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We now have a 100-year history by which to judge the Federal Reserve's performance. On balance, the Fed has not increased economic stability relative to the pre-Fed era. The Great Depression, the great stagflation, and the 2008 financial crisis have all occurred on the Fed's watch. Even excluding the Great Depression, business cycles have not become appreciably milder, nor have recessions become less frequent or measurably shorter.

The Fed has strayed so far from the classic prescription for a lender of last resort—to provide short-term funds to solvent institutions at penalty rates—it strains all reason to suggest that it has successfully fulfilled that function. Its regulatory failures are numerous. It failed even to see the 2008 financial crisis coming. Perhaps the best that can be said about the Fed is that the variability in inflation has declined since 1984.

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The Federal Reserve's centennial is the perfect time to assess the Fed's track record and to propose major reforms as needed. This article provides policymakers with direction to begin addressing these issues. Specifically, the article discusses several long-term policy reforms in the context of a monetary commission and also provides a list of reforms that could more easily be instituted outside of such a formal group.

Major Fed Failures

One of the most glaring failures of the Fed, compared to its original purpose, has been its misuse as a lender of last resort. The essence of the classic prescription for a lender of last resort—well known at the founding of the Fed—is to avoid lending to financially troubled firms. The purpose is, instead, to ensure the system-wide flow of credit while avoiding the moral hazard issues that arise via government lending to private companies. Within its first 25 years of operation, the Fed twice failed to provide any sort of liquidity to the banks it was supposed to serve, likely worsening the Great Depression. In 1929, the Federal Reserve Board prohibited the extension of credit to any member bank that it suspected of stock market lending, a decision that ultimately led to a 33 percent decline in the economy's stock of money (Humphrey 2010, Timberlake 2012: 354–55). In 1937, the Federal Reserve Board of Governors doubled the reserve requirement for member banks, again preventing credit from expanding when and where it was needed (Friedman and Schwartz 1963: 543).

Throughout its history, the Fed has also consistently strayed from the classic lender of last resort prescription by lending directly to specific institutions, especially those with questionable financial strength (Schwartz 1992, Michel 2014a). The Fed's actions in the 2008 financial crisis were merely the latest in a long line of credit allocation activities that demonstrate this unfortunate proclivity. A classic lender of last resort would provide short-term loans to all solvent institutions, on good collateral, at a high rate of interest. Yet during the most recent crisis, the Fed allocated more than \$16 trillion in credit to specific firms, at an estimated \$13 billion *below* market rates.¹

The Fed's actions leading up to the 2008 crisis also highlight the central bank's failure as a financial market regulator. The U.S. central bank has been involved in banking regulation since its founding, and it became the regulator for all holding companies owning a member bank with the Banking Act of 1933. When bank holding companies, as well as their permissible activities, became more clearly defined under the Bank Holding Company Act of 1956, the Fed was named their primary regulator (Watkins and West 1982).

Although it would be unjust to place all of the blame on the Fed, the fact remains that the U.S. experienced major banking problems during the Depression era, again in the 1970s and 1980s, and also a severe financial crisis in 2008. All of these disruptions occurred on the Fed's watch. At best, the Fed did not predict the crises. In 2008, for example, Fed chairman Ben Bernanke testified before the Senate that "Among the largest banks, the capital ratios remain good and I don't anticipate

¹ See GAO (2011a, 2011b); Ivry, Keoun, and Kuntz (2011), and White (2014a).

any serious problems of that sort among the large, internationally active banks that make up a very substantial part of our banking system” (CNBC.com 2008). Simply being mistaken about banks’ capital is one thing, but the Fed was the primary regulator for many of these institutions.

In fact, under the 1999 Gramm–Leach–Bliley Act (GLBA), the Fed alone approved applications to become a financial holding company only after certifying that both the holding company and all its subsidiary depository institutions were “well-managed and well-capitalized, and . . . in compliance with the Community Reinvestment Act, among other requirements” (Avraham, Selvaggi, and Vickery 2012: 67).² The Fed has not always had sole discretion in determining which banks were well-capitalized, but in the 1950s it developed a “risk-bucket” approach to capital requirements that formed the basis of the risk-weighted capital requirements still used today (Crosse 1962: 169–72).

In particular, the Fed’s original method was the foundation for the Basel I capital accords which the Fed and the Federal Deposit Insurance Corporation (FDIC) adopted for U.S. commercial banks in 1988. Under these capital rules, U.S. commercial banks have been required to maintain several different capital ratios above regulatory minimums in order to be considered “well capitalized.” According to the FDIC, U.S. commercial banks exceeded these requirements by 2 to 3 percentage points, on average, for the six years leading up to the crisis (Jablecki and Machaj 2009: 306–7). Moreover, the Basel requirements sanctioned, via low risk

² GLBA allowed bank holding companies to affiliate with firms engaged in activities such as securities and insurance underwriting.

weights, investing heavily in the mortgage-backed securities (MBS) that contributed to the 2008 meltdown (Michel 2014b).³

The Fed has also failed to improve overall economic stability. The full Federal Reserve era, for instance, has “been characterized by more rather than fewer symptoms of monetary and macroeconomic instability than the decades leading to the Fed’s establishment” (Selgin, Lastrapes, and White 2012). Yes, U.S. economic stability has improved since WWII, but it would be myopic to focus only on this period. For starters, such an assessment rests largely on forgetting any policy mistakes that occurred prior to 1985, after which the Volcker and Greenspan years coincided with what’s known as the “Great Moderation.” Moreover, while many have attributed this moderate period to improved monetary policy, several studies suggest that other factors—such as fewer exogenous economic shocks and more efficient capital markets—also contributed to this reduction in volatility (see Stock and Watson 2002, 2005).⁴

Additional studies suggest that the apparent postwar improvement depends heavily on a comparison to unrevised prewar data—so much so that what appears to be a dramatic improvement after WWII is actually a “figment of the data” (Romer 1986a: 314). One major study concludes: “Depending on which series and measure are used, somewhere between half and all of the observed stabilization is the result of comparing inconsistent data” (Romer 1986a: 322).

³ The Fed was directly responsible for the recourse rule, a 2001 change to the Basel requirements that applied the same low-risk weight for Fannie and Freddie issued MBS to highly rated private-label MBS (Friedman and Wladimir 2011: 69).

⁴ For a list of studies supporting various views of the causes of the great moderation, see Selgin, Lastrapes, and White (2012: 579–80).

Revised data series show that improvements in specific aggregates, such as employment, industrial production, and GNP, are also much less dramatic than previously thought (Romer 1986b, 1994).⁵ As for inflation, the volatility in price level changes has come down roughly 1 percentage point in the full Fed era, with most of the reduction in the post-WWII period. In fact, inflation variability has declined even more the latter half of the postwar period, after the Fed was given a formal price stability mandate in 1977. On the other hand, the average rate of inflation is higher in the Fed era, and even more so after 1977. The decline in inflation variability, particularly since the mid-1980s, has certainly contributed to the perception that the Fed learned from earlier mistakes and figured out the “right” way to implement monetary policy. Still, it is clear that deflation—even the benign type of price declines that are driven by aggregate supply improvements—has all but disappeared during the Fed era (Selgin, Lastrapes, and White 2012: 574; Selgin 1997; Bordo, Lane, and Redish 2004).

The Fed’s success and failure—indeed, the success of active monetary policy in general—regarding macroeconomic stability have been debated among economists for decades. While there are some areas of broad agreement in this debate, key disagreements remain. For instance, while most reform-minded economists would prefer some type of rules-based monetary policy to the pure discretionary framework that now exists, there is no clearly overwhelming consensus on exactly which rule should be implemented. John Taylor and Scott

⁵ For studies in support of an alternative view, see Selgin, Lastrapes, and White (2012: 577–79).

Sumner, for example, have very different prescriptions for a rule-based Federal Reserve, even though both economists' views are rooted in monetarism.⁶

Similarly, many reform-minded economists recognize that the Fed's so-called independence is rather limited, but there is no overwhelming consensus regarding what—if anything—to do about the political nature of monetary policy. Should Congress take firm control of monetary policy? Should the Federal Reserve become part of the Treasury Department? Many economists have argued against such measures, but Milton Friedman argued that these changes (particularly congressional control) could “avoid major mistakes like the Great Depression and the great inflation” (Friedman 2014: 636). It will likely take time to reach a compromise on these types of major monetary policy reforms, but there is broader agreement on several other key policy improvements. Policymakers should aim to work out any remaining disagreements over the long term, while simultaneously proceeding with reforms that are more widely agreed upon. Packaging the bulk of these ideas together into one piece of legislation can help to guard against the piecemeal approach exhausting the political will to enact further reforms.

Long-Term Monetary Policy Reforms

The Federal Reserve currently employs discretionary policy without any rigid operational framework. Thus, the Federal Open Market Committee (FOMC) is not bound to implement expansionary or contractionary policies at any particular

⁶ While Sumner advocates the central bank targeting nominal GDP, Taylor prefers that the central bank target interest rates—in a formulaic manner—based on a both inflation and employment (i.e., the Taylor rule).

time using any particular method. The FOMC does operate under the so-called *dual mandate*, requiring it to promote both price stability and low unemployment, but it has no binding requirements to hit any specific economic goals.⁷ Consequently, FOMC members are completely free to judge both the direction of the economy and the appropriate monetary policy response.

In contrast to this discretionary framework, rules-based monetary policies would require the Fed to state specific policy goals and responses *before* engaging in policy actions. A policy rule commitment would ostensibly bind the Fed to a specific course of action based on clearly defined economic outcomes, thus drastically reducing uncertainty with respect to the Fed's policies. Another possible advantage of policy by rule rather than policy by pure discretion is that rules-based policies can prevent short-term considerations from interfering with the Fed's long-term goals.

Nonetheless, policymakers could implement one of many different monetary policy rules, and there is no clear consensus on which rule would be best. For instance, the Fed could be required to follow an inflation targeting rule, a Taylor rule, or a nominal GDP targeting rule. Alternatively, some form of a gold standard could be reinstated or the monetary base could be frozen, thus ultimately eliminating the need for a central bank (Friedman 2014). The best way to settle this debate and find the best way forward would be for Congress to provide a public forum for experts to evaluate these issues. A formal monetary commission, such as

⁷This provision is controversial because many economists believe that monetary policy can do very little to influence employment. For example, former Federal Reserve chairman Ben Bernanke (2012) publicly stated that "the maximum level of employment in a given economy is largely determined by nonmonetary factors" (Bernanke 2012).

the one proposed by Rep. Kevin Brady (R-Texas) and Sen. John Cornyn (R-Texas), would be an excellent vehicle for assessing the Fed's overall performance and implementing the best long-term monetary policy reforms.

The Centennial Monetary Commission Act of 2013 (H.R. 1176 and S. 1895), for example, would "establish a commission to examine the United States monetary policy, evaluate alternative monetary regimes, and recommend a course for monetary policy going forward." The commission's recommendations would not bind Congress to make any particular changes, but it would provide members of Congress with the information they need to fulfil their constitutional responsibilities regarding monetary policy.

Major structural reforms to the Fed will most likely not be achieved without such a formal commission. On the other hand, because the Fed has had so much discretion in the past, there are several reforms that could most likely be implemented outside of any formal commission's recommendations. Furthermore, it may be best to institute most of these reforms simultaneously. Many of these policy improvements are complimentary and taking too much time to implement them may be counterproductive.

Near-Term Policy Improvements

The Fed's supporters believe that a central bank needs broad discretion to deal with unforeseen economic changes. Historically, though, the Fed has exercised discretion in ways that go well beyond what is traditionally viewed as monetary policy (Schwartz 1992). For instance, the Fed currently has the discretion to deal

with large, unexpected swings in the economy via “emergency” measures. In particular, Section 13 (3) of the Federal Reserve Act allows the Board of Governors to authorize Fed District Bank lending to "any participant in any program or facility with broad-based eligibility" in "unusual and exigent circumstances."⁸

During the 2008 financial crisis, for example, the Fed created more than a dozen special lending programs by invoking its emergency authority under Section 13 (3). The U.S. Government Accountability Office (GAO) estimates that from December 1, 2007, through July 21, 2010, the Fed lent financial firms more than \$16 trillion through Broad-Based Emergency Programs (GAO 2011a, 2011b). *Bloomberg Markets* estimates that the Fed’s total emergency loans from 2007 to 2010 charged \$13 billion *below* market rates (Ivry, Keoun, and Kuntz 2011). This type of direct credit allocation stretches well beyond the norms of monetary policy into the area of fiscal policy. Moreover, charging below market rates has, once again, shown that the Fed tends to stray from the classic prescription for a lender of last resort.

Fixing this problem should be relatively easy compared to implementing any of the major structural reforms discussed above. There is already broad agreement among reform-minded economists that monetary policy entails maintaining system-wide liquidity and, therefore, does not require emergency lending authority. The work of a formal commission does not need to be bogged down with these types of Fed reforms on which there is already broad agreement. In fact, pending legislation in the U.S. House of Representatives would implement some of these policy

⁸ See 12 U.S. Code § 248(r)(2)(A)(ii). The “Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010” amended this authority after the 2008 crisis, but even if these changes had been in place prior to the crisis, the Fed still would have been able to conduct roughly half of those lending programs.

improvements. The following list, though not comprehensive, is meant to serve as a guide for policymakers to reform the Fed outside of a formal monetary commission.

End the Fed's Broken Lender of Last Resort Function

Congress should prohibit the Fed from making emergency loans under Section 13 (3) and via the discount window. There is, in fact, no clear economic rationale for the Fed to provide direct loans to private firms, and the discount window is a relic of the Fed's founding. Given the development and current sophistication of financial markets, there is even less reason to allow the central bank to serve as a lender of last resort now than there was in 1913. Firms that fail should be allowed to go through bankruptcy so that markets ultimately become stronger and more efficient. Congress should help to minimize the chances of future "too-big-to-fail" credit allocation by revoking the Federal Reserve's emergency lending authority and closing the discount window.

Update the Federal Reserve's Primary Dealer System

The current primary dealer framework was created in the 1960s when there were clearer advantages to having a centralized open market system in New York. Now, however, there is good reason to believe that allowing *all* member banks to participate in open market operations would provide a more liquid interbank lending market. At the very least, expanding the participants in open market operations would make the federal funds market less dependent on any particular institution. This type of reform would enhance the Fed's ability to provide system-

wide liquidity, thus reducing the temptation to lend money to individual financial firms.

Require the Fed to Select a Short-Term, Rules-Based Policy

Ending discretionary monetary policy and moving the U.S. toward a truly competitive monetary system is a justifiable long-term goal. In the near term, however, Congress could require the Fed to take a small step toward this outcome. For example, the approach offered in the Federal Reserve Accountability and Transparency Act of 2014, introduced by Rep. Bill Huizenga (R-MI) and Rep. Scott Garrett (R-NJ), would require the Fed to choose its own monetary policy rule. It would also give the Fed the flexibility to stop following its policy rule, provided that it explains this decision to Congress. A policy based on this type of rule would avoid some of the drawn-out, scholarly debates sure to ensue in a formal monetary commission, and it would not overly restrict the Fed.

Reverse Quantitative Easing

In December 2008, the Fed began what eventually became several rounds of quantitative easing, an unconventional form of expansionary monetary policy. Under its QE programs, the Fed purchased long-term Treasury securities as well as the debt and the mortgage-backed securities of Fannie Mae and Freddie Mac. A large portion of these purchases removed some of the riskiest assets—Fannie’s and Freddie’s debt and MBS—from commercial banks’ balance sheets. This fact, coupled with the decision to pay interest on reserves, suggests the QE programs were more

about propping up failing banks than expanding the money supply (Horwitz 2014). Regardless, the Fed now holds more than five times the amount of securities it had prior to the 2008 crisis. With the latest QE round ending in October 2014, the Fed's balance sheet now shows more than \$2 trillion in long-term Treasuries and nearly \$2 trillion in GSE securities.

According to Richard Fisher, president of the Dallas Federal Reserve Bank, the Fed now holds more than 30 percent of all outstanding MBS and nearly 25 percent of outstanding Treasuries (Fisher 2014). Holding such large quantities of securities, many of which are of questionable value, unnecessarily exposes taxpayers to losses and heightens the risk of future inflation. The Fed should start reversing these QE purchases and bringing its balance sheet back to the size it was prior to the QE programs. The central bank can minimize any negative effects to reversing QE by announcing a deliberate long-term plan to sell the bulk of these securities.

As an example, the Fed could announce the following plan:

- Through 2020, 75 percent of the long-term securities and MBS will be sold, and the remainder will be held until maturity.
- Each month, \$45 billion of the long-term securities and MBS will be sold.

End the New Reverse Repo Program

The Fed's Overnight Reverse Repurchase Facility (ON RRP), still in the testing phase, would ultimately result in yet another expansion of federal involvement that adds to firms' incentive to take financial risks. Currently, on any given day, private

firms (as well as Fannie and Freddie) can lend the Fed up to \$10 billion and collect interest the next day (Bair 2014). An expanded ON RRP makes it more likely that, for example, money market funds would lend to the Fed at the first sign of market turmoil rather than finance private firms' commercial paper (a short-term debt instrument used by many non-financial companies). More broadly, this program essentially turns the Fed into a *borrower* of last resort; it provides lenders with a guaranteed rate of return at the expense of private markets. Because there is no risk the Fed will fail to uphold its end of the contract, an expanded ON RRP increases the likelihood that even more firms will run straight to the Fed during market instability.

Moreover, investors would be less likely to monitor their own risk if they know they have an expanded government backstop. The program marks a drastic departure from previous open market operations and potentially increases systemic risk. The fact that the Fed is testing new ways to influence additional short-term credit markets only underscores that its aggressive QE policies have damaged these markets and should therefore be reversed sooner rather than later.

End the Fed's Role as a Financial Regulator

A central bank does not need to be a financial regulator to conduct monetary policy (Goodfriend and King 1988). Allowing the Fed to serve as a financial regulator increases the likelihood that policy decisions will be compromised as the Fed's employees become embedded in the financial firms they are supposed to be overseeing. The fact that Dodd-Frank imposed a nebulous financial stability

mandate on the Fed only increases this possibility. Aside from these recent changes, it is completely unnecessary for the U.S. central bank to serve in a regulatory capacity. Removing the Fed from its regulatory role would leave at least five other federal regulators overseeing U.S. financial markets.

Require a Full Accounting of Interest on Reserves

Congress should require the GAO and the Federal Reserve to officially report whether paying interest on reserves (IOR) has hindered the economic recovery and made other Fed efforts less effective. Prior to the crisis, the Fed paid no interest on banks' reserves. Yet, it began IOR at the same time it started to purchase massive quantities of securities in (ostensibly) an effort to spur economic growth. At the very least, the Fed should give an accounting of the impact IOR has had on its policies.

Allow Private Innovations to Flourish

The privately produced digital currency Bitcoin is just one example of a market innovation which allows people to choose their own mediums of exchange. Bitcoin is both a digital currency and an electronic payment network. The technology allows people to send money to another person or business via the Internet without a third party such as PayPal or MasterCard. Though it is still not pervasively used, Bitcoin, perhaps by accident, seems to have solved some payment system deficiencies that even the Fed has decried (see Hochstein 2015).

Nonetheless, Bitcoin has come under increasing scrutiny from both federal and state regulators (Hill 2013).

Congress should ensure that these types of private innovations flourish by, at the very least, preventing any regulatory actions which may threaten their use.

Concerns over people using digital (or any other non-US dollar) payments for illegal activity should not result in these technologies being held to higher standards than payment systems based on the dollar (or other national currency). Criminals often break the law in pursuit of money, but the policy solution is not to outlaw money.

Congress could also encourage these types of private innovations by passing several modest reforms:

- *Eliminate capital gains taxes on alternative currencies.* The IRS has labeled digital currency as property, thus requiring people who use digital currency as a medium of exchange to calculate basis and pay capital gains taxes. Treating digital currency as any other medium of exchange, instead, would simplify the process of engaging in transactions with alternatives such as Bitcoin. Similarly, prohibiting state and federal taxes on any precious metals used as a medium of exchange would enhance private citizens' ability to use non-dollar contracts.
- *Repeal statutes banning private coinage.* Laws such as Section 486 and 489 of Title 18 of the U.S. Code (18 USC § 486 and 18 USC § 489) effectively prohibits private coinage, even though the U.S. Constitution does not ban private coinage and private coins previously (prior to the Civil War)

circulated in the United States. Repealing these statutes would restore the freedom of private citizens and firms to produce metal coins intended for use as a medium of exchange. Anti-counterfeiting laws have also been used to inhibit private citizens' ability to use non-dollar contracts. In particular, statutes such as sections 485 and 486 of Title 18 of the U.S. Code (18 U.S.C. § 485 and 18 U.S.C. § 486) have been used to prosecute the proprietors of E-Gold and Liberty Dollars, even though they were clearly not counterfeiting U.S. money (White 2014b). These statutes should be repealed or amended to allow private firms to produce pieces of *original* design.

Clarify Money-Laundering Laws, Bank Secrecy Laws, and Money Transmitting

Licensing Requirements

These laws, as well as the broad discretion enjoyed by federal officials with respect to these laws, have served as barriers to entry for private firms developing innovative ways to solve payment system inefficiencies. Some forms of innovation have not precisely fit the definition of current statutes, and it seems likely that new innovations will run into the same problem because of their very nature. At the very least, conflicts over the precise definition of the term *funds* in 18 USC § 1960 (Prohibition of Unlicensed Money Transmitting Business) and 31 USC § 5330 (Registration of Money Transmitting Businesses) should be resolved so that digital currency transmission is treated equivalently to those in other currencies. These laws are intended to cut down on criminal activity, but Congress should ensure that

they are not used to restrain private-sector innovations by individuals who have committed no crime.

Conclusion

On balance, the Fed has not fulfilled the promises of its founders. Overall, it has not increased economic stability relative to the pre-Fed era, and it has often contributed to instability. The Great Depression, the great stagflation, and the 2008 financial crisis all occurred on the Fed's watch. Even excluding the Great Depression era, business cycles have not become appreciably milder and recessions have not become less frequent or measurably shorter. The Fed has never held to the classic prescription for a lender of last resort, and, at best, it has displayed no comparative advantage over any other state or federal financial regulatory agency.

There are many aspects of the Federal Reserve system that are ripe for reform, but even market-oriented economists display disagreement over some of these policy improvements. Many reform-minded economists, for example, believe rules-based monetary policy is preferable to pure discretionary policy, but there is no broad consensus on which rule would be best. Instituting this type of major structural reform, therefore, might best be accomplished in the context of a formal congressional commission. Given the broader agreement that exists on other key reforms, however, Congress could likely achieve several key policy improvements outside of a formal commission. This article has provided something of a roadmap to begin instituting both types of reform to the nation's monetary policy.

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