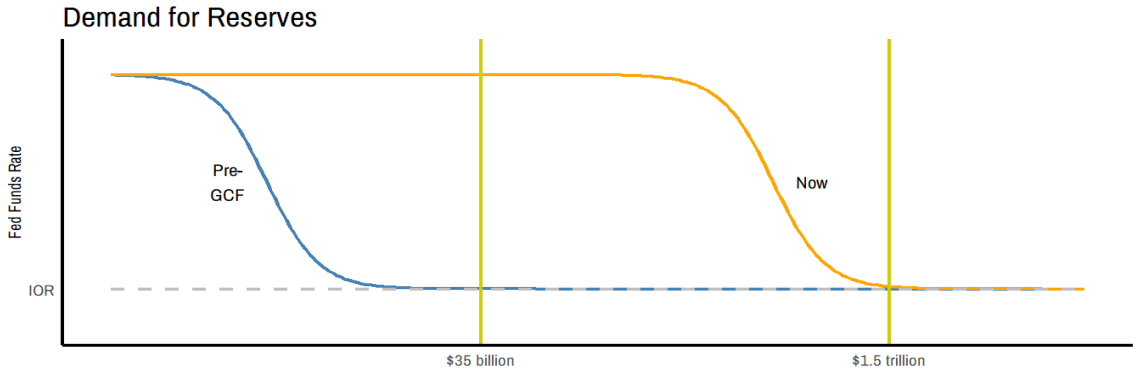
BANK POLICY INSTITUTE

Comment on "Reserves Were Not So Ample After All"

Bill Nelson | October 28, 2020

In my remarks today I will begin by stipulating to the authors' main point—reserves were not ample in September 2019—but I will then draw a different conclusion. In particular, I will argue that reserve demand is high because reserve supply is high; that there is nothing in law or regulation that requires a high level of reserve balances; that demand for reserves can be shifted back down to much lower levels; and that doing so is important both to curtail the Fed's expanding role in the financial system and to preserve the Fed's long-term independence.

Let me start with what is no doubt a familiar graph for most of you. The exhibit depicts the demand for reserve balances – deposits of commercial banks at Federal Reserve Banks, the blue and orange lines. The x-axis is the level of reserve balances, and the y-axis is the level of the overnight fed funds rate, the interest rate on onshore, unsecured, interbank loans. The lines start up near the Fed's lending rate, the discount rate, because in theory a bank shouldn't borrow funds from another bank for more than it would have to pay to borrow from the Fed (more on that later). At the right, the line flattens out around the interest on reserves rate, the IOR rate, the amount the Fed pays for deposits, because no bank should lend funds to another bank for less than it can get simply leaving the funds on deposit at the Fed. As reserve balances decline from an abundant level, the curve rises up steeply; that is the point where reserves begin to become scarce. The authors put that amount at about $1½ trillion as with the orange line. As I will discuss, that demand curve is miles and miles to the right of where we used to think it was.

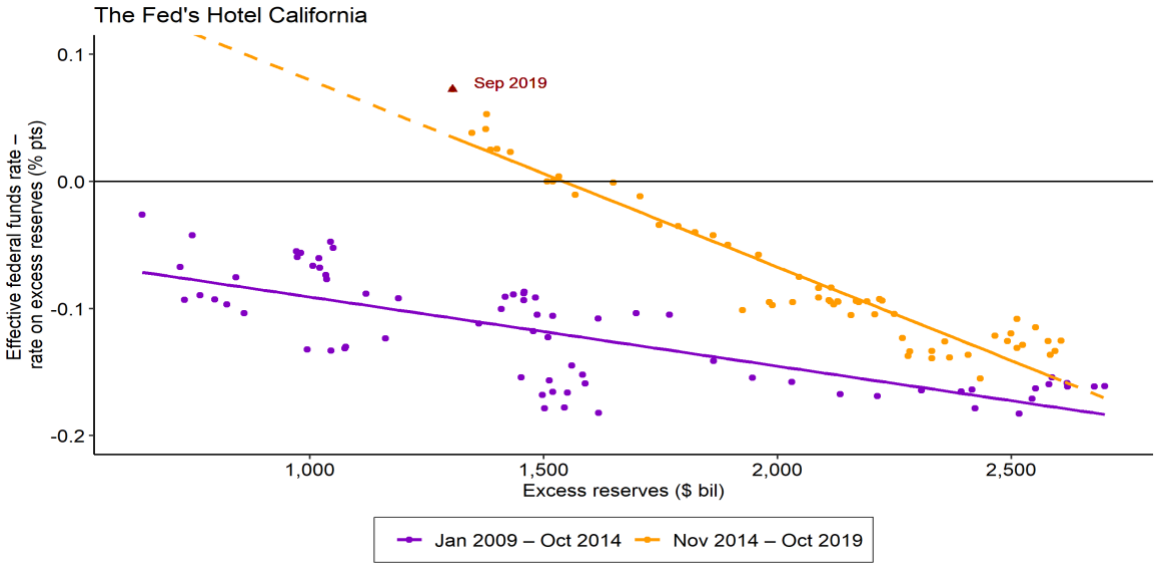


The demand for reserves effectively determines the necessary size of the Fed. The Fed's liabilities are basically currency, which is essentially exogenous, and commercial bank deposits, that is, reserves balances. Only the Fed can create reserves, and, because balance sheets must balance, to do so it must own assets that exceed currency by an amount equal to the desired amount of reserves. If the demand for reserves is permanently vastly higher than it used to be, the Fed has to be vastly bigger than it used to be. That massive size would be necessary whether the Fed conducts policy using an abundant reserve framework, as it does now, or a scarce reserve framework, as it used to do, because the necessary scarce amount is only a bit below the necessary abundant amount.

The quantity of reserves that the Fed has judged to be necessary for reserves to be abundant has grown remarkably over time. In April 2008, when Federal Reserve staff first considered the possibility of operating policy with an abundant-reserves framework, staff estimated that the level of reserves that would be needed "…might be on the order of $35 billion…" The assumption rose to $100 billion in 2016, $500 billion in 2017, $600 billion in 2018, $1 trillion in early 2019, and $1½ trillion in late 2019.

That minimum quantity of abundant reserves has grown over time because the level of reserves has grown over time. In a monetary policy variant of Say's law, the supply of reserves creates its own demand. As I will explain, bankers and their examiners get used to the higher level, and the associated configuration of interest rates, and make institutional arrangements that lock in that higher level.

That ratchet effect can readily be seen in the data. This exhibit, which I was first shown by Hoover's Andy Filardo, plots the level of reserve on the x-axis and the spread between the federal funds rate and the IOR rate on the y-axis. The purple dots sketch out the steady increase in reserve balances between 2009 and 2014, and the orange dots trace the decline in reserves between late 2014 and the repo turmoil in September 2019 of last year. As can be seen, the spread rose more sharply when balances declined than it fell when balances rose. It appears that an oversupply of reserves is a hotel that the Fed can check out of but can never leave. Thank goodness, however, the Fed actually can leave, and I will discuss how, but first I will describe how the short-run demand for reserves rises with supply.



There is nothing in law or regulation that requires banks to hold high levels of reserve balances as opposed to other highly liquid assets, especially now that reserve requirements have been set to zero. The relevant regulations are the Liquidity Coverage Ratio (or LCR), the Net Stable Funding Ratio (or NSFR), the monthly self-run liquidity stress tests required by Reg YY, resolution and recovery requirements, the Fed's payment system risk policy, and the Fed's discount window policy.

- The LCR, which assesses a bank's ability to withstand 30-days of severe stress, is unaffected if a bank holds Treasuries instead of reserves and essentially unaffected if the bank moves into Treasury reverse repos instead.
- The NSFR, which assesses bank liquidity over a one-year horizon, and was finalized last week, is also unaffected if a bank switches between reserves, Treasuries, and Treasury reverse repos.
- Reg YY requires banks to conduct monthly liquidity stress tests at the overnight, one-month, three-month, and one-year horizons. There is nothing in the regulation specifically about reserve balances.
- There are resolution and recovery liquidity requirements associated with banks' living wills. The requirements are secret, but in the aftermath of the September turmoil the FDIC stated that the requirements do not build in a preference for reserves.
- One reason to hold reserves could be to avoid running a daylight overdraft. But the Fed's payment system risk policy is designed to enable banks to run a daylight overdraft safely, not discourage them from doing so.
- Another reason could be to avoid having to borrow from the discount window at the end of the day. But both Regulation A, which covers discount window policy, and supervisory guidance issued by the Fed, OCC, FDIC, and NCUA encourage banks to use the discount window freely as a tool for liquidity management.

Why then has the demand for reserves grown steadily over time? For more than a half decade after QE3, reserves were super abundant, and the interest rate that the Fed paid on reserve balances was above the interest rate banks could earn on other, similar liquid assets. Over time, banks took actions that made sense in that environment, and bank examiner expectations evolved in reaction to those actions. Consequently, banks and their examiners became accustomed to the resulting important role of reserves in banks' liquidity risk management.

A senior officer at a large bank recently provided me an example of this process. When the interest rate on reserves was higher than market rates, her bank elected to hold reserves in an amount equal to projected cash needs under stress over one week and Treasury securities to cover projected needs over the subsequent three weeks. When repo rates moved higher than the interest rate on reserves in 2019, the bank considered reducing its cash holdings to its projected need over three days, still holding Treasury securities to cover the rest of the month. While both arrangements are consistent with liquidity requirements, the bank's examiners would have expected an explanation for the reduction in cash, an experience the bank's management decided they would rather avoid, and the bank elected not to make the change.

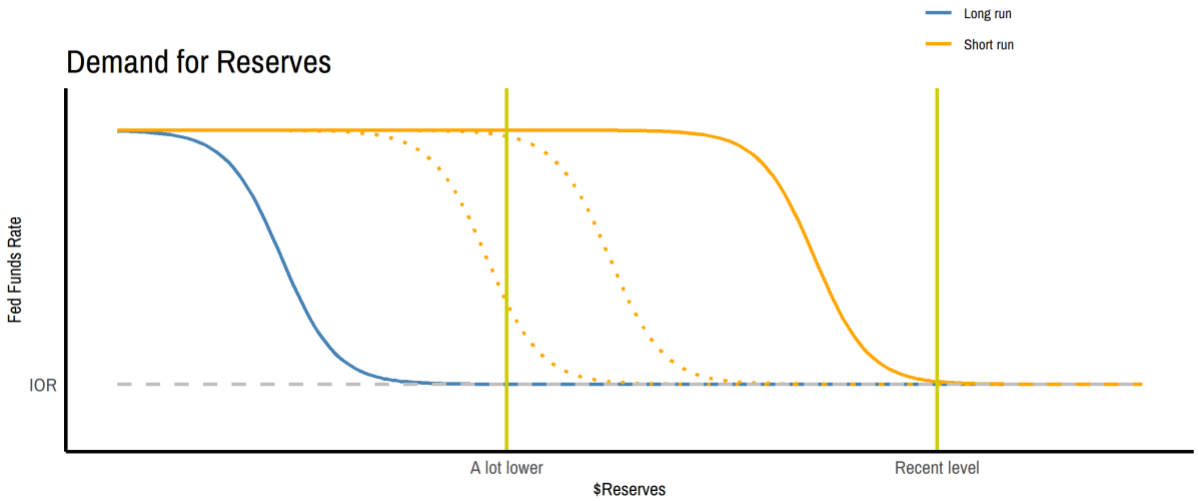
Relatedly, when I was visiting the Norges Bank (the central bank of Norway) before the pandemic, they told me that a similar dynamic led them in 2010 to switch from a system with abundant reserves to a

system with more scarce reserves, (roughly the reverse of the FOMC's decision in January 2019). When seeking comment on their decision, they indicated:

> When Norges Bank keeps reserves relatively high for a period, it appears that banks gradually adjust to this level…With ever increasing reserves in the banking system, there is a risk that Norges Bank assumes functions that should be left to the market.
>
> Norges Bank (1 October 2010)

Although Vice Chair Quarles has publicly stated that he would urge examination teams not to mandate a preference for reserve balances over Treasuries, examiner behavior can be extremely difficult to change. I spent 15 years trying to reduce the stigma associated with borrowing from the discount window. In 2004, the chief funding officer of a large West Coast bank told me that his bank was reluctant to use the window because their bank examiner didn't like it. So, I encouraged the four national banking agencies to publish the joint guidance I mentioned earlier indicating that using the window was ok, which they did. The banker then checked with his examiner after his examiner had read the new guidance; the examiner indicated that he still didn't like the discount window.

To reduce the level of reserve balances, the Fed needs to reverse the process that generated the higher demand. Once the Covid-19 emergency is behind us, the Fed needs to allow its portfolio of securities to decline and reserve balances to shrink. When modest scarcity pushes money market rates a bit above the IOR rate, banks will begin to economize on reserve balances as they had begun to do in 2019. Of course, once supply is on the edge of the steep part of the short-run demand curve, the Fed will need to control daily reserve volatility, as was standard under the old operating regime, but something they neglected to do in September 2019. As scarcity returns, so will a normal federal funds market in which banks borrow and lend at the end of the day to avoid overnight overdrafts or costly surplus end-of-day balances. To avoid having large end-of-day balances, banks will again get used to daylight overdrafts, and so too will their examiners. In short, by moving the yellowish-green bars left, the Fed can gradually move the short-run demand for reserves (the orange lines) down.



Unfortunately, shrinking reserves alone is unlikely to help much to reduce the stigma associated with borrowing from the discount window, unless reserve balances are reduced so far that banks frequently end up at the window. There has been a stigma associated with discount window borrowing for at least 80 years, and anyone who tells you there is a simple solution hasn't worked on it at the ground level. Understanding stigma not only sheds light on the demand for reserves and the possible need for a standing repo facility, it also sheds light on capital and liquidity buffer usability. Indeed, in discussions back in September 2019 and again a few days ago, folks at JPMorgan Chase explained to me that the Jamie Dimon quote cited by the authors is all about having enough cash at the beginning of the day to be sure that you don't have to borrow from the discount window at the end of the day.

Of course, the question remains, why bother reducing reserve demand? After all, as the authors quote Joe Gagnon and Brian Sack: "…maintaining a higher level of reserves as a buffer has no meaningful cost." I disagree, strongly. The costs of an enormous level of reserves and a correspondingly massive Fed portfolio of government securities are high but are largely political and intangible and so uncompelling to economists. While the old framework required only small transactions with a small set of counterparties, under the current framework the Fed conducts massive transactions, in the form of taking deposits, with thousands of counterparties. And the size and scope of the daily transactions would increase much further if the Fed unwisely decides to target the repo rate instead of the fed funds rate, as seems possible. Furthermore, under a scarce reserves framework, the Fed can deflect Treasury pressure to buy more securities or Congressional pressure to buy, say, municipal securities, by observing that, if its balance sheet exceeds the demand for reserves, it will lose control of monetary policy. Under the abundant reserves framework, there is no such limit. And all this is coming at a time when the Fed's reach is already expanding through its backstopping of corporate and muni debt markets, and amidst calls for it to act to reduce climate change and income inequality.

This spring, when the Fed bought $1 trillion in securities in three weeks, this whole discussion felt moot. Trying to continue it felt like being the guy who calls you up the evening after losing an argument to say "and another thing." But over the past month or so, something has changed. There have been a growing number of people expressing concern about the Fed's role in the financial system and society -- concern that a universal expectation that the Fed will step in whenever there is financial volatility will become self-fulfilling.

> "…this didn't happen because of moral hazard. The moral hazard is more that we don't want people to assume that these – that we'll run in all the time."
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> Jerome Powell, October 6, 2020