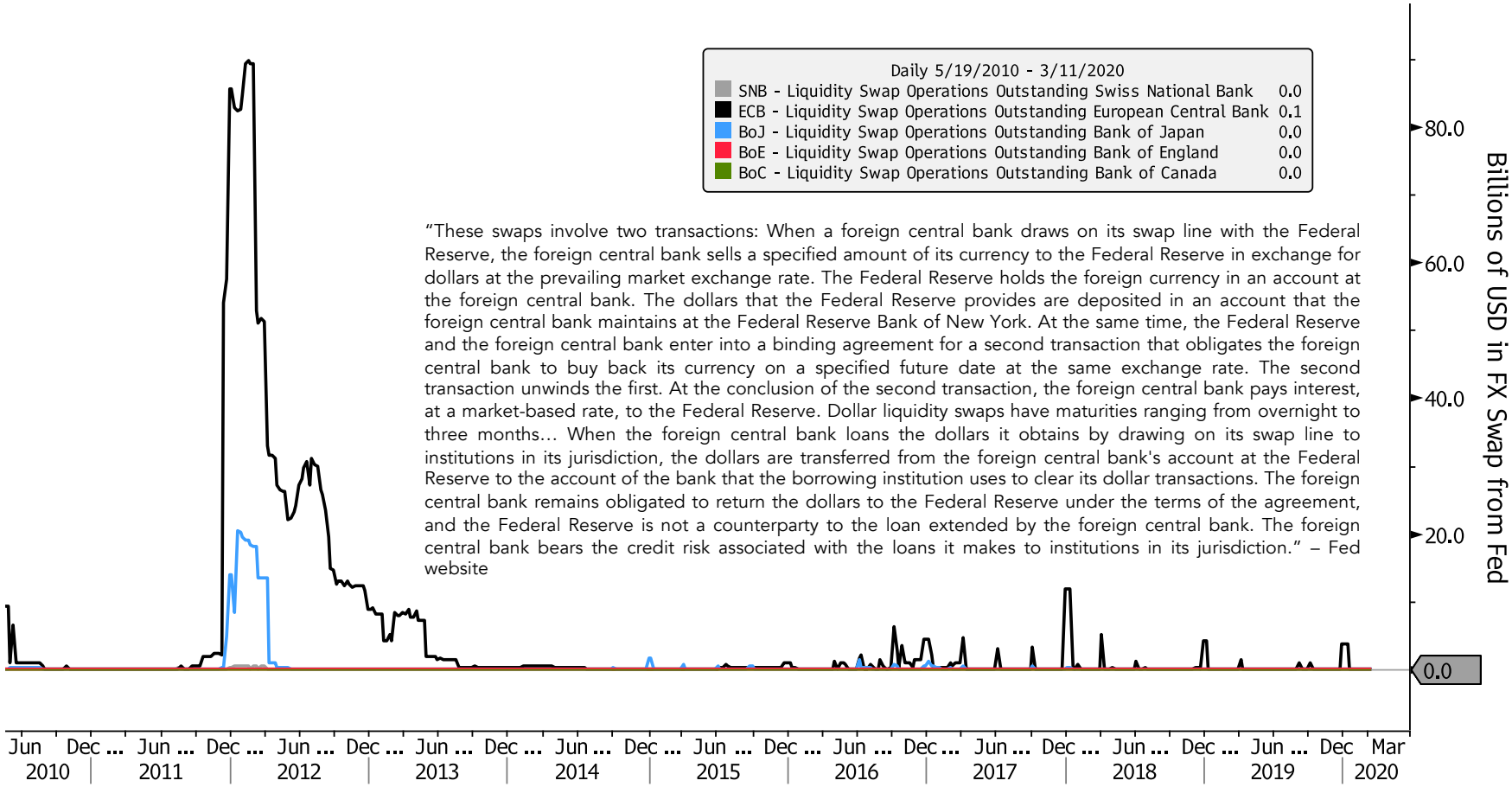


Source: © Merk Investments, Bloomberg

Analysis: The Fed just announced 700 billion in QE ($500 billion in U.S. Treasuries and $200 billion in mortgage-backed-securities (MBS)). Purchases will occur "in the coming months" according to the Fed statement. I expect a significant increase in the Fed's balance sheet in the weeks and months ahead with further QE purchases, commercial paper backstop, foreign swap lines, and usage of the discount window.

Fed U.S. Dollar Swap Line Lending to Foreign Central Banks

Billions in USD Swap agreements outstanding to foreign central banks



"These swaps involve two transactions: When a foreign central bank draws on its swap line with the Federal Reserve, the foreign central bank sells a specified amount of its currency to the Federal Reserve in exchange for dollars at the prevailing market exchange rate. The Federal Reserve holds the foreign currency in an account at the foreign central bank. The dollars that the Federal Reserve provides are deposited in an account that the foreign central bank maintains at the Federal Reserve Bank of New York. At the same time, the Federal Reserve and the foreign central bank enter into a binding agreement for a second transaction that obligates the foreign central bank to buy back its currency on a specified future date at the same exchange rate. The second transaction unwinds the first. At the conclusion of the second transaction, the foreign central bank pays interest, at a market-based rate, to the Federal Reserve. Dollar liquidity swaps have maturities ranging from overnight to three months… When the foreign central bank loans the dollars it obtains by drawing on its swap line to institutions in its jurisdiction, the dollars are transferred from the foreign central bank's account at the Federal Reserve to the account of the bank that the borrowing institution uses to clear its dollar transactions. The foreign central bank remains obligated to return the dollars to the Federal Reserve under the terms of the agreement, and the Federal Reserve is not a counterparty to the loan extended by the foreign central bank. The foreign central bank bears the credit risk associated with the loans it makes to institutions in its jurisdiction." – Fed website

Source: © Merk Investments, Bloomberg

Analysis: The Fed set up temporary U.S. Dollar swap lines with several major foreign central banks in late 2007, which were used heavily to alleviate U.S. dollar funding stress overseas in 2008 and 2009 (with a peak of over 500 billion in swap line borrowing in late 08/early 09). In 2010 (when the above data series began) the Fed formed standing arrangements for dollar liquidity swap lines with the Bank of Canada, the Bank of England, the European Central Bank, the Bank of Japan, and the Swiss National Bank. Fed dollar swap lines were used again in 2011-2013 (primarily by the ECB due to stress in the Eurozone). It seems likely that Fed swap lines will be used heavily again in future crises. Yellen has argued it is within the Fed's congressional mandate to respond to global developments given the potential spillover to the US. The IMF's Lagarde (now the ECB chief) encouraged extending the U.S. dollar swap lines to emerging market central banks as an additional crisis fighting tool.

Link: https://www.federalreserve.gov/monetarypolicy/bst_liquidityswaps.htm

Notes

At an emergency meeting on Sunday the Fed cut the Fed Funds Rate back to zero (0.00-0.25%) and lowered the discount rate to 0.25% (no spread over the upper end of the Fed Funds Rate range). They announced QE of 700+ billion (500 billion in U.S. Treasuries and 200 billion in Mortgage Backed Securities). The Fed will be lending U.S. dollars to foreign central banks through its standing swap lines, to help alleviate dollar funding stress internationally. They also loosened bank regulations to encourage lending to businesses and households. Thankfully, U.S. banks are well capitalized as they will need to temporarily expand balance sheet to facilitate the flow of payments. Fiscal policy will be needed to backstop lost revenue as the country implements public health initiatives.

Importantly, on Tuesday the Fed stepped in with the commercial paper backstop (commercial paper provides critical working capital financing to corporate America).

Measures taken to flatten the virus spread curve (so as not to overwhelm healthcare systems) are creating extreme short-term economic strain. And that's putting a lot of stress on the global financial system. Financial conditions will be the primary concern of the Fed over the next several weeks. Commercial paper and bank credit lines may be heavily relied on for businesses to continue making payroll, rent, supplier, and debt service payments, among others, while revenues are down. The commercial paper backstop and discount window are intended to address those issues. And the foreign swap lines are critical because of the 11 trillion in U.S. dollar debt outstanding that is issued by non-banks outside the U.S. Take up on the swap lines is likely to be significant.

The Fed sits at the top of the global money/credit hierarchy—with unlimited balance sheet. And consistent with its original reason for being, will continue to be the (global) lender of last resort. I expect a significant increase in the Fed's balance sheet in the weeks and months ahead with QE, commercial paper, foreign swap lines, and usage of the discount window. Also, we may see increased coordination between the Fed, Treasury, and Congress as policy makers work to minimize the economic damage of this exogenous shock. I expect that policy makers will act aggressively.

-Nick Reece, CFA

Recent Fed Statements:
https://www.federalreserve.gov/newsevents/pressreleases/monetary20200315a.htm
https://www.federalreserve.gov/newsevents/pressreleases/monetary20200315b.htm
https://www.federalreserve.gov/newsevents/pressreleases/monetary20200315c.htm
https://www.federalreserve.gov/newsevents/pressreleases/bcreg20200316a.htm
https://www.federalreserve.gov/newsevents/pressreleases/monetary20200317a.htm

The Story Behind the 2008 Commercial Paper Backstop

"Several staff meetings with lots of blue-sky thinking, at both the Board and the New York Fed, led to the proposal… The Board could create a new legal entity called the Commercial Paper Funding Facility, or CPFF, which could buy commercial paper with funds provided by the Fed under its 13(3) authority. Hank and I had discussed the basic idea at our October 1 lunch with the president.

We needed to break the mentality that was prompting commercial paper buyers to lend for only a few days at a time (if they were willing to lend at all). Buyers lending at very short maturities hoped to be the first to the door if anything went wrong, leaving the buyers who had lent at longer maturities holding the bag. It was yet another example of run psychology. With the Fed acting as a backstop for commercial paper, including commercial paper with longer maturities, we might be able to restore confidence to both lenders and borrowers.

We soon faced an unexpected hitch. Loans made by the Federal Reserve, we knew, must be "secured to the satisfaction" of the Reserve Bank making the loan—in the case of the CPFF, the New York Reserve Bank. Firms that issue commercial paper are legally obligated to repay, but by longstanding practice the paper is rarely backed by explicit collateral, such as marketable securities. Could a loan to the CPFF, whose only assets were commercial paper, be considered adequately secured?

We scrambled to find a way to ensure that our loans to the facility would be adequately secured. It took some lengthy meetings and calls, but eventually we found a workable formula. First, we stipulated that the CPFF would be allowed to buy only the most highly rated commercial paper (which, unfortunately, left out some important companies). We also required firms that wanted to sell their commercial paper to the facility to pay an up-front fee and an interest rate high enough to hasten their return to the regular market as conditions normalized. The fees were put in a reserve against possible losses. Finally, we limited our risk by capping the amount of commercial paper any one firm could sell to the CPFF. With these conditions in place, the Board and the New York Fed were willing to stipulate that loans to the CPFF were adequately secured. During its existence, the facility would suffer no losses and turn a profit for taxpayers, collecting $849 million in fees...

The Fed's new Commercial Paper Funding Facility had quickly proved its value. By the end of the day on October 29, two days after it opened for business, it had purchased $145 billion in three-month commercial paper. A week later, it held $242 billion and, at its peak in January 2009, $350 billion. The program halted the rapid shrinkage of this crucial funding market and helped return interest rates on commercial paper to more normal levels."

Ben Bernanke, in The Courage to Act: A Memoir of a Crisis and Its Aftermath

Bernanke's GFC Thought Process on the Discount Window

"By August 16 (2007), financial conditions had deteriorated to the point where we were ready to be more aggressive. Tim Geithner, Don Kohn, and I conferred that morning with our central bank counterparts in Europe, Canada, and Japan. I scheduled another emergency conference call of the FOMC at six o'clock that evening. To try to overcome stigma, we decided we would make discount window loans more attractive by halving the interest rate penalty. Banks would be able to borrow at a half percentage point, rather than a full point, above the FOMC's target for the federal funds rate. We'd also try to persuade some leading banks to borrow at the window, thereby suggesting that borrowing did not equal weakness. To encourage credit to flow at terms longer than overnight, we would offer loans through the discount window for up to thirty days and indicate that we'd be liberal about renewing the loans as needed...

We considered cutting the discount rate more than a half percentage point, a step advocated by Rick Mishkin, but we were balancing two competing concerns. If we didn't cut the discount rate enough, banks, worried about stigma, wouldn't borrow. But, if we cut it too much, smaller banks—who can't borrow overnight funds in the open market as cheaply as larger banks—might overwhelm the Reserve Banks with requests for relatively small loans, which we were not prepared to handle administratively. We might have to turn away would-be borrowers...

[In March 2008] we opened the liquidity spigot another turn for commercial banks, increasing the maximum maturity of discount window loans from thirty days to ninety days. And we cut the discount rate (the interest rate on discount window loans) by 1/4 percent, to 3-1/4 percent—just 1/4 percent higher than the target for the federal funds rate."

Ben Bernanke, in The Courage to Act: A Memoir of a Crisis and Its Aftermath

About the Author

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