David Howden · Joseph T. Salerno
Editors

The Fed at One Hundred

A Critical View on the Federal Reserve System

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Foreword

The US Federal Reserve recently celebrated its 100th anniversary. It is therefore a fitting moment to ask how it is doing.

This indispensable book, edited by Professors David Howden and Joseph Salerno, and including contributions from a long list of distinguished scholars, both asks the question and answers it simply and authoritatively: the Fed has been a complete failure.

At first glance this question and answer might seem primarily of interest to economists. But nothing could be further from the truth. What the Fed and other central banks do deeply affects the lives of everyone.

If the Fed fails, if more worryingly the entire line of thought that led to the Fed proves to be wrong, it is the middle class and the poor who pay the ultimate price. Over the course of the last century, it is no exaggeration to state that millions have lost their jobs because of the Fed. In prior decades, many of these people faced homelessness or even starvation. Even if homeless people rarely starve today in America, the consequences of bad economic policies are incalculable.

Fed failure is most obvious when it comes to economic crises and joblessness. But there is a great deal of wishful thinking and misinformation about this subject. Economic writer Jeffrey Madrick has stated: "By 1913, the US federal government created a stable financial system with the creation of the Federal Reserve."

Economist Milton Friedman was more accurate when he wrote that: "The severity of each of the major economic contractions… is directly attributable to acts of … the Reserve authorities and would not have occurred under earlier monetary and banking arrangements."

Friedman wrote this in 1962, years before the Fed-induced great inflation of the 1970s and the Fed-induced bubbles that led to the Crash of 2008. Since 2008, the Fed has embarked on what would seem to be the quixotic task of trying to prove that more money and debt produced by itself will cure a crisis created in the first place by too much money and debt.

The Fed's legislative mandate did not originally include employment levels. That was added by Congress in 1977. The initial focus was on price stability. It was

thought that stable prices and an elastic currency would eliminate the recessions and depressions of the preceding years.

The Fed did indeed bring us an elastic currency, which in practice just meant creating more and more new money, but it did not bring us stable prices. Since the beginning of the Fed in 1914, the dollar has lost 97 % of its reported purchasing power. And there are reasons to think that the dollar has actually lost even more, especially since the Clinton administration, when the method of calculating consumer price inflation was quietly changed.

Paul Volcker, generally regarded as the most successful of Fed chairmen, stated in 1994: "If the overriding objective is price stability, we did a better job with the nineteenth century gold standard and passive central banks, …or even with 'free banking'."

Uncontrollable consumer price inflation is supposed to be a mystery, but there is nothing mysterious about it. Thibault de Saint Phalle observed in 1985 that: "No one in Congress ever points out… it is the Fed itself that creates inflation." So we have the irony of an institution charged with controlling inflation which has instead created it.

Today the Fed has gone public with a policy of deliberately fostering consumer price inflation, because this is supposed to help the economy. Never mind that there is neither evidence nor logic to support this idea, and never mind that rising prices most directly punish the middle class and poor.

The legislators who passed the Federal Reserve Act in 1913 thought they were creating a "lender of last resort" run by bankers, not a national economic planning agency run by a narrow group of economists. But the latter is what we have today. Respected economic writer Jim Grant says about this: "Central planning may be discredited in the broader sense, but people still believe in central planning as it is practiced by…[the Fed]….To my mind the Fed is a cross between the late, unlamented Interstate Commerce Commission and the Wizard of Oz."

Economic writer Gene Callahan adds an important further observation when he says that the chairman of the Fed "is the head price fixer of a price fixing agency." What he means is that the Fed's main tool is control of the price of borrowed money, one of the biggest prices in the economy. Other central banks directly control currency prices, but the US Fed chooses to influence rather than control the price of the dollar on international exchanges.

Ironically, former Fed chairman Ben Bernanke told students that: "Prices are the thermostat of an economy. They are the mechanisms by which an economy functions." But prices cannot be a thermostat when they are controlled.

The Fed is not only loose in its economic thinking. It is also loose in interpreting its own statute. Much of what it did following the Crash of 2008 was legal, but not all of it. The purchase of Fannie Mae and Freddie Mac securities violated the clear language of the law. Unfortunately the Fed is never held to account. It operates in almost complete secrecy and even pays for itself by creating money out of thin air.

There is much, much more to be said, and it is all covered by this wonderful book. Individual chapters range from the history of the Fed, including the unnecessary tragedies of the Great Depression and Crash of 2008, to how the Fed operates

behind its closed doors, and what it means for the economy. Importantly, it tells us what a better monetary system would look like, a monetary system that could launch us on a new and hitherto unknown era of prosperity.

This is a book for anyone, not just scholars. It could also be used as an excellent introduction to economics or as an adjunct to an economic textbook for students. After seeing firsthand, in these pages, how critical right economic thinking and policy are for our lives, anyone would want to delve more deeply into the subject.

Charlottesville, Virginia Hunter Lewis

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Introduction

David Howden and Joseph T. Salerno

From the early 1980s until 2007, the Federal Reserve System came to be regarded as a hallowed institution whose doings were, if not always above reproach, seen as beyond the reach of partisan politics and the petty concerns of government bureaus. The two Fed chairmen whose terms defined this period, Paul Volcker (1979–1987) and Alan Greenspan (1987–2006) were widely revered by the financial markets, media commentators, most monetary economists, many politicians, and even the public at large. They were portrayed by fawning media as larger than life characters, a "Financial Legend" and a "Maestro," whose slightest word or vocal inflection could move markets. Their every pronouncement and deed were assiduously documented and studied. Whereas probably not one in a thousand Americans could identify William McChesney Martin in the 1960s or even Arthur Burns in the 1970s, the names of Volcker and especially Greenspan during their tenures were probably more recognizable to Americans than the name of the sitting Vice President of the U.S.

After the housing bubble burst and the financial crisis struck with its accompanying bailouts of financial institutions and markets of every kind, the popular view of the Fed changed radically. Hagiographic accounts of Alan Greenspan like *Maestro: Greenspan's Fed and the American Boom* (Woodward 2000) hailing his wizardry as a Fed Chairman abruptly ceased being published. Books with titles like *Panderer to Power: The Untold Story of How Alan Greenspan Enriched Wall Street and Left a Legacy of Recession* (Sheehan 2010) and *The Global Curse of the Federal Reserve* (Brown [2011] 2013) began to pour forth from mainstream publishers. Representative Ron Paul's bill to audit the Fed (H.R. 1207) introduced in the House of Representatives in 2009 received broad grassroots support and

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garnered 309 cosponsors in the House. It was passed by the House 327 to 98 in mid-2012 after it was reintroduced in the subsequent Congress. Last November, a *Rasmussen Reports* (2013) national telephone survey found that 74 % of American adults favored auditing the Fed and making the results public while only 10 % were opposed. Nor do consumers seem to find the Fed's announcements and targets credible any longer. According to the September 2013 monthly Index of Consumer Expectations compiled by the University of Michigan Survey Research Center, consumers clearly do not believe that the Fed either is aiming at or is capable of hitting its announced inflation target of 2 % in the short run or the long run (Baum 2013).[1]

Some economists (e.g., Taylor 2009; Meltzer 2009; Hoffmeister 2012) and even a Fed official or two (e.g., Hoenig and Thomas 2011a, b; Huszar 2013) have questioned the Fed's performance leading up to, during, or after the financial crisis. Most mainstream economists, however, dismiss the public's loss of confidence in the Fed and reject the challenges of the minority of fellow economists and Fed officials. Instead, they cling tenaciously to a consensus narrative about the continual and uninterrupted improvement in Fed monetary policy that has been carefully constructed over the past quarter of a century.

The Fed began to enjoy an enhanced reputation among economists in the 1990s as accelerated economic growth for most of the decade coincided with an inflation rate that fell steadily from 5 % per year at the beginning of the decade to 2 % at its end. Indeed, two prominent macroeconomists, Alan Blinder and Janet Yellen, celebrated the decade in a book entitled *The Fabulous Decade: The Macroeconomic Lessons of the 1990s* (2001). (The hyperbolic note struck in the main title may be attributable to the fact that the co-authors served together on the Federal Reserve Board in the mid-1990s.) In addition, at the tail end of the decade, research by mainstream macroeconomists discovered that the variability of both real output and inflation declined sharply after the mid-1980s and that this reduction in macroeconomic volatility persisted through the 1990s, in the U.S. as well as in several other major industrial countries. The period 1985–2006 has since come to be referred to as the "Great Moderation."

It was not until a few years after its discovery that Ben Bernanke (2004), then a Fed Governor, drew public attention to the phenomenon in a notable speech. According to Bernanke, while several plausible hypotheses existed to account for the Great Moderation, improvement in monetary policy was a significant contributing factor.[2] According to Bernanke:

> Few disagree that monetary policy has played a large part in stabilizing inflation, and so the fact that output volatility has declined in parallel with inflation volatility, both in the United

[1] For one year out, the index of inflation expectations averaged 3.2 % over the previous year and 3.1 % over the previous 5 years. Consumer expectations of long-term inflation are roughly the same, averaging 2.9 % over the previous year and 3.0 % over the previous 5 years.

[2] For an overview of the debate over the various causes of the Great Moderation, see Stock and Watson (2003).

> States and abroad, suggests that monetary policy may have helped moderate the variability of output as well. . . . My view is that improvements in monetary policy, though certainly not the only factor, have probably been an important source of the Great Moderation.

Shortly thereafter the story of greater macroeconomic stability and its attribution to the Fed and other central banks for having "learned the lessons of the 1970s" and deliberately improved their monetary policy became entrenched in macroeconomics and money and banking textbooks as the new orthodoxy. The textbook narrative of how the Fed attained enlightenment in its conduct of monetary policy remains unchanged today despite the intervening episodes of the housing and stock market bubbles and the subsequent financial crisis and Great Recession (e.g., Cecchetti and Shoenholtz 2011, pp. 382–384, 591–593; Mishkin 2010, pp. 461–493). Indeed post-financial crisis editions of these textbooks even tout that the "forward-looking" posture that the Fed adopted in the 1990s has enabled it to make "preemptive strikes," via raising or lowering the fed funds rate, against threatened macroeconomic instability and these have been quite successful "by the standards of the 1970s and 1980s." Thus, Frederic Mishkin (2010, p. 492), a prominent monetary economist and former Fed governor, argues: "These preemptive attacks against negative shocks to aggregate demand were particularly successful during the Greenspan era in keeping economic fluctuations very mild."

As for the emergence and bursting of the dot-com bubble of the late 1990s, Mishkin (2010, p. 492) brushes this aside because it came at the end of the longest economic expansion (1991–2001) in U.S. history "and the subsequent recession was quite mild." And what about the financial crisis of 2008 and the subsequent Great Recession that the U.S. has still not fully recovered from? Well, according to the orthodox view, the Fed may be "forward looking" but surely it is not prescient and could hardly be expected to foresee the depth of the financial crisis. Mishkin (2010, p. 492), for instance, airily disposes of this challenge in a single sentence:

> The magnitude of the financial disruption during the subprime financial crisis, however, was so great that the preemptive actions by the Federal Reserve were not enough to contain the crisis, and the economy suffered accordingly.

Cecchetti and Shoenholtz (2011, p. 384) characterize the financial crisis as just another learning experience for the Fed which will lead to further improvement in its conduct and performance, because the crisis has spurred economists to explore "how to improve financial regulation" and to reconsider "the role that central banks should play in financial supervision."

The orthodox story attributes the progressive improvement of the Fed's conduct and performance in monetary policy mainly to what (Blinder 2004) has dubbed the "quiet revolution." This revolution involved fundamental changes in the institutional arrangements and operating procedures of the Fed and other major central banks in accordance with an emerging consensus among economists regarding the optimal organizational structure of a central bank.[3]

[3] As Blinder (2004, p. 3) notes research on central banking became a growth industry in the 1980s and 1990s. A computer search that he conducted on EconLit turned up 980 references in the 1970s, which doubled to 1,929 in 1980s and reached a "staggering" 4,921 in the 1990s.

The consensus that emerged from the literature identified several criteria for the design of a good central bank. A central bank needs to be *independent* from political influence, yet *accountable* for its actions. The latter quality entails that the central bank be *transparent* in its decision-making, which includes coherence and clarity in communicating its decisions to the legislature, the markets and the public at large. Transparency and accountability require that the central bank should be constrained by clearly articulated goals that are mandated by the political authorities, but should enjoy "*instrument independence*" in deciding what means to use in pursuing these objectives.[4] Furthermore the goal should be an explicit "*nominal anchor*" of some kind. That is, a nominal variable such as the inflation rate, money supply, or exchange rate within a specified range should be targeted in order to "tie down" the price level. The literature has converged on the inflation rate, in the form of "inflation targeting," as the optimal nominal anchor.[5] Also, in order to avoid the possibly arbitrary and idiosyncratic decision-making of a single individual, all decisions should be made by committee, rather than a single individual such as the head of the central bank. Finally the *policy framework* that underlies the central bank's decisions when goals conflict, that is, its priorities in determining what tradeoffs it will make between low unemployment and low inflation, should be unambiguous and clear to the markets and the public.[6] A legal mandate for a central bank to target a range of inflation rates, for instance, is one type of policy framework as is the Fed's announcement of acceptable ranges for the unemployment and inflation rates as its trigger for "tapering" its quantitative easing policy.

At least three major central banks were allegedly designed or redesigned "from scratch" according to these principles during the 1990s, including the European Central Bank, the Bank of England and the Bank of Japan (Blinder, p. 56). In addition, major changes occurred in the Fed's operating procedures in 1994, 1999, and 2002 along the lines indicated by monetary policy research (Blinder 2004, pp. 5–25). Cecchetti and Schoenholtz (2011, p. 384) sum up this revolution in central banking:

> The Bank of England is more than three centuries old . . . but its operating charter was rewritten in 1998. The same year brought major changes in the organizational structure of the Bank of Japan. Federal Reserve operations have changed, too. The first public announcement of a move in the federal funds rate was made on February 4, 1994. On January 9, 2002, the regular issuance of a statement explaining interest rate decisions became an official part of Federal Reserve procedure.

Even today, few monetary economists would disagree with the triumphalist conclusion enunciated by Mishkin (2007, p. 20), ironically shortly before the financial crisis struck:

[4] On instrument independence versus goal independence, see Mishkin (2007, pp. 495–498).

[5] On the importance of a nominal anchor and the optimality of inflation targeting see the relevant chapters in Mishkin (2007).

[6] Mishkin (2007, pp. 1–27, 489–535) and Blinder (1998, 2004) present detailed surveys of this literature, copious references to which can be found therein. For a good textbook summary of the literature, see Cecchetti and Shoenholtz (2011, pp. 382–89, 407–410).

> The practice of central banking has made tremendous strides in recent years. We are currently in a highly desirable environment that few would have predicted fifteen years ago: not only is inflation low, but its variability and the volatility of output fluctuations are also low. . . . [N]ew thinking about monetary policy strategy is one of the key reasons for this success.

To round out the orthodox narrative, we must mention the deeply entrenched view regarding the performance of the Fed over the entire course of its history since its creation in 1913. It is accepted almost as an article of faith among mainstream economists that the creation of the Fed helped lead to substantial moderation in the amplitude, frequency, and duration of output fluctuations. Despite admittedly egregious monetary policy errors in the 1930s and 1970s, in this respect, it still performed much better than the classical gold standard in the century or so leading up to World War One. This claim has been rehearsed in so many books and articles that there is no need to detail it here.[7]

The aim of this volume is to use modern Austrian monetary and business cycle theory and modern organizational economics to thoroughly rewrite the storyline about the Fed as presented above. Revisionist economic history, which seeks to identify the special interests benefiting from legislation, is also used to challenge the accepted story of the creation of the Fed as an attempt to stabilize the financial system in the interests of improving economic performance and enhancing public welfare.[8] Thus the alternative narrative presented in the contributions to this volume will significantly diverge on several important points from the orthodox version.

In this volume, the creation of the Fed is treated as an attempt to implement a profit-maximizing cartel, which was dictated by the working out of the economic logic of fractional-reserve banking. Chapters assessing the historical performance of the Fed argue that Fed manipulation of money and interest rates over the past century exacerbated cyclical fluctuations and financial instability in the U.S. economy compared to the classical gold standard, contrary to the rhetoric of Fed apologists.[9] It is also demonstrated that a fiat-dollar regime controlled by the Fed inevitably brings about a surreptitious redistribution of income and wealth in

[7] There have been some dissenting voices among influential mainstream economists, however. Romer (1986a, b) has argued that the observed reduction in output and unemployment volatility in the period following World War Two, compared to the pre-World War One era, may very well be a "figment of the data," which is due to an improvement in economic data rather than economic policy. Her view has made some headway in the economics profession. As Mankiw (2010, p. 453) observes: "Although her work remains controversial, most economists now believe that the economy in the immediate aftermath of the Keynesian revolution was only slightly more stable than it had been before."

[8] The leading example of revisionist economic history in the area of money and banking is Rothbard (2002).

[9] By treating the Fed as a cartel intended to serve private interests, this volume goes beyond recent immanent critiques (e.g., Selgin et al. 2012) that demonstrate that the Fed has failed to achieve its stated goals of reducing the variability of prices and the volatility of real output when compared to the classical gold standard that preceded its creation.

the form of "Cantillon effects," which goes well beyond the well known effects of inflation on the relationship between creditors and debtors.

The widely accepted view promoted by Friedman and Schwartz that Fed policy was too tight during the early 1930s and that its deflationary policy stance was mainly responsible for transforming a "garden variety" recession into the Great Depression is questioned. The Fed's deliberate attempts at "reflation" of the economy are suggested as the real cause of the tailspin into depression. The Fed's role before and after the Banking Act of 1935 in causing the "recession within a depression" of 1937–1938 is also critically examined and the accepted account of the episode is rejected.

The venerable doctrine of the Fed's independence from the influence of politics is scrutinized in light of the public choice literature on the subject and is exposed as nothing more than a legend designed to mislead the public. Furthermore, it is argued that the Fed's policy of targeting interest rates in the face of huge government budget deficits poses irresistible incentives that encourage the Fed to accommodate monetary policy to a fiscal policy based on political considerations. Using modern organizational economics to analyze the internal, microeconomic structure of the Fed, it is argued that, even if they were acting autonomously, Fed policymakers do not possess the information or confront the incentives necessary to make effective decisions regarding interest rates and open market operations let alone unorthodox monetary policies such as quantitative easing and forward guidance.

Recently, the adoption of a nominal anchor mandating that the Fed target the price of gold has been proposed by neo-supply siders and this proposal has been embodied in a bill introduced into the House of Representatives. It is argued here that far from serving as a radical remedy for the monetary disorder prevailing in the U.S., gold-price targeting is based on the exact same erroneous assumptions about money and creates the same problems as the current inflation-targeting regime. Rather than a nominal anchor, opening the Fed-controlled fiat dollar to the real anchor of competition from both foreign and commodity (e.g., gold and silver) currencies is suggested as an alternative. The Fed's narrow focus on consumer price inflation and its willful disregard of asset prices is implicated as the primary cause of the housing and financial bubbles whose inevitable deflation brought about the financial crisis. In direct contradiction of the orthodox story, it is argued that the plethora of non-traditional monetary policies instituted by former Fed Chair Ben Bernanke in the wake of the crisis not only radically transformed the role of the Fed in the modern economy but also distorted and prolonged the economic recovery from recession.

In putting together this volume the editors do not expect to radically transform the long accepted and deeply entrenched views of the Fed overnight. Rather we seek to promote a critical discussion of the fundamental advantages and disadvantages of the Fed. We believe that this is a discussion that has been closed for far too long, greatly to the detriment of the U.S. and global economies.

References

Baum C (2013) Consumers tune out fed's inflation target (September). Available at http://www.bloombergview.com/articles/2013-09-13/consumers-tune-out-fed-s-inflation-target

Bernanke B (2004) The great moderation. http://federalreserve.gov. Retrieved 15 April 2011

Blinder A (1998) Central banking in theory and practice. MIT Press, Cambridge, MA

Blinder A (2004) The quiet revolution: central banking goes modern. Yale University Press, New Haven, CT

Blinder A, Yellen JL (2001) The fabulous decade: macroeconomic lessons from the 1990s. Century Foundations Press, New York

Brown B [2011] 2013 The global curse of the Federal Reserve: how investors can survive and profit from monetary chaos, 2nd edn. Palgrave Macmillan, New York

Cecchetti SG, Schoenholtz KL (2011) Money, banking and financial markets, 3rd edn. McGraw-Hill Irwin, New York

Hoenig TM (2011a) Financial reform—post crisis? Speech at women in housing and finance. Washington DC, (February 23). Available at http://www.bis.org/review/r110224a.pdf

Hoenig TM (2011b) Statement before the house subcommittee on domestic monetary policy and technology United States house of representatives (July 26) with selected speeches. Available at http://www.kansascityfed.org/publicat/speeches/072611hoenig.pdf

Hoffmeister P (2012) The fed, the financial crisis and monetary history: an interview with Dr. Allan Meltzer. Forbes (July 25). Available at http://www.forbes.com/sites/realspin/2012/07/25/the-fed-the-financial-crisis-and-monetary-history-an-interview-with-dr-allan-meltzer/

Huszar A (2013) Confessions of a quantitative easer. http://online.wsj.com (Novmber 11). Available at http://online.wsj.com/news/articles/SB10001424052702303763804579183680751473884

Mankiw NG (2010) Macroeconomics, 7th edn. Worth Publishers, New York

Meltzer A (2009) Reflections on the financial crisis. Cato J 29(1):25–30. Available at http://www.indytruth.org/library/journals/catojournal/29/cj29n1-3.pdf

Mishkin FS (2007) Monetary policy strategy. The MIT Press, Cambridge, MA

Mishkin FS (2010) The economics of money, banking, and financial markets, 2nd edn. Addison-Wesley, New York

Rasmussen Reports (2013) 74 % Want to Audit the Federal Reserve (November 8). Available at http://www.rasmussenreports.com/public_content/business/general_business/november_2013/74_ want_to_audit_the_federal_reserve

Romer CD (1986a) Spurious volatility in historical unemployment data. J Polit Econ 94:1–37

Romer CD (1986b) Is the stabilization of the postwar economy a figment of the data? Am Econ Rev 76:314–334

Rothbard MN (2002) A history of money and banking in the United States: the colonial era to world war II. In: Salerno JT (ed). Ludwig von Mises Institute, Auburn, AL

Selgin GA, Lastrapes WD, White LH (2012) Has the fed been a failure? J Macroecon 34 (3):569–596

Sheehan FJ (2010) Panderer to power: the untold story of how Alan greenspan enriched wall street and left a legacy of recession. McGraw Hill, New York

Stock JH, Watson MW (2003) Has the business cycle changed? Evidence and explanations. Prepared for the federal reserve bank of Kansas City symposium. Monetary Policy and Uncertainty, Jackson Hole, Wyoming, 28–30 August. Available at http://www.kansascityfed.org/PUBLICAT/SYMPOS/2003/pdf/Stock-Watson.0902.2003.pdf

Taylor JB (2009) Getting of track: how government actions and interventions caused, prolonged, and worsened the financial crisis. Hoover Institution Press, Stanford, CA

Woodward B (2000) Maestro: Greenspan's fed and the American boom. Simon & Schuster, New York

A Pre-history of the Federal Reserve

David Howden

While economists have generally quite favorable views of market-oriented solutions to the provisions of goods and services, there is one common exception: money (Rothbard 1991: 2; Huerta de Soto 2012: xxx). This seeming paradox brings with it three unfortunate results. First, since the supply of money is assumed to be produced optimally by a central bank, monetary economics commonly treats it as an exogenous variable. Second, and as a consequence of this point, is that any change to central bank controlled monetary policy is seen as a panacea for economic disequilibria. Finally, since the central bank is in control of the panacea it is raised to the lofty position of "doctor" of the economy, a highly respected and necessary role to correct for imbalances caused by entrepreneurs and investors.

The recent history of the present recession provides a more than adequate example of the final point. Throughout the world central banks have taken on an almost omnipotent aura as the only institutions which can save the world in recession from its much worse fate of depression. No central bank exemplifies this status more than the United States' Federal Reserve (Fed).

The origin of the Fed is commonly seen as a well-thought out addition to the U.S. economy. Under this reasoning, the Fed was an institution which always *should* have been at the helm of American's monetary matters, but it was only in the early twentieth century that politicians and economists made it so. In this sense the emergence of the Fed had the same root as all other central banks in the world: happenstance.

There exist, however, alternative theories as to why central banks emerged. Common ones include central banks emerging in response to the government's demand to issue currency to pay for its debts (Smith 1936; Selgin and White 1999), as a cartelizing force by the private banking industry (Goodhart 1988), or as the nationalization of the private clearing house system (Gorton 1985). All three of these theories are important as they call into question the origin of the central bank.

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Specifically, if central banks did not emerge in response to the exogenous need for a government money supplier, perhaps the lofty honors bestowed on them are misplaced.

In this chapter I will guide the reader through a reverse history of the Fed's origin. I will demonstrate working backwards from 1914 that the creation of the Fed was the response to a series of changes in the legal and regulatory framework of the United States' banking industry over the preceding half century. In conclusion I will demonstrate that this series of changes was originally set in motion by a legal privilege unduly given to American banks during the free-banking era of 1837–1862. During this era the provision of money was ably handled by private, competitive note-issuing banks, and in the absence of the legal privilege of fractional reserves this system would have been sustainable, thus eliminating the incentives to create the centralized Federal Reserve System 60 years later.

From Clearing House to Central Bank

When the Federal Reserve was solidified into law its advocates saw it as no more than "an evolutionary development of the clearinghouse associations" (Timberlake 1984: 15). Indeed, the Federal Reserve Act made only one change to the operational structure of the American monetary system of the time: the centralization of note issuance at the hands of a government-mandated monopoly: the Fed. This monopoly on note issuance represented a major centralization of power in the hands of the Fed, though by-and-large all other roles were already subsumed by private clearing houses. The Federal Reserve bill's Senate sponsor, Robert Owens, went so far as to note that "[t]his bill... is merely putting into legal shape that which hitherto has been illegally done" (U.S. Congress 1913: 904).

The "illegal" activity that Owens referred to was the practice of the private clearing house system of the time to issue its own private currency. In times of banking crisis, a run on banks would occur whereby depositors would redeem the inside money of the banking system (i.e., their deposits) into currency. As the system operated on a system of fractional reserves, these runs had the potential to bankrupt those banks lacking sufficient reserves to honor their redemption requests. To combat these insolvencies, the clearing house system issued currency which was "payable only through the clearinghouse."

This issuance of clearing house money was not sanctioned by the law. Legal money being in short supply during bank runs, the clearing house system moved to protect its member banks the best it could, thus resorting to this questionable practice. Despite the clear illegality of the practice, "no one thought of prosecuting or interfering with the issuers" (Andrew 1908: 516). The multitude of bankruptcies and financial hardship that it precluded made legislators turn a blind eye to the practice provided that it did not become too widespread.

Though the Federal Reserve bill was drafted and discussed in rather secretive terms (Griffin 1994; Rothbard 1994), its passage brought very little public protest.

Partly this was because, as previously noted, the bill did nothing to drastically change the monetary landscape of the United States. More important was that the public and banking establishment actually had reason to demand that such a bill be passed (Bagus and Howden 2012a: 167).

From the public's point of view, the American banking system by 1913 was characterized by frequent suspensions on deposit redemptions during banking crises. With an "inelastic" supply of currency, the fractional-reserve banks that dotted the financial landscape of the time had few options to increase the supply of base money when redemption demands increased. Rightly or wrongly, this inability led the public to all but welcome the elasticity that the Federal Reserve would bring to the supply of currency—an ability to increase the money supply during reserve draining emergencies to keep banks liquid and depositors appeased. Indeed, from the average depositor's point of view, it mattered not whether this elasticity of the money supply to keep illiquid banks solvent happened at the hands of the private clearing house system or a centralized monetary authority. The end result, and goal, was the same in either case: continual access to deposits and a reduced threat of disruptive bankruptcies.

From the government's point of view, the Federal Reserve bill provided an avenue to eliminate one illegal activity from the financial arena. There was also the thorny issue that any noncompliance with the law threatened the legitimacy of the government and its laws, and thus removing illegal activity in a way that did not cause public outcry (as would have occurred had the clearing house system not been allowed to issue currency and allowed banks to fail) increased the appearance of the government's control over its jurisdiction.

The bill also called for the central bank to serve as the fiscal agent of the government, something that would further appease Congressmen. Not only would control of its fiscal agent result in some cost savings compared to using the private banking system for its transactions, it would also enable the government easier access to financing through monetization of its debt. Indeed, central bank creation as a response to the fiscal needs of the government is one long-standing theory of the origin of central banks. In the case of the Federal Reserve, although it is an apparent explanatory factor, it was really only a force that made the bill more palatable for legislators to pass through Congress.

While both the general public and the government had valid reasons for creating a centralized monetary authority, one would usually be surprised to see an industry clamoring for monopolization at the hands of the government. However, from the banking industry's point of view, a coordinating agency such as a central bank allowed for greater and more consistent profits than was previously the case. Banking industry profits are maximized when banks are allowed to operate on fractional reserves and use their deposited funds to finance new investments. Instability is bred, however, unless these same banks can do so simultaneously or "in-concert".

Any sustainable in-concert expansion of the money supply by banks requires that they function as a cartel—each member must expand at the exact same pace as any other member. In order that the members do not see individual profits

threatened by one member "cheating" to attract clientele, the greater banking sector solidifies the informal cartel by way of a formal monopoly. Indeed, industries that are difficult to cartelize are subject to forces enticing them to monopolize to secure greater profits (Rothbard 1962: 579). The U.S. government, usually weary of cartels and centralization of industry power at the hands of specific firms, was only too willing to grant this monopoly provided that it was in control of it.

Thus all three interests—the government, banks and depositors—had an incentive to see the existing monetary system nationalized at the hands of the federal government. The private clearing house system begat the Federal Reserve.

The Growth of the Clearing House

If the Federal Reserve was created to make legal that banking system which already existed, it is instructive to understand what such a banking system looked like, and how it emerged. The common denominator between the pre- and post-Fed banking systems is the strong presence of a clearing house system. The clearing house largely directed banking activity and held an inordinate amount of power over individual banks.

The first and still largest clearing house in the United States is the New York Clearing House Association (NYCH).[1] Created in 1853 as a solution to a complex settlement process among New York City banks, the NYCH took on broader roles than just clearing transactions. One of the most significant expansions of its powers, and one most apparent in Federal Reserve operations today, is the mandate to mitigate banking panics.

The first such test occurred during the panic of 1857. In a bid to maintain confidence in the banking system, member banks decided that when any one bank was faced with the option of suspending specie payments they could turn to the NYCH for liquidity assistance. The NYCH would issue loan certificates to settle accounts, thus economizing on the amount of currency that banks would otherwise need to use for settlement. These loan certificates were issued as a joint liability of all member banks and thus spread the risk of any one individual bank's collapse across all members. These loan certificates would become common during banking panics, being used in smaller denominations during the panic of 1873 and every subsequent panic through 1907.

The use of the NYCH loan certificates was a straightforward affair. Banks in need of currency could submit part of their assets as collateral against certificates that could only be used in the clearing process. In this way, banks were able to swap

[1] Although not the only clearing house relevant to this paper, I will focus almost exclusively on the role of the New York Clearing House Association for simplicity and also because of its continuous operations throughout all of the present study. Almost everything concerning the NYCH also applies to other major clearing houses of the time, such as the Suffolk Bank of Boston.

illiquid for liquid assets and thus promote their liquidity positions, as well as ensure their solvency. If any one bank failed, the posted collateral would be made worthless. Due to the risk-sharing arrangement that the NYCH brokered between member banks, all remaining members would share the loss in proportion to each bank's remaining capital relative to that of all other members (Gorton 1985: 280–281).

While the loan certificates were able to meet the liquidity needs of the banking system for some time, they too eventually became insufficient to maintain the smooth functioning of the banking system.

The first alternative measure to the loan certificate was the extension of their use to members of the general public. Originally the certificates were to be used solely for settling accounts within the banking system through the NYCH. This development occurred during the panics of 1893 and 1907, and made small denominations available to the public. The issuance of these certificates to the public created a currency substitute, and was an illegal activity (Timberlake 1984). It was this illegality that prompted Congress to reassess the role and structure of the clearing house system, and provided one reason to abrogate its functions to the Federal Reserve.[2]

If the bank run was more severe than the use of clearing house loan certificates could stymie, banks would resort to convertibility suspensions. Loan certificates issued to banks, and also individuals, came to be associated with restrictions on or suspensions of the conversion of inside money to currency. As the scope of the Clearing House grew, so too did the range of banks that it would invoke its policies on. This point brings us back to the prime reason why the American public did not resist the centralization of its monetary system at the hands of Congress: the correlation between clearing house loan certificates and restrictions on deposits became so prevalent that the public welcomed the creation of the Federal Reserve to halt these suspensions (Timberlake 1984: 14).[3]

Precedent Set for Clearing House Certificates

The original use of clearing house certificates to stem banking panics occurred during a period when the United States banking sector was already facing numerous regulations, hindering its stability. The use of the certificates was the best option available to the private banking system to ensure its stability in the face of

[2] There was one benefit to the illegality of issuing clearing house certificates to the general public. The risk of legal penalties ensured that this option would only be undertaken during extreme circumstances, and thus led to their use being less than would otherwise be the case (Horwitz 1990: 647).

[3] Note that the suspension of payments was not only a feature of the American free banking period. Checkland (1975: 185) observed that "[t]he Scottish [free-banking] system was one of continuous partial suspension of payments."

destabilizing regulations and lacking an official lender of last resort. The precedent for their use occurred during the free-banking period, a period of relative deregulated banking activities, specifically during the Panic of 1857 (Timberlake 1984: 4). The free-banking period, generally characterized as lasting from 1837–1862, is a reasonable approximation of how a laissez-faire banking system can function and mitigate panics if left to its own devices.

After functioning reasonably well for several decades, the Panic of 1857 was set in motion by the failure of the Ohio Life Insurance and Trust Company on 24August. The Panic was of such breadth that Marx and Engels, writing from London England, defined it as the world's first global economic crisis (1986, vol. 28: xiii). The failure of Ohio Life threatened to precipitate the failure of other Ohio banks through association, and perhaps even spread to neighboring states (Calomiris and Schweikart 1991: 808–810).

President James Buchanan blamed the panic on the paper-money system prevalent at the time, and in particular he encouraged Congress to pass a law forfeiting a bank's charter in the event that it suspended payment in specie to its depositors (Klein 1962: 314–315). Although this may seem like the actions of an overreaching executive branch, in nineteenth century America a suspension of the convertibility of deposits "amounted to default on the deposit contract, and was in violation of banking law" (Gorton and Mullineaux 1993: 326). With this avenue removed from their policy options, banks begin coordinating their behavior, particularly in the affected states of Ohio and Indiana (Calomiris and Schweikart 1991). Notably, however, the coordinated behavior diverged from the past in one important way.

Early in the Panic, banks pursued the usual path of curtailing loans to augment their precautionary reserves. The clearing house, on the other hand, pushed forward a different solution that was not uniformly beneficial to all banks. Under this alternative, banks would increase their loan portfolios proportionately. In this way, clearing house balances would be reduced or eliminated and thus currency would be further economized (Myers 1931: 97). Any shortfalls in clearing balances would be met through the issuance of loan certificates.

Member banks voluntarily abrogated certain rights to the clearing house during banking panics, though some irregularities of this abrogation are apparent (Bagus and Howden 2012a: 165).

The pooling of reserves to back clearing house loans against, though technically voluntary, was predictably not uniformly desired among the banking establishment. Prudently managed banks with stronger liquidity positions objected to the practice as "inequitable", and decried that pooling "denied them the rewards for their caution" (Timberlake 1984: 4). The effect was that strong banks subsidized the weak ones when liquidity became scarce.

The clearing house did not just stop at using member banks' assets as a common pool to issue loan certificates against; it also set out on a policy to equalize reserves by its own assessment, using the reserve base as a "common fund to be used for mutual aid and protection" (Myers 1931: 100). This pooling feature had the effect of allowing for an even greater degree of centralization than even a "strong central bank" could hope for (Myers *ibid.*).

Our earlier description of the advent of the Fed as being one of making the existing illegal banking system legal may be a bit of an understatement. The clearing house systems that existed in late nineteenth century America had even more powers than other central banks of the time.

The use of loan certificates, for example, allowed the clearing house to be "converted, to all intents and purposes, into a central bank, which, although without power to issue notes, was in other respects more powerful than a European central bank, because it included virtually all banking power of the city" (Sprague 1910: 50–63, as quoted in Timberlake 1984: 5). Shenfield (1984: 74) is an even stronger critique, describing the Boston based clearing house, the Suffolk bank, as "a successful central banking system." Indeed, clearing houses had grown to such importance that they were almost universally seen as equivalents to their European central bank counterparts. By design or not, they took on a scope of roles and tools that was not even apparent to the original developers of them (Cannon 1908: 97).

Banking's Original Sin

If the use of clearing house loan certificates ushered in a period of increasingly centralized powers in the hands of a few clearing houses, we may do well to ask why these certificates were necessary. Interestingly, while the expansion of clearing house roles and strengthening of their powers came during the more heavily regulated post-Civil War period, the original use of the loan certificates and asset pooling occurred during the laissez-faire free-banking era.

There is a large body of theoretical literature on free-banking regimes that suggests that the reason the loan certificates were invoked—liquidity draining runs on reserves—should not happen. One specific theoretical outcome of a free-banking system is that it will be able to function with fractional reserves while not suffering reserve draining conversions of inside to base money. Notably this was not the case during the American free-banking period. If the theory does not provide an adequate job of describing reality, the only conclusion is that the theory is somehow mistaken.

Two key areas where the theory of free banking errs are in its assumption that competitive note-issuing banks will not over-expand credit in a destabilizing manner, and that the demand for inside money is stable.

In the first instance, there is a clear incentive for profit-maximizing banks to increase their credit issuances in a bid to maintain not only absolute, but also relative profits. This can only be done by all banks in a system acting in-concert with one another, primarily by one of three avenues (Bagus and Howden 2010, 2012a): (1) using an interbank loan market to substitute for reserves in covering non-zero clearing balances; (2) lengthen the clearing period so as to minimize clearing balances; and (3) use the increased negotiability of reserve assets apparent under credit expansion to reduce holdings thereof. In the case of the 20-year period of free banking in question, the first avenue was apparent through the increasing

role of the clearing houses (Bagus and Howden 2012a: 164–165). The second avenue is difficult to discern, but no evidence precludes its possibility (Bagus and Howden 2012a: 162), and some evidence does point to lengthened clearing periods (Norman et al. 2006). The final avenue would be apparent if an in-concert credit expansion engendered a credit-fueled boom. As we will see, this was one of the hallmarks of the Panic of 1857.

The other area where the theory of the stability of free banking errs is in its claimed "proof" that the demand for money is stable under such a regime. By stable, it is often claimed that the demand for money is comprised solely of the demand for inside money (e.g., Selgin 1988: 54). Indeed, such theorists err in *petitio principi* by assuming that the demand for money is limited to inside money (e.g., Selgin 1988: 37, 60fn18, and *passim*) while simultaneously trying to demonstrate that a free-banking system will reach stability whereby the demand for money will only consist of the demand for inside money.

Panics originate when depositors doubt the ability of their banks to make good on their promise to redeem inside money for currency. One reason why such a situation may arise is if the previous period of credit expansion led to an Austrian business cycle (ABC)—defined as a situation where a monetary expansion not backed by savings breeds an unsustainable boom (Mises 1949; Hayek 1931; Rothbard 1962; Garrison 2001). The years leading up to the Panic of 1857 fit the description of an ABC nicely.

While the failure of Ohio Life Insurance and Trust proved to be the instigator of the broader Panic, widespread imbalances in the US economy had already been bred over the preceding boom.[4] Lasting roughly from 1852 to 1857, the boom was marked by widespread credit expansion driven by a reduction in the reserves held by private banks and coupled with an increase in the issuance of inside money.

Traditional explanations of the Panic of 1857 diverge, though center on the common theme of bank speculation. J. S. Gibbons (1859: 2) attributed the Panic to banks contracting their loans, because of deposit withdrawals by New York country banks. D. Morier Evans (1859) blamed excessive speculation by banks, and B. Douglass & Co. thought that, in the wake of otherwise prosperous economic times, the cause was a "terror inspired by a trifling cause or misapprehension of danger" (Mourier Evans 1859: 122–134).

During the contraction of 1839–1843, banks increased their reserve ratio to 29 %. By the time the Panic of 1857 set in this had declined to 13 %, and the money supply ballooned from $171mn. to $647mn (Trask 2002). Increased speculation took place as the banking system inflated the money supply by almost 10 % annually for 14 years.

[4] The importance granted to Ohio Life may be overstated (Calomiris and Schweikart 1991: 809). Its failure was caused by inappropriate (or possibly fraudulent) actions by its management, which had only a trivial effect on other banks liabilities. Its demise preceded suspensions at other banks by about 1 month. Finally, those banks most directly linked with Ohio Life—its correspondent banks in Ohio—were reimbursed upon its failure with no loss. Only one bank subsequently failed in Ohio during the Panic.

According to ABC theory, one result that should be apparent from such inflation is an increased emphasis on longer-dated investment projects and consumption expenditures. The railroad fever that coincided with this period gave rise to speculative bubbles, notably in land prices and real estate in America's newly opened western frontier. The hallmark of the ABC is that these investments eventually prove to be unsustainable given the amount of savings available. As these investments proved to be unprofitable, securities prices fell and investors, fearful of their bank's ability to honor their deposits, rushed to make withdrawals. In this way "[t]he declining fortunes of western railroads and declines in western land values, along with a ... reserve drain in New York City banks, ultimately explains the origins of the panic" (Calomiris and Schweikart 1991: 819).

The Panic of 1857 is notable because it is an event that the free-banking literature suggests should not have happened. According to this literature, private banks issuing notes while holding only fractional reserves should be able to reach a stable equilibrium where competition between banks avoids a destabilizing over-issuances of notes. This was notably not the case, and the hallmarks of an inflationary boom are evident in the pinnacle of the Panic.

The "original sin" of banking, then, was not the free-banking aspect of the industry's organization, but its ability to issue notes against fractional reserves. This legal privilege allowed these banks to set in motion an inflationary boom that ultimately led to widespread redemption suspensions and bank failures. More notably, it led to increased interventions in the banking sector to rectify the problems of the past.

Conclusion

I have provided herein a reverse chronological history of the Federal Reserve's emergence, tracing it back to the free-banking era that defined the US banking landscape from 1837–1864. Specifically, an error was committed in allowing banks to finance their lending activities with fractional reserves. This error set in motion an an ever-expanding series of interventions into the banking sector to rectify past imbalances, finally culminating with the creation of the Federal Reserve in 1914.

It may prove instructive now that the evolutionary path of the Federal Reserve's origin has been traced out to reserve the order and rephrase it as a progressive series of sequential steps.

1. From 1837–1864 the American banking industry was dominated by free banks able to issue their own currency. They were also legally permitted to operate with fractional reserves, implying a dislocation between their deposit and lending activities.
2. By 1857 a credit-induced boom, or Austrian business cycle, culminated in a banking panic. This credit-induced boom saw banks extending loans to finance the westward expansion of America, primarily through land speculation and

railway construction. When these projects proved less profitable than had been expected, investors commenced a selloff that compromised bank balance sheets heavily exposed to these speculations. This in turn brought a run on the banks, as depositors doubted the ability of overextended banks to redeem their deposits for specie.

3. Under the threat of widespread insolvency, banks banded together via the private clearing house system and commenced the use of clearing house certificates to brace up illiquid members. These certificates would be jointly guaranteed by all banks in the system, and would economize on scarce specie for clearing transactions. First used during the Panic of 1857, these certificates were not uniformly welcomed by the banking industry. Those banks that followed more prudent lending practices and were in less dire need of liquidity objected that their funds were used to support their less prudent competitors. Inclusion in the clearing house system depended on participation, and thus all banks were obliged to partake lest they become outsiders of the industry.
4. The centralization of reserves in the clearing house continued unabated through subsequent banking panics, and effectively endowed the private clearing house systems with as many powers as established central banks in Europe.
5. While the use of clearing house certificates did keep illiquid banks afloat for a period, by the end of the twentieth century larger reserve drains required further measures. The first alternative measure was the extension of the certificates to the general public. In this way reserves were even further economized on as they were no longer necessary to the same extent for interbank transactions clearing or redemption requests by the general public. Issuing certificates to the general public was illegal.
6. Because of the illegality of issuing certificates to the general public, this option was undertaken sparingly. A necessary additional measure was redemption suspensions, whereby the public was not able to convert their deposits to specie. Depositors had obvious objections to suspensions, as they did to the use of clearing house certificates as currency substitutes.
7. The Federal Reserve Bill of 1913 was an attempt to make legal those practices that the clearing house system was already undertaking. To that end, the drafters of the bill saw it not as a change in the organization of the banking sector, but rather in the sanctioning by law those previously questionable practices (specifically, the issuance of clearing house certificates to the public and the elimination of redemption suspensions).
8. Few industries clamor for nationalization, though there was no significant backlash during the creation of the Federal Reserve. This is because bankers saw it as a way to coordinate their credit issuing activities and secure more dependable profits than without such a coordinating agency. (They also welcomed it as a dependable lender of last resort.) Depositors saw the Fed as an end to annoying and at times painful redemption suspensions. The government saw it as a way to maintain the legitimacy of law by ending illegal banking practices but not endangering the solvency of the banking sector.

9. Congress enacted the Federal Reserve Act on 23 December 1913, 56 years after the Panic of 1857 set in motion the events that would culminate in its existence.

Most theories of central bank origins see them as exogenous developments. Generally they are a response to the fiscal needs of the central government. While this was no doubt a concern in the case of the United States, the emergence of the Federal Reserve is an organic outgrowth of the existing private free-banking system from 1837–1864.

I will close with a few thoughts on whether this organic outgrowth is healthy. The reason the Fed was created was to provide the liquidity necessary to forestall banking panics. The banking panics that became more-or-less regular features of America's financial system were the product of the original sin of the free-banking era: fractional reserves. Legally permitted to over-issue credit against their deposit base, the private and free banking system of 1837–1864 put in motion ever more severe Austrian business cycles. The reserve draining runs that accompanied these cycles led to more interventions and regulations that culminated with the creation of the Federal Reserve.

Yet the Federal Reserve is not a panacea to these credit cycles. Indeed, evidence abounds that business cycles have been more frequent and severe since the creation of the Fed (Selgin et al. 2012). If the Fed has not been as successful as was originally reckoned at overcoming the failings of the then-existing banking industry, an alternative is to reconsider changing the banking industry.

The original sin of fractional reserves set in motion the business cycles that led to the creation of the Fed. Redrafting banking laws so as to force banks to hold 100 % reserves would remove this original instability, while at the same time not onerously burdening the banking sector. Credit would still exist through strict time deposits (Bagus and Howden 2012b: 299) or equity transactions. Reserve draining runs would become a thing of the past, as banks would hold sufficient reserves to cover any contingent possibility.

If the evolution of the Federal Reserve shows one thing it is that its emergence lies in the culmination of errors with a single origin. As we reflect on the 100-year anniversary of the Fed, the question of its performance over its history takes center stage. A more important question to ask, however, is whether the creation of the Fed and its continued existence was the proper response to the original problem. To this end this paper has demonstrated two facts. First, that the Fed is the organic outgrowth of, and response to the problems of, the free-banking era. Second, that the business cycles and panics of the free-banking era were the product of the legal privilege allowing banks to hold fractional reserves. Given this second fact, the birth of the Federal Reserve was the incorrect response to the problem at hand. Eliminating the Fed and redrafting banking law to eliminate the practice of fractional reserves would not only mitigate banking panics and business cycles, but also remove the illusion of stability fostered by the supposedly omnipotent Federal Reserve.

References

Andrew AP (1908) Substitutes for cash in the panic of 1907. Q J Econ 22:497–516
Bagus P, Howden D (2010) Fractional reserve free banking: some quibbles. Q J Austrian Econ 13 (4):29–55
Bagus P, Howden D (2012a) Still unanswered quibbles with fractional reserve free banking. Rev Austrian Econ 25(2):159–171
Bagus P, Howden D (2012b) The continuing continuum problem and future goods. J Bus Ethics 106(3):295–300
Calomiris CW, Schweikart L (1991) The panic of 1857: origins, transmission, and containment. J Econ Hist 51(4):807–834
Cannon JG (1908) Clearing houses and the currency. In: Seligman ERA (ed) The currency problem and the present financial situation. Columbia University Press, New York
Checkland SG (1975) Scottish banking: a history, 1695–1973. Collins, Glasgow
Garrison RW (2001) Time and money: the macroeconomics of capital structure. Routledge, London
Gibbons JS (1859) The banks of New York, their dealers, the clearing house, and the panic of 1857. D. Appleton and Co, New York
Goodhart CAE (1988) The evolution of central banks. The MIT Press, Cambridge
Gorton G (1985) Clearinghouses and the origin of central banking in the United States. J Econ Hist 45(2):277–283
Gorton G, Mullineaux DJ 1987 [1993] The joint production confidence: endogenous regulation and nineteenth century commercial-bank clearinghouses. In: White LH (ed) Free banking, volume II: history. Edward Elgar, Aldershot, pp 318–329 (Reprinted)
Griffin GE (1994) The creature from Jekyll Island: a second look at the federal reserve. American Media, Westlake Village, CA
Hayek FA (1931) Prices and production. Routledge, London
Horwitz S (1990) Competitive currencies, legal restrictions, and the origins of the Fed: some evidence from the panic of 1907. South Econ J 56(3):639–649
Huerta de Soto J [2004] 2012 Money, bank credit, and economic cycles, 3rd edn. Ludwig von Mises Institute, Auburn, AL
Klein PS (1962) President James Buchanan. The Pennsylvania State University Press, University Park, PA
Marx K, Engels F (1986) Collected works of Karl Marx and Frederick Engels: volume 28. International Publishers, New York
Mourier Evans D (1859) The history of the commercial crisis, 1857–1858 and the stock exchange panic of 1859. Groombridge and Sons, London
Myers M (1931) The New York money market: origins and development, vol 1. Columbia University Press, New York
Norman B, Shaw RJ, Speight G (2006) The history of interbank settlement arrangements: Exploring central banks'role in the payments system. In: Paper presented at the Bank of England's past, present, and policy conference.The evolution of central banks: lessons for the future. Nov 23–24
Rothbard MN (1994) The case against the Fed. Ludwig von Mises Institute, Aubrun, AL
Rothbard MN [1962] 2009 Man, economy, and state: a treatise on economic principles, 2nd Scholar's edition. Ludwig von Mises Institute, Auburn, AL
Rothbard MN [1991] 2010 What has government done with our money? Ludwig von Mises Institute, Auburn, AL
Scott Trask HA (2002). The Panic of 1837 and the Contraction of 1839–43: a reasment of its causes from an Austrian perspective and a critique of the free banking interpretation. Working paper
Selgin GA (1988) The theory of free banking: money supply under competitive note issue. Rowman & Littlefield, Totowa, NJ

Selgin GA, White LH (1999) A fiscal theory of government's role in money. Econ Inq 37(1):154–165
Selgin GA, Lastrapes WD, White LH (2012) Has the Fed been a failure? J Macroecon 34(3):569–596
Shenfield A (1984) The Scottish banking system in the eighteenth and nineteenth century. In: Salin P (ed) Currency competition and monetary union. Martinus Nijhoff Publishers, The Hague
Smith V (1936) The rationale of central banking. P.S. King and Son, London
Sprague OMW (1910) History of crises under the national banking system. Senate Document Number 538. 61st Congress, 2nd Session, National Monetary Commission
Timberlake RH Jr (1984) The central banking role of clearinghouse associations. J Money Credit Bank 16(1):1–15
United States Congress (1913) Congressional records of the 63rd congress, 2nd session
von Mises L [1949] 1998 Human action: Scholar's edition. Ludwig von Mises Institute, Auburn, AL

Does U.S. History Vindicate Central Banking?

Thomas E. Woods Jr

We have heard the objection a thousand times: why, before we had a Federal Reserve System the American economy endured a regular series of financial panics. Abolishing the Fed is an unthinkable, absurd suggestion, for without the wise custodianship of our central bankers we would be thrown back into a horrific financial maelstrom, deliverance from which should have made us grateful, not uppity.

The argument is superficially plausible, to be sure, but it is wrong in every particular. We heard it quite a bit in the financial press after the announcement that then-Congressman Ron Paul, a well-known opponent of the Fed, would chair the House Financial Services Subcommittee on Domestic Monetary Policy. Fed apologists were beside themselves—a man who rejects the cartoon version of the history of the Fed will hold such an influential position? He must be made into an object of derision and ridicule.

The conventional wisdom runs something like this: without a central bank or its lesser cousin, a national bank, we had frequent episodes of boom and bust, but since the creation of the Federal Reserve System the economy has been far more stable. People who believe in a free market in banking, as opposed to these cartel arrangements, are evidently so uninformed or so blinded by ideology that they have never heard or internalized this one-sentence encapsulation of nineteenth- and twentieth-century monetary history.

Modern scholarship has not been kind to this thesis. Mainstream economists have begun to acknowledge that the alleged instability of the period before the Federal Reserve has been exaggerated, as the posited stability of the post-Fed period. Christina Romer, who chaired the Council of Economic Advisers under Barack Obama, finds that the numbers and dating used by the National Bureau of Economic Research (NBER, the largest economics research foundation in the U.S., founded in 1920) exaggerate both the number and the length of economic

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downturns prior to the creation of the Fed. In so doing, the NBER likewise overestimates the Fed's contribution to economic stability. Recessions were in fact not more frequent in the pre-Fed than the post-Fed period (Selgin et al. 2010: 18ff).

Suppose we compare only the post-World War II period to the pre-Fed period, thereby excluding the Great Depression from the Fed's record. In that case, we do find economic contractions to be somewhat more frequent in the period before the Fed, but as economist George Selgin explains, "They were also 3 months shorter on average, and no more severe" (Selgin et al. 2010: 20). Recoveries were also faster in the pre-Fed period, with the average time peak to bottom taking only 7.7 months as opposed to the 10.6 months of the post-World War II period. Extending our pre-Fed period to include 1796–1915, economist Joseph Davis finds no appreciable difference between the frequency and duration of recessions as compared to the period of the Fed.

But perhaps the Fed has helped to stabilize real output (the total amount of goods and services an economy produces in a given period of time, adjusted to remove the effects of inflation), thereby decreasing economic volatility. Not so. Some recent research finds the two periods (pre- and post-Fed) to be approximately equal in volatility, and some finds the post-Fed period in fact to be more volatile, once faulty data are corrected for. The ups and downs in output that did exist before the creation of the Fed were not attributable to the lack of a central bank. Output volatility before the Fed was caused almost entirely by supply shocks that tend to affect an agricultural society (harvest failures and such), while output volatility after the Fed is to a much greater extent the fault of the monetary system.[1]

According to Richard Timberlake, a well-known economist and historian of American monetary and banking history, "As monetary histories confirm. . .most of the monetary turbulence—bank panics and suspensions in the nineteenth century—resulted from excessive issues of legal-tender paper money, and they were abated by the working gold standards of the times" (Timberlake 2007: 349). It is the old story of the faults of interventionism being blamed on the free market.

Contemporaries by and large attributed the Panic of 1819, for example, to the inflationary and then rapidly contractionary policies of the Second Bank of the United States.[2] As often happens when the country is flooded with money created out of thin air, speculation of all kinds grew intense, as eyewitness testimony abundantly records.

During the years when the U.S. had no central bank (the period from 1811, when the charter of the first Bank of the United States expired, and 1817), government had granted private banks the privilege of expanding credit while refusing to pay depositors demanding their funds. In other words, when people came to demand their money from the banks, the banks were allowed to tell them they didn't have the money, and depositors would simply have to wait a couple years—and at the

[1] See the extensive citations in Selgin et al. (2010: 9–15).

[2] The classic study of the Panic is Rothbard (2007). The book was originally published by Columbia University Press in 1962.

same time, the bank was allowed to continue in operation. By early 1817 the Madison administration finally required the banks to meet depositor demands, but at the same time chartered the Second Bank of the United States, which would itself be inflationary. The Bank subsequently presided over an inflationary boom, which came to grief in 1819 (Rothbard 1995: 212).

The lesson of that sorry episode—namely, that the economy gets taken on a wild and unhealthy ride when the money supply is arbitrarily increased and then suddenly reduced—was so obvious that even the political class managed to figure it out. Numerous American statesmen were confirmed in their hard-money views by the Panic. Thomas Jefferson asked a friend in the Virginia legislature to introduce his "Plan for Reducing the Circulating Medium," which the Sage of Monticello had drawn up in response to the Panic. The plan sought to withdraw all paper money in excess of specie over a 5-year period, then redeem the rest in specie and have precious-metal coins circulate exclusively from that moment on. Jefferson and John Adams were especially fond of Destutt de Tracy's hard-money *Treatise on the Will* (1815), with Adams calling it the best book on economics ever written (its chapter on money, said Adams, defends "the sentiments that I have entertained all my lifetime") and Jefferson writing the preface to the English-language edition.[3]

While the Panic of 1819 confirmed some political figures in the hard-money views they already held, it also converted others to that position. Condy Raguet had been an outspoken inflationist until 1819. After observing the distortions and instability caused by paper-money inflation, he promptly embraced hard money, and went on to write *A Treatise on Currency and Banking* (1839), one of the great money and banking treatises of the nineteenth century. Davy Crockett, future president William Henry Harrison, and John Quincy Adams (at least at that time) were likewise opposed to inflationist banks; in contrast to the inflationary Second Bank of the United States, Adams cited the hard-money Bank of Amsterdam as a model to emulate. Daniel Raymond, disciple of Alexander Hamilton and author of the first treatise on economics published in America (*Thoughts on Political Economy*, 1820), expressly broke with Hamilton in advocating a hard-money, 100 % specie-backed currency (Rothbard 1995: 213–216).

Popular references to the Panic of 1837 today urge us to blame President Andrew Jackson for having dissolved the Second Bank of the United States. The most common argument is this: without a national bank to discipline the state banks, the state banks that received the federal deposits after the closure of the Second Bank went on an inflationary binge that culminated in the Panic of 1837 and another downturn in 1839. This standard diagnosis is partly Austrian, surprisingly, in that it blames artificial credit expansion for giving rise to unsustainable booms that end in busts. But the alleged solution to this problem, according to modern commentators, is a robust central bank with implicit regulatory powers over smaller institutions.

Senator William Wells, a hard-money Federalist from Delaware, had been unconvinced from the start that the best way to encourage sound practices among

[3] Ibid., 212–213; see also Rothbard (2007: 249) and Luttrell (1975).

smaller unsound banks was to establish a giant unsound bank. "This bill," he said in 1816,

> came out of the hands of the administration ostensibly for the purpose of curtailing the over-issue of Bank paper: and yet it came prepared to inflict on us the same evil, being itself nothing more than a simple paper making machine; and constituting, in this respect, a scheme of policy about as wise, in point of precaution, as the contrivance of one of Rabelais's heroes, who hid himself in the water for fear of the rain. The disease, it is said, is the Banking fever of the States; and this is to be cured by giving them the Banking fever of the United States. (Gouge 1833: 83)

Another hard-money U.S. senator, New York's Samuel Tilden, likewise wondered, "How could a large bank, constituted on essentially the same principles, be expected to regulate beneficially the lesser banks? Has enlarged power been found to be less liable to abuse than limited power? Has concentrated power been found less liable to abuse than distributed power?" (Cornell 1876: 322).

A much better solution recommended by hard-money advocates at the time is what became known as the "Independent Treasury," in which the federal deposits, instead of being distributed to privileged state banks and used as the basis for additional rounds of credit creation there, were retained by the Treasury and kept out of the banking system entirely. Hard-money supporters believed that the federal government was propping up (and lending artificial legitimacy to) an unsound system of fractional-reserve state banks by (1) distributing the federal deposits to them, (2) accepting their paper money in payment of taxes and (3) paying it back out again. As William Gouge put it,

> If the operations of Government could be completely separated from those of the Banks, the system would be shorn of half its evils. If Government would neither deposit the public funds in the Banks, nor borrow money from the Banks; and if it would in no case either receive Bank notes or pay away Bank notes, the Banks would become mere commercial institutions, and their credit and their power be brought nearer to a level with those of private merchants. (Gouge 1833: 113)

Contemporary opponents of the Bank have sometimes been portrayed as antimarket, antiproperty populists. "Last time we had a central bank," wrote a critic of Ron Paul in 2010, "its advocates were conservative, hard-money businessmen, and its opponents were subprime borrowers and lenders who convinced President Jackson the bank was holding back the nation" (DiStefano 2010). That is as wrong as wrong can be, as we'll see in a moment. But our critic proceeds from this error to the false conclusion that supporters of the market economy then as now should be supporters of the central bank.

To be sure, opponents of the Second Bank of the United States were no monolith, and even today the central bank is criticized both by those who condemn its money creation as well as by those who criticize its alleged stinginess. On balance, though, the fight against the Second Bank was a free-market, hard-money campaign against a government-privileged paper-money producer. "The attack on the Bank," concluded Professor Jeff Hummel in his review of the literature, "was a fully rational and highly enlightened step toward the achievement of a laissez-faire metallic monetary system" (Hummel 1978: 161).

In fact, the most important monetary theorist of the entire period, William Gouge, was a champion of hard money who opposed the Bank; he considered these two positions logically coordinate, indeed inseparable. "Why should ingenuity exert itself in devising new modifications of paper Banking?" Gouge asked. "The economy which prefers fictitious money to real, is, at best, like that which prefers a leaky ship to a sound one" (Gouge 1833: 230). He assured Americans that "the sun would shine, the streams would flow, and the earth would yield her increase, if the Bank of the United States was not in existence" (Gouge 1833: 203). The conservative *Bankers' Magazine*, upon Gouge's death, said that his hard-money book *A Short History of Paper Money and Banking* was "a very able and clear exposition of the principles of banking and of the mistakes made by our American banking institutions" (Bankers' Magazine 1863: 242).

Another important hard-money opponent of the national bank was William Leggett, the influential Jacksonian editorial writer in New York who memorably called for "separation of bank and state." Economist Lawrence White, who compiled many of Leggett's most important writings, calls him "the intellectual leader of the laissez-faire wing of Jacksonian democracy" (White 1984: xi). He denounced the Bank for its repeated expansions and contractions, and for the economic turmoil that such manipulation left in its wake.

The Panic of 1819 had likewise been due to such behavior on the part of the Bank, said Leggett during the 1830s. "For the 2 or 3 years preceding the extensive and heavy calamities of 1819, the United States Bank, instead of regulating the currency, poured out its issues at such a lavish rate that trade and speculation were excited in a preternatural manner" (Leggett 1984: 66) Leggett continues,

> But not to dwell upon events the recollection of which time may have begun to efface from many minds, let us but cast a glance at the manner in which the United States Bank regulated the currency in 1830, when, in the short period of a twelve-month it extended its accommodations from forty to seventy millions of dollars. This enormous expansion, entirely uncalled for by any peculiar circumstance in the business condition of the country, was followed by the invariable consequences of an inflation of the currency. Goods and stocks rose, speculation was excited, a great number of extensive enterprises were undertaken, canals were laid out, rail-roads projected, and the whole business of the country was stimulated into unnatural and unsalutary activity. (*ibid.* 68)

As in later crises, banks were allowed to suspend specie payment (a fancy way of saying that the law permitted them to refuse to hand over their depositors' money when their customers came looking for it) while permitting them to carry on their operations. The knowledge that government could be counted on to bail out the banks in this way created a lingering problem of moral hazard that would affect banks' behavior in the future.

In his coverage of the later Panic of 1837, Leggett blamed artificial credit creation:

> What has been, what ever must be, the consequence of such a sudden and prodigious inflation of the currency? Business stimulated to the most unhealthy activity; a vast amount of over production in the mechanick arts; a vast amount of speculation in property of every kind and name, at fictitious values; and finally, a vast and terrifick crash, when the

> treacherous and unsubstantial basis crumbles beneath the stupendous fabrick of credit, and the structure falls to the ground, burying in its ruins thousands who exulted in the fancied security of their elevation. Men, now-a-days, go to bed deeming themselves rich, and wake in the morning to find themselves stripped of even the little they really had. They count, deluded creatures! on the continued liberality of the banks, whose persuasive entreaties seduced them into the slippery paths of speculation. But they have now to learn that the banks cannot help them if they would, and would not if they could. They were free enough to lend their aid when assistance was not needed; but now, when it is indispensable to carry out the projects which would not have been undertaken but for the temptations they held forth, no further resources can be supplied. (*ibid.* 98)

Toward the end of 1837, Leggett added:

> Any person who has soberly observed the course of events for the last three years must have foreseen the very state of things which now exists. … He will see that the banks. . .have been striving with all their might, each emulating the other, to force their issues into circulation and flood the land. He will see that they have used every art of cajolery and allurement to entice men to accept their proffered aid, that in this way they gradually excited a thirst for speculation which they sedulously stimulated until it increased to a delirious fever and men in the epidemic frenzy of the hour wildly rushed upon all sorts of desperate adventures. They dug canals where no commerce asked for the means of transportation, they opened roads where no travelers desired to penetrate and they built cities where there were none to inhabit. (*ibid.* 97)

The Panic of 1857, in turn, was the result of a 5-year boom rooted in credit expansion. The most capital-intensive industries of that decade, railroad construction and mining companies, expanded the most during the boom. States had even backed railroad bonds, promising to make good on those bonds if the railroad companies did not (Huerta de Soto 2006: 484–485).

President James Buchanan engaged in no vain effort to reflate the economy. He observed in his first annual message, "It is apparent that our existing misfortunes have proceeded solely from our extravagant and vicious system of paper currency and bank credits." The economy recovered within 6 months, even though the money supply fell, interest rates rose, government spending was not increased, and businesses and banks were not bailed out. But Buchanan cautioned Americans that the periodical revulsions which have existed in our past history must continue to return at intervals so long as our present unbounded system of bank credits shall prevail" (Trask 2003).

In his State of the Union address, Buchanan envisioned a federal bankruptcy law for banks that, instead of giving legal sanction to their suspension of specie payments (that is, their failure to honor their depositors' demands for withdrawal), would in fact shut them down if they failed to make good on their promises. "The instinct of self-preservation might produce a wholesome restraint upon their banking business if they knew in advance that a suspension of specie payments would inevitably produce their civil death."

Until recently it was customary to refer to the 1870s as the period of the "Long Depression" in the United States. The modern consensus holds that there was no "Long Depression" after all. Even the *New York Times* recently observed:

> Recent detailed reconstructions of nineteenth-century data by economic historians show that there was no 1870s depression: aside from a short recession in 1873, in fact, the decade saw possibly the fastest sustained growth in American history. Employment grew strongly, faster than the rate of immigration; consumption of food and other goods rose across the board. On a per capita basis, almost all output measures were up spectacularly. By the end of the decade, people were better housed, better clothed and lived on bigger farms. Department stores were popping up even in medium-sized cities. America was transforming into the world's first mass consumer society. (Morris 2006)

Farmers, moreover, who panicked at falling prices for agricultural commodities, at first failed to note that other prices were falling still faster. The terms of trade for American farmers improved considerably during the 1870s (*ibid.*).

As for historians, they seem to have been fooled by the statistics on consumer prices, which fell an average of 3.8 % per year. And since the conventional wisdom holds that falling prices and depression are intimately linked—they are not—they concluded that this must have been a time of terrible depression. With the gold standard restored in 1879 after being abandoned during the Civil War, the 1880s were likewise a period of great prosperity, with real wages rising by 20 %.

The post-Civil War panics in the United States were due in large part to the unit-banking regulations in many states that forbade branch banking of any sort. Confined to a single office, each bank was necessarily fragile and undiversified. Canada experienced none of these panics even though it did not establish a central bank, the establishment's trusted panacea, until 1934. As Milton Friedman was fond of pointing out, when 9,000 banks failed in the U.S. during the Great Depression, not a single bank failure was taking place in Canada, where the banking system was not damaged by these regulations.

Moreover, as Charles Calomiris has noted, the bank failure rate during the pre-Fed panics was small, as were the losses depositors suffered. Depositor losses amounted to only 0.1 % of GDP during the Panic of 1893, which was the worst of them all with respect to bank failures and depositor losses. By contrast, in just the past 30 years of the central-bank era, the world has seen 20 banking crises that led to depositor losses in excess of 10 % of GDP. Half of those saw losses in excess of 20 % of GDP (Calomiris 2009: 11, 36).

Just from an empirical point of view, therefore, the case for the Fed is far weaker than its proponents admit or realize. Still, as in so many other areas, critics of the status quo are reflexively condemned as cranks, and alternatives are dismissed as unthinkable. But they are unthinkable only because we have allowed fashionable opinion to keep us from thinking them. We have been forced into a box that confines our choices to various forms of statism. The movement to end the Fed is an astonishing and most welcome first step toward clawing our way out.

References

Bankers' Magazine (1863) Death of William M. Gouge. September
Calomiris CW (2009) Banking crises and the rules of the game. NBER working paper 15403

Cornell WM (1876) The life of Hon. Samuel Jones Tilden. Lee & Shepard, Boston, MA
DiStefano JN (2010) Kill off the Fed? History provides lessons. Philadelphia Inquirer, 12 December. http://articles.philly.com/2010-12-12/business/25293254_1_central-bank-stock-market-financial-crisis
Gouge WM (1833) A short history of paper money and banking in the United States. T.W. Ustick, Philadelphia, PA
Huerta de Soto J (2006) Money, bank credit, and economic cycles (trans: Melinda A. Stroup). Ludwig von Mises Institute, Auburn, AL
Hummel JR (1978) The Jacksonians, banking, and economic theory: a reinterpretation. J Libertarian Stud 2:2
Leggett W (1984) Bank of United States. In: White LH (ed) Democratick editorials: essays in Jacksonian political economy. Liberty Fund, Indianapolis, IN
Luttrell CB (1975) Thomas Jefferson on money and banking: disciple of David Hume and forerunner of some modern monetary views. Hist Politi Econ 7:156–173
Morris CR (2006) Freakoutonomics. New York Times, 2 June
Rothbard MN (1995) Classical economics: an Austrian perspective on the history of economic thought, volume 2. Edward Elgar, Brookfield, VT
Rothbard MN (2007) The panic of 1819: reactions and policies. Ludwig von Mises Institute, Auburn, AL
Selgin G, Lastrapes WD, White LH (2010) Has the Fed been a failure? Cato Institute Working Paper
Timberlake RH Jr (2007) Gold standards and the real bills doctrine in U.S. Monetary Policy. Independent Review 11
Trask HAS (2003) Reflation in American history. Ludwig von Mises Institute daily article, 31 October
White LH (1984) Foreword. In: Leggett W (ed) Democratick editorials: essays in Jacksonian political economy. Liberty Fund, Indianapolis, IN

Ben Bernanke, The FDR of Central Bankers

Robert P. Murphy

Many economists have argued that Franklin Roosevelt's famous New Deal exacerbated and prolonged the Great Depression that he had inherited from Herbert Hoover, making their case for the layperson (e.g. Murphy 2009) or professional economists (e.g. Cole and Ohanian 2004). Yet beyond the shortcomings in any specific New Deal program, FDR's legacy includes a fundamental transformation—for better or worse—of the way Americans view the proper role of the federal government in economic affairs. In the terminology of Higgs (2006), the Great Depression was yet another example of the "ratchet effect" of growth in the Leviathan State, where the government expands to ostensibly deal with an emergency, but never returns to its pre-crisis size. Nowadays most Americans take it for granted that the federal government has an important role to play in combating economic downturns, regulating the financial sector, and providing for retirement income, yet these attitudes are themselves a result of the New Deal and its surrounding mythology.

In a similar pattern, Federal Reserve chairman Ben Bernanke used the financial crisis of 2008 and ensuing "Great Recession" to implement a series of extraordinary Fed operations, which would have been unthinkable before the crisis. Once the standard lever of pushing down interest rates (more specifically, the federal funds rate) had been pushed to its limit, the Fed adopted a new tactic of "quantitative easing," which focused on the dollar value of purchases, rather than the level of interest rates. At the same time, the Fed drastically altered the nature of its asset purchases. Rather than performing textbook "open market operations" by buying government bonds, now the Fed was actively engaged in rescuing specific sectors of the economy through targeted purchases, a move that was arguably illegal and definitely unprecedented (Mehra 2010).

As with the New Deal, here too the specific policies can be criticized for their harmful effects on the economy. Yet more generally, we can document the

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understanding and expectations of the powers of the Federal Reserve. For example, after watching the Fed (not the federal government) rescue AIG in September 2008, and then target the mortgage-backed securities market for assistance, some began to wonder if Bernanke would swoop in to rescue the beleaguered bond markets for strapped state and local governments (e.g. Blanchflower 2010; Melloy 2010).

Perhaps surprising to some, one of the leading advocates of greater Fed action to promote recovery comes from the self-described modern followers of Milton Friedman, the so-called "Market Monetarist" school of thought, represented by such economists as Scott Sumner, David Beckworth, and Bill Woolsey (Beckworth 2012). However, although the layperson might associate Milton Friedman's monetarism with a hands off approach to recessions, nonetheless the Market Monetarists have a valid point: Friedman famously blamed the Fed's *inaction* during the early 1930s for exacerbating the Great Depression (Friedman and Schwartz 1963).

Specifically, Friedman and Schwartz (1963) argued that the Fed had established itself as the lender of last resort, displacing private-sector analogs (such as J.P. Morgan's hand-picked rescue of solvent but illiquid banks during the Panic of 1907). Yet in the early 1930s, as the financial sector suffered a massive wave of bank runs, the Fed did not purchase a sufficient number of assets (raising total reserves) in order to compensate for the public's withdrawal of deposits from the commercial banking system. In a fractional reserve banking system, the result of this Fed timidity was a collapse of broader monetary aggregates (such as M2) by about a third from 1929–1933, which Friedman and Schwartz consider primarily responsible for the severity of what we now know as the Great Depression. In their own words:

> The drastic decline in the quantity of money during [1929–1933] and the occurrence of a banking panic of unprecedented severity were not the inevitable consequence of other economic changes. They did not reflect the absence of power on the part of the Federal Reserve System to prevent them. Throughout the contraction, the System had ample powers to cut short the tragic process of monetary deflation and banking collapse. Had it used those powers effectively in late 1930 or even in early or mid-1931, the successive liquidity crises that in retrospect are the distinctive feature of the contraction could almost certainly have been prevented and the stock of money kept from declining or, indeed, increased to any desired extent. Such action would have eased the severity of the contraction and very likely would have brought it to an end at a much earlier date. (Friedman and Schwartz 2008, p. 8)

In contrast to the original monetarist position on the Great Depression, and the current Market Monetarist position on the Great Recession, the Austrian School of economics recognizes the importance of *relative* asset prices. The Austrian analysis explains why targeted Fed interventions to rescue specific markets is economically harmful not merely because it increases the threat of general price inflation, but because it misallocates resources by undermining the validity of asset price signals.

Bernanke's Extraordinary (and Legally Dubious) Interventions

The St. Louis Fed provides a timeline of the events and policy actions during the financial crisis. The table below provides a condensed list of the major policy innovations, where the descriptions in the second column are direct quotations from the St. Louis Fed timeline (with bold added by the present author).

Date	Action
12/12/07	The Federal Reserve Board announces the creation of a Term Auction Facility (TAF) in which **fixed amounts of term funds will be auctioned to depository institutions against a wide variety of collateral**. The FOMC authorizes temporary reciprocal currency arrangements (swap lines) with the European Central Bank (ECB) and the Swiss National Bank (SNB)
3/11/08	The Federal Reserve Board announces the creation of the Term Securities Lending Facility (TSLF), which will **lend up to $200 billion of Treasury securities for 28-day terms against federal agency debt, federal agency residential mortgage-backed securities (MBS), non-agency AAA/Aaa private label residential MBS**, and other securities
3/16/08	The Federal Reserve Board establishes the Primary Dealer Credit Facility (PDCF), extending credit to primary dealers at the primary credit rate against a broad range of investment grade securities
3/24/08	**The Federal Reserve Bank of New York announces that it will provide term financing to facilitate JPMorgan Chase & Co.'s acquisition of The Bear Stearns Companies Inc. A limited liability company (Maiden Lane) is formed to control $30 billion of Bear Stearns assets** that are pledged as security for $29 billion in term financing from the New York Fed at its primary credit rate. JPMorgan Chase will assume the first $1 billion of any losses on the portfolio
5/2/08	**The FOMC expands the list of eligible collateral** for Schedule 2 TSLF auctions to include AAA/Aaa-rated asset-backed securities, in addition to already eligible residential and commercial MBS and agency collateralized mortgage obligations
6/13/08	**The Federal Reserve Board authorizes the Federal Reserve Bank of New York to lend to the Federal National Mortgage Association (Fannie Mae) and the Federal Home Loan Mortgage Corporation (Freddie Mac)**, should such lending prove necessary
9/14/08	The Federal Reserve Board expands the list of eligible collateral for the PDCF to include any collateral that can be pledged in the tri-party repo system of the two major clearing banks. Previously PDCF collateral had been limited to investment-grade debt securities. The Board also expands the list of collateral accepted by TSLF to include all investment-grade debt securities and increases the frequency of Schedule 2 TSLF auctions and total offering to $150 billion. **The Board also adopts an interim final rule that provides temporary exceptions to Section 23A of the Federal Reserve Act** to allow insured depository institutions to provide liquidity to their affiliates for assets typically funded in the tri-party repo market
9/16/08	The Federal Reserve Board authorizes the Federal Reserve Bank of New York to **lend up to $85 billion to the American International Group (AIG)** under Section 13 (3) of the Federal Reserve Act
9/18/08	The FOMC expands existing swap lines by $180 billion and authorizes new swap lines with the Bank of Japan, Bank of England, and Bank of Canada

(continued)

Date	Action
9/19/08	The Federal Reserve Board announces the creation of the Asset-Backed Commercial Paper Money Market Mutual Fund Liquidity Facility (AMLF) to extend non-recourse loans at the primary credit rate to U.S. depository institutions and bank holding companies to **finance their purchase of high-quality asset-backed commercial paper from money market mutual funds**. The Federal Reserve Board also announces plans to purchase federal agency discount notes (short-term debt obligations issued by Fannie Mae, Freddie Mac, and Federal Home Loan Banks) from primary dealers
9/21/08	The Federal Reserve Board approves applications of investment banking companies Goldman Sachs and Morgan Stanley to become bank holding companies
9/29/08	The FOMC authorizes a $330 billion expansion of swap lines with Bank of Canada, Bank of England, Bank of Japan, Danmarks Nationalbank, ECB, Norges Bank, Reserve Bank of Australia, Sveriges Riksbank, and Swiss National Bank Swap lines outstanding now total $620 billion.
9/26/08	The Federal Reserve Board announce that **the Fed will pay interest on depository institutions' required and excess reserve balances** at an average of the federal funds target rate less 10 basis points on required reserves and less 75 basis points on excess reserves
10/7/08	The Federal Reserve Board announces the **creation of the Commercial Paper Funding Facility (CPFF), which will provide a liquidity backstop to U.S. issuers of commercial paper** through a special purpose vehicle that will purchase three-month unsecured and asset-backed commercial paper directly from eligible issuers
10/8/08	The Federal Reserve Board authorizes the Federal Reserve Bank of New York to borrow up to $37.8 billion in investment-grade, fixed-income securities from American International Group (AIG) in return for cash collateral
10/21/08	The Federal Reserve Board announces creation of the Money Market Investor Funding Facility (MMIFF). Under the facility, the Federal Reserve Bank of New York provides senior secured funding to a series of special purpose vehicles to facilitate the purchase of assets from eligible investors, such as U.S. money market mutual funds. **Among the assets the facility will purchase are U.S. dollar-denominated certificates of deposit and commercial paper** issued by highly rated financial institutions with a maturity of 90 days or less
10/29/08	The FOMC also establishes swap lines with the Banco Central do Brasil, Banco de Mexico, Bank of Korea, and the Monetary Authority of Singapore for up to $30 billion each
10/10/08	The Federal Reserve Board and the U.S. Treasury Department announce a restructuring of the government's financial support of AIG. . .. The Federal Reserve Board also authorizes the Federal Reserve Bank of New York to establish two new lending facilities for AIG: The Residential Mortgage- Backed Securities Facility will lend up to $22.5 billion to a newly formed limited liability company (LLC) to purchase residential MBS from AIG; **the Collateralized Debt Obligations Facility will lend up to $30 billion to a newly formed LLC to purchase CDOs from AIG (Maiden Lane III LLC)**
10/23/08	The U.S. Treasury Department, Federal Reserve Board, and FDIC jointly announce an agreement with Citigroup to provide a package of guarantees, liquidity access, and capital. Citigroup will issue preferred shares to the Treasury and FDIC in exchange for protection against losses on a $306 billion pool of commercial and residential securities held by Citigroup. **The Federal Reserve will backstop residual risk in the asset pool through a non-recourse loan**

(continued)

Date	Action
11/25/08	The Federal Reserve Board announces the creation of the **Term Asset-Backed Securities Lending Facility (TALF)**, under which the Federal Reserve Bank of New York will lend up to $200 billion on a non-recourse basis to holders of **AAA-rated asset-backed securities and recently originated consumer and small business loans**
11/25/08	**The Federal Reserve Board announces a new program to purchase direct obligations of housing related government-sponsored enterprises** (GSEs)—Fannie Mae, Freddie Mac and Federal Home Loan Banks—and MBS backed by the GSEs. Purchases of up to $100 billion in GSE direct obligations will be conducted as auctions among Federal Reserve primary dealers. Purchases of up to $500 billion in MBS will be conducted by asset managers
12/22/08	The Federal Reserve Board approves the application of CIT Group Inc., an $81 billion financing company, to become a bank holding company. The Board cites "unusual and exigent circumstances affecting the financial markets" for expeditious action on CIT Group's application
1/16/09	The U.S. Treasury Department, Federal Reserve, and FDIC announce a package of guarantees, liquidity access, and capital for Bank of America. The U.S. Treasury and the FDIC will enter a loss-sharing arrangement with Bank of America on a $118 billion portfolio of loans, securities, and other assets in exchange for preferred shares. In addition, and if necessary, **the Federal Reserve will provide a non-recourse loan to back-stop residual risk in the portfolio**
1/30/09	**The Board of Governors announces a policy to avoid preventable foreclosures on certain residential mortgage assets** held, controlled or owned by a Federal Reserve Bank
2/10/09	The Federal Reserve Board announces that is prepared to expand the Term Asset-Backed Securities Loan Facility (TALF) to as much as **$1 trillion and broaden the eligible collateral to include AAA-rated commercial mortgage-backed securities, private-label residential mortgage-backed securities,** and other asset-backed securities
3/18/09	The FOMC votes to **maintain the target range for the effective federal funds at 0 to 0.25 %.** In addition, the FOMC decides to **increase the size of the Federal Reserve's balance sheet by purchasing up to an additional $750 billion of agency mortgage-backed securities, bringing its total purchases of these securities to up to $1.25 trillion this year**, and to increase its purchases of agency debt this year by up to $100 billion to a total of up to $200 billion. **The FOMC also decides to purchase up to $300 billion of longer-term Treasury securities over the next six months** to help improve conditions in private credit markets. Finally, the FOMC announces that it anticipates expanding the range of eligible collateral for the TALF (Term Asset-Backed Securities Loan Facility)
3/19/09	The Federal Reserve Board announces an expansion of the eligible collateral for loans extended by the Term Asset-Backed Securities Loan Facility (TALF) to **include asset-backed securities backed by mortgage servicing advances, loans or leases related to business equipment, leases of vehicle fleets, and floorplan loans**

Source. "The Financial Crisis: A Timeline of Events and Policy Actions." Federal Reserve Bank of St. Louis, available at: http://timeline.stlouisfed.org/index.cfm?p=timeline. Accessed July 26, 2013

The particular timeline from which the above table is drawn, runs through April 2009. After that date, two additional major Fed actions were "Operation Twist,"

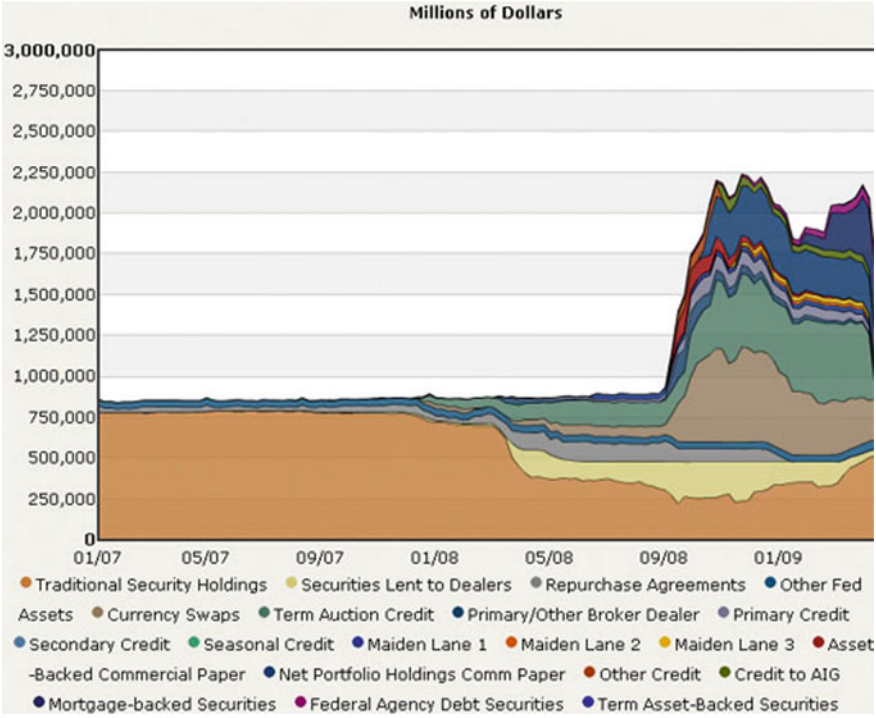

Fig. 1 Composition of Federal Reserve Balance Sheet. *Source*. Rampell (2009)

first announced on September 21, 2011[1] (which involved a $400 billion turnover of short-term Treasuries for longer-term Treasuries on the Fed's balance sheet, designed to push down longer-term yields), and so-called QE3, announced on September 12, 2013[2] (which involved an additional purchase of $40 billion per month in agency MBS).

Thus there were two changes in Fed policy during the crisis: Besides the (massive) increase in the sheer size of the Fed's balance sheet, there was also a change in the composition of those assets. Bagus and Howden (2009a, b) make this distinction with the terms "quantitative easing" versus "qualitative easing.") We can graphically illustrate both types of easing in Fig. 1 above, which shows the Fed's balance sheet over time:

Jeffrey Rogers Hummel argues that the Federal Reserve's actions since the crisis have "resulted in a dramatic transformation of the Fed's role in the economy. Bernanke has so expanded the Fed's discretionary actions beyond merely

[1] See: http://www.federalreserve.gov/newsevents/press/monetary/20110921a.htm.

[2] See: http://www.federalreserve.gov/newsevents/press/monetary/20120913a.htm.

controlling the money stock that **it has become a gigantic financial central planner**" (Hummel 2012, p. 166, bold added).

Continuing the analogy with the New Deal, the Fed's extraordinary actions have pushed the bounds of legality. (Portions of the New Deal were initially struck down in the famous Court-packing episode.[3]) Mehra (2010) argues "that many of the Fed's responses to the crisis exceeded its statutory authority" (p. 221).

The specific problem is that Section 14 of the Federal Reserve Act specifically prohibits many of the assets purchased conducted by the Fed since the crisis. The Fed attempted to skirt this prohibition by using the powers granted in Section 13.3, which gives open-ended powers to the Fed to make loans. This loophole explains the creation of the various LLCs (such as the three Maiden Lane companies): Technically, the Fed would make loans to, say, Maiden Lane II, which in turn would then *buy* mortgage-backed securities from beleaguered investment banks.

Whether we consider such a procedure a technical violation of the Federal Reserve Act is irrelevant for the present paper. It is clear that Section 14's prohibitions on various types of asset purchases were intended to prevent just the sort of central planning by the Fed that has been unleashed under Bernanke's leadership.

The Market Monetarist Complaint Against Bernanke's "Tight" Policy

It is not surprising that Keynesian interventionists such as Paul Krugman support further efforts by the central bank to stimulate the economy during the prolonged slump, with the only reservation concerning its possible impotence (Krugman 2013). However, the supposedly free-market heirs of Milton Friedman's monetarism—who call themselves "Market Monetarists"—are even stronger proponents of more action by the Fed. Scott Sumner is one of the leaders of the school of thought, and arguably has done the most (through his blogging efforts) to bring its ideas to the attention of the profession. Not only does Sumner think the Fed ought to do more, he argues that "excessively tight money worsened the recession in the second half of 2008" (Sumner 2012, p. 129).

Although newcomers to Sumner's views may at first be shocked that he can describe Fed policy in late 2008 as "excessively tight," he defends his views citing the authority of Frederic Mishkin and Milton Friedman himself. After all, argues Sumner, it was Friedman and Schwartz who overturned what had been the conventional wisdom regarding Fed policy during the Great Depression. Rather than viewing the Fed as powerless to prevent the unfolding Great Depression, Friedman and Schwartz pinned much of the blame squarely on the Fed's unwillingness to

[3] See: http://www.judiciary.senate.gov/about/history/CourtPacking.cfm.

counteract the public's withdrawal of deposits from the commercial banking system.

Sumner argues that future macroeconomists will look with pity and disbelief on today's policymakers at the Fed, and wonder how they could have made the same mistake as their analogs did during the Depression. It's true, Sumner concedes, that the Fed has slashed interest rates to virtually zero percent, and has expanded both the monetary base as well as broader measures of money (such as M1 and M2). Yet each of these metrics is a poor indicator of the stance of monetary policy: Nominal interest rates can be high in absolute terms during a hyperinflation, and once nominal rates approach the zero lower bound, the demand for cash can grow sharply (since there is little opportunity cost to holding it).

Rather than looking at interest rates or various measures of the quantity of money, Sumner makes the case that "tight" or "easy" money should be *defined* relative to the market's expected growth of future nominal GDP. In particular, because nominal GDP has grown at a very anemic pace since the fall of 2008—and presumably because the market correctly anticipated this—Sumner concludes that Bernanke has overseen the tightest Fed policy since the Herbert Hoover administration.

Now it's true that Ben Bernanke's "central planning" interventions—ostensibly to revive stressed credit channels—rely on a different interpretation from the Friedman account of what *precisely* went wrong during the early 1930s (Hummel 2012, pp. 166–167). It is also true that Anna Schwartz herself—co-author of the famous *Monetary History* with Friedman—publicly rebuked Ben Bernanke's handling of the crisis and said in the summer of 2009 that he should not be reappointed as Fed chair (Schwartz 2009).

Despite these conflicts, it is still true that today's Market Monetarists make a plausible case that they are merely amplifying Friedman's lessons of the Great Depression, and of Japan in more recent times. From an Austrian perspective, both the original Friedmanite monetarists as well as today's Market Monetarists who (rightly or wrongly) claim his legacy, commit the same mistake.

The Austrian Perspective

In contrast to the Market Monetarist approach, the Austrians recognize the importance of relative prices, especially in intertemporal allocation. The definitive Austrian account of the Great Depression is provided in Rothbard (2008), which explains that the Fed's easy money policies in the 1920s set up the boom and inevitable bust. (Herbert Hoover and then FDR's policies prolonged the agony and fostered what we now call the Great Depression.)

By focusing on aggregates, rather than relative prices and the distortions artificially low interest rates can cause in the structure of production, monetarists both past and present fail to recognize unsustainable booms in progress. For example, Irving Fisher (one of Milton Friedman's heroes) famously misdiagnosed the

U.S. economy in the late 1920s, because he erroneously thought a stable CPI was the right metric. In contrast, the Austrian economist Ludwig von Mises was much more alert to the festering problems with the world economy at that time. (Thornton 2008)

Similarly, the Market Monetarist framework in 2007 would have given no indication that an economic catastrophe would soon befall the world, as nominal GDP growth had not been excessively high during the housing boom years. Indeed, Sumner's entire message is that the Great Recession is *not* due to structural problems or misallocated resources, but is almost entirely an unnecessary creation of central banks' unwillingness to sufficiently inflate (in order to mold expectations of future nominal GDP growth). In contrast, there were many Austrian warnings during the housing boom years that Greenspan's policies were setting the economy up for a crash (e.g., Thornton 2004).

To appreciate just how little the economics profession (outside of the Austrians) cares about the structure of production, consider the blogosphere reaction (in July 2013) to news that Larry Summers was a top contender to replace Ben Bernanke as Fed chair. Critics—including Scott Sumner himself and others who embraced Market Monetarism—seized on the following commentary from a 2012 Summers article in Reuters questioning the ability of the Fed to provide more stimulus:

> However, one has to wonder how much investment businesses are unwilling to undertake at extraordinarily low interest rates that they would be willing to undertake with rates reduced by yet another 25 or 50 basis points. It is also worth querying the quality of projects that businesses judge unprofitable at a -60 basis point real interest rate but choose to undertake at a still more negative real interest rate. There is also the question of whether extremely low safe real interest rates promote bubbles of various kinds. (Summers 2012)

In reaction to this perfectly reasonable statement, Matt O'Brien wrote in The Atlantic:

> In other words, [Summers] thinks the Fed pushing down real interest rates might only push companies to make bad investments they otherwise wouldn't make. It's a very Austrian view of things—the idea that pushing interest rates "artificially" low makes businesses make mistakes.
>
> This is not good. Now, there are plenty of people who think QE is going to turn us into Zimbabwe or inflate the mother-of-all-bubbles or just bail out the banks, but none of those people should be running the Fed. (O'Brien 2013)

To repeat, O'Brien's reaction to Summers is not simply the uneducated hyperbole of an amateur; Sumner himself endorses the notion that the *particular* investments made in the depths of a recession is something only Austrians—and apparently Larry Summers—worry about (Sumner 2013).

The debate over Bernanke's successor—with most analysts focusing on Janet Yellen versus Larry Summers—shows the great success that Bernanke has had in transforming the expectations of the Federal Reserve. Most analysts evaluate the next Fed chief according to whether he or she is "willing to do more" to help boost the lackluster economic recovery. Bernanke's unprecedented interventions will thus go down in (conventional) macroeconomic history as preventing a repeat of the Great Depression, but alas being inadequate to deliver full prosperity.

Conclusion

It is incontrovertible that the Federal Reserve, under Ben Bernanke's leadership, has achieved a level of discretionary intervention in specific asset classes that would have been unthinkable before the 2008 crisis. Indeed, not only has Bernanke upset the traditional understanding of the Fed's role, he has even skirted (and perhaps overstepped) the actual statutory bounds of its power. In this respect, Bernanke is the FDR of central bankers.

Perhaps ironically, the ostensibly free-market heirs of Milton Friedman—the Market Monetarists—attribute the Great Recession to excessively *tight* Fed policy. Just as Friedman famously argued that the Fed should have provided whatever level of base money necessary in order to arrest the collapse of the broader money stock, so too today's Market Monetarists want the Fed to announce unlimited asset purchases to achieve their desired policy goal. In their view, both the Great Depression and the Great Recession were entirely preventable catastrophes delivered by Fed timidity.

The Austrian economists *also* blame the Fed for both the Great Depression and the Great Recession, but in a completely different way. The Austrians focus on *easy* Fed policy during the preceding boom periods—in the 1920s and the 2000s—that set up an inevitable bust. The Austrian analysis is much richer than the monetarist perspective, because the Austrian approach incorporates the economy's intertemporal capital structure. Recent commentary among economists and economic commentators concerning Bernanke's successor reveals just how unique—and important—the Austrian perspective is.

References

Bagus P, Howden D (2009a) Qualitative easing in support of a tumbling financial system: a look at the eurosystem's recent balance sheet policies. Econ Aff 29(4):60–65

Bagus P, Howden D (2009b) The federal reserve system and eurosystem's balance sheet policies during the financial crisis: a comparative analysis. Rom Econ Bus Rev 4(3):165–185

Beckworth D (2012) Boom and bust banking: the causes and cures of the great recession. The Independent Institute, Oakland, CA

Blanchflower DG (2010) Quantitative easing is only show in town. Bloomberg, 18 October 2010, available at: http://www.bloomberg.com/news/2010-10-18/quantitative-easing-is-only-show-in-town-commentary-by-david-blanchflower.html

Cole HL, Ohanian LE (2004) New deal policies and the persistence of the great depression: a general equilibrium analysis. J Polit Econ 112(4):779–816

Friedman M, Schwartz A (2008) The great contraction: 1929–1933. Princeton University Press, Princeton, NJ

Friedman M, Schwartz A (1963) A monetary history of the United States, 1867–1960. Princeton University Press, Princeton, NJ

Higgs R (2006) Depression, war, and cold war. Oxford University Press, New York

Hummel JR (2012) Ben Bernanke versus Milton Friedman: the Federal Reserve's emergence as the U.S. economy's central planner. In: Beckworth D (ed) Boom and bust banking. Oakland, CA, The Independent Institute, pp 165–210

Krugman P (2013) Milton's paradise, still lost. New York Times blog post, 27 July, available at: http://krugman.blogs.nytimes.com/2013/07/27/miltons-paradise-still-lost/

Mehra A (2010) Legal authority in unusual and exigent circumstances: the federal reserve and the financial crisis. Univ Penn J Bus Law 13:1, available at: https://www.law.upenn.edu/journals/jbl/articles/volume13/issue1/Mehra13U.Pa.J.Bus.L.221(2010).pdf

Melloy J (2010) Outraged yet? What if Fed buys Munis?" CNBC, 18 November, available at: http://www.cnbc.com/id/40256223

Murphy RP (2009) The politically incorrect guide to the great depression and the new deal. Regnery, Washington, DC

O'Brien M (2013) Larry summers should absolutely not be the next fed chair. The Atlantic, 25 July, available at: http://www.theatlantic.com/business/archive/2013/07/larry-summers-should-absolutely-not-be-the-next-fed-chair/278083/

Rampell C (2009) Fed balance sheet expansion: some takeaways. Economix New York Times blog post, 7 May 2009, available at: http://economix.blogs.nytimes.com/2009/05/07/fed-balance-sheet-expansion-some-takeaways

Rothbard M (2008) America's great depression, 5th edn. The Ludwig von Mises Institute, Auburn, AL

Schwartz A (2009) Man without a plan. New York Times, 25 July, available at: http://www.nytimes.com/2009/07/26/opinion/26schwartz.html

Summers L (2012) Breaking the negative feedback loop. Reuters, 3 June, 2012, available at: http://blogs.reuters.com/lawrencesummers/2012/06/03/breaking-the-negative-feedback-loop/

Sumner S (2012) How nominal GDP targeting could have prevented the crash of 2008. In: Beckworth D (ed) Boom and bust banking. Oakland, CA, The Independent Institute, pp 129–164

Sumner S (2013) An ad hoc sticky interest rate theory of recent recessions. TheMoneyIllusion blog post, 27 July 2013, available at: http://www.themoneyillusion.com/?p=22562

Thornton M (2008) The great depression: Mises vs Fisher. Q J Austrian Econ 11:230–241

Thornton M (2004) Housing: too good to be true. Mises.org blog post, 4 June 2004, available at: http://mises.org/daily/1533

Fed Policy Errors of the Great Depression

Jeffrey Herbener

The standard view of the monetary policy errors of the Great Depression is that the Fed's policy was contractionary during the two periods of downturns in the economy during the Great Depression, 1930–1933 and 1937–1938, and that had it not been so the downturns of those years could have been avoided or at least mitigated. Advocates of this view give a variety of reasons for why the Fed adopted such a stance. Perhaps the best known is the one offered by Milton Friedman (1963).[1] The Fed performed well during the 1920s under the stewardship of Benjamin Strong deftly expanding the money stock to roughly match the expansion of production, leaving the price level nearly stable. Strong's untimely death in October of 1928 threw the Fed into disarray. In the wake of the stock market collapse a year later, the Fed sat idly by as the banking system crashed dragging the money stock down with it. When the Fed finally began to inflate the money stock, it was too little too late. The Great Contraction proved to be a fatal policy error ushering in the Great Depression. The monetary inflation that began after the trough was lifting the economy out of the depression when the fed tightened monetary policy by raising required reserve ratios in 1936. Banks responded by reducing their lending to build their excess reserves position back to the level it reached before reserve ratios were raised. The credit contraction led to the secondary downturn of 1937–1938.

Analyses predating Friedman's gave a different answer to the question of the Fed's policy errors and new scholarship is validating the older wisdom. It now appears that Friedman will be merely an interlude between the sounder analysis of economists contemporary to the Great Depression and those who have rediscovered their insights.

[1] For an admiring treatment of Friedman and Schwartz's view, see Pongracic 2007. For a recent defense of Friedman and Schwartz, see Timberlake (1999a, b, c).

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The Boom of the 1920s

Older analyses argued that the initial policy error of the Fed was allowing monetary inflation and credit expansion during the second half of the 1920s, which led entrepreneurs to malinvest capital and misallocate resources into an unsustainable build-up of the economy's capital structure. Benjamin Anderson (1979 pp. 131–157) documented two periods of rapid expansion of the bank credit in the 1920s. The first started in 1924 as a response to the Fed's failed policy of collapsing the money stock in 1920 to intentionally deflate prices to their levels before the First World War. Instead of eliminating the distortions of the wartime monetary inflation, the policy of monetary deflation revealed the prior malinvestments that the inflation had generated. The sharp and rapid decline in prices led to a speedy liquidation of the malinvestments and reallocation of resources. After the recovery, the Fed fatefully turned to open market operations as its preferred method of conducting monetary policy. The second expansion of bank credit began in 1927 and, by the end of 1928, generated asset price inflation in real estate and stock markets and their attendant malinvestments and misallocations. Both episodes were induced by the Fed increasing its balance sheet by several hundred million dollars and banks expanding credit on the resulting additional reserves by several billions of dollars. From June 30, 1922 to their peak on April 11, 1928, Deposits of Commercial Banks increased $13.5 billion from $30.7 billion to $44.2 billion and Loans, Discounts, and Investments of Commercial Banks rose $14.5 billion from $33.1 billion to $47.6 billion. The increase in bank reserves that fueled the two episodes of credit expansion was entirely from Fed expansionary policy. The other source of bank reserves, the gold stock, increased from $2.6 billion in October 1920 to $4.2 billion in August of 1924. But in August of 1927 the gold stock remained nearly unchanged at $4.3 billion and then declined to $3.8 billion by April of 1928.

The Fed held rediscount rates too low and expanded the use of open market operations too vigorously in the second half of the 1920s. "The New Deal," Anderson wrote, "did begin in 1924 in an immense artificial manipulation of the money market." In the summer of 1924, the Fed made open market purchases of $500 million which increased bank reserves 17 % in 1 year. With their additional reserves of $300 million, member banks increased Bank Credit by $4.2 billion from $34.7 billion on March 31, 1924 to $38.9 billion on June 30, 1925 and Bank Deposits by $4.2 billion from $28.3 billion to $32.5 billion over the period (Anderson 1979, p. 127).

C.A. Phillips, T.F. McManus, and R.W. Nelson (2007, pp. 82–114) claimed that the roots of the Great Depression go back to the monetary inflation and credit expansion begun by the Fed in 1922. They document that the deposits of all banks increased from $35.7 billion on June 30, 1921 to $55.3 billion on December 31, 1929, a rise of 55 % or 6 % per annum. They calculated that 90 % of the increase in member bank reserves over that period came in the 3 years, 1922, 1924, and 1927 and that 80 % of the increase in total deposits coincided with an expansion of the Federal Reserve's balance sheet as a result of open market operations.

The impact of open market operations on bank reserves was augmented by the Fed policy of keeping rediscount rates low when open market purchases ceased or were supplanted by open market sales. Banks took advantage of the alternative of increasing their rediscounting activity when their sales of securities to the Fed declined. The result was that bank reserves did not decline even when open market policy switched from expansive to contractive. The credit expansion that ensued from the Fed's policy shifted the loan portfolio of banks from commercial loans to real estate loans and securities. In 1921, commercial loans were 53 % of member banks Loans and Investments but only 36 % in 1929. Loans on securities rose from 19 % to 28 % and real estate loans from 3 to 8 % over the same period. Investments increased 79 % from 1921 to 1928. The Fed itself commented on significant reduction of liquidity from the credit expansion as early as its 1926 Annual Report. The Report cited construction and real estate as lines of production stimulated by credit expansion during the boom. Because production in the economy is an integrated system, however, malinvestments were not limited to just a few lines of activity but extended to related lines of production throughout the capital structure.

Phillips, McManus, and Nelson (2007, pp. 183–184) leave no doubt of Fed culpability for the boom-bust of the 1920s and 1930s:

> The Federal Reserve System, in other words, entered upon an active policy of positive control. Banking developments in this country from 1922 onward were almost entirely the consequence of Federal Reserve control operations. Dr. Miller's characterization of the 1927 "boot-strap lifting" experiment as "one of the most costly errors committed by it or any other banking system in the last 75 years" applies with equal force to the experiments of 1922 and 1924. In the formulation and execution of an essentially inflationistic policy of control, the Board must be charged with a colossal error, the ultimate effect of which was, as Dr. Miller himself admits, the depression.

Murray Rothbard (1972, pp. 81–125), in his account of the Great Depression written contemporaneously with Friedman's, calculated that the money stock increased from $45.3 billion on June 30, 1921 to $73.3 billion on June 30, 1929, a rise of nearly 62 % or 7.7 % annually. As with increases in bank credit, increases in the money stock came in waves during 1922–1923, late 1924, late 1925, and late 1927. Rothbard showed that the entire increase came in the form of money substitutes, as currency in circulation was $3.64 billion in 1929 and $3.68 billion in 1921. The main cause of the increase in bank money substitutes was an increase in reserves. Over the 8 year period total reserves rose from $1.60 billion to $2.36 billion, an increase of nearly 48 %. And that portion of total reserves controlled by the Fed increased $1.79 billion more than offsetting the $1.04 billion decrease in total reserves from uncontrolled sources, which included the gold stock, money in circulation, and bills repaid. The major sources of increasing controlled reserves were Fed purchases of government securities ($2.24 billion), bills bought by the Fed ($2.16 billion) and new discounts by the Fed ($1.54 billion).

In response to criticism of Rothbard for including uncommon money substitutes in his calculation of the money stock, Joseph Salerno (1999) has shown that taking out the offending items leaves the inflationary conclusion intact. "The increase in

Rothbard's M between mid-1921 and the end of 1928 totaled about 61 %, yielding an annual rate of monetary inflation of 8.1 % a year; with [life insurance reserves] left out, the money supply increased by about 55 % over the period or at an annual rate of 7.3 %." That it was the Fed's intent to inflate the money stock and expand credit is clear. Salerno calculates that from mid-1921 to the end of the inflation in late 1928, bank reserves controlled by the Fed rose 138 % or 18.4 % per year while uncontrolled reserves fell 89 % or 11.9 % per year.

Allan Meltzer chronicles the Fed's move toward using open market operations in the early 1920s. "The tenth annual report [in 1923] marks a turning point in Federal Reserve Policy," Meltzer (2003, p. 160) writes, "leading economists commented on the development of more activist policy and the use of open market operations to adjust bank borrowing." Securities held by the Fed rose to a peak of $590 million during 1924 as the Fed attempted to stimulate recovery from a downturn in 1923. Even though they fell back to $540 million by the end of the year that level was still above the $500 million limit the Fed had set in November. As the boom ensued, the Fed began to sell securities throughout 1925. In response to the mild downturn in 1926, the Fed renewed open market purchases in May of 1927, adding $270 million in securities by the end of the year. Benjamin Strong noted that bank credit had increased by $5 billion on an increase of total reserves of $200 million from 1925 through 1927. The credit multiplier had grown to 15 as banks were leveraging their deposits against their reserves. In January 1928, the Fed itself estimated that bank credit had increased 8 % during 1927, the largest annual increase in 3 years and significantly larger than the normal annual increase (Meltzer 2003, pp. 197–245).

The Crisis of 1930–1933

Given the monetary inflation and credit expansion generated by the Fed in the 1920s in its attempts to manage the money stock to foster booms and counteract downturns, a financial correction to bring prices and production back in line with people's preferences was inevitable. The attempt by the Fed to re-inflate during 1930–1933 only helped to forestall and deepen the crisis. Friedman, in contrast to this view, insisted that the Fed did too little to save banks and that by collapsing the money stock the waves of bank failures set in motion a destructive price deflation which suppressed production. However, most of the decline in production had occurred by the fourth quarter of 1931 which was before the two biggest waves of bank failures, in the fall of 1931 and 1933 (Ohanian 2009; Salerno 2009). Also, during the financial crisis of 1920–1921, the Fed intentionally shrank its balance sheet forcing the money stock to contract and leading to the collapse of nearly a thousand banks. Although the collapse of the money stock in 1920–1921 was commensurate with its collapse in 1930–1933, no Great Depression followed. The correction was severe and short because of the *laissez faire* policies of the Harding administration (Woods 2009). In contrast, during the first stage of the Great Depression, the Fed tried desperately to re-inflate the money stock only to see

production and employment continue to sink because of the activist policies of the Hoover administration (Rothbard 1972, pp. 252–295; Ohanian 2009).

Anderson (1979, pp. 224–229) chronicled the manner in which the Federal Reserve District Banks, and the New York District Bank in particular, acted swiftly and decisively to counteract the effects of the bursting of the stock market bubble. Overall, the Federal Reserve System expanded credit by $312 million and total bills and securities over 23 %. In the week of October 23–30 alone, the Fed bought $150 million in government securities. The New York District Bank lowered its discount rate from 6 % where it had been since August 9 to 5 % on November 1 and 4 ½ % on November 15. In the first week of the panic, the New York Bank began lowering its buying rate on acceptances from 5 ⅛ % in stages down to 4 % on November 21. Emboldened by the rebound of the stock market from its low point on November 13, the Fed moved aggressively to monetary expansion in early 1930. The New York District Bank lowered its rediscount rate in stages from its level of 4 ½ % since November 15 to 2 % by the end of 1931. The Fed pushed down its buying rate on acceptances from 4 % since November 21 to 1 ¾ % by the end of 1930. Coupled with the expansionary policy of lower rates was an explosion of open market purchases by the Fed. On October 23, 1929 the Fed owned $136 million in government securities. By December 8, the figure stood at $533 million and on August 27, 1930, $602 million. Unlike the open market stimulus of 1924 and 1927, this time only the stock market rebounded. In the two previous episodes, production also rose, but not after 1930.

In 1931, foreign gold redemption and an increase in domestic demand for currency threatened to drain the reserves of banks. The Fed countered these contractionary forces with rediscounting and buying acceptances. The gold drain started immediately after Britain abandoned the gold standard. From September 16, 1931 to October 28, the gold stock fell $728 million. And between July 31 and December 31, there was an increase of currency in circulation of $810 million. The Fed countered by increasing rediscounts from a daily average of $169 million in July to $774 million in December and $848 million in February 1932. The Fed also bought acceptances, the figure rising from $79 million in July 1931 to $768 million by the end of October. After it tapered off buying acceptances from banks in the last few months of 1931, the Fed bought $236 million acceptances for foreign correspondents between October 1931 and the end of March 1932. The Fed was willing to inflate further, but not able to do so. According to Anderson, it could not increase its purchases of government securities in the winter of 1931–1932. When the Federal Reserve Act was passed in 1913, federal government debt outstanding was a mere $1 billion. Far too little such debt existed to make open market operations the basis of monetary inflation and credit expansion operations. Instead, the Fed was to operate by issuing Federal Reserve Notes against the rediscounting of paper from commercial banks. Moreover, technically the government issued Federal Reserve Notes to the Federal Reserve Banks, which in turn were required to provide collateral for them. The collateral could be either gold or commercial paper, which included acceptances and bills of banks secured by government securities. Government securities themselves, however, could not serve as

collateral. During the downturn of 1920–1921, the expansion of Federal Reserve Notes was covered by an expansion of discounts with the Federal Reserve Banks. But in the downturn of 1930–1933, Federal Reserve Banks had been buying government securities instead of bank acceptances and banks had been using the funds to retire their acceptances. Reversing this policy to allow more acceptances so that additional collateral could be given to expand Federal Reserve Note issue would have entailed higher interest rates. After the easing of monetary policy by expanding open market operations in 1930 in a futile effort to boost production, the pressure for bank liquidation built and yet, the Fed had exhausted its capacity to inflate in the winter of 1931–1932. As a result, when it came, the bank liquidation was more dramatic and concentrated (Anderson 1979, pp. 258–267).

The constraint on Fed inflation was lifted with the Glass-Steagall Act, which became law on February 27, 1932. Authorized by the act to use government securities as collateral for the issue of Federal Reserve Notes, the Fed began what would become the nearly complete supplanting of other assets with government securities on its balance sheet.[2] From February 24 to May 18, bank reserves rose from $1.9 billion to $2.2 billion. Pressure on banks continued, however, despite the Fed's new inflationary powers because of the desire people themselves had to hold money. Money in circulation rose from $4.8 billion in August of 1931 to $5.2 billion in May 1932 and peaked in June at $5.4 billion (Anderson 1979, pp. 270–272).

The pressure on banks was regional and followed the lines of boom lending. Chicago banks were under the most distress in the winter of 1931–1932. After that crisis faded in the summer of 1932, banks in Detroit came under pressure in the winter of 1932–1933. Detroit had been the center of the boom in auto production and the site of a real estate bubble during the late 1920s. Despite tremendous efforts of New York banks and local industrialist to bail out banks in Detroit, the governor of Michigan declared a moratorium. The moratoria that swept across many states deviated from those in 1907, which permitted transfer of funds by check but no cash withdrawals. By allowing even small cash withdrawals, the country banks were made unmanageably illiquid and failed (Anderson 1979, pp. 285–290).

Rothbard (1972, pp. 191–193, 212–213, and 230–233) documented that the aggressive Fed expansion of bank reserves in the wake of the stock market crash generated a $1.8 billion increase in bank deposits in the last week of October 1929. The nearly 10 % increase in bank deposits was almost entirely issued by banks in New York City, $1.6 billion of the total $1.8 billion. By the end of 1929, the Fed's expansion of controlled reserves of $359 million had not quite offset the contraction

[2] In August of 1929, Bills Discounted made up 73 % of Reserve Bank Credit while U.S. Government Securities were 10 %. By August 1930, Bills Discounted had declined 80 % and made up only 20 % of the portfolio while Government Securities had increased fourfold and were 60 % of the Fed's portfolio. By August of 1932, Bills Discount had nearly doubled but made up only 19 % while Government Securities had tripled and were 79 %. By August of 1933, Government Securities constituted 97 % of the portfolio and dominated it from that point on. Compiled from Board of Governors of the Federal Reserve System 1943a.

of uncontrolled reserves of $381 million. Of the controlled reserves, the Fed purchased $375 million in securities. For 1930, member bank reserves rose $116 million but controlled reserves increased $209 million. Of the controlled reserves, the Fed bought another $218 million of government securities. The larger reserves did not stimulate the money stock, which stood at $73.32 at the end of 1929 and $73.27 billion at the end of 1930, as banks were rebuilding their liquidity. Monetary contraction was slight until the last quarter of 1931. Currency plus bank deposits fell from $53.6 billion at the end of 1930 to $52.9 billion on June 30, 1931 and then to $48.3 billion by the end of 1931. Over the year, the money stock fell from $73.2 billion to $68.2 billion with most of the decline in the latter part of the year. The Fed attempted to inflate through September, increasing controlled reserves by $195 million only to be overwhelmed by a decrease in uncontrolled reserves of $302 million. The decline in uncontrolled reserves coming mainly from the enormous $356 million increase in currency in circulation as people moved to shore up their liquidity. From the end of September to the end of the year, bank reserves fell $400 million, from $2.36 billion to $1.96 billion. Even though the Fed increased controlled reserves by $268 million, its attempt at re-inflation was inadequate as currency in circulation increased $400 million.

After passage of Glass-Steagall, the Fed engineered an enormous inflation (Rothbard 1972, pp. 266–272). Controlled reserves of the Fed increased by $1 billion from the end of February 1932 to the end of July as it bought $1.1 billion in securities. At the beginning of the inflation, bank reserves stood at $1.85 billion. By the end of the year, they had risen to $2.51 billion. The $660 million increase in 10 months was the largest in the history of the Federal Reserve System. Rothbard estimated that if the banks would have issued fiduciary media and created credit normally, the money stock would have increase by $8 billion. Instead, desperate for liquidity, banks began to build their reserve position.[3] As a consequence, the money stock declined during 1932 from $68.25 billion to $64.72 billion, with deposits accounting for $3.2 billion of the $3.5 billion decline. As Rothbard explained, "In a time of depression and financial crisis, banks will be reluctant to lend or invest, (a) to avoid endangering the confidence of their customers; and (b) to avoid the risk of lending to or investing in ventures that might default." When the Fed ceased its open market purchases in July, gold began to flow into the country again, rising by $539 million by the end of the year. Banks responded by further building their excess reserves, up to the level of 20 % of their total reserves.

Meltzer (2003, pp. 273–275) concurs that "the Fed was not entirely passive for the three and a half years of the decline. More than once it purchased securities or lowered the rediscount rate. . .. As noted by Wicker, Brunner and Meltzer, and Wheelock, Federal Reserve officials behaved consistently in the 1923–24, 1926–1927, and 1929–1933 declines." In the first two cases, the Fed's actions "had

[3] Excess reserves increased from $52 million in December 1929 to $773 million in December 1933 to $1,771 million in December 1934 to $2,955 million in December 1935. Compiled from Board of Governors of the Federal Reserve System 1943a.

received praise at the time and encouraged the belief that the system had taken countercyclical action to lessen the downturn."[4] Meltzer (2003 pp. 274–280) notes several economists and bankers at the time who argued that because monetary inflation and credit expansion of the late 1920s had led to asset price inflation and malinvestment, the correct policy for the Fed was to allow liquidation of the malinvestments and reallocation of capital. He cites Adolph Miller, Charles Hamlin, Paul Warburg, Lionel Robbins, and Oliver Sprague noting that there were "many other bankers and central bankers" who held this view.[5]

The Inflation of 1934–1937

In a similar way that he misinterpreted the monetary inflation and credit expansion of the 1920s as an engine of prosperity, Friedman approved of the tremendous inflation after 1933 as driving recovery. Instead, while the monetary inflation resulted in re-inflating the asset price bubbles and boosting nominal GNP, it did little to stimulate the real economy which was suppressed by the lack of investment.[6] The monetary inflation was driven by the Roosevelt administration's overvaluing gold which resulted in the "golden avalanche." From the revaluation of gold in February 1934 to October of 1941, the gold stock rose steadily from $7 billion to $22 billion. Member bank reserves rose from $2.9 billion in January 1934 to $14.4 billion in January 1941. Over the same period, excess reserves rose from $938 million to just under $7 billion. The tremendous build-up of reserves coincided with an increase in currency in circulation of $3 billion, from 1934 to 1940. Demand deposits in the banks increased from $15 billion at the beginning of 1934 to $35 billion at the end of 1940. The money stock (M1) grew from $19.8 billion at the beginning of 1934 to $42.3 billion at the end of 1940. M2 increased from $42.5 billion to $70.8 billion over the same period (Anderson 1979, pp. 401–405).

The Fed did nothing to counteract the inflationary impact of the gold inflow. Its controlled reserves, which consisted almost entirely of government securities, stood at $2.44 billion at the beginning of 1933, $2.43 billion at the beginning of 1937, $2.56 billion at the beginning of 1938, and $2.56 billion at the beginning of 1939.[7]

[4] See Wicker (1966), Brunner and Meltzer (1968), and Wheelock (1992).

[5] Anderson (1979, p. 146) also mentions H. Parker Willis. Rothbard (1972, pp. 276–277) mentions both Willis and Gottfried von Haberler.

[6] Gross Private Domestic Investment fell 80 % from January 1929 to January 1933. Twelve years later, it had still not recovered its 1929 level. Compiled from U.S. Department of Commerce 2013.

[7] Compiled from Board of Governors of the Federal Reserve System 1943b.

The Downturn of 1937–1938

By 1935, there was growing concern at the Fed about the further inflationary potential of the excess reserves piled up by banks. It did not sell securities to mop up the excess reserves and remove the potential, partly because of the foregone interest such a policy entailed. Instead, the Fed raised reserve requirement ratios on August 16, 1936 from 13 to 19.5 %, 10 to 15 %, and 7 to 10.5 % for central reserve city bank, reserve city banks, and country banks respectively. On March 1, 1937 reserve requirement ratios increased to 22.75, 17.5, and 12.25 %, respectively, and then to 26, 20, and 14 %, respectively, on May 1, 1937. The Fed then lowered the ratios back to 22.75, 17.5, and 12.25 respectively on April 26, 1938 where they remained until the Fed raised them to the May 1, 1937 level in November 1941 (Anderson 1979, pp. 405–406).

Contrary to Friedman's claim, banks did not respond to the higher reserve requirement ratios by reducing their loans to build their excess reserves back to the proportion they had of total reserves before the change in Fed policy. The trend of increasing total reserves in the banks was slower after 1936 than before 1936. In the 2 years before the Fed starting raising reserve requirement ratios, member bank reserves increased 53 % from $4.045 billion in August 1934 to $6.181billion in August of 1936. In the following 2 years they increased 32 % to $8.119 billion in August of 1938. Moreover, banks did not begin decreasing their loan portfolios until after the economy slumped. Member bank loans rose from their trough of $11.841 billion on November 1, 1935 to their peak of $14.285 billion on June 30, 1937. From that level they fell to $12.937 billion on September 28, 1938 and rose thereafter.[8] According to the NBER, the downturn began in May of 1937, nearly 2 months before the loan contraction began. Additionally, the credit crunch was associated with falling and low interest rates, not rising and high rates. Anderson noted that rates on consumer loans and Treasury bills fell from mid-1936 to mid-1937 and other rates remained at historically low levels. The decreased quantity of loans was driven, therefore, by declining demand for credit not declining supply which would have increased rates. Finally, the credit contraction did not generate a significant monetary deflation. Currency plus demand deposits hit a peak of $30.69 billion in June 1937, fell to its trough of $29.60 billion in December 1937, then rose to $29.73 in June 1938 and to $31.76 in December 1938. Currency plus total deposits peaked at $57.23 billion in December 1937, fell to its trough of $56.57 billion in June 1938, then rose to $58.96 billion in December 1938.[9] The consumer price index rose to a peak in October 1937, then fell 5.5 % to its trough in April 1939. The producer price index for all commodities rose to a peak in July 1937, then fell 15 % to its trough in August 1939. [10] Even though the period of price deflation was only at its halfway mark, continuing until

[8] Compiled from Board of Governors of the Federal Reserve System 1943a.

[9] Compiled from Board of Governors of the Federal Reserve System 1943a.

[10] Compiled from Bureau of Labor Statistics 2013a, b.

April 1939 for the CPI and August 1939 for the PPI, the NBER dates the end of the downturn in June 1938 a year before the period of price deflation reached its end. Given that the money stock was not declining significantly, the price deflation was being driven by an increase demand for money holdings.

Demand for credit was declining and demand for money rising because of a wave of uncertainty washing over investors. The cause of the pullback by investors was the Roosevelt administration's renewed assault on the market economy. The Supreme Court had reversed itself and declared major components of the New Deal constitutional after 1935, Roosevelt renewed his rhetorical attack on "economic royalists" during the 1936 campaign, and congress had raised taxes and passed burdensome labor legislation. Anderson (1979, pp. 432–438) noted the vigorous labor union activity after the election of 1936 and the resulting boost in wages, which cut into business profits and suppressed investment.[11]

Conclusion

The monetary inflation and credit expansion generated by the Federal Reserve during the 1920s resulted in malinvestments of capital capacity and misallocation of resources throughout the economy. For the economy to recover its normal operation, the malinvestments and misallocations needed to be corrected. The Fed could have facilitated the processes by adopting a policy of neither inflating nor deflating the money stock. Such a stance would have eliminated the additional consequences of the vagaries of its actual policy on the structure of prices. Instead, the Fed attempted a vigorous monetary inflation after the financial crisis began in October 1929, followed by inaction during 1931, and then the most rapid monetary inflation ever engineered by the Fed to that point in history in 1932. Moreover, the price deflation of 1930–1933 did not, by itself, suppress economic activity. The Fed intentionally contracted the money stock before the downturn of 1920–1921 and even though the ensuing price deflation was commensurate in size with that of 1930–1933, it was allowed to run its course. A deep, but short downturn was sufficient to correct the malinvestments and misallocations induced by Fed generated monetary inflation and credit expansion prior to 1920. It was over in less than 18 months. In contrast, the Hoover administration policies prolonged the price deflation for four long years in a vain effort to arrest the corrective process. Lee Ohanian (2009) has estimated that "the recession was three times worse—at a minimum—than it otherwise would have been because of Hoover." He estimates that Hoover's policies resulted in two-thirds of the decline (18 percentage points of the total 27 % points) in GDP from 1930 to the end of 1931.[12]

[11] For more on the factors suppressing investment, see Smiley (2002, pp. 105–132).

[12] Also, on Hoover's policies, see Rothbard (1972) and Salerno (2009).

The Fed's vigorous inflationary policy of 1932 began a period of sharp monetary inflation that lasted until 1936. After the spring of 1934, it was driven by the "golden avalanche." Despite ample assets to make open market sales, the Fed did nothing to arrest the monetary inflation. By the end of 1935, asset prices had been re-inflated. The Fed's policy of raising required reserve ratios beginning in 1936 prevented banks from issuing even more fiduciary media than they otherwise could with their now diminished, but still significant, excess reserves. The banks continued to build their reserves but at a slower rate after the summer of 1936 than before. The collapse of bank lending came from investors, not banks, who pulled back in the wake of increasing federal government intervention into the economy after the Supreme Court ratification of various New Deal programs beginning in 1935.

As Robert Higgs (1997) has argued, what distinguished the Great Depression from other downturns in American history was the dearth of private investment. Higgs calculates that net private investment fell from $8.3 billion in 1929 to $2.3 billion in 1930 and then was negative for the next 5 years, recovering to positive figures in 1936 and 1937 before slipping negative again in 1938. For the 11 year period, from the beginning of 1930 to the end of 1940, net private investment was a negative $3.1 billion. Investors withdrew and sat on the sidelines because the administrations of Hoover and Roosevelt had made uncertain the final configuration of the regime under which business would operate. The Banking Act of 1935 was one of a number of measures centralizing power in the Federal government with difficult to anticipate consequences on the character of the political regime. Coupled with other significant measures, such as the National Labor Relations Act and the Social Security Act in 1935 and the Revenue Acts of 1935, 1936, and 1937, the Banking Act of 1935 added to the difficulty of entrepreneurial anticipation of the final configuration of the pattern of government intervention into business enterprise. Investors pulled back in the face of regime uncertainty and the ensuing capital consumption suppressed production for over a decade.

The Fed's culpability for the Great Depression was in inflating the money stock through credit expansion in the 1920s and allowing the money stock to expand from 1934–1936. These inflations generated malinvestments throughout the capital structure of the economy making corrective downturns necessary. The depth and duration of the Great Depression was the result of misguided efforts by the Hoover and Roosevelt administrations to arrest the corrective process and not monetary contraction.

References

Anderson B (1979) Economics and the public welfare. Liberty Press, Indianapolis, IN

Board of Governors of the Federal Reserve System (1943a) Banking and monetary statistics 1914–1941: Section 1. Available at http://fraser.stlouisfed.org/docs/publications/bms/1914-1941/section1.pdf

Board of Governors of the Federal Reserve System (1943b) Banking and monetary statistics 1914–1941: Section 9. Available at http://fraser.stlouisfed.org/docs/publications/bms/1914-1941/section9.pdf
Brunner K, Meltzer A (1968) What did we learn from the monetary experiences of the United States in the great depression. Can J Econ 1:334–348
Bureau of Labor Statistics (2013a) Consumer price index. Available at http://research.stlouisfed.org/fred2/data/CPIAUCNS.txt
Bureau of Labor Statistics (2013b) Producer price index: all commodities. Available at http://research.stlouisfed.org/fred2/data/PPIACO.txt
Friedman M, Swartz A (1963) A monetary history of the United States, 1867–1960. Princeton University Press, Princeton, NJ
Higgs R (1997) Regime uncertainty: why the great depression lasted so long and why prosperity returned after the war. Independent Rev 1(4):561–590
Meltzer A (2003) A history of the Federal Reserve, vol 1: 1913–1951. University of Chicago Press, Chicago, IL
Ohanian L (2009) What—or who—started the great depression. J Econ Theory 144(6):2310–2335
Phillips CA, McManus TF, Nelson RW (2007) Banking and the business cycle. Mises Institute, Auburn, AL
Pongracic I Jr (2007) The great depression according to milton friedman. The Freeman, September, 21–27
Rothbard M (1972) America's great depression. Sheed and Ward, Kansas City
Salerno J (1999) Money and gold in the 1920s and 1930s: an Austrian view. The Freeman, October, 31–40
Salerno J (2009) Rothbard vindicated. Mises Daily, 4 September
Smiley G (2002) Rethinking the great depression. Ivan R. Dee, Chicago, IL
Timberlake R (1999a) Money in the 1920s and 1930s. The Freeman, April, 37–42
Timberlake R (1999b) Gold policy in the 1930s. The Freeman, May, 36–41
Timberlake R (1999c) The reserve requirement debacle of 1935–1938, June, 23–29
US Department of Commerce (2013) Gross private domestic investment. Available at http://research.stlouisfed.org/fred2/data/GPDIA.txt
Wheelock D (1992) Monetary policy in the great depression: what the fed did and why. Review of the Federal Reserve Bank of St. Louis 77: 27–38
Wicker E (1966) Federal Reserve monetary policy, 1913–1933. Random House, New York
Woods T (2009) Warren Harding and the forgotten depression of 1920. Intercollegiate Rev 44 (2):22–29

The Federal Reserve: Reality Trumps Rhetoric

Shawn Ritenour

Robert Higgs (1987) has made a brilliant career of showing how the state makes good use of crises both real and perceived by centralizing and accumulating power to itself. The advent of the Federal Reserve is the quintessential example of this phenomenon of political economy. The Panic of 1907 opened the door for the creation of a central bank, as various bankers, intellectuals, and politicians cited the Panic to make a case for the benefits of central banking. Beginning with the now modest claim that a central bank would make financial panics obsolete by ensuring an elastic currency, over the past 100 years, Fed rhetoric has escalated so that the masses are now assured that our central bank is absolutely indispensable for the smooth functioning of the entire social economy. In light of the history of Federal Reserve activity and its consequences, Fed rhetoric was wrong at every point. Rather than promoting stability, Federal Reserve monetary policy has resulted in economic destruction: massive price inflation, the consequential withering away of the dollar's purchasing power, and the worst financial panics and depressions in the history of the United States.

Origin of the Federal Reserve

While the origins of central banking in the United States can be traced back to the 1781 chartering of the First Bank of North America, the Federal Reserve specifically arose out of the instability in the banking, financial, and monetary system created by the National Banking Acts of 1863 and 1864 (Rothbard 2008, pp. 191–234). The individualized structure of the pre-Civil War state banking system was replaced by a more centralized inverted pyramid of country banks expanding bank notes and deposits on top of reserve city banks, which in turn expanded on top of

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New York City banks. Not surprisingly, however, increasing inflation via credit expansion resulted in the recurring financial panics of 1873, 1884, 1893, and 1907, which were the necessary consequence of reserve pyramiding and excessive deposit creation by commercial banks. (Rothbard 2008, pp. 229–230).

The Fed was ostensibly designed to rectify defects in the national banking system that were revealed in the Panic of 1907 (Beckhart 1922, pp. 11–15). Several influential economists, academics, and financial experts soon began promoting the idea that financial and commercial panics were due to a lack of centralized and coordinated banking activity, rigidity and immobility of reserves, and inelasticity of National Bank notes (Weston 1922). Such ideology won the day with the Federal Reserve Act of 1913 being passed by Congress and signed into law by President Woodrow Wilson.

Federal Reserve Rhetoric

Throughout the existence of the Fed, its officers and intellectual supporters understandably asserted that the government's movement toward central banking was a most beneficial evolution. In *The Federal Reserve Bulletin*, for example, Fed Chairman Thomas B. McCabe (1948, p. 1340) asserted that money production could not manage itself, so we need a central bank such as the Fed that acts for the public interest. Nearly three decades later, the veritable Arthur Burns (1973a, p. 4) claimed that the basic assets of the Fed are concern for the general welfare, moral integrity, respect for tested knowledge, and independence of thought.

The alleged benefits from a Fed-managed elastic money stock became the standard justification for the Fed in later propaganda. In 1948 Fed Chairman McCabe (1948, p. 1340) asserted that a lack of a central bank caused a continual threat of financial panic, but the Fed put an end to this danger—a rather cheeky claim to make only a few years after the Great Depression. Subsequent Fed Chairman William McChesney Martin (1951, 1954) claimed that the Fed was designed to minimize panics and crises due to irregularities in flow of money supply, make the monetary system function more smoothly, but that a gold standard was too rigid.

In 2013 Chairman Ben Bernanke (2013, pp. 12–13) likewise said told college students that "financial stability concerns were a major reason why Congress decided to try to create a central bank in the beginning of the twentieth century. Since the gold standard determines the money supply, there's not much scope for the central bank to use monetary policy just to stabilize the economy." The removal of the monetary system from political control, however, is the chief virtue of the gold standard (Mises 1953, p. 413).

Claims that the Fed would merely provide an elastic currency quickly morphed into claims that the Fed would serve the American people by achieving price stability and then ultimately broadened its claim that monetary policy can achieve full-orbed macroeconomic and financial stability. If money supply increases at the

same rate of volume of trade, it was argued, there is no inflation or deflation. By 1947, the Board of Governors (1947, p. 1) explained to the public that "over the years the System has developed a broader objective, namely, to help prevent inflations and deflations, and to do its share in creating conditions favorable to sustained high employment, stable values, and a rising level of consumption." This broadened set of goals was corroborated by subsequent Fed Chairmen Marriner S. Eccles (1949a) and Martin (1953, p. 2, 1954, p. 8, 1964, pp. 5, 9) During the early 1970s Chairman Burns (1973a, p. 6) claimed that the Fed bore heavy responsibility for economic stability. Alan Greenspan (1988, pp. 2–5) made similar public assertions. Finally, Ben Bernanke (2013, pp. 4–5) repeated that the Fed fosters macroeconomic and financial stability by tempering the business cycle, promoting economic growth, keeping inflation low and steady and by warding off financial panics and crises.

From the mid-1940s the Fed painted itself as a veritable Prince Saint George protecting us from the inflation dragon. Fed officials saw inflation as a significant problem after WWII (Eccles 1947; McCabe 1948). In 1951 Fed Chairman Martin began using combative language while exhorting the American Bankers Association, "It will require real courage, vision, toughness, and stamina to continue this laudatory fight against inflation" (Martin 1951, p. 3).

Significantly, however, they at most saw the Fed as a passive channel through which inflation merely happened. Chairman Martin (1954, p. 10, 1958) justified the need to restrain price inflation because it leads to recession and provided a competent empirical description of business cycles, noting that recession follows price-inflationary booms. Unfortunately he provided no causal explanation for why this is so.

During the beginnings of the great inflation of the 1970s, Fed Chairman Aurthur Burns viewed price inflation as the product of many proximate causes, none of which was admitted to be an increase in the money supply (Burns 1973a, p. 8). The frightening price inflation experienced during the late 1970s led to escalation of militaristic rhetoric. Inflation was a terrible problem that needed conquering (Miller 1978). Before the Commonwealth Club of California, Fed Chairman Miller sounded as if he was rallying the troups:

> "We now face a crucial period in this struggle. The war against inflation has been set back temporarily by another oil price shock. America is being sorely tested. We now need to demonstrate forcefully our will and determination to stay on course despite the prospect of a delay in our timetable—perhaps by a year or more—for wringing out inflation" (Miller 1979, p. 1).

In 1981 Paul Volcker tagged price inflation as "public enemy number one" (Volker 1981, p. 13).

The history of the Fed is also, ironically, scattered with rhetoric asserting the Fed also protects us from deflation. As early as 1920, the Federal Reserve Board (1920, p. 72) was arguing that the price inflation following WW I must be checked, but not with deflation for deflation's sake. Soon after WW II Chairman Eccles (1948) consoled in a letter that massive deflation of national income and corresponding

unemployment by 2/3 would result in revolution, so the government would not allow that to happen.

The Fed, however, became most acutely afraid of deflation during the 2000s. Ben Bernanke, deflation-phobe *par excellence*, while he was still merely a governor of the New York Fed began warning of the dangers of what every shopper at Walmart craves—lower prices. He asserted that price deflation of as little as 1 % per year has been associated with painfully slow growth, rising joblessness, and intractable financial problems, and was also an important negative factor in the Japanese slump. Bernanke assured his listeners that the Fed will take whatever means necessary to combat deflation (Bernanke 2002, pp. 1–2). In 2006 for the first time the Fed made it explicit that price inflation that is too low is as undesirable as price inflation that is too high (Bernanke 2006, pp. 1–2). The Fed's previous policy of price stability morphed into inflation stability due to apoplithorismosphobia—the fear that "an economy would 'suffer' from falling prices" (Thornton 2003).

To achieve the end of macroeconomic stability, Fed officials have argued over the years that conscious control and management of the monetary system by the central bank is a necessity. As early as 1934 Fed Governor Eccles (1934, pp. 2–4) argued that the Fed needed to avoid two things in the future: that recovery does not lead to inflation and that recovery does not lead to recession. In a 1937 statement that would fill any Keynesian, monetarist, and market monetarist with approval, Eccles declared that easy money is needed to get us out of depression, not tight money (Eccles 1937). Eccles (1949a, b) was still stressing to Congress that the country needs *someone* to carry out centralized monetary policy in 1949 Congressional subcommittee testimony. One year earlier the Chairman of Fed, Thomas B. McCabe merely asserted that money production cannot manage itself and that we needed the Fed as a lender of last resort (McCabe 1948, pp. 1340–1341).

Such rhetoric continued into the 1950s. In various public addresses Chairman Martin (1951, 1953, pp. 3–5) asserted that the Fed is indispensable for maintaining sound money.

Almost 20 years later, Chairman Arthur Burns was making similar claims. He told the 1973 International Monetary Conference that good monetary management by the Fed is "indispensable" in dealing with inflation without plunging the economy into recession, while at the same time admits that monetary policy might not be enough to accomplish this end (Burns 1973b, p. 1–3).

Indeed, from the beginning, apologists have claimed its actions are so efficacious as to make financial crises obsolete. In the Secretary of the Treasury's first annual report after the first full year of Fed operation, the Comptroller of the Currency was optimistic to the point of rapture. The Federal Reserve Act "supplies a circulating medium absolutely safe, which will command its face value in all parts of the country, and which is sufficiently elastic to meet readily the periodical demands for additional currency." Therefore "such financial and commercial crises, or 'panics,' as the country experienced in 1873, in 1893, and again in 1907, with their attendant misfortunes and prostrations, seem to be mathematically impossible" (Secretary of the Treasury 1915, p. 479). Before the Industrial College of the Armed Forces in 1953, Chairman Martin (1953, pp. 8–9) likewise declared victory, claiming that the

Fed had succeeded doing what it was created for: maintaining an elastic money supply and efficient distribution of bank reserves. Over 40 years later, Fed Chairman Volcker assured ABC News that because of the protections in our financial system and economic policy, he did not worry about revisiting Great Depression conditions while trying to reduce double-digit inflation (Volker 1979, p. 3).

Although Fed officials sometimes, albeit rarely, recognized the empirical reality that recessions followed inflations, they have staunchly failed to take responsibility for the destructive recessions that Fed-induced inflation is responsible for generating. They tend to view depressions as things that are exogenous and that the Fed needs to respond to rather than put in motion. The Fed-backed banking system is never recognized as being responsible for inflationary booms that necessarily result in recessions. In the midst of the Great Depression, for example, Fed chairman Eccles sought to deflect blame by asserting that the banking system and Fed was no more responsible for the Great Depression than any other institution in our capitalistic economy (Eccles 1933, p. 12). If the Fed was guilty, he seemed to imply, so was all of capitalism.

Since Friedman and Schwartz's *A Monetary History of the United States, 1867–1960* (Friedman and Schwartz 1963) Fed officials begrudgingly began citing the Fed for not being inflationary enough in response to the early stages of recessions, thereby allowing them to last longer and become more destructive. In a now famous remark accepting culpability for the Great Depression, then Fed Governor Bernanke quipped to Milton Friedman, "You're right, we did it. We're very sorry. But thanks to you, we won't do it again" (Bernanke 2002).

Federal Reserve Reality

Alas, from the beginning reality diverged from Fed rhetoric. What the Fed claimed it did and would do sharply differed from what it actually did and from the consequences of its actions. Instead of preventing and ameliorating crises, it caused and aggravated them. Instead of fighting inflation, it was inflation's fountainhead. Instead of remaining politically independent, it served politicians.

While it was originally claimed that the Fed would make financial and economic crises impossible by supplying an elastic money stock, in reality, from the beginning the Federal Reserve System was deliberately designed as an engine of inflation to be controlled and kept uniform by the central bank.

It turns out that Elihu Root was right when, during Congressional debate of the Federal Reserve Act he warned that, regarding the money supply, Fed operations would result in all expansion and no contraction (Groseclose [1980] 2009, pp. 108–109). This occurred because the new regulatory structure under the Fed entirely favored monetary expansion (Rothbard 2008, pp. 235–246; Groseclose [1980] 2009, pp. 144–148; Secretary of the Treasury 1915, pp. 479–480).

In the first place, only the Federal Reserve Banks could print paper notes. The member commercial banks, no longer able to print bank notes, could only buy them

from the Fed by drawing down their deposit accounts at the central bank. The Fed, therefore, was now the single base of the entire banking pyramid. Gold was expected to be centralized at the Fed which could issue either $2.86 in deposits or $2.5 in bank notes for every dollar of gold in reserve.

All national banks were forced to become members of the Federal Reserve System while state-chartered banks had a voluntary choice. Nonmembers could be manipulated, however, because in order to get cash for their customers, they had to keep deposit accounts with member banks that had access to the Fed.

In a few years, the Fed adopted the policy of withdrawing gold certificates from circulation and substituting Federal Reserve Notes. They only had to be backed 40 % by gold certificates which meant that 60 % of the released gold was available as a base on which to pyramid an even larger multiple of bank money. Such a centralized organizational structure, therefore, greatly reduced competition between banks, removing an important check on monetary inflation in a fractional reserve setting (Rothbard 2008, pp. 132–134).

Additionally, the Federal Reserve Act lowered reserve requirements against deposits. On demand deposits, legal reserve requirements for central reserve city banks, reserve city banks, and country banks were lowered to 18, 15, and 12 % respectively. On time deposits the legal reserve ratio was lowered to 5 % for all classes of banks. The 1917 amendment of Fed Reserve Act lowered reserve requirements again. Such moves helped destabilize the banking system by allowing for more monetary inflation, as banks moved toward holding more of their assets in the form of time deposits to take advantage of the lower legal reserve ratio (Anderson 1979, p. 46).

The consequences of these institutional changes were striking. Primarily aided by lower reserve requirements, the Fed tremendously expanded credit during WW I relative to previous banking history (Anderson 1979, pp. 45–47, 56). Bank loans and investments as well as deposits both doubled between 1914 and 1920 (Phillips et al. [1937] 2007, p. 20). In fact, the increase in deposits during this period was greater than the total increase in deposits in the entire history of the United States banking system up until 1914. Not surprisingly, wholesale prices increased by 144 % from 1915 to 1920. As noted by Phillips, McManus, and Nelson:

> Had it not been for the creation of the Federal Reserve System, there would have been a limit to the expansion of bank credit during the War that would speedily have been reached- the ratio of reserves to deposit liabilities would have fallen to the legal minimum and prevented the further expansion of deposit credit, unless new reserves were acquired in some manner. The establishment of the Federal Reserve System, with its pooling and economizing of reserves, thus permitting a greater credit expansion on a given reserve base, had the practical effect of an acquisition of new reserves for the banking system. The credit-expansion powers of the available reserves were magnified several times by the provisions of the Federal Reserve Act (Phillips et al. [1937] 2007, p. 23).

In the 1920s the monetary inflation process was pushed along by the Fed's foray into open market operations. The Fed made "gigantic" and extended open market purchases of Treasury bonds in the 1920s (Anderson 1979, pp. 155–157). Such credit expansion by the Fed led to large increases in commercial bank reserves

which lead to great monetary inflation 1922–1929 (Phillips et al. [1937] 2007, pp. 79–91; Anderson 1979, pp. 144–150). This in turn facilitated both direct and security "investment inflation" (Phillips et al. [1937] 2007, pp. 103–114). Member bank investments increased 67 % from 1921 through 1929 while loans on securities increased by 129 % and loans on urban real estate increased 214 %.

After World War II the Fed actively sought to reduce interest rates in order to assist the U. S. Treasury in floating its debt. In doing so, it was essentially monetizing government debt. Post-World War II inflation was further helped along by an additional reduction in legal reserve requirements in 1948. So much so, Timberlake (1993) claims, that while the monetary base increased at a relatively slow annual rate, the money stock increased much more rapidly. Indeed, the M1 money supply, made up of bank deposits and currency in circulation increased from $180 billion at the end of 1945 to $300 billion at the end of 1963. The Fed continued its monetizing ways through the 1960s, as it accumulated U. S. Debt up to $43.3 billion by 1967 (Timberlake 1993, pp. 328–331).

U. S. economic history clearly refutes the notion that the Fed merely maintained an elastic currency to satisfy only the needs of commerce. If that were so, one would expect no necessary long-term trend toward increasing inflation, yet that is what we see. The rate of annual increase of the monetary base has increased with each inflation-enhancing institutional change in our monetary system. From 1918 through 1933, the year Roosevelt took us off the domestic gold standard, the monetary base increased at an average annual rate of approximately 2.2 %. From 1933 to 1971, when Nixon took the dollar off the last vestiges of the international gold standard, the monetary base increased at an average annual rate of 6.4 %. After we left gold for good, the Fed increased the monetary base at an average annual rate of 9.8 %.

The money stock followed suit. Since the advent of the Fed, M2 money stock increased by $10,006.4 billion in 2012. That is over a 452 % increase during the life of the Fed.

As one might expect as the money supply increased continually the over past century, the purchasing power of the dollar collapsed relative to what it was the century before the Fed. The consumer price index was 22.8 times higher in June 2013 than in January of 1913.

From 1800 to about 1895, the purchasing power of the dollar roughly doubled. Then, as prices began their long march up after the advent of the Fed, the dollar's purchasing power began its long slide downward, culminating in a PPM of approximately 8 cents in 2009 compared to the dollar of 1800. So much for maintaining the value of the dollar, stable prices, and manipulating the money supply only for the needs of commerce.

In light of the historical record, concerns about price deflation should be laughable. Noticeable price deflation has occurred only three times over the past 100 years. The Fed allowed for price deflation in the wake of the 1920–1921 recession, which is why it was over so quickly (Anderson 1979, pp. 79–91; Murphy 2009). It was ineffective in stopping monetary and price deflation in 1931–1933

even though it was not for lack of trying (Rothbard [1963] 2000, pp. 214–216, 239–241, 260–263; Salerno 2010).

Indeed the financial meltdown of 2008 is merely the most recent economic debacle fostered by the Fed. Less than 8 years after its origin, a Fed-induced inflationary boom set in motion the recession of 1920–1922 (Anderson 1979; Phillips et al. [1937] 2007). Likewise, Fed inflation in the mid-to-late 1920s ushered in the recession that turned in to the Great Depression (Anderson 1979; Phillips et al. [1937] 2007, pp. 78–174; Rothbard [1963] 2000). After World War II the Fed oversaw inflation and recession during the 1950s. By 1963 Fed-backed inflation so far outstripped the the U.S. stock of gold that it was nowhere near large enough to cover our obligations under the Bretton Woods system. The situation was so bad, in fact, that the U.S. Treasury was compelled to borrow abroad in money other than dollars because of foreign lack of confidence in U. S. currency (Groseclose [1980] 2009, pp. 237–238). The Fed prevented neither the stock market crash of 1987 nor the collapse of the hedge fund Long Term Capital Management. Immediately after the great stock market crash of 1987, then new Federal Reserve Chairman Greenspan, assured investors that the Fed stood ready to provide whatever liquidity was necessary to keep the markets afloat. The Fed's solution to the 1990's recession and Mexican Peso crisis was more of the same—monetary inflation via credit expansion.

Investors flush with new cash were looking for opportunities and became hip to the next big thing: technology and the internet. Fed inflation in the 1990s lead to the tech-stock bubble and subsequent recession of 2000 (Callahan and Garrison 2003). The Fed again responded by doing what it does best: assuring investors, expanding credit and increasing the money supply and repeated its "accommodation" after the 9/11 terrorist attacks. Many investors, bitten by the tech crash and induced by various lending regulations, directed their new money into real estate and then mortgage backed securities and financial derivatives based on these securities. Capital was malinvested again resulting in the Great Recession and the worst of crony capitalism (Ravier and Lewin 2012; Salerno 2012; Stockman 2013; Woods 2009). Economic history demonstrates that not only has the Fed not provided economic stability, again and again it has introduced instability and economic destruction through its inflationary credit expansion and interest rate manipulation.

Conclusion

For a 100 years the Fed has proclaimed its economic indispensability. The picture it paints of a world without the Fed is a dystopian one in which society is left lurching from recession to recession, alternately experiencing runaway inflation and high unemployment. Thanks to the Fed, it is claimed, we instead enjoy sound money, fewer recessions, high employment, stable prices, and increased standards of living. In other words, the Fed is absolutely necessary for full-orbed macroeconomic stability.

Economic reality teaches a vastly different lesson, however, because the laws of economics have a way of impinging on statist rhetoric. The history of the Fed has been one of monetary inflation, higher overall prices, diminished purchasing power, economic depressions, and lost decades. In 1913 the state sowed the inflationist wind and for a 100 years we have been reaping the economic whirlwind.

References

Anderson BM (1979) Economics and the public welfare, 2nd edn. Liberty Press, Indianapolis, IN

Beckhart BH (1922) Outline of banking history: from the first bank of the United States through the Panic of 1907. In: Welton AD, Crennan CH (eds) The Federal Reserve System—its purpose and work. The American Academy of Political and Social Science, Philadelphia, PA, pp 1–16

Bernanke BS (2002) Deflation: making sure 'it' doesn't happen here. [Online] Available at: https://fraser.stlouisfed.org/docs/historical/bernanke/bernanke_20021121.pdf. Accessed 18 June 2013

Bernanke BS (2006) Reflections on the yield curve and monetary policy. [Online] Available at: http://fraser.stlouisfed.org/docs/historical/bernanke/bernanke_20060320.pdf. Accessed 18 June 2013

Bernanke BS (2013) Origins and mission of the Federal Reserve. [Online] Available at: http://www.federalreserve.gov/newsevents/lectures/origins-and-mission.htm. Accessed 26 June 2013

Board of Governors of the Federal Reserve System (1947) The Federal Reserve System: its purposes and functions, 2nd edn. Board of Governors of the Federal Reserve System, Washington, DC

Burns AF (1973a) Objectives and responsibilities of the Federal Reserve System. [Online] Available at: http://fraser.stlouisfed.org/docs/historical/burns/Burns_19730908.pdf. Accessed 5 July 2013

Burns AF (1973b) Some problems of central banking. [Online] Available at: http://fraser.stlouisfed.org/docs/historical/burns/Burns_19730606.pdf. Accessed 24 June 2013

Callahan G, Garrison RW (2003) Does Austrian theory help explain the Dod-Com boom and bust? Q J Austrian Econ 6(2):67–98

Eccles MS (1933) Reconstructing economic thinking. In: Utah Education Association Bulletin. Utah Education Association, Salt Lake City, UT, pp 11–20

Eccles MS (1934) Remarks of Mr. Marriner S. Eccles, Governor of the Federal Reserve Board, at a meeting of the Federal Reserve Board with representatives of the industrial advisory committees. [Online] Available at: http://fraser.stlouisfed.org/docs/historical/eccles/074_06_0001.pdf. Accessed 21 June 2013

Eccles MS (1937) Statement of chairman Eccles with reference to his position on credit and moentary policies. [Online] Available at: http://fraser.stlouisfed.org/docs/historical/eccles/092_06_0003.pdf. Accessed 21 June 2013

Eccles MS (1947) The current inflation problem—causes and controls. [Online] Available at: http://fraser.stlouisfed.org/docs/historical/eccles/069_01_0008.pdf. Accessed 21 June 2013

Eccles MS (1948) Letter to Don T. Kyle. [Online] Available at: http://fraser.stlouisfed.org/docs/historical/eccles/068_11_0007.pdf. Accessed 18 June 2013

Eccles MS (1949a) Purposes and functions of the Federal Reserve System. [Online] Available at: http://fraser.stlouisfed.org/docs/historical/eccles/082_01_0001.pdf. Accessed 24 June 2013

Eccles MS (1949b) Statement of Marriner S. Eccles before the subcommittee on monetary, credit and fiscal policies of the joint committee on the economic report. [Online] Available at: http://fraser.stlouisfed.org/docs/historical/eccles/070_02_0003.pdf. Accessed 21 June 2013

Federal Reserve Board (1920) Sixth annual report of the Federal Reserve Board. Government Printing Office, Washington, DC

Friedman M, Schwartz A (1963) A monetary history of the United States, 1867–1960. Princeton University Press, Princeton, NJ

Greenspan A (1988) The crash of October 1987: 14 months later. [Online] Available at: https://fraser.stlouisfed.org/docs/historical/greenspan/greenspan_19881228.pdf. Accessed 18 June 2013
Groseclose E [1980] 2009 America's money machine: the story of the Federal Reserve. The Ludwig von Mises Institute, Auburn, AL
Higgs R (1987) Crisis and Leviathan: critical episodes in the growth of American Government. Oxford University Press, New York, NY
Martin WMJ (1951) Our Federal Reserve System. [Online] Available at: http://fraser.stlouisfed.org/docs/historical/martin/martin51_1002.pdf. Accessed 21 June 2013
Martin WMJ (1953) The role of the federal reserve system. [Online] Available at: http://fraser.stlouisfed.org/docs/historical/martin/martin53_0121.pdf. Accessed 21 June 2013
Martin WMJ (1954) Monetary policy and the federal reserve system. [Online] Available at: http://fraser.stlouisfed.org/docs/historical/martin/martin54_0408.pdf. Accessed 21 June 2013
Martin WMJ (1958) The battle against recession. [Online] Available at: http://fraser.stlouisfed.org/docs/historical/martin/martin58_0422.pdf. Accessed 24 June 2013
Martin WMJ (1964) Our American economy and the Federal Reserve System. [Online] Available at: http://fraser.stlouisfed.org/docs/historical/martin/martin64_0730.pdf. Accessed 24 June 2013
McCabe TB (1948) The significance of membership in the Federal Reserve System. Federal Reserve Bulletin, November, pp 1339–1343
Miller CW (1978) Speech given before the National Press Club. The American Banker, 12 June, pp 4–9
Miller CW (1979) New directions: strategy for economic progress. [Online] Available at: https://fraser.stlouisfed.org/docs/historical/miller/Miller_19790719.pdf. Accessed 18 June 2013
Mises L (1953) The theory of money and credit. Yale University Press, New Haven, CT
Murphy RP (2009) The depression you've never heard of: 1920–1921. Freeman 59(10):24–26
Phillips CA, McManus TF, Nelson RW [1937] 2007 Banking and the business cycle: a study of the great depression in the United States. The Ludwig von Mises Institute, Auburn, AL
Ravier A, Lewin P (2012) The subprime crisis. Q J Austrian Econ 15(1):45–74
Rothbard MN (2000) America's great depression, 5th edn. The Ludwig von Mises Institute, Auburn, AL
Rothbard MN (2008) The mystery of banking, 2nd edn. The Ludwig von Mises Institute, Auburn, AL
Salerno JT (2010) Money and gold in the 1920s and 1930s. In: Salerno, JT (2010) Money sound and unsound. The Ludwig von Mises Institute, Auburn, AL, pp 431–449
Salerno JT (2012) A reformulation of Austrian business cycle theory in light of the financial crisis. Q J Austrian Econ 15(1):3–44
Secretary of the Treasury (1915) Annual report of the secretary of the treasury on the state of the finances for the fiscal year ended June 30, 1914. Government Printing Office, Washington, DC
Stockman DA (2013) The great deformation: the corruption of capitalism in America. Public Affairs, New York, NY
Thornton M (2003) Apoplithorismosphobia. Q J Austrian Econ 6(4):5–18
Timberlake RH (1993) Monetary policy in the United States: an intellectual and institutional history. The Chicago University Press, Chicago, IL
Volcker P (1979) ABC news 'issues and answers'. [Online] Available at: https://fraser.stlouisfed.org/docs/historical/volcker/Volcker_19791029.pdf. Accessed 18 June 2013
Volcker P (1981) Dealing with inflation: obstacles and opportunities. [Online] Available at: https://fraser.stlouisfed.org/docs/historical/volcker/Volcker_19810415.pdf. Accessed 18 June 2013
Weston NA (1922) The studies of the national monetary commission. In: Welton AD, Crennan CH (eds) The Federal Reserve System—its purpose and work. The American Academy of Political and Social Science, Philadelphia, PA, pp 17–26
Woods TFJ (2009) Meltdown: a free-market look at why the stock market collapsed, the economy tanked, and government bailouts will make things worse. Regnery Publishing, Inc., Washington, DC

A Fraudulent Legend: The Myth of the Independent Fed

Thomas DiLorenzo

> *[E]very aspect of this mythology [Fed independence] is the very reverse of the truth. We cannot think straight about money, banking, or the Federal Reserve until this fraudulent legend has been exposed and demolished.*
>
> Murray N. Rothbard, *The Case Against the Fed*

The idea that the Fed is, and ought to be, independent of politics is part of the ideological legacy of the "Progressive Era" of the early twentieth century. In order to combat the age-old skepticism about government intervention that emanated from the Jeffersonian tradition in American politics (i.e. "that government is best which governs least"), the Progressives used their positions in academe, journalism, and government to wage a crusade against the "spoils system" whereby the managers of government enterprises were typically political patronage appointees (Rothbard 1995). In its place, they argued, should be an army of professionally trained (by Progressive intellectuals) bureaucrats who would in theory serve only "the public interest," especially if civil service regulations could protect them from political pressures and firings, granting them effective lifetime tenure in their jobs. No longer would the management of government enterprises change hands with every election cycle. That would supposedly assure that government employees would serve the "public interest" and not private political interest.

The Fed became one of hundreds of government enterprises at the federal, state, and local governmental levels in the U.S. that was touted as a political institution that would somehow be detached from and independent of politics. As such, the Fed and its supporters developed their own stylized propaganda line. As described by Rothbard (2013):

> The public, in the mythology of the Fed and its supporters, is a great beast, continually subject to a lust for inflating the money supply and therefore for subjecting the economy to inflation and its dire consequences. Those dreaded all-too-frequent inconveniences called 'elections' subject politicians to these temptations, especially in political institutions such as the House of Representatives who come before the public every two years and are therefore particularly responsive to the public will. The Federal Reserve, on the other hand, guided by monetary experts independent of the public's lust for inflation, stands ready at all times to promote the long-run public interest by manning the battlements in an eternal fight against the Gorgon of inflation. The public, in short, is in desperate need of absolute control

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> of money by the Federal Reserve to save it from itself and its short-term lusts and temptations.

This, says Rothbard, is the ideology of the Fed as reflected in its own propaganda, in "establishment" journalism, and in textbook pronouncements by myriad economists.

Every aspect of this ideology—of the allegedly apolitical civil service as well as that of the "independent" Fed—is demonstrably false. It is hard to imagine that the American public was ever so naïve and gullible as to believe that political institutions could somehow be apolitical, but the constant repetition of this idea at all levels of education, in newspapers, books, and magazines, and in politics itself apparently persuaded much of the public to believe in what Milton Friedman called a "barking cat" theory of politics. Just as there is no such thing as a cat that barks like a dog, Friedman was fond of saying, there can be no such thing as an apolitical political institution, either.

In essence, Progressive ideology stood on its head the famous dictum by James Madison in *Federalist* #10 that if men were angels, there would be no need for government. Men could in fact become angel-like, the Progressives insisted, as long as they receive the proper Progressive indoctrination in the methods of statism.

The Progressive ideology is still preached far and wide, even though worldly events immediately proved it to be unequivocally false. In *The Triumph of Conservatism* historian Gabriel Kolko (1977) demonstrated in great detail that all of the major government regulatory agencies, such as the Federal Trade Commission and the Food and Drug Administration, that were the crowning achievements of Progressivism were thoroughly politicized from the very beginning. They all came about as a result of an unholy alliance between Progressive intellectuals and big business interests who wanted to use the "independent" regulatory agencies to thwart competition by their smaller competitors, and to deter entry into their industries by any newcomers (Rothbard 2007). Legal Scholar Butler Shaffer (1977) showed how all of these interventions were little more than veiled forms of corporate welfare in his book entitled *In Restraint of Trade*.

Chicago School economists who researched the Progressive Era regulatory institutions referred to a "capture theory" of regulation whereby regulators were routinely "captured" politically by the industries they were supposedly regulating "in the *public* interest." The "independent" Civil Aeronautics Board enforced a monopolistic, cartel-pricing scheme for the benefit of the airline industry for decades; the Interstate Commerce Commission did the same for the trucking and railroad industries; and so on. George Stigler (1975) was perhaps the most prominent Chicago School economist associated with the capture theory of regulation, which was mentioned by the Nobel Committee upon awarding him the Nobel Prize in Economic Science in 1982.

The Fed fits naturally into this capture theory mold as a government-enforced cartel for the benefit primarily of the banking industry, which has always been the Feds main source of political support. For example, when Congressman Henry Reuss introduced a bill that would have authorized the U.S. General Accounting

Office to audit the Fed in the 1970s the bill was soundly defeated by the bankers' lobby. Economist Robert Auerbach (1985, p. 52) wrote of how the chairman of the Richmond, Virginia branch of the Federal Reserve Board congratulated a meeting of bankers after Reuss's bill was defeated by saying: "The bankers in our district and elsewhere did a tremendous job in helping to defeat the General Accounting Office bill. It shows what can be done when the bankers of the country get together."

When Congressman Henry Gonzalez proposed legislation in the 1990s that would have opened up some of the Fed's behavior to public scrutiny, the banking industry's trade associations swung into action again and mounted a powerful and successful political campaign in opposition to the Gonzalez reforms. The same thing happened yet again when Congressman Ron Paul introduced legislation to audit the Fed in 2009.

At the time of the Gonzalez proposals Rothbard (2013) asked the trenchant rhetorical questions: "[W]hy should bankers be so ready to defend a federal agency which controls and regulates them, and virtually determines the operation of the banking system? Shouldn't private banks want to have some sort of check, some curb, upon their lord and master? Why should a regulated and controlled industry be so much in love with the unchecked power of their own controller?"

The obvious answer to these rhetorical questions is that the banking industry is so supportive of the Fed as its "regulator" because the Fed regulates the money supply *for the benefit of the banking industry* and not "the public." The more power (and the more secrecy) the Fed has the better as far as the banking industry is concerned.

The Fed is the vehicle that politicizes the banking industry, not what isolates the industry from politics, as its own propaganda contends. If what the Fed does was truly "in the public interest," then we would not observe such well-organized political movements designed to maintain Fed secrecy. If what *any* government agency does is really "in the public interest," then the agency should be more than happy to be as transparent as possible.

Indeed, shortly after it was founded in 1913 the Fed accommodated the wishes of politicians by monetizing a large amount of the debt that was issued to finance American entry into World War I. It has thus been a political institution from the beginning, just like all the other Progressive era regulatory institutions. In fact the Fed has helped finance all subsequent wars (Zelmanovitz 2010), along with an expansion of the welfare state as well. Since direct, explicit taxation is much more visible and painful to the taxpayers, the Fed creates what public choice economists call a "fiscal illusion." That is, the cost of government programs (including war) are *perceived* to be lower than they actually are if the costs can be partially hidden with debt and price inflation. Wars would likely be less frequent and of shorter duration if the public was confronted with an explicit tax bill for them (Salerno 1999).

An even bigger myth or false legend than the "public interest" theory of regulation that came about during the Progressive era is the notion that the Fed has, since 1913, been a voracious inflation fighter. Recall that the key to the theory of the "independent" Fed is the theory that much of the public wants an inflated

currency, and that politicians cannot resist the temptation to pander to such a large voting bloc. Hence, the heroic, selfless, and independent Fed protects the public from itself, or so the story goes. But the consumer price index has increased more than 20-fold since the founding of the Fed. If the Fed's role is to "fight" price inflation, then it has failed miserably. This fact alone gives the lie to the standard propaganda line of the heroic, selfless, and independent Fed protecting the public interest by controlling price inflation.

The Fed as Political Tool

Economist Robert Weintraub (1978) published research that showed how Fed policy routinely follows the wishes of the men who are in a position to reappoint the Fed Chairman—American presidents. He did this by showing that the Fed fundamentally shifted its monetary course in 1953, 1961, 1969, 1974, and 1977—all years in which the presidency changed hands.

Weintraub showed that when President Eisenhower publicly expressed a wish for slower monetary growth, the money supply grew by only 1.73 % during his administration, the slowest rate in more than a decade. Then when President Kennedy advocated somewhat faster monetary growth, the Fed accommodated him as well. From January 1961 to November 1963 the money supply grew by 2.31 %.

President Lyndon Johnson wanted even more rapid monetary growth to help finance the Vietnam War and his "Great Society" welfare programs. The money supply growth rate more than doubled to 5 % annually. These varying rates of monetary growth all occurred under the same Fed Chairman, William McChesney Martin. Martin's main goal was apparently to please his political masters by creating the economic instability that they desired so as to boost their political careers.

Martin's successor, Arthur Burns, was even more of a political animal. As economist Gerald O'Driscoll (2013), a former vice president of the Dallas, Texas branch of the Federal Reserve Board, wrote in the *Wall Street Journal*: "The diary [Burns] kept during the Nixon years confirms that Fed policy became subservient to administration goals and the president's re-election campaign. As he wrote in one diary entry, he told Nixon that 'I was looking after monetary policy and he did not need to be concerned about the possibility that the Federal Reserve would starve the economy.'"

Burns did something that essentially destroyed his reputation as a serious economist when he publicly supported President Nixon's imposition of wage and price controls, something that the economics profession has long been almost unanimously opposed to. In addition, when Burns's staff informed him that the money supply was to grow at a robust 10.5 % annual rate in the third quarter of the election year of 1972, according to Weintraub (1978), Burns saw to it that there was even faster monetary growth in order to boost Nixon's chances for reelection. The

growth in the rate of the money supply in 1972, Weintraub pointed out, was the fastest for any 1 year since the end of World War II. It helped reelect Nixon and, as O'Driscoll (2013) pointed out, "The great inflation of the 1970s was the outcome."

Nixon's successor, President Gerald Ford, was worried about price inflation and publicly called for slower monetary growth, but it was too late; the inflation cat had already been let out of the bag. Nevertheless, the Fed under Arthur Burns complied with a slower, 4.7 % monetary growth rate. Then President Ford's successor, the liberal Democrat Jimmy Carter, expressed a desire for even more rapid monetary growth, so Burns accommodated his new master by increasing the rate of growth to 8.5 % annually. Following the Burns/Nixon model, the money supply increased by 16.2 % in the 5 months preceding the 1980 election according to Weintraub.

With price inflation raging at 13 % annually, the new Fed Chairman, Paul Volker, accommodated the wishes of President Reagan by sharply curtailing monetary growth. Alan Greenspan, the consummate political animal, was every bit as politically "accommodating" to the Clinton and Bush administrations. And as O'Driscoll (2013) wrote, "It is difficult to portray the Fed under Chairman Ben Bernanke as operating independently in any meaningful sense." For with his long-term commitment to ultra-low interest rates, "Bernanke has hitched monetary policy to the fiscal policy of the Obama administration in a bid to inflate asset prices. That is the opposite of what is supposed to be central bank independence and places the Fed closer to a presidential administration than it has been since the days of Burns and Nixon."

The Fed is such a politicized institution that it often serves as a political scapegoat for members of Congress whenever there is a recession or even an uptick in the unemployment rate. As economist Edward Kane (1980) wrote in the *Journal of Monetary Economics*, whenever monetary policies are popular, politicians claim that their influence on the Fed was responsible. When monetary policies are unpopular, then the politicians can blame it all on a "stubborn" Federal Reserve Board that refuses to take their orders. In return for the favor, wrote Kane, the Fed is allowed to amass a huge slush fund by earning interest income from the government securities it purchases through open market operations. That is how the Fed finances its own salaries and perks (which include tens of thousands of well-paid employees, a fleet of Learjet's and small cargo planes, fleets of "company" vehicles, a collection of paintings and sculptures worth millions, millions spent on professional memberships, entertainment, and travel, and massive real estate holdings).

The Fed as Engine of Reverse Robin Hood Redistribution

The Fed really abandoned all pretense of being "independent" of politics in the aftermath of "The Great Recession" of 2008, although it continues on, with the help of its academic supporters, with the rhetoric and propaganda of "Fed independence." Specifically, the Fed made it ever so obvious that its primary concern is protecting the bonuses of the Wall Street investment banking titans who, in turn,

supply millions of dollars in campaign "contributions" to the executive and legislative branches and the two major political parties. (It is not just a coincidence that the U.S. Treasury Secretary is almost always a top executive at Goldman Sachs). The Fed does this by responding to bursted bubbles in real estate and stock markets, among other places, by pumping even more liquidity into the economy, thereby creating new bubbles—and new profit opportunities for Wall Street speculators. As David A. Stockman (2013, p. 653) wrote in his book, *The Great Deformation*, [T]he central banking branch of the state remains hostage to Wall Street speculators who threaten a hissy fit sell-off unless they are juiced again and again. Monetary policy has thus become an engine of reverse Robin Hood redistribution; it flails about implementing quasi-Keynesian demand-pumping theories that punish Main Street savers, workers, and businessmen while creating endless opportunities … for speculative gain in the Wall Street casino." Thanks to the Fed, the machinery of the state and the machinery of reelection have become coterminous, says Stockman.

Monetary inflation enriches the "one percenters" on Wall Street while impoverishing just about everyone else. By deterring savings with its policy of artificially lowering interest rates the Fed destroys much of the essential ingredient of economic growth—savings, investment, and capital accumulation.

A sister policy to monetary inflation for the benefit of the one percenters is Federal Reserve-funded bailouts of the one percenters whenever the Fed-generated bubbles burst and cause a recession or depression. What Americans have witnessed, writes Stockman (2013, p. xi), is a "capture of the state, especially its central bank, the Federal Reserve, by crony capitalist forces deeply inimical to free markets and democracy."

For example, in the aftermath of the Great Recession the Fed printed nearly twice as much money, primarily to bail out Wall Street investors, in 13 weeks as it had during the entire previous century. In fact, as Stockman (2013, p. 45) writes, in 2008 it was not so much "the economy" that was crashing; it was only "the stock prices of Goldman [Sachs] and the other big banks" like Morgan Stanley. Morgan Stanley was bailed out by the Fed to the tune of $107 billion. The result for the company was similar to the $10 billion bailout of Goldman Sachs: "Goldman Sachs had been handed $10 billion to save itself from alleged extinction. Yet it then swiveled on a dime and generated a $29 billion surplus—$16 billion in salary and bonuses on top of $13 billion in net income—for the year that began just 3 months later" (Stockman 2013, p. 3). Similarly, the $180 billion bailout of the insurance company AIG at a time when 90 % of the company's assets were solvent, was "all about protecting short-term earnings and current-year executive and trader bonuses" and had nothing to do with "saving" the economy in general (Stockman 2013, p. 7).

The Fed as Financier of the Welfare State

The Fed has always been a primary financial vehicle for the military/industrial/congressional complex. It has also increasingly become a political vehicle for the further enrichment of the barons of Wall Street who are such an essential source of funding of the political careers of the Washington, D.C. political establishment of both major parties. In addition to funding the warfare state and the Wall Street-centered corporate welfare state, the Fed also curries favor with its political masters by funding a large part of the welfare state as well. Debt finance and money creation create a fiscal illusion with regard to the welfare state as well as with the warfare state, as mentioned above.

The Fed has been especially active as a welfare state financier as the chief enforcer of the 1977 federal Community Reinvestment Act (CRA). Under this law mortgage lenders are pressured to adopt lending quotas for low-income and minority borrowers. Dozens of (at least partially) government-funded "community organizations" such as ACORN (Association of Community Organizations for Reform Now) are empowered by the Fed to protest bank mergers, expansions, or new branch openings if the organizations claim that the bank in question has not made enough loans, often regardless of creditworthiness, to low-income and minority borrowers. Bank mergers, expansions, etc. are held up until the banks give the organizations themselves large amounts of cash, in addition to promising to make millions of dollars of sub-prime loans. Once such payments are made the Fed may allow the merger or bank expansion to proceed. As a result, many banks and other mortgage lenders have been coerced into making billions of dollars of bad loans to unqualified borrowers.

For example, the Federal Reserve Bank of Boston (1997) publishes a document entitled "Closing the Gap: A Guide to Equal Opportunity Lending" that threatens mortgage lenders with huge fines for failing to comply with the Fed's "equal opportunity" guidelines. In order to comply with the Fed's guidelines, the document instructs mortgage lenders to ignore traditional measures of creditworthiness with regard to loan applications by "minority and low-income consumers." Proof of income is not necessary, advised the Fed, nor is information about the age, location and condition of a house. Traditional ratios of monthly mortgage payments to income should also be ignored, as should "lack of credit history" when it comes to low-income and minority borrowers.

The Fed worked hand-in-hand with Congress in forcing banks to make trillions of dollars of these bad loans to unqualified borrowers, as Congress instructed the "government-sponsored enterprises" (GSEs) Fannie Mae and Freddie Mac to purchase the bad or "subprime" CRA loans from mortgage lenders, "bundle" them, and sell them as "securities" on secondary markets. There was always an implicit promise that if they day ever came when the secondary market crashed, there would be a bailout. And indeed there was; In 2008 the U.S. Congress granted the two GSEs some $200 billion in bailout money.

This was 1 year after Fed Chairman Ben Bernanke (2007) praised the Community Reinvestment Act racket to the treetops in a March 30, 2007 speech entitled "The Community Reinvestment Act: Its Evolution and New Challenges." The speech was delivered to celebrate the thirtieth anniversary of this welfare state program. Chairman Bernanke boasted that under the Fed's CRA enforcement:

> Securitization of affordable housing expanded, as did the secondary market for these loans, in part reflecting a 1992 law that required the government-sponsored enterprises, Fannie Mae and Freddie Mac, to devote a large percentage of their activities to meeting affordable housing goals.

"[A]dvocacy groups [like ACORN] increasingly used the public comment process to protest bank applications on CRA grounds" during the 1990s, Bernanke fondly recalled. Barely a year later, hundreds of billions of dollars in these bad loans would be in default. At that point, Bernanke blamed the whole mess on the alleged "systemic risk" run amok that he claimed was an inherent feature *of capitalism.*

The Fed's fueling of the "subprime" mortgage market was part of the U.S. government's "National Homeownership Strategy" in which such things as down payments and one's ability to make monthly mortgage payments were denounced as some sort of societal injustice, not unlike racial discrimination. Left-wing Washington politicians understood that much of the public would be opposed to simply using tax dollars to directly purchase private homes for their welfare-roll constituents, so they employed the coercive powers of Fed regulators (among others) to strong-arm banks into making trillions of dollars in bad loans. The banks actually profited from the scheme (for a while, anyway) by making fees on the bad loans, and then selling the loans to Fannie Mae and Freddie Mac. Congress mandated that 56 % of Fannie and Freddie's volume had to be composed of CRA loans (Stockman 2013, p. 407).

The Barking Cat of Last Resort

The notion that the Fed was *ever* independent of politics is sheer nonsense. It began its existence as the financial handmaiden to the warfare state during World War I, and continued in that role to this day. Monetary policy has fluctuated wildly based on the political whims of American presidents and the faithful compliance with their wishes by successive Fed chairman.

A top priority of the Fed is to generate profit opportunities and bailouts for the mega-wealthy Wall Street speculators who finance the careers of myriad Washington politicians. Nothing could be less independent of politics.

The Fed is also an important financier of the government's welfare state expansion through its money printing and regulatory activities, as just discussed. It is the preeminent financial vehicle of the welfare/warfare/crony capitalist state. As the false legend of the "independent Fed" dies, so should the Fed itself.

References

Auerbach R (1985) Politics and the Federal Reserve. Contemp Policy Issues 3(5):43–58
Bernake B (2007) The CRA: its evolution and new challenges. http://www.federalreserve.gov/newsevents/speech/bernanke200703309.htm
Boston Federal Reserve Bank (1997) Closing the gap: a guide to equal opportunity lending. http://www.bos.frb.org/commdev/commaff/closingt.pdf
Kane E (1980) Politics and Fed policymaking. J Monet Econ 6(2):199–211
Kolko G (1977) The triumph of conservatism. Free Press, New York
O'Driscoll GP (2013) Debunking the myths about central banks. Wall Street Journal Online. http://onlinewsj.com/article/SB10001424127887323468604578252443925155434.html
Rothbard MN (1995) Bureaucracy and the civil service in the United States. J Libertarian Stud 11 (2):53–75
Rothbard MN (2007) World War I as fulfillment: power and the intelectuals. http://mises.org/daily/2543
Rothbard MN (2013) The myth of Fed independence. http://mises.org/daily/6365/
Salerno JP (1999) War and the money machine: concealing the costs of war beneath the veil of inflation. In: John D (ed) The costs of war: America's pyrrhic victories. Transaction Publishers, New Brunswick, NJ, pp 367–387
Shaffer B (1977) In restraint of trade. Associated University Presses, Cranberry, NJ
Stigler G (1975) The citizen and the state. University of Chicago Press, Chicago, IL
Stockman DA (2013) The great deformation: the corruption of capitalism in America. Public Affairs Press, New York
Weintraub R (1978) Congressional supervision of monetary policy. J Monet Econ 4(2):341–362
Zelmanovitz L (2010) Money and war in Murray Rothbard's a history of money and banking in the United States. http://libertarianpapers.org/articles/2010/lp-2-17

Will Gold Plating the Fed Provide a Sound Dollar?

Joseph T. Salerno

Every period of economic crisis or turmoil in the U.S. since 1971 has invariably elicited an outbreak of nostalgia for the "gold standard" among assorted financial journalists, investment gurus, policy wonks, politicians, and even a few economists. Generally the proposals that these reformers present take the form of a greatly watered-down version of the genuine, classical gold standard. For example, the monetary disorder attending the Great Inflation of the 1970s brought forth a public clamor for a return to gold that rose to a crescendo by 1980. Congress enacted a law in October of that year establishing what came to be called the Gold Commission to study the role that gold should play in the U.S. and international monetary systems. In June 1981, President Ronald Reagan appointed 17 members of the commission, which submitted its report to Congress in March 1982.[1]

Although the Gold Commission considered plans for a variety of gold standard regimes, the one that received by far the most exposure in the mainstream media was the proposal of supply–side economists and journalists including Robert Mundell, Arthur Laffer, and Jude Wanniski for the implementation of a system very much like the Bretton Woods System.[2] This proposal formed the basis for the

[1] Anna Schwartz (2004), author of the Commission's majority report, frankly questions whether the establishment of the Gold Commission was a "serious attempt to study what a gold standard could contribute to the public welfare." Judging by the make-up of the Commission it is difficult to disagree with her assessment. Aside from U.S. Representative Ron Paul and entrepreneur Lewis E. Lehrman, the politicians, businessmen, Federal Reserve Board Governors, and economists composing the Commission had no sympathy for the gold standard. Paul and Lehrman's position can be found in the minority report of the Commission (Paul and Lehrman 2007).

[2] The proposal is presented in detail in Laffer (1980). Also see: Laffer and Miles (1982, pp. 399–401); Mundell (1981); and Wanniski (1981). See Welker (1980) and Salerno ([1982] 2010) for a discussion and critique of the various proposals for a gold standard in circulation at the time.

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Gold Reserve Act introduced as a bill into the U.S. Senate in 1981 by Senator Jesse Helms (R-NC).[3]

The financial crisis of 2007–2008 and the ensuing recession and stagnant recovery have raised recent calls for the restoration of the gold standard. And once again, the plan that has received the most support and media attention is one that calls for the establishment of an attenuated version of the Bretton Woods system in which the Fed is legally mandated to target the price of gold. And it, too, is the basis of a Congressional bill. H.R. 1576 (2013) entitled "The Dollar Bill Act of 2013" was introduced into the U.S House of Representatives on April 16, 2013 by U.S. Representative Ted Poe (R-Texas).[4]

In the first section of the paper, I will describe the nature and operation of the gold standard that is envisioned in Ted Poe's bill. I will analyze the chief flaws in Poe's proposed "Dollar Bill system" in the second section. I argue that it is not really a gold standard in any meaningful sense. The third section will be devoted to an analysis and critique of the main arguments presented by the advocates of Poe's bill. I will try to demonstrate that the arguments of the contemporary pro-gold reformers are built on the same fundamental fallacies that are espoused by mainstream macroeconomists and Fed policy makers whose doctrines and policies they so roundly condemn. I will conclude with some observations on the path back to sound money in the final section.

The Dollar Bill System

Representative Poe's bill begins grandly with a list of "findings" that constitutes a blistering indictment of the performance of the Federal Reserve System ever since Congress delegated to it the power to regulate the dollar in 1913.

According to these findings, the U.S. dollar has declined "dramatically" relative to real commodities including gold and crude oil and to foreign currencies while its value has become "unstable and uncertain." The Fed "has not produced a stable and reliable value" for the U.S., nor can it "be reasonably expected" to do so. The findings then go on to detail the deleterious effects of the unstable dollar on: economic growth; the cost of capital and risks of long-term investment; real earnings of American workers; the value of financial assets held by the American public; the real value of pension plans and retirement accounts; the economic and political standing of the U.S. in the world; and the level of anxiety and uncertainty in financial markets and among the public at large.

To prevent further instability in the value of the U.S. dollar caused by the Fed, Poe's bill would mandate the Fed to fix the price of gold within a narrow band. The first step in instituting this gold price-targeting regime would be for the Board of

[3] Helms's bill is reprinted in Welker (1980, pp. 7–9).

[4] For Poe's bill, see H.R. 1575 (2013).

Governors of the Fed to designate a "Target Week" that would start no earlier than 90 days and end no later than 120 days from the enactment of the bill. Using an unspecified "random process" the Board would then designate during the Target Week a precise day, hour, minute and second as the "Target Moment," which it would not publicly disclose. The dollar price of gold would be fixed at the price prevailing on the exchange operated by Commodities Exchange, Inc. (COMEX) of the New York Mercantile Exchange precisely at the Target Moment and maintained within a range of plus or minus 2 % of this price (the "Target Range") from that time onward.[5]

The Fed would maintain the gold price within the Target Range "directly" by open market operations. Furthermore, the Fed would be barred from using indirect methods, for instance, targeting the Fed Funds rate as it does now, to carry out the bill's mandate. In the same vein, the bill would prohibit the recent practice of paying interest on bank reserves deposited at the Fed.

While the bill lays out the basic policy framework for the "Dollar Bill system," it does not describe how it actually might operate to "stabilize" the dollar.[6] Details of its operation, however, may be gleaned from the writings of the bill's major proponents, namely *Forbes* magazine publisher and long-time supply-sider Steve Forbes (2013a, b), *Forbes* economic journalist Louis Woodhill (2011, 2013a, b) and investor and columnist Nathan K. Lewis (2007, 2013), author of two books on the gold standard.

To begin with, gold would not play a direct monetary role under the Dollar Bill system. The U.S. dollar would continue as a pure fiat money, inconvertible into gold. The monetary base would be, as it is now, composed exclusively of fiat dollars, that is, Federal Reserve notes held by the public and by the banks in their vaults and ATM machines plus reserves held by the banks on deposit at the Fed.

Thus the Fed would continue to control the monetary base, but it would do so by buying or selling bonds depending on whether the price of gold was falling or rising relative to its target price within the Target Range. Suppose for simplicity that the target gold price was established at $1,300 per ounce in accordance with the process specified in the Dollar Bill Act. This means that the Fed would be legally compelled to conduct open market sales thereby reducing the monetary base whenever the price of gold rose to $1,326, which at 2 % above the target price of $1,300 defines the upper limit of the Target Range. Similarly, a movement of the price of gold to $1,274 at the lower end of the Target Range would oblige the Fed to expand the monetary base via open market purchases.

[5] The language in the bill refers to making "the value of the U.S. dollar equal to the price of gold," which is nonsensical and empty rhetoric. One could just as easily declare the value of the dollar equal to the price of IPads, soybeans or any good or service whatever, because the dollar's value or purchasing power always consists of (the reciprocal of) the prices of all the alternative goods, including gold, that it exchanges for on the market. "Fixing the dollar price of gold" is the correct and honest description of what the Fed would actually be doing.

[6] Woodhill (2011) uses the term "Dollar Bill system" to designate the monetary system that would emerge from Poe's bill in order to distinguish it from the Bretton Woods system.

The "Goldless" Gold Standard

There are numerous problems with this blueprint for a new gold standard. Most important, however, is that it is a pseudo-gold standard, a gold standard *in name only*. It has been described as a "goldless gold standard" (Benko 2013). There would be no gold dollars coined and in circulation among the public, nor would the Fed be required to maintain convertibility between dollars and gold or to hold any gold reserves at all. Thus Poe's Dollar Bill Act would leave the fiat dollar fully intact and the supply of dollars subject to continued absolute control by the Fed via open market operations. In effect, the Dollar Bill system is nothing but monetarism with a price rule rather than a quantity rule governing the Fed's operating procedure.

As I argued in a critique of the earlier Laffer proposal for a gold standard (Salerno [1982] 2010, pp. 282–283):

> When we strip away the gold plating, Laffer's price rule appears as a technique designed to control inflation under the current fiat-money standard. It thus differs only in technical detail from the quantity rule advocated by the monetarists.. . . Laffer's plan turns out to be, in essence, a kind of "price rule monetarism," the references to gold notwithstanding. The most serious defect in both variants of monetarism is that they fail to address the underlying cause of inflation, namely, the government monopoly of money.

In fact the Poe bill places even fewer restraints on the Fed than did Laffer's proposal, which, as noted above, served as the blueprint for Senator Jesse Helms's Gold Reserve Act of 1981. At least in the Helms bill, the dollar and gold would be freely convertible into one another at the official price. In addition the Fed would be obliged to pay out gold coins and to hold gold reserves as a certain percentage of its dollar liabilities, although these reserves could vary within a wide range and dollar convertibility would be legally suspended if the level of reserves sank far enough below the lower limit of the range. After a period of inconvertibility and free fluctuation of the gold price, the official gold price would then be reset below its previous level.

The supporters of the Poe bill clearly recognize that the dollar would remain a fiat currency subject to monopoly control by the Fed and that gold would have no monetary role whatsoever. Indeed they tout this as a major virtue of the Dollar Bill system. For example, Steve Forbes (2013b) refers to "countless varieties" of gold standards and describes the "common characteristic" of real gold standards in the following terms: "Theoretically . . . you don't need an ounce of the yellow metal to operate a gold standard; all you need is to refer to the price in the open market." Louis Woodhill (2013a) explicitly rejects the use of gold as money in an article revealingly entitled "Gold Isn't Money, but It Should Be Used to Define the Value of the Dollar."

But why would self-proclaimed supporters of the gold standard be willing to leave in place the inflationist Federal Reserve and the ever depreciating fiat dollar, while relegating gold to the status of an ordinary market commodity whose price is used as a target to guide the Fed in manipulating the money supply? In order to

answer this question we need to examine their fundamental views on the nature and function of money.

Erroneous Monetary Doctrines

Underlying the arguments of those who advocate the "goldless" gold standard are three erroneous doctrines regarding money. These errors can be traced back to the writings of the first influential fiat-money inflationist, John Law ([1705] 1966) at the beginning of the eighteenth century and have been exposed and refuted time and again during the past three centuries by sound-money theorists in the classical-Austrian tradition.[7] In analyzing these doctrines, it will become apparent that the advocates of the Dollar Bill system share these fallacies in common with central bankers, macroeconomists and other supporters of the current fiat-dollar regime whom they criticize so vehemently.

A. Money as a Policy Tool

Proponents of the classical gold standard have generally viewed money, and the gold standard in particular, as a social institution that is the outcome of a market process involving millions of individuals and evolving over millennia. In their view, the primary function of money is to serve as a general medium of exchange that is used by the multitude of autonomous participants in the market to carry out their diverse transaction plans in the most economical manner. Money also serves at the same time to provide entrepreneurs with a reliable means of calculating the prospective costs and revenues of their investment and production plans, which guide them in efficiently allocating productive resources to those uses anticipated to be most valuable to consumers.[8]

The adherents of the Dollar Bill system reject this account of the origin and function of money. Rather than an organically grown social institution, they consider money to be a policy instrument deliberately constructed and wielded by government and its central bank to achieve specific macroeconomic goals, such as an adequate supply of money, low interest rates, a stable price level, the avoidance of deflation and depression, and so on. In this "constructivist" narrative of money, the gold standard like all monetary regimes is purely a contrivance of government *policy* and has always been so historically.

In his book on the gold standard, Nathan Lewis (2013) elaborates the argument that the gold standard is a policy tool. For Lewis (2013, pp. 28–29) all forms of the gold

[7] For a review and critique of Law's doctrines in their ancient and modern forms, see Salerno ([1991] 2010).

[8] For a historical overview of this approach to money, see Salerno ([1991] 2010).

standard are "a subcategory of a broader class of fixed-value policies" which may or may not involve the use of gold as the "standard of value." In this subclass of policies, the gold standard refers to a variety of systems that have existed or can be conceived in which the value of the currency is linked to the value of gold bullion via a fixed or "parity" price at which bank notes exchange for gold. All historical gold standards—even the 100 %-reserve banknotes issued by the Bank of Amsterdam in the seventeenth and eighteenth centuries—therefore have been an invention of government policy, "a fixed-value system with gold as the policy target." Indeed in his analysis of the operation of a gold standard, Lewis (2013, pp. 159–169) does not treat the 100 %-reserve gold standard as fundamentally different than his preferred "no gold" gold standard in which the money manager does not hold any gold reserves and does not buy or sell gold at the parity price but instead targets the gold price by buying or selling bonds or even fine art.[9]

Furthermore, according to Lewis (2013, pp. 30–31), gold itself does not function as money in any kind of gold standard. Rather, fixing the price of gold is simply an effective policy for constraining the "currency manager" to ensure that the supply of currency, consisting of "banknotes with no intrinsic value," remains artificially scarce and therefore valuable. Thus by establishing a fixed price of gold, the "worthless paper chits" can be given a specific value, i.e., the same value as a specific weight of gold bullion. The startling implication of Lewis's analysis is that somehow money originated as a paper fiat currency without a determinate supply or purchasing power over goods and services, *and then* governments had to invent a method of keeping it scarce and giving it a market value. Needless to say, this is preposterous. Even if a clever monarch, politician, or central banker were able to devise a policy rule to ensure that paper currency remained scarce, its initial introduction into the barter economy would fail because economic agents would not be able to value the currency in the absence of a pre-existing set of exchange ratios between the new currency and real goods and services.[10]

Lewis's ideas on money do not differ in the least from the position of most mainstream economists, who maintain that all historical and thinkable monetary regimes must involve an implicit or explicit "policy rule." Where supporters of the current monetary regime differ from the advocates of the Dollar Bill system is in their belief that targeting the price of gold is a "suboptimal policy rule," which can be improved upon by targeting either a short-term interest-rate or the inflation rate.

B. Money Is a Measure of Value

According to mainstream economics textbooks, one of the primary functions of money is to "measure" the value of goods and services exchanged on the market. A

[9] For a critique of earlier advocates of the gold standard who viewed the gold standard as a creation of government policy, see Salerno (1992, pp. 102–107).

[10] As early as 1912, Ludwig von Mises demonstrated, via his "regression theorem," that money must originate as a commodity with a pre-existing market value under barter. See Mises (1981, pp. 129–44, 1998, pp. 405–408).

typical statement of this view is given by Frederic Mishkin (2010, p. 55) in his textbook on money and banking:

> [M]oney . . . is used to measure value in the economy. We measure the value of goods and services in terms of money, just as we measure weight in terms of pounds and distance in terms of miles.

When money is conceived as a measure of value, the policy implication is that one of the primary objectives of the central bank should be to maintain a stable price level. This will supposedly remove inflationary noise from the economy and ensure that any changes in money prices that do occur will tend to reflect a change in the relative values of goods and services to consumers. Thus, for mainstream economists, stabilizing a price index based on a basket of arbitrarily selected and weighted consumer goods, e.g., the CPI, the core CPI, the PCE, etc. is a prerequisite for rendering money a more or less fixed yardstick for measuring value.

Now the idea that a series of acts involving interpersonal exchange of certain sums of money for quantities of various goods by diverse agents over a given period of time somehow yields a measure of value is another ancient fallacy that can be traced back to John Law. Law ([1705] 1966, pp. 52, 61, 92, 102) repeatedly referred to money as "the measure by which goods are valued." This fallacy has been refuted elsewhere. Suffice it to say that the act of measurement involves the comparison of one thing to another thing that has an objective existence and whose relevant physical dimensions and causal relationships with other physical phenomena are absolutely fixed and invariant to the passage of time, e.g., a yardstick or a column of mercury. In contrast, the value an individual attaches to a given sum of money or to any kind of good is based on a subjective judgment and is a purely intensive quality without physical dimensions. As such the value of money varies from moment to moment and between different individuals. The price paid for a good in a concrete act of exchange does not measure the good's value; rather it expresses the fact that the buyer and the seller value the money and the price paid in inverse order. For this reason neither money nor any other good can ever serve as a measure of value.[11]

Unfortunately, advocates of a gold-price target wholeheartedly embrace this mainstream doctrine while giving it an odd twist. They begin with the wholly unsupported assumption that one commodity, gold, is stable in value and that, therefore it can serve as the lone guiding star—or "The Monetary Polaris" as Lewis (2013) terms it—for Fed monetary policy. According to Steve Forbes (2013b) real gold standards have one thing in common: "They use gold as a measuring rod to keep the value of money stable. Why? Because the yellow metal keeps its intrinsic value better than anything on the planet."

Woodhill (2013a, b) writes in a similar vein:

> The fundamental validity of the gold standard rests upon the premise that the real value of gold remains constant over time.. . . The most fundamental thing about a unit of measure is

[11] For a critique of the idea that money is or can be made to measure value see Rothbard (2009, pp. 843–851) and Mises (1981, pp. 51–62; 1998, pp. 220–229).

> that it be constant.. . . Gold is not money, and it should not be money. However we can and should use gold to define the value of the dollar.

These passages reflect an almost mystical belief that the "intrinsic" or "real" value of gold is, for all practical purposes, eternally unchanging, unaffected by the continual flux of human valuations, stocks of resources (including gold itself), technology, and entrepreneurial judgments that defines the essence of the dynamic market economy. Furthermore no definition is ever given of what exactly the concept of "intrinsic value" means or in what units it is expressed.

Historical experience clearly shows that the value of gold vis-a-vis other commodities has fluctuated over the centuries, even when gold has served as the monetary standard. This was certainly the case, for example, when the U.S. returned to the gold standard after the Civil War. From 1880 to 1896, U.S. wholesale prices fell by about 30 %. From 1897 to 1914 wholesale prices rose by about 2.5 % per year or by nearly 50 %. This rise came about mainly as the result of a nearly doubling of the global stock of gold between 1890 and 1914 due to discoveries of new gold deposits in Alaska, Colorado, and South Africa and improvements in the technology of mining and refining gold (Friedman and Schwartz 1971, pp. 135–137).

Proponents of a gold-price target thus seem to ignore both theory and history in assuming that once the dollar price of gold has been fixed, the value of money itself becomes forever stable and immune to the influence of market forces of supply and demand. Inflation and deflation are, therefore, *ipso facto* banished from the economy. This implies that any changes occurring in the quantity of money under a fixed-gold price regime are to be construed as benign and stabilizing adjustments of the supply of money to changes in the demand for money. As Forbes (2013a) argues:

> [T]he yellow metal is merely a means of measuring the value of the dollar. The fact that a foot has 12 inches doesn't restrict the number of square feet you have in a house. The fact that a pound has 16 ounces doesn't restrict your weight, alas—it's a simple measurement.. . . The virtue of a properly constructed gold standard is that it's both stable and flexible—stable in value and flexible in meeting the marketplace's natural need for money. If an economy is growing rapidly such a gold-based system would allow for rapid expansion of the money supply.

In other words Forbes's "stable and flexible" gold standard would facilitate and camouflage an inflationary expansion of the money supply that would, according to Austrians, derange capital markets and lead to asset bubbles.[12] The motto of our current gold-price fixers seems to be: "We want sound money—and plenty of it."[13]

Lewis takes the idea that gold is an absolutely fixed measure of value to its logical—and absurd—conclusion. If gold is intrinsically constant in value, he reasons, then the "equivalent gold value" of labor income computed at the current dollar price of gold will give us a truer picture of the trend of real wages than

[12] See, for example, Salerno (2012) and Woods (2009).

[13] I have heard economist Roger Garrison of Auburn University use this phrase to characterize the monetary program of the 1980s supply-siders.

calculations using the fiat dollar adjusted for inflation. Thus Lewis constructs a chart of "U.S. Median Male Full-Time Income in Gold Oz." According to this chart, income rises from 125 gold oz. per year in 1955 to an all-time postwar high of 250 oz. in 1970. Real income then falls precipitously to around 25 gold oz. in 1980. Over the next 20 years it climbs steadily punctuated with a few minor downturns, eventually reaching a local peak of 125 oz. and finally re-attaining the level of 1955. From there it is all downhill to 2010 where real income settles at 35 oz.

It is hard to imagine that Lewis is actually claiming that median annual wage income measured in an alleged unit of constant value, that is, real wages, was 14 % and 28 % in 2010 of what it was in 1970 and 2001, respectively. Yet how else is one to interpret the conclusion Lewis (p. 23) derives from his chart?

> The equivalent gold value of the income of the full-time working male in the United States has fallen drastically since the beginning of the Mercantilist monetary era [i.e., 1971]. The decline in the dollar value since 2001 has of course accelerated this trend downward; as the dollar's value declines, the value of wages paid in dollars declines also.

Of course the chart shows no such thing. What it does show is that paper fiat money that is progressively inflated and arouses inflationary expectations changes the value of inflation hedges like gold *relative* to the value of other goods and services. For the same reason one would find a similar movement over time of labor incomes expressed in terms of units of art, antiques, and other collectibles.

C. Deflationphobia

The last fallacy may be summed up as "deflationphobia." [14] The supporters of Poe's bill live in constant dread of falling prices, which they fear will result in a financial meltdown and a downward spiral of the real economy into ruinous depression. In this respect, too, they are no different than the mainstream economists that they criticize and the inflationist Fed policymakers they seek to rein in.[15]

Woodhill exemplifies the extreme deflationphobia that animates the typical supporter of a gold price-targeting regime. Woodhill (2013a) bluntly asserts:

> The most fundamental issue that determines the workability of a gold standard is whether it attempts to use gold *as* money. Any gold standard system where the size of the monetary base is determined by the physical supply of gold will eventually suffer a deflationary collapse.

[14] On the nature of deflationphobia and the causes of its most recent outbreak, see Salerno ([2003] 2010, pp. 267–269; and [2004a, b] 2010. Other economists who have recognized the phenomenon are Mark Thornton (2003) and Brendan Brown (2013, pp. 58–63).

[15] See Woodhill 2013b for a bitter critique of Fed policy and the monetary economists who are apologists for it, which is aptly entitled "America Doesn't Need Monetary Policy, and It Doesn't Need Economists." And yet, as we shall see, Woodhill's deflationphobia is even more blind and frenzied than Bernanke's.

Woodhill then points to the economic collapse of 1930 as "inevitable" because of the way the gold standard was designed at the time. Curiously, while he admits that there are various kinds of gold standards, some workable and some not, he does not specify that the gold standard that was in place in 1930 was the gold exchange standard. This was a greatly attenuated form of the classical gold standard. Indeed the gold exchange standard was, practically speaking, very similar to the goldless gold standard that he prefers. The gold exchange standard was deliberately designed to "economize" on gold so that there was very little gold coin held by the public, gold reserves were centralized in the Fed and a few other important central banks, and central banks, especially the Fed and the Bank of England, "cooperated" in order to expand their national money supplies while maintaining the legal parities between their currencies and gold.[16] In contrast, the classical gold standard, a genuine gold standard that involved the use of gold coins as currency, performed remarkably well for a century until it was deliberately destroyed in 1914 by revenue-hungry governments gearing up to fight World War I.[17]

Woodhill also conveniently ignores the fact that under the classical gold standard there were periods of deflation that coincided with vigorous economic growth. For example, in the U.S. between 1880 and 1896, wholesale prices declined by about 1.75 % or by nearly 30 % overall. During the same period, real income rose by 85 %, or approximately 5 % per year (Friedman and Schwartz 1971, pp. 94–95; Salerno [2003] 2010, pp. 273–274). In fact real income in the deflationary 1880s expanded at the highest decadal rate of growth in U.S. history. Even some Fed economists have come to recognize this type of deflation as a "benign" or "good" deflation caused by technological improvements and an accumulation of capital that lowers the costs of production and expands the supplies of goods and services (Federal Reserve Bank of Cleveland 2002; Bullard and Hokayem 2003, p. 1). This is the same benign process that in the last several decades has caused precipitous drops in the prices of computers, video game systems, HDTVs, Lasik eye surgery, and so on to the great benefit of consumers. Another recent example is China from 1998 to 2001. During that period, real income grew at an annual average rate of 7.6 % while retail prices declined in every year, with the annual deflation rate ranging from 0.8 to percent to 3.0 % (Federal Reserve Bank of Cleveland 2002, p. 10).

This process of "growth deflation" is the natural outcome of the free functioning of a healthy capitalist economy under market-supplied commodity money like gold. The secular decline of prices reflects the equilibrating adjustment between rapidly increasing labor productivity, falling production costs, and an ever expanding volume of goods, on the one hand, and a fixed or slowly increasing money supply on the other.[18]

[16] For a thorough history, analysis, and critique of the gold exchange standard, see Rothbard (2005, pp. 351–433).

[17] Within two weeks of the outbreak of World War 1, every belligerent government suspended the gold standard. On why war leads inevitably to the abolition of the gold standard, see Salerno (1995).

[18] On "growth deflation," see Salerno ([2003] 2010, pp. 272–274).

Woodhill's lack of comprehension of this monetary adjustment process leads him to present a highly distorted picture of the true gold standard. According to Woodhill if money were gold, the slowly growing supply of gold would be confronted with a "new and potentially unlimited demand." Eventually the monetary demand for gold would cause an increase in the real price of gold and therefore in the dollar, i.e., deflation, "precipitating a financial and economic crisis." The financial crisis would in turn cause a further increase in the demand for money as everyone scrambled to become more liquid. This would raise the demand for gold even further and intensify the crisis "leading to a complete meltdown of the whole financial system and real economy. This is exactly what happened in 1930."

This is deflationphobia run riot. Nowhere in this nightmare scenario does Woodhill advert to the operation of the venerable mechanism of supply and demand which would adjust prices in goods' markets permitting monetary transactions to continue smoothly without crises or depressions. Indeed, Woodhill's reference to 1930 is not an indictment of gold money and deflation, as he believes. Quite the contrary: it is an admission that the gold exchange standard failed to restrain the Fed from expanding the money supply and manipulating interest rates from 1922 to 1928, creating massive stock and real estate bubbles that burst in 1929 ushering in the financial crisis of 1930. The monetary disorder of the 1920s and 1930s occurred despite—or rather because of—the fact that the Fed, while fixing the price of gold at its legal parity, manipulated the money supply to "stabilize" the domestic price level and to bail out Great Britain in its attempt to avoid the deflation required by its flawed decision to return to gold at the overvalued prewar parity for the pound. Fed policy thus prevented goods' prices from adjusting downward naturally in the face of rapid economic growth.[19] In addition, contrary to Woodhill's hysterical claim to the contrary, recent empirical research has shown no statistically significant link between deflation and depression (Atkeson and Kehoe 2004; Salerno [2004a, b] 2010).[20]

Finally, let us look at deflationary episodes involving large contractions of the money supply as a result of either a financial crisis or the restoration of the genuine

[19] For a detailed account of how the international gold exchange standard facilitated the inflationary asset boom of the 1920s that resulted in depression and the breakdown of the standard in the early 1930s, see Rothbard (2005 pp. 351–433). Rothbard (2000) focuses more narrowly on how the Federal Reserve manipulated the gold standard and generated the 1920s inflationary boom and Great Depression in the U.S.

[20] Summing up their study that used raw, unadjusted panel data from 16 countries over at least a 100-year period covering 73 deflation episodes and 29 depression episodes, Atkeson and Kehoe (2004) conclude:

> "The data suggest that deflation is not closely related to depressions. A broad historical look finds more periods of deflation with reasonable growth than with depression, and many more periods of depression with inflation than with deflation. Overall the data show virtually no link between deflation and depression."

gold standard following an enormous expansion of fiat money.[21] Even in these cases, as long as there existed reasonable flexibility of prices, there was either no accompanying depression of the real economy or the depression was sharp but brief. In U.S. history, the financial crisis and monetary deflation of 1839–1843 and the deliberate contraction of the stock of fiat money during 1876–1879 to restore the gold standard did not provoke a decline in real growth but merely a fall in prices. The sharp monetary contraction in the U.S after World War 1 also did not plunge the U.S. economy into a downward spiral of depression.[22] In fact the 1920–1921 depression was remarkably brief and ended before Congress was able to pass a public works bill.[23]

Concluding Remarks on the Path Back to Gold Money

Now one might infer from the argument in this paper that the problem with the monetary reform under consideration is that it does not immediately result in a genuine gold standard, but this is not necessarily the case. This is not to deny that a monetary regime like the nineteenth-century classical gold standard would be far superior to both the proposed Dollar Bill Standard discussed above and the current regime of national fiat currencies under managed exchange rates. But in the short run under current politicized monetary institutions, the formal restoration of the classical gold standard may not be a practical possibility.

Let us take as an example the recent proposal of Lewis Lehrman (2012) to restore the "true" gold standard. Lehrman's book makes a thoughtful and compelling case for reconstituting the U.S. dollar as a genuine gold currency. Under Lehrman's "Monetary Reform Plan" the dollar would be legally defined once again as a specific weight of gold and there would be unrestricted convertibility between gold on the one hand and dollar notes and deposits on the other. Gold coin would thus be minted and in circulation among the public. Lehrman also presents a detailed plan for transition from the current system back to the gold standard either by the U.S. unilaterally or via a multilateral international conference. Now any plan for a government-managed national or international transition from the current fiat-money regime to the classical gold standard would inevitably involve interested central bankers and bureaucrats. And this is true of Lehrman's plan.

[21] It should be noted that a monetary deflation that is caused by a financial panic can only be the result of a previous expansion of the money supply via the fractional reserve banking system. On this point, see Howden 2012.

[22] On the depression of 1839–1843, see Temin (1969, pp. 155–65). For a brief discussion of the monetary contraction of 1876–1879, see Kindahl (1971) and Bullard and Hokayem (2003).

[23] The depression of 1920–1921 is discussed in Weiher 1992 (pp. 26–27); Degen 1987 (pp. 30–40); Anderson 1979 (pp. 61–89); and Gordon 1974 (pp. 21–22).

Such a plan confronts an insurmountable problem, however. For example, in the U.S., the Fed and the U.S Treasury, their academic advisers, and their political and financial constituencies are steeped in the erroneous monetary doctrines criticized above. They all accept without question that money is a policy tool consciously designed to achieve aggregative statistical targets, including and especially stability of some arbitrarily constructed index of prices. They are also ardent deflationphobes who consider generally falling prices, even in the face of productivity growth, as the road to economic ruination and to be avoided at all costs. These attitudes have been deeply entrenched among monetary policymakers and the vast majority of monetary economists since at least the 1960s. Indeed Murray Rothbard (2000, pp. 169–181) argued that such attitudes were prevalent among Anglo-American economists and policymakers in the 1920s. Given that such attitudes have long been embedded in the intellectual culture of the political institutions that are called upon to manage the resumption of the gold-convertible dollar, even the most carefully conceived transition program will come to grief.

Consider that the transition from the current chaotic and unstable monetary and financial regime to the gold standard could not take place in one fell swoop but would require a lengthy period of time. For example, Lehrman's plan stipulates that the transition would not be more than 4 years from the date of the announcement of the resumption of convertibility. During this period, which may be less than 4 years, the Fed and Treasury policymakers would need to make a number of radical policy changes in preparation for resumption. Not only would these changes cut against their ingrained attitudes and inclinations, but the unforeseen emergence of cyclical phenomena or instabilities in the financial sector would provide them with strong reasons to suspend or reverse the implementation of such policies until the crisis had passed. We also should not discount the possibility that the Fed and Treasury bureaucrats, many of whose jobs will be obsolescent after resumption, will readily respond to pressure from their political and private sector constituencies to sabotage the transition. In sum there is a strong case to be made that a transition to a genuine gold dollar may be practically impossible under existing political institutions.

A simpler and less encumbered path to sound money and the gold standard would be to permit the fiat dollar to face competition from alternative currencies. In other words, give U.S. citizens the unrestricted right to choose to contract and make payments in gold, silver, yen, euro, etc. This proposal for currency competition was first advanced by F.A. Hayek (2009) in 1974 and has been since advocated by many others, including Henry Hazlitt (2009) and Hans Sennholz (1985). This reform would not directly involve the Fed and the U.S. Treasury, nor would it require a complicated and time-consuming plan susceptible to bureaucratic obstruction. All it would involve is the abolition of legal tender laws that privileges the fiat dollar as a general medium of exchange and the removal of all excise, sales, and capital gains taxes on the trading and holding of gold, silver, and foreign currency deposits. Any legislative impediments to private firms minting gold and silver coins denominated strictly by purity and weight would also have to be repealed. U.S. banks would be freed from all regulatory and legislative restraints in accepting and holding deposits of any kind of metallic coins or foreign currency, while being exempted from

mandatory membership in the Federal Reserve System, the Federal Deposit Insurance Corporation, etc. Legal barriers to entry and interstate branching in banking would also be eliminated.

This program would severely restrict the inflationary propensity of the Fed, because U.S. citizens would be now free to replace a rapidly depreciating dollar in their transactions and cash holdings with whatever they perceived to be a more stable medium of exchange. The Fed's monopoly of the money supply would effectively be eliminated and monetary policy in any meaningful sense would be abolished. In the worst case scenario if the Fed continued its inflationary monetary policy, there would be a rapid run from the dollar into competing currencies and conditions would then be ripe for a hard-money gold standard (or parallel gold/silver standards) to naturally emerge on the market.

References

Anderson BM (1979) Economics and the public welfare: a financial and economic history of the United States, 1949–1946, 2nd edn. Liberty Press, Indianapolis, IN

Atkeson A, Kehoe PJ (2004) Deflation and depression: is there an empirical link. Am Econ Rev Pap Proc 94(May):99–103

Benko R (2013) Gold defined money and monetary history at the Cato Institute: a velvet underground event. Forbes (July 29)

Brown B (2013) The global curse of the Federal Reserve: how investors can survive and profit from monetary chaos. Palgrave Macmillan, New York

Bullard JB, Charles MH (2003) Deflation, corrosive and otherwise. Federal Reserve Bank of St. Louis National Economic Trends (July). http://research.stlouisfed.org/publications/es/03/ES0317.pdf

Degen RA (1987) The American monetary system: a concise survey of its evolution since 1896. D.C. Heath, Lexington, MA

Federal Reserve Bank of Cleveland (2002) Deflation. 2002 Annual report. http://www.clevelandfed.org/Annual02/Essay.pdf

Forbes S (2013a) Advance look: what the new gold standard will look like. Forbes (May 8). http://www.forbes.com/sites/steveforbes/2013/05/08/heres-what-a-new-gold-standard-could-look-like/

Forbes S (2013b) Introduction to Nathan K Lewis, Gold*:* the monetary polaris. Canyon Maple, New Berlin, NY

Friedman M, Schwartz AJ (1971) A monetary history of the United States, 1867–1960. Princeton University Press, Princeton, NJ

Gordon RA (1974) Economic instability and growth: the American record. Harper and Row, New York

H. R. 1576 113th Congress (2013) Dollar bill act of 2013. http://beta.congress.gov/bill/113th/house-bill/1576/text

Hayek FA [1976] (2009) Choice in currency: a way to stop inflation. Ludwig von Mises Institute, Auburn, AL. http://library.mises.org/books/Friedrich%20A%20Hayek/Choice%20in%20Currency.pdf

Hazlitt H [1978] (2009) The inflation crisis and how to resolve it. Ludwig von Mises Institute, Auburn, AL. http://mises.org/books/inflationcrisis.pdf

Howden D (2012) Deflation's inflationary source. Mises Daily (February 16). http://mises.org/daily/5905/Deflations-Inflationary-Source

Kadlec C (2012) A path to a 21st century gold standard. Forbes.com (May 21). http://agoldenage.com/a-path-to-a-21st-century-gold-standard/#more-234
Kindahl JK (1971) Economic factors in specie resumption: the United States, 1865–1879. In: Fogel RW, Engerman SL (eds) The reinterpretation of American economic history. Harper and Row, New York
Laffer AB (1980) The reinstatement of the dollar: a blueprint. A.B. Laffer, Rolling Hill Estates, CA
Laffer AB, Miles M (1982) International economics in an integrated world. Scott, Foresman, and Co., Glenview, IL
Law J [1705] (1966) Money and trade considered with a proposal for supplying the nation with money. Augustus M. Kelley, New York
Lehrman LE (2012) The true gold standard: a monetary reform plan without official reserve currencies, 2nd edn. The Lehrman Institute, New York
Lewis NK (2007) Gold: the once and future money. Wiley, Hoboken, NJ
Lewis NK (2013) Gold: the monetary polaris. Canyon Maple, New Berlin, NY
Mishkin F (2010) The economics of money, banking & financial markets. Business school edition, 2nd edn. Addison Wesley, New York
Mundell RA (1981) Gold would serve into the 21st century. Wall Street J (September 30), p 33
Paul R, Lehrman L (2007) The case for gold: a minority report for the U.S. gold commission. Ludwig von Mises Institute, Auburn, AL, http://library.mises.org/books/Ron%20Paul/Case%20for%20Gold.pdf
Rothbard MN (2000) America's great depression, 5th edn. Ludwig von Mises Institute, Auburn, AL, http://mises.org/rothbard/agd.pdf
Rothbard MN (2005) A history of money and banking in the United States: the colonial era to World War II. Ludwig von Mises Institute, Auburn, AL, http://mises.org/books/historyofmoney.pdf
Rothbard MN (2009) Man, economy, and state: a treatise on economics with power and market: government and the economy. Scholars edition, 2nd edn. Ludwig von Mises Institute, Auburn, AL. http://library.mises.org/books/Murray%20N%20Rothbard/Man,%20Economy,%20and%20State,%20with%20Power%20and%20Market.pdf
Salerno JT (1992) Gold and the International Monetary System: the contribution of Michael A. Heilperin. In: Llewellyn HR Jr (ed) The gold standard: perspectives in the Austrian School, 2nd edn. Ludwig von Mises Institute, Auburn, AL, pp 81–111. http://mises.org/books/goldstandard.pdf
Salerno JT (1995) War and the money machine: concealing the costs of war beneath the veil of inflation. Journal des Economistes et Etudes Humaines 6 (March). Reprinted in idem, Money: sound and unsound. Ludwig von Mises Institute, Auburn, AL, pp 237–265. http://library.mises.org/books/Joseph%20T%20Salerno/Money,%20Sound%20and%20Unsound.pdf
Salerno JT (2012) A reformulation of Austrian business cycle theory in light of the financial crisis. Q J Austrian Econ 15/1(Spring):3–44
Salerno JT [1982] (2010) The gold standard: an analysis of some recent proposals. Cato Institute Policy Analysis No. 16 (September 9), 15 pp. Reprinted in idem, Money: sound and unsound. Ludwig von Mises Institute, Auburn, AL, pp 375–401. http://library.mises.org/books/Joseph%20T%20Salerno/Money,%20Sound%20and%20Unsound.pdf
Salerno JT [1991] (2010) Two traditions in modern monetary theory: John Law and A.R.J. Turgot. Journal des Economistes et Etudes Humaines 2 (June/September). Reprinted in idem, Money: sound and unsound. Ludwig von Mises Institute, Auburn, AL, pp 1–60. http://library.mises.org/books/Joseph%20T%20Salerno/Money,%20Sound%20and%20Unsound.pdf
Salerno JT [2003] (2010) An Austrian taxonomy of deflation—with applications to the U.S. Q J Austrian Econ 6/4(Winter):81–109. Reprinted in idem, Money: sound and unsound. Ludwig von Mises Institute, Auburn, AL, pp 267–314. http://library.mises.org/books/Joseph%20T%20Salerno/Money,%20Sound%20and%20Unsound.pdf

Salerno JT [2004a] (2010) Did greenspan deserve support for another term? Indep Rev 9 (1 Summer):117–126. Reprinted in idem, Money: sound and unsound. Ludwig von Mises Institute, Auburn, AL, pp 555–569. http://library.mises.org/books/Joseph%20T%20Salerno/Money,%20Sound%20and%20Unsound.pdf

Salerno JT [2004b] (2010) Deflation and depression: where's the link. Mises Daily (August 6). Reprinted in idem, Money: sound and unsound. Ludwig von Mises Institute, Auburn, AL, pp 595–602. http://library.mises.org/books/Joseph%20T%20Salerno/Money,%20Sound%20and%20Unsound.pdf

Schwartz AJ (2004) The 1981–82 gold commission: dialogue with Walker F. Todd. American Institute for Economic Research. https://www.aier.org/sites/default/files/images/stories/news/documents/anna-schwartz/GC-1.pdf

Sennholz H (1985) Money and freedom. Libertarian, Spring Mills, PA

Temin P (1969) The Jacksonian economy. W.W. Norton, New York

Thornton M (2003) Apoplithorismosphobia. Q J Austrian Econ 6/4(Winter):5–18

von Mises L (1981) The theory of money and credit (trans. HE Batson), 3rd edn. Liberty Classics, Indianapolis, IN

von Mises L (1998) Human action: a treatise on economics. Scholars Edition. Ludwig von Mises Institute, Auburn AL. http://library.mises.org/books/Ludwig%20von%20Mises/Human%20Action.pdf.

Wanniski J (1981) A job only gold can do. New York Times (August 27), p A31

Weiher K (1992) America's search for monetary stability: monetary and fiscal policy since 1913. Twayne, New York

Welker EP (1980) Plans to revive the gold standard. American Institute for Economic Research, Great Barrington, MA, https://www.aier.org/sites/default/files/publications/EEB198010.pdf

Woodhill L (2011) Stop the madness make the dollar as good as gold. Forbes (March 30). http://www.forbes.com/sites/louiswoodhill/2011/03/30/stop-the-madness-make-the-dollar-as-good-as-gold/

Woodhill L (2013a) Gold isn't money, but it should be used to define the value of the dollar. Forbes (April 18). http://www.forbes.com/sites/louiswoodhill/2013/04/18/gold-isnt-money-but-it-should-be-used-to-define-the-value-of-the-dollar/

Woodhill L (2013b) America doesn't need monetary policy, and it doesn't need economists. Forbes (August 14). http://www.forbes.com/sites/louiswoodhill/2013/04/18/gold-isnt-money-but-it-should-be-used-to-define-the-value-of-the-dollar/

Woods TE Jr (2009) Meltdown: a free-market look at why the stock market collapsed, the economy tanked, and government bailouts will make things worse. Regnery, Washington, DC

Arthur Burns: The Ph.D. Standard Begins and the End of Independence

Douglas French

Jim Grant, former writer for Baron's and editor of the very influential newsletter *Grant's Interest Rate Observer*, likes to distinguish between today's monetary regime versus the various permutations of the gold standard, by labeling the fiat dollar as being on "the Ph.D. standard" (Grant's 2013: 1).

America's central bank changed management philosophy on February 1, 1970 with the hiring of its first Ph.D. economist as Chairman. It has been nothing but PhDs since with the exception of G. William Miller who served as Chairman for only 17 months after Arthur Burns. Not so coincidently, the money supply has rocketed upward. The Fed has gone from central bank to central planner with the Fed viewed as being powerful enough to fix whatever ails the economy.

Prior to Burns's hiring, men of industry or commercial banking had served as Fed Chairmen. Their experience in the real world provided them less faith they could steer the economy with government monetary tools. The hiring of Burns began a new era of tinkerers from academia, armed with mathematics and Keynesian macroeconomic theories. The Ivory Tower provided the hubris convincing each of these men they could guide the economy with the one tool the central bank has, money, and always more of it.

The Right Qualifications

Arthur F. Burns was the Federal Reserve's 10th Chairman of its Board of Governors. None of his nine predecessors, in the words of Milton Friedman, "had any training or special competence in the problems of the economy as a whole" (Newton 1983: 154).

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The previous Chairman were, again, in Friedman's words, "able, public-spirited men with high standards of integrity and service." This rather backhanded compliment was equivalent of saying these were good, honest men who just weren't smart enough for the job. None saw the big picture, only having "experience in individual business or financial institutions" (Newton 1983: 155).

On the other hand, Arthur Burns, wrote Friedman, "is the first person ever named Chairman of the Board who has the right qualifications for that post" (Newton 1983: 155).

Burns was Friedman's professor at Columbia and the future Nobel Prize winner would remain a friend and advocate for Burns till the end, as would the 13th Fed Chairman Alan Greenspan, another Burns student and protégé. Friedman wrote, "Save for my parents and wife, no one has influenced my life more than Arthur" (as quoted in Wells 1994: 6).

In his column in the February 2, 1970 Newsweek, Friedman wrote that the Fed had been operating under an erroneous philosophy that monetary policy was concerned with credit. Friedman said this preoccupation led to the central bank focusing on interest rates and the regulating of individual bank activities.

The previous Fed Chairman had been bankers and businessmen and so it only makes sense that they would see the world from a micro standpoint. But, Friedman said the Fed's preoccupation with Federal debt caused the central bank to be focused on the "sideshow" when in fact, the "key function of the Fed, the function that it and it alone can perform, is to control the quantity of money" (Newton 1983: 155).

Money growth had been erratic causing instability and price inflation. "Arthur Burns will not make this mistake," Friedman wrote (as quoted in Newton 1983: 155).

Burns had no experience in the real world and Friedman, despite being considered one of the great free market thinkers of all time, believed Burns's experience was perfect to run the central bank. It was Burns's experience as a college professor and working for government that had Friedman convinced.

Political Climber

Burns had served as the president's chief economic advisor from 1953 to 1956 and was a member of the U.S. Advisory Council on Social Security Financing during Dwight D. Eisenhower's second term. At one point, Ike told Burns, "Arthur, you'd have made a fine chief of staff during the war." Burns would treasure that compliment for the rest of his life (Wells 1994: 16).

Importantly, he "developed a tight relationship with Eisenhower's vice president, Richard M. Nixon," writes Jerome Tuccille (2002: 75). Burns thought highly of Nixon and said, "It's extraordinary, that he's been so unpopular over the years with intellectuals. He's really one of us" (Wells 1994: 17).

"Burns loved to be near the center of government power: he worked very hard at his job and was devoted to the president," writes Newton. "He was extremely vulnerable to presidential flattery, particularly the flattery of being told the 'inside story' or being 'in the know.'" This is a dangerous quality for a Fed Chairman to have (Newton 1983: 169).

While it's assumed that Fed Chairmen are nerdy economists that never get out, Burns was a "social creature" according to one friend. "His manners were courtly and his nature warm," writes Wyatt Wells in *Economist In An Uncertain World: Arthur Burns and the Federal Reserve, 1970–78*, "for instance, he never failed to hold the elevator for others or to inquire after a sick child or spouse—and he was especially popular among women, who appreciated his gallant attitude toward them" (Wells 1994: 12–13).

Burns's manners and way with women rubbed off on his Columbia pupil Alan Greenspan. The 13th Fed Chair was known as a ladies' man. Sunday Times reporter Sarah Baxter described an aging Greenspan as "charming and attentive" (Baxter 2007).

Laissez Faire to Keynesian

When Burns left Columbia he left his laissez faire views behind as well, Tuccille explains, becoming a "Keynesian in practice." It's fine to be theoretically right in the classroom, but Burns felt that he had to accomplish things to be rewarded in Washington. "According to Burns, politics was the art of governing in an imperfect environment" (Tuccille 2002: 75–76).

Burns's philosophy would not only affect his actions during his term as Fed Chair, but his worldview heavily influenced his student Greenspan as well. "This may have been the single most memorable message that Alan received from his friendship with, and tutelage under, Arthur Burns. Many have noted that the parallels between the two men's lives were startling" (Tuccille 2002: 76).

Burns was, according to Friedman, an expert on the business cycle. "He understands the *monetary system* and its relation to the economy at a depth and subtlety that has not been equaled by any past Chairman of the Board," Friedman gushed (Newton 1983: 155).

Friedman, on one hand viewed the chairman of the Fed as the overseer of the U.S. economy, while on the other, famously championing "Friedman's k-percent rule" which called for the money supply to be increased by a constant percentage rate every year. Friedman supposedly thought a computer could run the Fed. However, in his Newsweek piece, Friedman gives the impression that Burns's judgment would be very beneficial to the economy.

"Arthur Burns is at the right place, because of the extraordinarily important influence monetary actions exert on the economy as a whole—and also because the Fed is the preeminent financial institution in the world." Friedman went on to write

that the time was right for a man like Burns to change the Fed's "basic philosophy" and move the central bank "to a less restrictive policy" (Newton 1983: 155).

Burns was a protégé of the great business cycle economist Wesley Clair Mitchell at Columbia University. He started as Mitchell's student, became his collaborator and eventually succeeded him at the National Bureau of Economic Research. "Burns's mind was powerful but not particularly original," writes Wells. Mitchell provided Burns the framework to bring out his talents." Mitchell's ideas dominated Burns's thinking for the rest of Burns's life," Wells wrote (1994: 4).

Burns was described as resembling "a small-town druggist, circa 1940." He parted his white hair down the middle, wore rimless wire-framed glasses and was heavy-set, continually smoking an Oom Paul pipe (Wells 1994: 16). He was said to be very smart. He was "never in doubt of the correctness of his opinions," writes Martin Mayer. (Mayer 401) According to Wyatt Wells, "From the start Arthur Burns displayed an unshakable sense of his own importance" (Wells 1994: 1).

Nixon and Burns

When Richard Nixon was elected in 1968, the close association that Burns had with Nixon paid off. Burns was a trusted confidant of the new president and did a number of tasks for Nixon during and after the election.

Right after the election Nixon told then-Fed Chairman William McChesney Martin that he would appoint Arthur Burns as Fed Chair as soon as he took office. The President elect thought that Martin had agreed to step down in mid-1969, when in fact he didn't. Martin stayed in place until his term was up in January 1970 (Matusow 1998: 19).

Nixon already disliked Martin, blaming him for his loss in the 1960 election. Once he took office, the President was sure that Martin would try to ruin him. In June of 1969 Martin was quoted as saying the U.S. economy was a "house of cards," and he firmed up the fed funds rate and stopped monetary growth. Nixon was livid (Matusow 1998: 18, 25–26).

When he took office, Nixon was not interested in economics matters, which bored him. His inaugural address devoted only one sentence to the economy. That would change by as early as 1971, when he told George Shultz, "When we get through, this Fed won't be independent if it's the only thing I do in this office" (Matusow 1998: 9, 62).

Until the Fed job was available, Nixon wanted Burns on his staff. Burns resisted, but finally succumbed to Nixon's flattery and became counselor to the president. The plan was for Burns to coordinate domestic policy and cabinet members, get the administration off to a good start, and then take over at the Fed.

Working with the president turned out to be a bit more complicated than planned. When Nixon had been Vice President and a candidate, Burns, who was older, treated Nixon with "slight condescension" according to one friend. With

Nixon now in charge, "Burns had trouble adjusting to a subordinate position," writes Wells.

One White House staffer said Burns had "an avuncular style that drove Nixon bats." The new counselor took his role seriously and would lecture his boss on pertinent issues at great length. "Burns would also bluntly contradict the president or anyone else in the administration with whom he disagreed, even though the chief executive hated confrontation," writes Wells. Nixon began to dread talking to Burns.

Burns also rubbed Nixon's two main lieutenants, John Ehrlichman and H.R. Haldeman the wrong way. They told their boss that Burns was a blowhard, who was unable to distinguish trivia from vital information. The feeling was mutual. Burns "thought of Haldeman and Ehrlichman as clerks promoted far above their natural talents and referred to them as 'the boys in the basement,'" writes Wells (1994: 26–30).

Burns's act quickly wore thin at the White House and his meetings were limited to half an hour each week. Meanwhile Daniel Patrick Moynihan, another Nixon staffer, began to get the president's ear. "Four minutes with Pat," Nixon reportedly said, "is worth four hours of Arthur Burns" (Wells 1994: 30).

The February 25, 1969 entry in Burns's diary mentions lunch with Fed Chairman Bill Martin. Martin had evidently made snide comments about Burns's "shortcomings for Fed. position" and he apologized to Burns who wrote," Poor fellow, he thinks he owns the Fed and has suddenly discovered that he is so indispensable that job must not go (though law requires it) to anyone else. Pathetic slob!"(Ferrell 2010: 14).

In October of 1969 Nixon appointed Arthur Burns to succeed Martin. Nixon's familiarity with Burns won the day. The president didn't trust the central bank, but with Burns he would have one of his own in charge. At the same time, when Burns took the oath of office in January 1970, Nixon said, "I have some very strong views on some of these economic matters and I can assure you that I will convey them privately and strongly to Dr. Burns. . . .I respect his independence. However, I hope that independently he will conclude that my views are the ones that should be followed."

As Burns was soaking in a standing ovation, Nixon broke in, saying, "You see, Dr. Burns, that is a standing vote of appreciation in advance for lower interest rates and more money." Later, in private, Nixon told his new Fed Chair, "You see to it: no recession" (Wells 1994: 42).

Burns the Manager

Burns was a domineering force at the Fed who created "turmoil and disorder in the Fed." High ranking Fed officials such as William Poole, Jim Pierce and Daryl Francis left because of Burns. An official in the St. Louis Fed told Maxwell Newton,

"Burns was a mean guy. He was mean. He's vindictive; he's revengeful" (Newton 1983: 171).

Newton relates a story told to him by financial journalist Sanford Rose, who penned an article while at Fortune magazine that described a dispute Burns was having with other members of the Federal Open market Committee in 1972. Rose had an inside source that told him that when Burns couldn't get the board to vote his way for more stimulus, he left the meeting angry, only to return an hour later, saying, "I have just talked to the White House."

"The article itself was not all that remarkable. The only remarkable thing was the effort that Arthur Burns put into getting me fired," Rose told Newton.

Newton's source at the St. Louis Fed told him that Burns saw the Fed Chair job "as a crusade—in favor of himself. This was his opportunity to play the grand master. "The same source said that people inside the Fed tried to find out all they could about Burns when he took the job, but they were mislead into believing "he is amenable to factual arguments" (Newton 1983: 174).

"In truth, of course, he wouldn't look at a piece of evidence to save his soul," Newton's source remembered (Newton 1983: 174).

According to Mayer, the chairman voted first so that open market committee members would follow. The Fed staff under Burns "acquired the habit of believing that it worked for the chairman, not for the board" (Mayer 1997: 402).

Instead of having formal votes, Burns would "sample sentiment" to skirt the law that required a vote be disclosed to the public. In one case when a vote was deadlock at 6 to 6, Burns said, "By the narrowest of margins, this six wins. I would like to have a recount, twelve to nothing" (Newton 1983: 174), and fearing requirements of the Freedom of Information Act, Burns simply stopped keeping transcripts altogether (Newton 1983: 174).

Monetary Engineering

Early in Burns's tenure growth was sluggish, unemployment high, while prices and wages continued to climb higher. GDP growth in the first half of 1971 was less than 3 %, while the unemployment rate was stuck at 6 %.

Wages for telephone workers would increase 33 % over the coming 3 years; postal workers won an annual increase between 7 and 9 %; copper workers would be paid 31 % more over 3 years, railroad workers 42 % over 42 months and steelworkers won a 31 % raise over 3 years (Wells 1994: 71).

The money supply was expanding at a rapid rate, rising 8.3 % (annualized) in the first quarter, followed by an unexpected 10.6 % (annualized) increase in the second quarter. Burns believed the money supply growth was excessive, however, with unemployment still high and growth still tepid, he was reluctant to increase interest rates or shut off the tap.

His solution was an "incomes policy" that would control wages by government force. Burns believed that inflation caused unemployment. So, if government controlled wages, that would keep prices down and, in turn, spur recovery.

Having a blind eye to the effects of monetary growth, and believing he could fix economic problems with policy, Burns began to lay the groundwork for economic engineering, telling a congressional committee, "The rules of economics are not working the way they used to. Despite extensive unemployment in our country, wage rate increases have not moderated. Despite much idle industrial capacity, commodity prices continue to rise rapidly" (Wells 1994: 72).

Burns Becomes a Team Player

The Nixon White House was not pleased with the Fed Chair. The president believed his man, Burns, was undermining their policies and destroying business confidence. And considering that an incomes policy was a key plan of the Democrats, Nixon believed his man at the Fed was betraying him. "Perhaps worst of all, the president, who was a suspicious man, thought Burns was helping his enemies," Wells writes (1994: 71–73).

Besides, Nixon wanted any bold actions to come from the White House, not the Fed. Burns was called to a meeting with President on June 28 according to the Fed Chair's diary. Burns wrote that he was told (among other things), "that while my status was a special one, I too will be expected to conform to publicly announced Administration policies, that my advocacy or comments on non-monetary matters was being interpreted widely as Administration policy—because of my friendship with the President that everyone knew"(Ferrell 2010: 45).

Burns wrote that what he saw that day from the President was "uncontrolled cruelty," and that he "was seized suddenly with fear for the safety of our country which depended so heavily on this insecure man (the thought flashed through my mind of an earlier conversation, when he asked me to inform him when I thought it would be a good time to bring on an international monetary crisis and added, winking privately as he spoke, 'I don't mind crisis'—the I being heavily underlined)"(Ferrell 2010: 46).

Burns recalls that the President's manner at that meeting was "imperial." Burns may have been a friend, but "he was still the emperor and I should therefore toe the mark—as should every good citizen, especially those that professed to be his friends." Burns concluded his diary entry with, "now I knew that I would be accepted in the future only if I suppressed my will and yielded completely—even though it was wrong at law and morally—to his authority"(Ferrell 2010: 47–48).

Nixon looked to quiet the Fed Chair by discrediting him. He instructed one of his cronies, Charles Colson, to spread rumors that Burns had asked for a 50 % pay increase: A devastating charge in the midst of Burns complaining about the wage hikes negotiated by labor unions.

In truth, the Office of Management and Budget (OMB) recommended a significant raise for the Fed Chairman (nearly 50 %), based upon what other central bankers were receiving, but Burns turned the pay increase down.

The rumor was also leaked that the Federal Reserve board would be increased from 7 to 14 and that the central bank would be placed under the authority of the White House to rattle the chairman (Ferrell 2010: 48).

Burns was outraged at the slander and rallied support on Capitol Hill. At the same time Wall Street was alarmed that the White House and the Fed were at odds. Nixon backed down and said at a press conference, "Arthur Burns . . . has taken a very unfair shot." That's all it took to assuage Burns's anger. Burn's said of his friend's comment, "I haven't been so deeply moved in years. . .This proves what a decent and warm man the President is" (Wells 1994: 74).

In August 12, 1970 the British government accelerated the White House economic agenda when it requested a guarantee or cover for $750 million of its holdings. Friday morning the 13th the White House economic brain trust[1] along with the President helicoptered from the Pentagon to Camp David, a presidential retreat in the Maryland Mountains, and were "locked up" from Friday to Sunday.

The bold economic plan was dictated to the group by the President, who "was governed mainly, if not entirely, by a political motive; that he had reached the decision that the kind of changes that we were discussing—on prices & wages, taxes, etc.—were essential for the campaign of 1972" (Ferrell 2010: 53).

A 90-day wage-price freeze was imposed, along with a 10 % tax on imports. As stimulus measures, the president would ask Congress to re-institute the investment tax credit, repeal the excise tax on auto and expand personal income tax deductions. And finally the gold window would be closed, with the U.S. refusing to redeem dollars in gold.

This agenda captured everything Burns had been agitating for, with one exception; he dissented on the gold question (Wells 1994: 75–76). "I expressed fear that a closing of gold window would lead to chaotic financial markets," Burns wrote in his diary, "and that it might be followed by trade wars, currency wars, and political friction—such as occurred during the thirties"(Ferrell 2010: 52).

But, first and foremost, the Fed Chairman was a team player. He writes, "I assured the President that I would support his new program fully. I could do this readily, except for the gold suspension" (Ferrell 2010: 53).

The Fed Chairman's reflections about the President's actions at Camp David were not flattering. Burns writes, "The weekend confirmed my growing feeling that the President needs to act in a way that satisfies his hunger for drama and novelty, that he lacks true self-assurance and that [he] therefore requires some dramatic act to convince himself that he is a strong leader, and that his prejudices or shall I say

[1] This brain trust was composed of John Connally, Paul Volker, George Shultz, Paul McCracken, Herbert Stein, Peter G. Peterson, H.R. Haldeman, John Ehrlichman, William Safire, and Arthur Burns (Wells 1994: 75).

principles?—will not survive clear evidence that the political winds require a change" (Ferrell 2010: 53).

With the election approaching in 1972 the Nixon administration worried that tight money might choke off recovery. There was no cause for concern. Burns targeted 6 % money growth in both 1971 and 1972 and demand deposits expanded more rapidly in each year (Wells 1994: 90–91). Burns writes, "I told him that I was looking after monetary policy and that he need not be concerned about the possibility that the Fed would starve the economy"(Ferrell 2010: 54).

Indeed, the money supply grew at more than an 8.5 % annual rate in the second half of 1972. The Fed did hike rates somewhat; however, the demand for credit was very strong and couldn't slow monetary expansion (Wells 1994: 98).

Burns did not step in to arrest the rapid money growth because he didn't see money as the cause of price inflation. "He thought that inflation persisted because it was ingrained in the attitudes of businessmen, workers, and consumers, and that an effective incomes policy offered the best way to change these attitudes" (Wells 1994: 100–101).

Herbert Stein, who was chairman of the President's Council of Economic Advisors that year, didn't see problems with monetary growth either. "We all thought, 'We're a long way from full employment, we still have a lot of room for expanding the economy, and the inflation rate is low'" (Wells 1994: 101).

It's Not the Fed's Fault

Consumer prices quickly escalated in the wake of Burns's monetary expansion, despite the punk economy. In 1973, the CPI increased 6.2 %, nearly doubling from 1972s 3.3 % increase. In 1974, the rate came close to doubling again to 11 %. Between 1975 and 1981, annual CPI increase bounced between a low of a 5.8 % increase to a high of 1980s 13.5 % CPI increase (Newton 1983: 185).

Again, Burns blamed everything else but money growth for price increases. Speaking to the House Banking Committee in April 1975 the Fed Chair said, "The fact is that inflation started in the mid-1960s and was mainly caused by large deficits, continued year after year, in the Federal Budget. As a result of the excess demand created by a persistently loose fiscal policy, a spiral of wages got under way in the private sector and the rate of inflation began to quicken" (Newton 1983: 188).

In a 1976 speech, Burns cited the business community's "exuberant mood" and "waves of speculation" as inflation causes (Newton 1983: 188).

After leaving the central bank, Burns delivered the Per Jacobsson lecture on September 30, 1979 in Belgrade, Serbia. In his lengthy address, Burns conceded that central banks had been "participants in the inflationary process in which the industrial countries have been enmeshed, but their role has been subsidiary" (Burns 1979: 21).

Burns went on to describe the inflation's "stubborn persistence" and excused central bankers for having any role in the inflation because their behavior had not

changed. The persistence reflected "the philosophic and political currents of thought that have impinged on economic life since the Great Depression and particularly since the mid-1960s" (Burns 1979: 21). Central bankers' "practical capacity for curbing an inflation that is continually driven by political forces is very limited" (Burns 1979: 21).

Burns faxed philosophical that his former employer could have stopped inflation anytime it wanted. "It did not do so because the Federal Reserve was itself caught up in the philosophic and political currents that were transforming American life and culture"(Burns 1979: 15).

When fiscal policy enlarged "the flow of benefits to the population at large, or to this or that group, the assumption was implicit that monetary policy would somehow accommodate the action" (Burns 1979: 15). Burns said the Fed stepped on the brakes in 1966, 1969, and 1974 but never long enough (Burns 1979: 16).

Burns said he didn't "mean to suggest that central bankers are free from responsibility for the inflation that is our common inheritance. After all, every central bank has some room for discretion and the range is considerable in the more independent central banks" (Burns 1979: 16).

But while the masters at the Fed have discretion, the cocksure Burns admitted they will make mistakes—lots of them. "In a rapidly changing world, opportunities for mistakes are legion. Even facts about current conditions are subject to misinterpretation" (Burns 1979: 16).

Conclusion

With the selection of Arthur Burns as the Federal Reserve Chairman and the freeing of the dollar from its tie to gold, American placed its trust in money to PhD economists, who hold the belief that they know which monetary buttons to push, and how hard, to produce the result they or their boss—the President—wants.

Burns himself couldn't have made it clearer in his Belgrade speech. "In most countries, the central bank is an instrumentality of the executive branch of government—carrying out monetary policy according to the wishes of the head of government or the ministry of finance" (Burns 1979: 15).

For the last 43 years (other than 17 months) the Federal Reserve has been under the control of professional economists: Humans thought to have superhuman skills in directing monetary policy and in turn the economy in whole. These gentlemen (so far) are thought to see things that others can't, understand the complexities of the economy that normal people can't fathom. These monetary mandarins are believed to not only be able to see around corners, but be completely independent minded.

As we've seen Burns was a social animal, susceptible to flattery and constantly seeking status and admiration. His pupil and friend Alan Greenspan was cut from the same cloth. Ayn Rand said about Greenspan, "Oh, Alan is so brilliant, but he's such a social climber." This extended even to his dating habits. Greenspan dated

Kay Bailey Hutchinson and Barbara Streisand before marrying Andrea Mitchell. "The Maestro" as he was called, was seduced by Washington's high society life style (Stein and McIntyre 2004).

On the job, these flawed PhDs have produced distortions and inflations of all types, whether its consumer prices as in Burns's time, or asset prices during the Greenspan and Bernanke eras.

To worship THE Fed Chairman is spectacularly wrong. Burns, upon reflection, understood the shortcomings of humans and that the ways to err were numerous. This is the closest he came to taking responsibility for the inflation of the 1970s and 1980s. Similarly, his protégé Alan Greenspan would take no responsibility for the housing bubble that his easy money policies engendered.

Burns, like his mentor, Mitchell, placed great dependence on empirical research (Wells 1994: 4). From the data, Burns believed he could formulate policies to set the economy on the right path. It never worked out that way.

Ironically, while Burns was still on the job as Fed Chairman, F.A. Hayek delivered his Nobel Prize acceptance speech entitled "The Pretense of Knowledge" on December 11, 1974. Hayek, spoke about economists like Burns, who believe there "exists a simple positive correlation between total employment and the size of the aggregate demand for goods and services; it leads to the belief that we can permanently assure full employment by maintaining total money expenditure at an appropriate level" (Hayek 1989).

That may work in the physical sciences, but, as Hayek explains, "Such complex phenomena as the market, which depend on the actions of many individuals, all the circumstances which will determine the outcome of a process. . .will hardly ever be known or measurable" (Hayek 1989).

Given the timing of the speech, Hayek may have had Burns specifically in mind when he said, "an almost exclusive concentration on quantitatively measurable surface phenomena has produced a policy which has made matters worse" (Hayek 1989).

Hayek continued, "If man is not to do more harm than good in his efforts to improve the social order, he will have to learn that in this, as in all other fields where essential complexity of an organized kind prevails, he cannot acquire the full knowledge which would make mastery of the events possible" (Hayek 1989).

In his conclusion, Hayek urges caution to men striving to control society. That very "striving which makes him not only a tyrant over his fellows, but which may well make him the destroyer of a civilization which no brain has designed but which has grown from the free efforts of millions of individuals" (Hayek 1989).

The human hand should not manage money. No matter what qualifications these economists bring to the job, they will only have enough knowledge to be dangerous. What we can know for sure is as PhDs go on running the central bank, monetary and market chaos will continue.

References

Baxter S (2007) Sarah Baxter meets Alan Greenspan. The Sunday Times, September 23
Burns A (1979) The anguish of central banking. Per Jacobsson Lecture (September 30). International Monetary Fund, Washington. [Available] http://www.perjacobssson.org/lectures/1979.pdf
Ferrell RH (ed) (2010) Inside the Nixon administration: the secret diary of Arthur Burns, 1969–1974. University Press of Kansas, Lawrence, KS
Grant's Interest Rate Observer (2013) Welcome to the revolution (May 31, 2013). Grant's Interest Rate Observer 31(11)
Hayek FA (1989) The pretence of knowledge. Am Econ Rev 79(6):3–7
Matusow AJ (1998) Nixon's economy: booms, busts, dollars, and votes. University Press of Kansas, Lawrence, KS
Mayer M (1997) The bankers: the next generation, the new worlds of money, credit and banking in an electronic age. Truman Talley Books, Dutton, NY
Newton M (1983) The Fed: inside the Federal Reserve, the secret power center that controls the American economy. Times Books, New York
Stein T, McIntyre S (2004) The dark side of Alan Greenspan. The Texas Hedge Report, September 28
Tuccille J (2002) Alan Shrugged: Alan Greenspan, the world's most powerful banker. Wiley, Hoboken, NJ
Wells WC (1994) Economist in an uncertain world: Arthur F. Burns and the Federal Reserve, 1970–78. Columbia University Press, New York

The Federal Reserve's Housing Bubble and the Skyscraper Curse

Mark Thornton

There are several theories of the business cycle that have maintained wide acceptability. These theories have given rise to several explanations for the Housing Bubble crisis that remain in fashion. This paper critically examines these theories and explanations. The result of this analysis shows how the combination of the Austrian Business Cycle (ABC) Theory and elements from *some* of these explanations can be combined to provide a coherent and comprehensive story of the Housing Bubble crisis. Indeed, a similar story can be constructed for all of the major economic crises during the one hundred year reign of the Federal Reserve.

A second aspect of this paper is to examine the Skyscraper Curse with respect to the Housing Bubble crisis. Lawrence (1999) first demonstrated an "eerie correlation" between record setting skyscrapers and world economic crisis. Thornton (2005) showed that the relationship between record setting skyscrapers and world economic crisis has a stronger correlation than previously thought. Furthermore, he provides theoretical connections that explain the association between the two phenomena. These connections are components of the ABC theory that provide the causal factors which explain both the business cycle and record setting skyscrapers. The final section will examine skyscraper events, i.e. skyscraper alerts and signals, from the Housing Bubble to the present. The evidence suggests a strong possibility of a looming world economic crisis.

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Theories and Explanations

Keynesian business cycle theories are based on the idea that cycles are caused by changes in aggregate demand. This theory, however, provides no purely *economic* cause for business cycles. The instigator or cause in Keynesian theory is a *psychological* factor that is driven by so-called "animal spirits." Small changes in entrepreneurs' optimism and pessimism affect their investment decisions and can spread and snowball out of control causing sharp increases and decreases in aggregate demand, profits, and employment. The general solution for these problems within the Keynesian framework is for aggregate demand to be decreased or increased by the public sector as a substitute for the private sector. The primary means to increase public sector aggregate demand is to increase government spending financed by borrowing rather than taxes. To tame a boom in the economy, a decrease in aggregate demand can be generated by increased taxes and budget surpluses. The effectiveness of the Keynesian approach has been subject to a great deal of scrutiny, but it is important to note that this short-run solution (budget deficits) has resulted in a major long run fiscal problem (large government debt) for many major economies.

As suggested above, the problem with Keynesian business cycle *theory* is that it does not provide an economic cause for cycles. Cycles just happen or are brought about by random exogenous factors. With the Housing Bubble, people just went out and built too many houses and then realized they made a mistake. At that point, the animal spirits of depression took over and the economy and in particular the housing and banking sectors went into a tailspin. The Keynesian explanation for the Housing Bubble crisis is correct in that expectations were psychologically impacted in a positive way during the bubble and in a negative manner after the crash and therefore do play a part in the narrative describing the cycle.

According to Real Business Cycle (RBC) theory the overall economy is influenced positively and negatively by "technological shocks" such as new technology, bad weather and disease shocks, oil price spikes, and new environmental or labor regulations. RBC theory holds that markets clear and that government should not respond to short-term fluctuations, but should concentrate on long-term improvements in public goods.

RBC theory does a good job of describing both the housing bubble and subsequent collapse. The housing bubble is explained by things such as the expansion of the Community Reinvestment Act in the late 1990s, increased tax advantage for residential real estate, and new developments in the "technology" of financing residential housing, such as mortgage-backed securities (MBS) and collateralized debt obligations (CDO). In addition there was indeed a spike in oil prices near the peak of the cycle. Finally, there was justifiable expectations regarding Obama Care and the expansion of regulation and government spending that could be seen as negative shocks to economy that would make it even more difficult for recent borrowers to repay their mortgages.

The RBC theory also does a good job of anticipating the aftermath of the housing crisis. The "shock" to the financial industry would increase the intensity of the crash and the massive Keynesian-style responses to the crisis represent the opposite of what RBC theory recommends. Specifically, the theory recommends the smallest possible response when it comes to monetary and fiscal policy. The "massive" response can therefore be viewed as a type of drag on the economy because expectations were confused going forward. This relates to Higgs (1997) "Regime Uncertainty" where government policies, actions, and inaction increase entrepreneurial uncertainty and thereby reduce economic activity.

Unfortunately, while RBC theory can provide a pretty good explanation in hindsight, the types of real changes that it relies on are difficult to model and hard to know in advance. Therefore, while it is "real," it does not really help us understand reality. However, its policy implications for an economic downturn are correct, which is essentially to do nothing and let markets clear. For the Austrian view on policy advice for an economic downturn see Salerno (2009).

Austrian Business Cycle (ABC) theory recognizes aspects of the above theories and can easily incorporate other theories such as the political business cycle theory and the Georgist theory of the business cycle. This is because most theories of the business cycle are actually just descriptions of business cycles based on different criteria such as psychology or technology. For example, Keynesians emphasize psychological aspects while RBC theorists emphasize real substantive changes in the economy.

It would be difficult to deny the psychological changes in people and markets that occur over the business cycle. In a true boom economy everyone is making money and they are often making more than they ever expected. Wealth, income, and wages grow at a very fast pace. Skyrocketing asset values encourage conspicuous consumption. Likewise, after boom turns to bust people first tend to deny that there has been any fundamental change in the economy. Axelrod (2006) explains that the next stages are anger, bargaining, depression, and finally acceptance. Depression is the dominant stage in an economic bust in terms of length and impact. However, these psychological experiences should be viewed as effects rather than causes, *just as they are viewed in the psychology literature*. While the strict version of the Kübler-Ross (2005) model of the "five stages of grief" is obviously false, and while the psychology literature uses the term "response," rather than effect, there is little doubt that these emotional responses are caused by things such as the death of a loved one, a terminal illness, traumatic experiences, or a chemical imbalance.

It also would be difficult to deny that real changes and shocks occur over the business cycle, particularly during the boom. Most booms or bubbles are in fact linked to new technologies and specific industries and products. The Housing Bubble was linked to "Subprime" and related financial innovations. The "tech" or dot.com bubble of the late 1990s, the Japanese Bubble of the 1980s, the Booming 1960s and the Roaring 1920s all expanded on the basis of new technologies in terms of products as well as production, distribution, and management processes.

For the same reasons it is difficult to deny the main features of Schumpeter's business cycle theory. New innovations and products expand along with the balance

sheets of the banking industry and you have a boom. As these new innovations run their course the economy falls into the inevitable economic bust.

The ABC theory asks the question, why? What is the ultimate cause of this cyclical process *described* by these approaches to understanding business cycles? In their model of a free market economy, price theory implies that there would not be any overall expansion beyond the trend growth (of savings) of the economy and neither would there be an overall lasting glut that followed. As Kates (1998) and Anderson (2009) suggest, price theory describes this result and gives you a model of what is often referred to as Say's Law.

For Austrians, the "price" that is of most important at the macroeconomic level is the interest rate, whether it is the interest rate on loans, interest as the return to capital, or the natural interest rate based on time preferences in the overall economy. The natural rate is the interest rate that governs the allocation of resources between investment for the future and current consumption, as well as investment across the entire structure of production in an economy. In a pure market economy the loan rate of interest would follow the natural rate of interest. Austrian economists have developed a theory of interest that explains his notion of a natural rate of interest as being based on social time preference.

The problem of the business cycle arises when the loan rate of interest diverges from the natural rate of interest. While this divergence could happen in a free banking system, the major divergence occurs under central bank regimes when large reductions of the interest rate are executed by injecting money into the banking system over a long period of time. A larger volume of loans is thereby made possible. As Salerno (2012) reminds us, the lower interest rate increases investment *and consumption* and reduces savings. These changes in the economy provide the conditions for a boom in the economy. If the new funds are funneled into a specific sector of the economy, a bubble could result.

In the typical context, the Federal Reserve deliberately "targets" the Federal Funds interest rates, which is the interest rate that banks can borrow from each other in order to maintain their required reserves. If the Federal Funds rate rises above the target the Fed can buy government bonds from banks; providing them with increased cash balances to either meet their required reserves or to increase lending. This is the traditional manner by which the Fed increases the monetary base and if this money is lent by the banking system it will have a multiplicative impact on the overall amount of new credit, borrowing, and investment. The Fed's target interest rate is naturally disruptive to an economy because (a) other interest rates are affected by the Fed target and (b) their target is rarely the same "target" sought by the market.

Notice that prior to the central bank's change in interest rates that all wealth-generating processes were being funded by either retained earnings or bank loans. When new loans are injected into the economy, recipients will spend or invest the money according to their preferences and existing economic conditions. This creates a different pattern of demand than would have existed and profits will be higher in certain areas of the economy rather than others. These profits in turn impact new investments geared towards serving this new pattern of demand. This

new pattern of capital investment is referred to as "Cantillon Effects" after economist Richard Cantillon (1755). Thornton (2006) described how Cantillon was the first to show that it is difficult to convert these investments to the new emerging pattern of demand and prices that ensue once the new money has run its course.

The specific pattern of malinvestments that ABC theory anticipates when the market interest rate is artificially reduced is that there will be a lengthening of the structure of production. An example of a lengthening of the structure of production would be the replacement of traditional dairy farms for local consumption with commercial dairy manufacturing that serves regional consumption. This requires a longer period of production and more stages of production. An example of a new product lengthening the structure of production would be pasteurized milk which involves cooking the milk to eliminate bacteria that increase shelf life of the product.

Starting with an equilibrium structure of production, the expansion of credit will go primarily towards the lengthening of the structure of production of existing goods or into establishing a new structure of production for new goods, which themselves often represent a longer structure of production and more roundabout means of production. Therefore, the ABC theory anticipates that distortions in credit markets actually cause technological shocks in the sense that they transform the way existing products are brought to market and by artificially inducing new products in the market.

To summarize, the ABC theory does not deny that psychological factors and technological shocks occur over the business cycle; in fact, it embraces them. However, it seeks an *economic cause* of the business cycle and finds it using the tools of price theory. Ultimately, the cause of the cycle is found in the distortion of interest rates brought about by central banks.

Thornton (2004b) shows that by using the ABC theory Austrian economists were able to observe the economy of the early 2000s and detect signs of the existence of a housing bubble where others could not. Block (2010) showed that numerous Austrian economists and "Austrian" financial analysts published warnings of a housing bubble. These warnings appeared before the bubble began to collapse and contained an identification of the cause of the bubble. The vast majority of mainstream and government economists saw no major problems in the economy at this time. In fact, Thornton (2009) showed that as we came closer to the bubble collapsing, there were more denials of a housing bubble and more claims of the emergence of a new paradigm.

For example, Randall Holcombe and Benjamin Powell (2009, p. vii), the editors of a recent book on the general housing crisis (that goes well beyond the problems of the Housing Bubble) have noted:

> The timing is noteworthy because most of the chapters (in their edited book) were written in 2006 when the housing boom across much of the country was reaching its peak. One chapter in particular in this regard deserves mention is Mark Thornton's, because he was discussing the inevitable collapse of the housing market bubble at a time when many observers were arguing that house prices could continue to rise indefinitely. Thornton's chapter does a good job of explaining the collapse of housing prices in hindsight and it is

worth noting that Thornton's hindsight was actually foresight: he was talking about the collapse before it actually occurred.

In fact, Austrian economists have a long record of spotting bubbles in the economy. For example, Thornton (2008a) points out that Mises, Hayek, and other Austrian economists were aware that the 1920s were a period of unsustainable boom conditions and financial imbalances, whereas Irving Fisher had declared a permanently high plateau and continued to deny the problem throughout the stock market's historic collapse. Thornton (2004a) also finds that Hazlitt, Mises, and Rothbard were writing and speaking out against the US government's economic policy and the dangers to the dollar (i.e. the Bretton Woods System) during the late 1960s, while Keynesian economist such as Arthur Okun, the Chairman of the President's Council of Advisors declared the business cycle had been defeated. What was ahead was the demise of Bretton Woods and stagflation of the 1970s. Thornton (2004b, c) finds this same pattern of predictions by Austrian and Mainstream economists repeated in the Tech/Dot.com Bubble and the Housing Bubble.

In the wake of the collapse of the housing bubble there began to appear a litany of explanations for what caused the housing bubble and the financial crisis. The "causes" of the housing bubble included: (1) insufficient regulation of financial markets; (2) deregulations of banking and repeal of the Glass-Steagall regulation; (3) government mandates for affordable housing through the Community Reinvestment Act as well as through Fannie Mae and Freddie Mac; (4) subprime loans made possible by new financial products such as mortgage-backed securities; and (5) psychological factors such as mania, speculation, and media promotion all fueled by feedback effects.

These factors that were identified by various ex-post explanations of the Housing Bubble crisis should not be viewed as the cause of the bubble. However, they do explain why it was a *housing* bubble. In other words a certain combination of these factors explains the adjective (housing), but not the noun (bubble). They also might contribute something to our understanding of the magnitude of the bubble and the duration of the correction process of unwinding the housing markets in that they made the process more difficult and time consuming compared to other bubbles. For example, when the synthetic mortgage backed securities market collapsed, it became highly problematic to complete the foreclosure processes. Homes that were tied up with synthetic MBSs had no well-defined owner of a given mortgage.

In the aftermath of the crisis all sorts of remedies were suggested and implemented. Thornton (2008b, 2009b, 2010a, b) shows that these remedies have not worked and in fact have made things worse and created new problems. The real solutions to bubbles and economic crises are shown by Thornton (2008c, d, 2009c) to be quite the opposite of those endorsed by the likes of Ben Bernanke and Paul Krugman. To reiterate, the cause of a bubble or boom in the economy is the monetary policy of the central bank. The Federal Reserve provides the *necessary* condition, the primary ingredient, for booms and bubbles.

Skyscraper Index

One interesting application of the ABC theory is the Skyscraper Index. Lawrence (1999) showed that there has been an eerie correlation between the building of the world's tallest skyscraper and world economic crisis. The Panic of 1907, the Great Depression, the collapse of Bretton Woods and the stagflation of the 1970s, the dot.com bubble of the late 1990s, and the Housing Bubble all were associated with the building of record-setting skyscrapers. This correlation is called the Skyscraper Index, Indicator, or even Curse. The fact that the Skyscraper Curse appears at key crisis points over the last century indicates that it is indeed an illustration of the ABC theory.[1]

Building on the correlation of Lawrence (1999), Thornton (2005) shows how the *correlation* relates to the ABC *theory*. Conditions for record setting skyscrapers are the same as those necessary to create a boom in the economy. These conditions include artificially low interest rates, an increase in the growth rate of credit, and a rapidly expanding money supply. Long periods of boom-time conditions lead to over confidence and extreme speculative behavior on the part of entrepreneurs. This manifests itself in things like "trophy" building which are achieved either through unusual architecture design, record heights, or both. Record setting skyscrapers usually coincide with long lasting economic booms, "faked fundamentals," and the hubris of self adoration.

The phrase "faked fundamentals" refers to the fact that the bubble does indeed change the fundamental facts of economic calculation. These facts include such things as interest rates, growth rates, employment rates, failure rates, etc. For example, the MBS industry could take a look at the recent history of foreclosures and find that the average failure rates was less than one percent and use that figure to build their models of how to create MBS products. When the foreclosure rate increases by a large unanticipated amount the models and products fail. Note that the Housing Bubble itself drove down the foreclosure rate, so that in a world of bubbles, the fundamentals cannot be trusted.

Record setting skyscrapers are a prominent example of how distortions in interest rates (i.e. actual rates below "natural" rates) alter the economy's structure of production in an unsustainable manner, but obviously it is not the building of a very tall building that *causes* an economic crisis. The most general impact on the economy is that the structure of production is reoriented towards longer run and more roundabout production processes. Record setting skyscrapers usually require a multitude of new technological processes and systems all of which have to have their own production, distribution, installation, and maintenance systems. This is symptomatic of the entire economy in an artificial boom. Another general impact on the economy is an increase amount of investment and consumption, and a decrease

[1] Rothbard (1994, p. 106) shows that the Panic of 1907 was the result of the US Treasury Secretary Lesley Shaw trying to act like a central bank by illegally injecting Treasury funds into large favored banks. Also see Mary Tone Rodgers and Berry K. Wilson (2011).

in saving. This means that balance sheets of businesses become relatively more leveraged and thus firms become more susceptible to failure.

With the skyscraper and related markets there is a large increase in capacity i.e. the amount of office space and related services means that expected future prices are unlikely to be achieved and therefore expected profits will not be achieved and losses will increase. Once boom has turned to bust, the existing capacity to produce new extremely tall skyscrapers will greatly exceed demand for producing skyscrapers and profit margins will be squeezed tight for the construction and materials firms that survive the bust.

The first major test of the Skyscraper Index post-Thornton (2005) was the housing bubble in the United States and elsewhere. Thornton (2007a) reported a world crisis Skyscraper signal took place in late July:

> There is a new record setting skyscraper in the making in the United Arab Emirates. The Skyscraper Index predicts economic depression and/or stock market collapses to occur prior to the completion of the skyscraper.

The *crisis signal* was based on the Burj Dubai Tower (now the Burj Khalifa Tower) setting the world height record for skyscrapers. Skyscraper *alerts* are given when "ground breakings" occur on construction projects that are projected to break world, continental, and national records. In contrast, skyscraper crisis signals are given when construction actually exceeds the previous record. The distinction between the two recognizes that not all such projects will be completed as planned.

It was at this same time that the US stock market reached its peak and began to roll over. The housing market which had been strong for many years finally stalled and then began to turn negative in terms of housing starts, housing sales, and housing prices. Mortgage financing companies began to falter and fail. Employment in the construction industry began to decline quickly. Thornton (2007b) even reported that illegal immigrants from Mexico had started to return home because of a lack of jobs. A nascent recovery or correction from the boom had begun in earnest by the end of the year.

However, by January of 2008 the Federal Reserve had begun to take actions beyond the traditional scope of Fed policy. They went beyond the typical policy moves of cutting the Federal Funds rate and Discount rate and embarked on a long series of unprecedented policy moves designed to bail out the large banks, supposedly with the purpose of preventing contagion effects in the broader economy. The US Treasury was also very active in attempting to bailout the economy in a rather unorthodox approach.

Thornton (2009d, e, 2010c) reported that Dubai began to experience financial trouble and had to delay payment on its debt issued to finance the Burj Khalifa Tower. When the Tower officially opened in January of 2010 the sovereign fund of the United Arab Emirates, which built the skyscraper was broke and had to be bailed out by the sheikh of Abu Dhabi for $10 billion. CNN reporter Kevin Voigt (2010) noted at the time:

> One person who wasn't surprised by the economic woes greeting the dedication of the Burj Khalifa (renamed Monday from Burj Dubai in honor of the sheikh of Abu Dhabi, which

recently threw Dubai a $10 billion lifeline) was Auburn University economist Mark Thornton. He predicted tough times for the emirate two years ago.

The next major Skyscraper signal was of the regional or continental variety. Thornton (2011) issued a Skyscraper signal for Europe when the Shard building surpassed the 1000 f. mark, setting a new skyscraper record for Europe. At the time, the Eurozone Crisis had already started to be revealed in some of the smaller nations on the fringes of Europe, but major European stock markets and the Euro were generally considered strong. By the time the Shard building officially opened in July of 2012 the Eurozone crisis was clearly evident with the sovereign debt crisis striking the PIIIGS (Portugal, Italy, Iceland, Ireland, Greece, and Spain).

There was also a spreading concern over the future of the Euro. More recently there has been the banking crisis in Cyprus, which Salerno (2013) could be the beginning of the unraveling of fractional reserve banking. Also Thornton (2013) noted the widening uncertainty surrounding Germany's request to have some of its central bank gold reserves returned from New York. In the wake of the forthcoming bailouts, Thornton (2012) reported that most European stock markets and sovereign debt problems have been papered over, but overall debt levels and unemployment rates have remained dangerously high. According to the International Labor Organization of the United Nations (2013) social unrest in the form of protests and demonstrations has remained at high levels.

The next skyscraper "event" occurred in the U.S. when One World Trade Center reached a record height in May 2013. This would have resulted in a Skyscraper Signal for North America, but the height record is based on the antenna fixed to the top of the building. This puts this pseudo-record in an indeterminate state as a skyscraper event.

The last Skyscraper Signal occurred this year in China where the Shanghai Tower became the country's tallest skyscraper. The Associated Press reported the Tower surpassed the Shanghai World Financial Center that set the national record in 2008, which itself was a Skyscraper Signal for the 2008 economic crisis in China. So far this latest national signal has been accompanied by a declining stock market and widespread concern over declining rates of economic growth and the recent change in political leadership.

Finally, the latest Skyscraper alert was also recently issued in China. Thibault (2013) reported that ground breaking ceremonies recently took place on what is planned to be the world's tallest skyscraper called Sky City. This project is noteworthy due to the remarkably short construction schedule due to the company's pre-fabricated construction process. If the current timetable is followed, a Skyscraper signal could be issued in late 2014 or early 2015. However, there is some doubt about whether or not the project will be allowed to continue or to achieve the height record. In a recent editorial, the *People's Daily* condemned the project as "impractical" and even made reference to the Skyscraper Curse. However, an administrative blockage of a record-setting project can probably no more stop the Skyscraper Curse than the destruction of the World Trade Towers could undo the demise of the Gold Standard and the Bretton Woods System. There has also

been an announcement of the building of the world's tallest skyscraper in Saudi Arabia.

The confluence of regional Skyscraper Signals in Europe, North America, and China along with a Skyscraper Alert for a world economic crisis clearly suggests the possibility of a looming world economic crisis. This pattern would be very much like previous episodes of skyscraper records including the Panic of 1907, the Great Depression, the Stagflation of the 1970s, dot.com bubble and the Housing Bubble. In line with these skyscraper-based predictions, a fundamental case can be built around the notion of a looming world economic crisis. Most of the world's major economies are facing pressing economic difficulties, including the US, Europe, Japan, and China. Additionally, according to Rickards (2011) central banks have been engaged in a world currency war on a scale that has never been experienced in human history.

Conclusion

The stated intention of central banks is to use monetary policy to stabilize and enhance economic activity. A standard criterion for central banks to achieve these goals is to produce price level stability and the natural rate of unemployment. To achieve these results central banks typically target and adjust interest rates to encourage the "right amount" of credit flows. Given what we know about bureaucracy and the ability of the central planner, it would be truly remarkable if central banks could achieve such goals on a consistent basis. Indeed many schools of economic thought consider central banks as the destabilizing force that causes business cycles, most especially the Austrian school. The inherent fallibility of central banks is then leveraged in an often haphazard manner by the fractional reserve banking system.

The ABC theory is alone in producing a pure *economic* theory of the business cycle. Other approaches provide elements of the historical narrative that yields a fuller description of business cycles by incorporating features such as psychological changes and technological shocks. These elements can be easily incorporated into the ABC theory. The Skyscraper Index is an interesting application and "concrete" illustration of ABC theory. It illustrates what Austrians have been theorizing about for over 100 years. The history of record skyscrapers is also a reminder that the century long reign of the Federal Reserve is a testimony that central banks are dangerous because they cause economic crisis. The Skyscraper Index is at the present time on high alert for a world economic crisis.

References

Anderson W (2009) Say's law and the Austrian theory of the business cycle. Q J Austr Econ 12(2): 47–59, https://mises.org/journals/qjae/pdf/qjae12_2_4.pdf

Axelrod J (2006) The 5 stages of loss and grief. Psych Central. http://psychcentral.com/lib/the-5-stages-of-loss-and-grief/000617. Accessed 4 Sept 2013

Block W (2010) Who predicted the housing bubble? LewRockwell.com, December 22. http://www.lewrockwell.com/2010/12/walter-block/who-predicted-the-housing-bubble/

Cantillon R (1755) Essai sur la Nature du Commerce en Général. Fletcher Gyles, London

Higgs R (1997) Regime uncertainty - why the great depression lasted so long and why prosperity resumed after the war. Indep Rev 1(4 Spring):561–590

Holcombe RG, Powell B (eds) (2009) America's housing crisis: a case of government failure. Independent Institute, Oakland, CA

International Labor Organization of the United Nations (2013) World of work report 2013: repairing the economic and social fabric, June. http://www.ilo.org/global/research/global-reports/world-of-work/2013/WCMS_214476/lang–en/index.htm

Kates S (1998) Say's law and the Keynesian revolution: how macroeconomic theory lost its way. Edward Elgar, Cheltenham

Kübler-Ross E (2005) On grief and grieving: finding the meaning of grief through the five stages of loss. Simon & Schuster, New York

Lawrence A (1999) The curse bites: skyscraper index strikes. Property Report, Dresdner Kleinwort Benson Research (March 3)

Rickards J (2011) Currency wars: the making of the next global crisis. Portfolio/Penguin, New York

Rodgers MT, Berry KW (2011) Systematic risk, missing gold flows, and the panic of 1907. Q J Austrian Econ 14(2 Summer):158–187, https://mises.org/journals/qjae/pdf/qjae14_2_2.pdf

Rothbard MN (1994) The case against the Fed. Ludwig von Mises Institute, Auburn, AL

Salerno JT (2009) Rothbard vindicated. Mises Daily Article, September 4. https://mises.org/daily/3689/Rothbard-Vindicated

Salerno JT (2012) A reformulation of Austrian business cycle theory in light of the financial crisis. Q J Austrian Econ 15(1 Spring):3–44, https://mises.org/journals/qjae/pdf/qjae15_1_1.pdf

Salerno JT (2013) The Cyprus deal and the unraveling of fractional-reserve banking, circle Bastiat Blog, March 27. http://bastiat.mises.org/2013/03/the-cyprus-deal-and-the-unraveling-of-fractional-reserve-banking/

Thibault H (2013) Les villes chinoises veulent toutes leurs gratte-ciel géants (Chinese cities are all their giant skyscraper) Le Monde, August 3. http://www.lemonde.fr/economie/article/2013/08/03/les-villes-chinoises-veulent-toutes-leurs-gratte-ciel-geants_3457102_3234.html

Thornton M (2004a) The 'New Economists' and the great depression of the 1970s. Mises Daily Article, May 7. https://mises.org/daily/1507/The-New-Economists-and-the-Great-Depression-of-the-1970s

Thornton M (2004b) Housing: too good to be true? Mises Daily Article, June 4. https://mises.org/daily/1533/Housing-Too-Good-to-Be-True

Thornton M (2004c) Who predicted the bubble, who predicted the crash? Indep Rev 9(1 Summer): 5–30

Thornton M (2005) Skyscrapers and business cycles. Q J Austrian Econ 8(1 Spring):51–74

Thornton M (2006) Cantillon and the cause of the business cycle. Q J Austrian Econ 9(3 Fall): 45–60

Thornton M (2007a) New record skyscraper (and depression?) in the making. Mises Economic Blog, August 7, 2007. http://archive.mises.org/6948/new-record-skyscraper-and-depression-in-the-making/

Thornton M (2007b) Illegal immigrants and the housing bubble. http://www.LewRockwell.com, March 1. http://www.lewrockwell.com/2007/03/mark-thornton/the-housing-bubble-caused-illegal-immigration/

Thornton M (2008a) The great depression: Mises vs Fisher. Q J Austrian Econ 11(3):230–241, https://mises.org/journals/qjae/pdf/qjae11_3_5.pdf
Thornton M (2008b) Bennie and the monetary jets. Mises Daily Article, February 29. https://mises.org/daily/2905/Bennie-and-the-Monetary-Jets
Thornton M (2008c) How to avoid another depression. Mises Daily Article, September 10. https://mises.org/daily/3103/How-to-Avoid-Another-Depression
Thornton M (2008d) Slash and burn. Mises Daily Article, November 18, 2008. https://mises.org/daily/3201/Slash-and-Burn
Thornton M (2009a) The economics of housing bubbles. In: Benjamin P, Randall H (eds) America's housing crisis: a case of government failure. Independent Institute, Oakland, CA, pp 237–262
Thornton M (2009b) Bernanke's Apoplithorismosphobia. Mises Daily Article, August 19. https://mises.org/daily/3625/Bernankes-Apoplithorismosphobia
Thornton M (2009c) Austrian recipe vs. Keynesian fantasy. Mises Daily Article, May 21. https://mises.org/daily/3465/Austrian-Recipe-vs-Keynesian-Fantasy
Thornton M (2009d) Delay in Dubai. Mises Economic Blog, November 27. http://archive.mises.org/11107/delay-in-dubai/
Thornton M (2009e) Getting nasty in Dubai. Mises Economic Blog, December 4. http://archive.mises.org/11107/delay-in-dubai/
Thornton M (2010a) Hoover, Bush, and the great depression. Q J Austrian Econ 13(3 Fall):86–100
Thornton M (2010b) Bernanke's solutions are the problem. Mises Daily Article, November 5. https://mises.org/daily/4798/Bernankes-Solutions-Are-the-Problem
Thornton M (2010c) What goes way up and what must come down. Mises Economics Blog, January 8. http://archive.mises.org/11408/what-goes-way-up-and-what-must-come-down/
Thornton M (2011) Skyscraper curse to hit Europe. Mises Economic Blog, September 5. http://archive.mises.org/18338/skyscraper-curse-to-hit-europe/
Thornton M (2012) European crisis signal. The Circle Bastiat (Mises Economic Blog), July 5. http://bastiat.mises.org/2012/07/european-crisis-signal/
Thornton M (2013) Germany repatriates its gold. Mises Daily Article, January 31. https://mises.org/daily/6351/Germany-Repatriates-Its-Gold
Voigt K (2010) As skyscrapers rise, markets fall. CNN.COM, January 8. http://www.cnn.com/2010/WORLD/asiapcf/01/08/skyscrapers.rise.markets.fall/

There Is No Accounting for the Fed

William Barnett II

Distinctions among (1) the Board of Governors of the Federal Reserve System (hereinafter, Board); (2) the Federal Reserve Bank(s) (hereinafter, FRBank(s)); and, (3) the Federal Reserve System (hereinafter, System), are essential insofar as the Executive Orders, Statutes, Acts, and the U.S. Code are concerned. These latter constitute the pertinent laws and regulations. These terms—Board, FRBank(s), and System—are *not* used interchangeably. The System consists, at a minimum, of the Board, and the 12 FRBanks (Cecchetti 2008, 276). However, sometimes the Open Market Committee, the member banks of the System, and the Federal Reserve Advisory Committee are included (Cecchetti 2008, 276).

The Federal Reserve Act requires that the Board submit annually a full report of its operations to the Speaker of the House of Representatives (12 USC §225b). This report includes official audited financial statements for the Board and also, in consolidated form, for the 12 FRBanks (Board 2012, 339 et seq.)[1]

I maintain that the official, audited financial statements of the 12 FRBanks, in particular their balance sheets,[2] are fraudulent on the basis of customary accounting standards. This fraud consists in: (1) claiming gold certificates as assets; (2) claiming Federal Reserve Notes (hereinafter, FRNote(s)) and dollar denominated deposits as liabilities[3]; and, (3) failing to note the existence of unissued FRNotes. This fraud originated in the failure to adjust the FRBanks' accounting procedures to the new monetary reality when the U.S. Government

[1] The most recent statements available are for calendar year 2012.

[2] The term "balance sheet" as used herein is a synonym for the "Federal Reserve Banks Combined Statements of Condition."

[3] The argument regarding these specific liabilities applies, mutatis mutandis, to all other dollar denominated soi-disant liabilities of the FRBanks.

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began the process of demonetizing gold.[4] Furthermore, it has been responsible, inter alia, for obfuscating the massive debt monetization (primarily U.S. Treasury debt, hereinafter, UST, but also private debt in recent years.)

The "Independent Auditors'[5] Report, Note 4—Significant Accounting Policies" (Board 2012, 375–376) states (emphasis added):

> Accounting principles for entities with the unique powers and responsibilities of a nation's central bank have not been formulated by accounting standard-setting bodies. The Board of Governors has developed specialized accounting principles and practices that it considers to be appropriate for the nature and function of a central bank. These accounting principles and practices are documented in the *Financial Accounting Manual for Federal Reserve Banks* (FAM), which is issued by the Board of Governors. The Reserve Banks are required to adopt and apply accounting policies and practices that are consistent with the FAM and the combined financial statements have been prepared in accordance with the FAM.
>
> **Limited differences** exist between the accounting principles and practices in the FAM and accounting principles generally accepted in the United States of America (GAAP), due to the unique nature of the Reserve Banks' powers and responsibilities as part of the nation's central bank and given the System's unique responsibility to conduct monetary policy. **The primary differences** are the presentation of all SOMA [system open-market account] securities holdings at amortized cost and the recording of SOMA securities on a settlement-date basis.
>
> [. . .]
>
> **In addition**, the Reserve Banks do not present a Combined Statement of Cash Flows as required by GAAP. . . **There are no other significant differences, other than those described above, between the policies outlined in the FAM and GAAP.**

Certainly if the FAM's use of "asset" or "liability" differs from that of GAAP; that is *momentous*. (Bagus and Howden 2009a, b) Therefore, as Deloitte & Touche do not list either among the limited differences between FAM and GAAP, those terms as used in the FRBanks' financial statements should conform to GAAP requirements.

The first section makes the case that the FRBanks are involved in fraud based on an analysis of the asset side of its balance sheets. The second section does the same with respect to the liabilities side. The third section investigates "missing money." The fourth section explains the causes of the fraud. The fifth section concludes.

Assets

The FRBanks' consolidated balance sheet (Board 2012, 364) is restated to focus on the items of particular relevance for our purpose.

All figures are in millions of dollars.

[4] The demonetization of gold began with Executive Order 6102, April 5, 1933 and was completed August 15, 1971, when President Nixon (1972) suspended the convertibility of the dollar into gold.

[5] Deloitte & Touche LLP is the auditor (Board 2012, 341–342, 360–361).

Assets		Liabilities	
Gold certificates	11,037	FRN outstanding[a]	1,034,052
		Total deposits	1,562,253
All other assets	2,907,833	All other liabilities	268,767
		Total liabilities	2,865,072
		Total capital	53,798
Total assets	2,918,870	Total capital and liabilities	2,918,870

[a]FRNotes net of FRBanks' holdings

Consider the entry "gold certificates." on the asset side. What, according to GAAP, is an asset? In the U.S., the Financial Accounting Standards Board (FASB), the arbiter thereof, states[6]:

> An *asset* of an entity is a present economic resource to which the entity has a right or other access that others do not have. . ..
>
> *Present* means that on the date of the financial statements both the economic resource exists and the entity has the right or other access that others do not have.
>
> An *economic resource* is something that is scarce and capable of producing cash inflows or reducing cash outflows, directly or indirectly, alone or together with other economic resources. . ..
>
> A *right or other access that others do not have* enables the entity to use the economic resource and its use by others can be precluded or limited. A right or other access that others do not have is enforceable by legal or equivalent means.

In distinction, Executive Order 6102, dated April 5, 1933, section 2, states, in part:

> All persons [individuals, partnerships, associations, or corporations] are hereby required to deliver on or before May 1, 1933, to a Federal Reserve Bank or a branch or agency thereof or to any member bank of the Federal Reserve System all gold coin, gold bullion and gold certificates now owned by them or coming into their ownership on or before April 28, 1933, except the following: [there followed by a few minor exceptions]"

According to section 4, the FRBank or member bank to which gold coin, bullion, or certificates was surrendered was to pay therefor "an equivalent amount of any other form of coin or currency coined or issued under the laws of the United States." Section 5 ordered the member banks to turn over to the FRBanks their own gold coins, bullion, and certificates, as well as those they received under section 2, for which they were to "receive credit or payment."

Executive Order 6260, dated August 28, 1933, revoked 6102, but had no substantive effect insofar as people's rights to own the relevant items were concerned. Thus, all monetary gold, whether in the form of coins, bullion, or certificates was to be owned by the FRBanks.

The next shoe fell with the passage of the Gold Reserve Act of January 30, 1934 (Kroos 1983, 240). Section 2 (a) states:

> Upon the approval of this Act all right, title, and interest, and every claim of the Federal Reserve Board, of every Federal Reserve bank, and of every Federal Reserve agent, in and

[6] http://www.fasb.org/project/cf_phase-b.shtml

> to any and all gold coin, and gold bullion shall pass to and are hereby vested in the United States; and in payment therefor [sic] credits in equivalent amounts in dollars are hereby established in the Treasury in accounts authorized under the sixteenth paragraph of section 16 of the Federal Reserve Act as, as heretofore and by this Act amended (U.S.C. Title 12, § 467.) Balances in such accounts shall be payable in gold certificates, which shall be in such form and in such denominations as the Secretary of the Treasury may determine.

Thus, the FRBanks were legally required to transfer all monetary gold to the Treasury for which they received gold certificates. However, the FRBanks could not redeem these certificates for gold coin or bullion, if for no other reason than that the very same section of the very same Act made it illegal for the FRBanks to own monetary gold! (Rothbard 1994, 138)

That said, the UST (Department of the Treasury 2011) states:

> The gold reserves being held by the Department are partially offset by a liability for gold certificates issued by the Secretary to the FRBNY [Federal Reserve Bank of New York] at the statutory rate, as provided in 31 USC § 5117. Since 1934, Gold Certificates have been issued in non-definitive or book-entry form to the FRBNY. The Department's liability incurred by issuing the Gold Certificates, as reported on the Consolidated Balance Sheets, is limited to the gold being held by the Department at the statutory value. Upon issuance of Gold Certificates to the FRBNY, the proceeds from the certificates are deposited into the operating cash of the U.S. Government. All of the Department's certificates issued are payable to the FRBNY.

Upon reading this one might think that the UST has an asset, gold reserves, offset, at least in part, by a liability to the FRBNY–UST gold certificates. But, as the Gold Reserve Act makes clear, neither the Board nor any FRBank has any title, interest, or claim to the Treasury's gold. Hence the FRBanks' gold certificates, a soi-disant asset, are nothing of the kind. De facto, they are but acknowledgements that U.S. Government acquired *by coercion* "every right, title, and interest and every claim" to the monetary gold of "all persons." It did so, first by requiring that "all persons" deliver their monetary gold, directly or indirectly, to FRBanks in return for payment of "an equivalent amount of any other form of coin or currency coined or issued under the laws of the United States." Then, all rights, privileges, etc., of FRBanks and agents to monetary gold was vested in the U.S. in return for "credits in equivalent in dollars" in accounts in the UST, payable in UST gold certificates. The Treasury's gold certificates, thus, are analogous to a thief's note to his victim acknowledging that he had stolen his prey's gold; they do not at all constitute a receipt promising to repay the stolen item.

Therefore, the item of gold certificates carried on the FRBanks' consolidated balance sheets is not really an asset.

Liabilities

According to the Uniform Commercial Code (UCC § 3–104 (a) (b) and (e)) a note is an unconditional promise to pay a fixed amount of money on demand to the bearer. But as FRNotes are themselves both payable in money, and, also, money itself, it is obvious that such "notes" are not notes at all, but rather "promises-to-pay." But "promises-to-pay" precisely what? The answer is "FRNotes" (Vieira 2002, 827–828). As such they are not liabilities in any meaningful sense of the term (Hulsmann 2008, 162).

Moreover, the FASB states[7]:

> A *liability* of an entity is a present economic obligation for which the entity is the obligor. . . *Present* means that on the date of the financial statements both the economic obligation exists and the entity is the obligor.
>
> An *economic obligation* is an unconditional promise or other requirement to provide or forgo economic resources, including through risk protection.
>
> An entity is the *obligor* if the entity is required to bear the economic obligation and its requirement to bear the economic obligation is enforceable by legal or equivalent means.

The FRBanks have no non-dollar denominated liabilities. In discussing the liabilities of FRBanks, the Board states: [8]

> A U.S. depository institution, when it needs more currency to meet its customers' needs, asks a Reserve Bank to send it more Federal Reserve notes. The Reserve Bank ships the currency to the institution and debits the institution's Federal Reserve account by the amount shipped. Thus, an increase in Federal Reserve notes outside of the Reserve Banks is matched, in the first instance, by a reduction in the quantity of reserve balances that banks and other depository institutions hold in their Federal Reserve accounts.

Should a FRBank depositor wish to redeem its deposits, it is paid in FRNotes. In that case, on the FRBank's balance sheet, FRNotes (outstanding) increase by exactly the same amount as deposits decrease. Thus deposits at FRBanks and FRNotes outstanding are full substitutes for FRBanks. Therefore such deposits are liabilities of the FRBanks to the same extent that are FRNotes.

12 USC § 411 decrees that FRNotes are redeemable for "lawful money." Simmons (1938, 108) states:

> The phrase "lawful money" is used frequently in the courts where it is given a wide variety of meanings. It occurs repeatedly in the money and banking laws of the United States, but is not explicitly defined. As a result of the use of an ambiguous term, a perplexing state of affairs confronts the student of money and banking. He can never be certain what is meant when the term is encountered. Sometimes legal tender is referred to, but very frequently a much less restricted interpretation is called for.

Simmons (1938, 117) continues: "Redemption presumably means the ability to convert paper money into some form of paper money or into coin. Apparently,

[7] http://www.fasb.org/project/cf_phase-b.shtml

[8] http://www.federalreserve.gov/monetarypolicy/bst_frliabilities.htm

Federal Reserve notes are redeemable in Federal Reserve notes, and similarly other forms in themselves."

Cross (1938, 412–413) states: "Gold and silver coins were never designated by Congress as lawful money, nor was any legislation ever enacted which explicitly permitted them to be used for legal-reserve purposes, yet from the very first they were accepted by the Comptroller of the Currency as part of the 'lawful money' reserve." Cross (1938, 413) continues:

> A final illustration shows how loosely Congress has employed the term "lawful money." Prior to the legislation of 1933–1934, Federal Reserve notes were redeemable at any Federal Reserve bank "in gold or lawful money," and Federal Reserve banks were compelled to hold a 35 % reserve "in gold or lawful money" behind their deposits. Congress did not use the phrase "in gold or in other forms of lawful money." It definitely set the two terms in contrast to each other, which would lead one to surmise that it did not deem gold to be lawful money, which conclusion is too absurd to merit consideration.

Because gold coins no longer are lawful money, the question arises; "What is?" The Board explains[9]:

> In 1933, Congress changed the law so that all U.S. coins and currency (including Federal Reserve notes), regardless of when issued, constitutes "legal tender" for all purposes. Federal and state courts since then have repeatedly held that Federal Reserve notes are also "lawful money."

That is, FRNotes must be redeemed for lawful money, but FRNotes are themselves lawful money. FRBanks (or the Treasury) may redeem FRNotes for (other?) FRNotes. As the only obligation is to redeem FRNotes for other FRNotes, this certainly is not a promise or requirement, unconditional or otherwise, to forego economic resources. Therefore, based on the GAAP/FASB definition of an *economic obligation*,[10] FRNotes are not liabilities.

Because the Treasury may redeem a FRBank's asset, gold certificates, for lawful money or legal tender, and FRNotes are *both*, such redemption would require that FRNotes be assets of FRBanks. But FRNotes cannot simultaneously be both assets and liabilities of FRBanks. This is a matter of logic, as well as of law.

What, then, of the initial acquisition of FRNotes by FRBanks? The Board informs us (Board 2013) : "The Federal Reserve pays the BEP [Bureau of Engraving and Printing] the cost of printing new currency and arranges and pays the cost of transporting the currency from the BEP facilities in Washington, D.C., and Fort Worth, Texas, to Reserve Bank cash offices." Presently this cost per note ranges from 5.2 cents for $1 and $2 notes to 9.2 cents for $20 and $50 notes (Board 2013).

The Board's Statements of Revenues and Expenses and of Changes in Cumulative Results of Operations (Board 2012, 344) contain a subsection titled "Currency Costs." Two items and the difference between them are:

[9] http://www.federalreserve.gov/faqs/money_15197.htm

[10] http://www.fasb.org/project/cf_phase-b.shtml

Assessments levied or to be levied on Federal Reserve Banks for currency cost	$650,010,597
Expenses for costs related to currency	650,010,597
Currency assessments over (under) expenses sum	0

Note 10 (Board 2012, 356–357), titled "Federal Reserve Banks," to the Board's financial statements, states: "The Board assesses the Federal Reserve Banks for its operating expenses, to include expenses related to its currency responsibilities, as well as for the funding the Board is required to provide to the Bureau and the Office." It also shows assessments levied or to be levied on FRB for currency expenses of precisely $650,010,597.

Note 15 (Board 2012, 359), titled "Currency," to the Board's financial statements, reads: "The Bureau of Engraving and Printing (BEP) is the sole supplier for currency printing and also provides currency retirement services." It also shows total currency costs incurred by the Board of $650,010,597.

What to make of this? The Board buys FRNotes from the BEP at full cost.[11] It assesses the FRBanks for the same amount and issues the FRNotes to the FRBanks. Then, when the FRBanks, in turn, issue the FRNotes to member banks, these notes are placed on the books of the FRBanks as liabilities, at face value, not at cost. However, FRNotes the Board has issued (and assessed) to the FRBanks, but that remain in the vaults of the FRBanks show up *nowhere* on the FRBanks' balance sheets. This means that the FRBanks have paid for FRNotes that do not appear on their books!

As shown, in 2011, the FRBanks paid over $650 million to acquire new FRNotes that, when issued into circulation by them, they claimed as liabilities. Why would FRBanks pay to acquire FRNotes if in fact those FRNotes become liabilities of FRBanks?

If the Board properly accounted for FRNotes, the transactions whereby the new FRNotes were acquired from the BEP would merely be pass-though items—a wash—on the Board's books. Expenses paid by the Board to the BEP for new FRNotes and Board revenues from assessments to FRBanks for the same notes would be identical and not affect the Board's books.

However, were the transactions whereby the FRBanks acquired the new FRNotes and, subsequently, issued then to member banks, properly accounted for, the books of the FRBanks would be greatly affected. The following is an example[12] of how such transactions could be properly accounted for.

Example: Journal Entries in USD

Accounts	Debits	Credits
Inventory of FRNotes—one with face-value $100	0.08	
Account payable		0.08

(continued)

[11] How does it pay for them? One assumes that the UST general account at the FRBank is credited for the relevant amount. However, what account is debited is not at all clear.

[12] An alternative is suggested, infra, but this method would be more transparent.

Accounts	Debits	Credits
To record purchase of inventory of one face-value $100 FRNotes @cost		
Account payable	0.08	
UST general account		0.08
To record paying account payable by paying the Board's debt to the UST(BEP) for the $100 face-value FRNotes		
Accounts receivable from member bank	100.00	
Sale of one FRNote to member bank at face value-$100		100.00
To record sale of one $100 face-value FRNote to member bank		
Member bank's demand-deposit at FRBank	100.00	
Accounts receivable from member bank		100.00
To record member bank's payment to FRBank		
Cost of goods (one $100 face-value FRNote) sold	0.08	
FRNote inventory		0.08
To reduce inventory and recognize cost of note sold		

Income Statement

Sales (revenue)	100.00
less COGS (expense)	0.08
Income	99.92

Closing entries

Accounts	Debits	Credits
Income	99.95	
Capital		99.95

Changes in Balance Sheet

Assets	Liabilities
	Member banks' deposits (100.00)
	U. S. Treasury general account 0.08
	Capital 99.92
Total assets $0.00	Total liabilities and capital 0.00

A restatement of the FRBank's balance sheet based on the foregoing would look as follows.

All figures are in millions of dollars.

Assets		Liabilities	
~~Gold certificates~~	~~11,037~~ 0	~~Federal Reserve Notes outstanding~~[a]	~~1,034,052~~ 0
		~~Total deposits~~	~~1,562,253~~ 0
All other assets	~~2,907,833~~ 2,918,870	~~All other liabilities~~	~~268,767~~ 0

(continued)

Assets		Liabilities	
		~~Total liabilities~~	~~2,865,072~~ 0
		Total capital	~~53,798~~ 2,918,870
Total assets	2,918,870	Total capital and liabilities	2,918,870

[a]FRNotes net of FRBank holdings

Or, more simply:

Assets		Liabilities	
Total assets	2,918,870	Total capital	2,918,870

Even a brief examination of the restated balance sheet should quell any fears as to the FRBanks being overleveraged or in danger of bankruptcy. Regarding the former, the leverage ratio however calculated is zero. And, regarding the latter, even if every asset the FRBanks own became totally worthless, the value of their liabilities (zero) would still not exceed that of their assets. Of course, with zero liabilities there is no possibility of a liquidity or a solvency problem.

Missing Money

Note 4k to the FRBanks' financial statements (Board 2012, 382) declares: "'Federal Reserve notes outstanding, net' in the Combined Statements of Condition represents the Bank's [sic] Federal Reserve notes outstanding, reduced by the Reserve Banks' currency holdings of $172 billion and $180 billion at December 31, 2011 and 2010, respectively." As noted, the FRBanks' balance sheets carry the "Federal Reserve Notes outstanding, net," as liabilities. That is, of the FRNotes issued by the Board to the FRBanks, the latter carry on their books as liabilities those that they, in turn, have issued to member banks. That is why the liability account is titled "Federal Reserve Notes, outstanding, *net*: i.e., it is the amount of FRNotes issued by the Board, *net* of those that have not yet been issued by FRBanks to member banks. But what of the $180 billion of FRNotes that were not outstanding; i.e., those that had not been issued to member banks and are still in vaults of the FRBanks? They are not accounted for anywhere on the FRBanks' consolidated balance sheets (Board 2012, 364). Those statements carry only two asset accounts of sufficient magnitude; i.e., of $180 billion or more: (1) "Treasury securities, net" of some $1.75 trillion, and (2) "Federal agency and government-sponsored enterprise mortgage-backed securities, net," of some $850 billion. But, neither of these categories includes unissued (to member banks) FRNotes.[13]

[13] There are two liability accounts of sufficient magnitude, "Federal Reserve Notes, outstanding, net" of some $1 trillion and "Deposits: Depository institutions" of some $1.56 trillion. However, neither of these categories include FRN unissued by FRB. Moreover, there is no conceivable way that such unissued FRN could be considered liabilities of the FRB.

Nor can it be claimed that, until issued to member banks, FRNotes are carried on the Board's books Board (2012, 343), in contradistinction to those of the FRBanks. This is because the largest asset account on its books "Property, equipment, and software, net," is "only" for some $182 million, approximately 0.001 % of the value of the unaccounted for FRNotes. The necessary conclusion is that the FRBanks' unissued FRNotes just do not appear anywhere on their balance sheets or on the Board's balance sheet. It is as if they do not exist, or at least do not have any value, until the FRBanks issue them to member banks.

Causes of Fraudulent Statements

It is easy to spot a proximate cause for the FRBanks' fraudulent financial statements. FRBanks acquire FRNotes by paying the full cost thereof, less than 10¢ per note, when in fact such notes are de facto and de jure worth their entire face value. This means the FRBanks "earn" a profit on every FRNote they acquire (regardless of whether issued or in their vaults), ranging from approximately $0.95 profit on every one dollar FRNote to some $99.92 profit on every $100 FRNote. However, they do not record the transactions whereby they first acquire FRNotes, and which would show the profits from acquiring them at cost. Rather, FRNotes first appear on their books when they use them to redeem deposits of member banks—and then they are entered, *incorrectly*, as liabilities.

31 USC § 5103 states: "United States coins and currency (including Federal reserve (sic) notes. . .) are legal tender. . ." FRBanks carry U.S. coins on their balance sheets as assets, the exact same balance sheets on which they carry FRNotes as liabilities. Thus, although both U.S. coins and FRNotes are legal tender, the former are *assets* and the latter *liabilities* on the FRBanks' books. Perhaps this is an artifact of the chemical differences between paper and metal?! Is this the magic of creative accounting? Or just plain magic? Who needs accountants if they have alchemists?

The ultimate cause of such fraudulence arises from the U.S. Government's confiscation of monetary gold. At one time, FRNotes *were* liabilities of the FRBanks. The Federal Reserve Act of December 23, 1913 *originally* read, in part: "They [FRNotes] shall be redeemed . . . in *gold* or lawful money at any Federal reserve bank." (Kroos 1983, Vol. IV, 21) [Emphasis added.] However, as we have seen, Congress has never defined the term "lawful money." It would have made no sense for Congress to have made FRNotes redeemable in lawful money, if in fact they intended such notes, themselves, to *be* lawful money. The only logical conclusion is that Congress did not intend FRNotes to be lawful money. Therefore, FRNotes had to be redeemed either for gold, or for lawful money, making FRNotes liabilities of FRBanks.

Then, some 20 years later, The Gold Reserve Act of January 30, 1934, amended Section 16 of The Federal Reserve Act to read, in part: "They [FRNotes] shall be redeemed in lawful money on demand at the Treasury Department of the United

States in the city of Washington, District of Columbia, or at any Federal Reserve bank." (Kroos 1983, Vol. IV, 240). That is, the law was amended to eliminate redemption in gold. However the same Gold Reserve Act, Sec. 15, in part, declared, for the first time, that FRNotes were legal tender: "...the term 'currency of the United States' means currency which is legal tender in the United States, and includes ..., Federal Reserve notes...." (Kroos 1983, Vol. IV, 249). That is, FRNotes that once were redeemable in "gold or lawful money," which latter term did not include FRNotes themselves, became redeemable only for FRNotes. Therefore, the nature of FRNotes was transformed from that of a liability to that of an asset. This is not exactly kosher, fraud-wise.

Conclusion

The problems considered could have been avoided had, at the time of the confiscation of monetary gold, the relevant authorities: (1) declared that the FRNotes, outstanding, were no longer liabilities of the FRBanks; (2) marked to zero and eliminated the liability account titled "Federal Reserve Notes, outstanding;" and (3) increased the appropriate capital accounts by the amounts that the liability accounts were decreased. Thereafter, future acquisitions of FRNotes would be recorded as increases in an asset account (unissued FRNotes) at face value. Such increases would be offset by increases in the UST's general account at the FRBank of New York for the full cost paid to the BEP, with the difference recorded as an increase in the capital accounts.[14]

The financial statements of the Board and the FRBanks as they now exist are fraudulent in any meaningful sense of the word. According to Merriam-Webster's Collegiate Dictionary 11th ed.: fraud is (1.b.) "an act of deceiving or misrepresenting : TRICK." The Oxford English Dictionary (online) (4.a.) defines "fraud" as "A method or means of defrauding or deceiving; a fraudulent contrivance; in mod. colloq. use, a spurious or deceptive thing." Perhaps well paid lawyers could persuade the courts otherwise, but if that be the case then, to misquote Dickens, "If the law holds that, the law is a ass – a idiot."

The Federal Government stole Americans' gold and then covered it up with fraudulent accounting.

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[14] Obviously, other methods, such as the one suggested in the example above, could be used that would show the transactions flowing through the income statements to the balance sheets.

References

Bagus P, Howden D (2009a) Qualitative easing in support of a tumbling financial system: a look at the eurosystem's recent balance sheet policies. Econ Aff 29(4):60–65
Bagus P, Howden D (2009b) The Federal Reserve System and eurosystem's balance sheet policies during the financial crisis: a comparative analysis. Rom Econ Bus Rev 4(3):165–185
Board of Governors of the Federal Reserve System (2012) Ninety-eighth annual report: 2011
Board of Governors of the Federal Reserve System (2013) Coin and currency services
Cross IB (1938) Lawful money: a note. J Polit Econ 46(3):409–413
Department of the Treasury (2011) Agency financial report: fiscal year 2011
Hulsmann JG (2008) The ethics of money production. Ludwig von Mises Institute, Auburn, AL
Kroos HE (1983) Documentary history of banking and currency in the United States, vols III and IV. Chelsea House, New York
Nixon RM (1972) Third annual report to the congress on United States foreign policy
Rothbard MN (1994) The case against the Fed. Ludwig von Mises Institute, Auburn, AL
Simmons EC (1938) The concept of lawful money. J Polit Econ 46(1):108–118
Vieira E Jr (2002) Pieces of eight, 2nd revised edn, vol 1. Sheridan Books, Chelsea, MI

Fiat Money and the Distribution of Incomes and Wealth

Jörg Guido Hülsmann

In the present paper we deal with the impact of monetary policy on incomes and wealth.[1] We shall start off discussing a few basic theoretical issues and then provide some statistical illustrations for the case of US.

The term monetary policy is today usually understood to refer to the actions of central banks and similar public and semi-public authorities that have control over the "printing press" and thus control the production of fiat money. Indeed, without the possibility to produce fiat money at virtually zero cost there would be no such thing as monetary policy (see Mises 1981, p. 250).

Fiat money systems have been created because they allow for a faster and larger production of money than the traditional commodity money systems. Historically, governments have sought to promote the creation of money not least of all because artificial increases of the money supply are easy ways to fill the public purse. Moreover, various theoretical considerations suggest that an "elastic" money supply might be useful in promoting economic growth.

The bottom line is that, under a fiat money system, the money supply is subject to the human will. It therefore tends to grow faster than under a commodity money system. What are the consequences of this fact for real and monetary incomes? What does it imply for aggregate wealth and the structure of wealth? In what follows, we will start off discussing the impact of money production on the distribution of incomes. Then we shall turn to analyzing its impact on the distribution of wealth. Here we shall argue that fiat money systems tend to increase the gap between incomes and wealth, and also tend to leverage income differences into even greater differences of wealth. We then round up our study by considering statistical evidence.

[1] This chapter builds upon and extends the arguments made in Hülsmann (2013).

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Money Production and the Distribution of Incomes

The starting point for any serious reflection on our subject is the fact that money production does not bring about uniform and simultaneous changes. An increasing money supply tends to entail a higher money price level, but the individual prices change at different points of time and each to a different extent (i.e. Cantillon effects).

As a consequence, money production creates winners and losers. The *winners* are those who can use the new money first, because at this point in time the money prices of the other goods are still relatively low. Due to these expenditures, prices and incomes gradually increase, and in this way the new money spreads through the economy. The *losers* of this process are those who only later—or last of all—enjoy a higher money income. This is because they are already having to pay the higher prices, created by the increased money expenditure of the early users of the new money, out of their previous lower income.

Strictly speaking this distributive effect is independent of the question whether the additional money is actually being spent, and of whether such spending entails any price changes. For example, in the past 5 years, the Fed has repeatedly increased the base money supply on a massive scale, while the impact on the price level has remained quite moderate.[2] Nevertheless this increase in the base money supply amounted to a large-scale redistribution, because some market participants received large quantities of a qualitatively better type of money (base money) while the overall money supply (including fiduciary media created by commercial banks) and the price level remained relatively stable.[3] As a comparison, think of the croupier in a casino, who right at the start of a poker game deals one of the players a few additional aces. The game hasn't even begun, and all players have the same amount of cards, but the privileged player already has the upper hand. We have the same situation here. The overall money supply has not been increased and thus the price level has not yet risen, but some market participants have, in relative terms, improved their position enormously.

[2] The Fed has increased the base money supply from $848 billion in August 2008 to $1.711 billion 1 year later, which makes for a 102 % increase; then again from $1.961 billion in October 2010 to $2.638 billion 1 year later, representing a 35 % increase; and again from $2.619 billion in June 2012 to $3.201 billion 1 year later, being 22 % increase (all data from St Louis Fed, times series BOGMBASE). Similarly, in 2011 the ECB has increased the base money supply from about 1.9 to about 2.7 trillion euros, without the price level increasing strongly during that and the following 2 years.

[3] As far as the price level is concerned, available data quality has been questioned by John Williams (shadowstats.com) who argues that the relative price stability in the BLS statistics of the past 30 years is due in no small part to the new ways of calculating the official price level. Applying the traditional calculation methodology, Williams finds that the old-method price-inflation figures are currently about 7 % higher than the new-method figures.

Distributive effects of money production exist in every monetary order.[4] However, in the case of a natural order based on silver and gold, the distributive impact of money production is severely limited, because money production itself is very limited due to its high costs. The situation is entirely different in our contemporary fiat money system. Here money production is pushed far beyond the level it would reach on a free market. As a result it causes a redistribution of income and money wealth far beyond what would be expected on a free market.

Some economists do not agree. They argue as follows: In our contemporary monetary systems, money is being produced in the form of credit. Central banks and commercial banks do not dig money out of the ground and spend it; they create money by creating credit. Now in that case, it makes no difference who receives the new money first, as the beneficiary is no richer than before. After all, the new money was lent, not given. The gross wealth of the beneficiary rises, indeed, but his debts now rise to the same extent as well. For example, if Mr. Jones takes out a loan of one million dollars to buy a house, his *net* wealth does not rise by one cent. It's true that his *gross* wealth is now greater, namely by the said million, but his debts have risen by exactly the same amount.

So far, so good. However, even if we pay due attention to the difference between gross and net wealth, the fact remains that it *does* make a difference whether Jones gets the house due to money creation. The difference is that *Jones* now lives in the nice house, which without money creation would have been sold at a lower price to someone else. *He* can now live there with his family. *He* receives his guests there. If we look at the funding of firms, the impact is even greater. Here again it's true that money creation does not necessarily lead to changes in the respective net company fortunes, but it influences the kind of products that now enter the market. Loans to a manufacturer of men's shoes enable *him* to realize his projects. Because of the loan he can pay higher wages and higher prices for leather than, say, the manufacturers of lady purses. The shoe production expands while purse production stagnates or shrinks. The provision of shoe wearers is improved, that of the purse carriers worsens.

Thus our above conclusion is confirmed: Money production always affects the distribution of real *incomes*. The first money users win, the last ones lose. But money production also has an impact on the financial structure of society, and thus on the distribution of wealth. This impact is complex and we cannot fully discuss it in the present paper.[5] We merely wish to focus on one important aspect, namely, on the fact that, in fiat money systems such as ours, in which money is being created in the form of debt, financial markets tend to grow faster than in commodity money systems.

[4] Moreover, they are not strictly speaking exclusive effects of the production of money, but result from *any* production process (see Mises 1981, pp. 237f).

[5] For a more detailed discussion see Huerta de Soto (2006) and Hülsmann (2013).

Money Production, Financial Markets, and the Income-Wealth Gap

It is a well-known fact that, for most of the twentieth century and until the present time, in virtually all countries of the developed world, financial markets have grown faster than the factor markets and the product markets of the "real" economy (cf. Demirgüç-Kunt and Levine 2001; Levine 2005). This tendency has been particularly patent in the past 30 years. The academic literature has explained this over-proportional growth by focusing on the services provided by financial markets, and financial intermediaries in particular. By contrast, the role of the monetary system in this growth story has been almost completely neglected.[6]

As we have recently shown (Hülsmann 2013, Chap. 8), there are at least three mechanisms or channels through which a fiat money system facilitates the growth of financial markets: (1) because financial titles are particularly useful securities in debt contracts; (2) because foreseeable price-inflation, a common consequence of fiat money systems, discourages money hoarding and encourages both the demand for, and the supply of, financial titles; (3) because the production of money through central banks is a matter of sheer human will and therefore creates moral-hazard problems leading to both an artificially high demand for financial titles, and an artificially big supply thereof.

The implication is that fiat money systems modify the relationship between current monetary incomes and wealth. The latter increases relative to the former. It takes more years of work and earning income to accumulate any given level of wealth. In other words, fiat money systems leverage the wealth gap between the haves and the have-nots (respectively the have-not-yets). New wealth needs longer to catch up with old wealth; and those who lose wealth through bad investments or expropriation need longer to get back to where they were. Ultimately, this means that fiat money systems tend to slow down upward social mobility. They hamper what Vilfredo Pareto (1966 [1909]) called the "revolution of elites" and thus contribute to turning a free society into a caste society.

Let us illustrate this wealth-gap leverage effect with a back-of-the-envelope calculation. Assume for simplicity's sake that all loans have a fixed interest rate; and that in all cases the widespread rule of thirds is applied, i.e. the maximum debt servicing any person is allowed to commit to, is limited in each case to a third of his net income.[7] Thus suppose three representative people: A blue-collar worker earning a monthly income of $1,800, a white-collar worker earning $3,600 and a high-ranking civil servant earning $7,200. If all three had borrowing costs of 10 %, the blue-collar worker could obtain a loan of about $86,400; the white-collar worker a loan of about $144,000; and the civil servant a loan of about $288,000.

[6] Exceptions can be found in particular in the Austrian literature, e.g. Howden (2010) and Hülsmann (2008, Chap. 13).

[7] So for example if A has an annual net income of $36,000, then the maximum debt servicing he is allowed to commit to is limited to $12,000.

Here the initial incomes have been multiplied through the loan market. However, notice that the *relative differences* between the loan amounts correspond exactly to the proportions between the incomes on which they are based. The civil servant earns twice as much as the white-collar worker, so the loans that he can service are always twice as big as those of the white-collar worker. In other words, *distribution of the wealth acquired on credit* in our example *mirrors the distribution of income*. The loan market itself does not have any influence on the distribution of the wealth acquired on credit if all market participants take out loans at the *same* interest rate and at the *same* ratio with their income.

Under these assumptions, as we have stated before, the loan market affects the relation between current monetary *income* and *wealth*. If all market participants start taking out loans to buy property (especially real estate and equity shares of firms), then the prices of these goods, which cannot be increased ad libitum, will start to increase. Thus the buyers need to work and earn income for longer periods as compared to a situation in which fewer people were to finance their purchases with loans.

From a microeconomic perspective, the loan market *always confers advantages in the short run*, because at the moment when the loan is made it enables the beneficiary to buy and control more goods than he otherwise could. But whether any such advantage also exists in the long run depends, from the point of view of the debtor, on the relationship between his debt service and his future income.

Now the fact is that fiat money systems tend to create permanent positive price-inflation rates. This means that prices and monetary incomes are on a steady growth path. Among the beneficiaries of this tendency are all those people who have to serve loans at fixed interest rates, whether they be households, firms, or governments. Indeed, the incomes of all sectors tend to rise with the price level, and thus the fixed interest-rate payments represent an ever-smaller burden on individual budgets. In other words, the individual short-run benefits of the loan market then tend to turn into individual long-run benefits. Under a fiat money system, therefore, there are strong incentives to buy goods (especially durable goods) on credit, and this leverages, as we have seen, the wealth gap between the haves and the have-nots.

This leverage effect depends most notable on the interest rate. Assume that the borrowing costs in our above example went down from 10 to 5 %. Then the loan amount for the blue-collar worker would go up to $144,000, the white-collar worker's to $288,000 and the civil servant's to $576,000. If the loan costs were to fall even more, to 2 %, the loan for the blue-collar worker would rise to $360,000, the white-collar worker's to $720,000, and the civil servant's to $1,440,000. Again, the *relative differences* between the loan amounts correspond in each case exactly to the proportions between the incomes on which they are based. The civil servant earns twice as much as the white-collar worker, and the loans that he can service are still always twice as big as those of the white-collar worker. Notice in particular that the proportions remain unchanged even as the *absolute differences* multiply in number. At borrowing costs of 10 % the public official can borrow (and consequently spend) $200,000 more than the blue-collar worker. At borrowing costs of

2 % the difference amounts to more than $1,000,000. But the relations between the loan sums remain always the same. The civil servant can always borrow and spend four times as much as the blue-collar worker, and twice as much as the white-collar worker.

In other words, we see again that the distribution of *wealth acquired on credit* mirrors the distribution of the underlying incomes, independent of the interest rate. But the general relation between current monetary income and wealth *does* depend (we might add: by definition) on the interest rate. The lower the interest rate, the longer one needs to work and earn income to accumulate any given level of wealth.

Leveraging Income Differences into Larger Wealth Differences

Thus far we have seen that fiat money systems leverage the wealth gap between the haves and the have-nots (and the have-not-yets) through the loan market. This leverage effect obtains even when we assume, as we have done so far, that *all* market participants can take out loans at the *same* interest rate and at the *same* ratio to their income.

But this assumption is rather unrealistic. In fact, it is more difficult for households with lower incomes to restrict their consumption than for those with higher incomes. The ratio between credit and income will therefore be lower for the former than for the latter. Moreover, the loan terms (including the interest rate) for households with higher incomes are as a general rule more favourable than for those with lower incomes. Therefore, the distribution of wealth acquired on credit does not simply mirror the distribution of the underlying incomes. Rather, the loan market tends to leverage income differences into even larger wealth differences. This holds true in any case in the short run; and in fiat money systems, it also tends to holds true in the long run.

In a natural monetary order based on precious metals such as silver and gold, there are no special incentives to take out a loan because here prices tend to fall in the long run (price level rises tend to be temporary). Under such circumstances people will do their best to avoid taking out loans, even though they might benefit from them in the short run. For example, in order to finance the purchase of a house, savings are first accumulated and then the purchase is made. It is quite different in a fiat money system, where the central banks intentionally create a positive price inflation rate, even though at a low level. In this case, there are virtually irresistible incentives to go into debt and, as we have seen, this has significant repercussions on wealth distribution.

This loan-market channel of wealth distribution is reinforced even more by the fact that inflation of the money supply leads, via Cantillon effects to a redistribution of incomes. Among the main beneficiaries of this redistribution are the entrepreneurs and employees of the finance industry. If, for example, a commercial bank

receives a loan of $50 billion at 1 % from the central bank, then it can invest the entire amount in US government bonds, say, at 3 %. The reason is that, according to current accounting rules, there is *no legal obligation* for the commercial bank to provide one single cent of equity capital; and there is *no prudential reason* to sacrifice any equity capital either, because government securities are known to enjoy the special protection of the central bank. So the commercial bank can finance the entire investment in US government bonds through the central bank, and it gains about $1.5 billion from this procedure. It incurs no significant risks or costs in doing so. It achieves its profit mainly because the central bank loans it the 50 billion under favourable terms and at the same time makes sure that government bond prices do not nosedive too far.[8]

Statistical Evidence

The foregoing considerations can be very nicely illustrated with some relevant statistics. The last 30 years, especially in the US, have provided an ideal environment for the above-mentioned mechanisms to fully develop. There has been low but constant price inflation; a permanent redistribution of income via the printing press; relatively great freedom of movement on the financial markets; and constantly decreasing interest rates. In particular the 30-year fixed rate mortgage average has gone down for decades (see Fig. 1).

The corollary has been increased income and wealth differentials in the population. Since the mid-1970s the pertinent indicators suggest an increasingly unequal distribution. The most widely used indicator is the Gini income ratio, which varies between the value 0 (when each member of society has exactly the same income) and the value 1 (one member of society has all income, while the others have none). The Gini income ratio is often used as a benchmark to assess the justice of income distribution, but this only makes sense if the ultimate standard of justice is communism. By contrast, the *variations* of the Gini ratio across time are a useful starting point for scientific enquiry, because they reflect the impact of various factors, among which the monetary system.

Now, in the case of the US, the evolution of the Gini income ratio shows that income distribution has grown unceasingly as from the early 1970s (see Fig. 2), that is, as from the time when the gold standard was abandoned in favour of the current fiat money system. In other words, under the US fiat money system the incomes of

[8] Incidentally, this explains in good part—perhaps even the best part of—those fabulous bonuses that were often paid out in the financial sector and to some extent still are paid out. The most famous examples are the Goldman-Sachs payouts. In 2010 the average year-end bonus there amounted to $430,000. The previous year it had been almost $500,000. These are, as already mentioned, *average* amounts, based on all employees from the cleaner to the top manager (see Treanor 2011).

Fig. 1 Thirty-year fixed rate mortgage average in the United States. *Source*: Freddie Mac; Federal Reserve Bank of St. Louis, times series MORTGAGE30US

the relatively poor US households have even further decreased relative to the richer US households.

The reason why this development did not lead to severe social conflicts is probably because in particular from the mid-1980s various other factors (information technology, the collapse of Soviet socialism etc.) led to a growth spurt. Due to money inflation poor families became poorer, but only *relative* to higher income families. In *absolute* terms they were for many years, roughly until the outbreak of the current crisis, better off than ever before. Only in recent years, their relative impoverishment has also gone in hand with an absolute decline of their wealth. Unsurprisingly, the result was widespread dismay and led to protest movements.[9]

Back in the 1920s there was a similar development when the above-described conditions, which constitute the ideal environment for the emergence of a bubble economy, also prevailed in the United States. The income distribution was correspondingly unequal then as well. The crisis of the 1930s then yielded a sharp turnaround of this trend. Almost all countries then subjected their national and international capital flows to strict government regulations. At the same time strongly progressive tax rates were introduced, with top tax rates of over 70 and sometimes over 90 %. The well-known consequence was a collapse of the

[9] It would lead us too far at this place to discuss the motivations and impact of these movements. We notice, however, that only a minority of the protesters in the US is aware of the connection between the current impoverishment and the monetary system. Unless this insight becomes more widespread and leads to a thorough monetary reform the prospects for turning the tides on income and wealth distribution are dim.

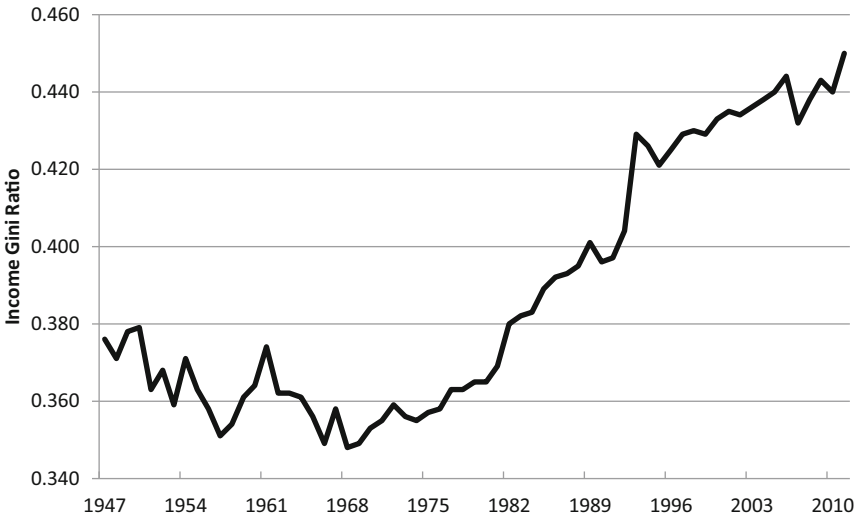

Fig. 2 Income Gini ratio of families by race of householder, All Races. *Source*: Census Bureau; Federal Reserve Bank of St. Louis, times series GINIALLRF

international division of labor and reduced labor productivity, which intensified again during the war years. A recovery followed only in the post-war years, this time with a more even income distribution.[10]

Another important distribution indicator is the ratio between the median income and the average (mean) income, or between the median wealth and the average (mean) wealth. The median income is the income of those households who earn less than the 50 % highest-earning households, but at the same time earn more than the 50 % lowest-earning households. The mean income on the other hand is the arithmetic mean of all incomes. If the mean is higher than the median, this indicates that the difference between the 50 % highest income households and the median household is greater than the difference between the 50 % lowest income households and the median. The wealthier then are so-to-say disproportionately wealthy, and the poorer are disproportionately poor (Table 1).

In the US, 1983 the median income of American households was $45,700 (measured in 2010 dollars) and the mean income was $55,600. So the ratio of the two figures was 1.22. Eighteen years later, in 2001, the median income was $52,000 and the mean income was $71,700. The ratio of the two figures rose to 1.38. In the following 9 years, the median and mean incomes of US households have been stagnating around that level, with a slight downward tendency since the outbreak of the crisis in 2007. In the 30 years before 2001, there had been a marked trend toward

[10] Cf. Piketty and Saez (2003, 2006). In their observations the authors neglect the influence of the currency system.

Table 1 Mean and median income of US households, 1969–2010

	1969	1983	1989	1992	1995	1998	2001	2004	2007	2010
Mean	56.7	55.6	64.2	60.4	64.3	69.4	71.7	69.8	71.1	67.5
Median	49.8	45.7	50.8	47.6	48.8	52.0	52.0	51.2	52.8	49.4
Ratio	1.14	1.22	1.26	1.27	1.32	1.33	1.38	1.36	1.35	1.37

Source: Wolff (2012, p. 56); own computations; mean and median figures in thousands, 2010 dollars

an increased concentration of income in the high-income households. This concentration has then been preserved throughout the following 9 years.

This trend is much more pronounced and much longer lasting in the case of *wealth* than of *income*. The mean-median ratio of the net worth of US households has more than doubled in the past 30 years.

Here the ratio of mean to median rose from 4.17 in 1989 to 5.23 in 2007. In the following 3 years this ratio then virtually mushroomed to 8.145 in 2010.[11] Similarly the Gini net worth ratio increased from 0.826 in 2001 to 0.870 in 2010 (see Wolff 2012, p. 58; Table 2). The very years during which the financial crisis was combated by the printing press were exceptionally favorable years for the concentration of American wealth.[12]

Finally, the ratio between income and net worth of US families is also in line both with our theoretical analysis and the statistical material considered so far. Indeed, the wealth-income ratio has risen from 5.12 in 1983 to 7.93 in 2007, and then slightly declined to 6.87 in 2010 (Table 3).

The wealth-income ratio can be used, in conjunction with the savings rate, as a measure of how long it takes to accumulate a given level of wealth. Suppose the savings rate of US households were 10 %. Then in 1983, an average US family would have needed about 51 years to accumulate the national average net worth out of its annual income. In 2010, it would have needed 68 years to do the same. In other words, new wealth needed increasingly more time to catch up with old wealth. The gap between the haves and the have-nots (respectively the have-not-yets) has strongly increased under the current fiat money system.

[11] In her study for the Congressional Research Service, Linda Levine (2012, p. 3, Table I) reports somewhat lower figures than Wolff (2012) while relying on the same source, the Survey of Consumer Finance Chartbook. Indeed, Wolff adjusts his figures to take account of the fact that figures on pp. 39f of the Chartbook (on which Levine relies to calculate the mean-median ratio) concern only "families with holdings."

[12] The same applies of course to all the other countries where this policy was implemented. Just one example of many: The bailout of the company *Resona Holdings* by the Japanese government in 2003 led to significant wealth gains for large banks. Cf. Pop and Pop (2009, pp. 1429–1459).

Table 2 Mean and median net worth of US households, 1969–2010

	1969	1983	1989	1992	1995	1998	2001	2004	2007	2010
Mean	232.5	284.4	325.8	316.8	292.6	361.5	468.1	496.9	563.8	463.8
Median	63.6	73.0	78.2	66.7	65.3	81.2	90.5	89.9	107.8	57.0
Ratio	3.65	3.90	4.17	4.74	4.48	4.45	5.17	5.53	5.23	8.14

Source: Wolff (2012, p. 56); own computations; mean and median figures in thousands, 2010 dollars

Table 3 Mean net worth and mean income of US households, 1969–2010

	1969	1983	1989	1992	1995	1998	2001	2004	2007	2010
Mean net worth	232.5	284.4	325.8	316.8	292.6	361.5	468.1	496.9	563.8	463.8
Mean income	56.7	55.6	64.2	60.4	64.3	69.4	71.7	69.8	71.1	67.5
Ratio	4.10	5.12	5.07	5.25	4.55	5.21	6.53	7.12	7.93	6.87

Source: Wolff (2012, p. 56); own computations; income and net worth figures in thousands, 2010 dollars

Conclusion

Under a fiat money system, the money supply is subject to the human will and therefore tends to grow faster than under a commodity money system. The Fed has used its terrible power to produce unlimited amounts money apparently without abusing it, keeping price-inflation rates at moderate one-digit figures for most of the past 100 years. But while the leadership of the Fed might have been well-intentioned, the very existence of the Fed has entailed a number of *unintended* consequences that have hampered the working of the market economy. These unintended consequences include most notably the distortion of interest rates, which in turn lead to inter-temporal disequilibria, business cycles, and economic crises. Moreover, the very existence of the fiat money system, combined with the Fed policy of targeting low but positive price-inflation rates, also had a significant impact on the distribution of incomes and wealth.

In our present contribution, we have argued that the Fed has created, and could not avoid creating, artificial income differences, benefitting its clients (commercial banks and governments) at the expense of most other market participants. Furthermore, the Fed policy of targeting low but positive inflation rates has been a formidable shot in the arm of financial markets. This artificial growth of financial markets has increased the gap between incomes and wealth, thus reinforcing the position of the already wealthy; and it has also leveraged income differences into even greater differences of wealth.

Clearly, these are problematic consequences. The problem is not income and wealth inequality per se; the problem is the *artificial* creation of income and wealth inequality by administrative fiat. Let us stress again that we do not claim the Fed leadership intentionally aimed at enriching its clients and the already wealthy at the expense of the rest of society. But as a matter of fact such redistribution has resulted from its operations, and this has happened on a massive scale. It is a consequence,

not so much of particularly inept Fed policies, but of fiat money systems as such. It will not disappear as long as US citizens will tolerate being subject to fiat money, with or without the Fed.

References

Demirgüç-Kunt A, Levine R (eds) (2001) Financial structure and economic growth. MIT Press, Cambridge, MA

Howden D (2010) Knowledge shifts and the business cycle: when boom turns to bust. Rev Austrian Econ 23(2):165–182

Huerta de Soto J (2006) Money, bank credit, and economic cycles, 2nd edn. Mises Institute, Auburn, AL

Hülsmann JG (2008) The ethics of money production. Mises Institute, Auburn, AL

Hülsmann JG (2013) Krise der Inflationskultur. Finanzbuch-Verlag, Munich

Levine R (2005) Finance and growth: theory, evidence, and mechanisms. In: Aghion P, Durlauf S (eds) The handbook of economic growth. North-Holland, Amsterdam

Levine L (2012) An analysis of the distribution of wealth across households, 1989–2010. CRS Report to Congress. Congressional Research Service, Washington, DC

Pareto V (1966) [1909] Manuel d'économie politique, 4th edn. Droz, Geneva

Piketty T, Emmanuel S (2006) The evolution of top incomes: a historical and international perspective. Am Econ Rev 96(2):200–205

Piketty T, Saez E (2003) Income inequality in the United States, 1913–1998. Q J Econ 118(1):1–39

Pop A, Pop D (2009) Requiem for market discipline and the specter of TBTF in Japanese banking. Q Rev Econ Finan 49(2):1429–1459

Treanor J (2011) Goldman Sachs bankers to receive $15.3bn in pay and bonuses. The Guardian (January 19)

von Mises L (1981) Theory of money and credit. Liberty Fund, Indianapolis, IN

Wolff EN (2012) The asset price meltdown and the wealth of the middle class. NYU working paper, New York

Unholy Matrimony: Monetary Expansion and Deficit Spending

Lucas Engelhardt

For the past several years, economists concerned with monetary policy have been establishing that an independent monetary policy maker provides superior price stability than a monetary policy maker that is more connected with politics (Alesina and Summers 1993). In short, introducing an independent monetary policy maker can lower average inflation without disrupting the economy. Americans, then, should rejoice that the Federal Reserve is considered to be one of the more independent central banks (Mishkin 2010).

This independence is based primarily on four traits. First, the Federal Reserve's goal is based on a dual mandate. It is supposed to pursue "price stability" and "full employment". However, the Federal Reserve may use its discretion to determine how to balance these two goals. In effect, by giving the Federal Reserve multiple goals, the legislature has given the Fed great freedom in determining its own goal. Second, the Federal Reserve enjoys independence in how it pursues its goal. Thus, we see the Federal Reserve adopting new policy styles on a seemingly regular basis, from a switch from setting targets for money supply growth to setting targets for interest rates to introducing quantitative easing. Third, the Federal Reserve's bureaucratic structure makes it largely (though not entirely) independent of political influences. For example, the Federal Reserve's Board of Governors are appointed to very long 14 year terms, and are not eligible for reappointment after they serve a full term. This is supposed to limit the need to pander to the political system for Fed Governors to be secure in their positions on the Board. Finally, the Federal Reserve is self-funding—and, in fact, has been quite profitable. Because of this, the Federal Reserve does not have to be concerned about its funding being affected by the political climate. While the Federal Reserve may not be entirely independent, these traits suggest that the Fed has a great deal of independence when actually determining what course to take with monetary policy.

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However, the Federal Reserve has chosen a policymaking approach that gives the political system a great deal of control over the money supply. Because the Federal Reserve has adopted an interest rate targeting regime, significant control over the money supply has been given to those that control the government budget. Both theory and data show that money supply growth has been influenced significantly by the level of government deficits—giving those making the budget decisions a significant practical say in monetary policy.

The Theory

There is no necessary reason that monetary policy and fiscal policy must be linked. For example, it is perfectly possible for the government to run significant budget deficits while monetary policy is quite tight. In this case, the government simply borrows money from the private sector to fund the government deficits. Similarly, government budget surpluses do not guarantee a tight monetary policy. The Federal Reserve can go on printing money and using it to buy pre-existing government bonds (or other securities), despite the fact that the government isn't issuing any new debt (Rothbard 2008).

However, the reality is that the two are connected—and have been connected for quite a long time because the Federal Reserve follows an interest rate targeting regime. Today, the Federal Reserve expressly follows an interest rate targeting regime, and has been announcing federal funds rate targets since its statement on June 30, 1999. However, prior to that time, the Federal Reserve had included "expectations" about what monetary policy would do to the federal funds rate going back through at least 1996. When suggesting the now famous "Taylor Rule", John B. Taylor showed that a relatively simple interest rate targeting rule was being followed, in practice, during the period examined in his data from 1987 until 1992 (Taylor 1993). This evidence suggests that the Federal Reserve has been concerned with interest rate levels since at least the middle of the 1980s—and perhaps even earlier. Since the level of interest rates have been a concern for the Federal Reserve, actions by significant market actors have had an influence on how expansionary the Federal Reserve's monetary policy must be.

One can think of an interest rate targeting regime as being a commitment by the monetary authorities to manipulate the loanable funds market so that the market interest rate is at some target level. Thus, if there is a substantial increase in the demand for loanable funds, then the Federal Reserve is obligated to increase the supply of loanable funds to prevent the additional borrowing from increasing interest rates. The increased supply of loanable funds comes from the Federal Reserve purchasing government securities on the open market with newly created money. In effect, the Federal Reserve monetizes the debt. At the same time, the same interest rate targeting policy would imply a contractionary monetary policy if there is a significant decrease in the demand for loanable funds—as the Federal Reserve must then use open market sales "soak up" the excess loanable funds that

would push interest rates down. Put another way: once the Federal Reserve has adopted an interest rate target, it has put other market participants in charge of how much money is created.

In the lending market, the Federal Government is a significant player. In 2012, the Federal Government's credit market debt outstanding totaled $11.6 trillion, substantially more than the total of household and non-profit mortgages, which was just $9.4 trillion. In 2012, there was net borrowing of $1.8 trillion in the US economy—of that $1.1 trillion was borrowed by the Federal government (Federal Reserve 2013). While net borrowing numbers may be somewhat misleading when determining the precise importance of a particular player in the credit markets, this should establish that the federal government is a big player in credit markets. It is certainly unlikely that any other single organization borrowed $1.1 trillion over the course of the year. That being the case, in the presence of interest rate targeting, federal budget policy will have a potentially large effect on the size of the money supply, as the Federal Reserve must offset the Treasury's borrowing to maintain its interest rate target.

While an interest rate target implies that the Federal Reserve must react to any changes in the demand for loanable funds, the interest rate target policy provides government with an incentive to increase its borrowing. In the absence of an interest rate targeting policy, such a large borrower as the federal government would have be concerned with how its borrowing may affect interest rates—fueling a crowding out of private investment. Even if crowding out itself is not a concern, higher interest rates will increase the cost of servicing the debt. With the interest rate target in place and the Federal Reserve committing to maintain it, the federal government does not need to worry about its borrowing leading to rising interest rates.

At the same time, the institutional relationship between the Federal Reserve and the Treasury gives the federal government another reason to borrow. Each year, the Federal Reserve's profits—apart from a fixed dividend that goes to banks that are members of the Federal Reserve System—are given to the Treasury. At the margin, any borrowing that is funded by the Federal Reserve (though through the round-about method of open market operations) is effectively interest-free. By way of example, the Treasury can issue $1 trillion in new bonds, promising to pay 5 % interest. The Treasury then sells these bonds on the open market. To prevent interest rates from rising, the Federal Reserve makes an offsetting purchase on the open market. So, now the Federal Reserve is holding $1 trillion of bonds paying 5 % interest. The federal government then has to pay $50 billion on those bonds, and the Federal Reserve earns $50 billion on the $1 trillion of new bonds being held. Since these $50 billion are likely to be profits, they get handed back to the Treasury. The Treasury paid $50 billion in interest, but then received $50 billion from the Federal Reserve. In the end, it is as if the bonds were interest-free in the first place. That being the case, the Treasury has very little reason to care what interest rates are at any point in time when deciding how much to borrow, as any sales of bonds will result in equivalent Federal Reserve purchases and revenues from the Federal Reserve that will pay the interest on the bonds. While the Treasury should be concerned about paying the interest on those bonds that are not purchased by the

Federal Reserve, the Fed's large bond purchases in recent years have made Treasury interest rates less of a concern than in times when the Fed owned far fewer government bonds.

Interest rate target policies, then, create a dangerous connection between fiscal policy and monetary policy. On the one hand, the money supply becomes determined by budget policy, since the federal government is a major player in the loanable funds market. On the other hand, with an interest rate target in place, the government has little reason to limit its deficits. Because of the interest rate policy, there is little reason to expect the borrowing to increase interest rates. At the same time, the commitment of the Federal Reserve to purchase any government bonds that create a risk of increasing interest rates leads makes much deficit borrowing effectively interest-free to the government.

The Data

From a theoretical basis, there is no reason to believe that monetary policy and fiscal policy have to be connected, but there are good reasons that they may be connected if the Federal Reserve has committed itself to an interest rate target. Because of this connection, when we turn to the data, we can expect to see that more rapid monetary expansion should accompany larger deficits while slower monetary expansion (or even monetary contraction) should accompany smaller deficits or budget surpluses.

However, in an activist policy environment, it becomes remarkably tricky to tease out whether any observed tie between deficits and expansionary monetary policy is causal. It is perfectly possible that deficits and expansionary monetary policy occur simultaneously not because one is causing the other, but because both are being caused by some third phenomenon. For example, when the economy enters a recession, there are often calls for fiscal and monetary "stimulus". As a result, on the fiscal side, government increase spending and decrease taxes—leading to larger deficits. On the monetary side, the Federal Reserve decreases its interest rate target and moves toward the lower target by rapidly increasing the money supply, or, more recently, the Federal Reserve commits to quantitative easing—which would also increase the money supply. So, which is it? Are the two connected? Or do the two just happen to be simultaneously fighting the same battle?

Before we can tackle these larger questions, first we need to establish that the connection exists in the first place. To do so, I gathered annual data from 1984 through 2012. During this time, the correlation between the growth rate of M2 money supply[1] and the deficit (as a % of Gross Domestic Product) was −0.03. That

[1] M2 is a broad measure that includes currency in the circulation, demand deposits (like checking accounts), savings accounts, and small time deposits (like Certificates of Deposit).

is, there was almost no statistical connection whatsoever between broad measures of the money supply and the fiscal deficit. However, M2 is not necessarily the best measure to use when faced with the question that we're trying to answer. M2 is a very broad measure of the money supply—and as such is only loosely connected with monetary policy itself. The Federal Reserve has much greater control over the narrower M1[2] and especially the monetary base (which falls more or less entirely under the Fed's direct control).[3] For these measures, the relationship is far stronger. The correlation between M1 growth and fiscal deficits is was 0.74 and that between monetary base growth and fiscal deficits is 0.58.

The correlations between the narrower measures of M1 or the monetary base and the fiscal deficit suggest a relatively strong positive correlation—higher deficits are associated with higher rates of money growth. But, this correlation has a number of possible explanations.

One explanation is "monetization". That is, the deficits are causing the monetary growth. A second explanation is "rates are good, so let's spend". That is, monetary policy is causing the deficits. Either of these two explanations suggest that monetary policy and fiscal policy are not independent. In the first case, monetary policy is determined largely by budget policy. In the second case, budget policy is determined largely by monetary policy. But, one last case is possible: perhaps both are caused by a third factor, like an economic recession that the various policy authorities are trying to stimulate the economy out of.

One option for evaluating the "third factor" hypothesis is to use multiple regression to explain monetary growth as the result of a combination of factors. In effect, multiple regression can allow us to control for a third factor and see if there is still a significant relationship between deficits and monetary growth. The most obvious (and most likely to be suggested) third factor that could be causing both monetary growth and deficits is the state of the economy. When the economy is growing rapidly, monetary growth tends to slow and deficits shrink or turn into surpluses. When the economy is doing very poorly, monetary growth picks up and deficits grow to try to stimulate the economy. Controlling for the state of the economy should help to determine whether there is a relationship between deficits and monetary base growth or M1 growth beyond what can be explained simply by the state of the economy itself. Using multiple regression, we arrive at the following relationship (standard errors in parentheses):

$$\begin{aligned}\text{MB growth} &= \underset{(5.4522)}{18.1783} + \underset{(0.7562)}{1.4190}\ \text{Deficit} \\ &\quad - \underset{(1.3392)}{4.5731}\ \text{Annual GDP Growth}\end{aligned}$$

[2] M1 includes primarily currency in circulation and demand deposits (like checking accounts).

[3] The monetary base is composed of currency in circulation and reserves held by banks—this is controlled more or less directly by the Federal Reserve.

The last term establishes that an increase in GDP growth does slow the growth of the monetary base—that is, monetary policy does respond to the state of the economy in the way that would be expected. However, even controlling for this effect, the second term shows that larger deficits are still connected with greater monetary base growth. So much so that a 1 % increase in deficits (as a percentage of GDP) leads to an increase in the monetary base growth rate of more than one percentage point. Put another way: a bad economy is not enough to explain away the relationship between deficits and monetary base growth.

When considering M1, the case for monetary policy being used for debt monetization is even stronger, as shows in the following relationship (standard errors in parentheses):

$$\begin{aligned}\text{M1 growth} &= \underset{(2.0398)}{0.6086} + \underset{(0.2808)}{1.4012}\ \text{Deficit} \\ &\quad + \underset{(0.4937)}{0.1670}\ \text{Annual GDP Growth}\end{aligned}$$

A 1 % increase in the deficit is associated with a 1.4 % increase in M1 growth—very much like with the monetary base. But, unlike with the monetary base, there is no statistically significant connection between the state of GDP and M1 growth. What connection there is exceptionally weak, and is in the wrong direction. This suggests that M1 growth that happens when there are deficits is happening not because of changes in GDP that are causing both, but rather is happening because of the deficits themselves (barring the existence of some other third factor that could be causing both, but that wouldn't be associated with the level of GDP).

This paints a very strong picture suggesting that either the deficits are causing the monetary growth or the monetary growth is causing the deficits.[4]

Now, we turn back to theory. Additional deficit borrowing tends to increase interest rates. If there is an interest rate targeting regime in place, then the Federal Reserve will have to increase the money supply to keep interest rates from rising. Is there a theoretical story for the causation to flow the other direction?

One possibility is that the increase in the money supply has actually lowered interest rates on Treasury bonds, and that these low interest rates encourage the government to borrow. This is, after all, the standard story for how most businesses would react. If interest rates are low, then it is a good time for businesses to fund new investments and for households to buy big-ticket items. Might the government work the same way?

Some reflection should suggest that this doesn't seem to be the way that government financing works. Very rarely does one hear a member of Congress declare that interest rates are low, so now is a good time to borrow. Instead, deficits seem to simply be an almost accidental result of the disconnect between taxing

[4] Technically, this work has only ruled out the state of GDP as being a third, common cause. However, I am unfamiliar with any other significant story suggesting a reason monetary policy and fiscal deficits should be so correlated!

policy and spending policy. Since taxes and spending are typically determined separately, deficits arise because tax revenue falls short of spending. In bad economic times this is expected as tax bases tend to shrink during such times while social safety net spending increases. At the same time, during bad economic times, some of the deficit is the intentional result of tax cuts and spending increases that are supposed to stimulate the economy. There is no particular reason here to believe that deficits are somehow "caused" by low interest rates, as interest rates don't intuitively seem to be a concern. This claim is made all the stronger if politicians are aware that any monetization makes the debt effectively interest-free. If any interest we pay will be paid back to the Treasury as Federal Reserve profits, then it is perfectly rational for the government to simply ignore interest rates when it is determining deficit policy, as interest rates are actually irrelevant.

This question can also be approached statistically. While, in as far as they believe that the Federal Reserve will monetize any debt, Congress and the President will ignore interest rates when determining budget policy, it is certainly possible that the interest rate picture could change the political pressures they face when making spending decisions. To get at this question, we can run a regression in which deficits are explained by a combination of GDP changes and the interest rate on 10 year Treasuries. Running this test, we find the following results:

$$\text{Deficit} = \underset{(1.5395)}{5.7071} - \underset{(0.3329)}{0.8523}\ \text{GDP Growth} - \underset{(0.2686)}{0.0513}\ \text{Interest Rates}$$

The second term suggests that higher GDP growth tends to lessen deficits—unsurprisingly. An increase in GDP of 1 % decreases the deficit by 0.85 %, and this is a strong statistical relationship. However, interest rates have no statistically discernible impact, while there is some relationship between deficits and interest rates that would be what we expect (higher interest rates leading to smaller deficits), the relationship is exceptionally weak. This suggests that politicians in the US have paid very little attention—if any—to interest rates when determining budget policy.

In the end, the data is pointing us toward one likely conclusion: expansionary monetary policy is, to a significant degree, the result of the Federal Reserve monetizing the debt. That is, the federal government is borrowing to finance its deficits, and to offset the interest rate pressures created by this increased demand for loanable funds, the Federal Reserve is expanding the money supply.

Cause for Concern

But, why does the connection matter? There are a number of potential concerns that may arise when monetary policy ceases to be independent of budget policy. First, connections between monetary policy and the political system are known to provide higher rates of price inflation without any offsetting benefits. By allowing the political system influence monetary policymaking, the Federal Reserve is opening

the way to potentially significant increases in prices, as the government's tendency to run deficits leads to significant increases in the money supply. A second, and somewhat more subtle, concern is that having multiple, independent policymakers decreases the damage that can be done in a case of policy error. This is part of the reason that an economy in which different investors make many different investments may tend to perform more reliably than we would expect a system in which investors all consistently made the same types of investments. When monetary policy is independent of fiscal policy, there is a potential for fiscal policymakers and monetary policymakers to disagree, and follow different courses. In doing so, the effects of one policy may be—at least to some degree—offset by the other policy. In a system where monetary policy is not divided from other policymaking, only one mind (or relatively small set of minds) controls all policy—which is likely to increase the magnitude of any errors that may occur.

One final concern should certainly be the most important of all: hyperinflation becomes far more likely when the independence of the central bank is compromised. Hyperinflation occurs when people lose confidence in what had previously been widely accepted as money in the economy. As a result, the demand for money—and its purchasing power—falls rapidly, and, correspondingly, the prices of goods increase substantially. While it is technically possible for hyperinflation to happen in the absence of budget deficits, historically, it is far more common that hyperinflation and budget deficits go hand-in-hand, with unsustainably large budget deficits playing the key role (Kiguel 1989).

The reason is not difficult to discern. Government spending requires funding through taxes, borrowing, or monetization. Taxes are politically unpopular, and, even when politically acceptable, have a limited ability to raise funds as tax bases typically diminish when tax rates increase. Borrowing is also eventually limited, as borrowers will not continue lending money to a government as it becomes increasingly obvious that the government is unable or unwilling to pay the money back. In the end, then, governments have a choice between keeping their spending within the strict limits of what can be taxed or borrowed or of resorting to monetization.

When the money supply increases to fund government deficits, the effects create the incentives for hyperinflation. The increase in the money supply tends to increase prices. Worse (from the government's perspective), those prices which will be most immediately affected will be those for the goods that the government is purchasing. So, the government sees its spending increase more than tax revenues do—so deficits grow. The growing deficit then requires additional monetization, leading to an increase in the rate of money growth. This process continues in a vicious circle until one of two outcomes occurs: either the government develops the political wherewithal to solve its budgetary problems, which then eliminates the need for monetization, or the monetary system collapses in hyperinflation. As the money loses value at an accelerating pace, the people try to minimize their cash holdings—which makes the increase in prices all the more rapid.

To further illustrate these two cases, one may consider the cases of two countries that have suffered crises in the past several years: Greece and Zimbabwe. As a member of the Eurozone, Greece does not get to determine its own monetary

policy—and, when making policy, the European Central Bank is concerned not only with the plight of Greece, but with the entire European economy. So, when faced with its crisis, Greece has been forced to achieve—or at least commit to—greater fiscal balance. In the case of Zimbabwe, the close relationship between the Reserve Bank of Zimbabwe and the Mugabe government led to the Bank funding the government's deficits on a regular basis—eventually culminating in hyperinflation (Coomer and Gstraunthaler 2011). While it is certainly true that neither option is pleasant, hyperinflation can be considered worse for a simple reason: hyperinflation doesn't prevent the eventual budgetary adjustment. It simply adds to that adjustment the problem of a monetary meltdown.

Conclusion

Central banking and budget policy do not have to be connected—and keeping the two separated helps prevent price inflation without worsening other economic outcomes. However, both theory and data suggest that the Federal Reserve is likely to have handed control of monetary policy to the politicians controlling the budget—even if only unintentionally. In doing so, we have been placed in danger of accelerating price inflation. At the time of this writing, the United States has not yet experienced outrageous inflation in consumer prices. However, one is left wondering how long it may be before the danger of high inflation becomes a reality, as it has so many times in the past in so many other countries. Knowing this is a potential danger, what can be done to prevent it?

Theory suggests that the reason for the link is that the Federal Reserve has adopted a practice of targeting interest rates. This policy should be abandoned. There are a number of other options that should be considered that are less likely to create the same danger.

Money supply targeting is one policy that would prevent accelerating growth in the money supply, as the Federal Reserve would be aiming to obtain a specific rate of money growth. Such a policy is not without potential problems, but it would separate monetary policy from budget policy.

Inflation targeting is a rising popular option. Under this system, the Federal Reserve would publically announce a medium-term price inflation target, and then would manipulate the money supply in an attempt to meet that target. This policy has a number of benefits, including transparency and that it focuses the central bank on creating the one benefit that central banks seem capable of creating. However, at the same time, the central bank's control over price inflation is "loose" at best.

Both of these options have one problem: they can still end up creating monetization of the debt. While there is less potential for hyperinflation in these systems, the continuous creation of new money that is used to buy government debt does create the likelihood that new money will be used, in large part, to fund government deficits.

One final option is more radical: a separation of money and state. With most markets, governments allow for multiple producers to produce a variety of goods and to compete for customers. Under this proposal, money would work the same way. Let various entrepreneurs produce different moneys, and let the market decide what is most desirable. In such a system there is no reason that new money would necessarily enter through markets for government bonds, so monetization is less of a problem. At the same time, people generally prefer that money maintain a relatively stable value—so the money that is eventually chosen is likely to have a stable value. This system of currency competition is also not hostage to the indiscretions of a poor monetary policy from a single monetary authority. If one of the competing money producers increases the supply of its money too quickly, people will abandon it for one of the many readily available alternatives—a process that is far less painful if those alternatives are already close at hand and well-understood.

In the end, if we want to separate monetary policy from the government budget, the most sure path—and arguably the safest one—is to separate money from state. Only then can we be free from the dangers that the connection between the two creates.

References

Alesina A, Summers LH (1993) Central bank independence and macroeconomic performance: some comparative evidence. J Money Credit Bank 12(2):151–162

Coomer J, Gstraunthaler T (2011) The hyperinflation in Zimbabwe. Q J Austrian Econ 14 (3):311–346

Federal Reserve (2013) Financial accounts of the United States: flow of funds, balance sheets, and integrated macroeconomic accounts

Kiguel MA (1989) Budget deficits, stability, and the monetary dynamics of hyperinflation. J Money Credit Bank 21:148–157

Mishkin FS (2010) How independent is the Fed? In: Mishkin FS (ed) The economics of money, banking, and financial markets. Pearson, Boston, MA, pp 396–399

Rothbard MN (2008) The mystery of banking. Ludwig von Mises Institute, Auburn, AL

Taylor JB (1993) Discretion versus policy rules in practice. Carnegie-Rochester Conference Series on Public Policy 39:195–214

Information, Incentives, and Organization: The Microeconomics of Central Banking

Peter G. Klein

Monetary theory and policy are fundamental issues in economics and there are huge literatures on the theory and practice of central banking. While sometimes criticizing particular Fed policies or Fed behavior during certain episodes, the academic literature is generally laudatory (Friedman and Schwartz 1963; Blinder 1998, 2013; Meltzer 2003, 2010), and occasionally hagiographical (Bernanke 2013a, b).[1] A few writers point to more serious problems, not only with the Fed's overall track record, but with the very institution of central banking (Rothbard 1994, 1999; Garrison 1996; Selgin et al. 2012).[2]

Both the Fed's defenders and its critics generally focus on macroeconomic questions. What is the correct monetary policy? Does the economy need an "activist" Fed? Should the central bank intervene to reduce unemployment, or focus on keeping prices stable? Is the Fed capable of doing these things? Should the Fed target interest rates or nominal GDP? Has the Fed done a good job? Would alternative institutions be better?

These are critically important questions. Ultimately, however, the Fed's behavior derives from the way it is organized, managed, and governed. In other words, the macroeconomic problem is built upon a more fundamental, underlying microeconomic problem: How is the Fed's behavior enabled, shaped, and constrained by its mandate, its legal authority, and its organizational design? To borrow a metaphor from industrial economics: the Fed's performance follows from its conduct, which

[1] The popular literature is more diverse, including both starry-eyed portrayals of central bankers (Woodward 2000) and populist critiques from a variety of political perspectives (Greider 1989; Griffin 1994; Paul 2009; Ahamed 2009).

[2] Another problem is that the vast majority of academic research in monetary economics is funded, directly or indirectly, by the Fed itself (White 2005).

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follows its structure. For a fuller understanding of the Fed, and central banking more generally, we should turn not only to macroeconomics, but also to microeconomics, specifically at the economic theory of organizations—their nature, emergence, boundaries, internal structure, and governance (Foss and Klein 2013).[3]

This chapter evaluates the Federal Reserve System—and the institution of central banking more generally—from the perspective of organizational economics. While I strongly disagree with many of the key policies of the Federal Reserve Board both before and after the Financial Crisis and Great Recession, my argument does not focus on particular actions taken by this or that Chair and Board. The problem is not that the Fed has made some mistakes—perhaps addressed by restating its statutory mandate, scrutinizing its behavior more carefully, and so on—but that the very institution of a central monetary authority is inherently destabilizing and harmful to entrepreneurship and economic growth.

A central bank is a government entity in charge of the monetary system—an entity that "controls the money supply," in layperson's terms—with the task of maintaining "price stability," achieving a "full employment" of the economy's resources, and other national economic performance objectives. (The Federal Reserve System is charged explicitly with achieving both price stability and full employment, the so-called "dual mandate" that is increasingly being questioned.[4]) The Fed, like other modern central banks, also serves as a "lender of last resort" tasked with protecting the financial system from bank runs and other panics by standing ready to make loans to commercial banks, using funds that are created instantly, from nothing, at the click of a mouse.

The central bank's job, in short, is to "manage" the monetary system. As such, it is the most important economic planning agency in a modern economy. Money is a universally used good and the loan market, through which newly created money enters the economy, is at the heart of the investment process. Ironically, though economics clearly teaches the impossibility of efficient resource allocation under centralized economic planning, as demonstrated (theoretically) by economists such as Mises (1920) and Hayek (1937, 1945) and (empirically) by the universally recognized failure of centrally planned economies throughout the twentieth century, many people think that the monetary system is an exception to the general principle that free markets are superior to central planning. When it comes to money and banking, in other words, it is essential to have a single decision-making body, protected from competition, without effective oversight, possessing full authority to take almost any action it deems in the best interest of the nation. The organization should be run by an elite corps of apolitical technocrats with only the public interest in mind.

And yet, everything we know about organizations with that kind of authority, without oversight, or any external check or balance, tells us that they cannot possibly work well. Just as economy-wide central planners lack the incentives

[3] For a rare microeconomic look at Fed organization and governance, see Reis (2013).

[4] Some observers refer to a "triple mandate" that also requires "moderate long-term interest rates."

and information to direct the allocation of productive resources, monetary planners lack the incentives and information to make efficient decisions about open-market operations, the discount rate, and reserve requirements. The Fed simply does not know the "optimal" supply of money or the "optimal" intervention in the banking system; no one does. Add the standard problems of bureaucracy—waste, corruption, slack, and other forms of inefficiency well known to students of public administration (Downs 1966; Niskanen 1971; Klein et al. 2013)—and it becomes increasingly difficult to justify control of the monetary system by a single bureaucracy. This is especially true when the good in question is money, the only good that exchanges against all other goods, meaning the good in which all prices are quoted. Mismanagement of the money supply not only affects the general price level, but distorts the relative prices of different goods and industries, making it more difficult for entrepreneurs to weigh the benefits and costs of various forms of action, leading to malinvestment, waste, and stagnation. Price inflation rewards debtors while punishing savers, just as artificially low interest rates reward homeowners while punishing renters. Instead, market forces should determine levels of borrowing and saving, owning and renting, and entrepreneurial activity. Put differently, the monetary system is so important that it cannot be entrusted to a government agency—even a scientifically distinguished, nominally independent, prestigious organization like the Federal Reserve System.

Critics of discretionary monetary policy have argued for fixed rules, such as Friedman's (1960) famous recommendation of a fixed rate of money-supply growth, or Taylor's (1993) more accommodating set of countercyclical rules. Others debate whether inflation targeting or nominal-income targeting is a more straightforward and realistic policy for the Fed (Romer 2011). However, none of these proposals is as effective as eliminating the monetary authority altogether, and relying on the voluntary decisions of market participants to determine the money supply and interest rates. A commodity standard, for example, removes even the possibility of central government intervention in the monetary system. If rules are better than discretion, the best policy is to eliminate all discretion, and to achieve a monetary standard that is wholly independent of political or technocratic interference.

The Fed's Performance Before and After 2008

My own views on monetary theory and policy derive from the works of Mises (1912), Hayek (1931), and Rothbard (1963).[5] From this perspective, the cause of the housing bubble was not irrational exuberance, corporate greed, or lack of

[5] More recent treatments and related literature include Garrison (2000), Oppers (2002), White (2006), Diamond and Rajan (2009), Ohanian (2010), Caballero (2010), Salerno (2012), and Calvo (2013).

regulation but the highly expansionist monetary policy of the Fed under Chairmen Greenspan and Bernanke.[6] After the dot-com crash the Fed began increasing the money supply rapidly, with the monetary base rising by 5.6 % in 2001, 8.7 % in 2002, and 6.3 % in 2003, while MZM rose by 15.7 %, 13.0 %, and 7.3 % during those years. Greenspan slashed the federal funds rate from 6.5 % in January 2001 to 1 % by June 2003, keeping it at 1 % until late 2004, a level not seen since 1954. This infusion of credit led to overinvestment in housing and other capital-intensive industries, aided by federal government policies designed to increase the rate of home ownership by relaxing underwriting standards (Jarocinski and Smets 2008; Liebowitz 2009; Norberg 2009; Woods 2009).

The correct response to the collapse of Lehman Brothers on September 16, 2008, and Washington Mutual 10 days later, would have been to let these insolvent institutions fail and to encourage a massive de-leveraging of the economy and an increase in savings and investment. An economic crisis represents a misallocation of productive resources, and the best policy response is to allow market participants to redirect resources from lower- to higher-valued uses. In short, once investments are revealed to be mistakes, it is critical to let the market *liquidate the bad investments as quickly as possible* to make them available for other purposes (Agarwal et al. 2009). Of course, physical and human resources cannot be instantly and costlessly reallocated to alternative uses. However, contracting parties should be allowed to renegotiate resource use without central banks getting in the way. Existing mechanisms for liquidating existing investments and organizations, such as bankruptcy, should be used where appropriate.

The Fed, working hand-in-hand with the Treasury department under the Bush and Obama Administrations, has done precisely the opposite, bailing out insolvent financial institutions and industrial concerns, driving interest rates to zero, and injecting trillions of dollars into the financial system—increasing the monetary base, for example, by an average of 33.7 % per year between 2008 and 2012, a cumulative increase of 198 %. In short, the Fed's philosophy has been *to prevent, as much as possible, entrepreneurs from liquidating any bad investments*—indeed, to perpetuate those bad investments as long as possible. Insolvent financial institutions, rather than go through bankruptcy and reorganization, with poorly performing executives replaced by better ones, have received billions of dollars of free money. Incompetent executives remain at the helm.

[6] The monetary and financial system is one of the most regulated sectors of the US economy, and there hasn't been any "deregulation" since the Gramm-Leach-Bliley Act of 1999, which if anything mitigated the harm of the financial crisis by allowing acquisitions, such as Bear Stearns by JP Morgan Chase and Merrill Lynch by Bank of America, that shielded bondholders from losses.

The Fed's Discretionary Authority

The Fed's defenders acknowledge that its recent actions are controversial. Still, they say, bold action was needed. Someone has to be in charge of the monetary system and, during a crisis, leaders have to make tough decisions. If not the Fed chair and staff—intelligent, competent, well-trained economists—who else?

Current Fed chair Bernanke is a distinguished macroeconomist with particular expertise on the Great Depression, seemingly ideally suited to helm the US central bank during a serious economic downturn. However, some critics have been puzzled that Bernanke's actions as chair seem inconsistent with positions he took in his academic writings. Ball (2012), for example, argues that "the Bernanke Fed has eschewed the policies that Bernanke once supported." Ball attributes the change in Bernanke's thinking to groupthink and to the chairman's own personality, which Ball describes as shy, withdrawn, and unassertive. Without intending to, Ball makes powerful arguments against discretionary monetary policy itself, which relies on a small, elite group of powerful technicians, interest-group representatives, and political advisers to design and implement rules and procedures that affect the lives of millions, that reward some (commercial and investment bankers, homeowners) while punishing others (savers, renters), that shape the course of world events. Under central banking, there are no rules, only discretion. Is it really wise to have a system in which one person's personality type has such a huge effect on the global economy?

Yes, the Fed's defenders insist. It is vital, they say, that the Fed not be constrained from pursuing whatever policies it deems best. Federal Reserve officials are regarded as Plato's philosopher-kings. When a group of distinguished economists expressed skepticism in 2008 about what became the Troubled Assets Relief Program—the government rescue of inefficient, badly managed financial firms, Mankiw (2008) offered the following response:

> I know Ben Bernanke well. Ben is at least as smart as any of the economists who signed that letter or are complaining on blogs and editorial pages about the proposed policy. Moreover, Ben is far better informed than the critics. The Fed staff includes some of the best policy economists around. In his capacity as Fed chair, Ben understands the situation . . .. If I were a member of Congress, I would sit down with Ben, privately, to get his candid view. If he thinks [the bailout] is the right thing to do, I would put my qualms aside and follow his advice.

One can hardly imagine a more dangerous perspective on government decision-making. It ignores differences in theoretical frameworks between, say, Keynesian, Austrian, monetarist, new classical, and other economists. It ignores differences in the interpretation of data, which is a matter of *judgment,* not intelligence. It ignores the possibility that key decision-makers, including Fed and Treasury officials, have private and conflicting interests. And of course it ignores normative concerns—some citizens may oppose rewarding incompetent managers with taxpayer funds, regardless of the efficiency consequences. More generally, Mankiw's argument would seemingly apply to any and all forms of government economic planning.

Why have markets at all, if we can have smart, well-informed planners directing the allocation of resources?

Unfortunately, Mankiw is hardly alone in holding to this worldview. Dismissing concerns about inflation resulting from the massive increase in the money supply since 2008, Blinder (2010) says not to worry: "To create the fearsome inflation rates envisioned by the more extreme critics, the Fed would have to be incredibly incompetent, which it is not." And yet, central banking, like all forms of government intervention, suffers from what Hayek called the "pretense of knowledge" (Hayek 1989; Caballero 2010). Notes Reis (2013, p. 20), referring specifically to central banking, "[w]hile many policymakers may be benevolent in their intentions, the history of government includes many mistakes and blunders because of incompetence, shortsightedness, hubris, false models, or bad ideas." Indeed, from an Austrian perspective, the Fed's actions since 2008 have been extremely harmful. Contrary to a popular storyline that the Fed and other central banks prevented financial catastrophe, and made the Great Recession less harmful than it otherwise would have been, the Fed's actions have made a bad situation much worse, by perpetuating the very structural imbalances that brought about the Recession in the first place. The problem with the US economy after 2008 was not a lack of effective aggregate demand, as Keynesian economists would say, but a structural imbalance brought about by two decades of cheap credit. And needless to say, the issue here is not Chairman Bernanke himself, but the impossible situation he faces as Fed chair.

Fed Independence

In 2009 a group of economists circulated a petition in support of Federal Reserve "independence," and against Congressional attempts to exercise increased oversight and governance. The idea that the Fed must be independent of any external constraint and must not be audited, governed, or supervised in a serious manner has become a shibboleth of contemporary macroeconomic policy. But it is profoundly mistaken, for two reasons.

First, proponents of Fed independence focus exclusively on monetary policy, as if the Fed's critics simply want to know how the Federal Funds Rate is set. But the Fed conducts not only monetary policy but fiscal policy as well, increasingly so since 2008. If the Fed can buy and hold any assets it likes,[7] if it works hand-in-hand with the White House and the Treasury to coordinate bailouts in the hundreds of billions of dollars, if it facilitates trillion-dollar deficits by buying all the treasuries the federal government wants to sell, it seems reasonable to have a bit more oversight (The Fed's role in bank supervision is also relevant; even the Fed's

[7] While the Fed primarily holds US Treasuries, it is legally permitted under Section 13(3) of the Federal Reserve Act to hold other assets under "unusual and exigent circumstances," a provision liberally exploited under the Bernanke Fed. See Johnson (2011) for details.

defenders recognize a need to separate its monetary-policy and bank-supervision roles, which suggests some oversight of the regulatory process.) Second, and more generally, the Fed is a national economic planning agency, and it performs about as well as every national economic planning agency in history. "Independence," in this context, simply means the absence of external constraint. There are no performance incentives and no monitoring or governance. There is no feedback or selection mechanism. There is no outside evaluation. Why would we expect an organization operating in that environment to improve overall economic performance?

Supporters of independence argue that Congressional or other oversight will pressure the Fed to pursue short-term goals (boosting output) at the expense of long-term performance (controlling inflation) (e.g., Kashyap and Mishkin 2009). But these arguments eschew comparative institutional analysis (Coase 1964; Demsetz 1969). Of course, there are potential hazards associated with Congressional oversight, but also potential benefits of stronger governance and greater transparency. For instance, exposing monetary policy (and the Fed's other controversial actions, e.g. bailing out foreign central banks) to Congressional scrutiny could put pressure on the Fed to service short-term political goals, but under the present system, the Fed can make trillion-dollar bets without any monitoring and feedback system. Unfortunately, cost-benefit analysis is usually forgotten where the Fed is concerned. Consider Thoma's (2009) defense of independence: "The hope is that an independent Fed can overcome the temptation to use monetary policy to influence elections, and also overcome the temptation to monetize the debt, and that it will do what's best for the economy in the long-run rather than adopting the policy that maximizes the chances of politicians being reelected."

This naive wish is simply that, a hope. Where is the argument or evidence that a wholly unaccountable Fed would, in fact, "do what's best for the economy in the long-run"? What are the Fed officials' incentives to do that? What monitoring and governance mechanisms assure that Fed officials will pursue the public interest? What if they have private interests? Maybe they are influenced by ideology. Suppose they make systematic errors. Maybe they are unduly influenced by the banking industry or other special-interest groups. To make a case for independence, it is not enough to demonstrate the potential hazards of political oversight. You have to show that these hazards exceed the hazards of an unaccountable, unrestricted, ungoverned central bank. A naive faith in the wisdom of central bankers to do what's right just isn't good enough.

Do We Need a Central Bank?

Without a central bank, how can a monetary system work? Don't we need a central bank to create bank reserves? Isn't the Fed necessary to maintain stable prices? Don't we need the government to create and regulate money?

In one of the first scientific analyses of the nature and origin of money, Menger (1892) explains how money—a generally accepted medium of exchange—emerges from the trading patterns of individual market participants.[8] Menger challenged the then-dominant "state theory of money," which held that money must be created, *ex nihilo,* by benevolent central planners. Rather, as decades of research in monetary theory and history have shown, there is no need whatsoever for government participation in the monetary and financial system. Money—whether a physical commodity like gold or silver or their paper equivalents—is essentially a commodity that is selected and "governed," so to speak, by the choices of entrepreneurs and consumers in the market. This is as true today, in an era of paper currencies and electronic payments, as it was under the international gold standard. There is no need for a government agency to increase or decrease the supply of money. Indeed, according to the Austrian school, government attempts to control the money supply create distortions in the economy by interfering with relative prices and warping the capital structure, encouraging the bad investments that manifest themselves over the course of the business cycle. Rather, the value of money should be determined on the market, as part of the normal, day-to-day process of exchanges between money and goods and services.

How, then, is price stability to be maintained? The answer is that the economy doesn't need "stable" prices, just market prices. Some of the proposals discussed at this hearing suggest removing the Federal Reserve Act's language about "maximum employment," keeping just the part about "stable prices." Eliminating the dual mandate would be a step in the right direction, as it would reduce the Fed's incentive to increase the money supply when unemployment rates rise beyond some arbitrary threshold. But the requirement of price stability should be removed as well. The idea that a central bank is need to maintain a stable or modestly rising price level—to prevent high levels of inflation, in other words—is based on a misunderstanding of inflation. In a growing economy, with a stable or slightly growing money supply (as under a commodity standard), prices will tend to fall, as in the US during the nineteenth century, when the US experienced dramatic increases in production and living standards. Price levels rise because the real economy is shrinking or—as is almost universally the case in practice—because the money supply is increasing faster than the increase in real production. Inflation is not caused by an "overheated" economy that the government needs to somehow cool off. Inflation, as Milton Friedman famously put it, is everywhere and always a monetary phenomenon. Central banks don't fight inflation; they create it.

A related claim is that a government agency is needed to control interest rates, keeping them sufficiently low to generate economic growth. However, interest rates are prices, prices that clear the markets between suppliers and demanders of loans. Increasing the money supply in an attempt to lower interest rates can indeed give the economy a short-term "boost," but at the cost of channeling resources into areas—housing, for instance—where the market does not want them to go. Driving

[8] See also Klein and Selgin (2000).

down interest rates below their market-clearing rates does not create real economic growth, but only distortions, by making it more difficult for entrepreneurs to anticipate the future goods and services that consumers will want to purchase, and thus be profitable. In Mises's (1949, pp. 549, 553) terminology, credit expansion that lowers interest rates, increases price levels, and alters relative price ratios "falsifies economic calculation." Credit expansion shifts wealth from savers to borrowers (and, in the case of mortgage lending, from renters to owners), from less time-sensitive investment projects to more time-sensitive ones; and from those who are last to receive the new money to those who are first in line. In short, activist monetary policy always, whether intentionally or not, picks winners and losers, increases uncertainty, and destroys real wealth.

What about the need for a lender of last resort? Even proponents of central banking recognize that the lender-of-last-resort function encourages what economists call "moral hazard": banks take on more risk than they would if they had to bear the full consequences of their portfolio decisions. The presence of a central bank, armed with an infinite supply of funds, ready to supply liquidity to any bank in financial distress, discourages prudent behavior.[9] Diamond and Rajan (2009) link the Financial Crisis to "the actions of the Federal Reserve earlier in the decade, not only in convincing the market that interest rates would remain low for a sustained period following the dot-com bust because of its fears of deflation, but also in promising to intervene to pick up the pieces in case of an asset price collapse—the so-called Greenspan put."

More generally, a dynamic, wealth-creating market economy relies on the power of competition—what Joseph Schumpeter famously called "creative destruction"—to sort between high-valued and low-valued use of resources, including the displacement of less efficient firms by their more efficient rivals. The banking industry is no different. If a bank, like any other business, cannot profitably produce goods and services that its customers demand, it should be liquidated and its assets made available to entrepreneurs who can do a better job. Bailouts, subsidies, and other forms of special privilege for particular entrepreneurs hinder the market process of directing productive resources to their highest valued uses. Besides explicit bailouts, implicit subsidies from "too-big-to-fail" guarantees stymie the entrepreneurial selection process, not only by protecting unsuccessful entrepreneurs and entrepreneurial ventures, but also by rewarding lobbying and other forms of rent-seeking, directing investment toward subsidized activities (at the expense of consumer preferences), and discouraging entry by nascent entrepreneurs who lack political connections.

These principles apply fully to the banking industry. Of course, financial firms are closely linked through complex transactions and instruments such as derivatives and other contracts. The failure of a particular financial institution imposes costs on

[9] Indeed, programs such as the Troubled Assets Relief Program are forms of corporate welfare that redistribute resources from the more prudent financial institutions—for example, banks that stayed out of the market for mortgage-backed securities—to the more reckless ones.

various counterparties, including other financial institutions. But the production of virtually every good and service in a mature industrial economy is characterized by a complex, interlocking web of transactions, mutual obligations, and contractual relationships. Banking is not unique in this regard. Yet we do not worry about contagion effects sweeping the computer hardware or retail clothing or dairy industry should one or two leading firms go bankrupt. Moreover, the extent to which parties expose themselves to counterparty risks, in banking or any other industry, depends on the protections offered by the regulatory system. If a computer hardware company knows that it is Too Big to Fail, or that a Computer Industry Resource Provider of Last Resort stands ready to supply labor, machines, and raw materials in case of trouble, that company will engage in all kinds of risky behaviors it would have otherwise avoided.

Alternatives to Central Banking

Exactly how a market-based monetary system would function, what form it would take, and how an economy can transition from government-controlled to market-based money, are interesting and important subjects that have stimulated large and growing academic and practitioner literatures (Friedman 1960; Rothbard 1962, 1994; Selgin and White 1994). Most proponents of market-based money favor a commodity standard, though competing paper currencies have been suggested as well (Hayek 1974). All these schemes have the basic advantage of taking the value of money out of the hands of government planners, allowing it to be determined by supply and demand, as with every other good and service in a market economy.

Another advantage of a commodity standard is that it prevents allowing a central bank to monetize the government's debt by purchasing government bonds (and reducing debt payments by generating price inflation). In the interest of transparency, it is far better to require that federal government spending be financed through taxation or borrowing from the public. Obviously, this would constrain the federal government's ability to stimulate the economy with increased spending during times of recession, which is exactly the point—a commodity standard imposes fiscal discipline. Such discipline would rescue entrepreneurs from the unpredictable and often arbitrary whims of monetary planners, freeing them to invest, innovate, and create economic growth.

Conclusion

There is an old joke about a central bank official picking up a pizza. (Perhaps it's Chairman Bernanke, on his way home after a long day of quantitative easing.) The clerk asks, "Do you want it cut in six slices, or eight?" The central banker responds: "I'm feeling extra hungry today; better make it eight."

Dividing the stock of goods and services by a larger quantity of money does not create wealth. One of the most important lessons of economic theory is that the only way for a society to generate economic growth is to consume less than it produces. The surplus (real savings) can be invested in the production of capital goods (and innovation) that allows for greater production in the future. Conversely, one of the oldest economic fallacies is the idea that the economy sometimes gets "stuck" with low production and high unemployment due to a shortage of money, and that the way to get it unstuck is to print more money to increase "total spending"—to consume more than the economy produces. Some 60 years ago Mises (1953, p. 423) ridiculed this as the "spurious grocer philosophy" (the merchant's view that his products aren't selling because buyers lack enough currency), associating it with Keynes. Austrian economics implies, instead, that Austrians hold, instead, that a monetary system controlled by an all-powerful central bank is inherently destabilizing and harmful to economic growth. The mistakes made by the Fed before and after 2008 are not isolated incidents, mistakes that can be corrected by making minor changes to the Fed's charter, structure, or independence. They are the predictable result of giving control of the monetary and financial system to a government agency. The best option is to replace the central bank and let the market be in charge of money.

The position advocated here is often dismissed as radical or extreme, a kind of "market fundamentalism" (to use a derogatory term). But it is a reasonable, pragmatic, realistic view. Economics and management scholarship teach that monopoly providers are inefficient and ineffective, and a government monopoly on money is no different. Markets are not perfect, but neither are Fed chairs. It would be far better to make the supply of money independent of political interference by returning monetary policy to the market.

References

Agarwal R, Barney JB, Foss N, Klein PG (2009) Heterogeneous resources and the financial crisis: implications of strategic management theory. Strat Organ 7(4):467–484

Ahamed L (2009) Lords of finance: the bankers who broke the world. Penguin, New York, NY

Ball LM (2012) Ben Bernanke and the zero bound. NBER working paper no. 17836

Bernanke BS (2013a) A century of U.S. central banking: goals, frameworks, accountability. Presentation at the first 100 years of the Federal Reserve: the policy record, lessons learned, and prospects for the future. NBER, Cambridge, MA

Bernanke BS (2013b) The Federal Reserve and the financial crisis. Princeton University Press, Princeton, NJ

Blinder AS (1998) Central banking in theory and practice. MIT Press, Cambridge, MA

Blinder AS (2010) In defense of Ben Bernanke. Wall Street Journal, 13 November 2010

Blinder AS (2013) After the music stopped: the financial crisis, the response, and the work ahead. Penguin, New York, NY

Caballero RJ (2010) Macroeconomics after the crisis: time to deal with the pretense-of-knowledge syndrome. J Econ Perspect 24:85–102

Calvo G (2013) Puzzling over the anatomy of crises: liquidity and the veil of Finance. Working Paper, Department of Economics, Columbia University
Coase RH (1964) The regulated industries: discussion. Am Econ Rev 54:194–197
Demsetz H (1969) Information and efficiency: another viewpoint. J Law Econ 12:1–22
Diamond DW, Rajan RG (2009) Illiquidity and interest rate policy. NBER working paper no. 15197
Downs A (1966) Bureaucratic structure and decision-making. Rand Corporation, Santa Monica, CA
Foss NJ, Klein PG (2013) Organizational governance. In: Wittek R, Snijders T, Nee V (eds) Handbook of rational choice social research. Stanford University Press, Redwood City, CA, pp 513–555
Friedman M (1960) A program for monetary stability. Fordham University Press, New York, NY
Friedman M, Schwartz A (1963) A monetary history of the United States, 1867–1960. Princeton University Press, Princeton, NJ
Garrison RW (1996) Central banking, free banking, and financial crises. Rev Austrian Econ 9:109–127
Garrison RW (2000) Time and money: the macroeconomics of capital structure. Routledge, London
Greider W (1989) Secrets of the temple: how the Federal Reserve runs the country. Simon & Schuster, New York, NY
Griffin GE (1994) The creature from Jekyll Island: a second look at the Federal Reserve. American Opinion Publishing, Appleton, WI
Hayek FA (1931) Prices and production. Routledge, London
Hayek FA (1937) Economics and knowledge. Economica 4(13):33–54
Hayek FA (1945) The use of knowledge in society. Am Econ Rev 35(4):519–530
Hayek FA (1974) Denationalization of money. Institute of Economic Affairs, London
Hayek FA (1989) The pretense of knowledge. Am Econ Rev 79 (Suppl 3–7)
Jarocinski M, Smets FR (2008) House prices and the stance of monetary policy. Federal Reserve Bank of St. Louis Review (July) 90(4): 339–365
Johnson CA (2011) Exigent and unusual circumstances: The Federal Reserve and the U.S. financial crisis. In: Alexander K, Moloney N (eds) Law reform and financial markets. Edward Elgar, Aldershot
Kashyap AK, Mishkin FS (2009) The Fed is already transparent. Wall Street Journal, 9 November 2009
Klein PG, Mahoney JT, McGahan AM, Pitelis CN (2013) Capabilities and strategic entrepreneurship in public organizations. Strat Entrepreneur J 7(1):70–91
Klein PG, Selgin GA (2000) Menger's theory of money: some experimental evidence. In: Smithin J (ed) What is money? Routledge, London, pp 217–234
Liebowitz SJ (2009) Anatomy of a train wreck: causes of the mortgage meltdown. In: Randall GH, Benjamin P (eds) Housing America: building out of a crisis. Independent Institute, Oakland, CA
Mankiw NG (2008) If I were a member of congress. Greg Mankiw's Blog, 26 September 2008
Meltzer AH (2003) A history of the Federal Reserve, vol 1: 1913–1951. University of Chicago Press, Chicago, IL
Meltzer AH (2010) A history of the Federal Reserve, vol 2: 1970–1986. University of Chicago Press, Chicago, IL
Menger C (1892) On the origin of money. Econ J 2:239–255
Mises Lv (1912[1953]) The theory of money and credit. Yale University Press, New Haven, CT
Mises Lv (1920[1935]) Economic calculation in the socialist commonwealth. In: Hayek FA (ed) Collectivist economic planning. Routledge, London
Mises Lv (1949) Human action: a treatise on economics. Yale University Press, New Haven, CT
Niskanen WA (1971) Bureaucracy in representative government. Aldine-Atherton, New York, NY

Norberg J (2009) Financial Fiasco: how America's infatuation with home ownership and easy money created the economic crisis. Cato Institute, Washington, DC
Ohanian LE (2010) The economic crisis from a neoclassical perspective. J Econ Perspect 24:45–66
Oppers SE (2002) The Austrian theory of business cycles: old lessons for modern economic policy? IMF working paper WP02/02
Paul R (2009) End the Fed. Grand Central Publishing, New York, NY
Reis R (2013) Central bank design. NBER working paper no 19187
Romer CD (2011) Dear Ben: it's time for your Volcker moment. New York Times, 29 October 2011
Rothbard MN (1963) America's great depression. D. Van Nostrand, Princeton, NJ
Rothbard MN (1994) The case against the Fed. Ludwig von Mises Institute, Auburn, AL
Rothbard MN (1999) Origins of the Federal Reserve. Q J Austrian Econ 2:3–51
Rothbard MN (1962) The case for a 100 per cent gold dollar. In: Leland Y (ed) In search of a monetary constitution. Harvard University Press, Cambridge, MA, pp 94–136
Salerno JT (2012) A reformulation of Austrian business cycle theory in light of the financial crisis. Q J Aust Econ 15:3–44
Selgin GA, White LH (1994) How would the invisible hand handle money? J Econ Lit 32:1718–1749
Selgin G, Lastrapes WD, White LH (2012) Has the Fed been a failure? J Macroecon 34:569–596
Taylor JB (1993) Discretion versus policy rules in practice. Carnegie-Rochester Conference Series on Public Policy 39:195–214
Thoma M (2009) Why the Federal Reserve needs to be independent. CBS Moneywatch, 12 November 2009
White LH (2005) The Federal Reserve System's influence on research in monetary economics. Econ J Watch 2:325–354
White WR (2006) Is price stability enough? BIS working paper no. 205
Woods TE (2009) Meltdown: a free-market look at why the stock market collapsed, the economy tanked, and government bailouts will make things worse. Regnery, Chicago, IL
Woodward B (2000) Maestro: Greenspan's fed and the American boom. Simon & Schuster, New York

A Stocktaking and Plan for a Fed-less Future

David Howden and Joseph T. Salerno

The essays contained in this volume have portrayed the Federal Reserve in a less than favorable light. In particular, they have pointed to both deficiencies in the theory guiding the Fed's operations and the venerated institution's historical record.

These are not criticisms to be taken lightly. Granted a legal monopoly over the United States' money supply, the Fed is an institution with far reaching powers that is secured in its position by an act of Congress. This legal privilege bestowed by Congress has expansive effects. Money is the common denominator of all monetary transactions. When something goes wrong with money, the error is not restricted to its area of initial impact. It reverberates throughout the whole monetary economy, and in this way a single error may propagate a general cluster of errors.

That errors happen in the market economy is not in dispute. In normal market processes, errors are exposed through losses at firms. These losses should not be shunned or swept under the table, but embraced as important signals that tell entrepreneurs when an action has been either unwanted by consumers or unsuccessfully implemented. These losses also open the doors to competitors to enter the market and better satisfy consumers. In this way, the trial and error method of the market, guided by the signals of profit and loss, continually weeds out unsuccessful or unwanted activities that impede the increase in consumer satisfaction.

Protected from competition and assured that its product will be accepted due to legal tender laws, the Federal Reserve stands outside of any system of checks and balances. This fact must already strike the reader as strange, as goods which share a similar monopoly status, such as public utilities and national defense, are subject to political checks and balances. The Fed operates as more or less an independent entity, at least de jure, and most economists vehemently argue that this is necessary

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to assure an unbiased and proper production and control of the nation's money supply.

What this volume has demonstrated is not only that there is a myth of independence, but that even if the Fed were subject to some of the more typical political checks and balances, the results would not be much better. In fact, the problem is not the institutional structure of the Fed or its exact relationship to the government. The problem is in the institution itself, and broadly applies to all central banks.

Take a step back and review the specifics of how the Fed is supposed to operate. Its mandate gives it two roles. On the one hand it must maintain price stability, which incidentally is now de facto defined as mild price inflation of around 2 % per year. On the other hand it is entrusted to enact monetary policy so as to engender full employment in the economy, or at least soften the landings of any business cycle. By creating an artificially low interest rate environment to fulfill this latter goal, the Fed not only promotes inflation but also hinders employment opportunities as it promotes destabilizing business cycles.

There is another important conflict and this is inherent in the method through which the Fed was granted its monopoly powers. These were bestowed by an act of Congress, and because misusing the Fed's tools for its own purposes is tempting to elected officials, political independence is staunchly guarded. Yet, what Congress giveth it can taketh away. As this book has made clear, the independence of the Fed is a mere myth, and there is substantial overlap between its operations ostensibly aimed at aiding an ailing economy and those pursued to covertly aid the federal government's finances.

Furthermore, one would think that the institution entrusted to control the nation's money supply would be staffed by employees who actually have dealt with money, or know something about the banking business. While this was indeed true in the Fed's early years, over time a shift has occurred which has increased the number of academics and politically-connected individuals in important positions within the organization. This is perhaps not problematic in itself (except for possible political conflicts of interest) but it has created a lasting and negative effect on the economics profession.

The Federal Reserve System is today a major sponsor of monetary economics research undertaken by American economists. While the involvement of Federal Reserve economists in monetary research could be attributed to self-selection, it could also be that the Fed biases monetary research by sponsoring its own researchers at the expense of competitors. In a recent assessment of the accepted papers in the *Journal of Monetary Economics*, over 80 % of authors had either a current or past affiliation with the Federal Reserve System, and 9 of its 11 editorial board members had a Fed affiliation (White 2005). This over-representation is troubling.

Perhaps the most troubling aspect of the current state of monetary economics, and this is readily apparent in almost all Fed-sponsored research, is an implicit belief that economic cycles are a natural occurrence. Whether they are caused by investors losing their nerve, or consumers not generating sufficient aggregate demand, as in the variety of Keynesian-oriented business cycle theories, the result

of technology shocks in real business cycle models or the aftermath of debt-fueled binges in many Post-Keynesian depictions, one stylized fact is clear: the crisis' origin is inherent in the market process and the Fed's proper job is to clean up the aftermath of these instabilities.

There is a radically different way of looking at the problem of the bust, and it can be distilled into a simple epigram. One of Friedrich Hayek's tips for aspiring economists was that "before we can explain why people commit mistakes, we must first explain why they should ever be right" (Hayek 1937: 33). In this way, instead of accepting that a mistake has been made and rectifying it, the economist should first understand under what conditions that mistake would never have been made in the first place.

Although difficult to conceptualize, a world without money is simple to model and draw conclusions from. Individuals produce and consume, and the only way to consume more is to produce more. There is a catch, however. The only way to produce more is to work more productively. Any gain in labor productivity involves capital investment given the current level of technology. In the moneyless world, investment is straightforward—it involves stockpiling some savings, and since there is no money to save it must be made in the fruits of our labor: produced goods.

As the worker stops consuming some of his produce and saves it for later consumption, he is freed somewhat from his hand-to-mouth existence. Instead of dedicating all his time to producing for sustenance, he can now devote his efforts to searching for productivity enhancing methods and tools. His prior savings will sustain him while he shifts his labor away from producing goods to sustain him and replenish his energy, to those other efforts that will not pay off until some later date.

Thus, in the moneyless economy, the primitive economic system is tightly controlled by savings. Workers produce goods, a part of which must be stockpiled to consume later if one wants to pursue investment-type activities. Investment will only occur if there is a prior supply of savings, and the length of investment projects (i.e., the amount of time the individual will devote to searching for new production processes or goods), will be determined by the availability of these prior savings.

Enter the money economy. Provided that money is a good like any other, nothing much changes. The key is in defining what "a good like any other" is. Scarcity should be an attribute that springs to mind, as would costliness to produce. Commodity money, or money substitutes that are fully-backed by a commodity, fit the bill. They are scarce in the sense that they cannot be reproduced at will, and even if they could be reproduced at will they would not be because of the cost of doing so (e.g., mining, minting or distribution costs). The moneyed world featuring a strict commodity money (or a perfect substitute for it) is not very dissimilar from the moneyless world. (Thought it should be clear that it would be a much more developed world, due to the increased exchange possibilities and accompanying division of labor and specialization that the generally accepted medium of exchange provides.)

Today's world is not like either of the aforementioned ones. It survives with fiat money—one created by act of government or its central bank. It is not scarce, or at least its scarcity is not determined by its cost of production. Unhinged from any commodity, money today mostly exists as a series of ones and zeros in a computer,

and its supply can be seamlessly controlled by the central bank at almost no marginal cost.

While control over a commodity and the ability to create it at will may be seen in a positive light, it is anything but. Hayek described the result of fiat money as a "loose joint" in the economy (1941: 408).

Money serves as a joint in the connection between savings and investment activities. When a commodity serves as money, or when a perfect money substitute is backed fully by a commodity, there is no "looseness" to it. Savings and investment are coordinated as any dollar of savings will result in a dollar of investment—no more and no less.

The Federal Reserve was not created to oversee and control a commodity-backed money, but rather to provide an elastic currency. This elasticity was provided in two ways. First, by raising or lowering the discount rate the Fed is able to decrease or increase the money supply. Alternatively, the Fed controls the supply of bank created money through its setting of the reserve ratio. By reducing the reserve ratio the Fed allows banks to issue money substitutes in the form of deposits in excess of the amount of currency deposited. The Federal Reserve since its inception has been instrumental in permitting the banking establishment to operate with fractional reserves.

The original impetus for the Fed's control over this flexible money supply was, besides pursuing its operating mandate, to more generally cushion the pain of economic recessions. As this volume should make clear, the Fed itself is the instigator of these cycles, and the "elastic money supply" it now controls was also responsible for recessions and panics before its creation.

One way to understand how the Fed is responsible for business cycles over the last 100 years is through the Austrian theory of the business cycle. This theory holds that the fundamental cause of economic instability is the central bank's expansion of money and credit, which severs the link between real savings and monetary savings (Hayek's loose joint).

The problem stems from diverting money from what consumers actually want. Consider why money exists, and why it is held. Money emerges and evolves as a commonly accepted medium of exchange. The reason money is held, however, is ultimately attributable to uncertainty (Mises 1949: 249). Unsure of exactly where, when or to what extent future expenses will arise and incomes accrue, individuals hold on to a sum of money as a type of insurance hedge. Any money held by the individual serves not as an investment, but rather as an immediately available and perfectly "liquid" asset to protect against these uncertain future events.

Deposits in the fractional-reserve banking system are *not* treated in this manner, contrary to the intent of depositors. Deposits are used as funding for loan activities by the bank. The result is that the fractional-reserve bank lends money which was never meant to be used for any purpose other than as an instantaneously available sum of purchasing power to meet contingent future events. The loose joint of money becomes apparent as a quantity of money finances more investments than would otherwise be the case when deposits are treated, in accord with their owners' intentions, as warehoused cash balances. The result is a larger source of funding

than would otherwise be available, and a corresponding reduction in interest rates below what would otherwise be the case.

According to the Austrian theory, the business cycle is propagated through three channels. Overconsumption occurs during the boom because of the falsification and inflation-induced increase of income and financial wealth coupled with the corresponding "wealth effect" on consumption (Mises 1949: 546–547; Salerno 2012: 16–20). Malinvestment occurs as the temporal ordering of investment is altered. Lower interest rates entice investment into longer-dated investment projects, at the expense of shorter-dated projects (Mises 1912, 1949; Hayek 1935). Finally, as banks are given access to a funding source (demand deposits) that would otherwise not be available in the absence of fractional-reserve banking, the financial sector of the economy grows unsustainably and disproportionally to the real productive sector (Howden 2010).

Each of these results is evident in recessions caused by monetary disturbances. Notably, this includes almost all recessions as by definition the initial disruption must be economy-wide for a general downturn to occur. Technology shocks, such as in real business cycles, or the loss of investor nerve in most Keynesian renditions, can only affect specific sectors within the economy. Only a disturbance to money has the ability to systematically disrupt consumption and investment plans and set in motion a general recession. (Wars or famines may also be sufficiently large so as to disturb the broader economy, though these are probably best left to "providence" theories of the business cycle.)

The Fed was originally created with the admirable goal of preventing or mitigating financial panics and resulting recessions. What was largely missed by the drafters of the Federal Reserve Act was that the recessions that plagued the United States over the preceding decades were primarily caused by the banking practice of holding only fractional reserves against deposits. The Free Banking Era from 1837 to 1864 bred generally favorable economic conditions and the private banking system developed innovative methods and products to deal with banking disturbances. Unfortunately, the legal setting of the Free Banking Era fell short of obliging banks to abide by standard contract law, and the result was a system that endogenously bred the very disturbances that bankers and financiers would diligently attempt to combat for decades.

The fact that banks were permitted to fund their operations through fractional reserves left them open to destabilizing panics of their own making. As recessions set in, depositors made periodic runs on banks that would be later known as the widespread panics of the times. Panics led to financial problems throughout nineteenth century America, principally in 1837, 1857, 1873, 1884 and 1893. By the time the Panic of 1907 occurred, depositors, bankers and legislators were already searching for a solution that would end once and for all the banking disturbances that were becoming more frequent and severe (Bagus and Howden 2012). The result was the creation of the Federal Reserve System in 1914.

The creation of the Federal Reserve, however, is akin to a doctor misdiagnosing an ailment and prescribing a medicine that acts to worsen the original disease. The cause of banking crises in the nineteenth century was not the lack of a central bank,

but rather the ability of banks to finance their lending operations with fractional reserves. The central bank was a short-term solution to paper over the losses created by banking panics, but at the same time increased the extent to which fractional-reserve banking could be practiced while also increasing the associated moral hazard and risk-taking in the economy. In a recent review of the Fed's first 100 years of operations, Selgin et al. (2012: 570) conclude that the Fed's history can be characterized by "more rather than fewer symptoms of monetary and macroeconomic instability." In short, it has been a failure.

If the Fed was the wrong prescription to a misdiagnosed problem, and has been an utter failure at achieving its stated goals, where do we go from here?

There are two potential paths forward, each having its own merits and demerits.

Option one involves abolishing the practice of fractional-reserve banking thus making banks subject to holding full reserves.

The first change needed to get the banking system to a state of 100 % reserves is to cancel out the government bonds it holds. The government bonds held by the Fed amount to an accounting fiction. The Treasury pays interest to the Fed for these bonds, but the Fed remits this payment back to the Treasury at its year-end (after paying for its operating expenses). Thus, the government bonds held by the Fed can be cancelled without any disturbance to the economy. The Fed's gold stock can be revalued from its historical price of $42.22/oz. and paid to the banks in exchange for retiring the monetary base. Since the monetary base includes almost all of the Fed's liabilities, the distribution of its revalued gold will eliminate its balance sheet, and with it, the central banking institution itself.

An alternative path would be to remove legal tender laws and the monopoly that the Fed currently has on money production within the United States. Such an option would expose the Fed to competitive forces, similar to Hayek's (1974) plan for "choice in currency." In such a way, individuals would be free to use alternative currencies, thus exposing the Federal Reserve to a competitive check.

Viewed individually, each option is a necessary but not sufficient condition for monetary stability. Option one would rectify the business cycles caused by fractional-reserve banking, though at the risk of political instability by a central bank still nominally possessing a government-mandated monopoly of the supply of dollars. The second option returns the U.S. banking system to its Free Banking Era roots, an alternative which we have seen not only bred instability through its use of fractional reserves, but which also created the incentives to install the Federal Reserve System as a market "stabilizing" central bank.

Lasting stability can only be achieved by combining both options. Banks must be allowed to compete against one another in money production, thus providing a competitive check on each other. Simultaneously, these banks must be obliged to follow the laws of other deposit-taking institutions and hold 100 % reserves to back any deposits created. Anything less than this complete proposal will result in a return, whether sooner or later, to the malaise in monetary affairs we are accustomed to today.

As we reflect on this 100th anniversary of the Federal Reserve System, it is useful and essential to consider its original mission and operating mandates. Price

stability has been poorly achieved by the Fed over the past 100 years, with more inflation than at any other period of human history. The business cycle has not been eliminated; indeed, today we find ourselves in the midst of the slowest recovery of the post-War era. In these two regards the Fed has been a failure.

The Fed has been, however, a complete success in some respects. By fostering a demand for government bonds, it has allowed the federal government to spend beyond its means. By serving as a lender of last resort, it has created an attitude of risk-taking among financial institutions never before seen. By stamping out the competitors in the money production business that existed prior to its creation 100 years ago, such as private note-issuing banks, it has come to be seen as the only institution capable of producing money. Finally, in its role of lender of last resort, the Fed has been credited with saving many financial institutions that would otherwise have succumbed to market forces because of their own ill-conceived practices. Never mind that the Fed itself promotes such unsustainable banking activities—it has created an aura among the public that it is the great savior of the financial sector, and in this way has become a venerated institution among even proclaimed defenders of free markets in other walks of life.

Given the dubious nature of these successes, it is high time the Fed stepped aside and let a more suitable institution take control. One of the prime benefits of the market is its ability to integrate and simplify distinct, disparate and dispersed pieces of information. Money prices permeate the market economy, and no other good plays a more central role than money. Far from being unable to efficiently supply money, it is exactly this type of good that the market excels at producing. Let's end the Fed and give the market a chance.

References

Bagus P, Howden D (2012) Still unanswered quibbles with fractional reserve free banking. Rev Austrian Econ 25(2):159–171

Hayek FA (1935[1967]) Prices and production, 2nd edn. A. M. Kelley, New York, NY

Hayek FA (1941) The pure theory of capital. University of Chicago Press, Chicago, IL

Hayek FA (1974) Choice in currency: a way to stop inflation. Institute of Economic Affairs, London

Hayek FA (1937) Economics and knowledge. Economica 4:33–54

Howden D (2010) Knowledge shifts and the business cycle: when boom turns to bust. Rev Austrian Econ 23(2):165–182

von Mises L (1912[1953]) The theory of money and credit. Yale University Press, New Haven, CT

von Mises L (1949[1998]) Human action: a treatise on economics. Ludwig von Mises Institute, Auburn, AL

Salerno JT (2012) A reformulation of austrian business cycle theory in light of the financial crisis. Q J Austrian Econ 15(1):3–44

Selgin G, Lastrapes WD, White WH (2012) Has the Fed been a failure? J Macroecon 34(3):569–596

White LH (2005) The Federal Reserve System's influence on research in monetary economics. Econ J Watch 2(2):325–354