

Testimony of Rep. Kevin Brady, Vice Chairman of the Joint Economic Committee
Before the Domestic Monetary Policy and Technology Subcommittee
of the Committee on Financial Services
10 a.m. Tuesday, May 8, 2012

Thank you, Chairman Paul, Ranking Member Clay, and Members of the Subcommittee.

Before discussing the *Sound Dollar Act*, I would like to acknowledge the work that Dr. Paul has done on this subcommittee and as a long-serving former Member of the Joint Economic Committee to bring sound money to the forefront of the public debate. Inflation has been called many things—a hidden tax, a government-sponsored reduction in workers’ paychecks, or “theft” as Dr. Paul often says. The American people understand the absurdity of a monetary policy that is designed to debase our currency.

We agree on three key points:

- Preserving the value of the dollar is essential to economic growth and prosperity;
- The federal government must not be allowed to monetize its debts; and
- Our financial system should serve the interests of all Americans, not just the interests of Washington and Wall Street.

Again, I would like to thank you, Mr. Chairman, for your steadfast commitment to bringing these issues to the forefront of the public debate. Your voice will be missed.

I am pleased to testify on behalf of the *Sound Dollar Act*, H.R.4180, and want to thank the Members of this Subcommittee who have already cosponsored this important legislation: Mr. Jones, Mr. Lucas, Mr. Luetkemeyer, and Mr. Huizenga.

When it comes to the global economy, some have characterized the 1800’s as the British century, the 1900’s as the American century and the current one as China’s century. I reject that prediction.

It is clear though, that to ensure the 21st century is another American century we must renew our commitment to what works well—our free market system—and reform what does not—our inefficient federal government.

Looking to our economic future, our goal should be clear: ensuring that America has the world’s strongest economy throughout the 21st century. To do that, we have to get our monetary policy right and our fiscal policy right so that our free market system can flourish.

A sound dollar is the sure and strong foundation for long-term economic growth. A sound dollar creates certainty and facilitates new business investment and long-term job creation. I believe the focused role of the Federal Reserve should be to protect the purchasing power of the dollar by maintaining long-term price stability.

Are there many other actions that Congress and the President must take to retain America's economic preeminence for the next 100 years? Of course—we must:

- Make our tax system simpler and more internationally competitive by lowering marginal tax rates and eliminating distortions that pick winners and losers;
- Reform important entitlement programs—including Social Security, Medicare, and Medicaid—to make them sustainably solvent so that they can continue to serve those Americans dependent upon them;
- Transform our regulatory system so that we can achieve our common goals—including a clean environment and safe workplaces—in more efficient, balanced, and less destructive ways; and
- Aggressively pursue trade agreements to open foreign markets to sell more American goods and services to the 95 percent of the world's population that lives outside of our borders.

However, these reforms by themselves will be insufficient if the Federal Reserve fails to maintain the purchasing power of the dollar over time. You only need look to the Great Depression of the 1930's and the Great Inflation of the 1970's to see that price deflation and price inflation are twin evils that reduce real output and employment.

Learning from the past and looking to the future, Congress must select the right monetary policy mandate, maintain a Fed independent of political pressure, and hold the Fed accountable for the results.

So let us examine what monetary policy should be going forward.

In 1977, Congress mandated that the Federal Reserve pursue monetary policy “so as to promote effectively the goals of maximum employment, stable prices, and moderate long-term interest rates.”¹ Since inflationary expectations affect long-term interest rates, the goals of stable prices and moderate long-term interest rates are interrelated. This is why the Federal Reserve is described as having a dual mandate for both price stability and full employment.

The employment half of the dual mandate reflects the *Employment Act of 1946*, which required the federal government to pursue economic policies that “promote maximum employment, production, and purchasing power.”² The price stability half of the dual mandate reflects the rising public concerns about price inflation in the 1970's.

Given the experiences of the past forty years and the unprecedented Fed actions of the past four, it is time for Congress and policy-makers to have a thoughtful, constructive debate about the dual mandate and the role of the Fed in our economic future.

¹ *The Federal Reserve Reform Act of 1977*, Pub.L. 95-188, 91 Stat. 1387, enacted November 16, 1977 as modified by the *Full Employment and Balanced Growth Act of 1978*, Pub.L. 95-523, 92 Stat. 1887, enacted October 27, 1978.

² Pub.L. 79-304, ch. 33, Sec. 2, 60 Stat. 23, enacted February 20, 1946.

Nobel Laureate economist Robert Mundell observed: “To achieve a policy outcome, you must use the right policy lever.”

In the Federal Open Market Committee (FOMC) statement of January 25th of this year, Chairman Ben Bernanke and the other members recognized that monetary policy is the right lever to maintain the purchasing power of the dollar by declaring, “The inflation rate over the longer run is primarily determined by monetary policy.”

In contrast, the FOMC acknowledged that monetary policy is the wrong lever to promote job creation by declaring “The maximum level of employment is largely determined by nonmonetary factors.” The FOMC is right on both counts: inflation is influenced by monetary policy and long-term employment is not.

While the dual mandate may be politically appealing, it makes no sense for Congress to charge the Federal Reserve with controlling what it cannot. Except in the very short term, monetary policy cannot boost real output and job creation.

Instead, using monetary policy as a short-term tool to speed growth may actually harm the economy in the long run. As Richard Fisher, President of the Federal Reserve Bank of Dallas, recently warned, the U.S. economy does not need any more “monetary morphine” that temporarily eases pain but does nothing to cure the underlying disease.

His point – and I agree – is that the President and Congress, not the Federal Reserve, can and should control the budget, tax, regulatory, and trade policies that create the business climate which drives sustainable economic growth and job creation.

Our global competitors already recognize this. Since Congress gave a dual mandate to the Fed, governments in many other countries have revised the charters of their central banks to focus either on a single mandate for price stability or a primary mandate for price stability with other goals clearly subordinated. Among the 47 central banks and monetary authorities in major countries surveyed by the Bank for International Settlements, only the Bank of Canada and the Federal Reserve have organizational laws that give other goals equal weight to price stability.³

Getting the mandate right is only half the job. How the Federal Reserve pursues its mandate is equally important.

According to Stanford University economist John Taylor, the key choice is between a discretionary regime and a rules-based regime. A discretionary regime generates uncertainty because it relies upon the subjective assessments of central bank policymakers. By contrast, a rules-based regime reduces uncertainty because it follows well-established rules, based on observable economic data, with a clear focus on a long-term goal.

³Ortiz, Guillermo and Yam, Joseph (Chairs of the Central Bank Governance Group), *Issues in the Governance of Central Banks*, Bank of International Settlements (May 2009).

Inflation-targeting is a rules-based regime under which a central bank establishes a target inflation rate expressed in terms of a broad-based price index of goods and services. A central bank tightens monetary policy when the actual inflation rate rises above its target and loosens monetary policy when the actual inflation rate falls below its target.

The last four decades of U.S. monetary policy demonstrate the advantages of a rules-based regime over a discretionary one. During the 1970's, the Federal Reserve had “go-stop” policies, in which monetary policy quickly swung from ease to tightness and back again. This incoherence produced a highly volatile real economy and a rising inflation rate.

A sea change occurred with the appointment of Paul Volcker as Fed Chairman in 1979. Under Volcker the FOMC aggressively tackled price inflation by controlling the growth of the money supply. This successful strategy was a significant step forward toward a rules-based monetary policy. While the economy did suffer back-to-back recessions,⁴ inflation dropped from 13.3 percent in 1979, the year Volcker became Chairman, to 3.8 percent in 1982.⁵

Between 1983 and 2000—the period known as the Great Moderation—the Federal Reserve continued to pursue price stability through an increasingly rules-based monetary policy, effectively ignoring the second half of its dual mandate. Two long economic booms resulted, with very low inflation. The booms were only interrupted by a short, shallow recession related to the first Persian Gulf War.

Unfortunately, between 2002 and 2005, the FOMC deviated from this successful rules-based regime, moving to a discretionary regime by keeping interest rates too low for too long. This loose monetary policy contributed to the inflation of an unsustainable housing bubble that eventually triggered a global financial crisis.

Since the height of the financial crisis in the fall of 2008, Washington has increasingly become dependent on the Federal Reserve to take unusual, interventionist actions—such as tripling the size of its balance sheet under QE1 and QE2 by purchasing the debt and residential mortgage-backed securities (RMBS) issued by Fannie Mae and Freddie Mac as well as Treasuries. Indeed, the FOMC justified these extraordinary actions by invoking—for the first time ever in late 2008—the employment half of the Federal Reserve’s dual mandate.

Ultimately the FOMC took these actions, in part, to compensate for President Obama’s failure to establish a strong, sustainable recovery. And just as low borrowing costs continue to mask the true pain of our nation’s historically high federal budget deficits, the Federal Reserve’s monetary experimentation has allowed the White House and Congress to shirk their responsibility to enact fiscal policies that create a competitive business climate which unleashes investment and spurs job creation.

⁴ The back-to-back recessions were January 1980 to June 1980 and July 1981 to November 1982.

⁵ The annual inflation rate as measured by the consumer price index.

The Federal Reserve's monetary experimentation of the last decade must end. Congress should give the Federal Reserve a single mandate for price stability, and the Federal Reserve should return to a rules-based system of inflation targeting to achieve that mandate.

To provide a foundation for long-term economic growth, I recently introduced the *Sound Dollar Act*, H.R.4180, in the House of Representatives. Senator Mike Lee of Utah, an articulate and studious member of the Joint Economic Committee, has introduced a companion bill, S.2247, in the Senate. The measure was introduced after many months of vetting with interested economists, current and former Fed staff as well as current and former members of the Federal Reserve Board of Governors – including discussions with Chairman Bernanke.

The *Sound Dollar Act* seeks to reform the Federal Reserve in several important ways. Specifically, the *Sound Dollar Act* replaces the dual mandate with a single mandate for long-term price stability; increases the Federal Reserve's accountability and openness; diversifies the FOMC; ensures credit neutrality for future FOMC purchases; and institutes congressional oversight of the Consumer Financial Protection Bureau.

As expected, critics have quickly charged that focusing on a sound dollar implies the Federal Reserve will ignore the employment needs of Americans. They are wrong. America can only maximize its real output with long-term price stability. Protecting the purchasing power of the dollar over time provides the strongest foundation for lasting economic growth and job creation.

Others have reacted as if a single mandate is a shocking proposal—an affront to all that is right and good. But as we know, the United States won World War II, enjoyed three decades of prosperity, and put a man on the moon without a dual mandate. It is not a fundamental part of our constitutional fabric or carved in granite—it is a 1977 policy directive based on the discredited “Phillips Curve” that Congress can and should change to ensure the future prosperity of our nation.

A mandate for price stability gives the Federal Reserve the right goal. Moving away from a discretionary regime and back toward a rules-based regime will help ensure the Fed achieves price stability.

In January 2012, the FOMC announced an inflation target of 2 percent defined in terms of the price index for personal consumption expenditures. I strongly applaud Chairman Bernanke and the other members of the FOMC for this step toward a rules-based, inflation-targeting regime.

However, this is merely a policy statement that could be reversed. Therefore, the *Sound Dollar Act* mandates that the FOMC continue inflation targeting over the long term.

Accurately measuring inflation is not easy. In the last decade, we clearly saw that price indices of goods and services do not always record all of the price movements in our economy, allowing asset bubbles to inflate undetected. The FOMC's current inflation target relies only upon the price index for personal consumption expenditures.

This index is the primary indicator that the Federal Reserve uses for measuring inflation. However, to identify incipient asset bubbles before they inflate to dangerous levels, the *Sound Dollar Act* also requires that the FOMC monitor and report to Congress on: (1) the prices of, and returns on, broad classes of assets including equities, corporate bonds, state and local government bonds and agricultural, commercial, industrial and residential real estate; (2) the price of gold; and (3) the foreign exchange value of the U.S. dollar.

To be clear, the *Sound Dollar Act* does not prescribe any specific action that the Federal Reserve must take if it detects an asset bubble. The appropriate responses are highly dependent upon circumstances. They might include a tightening of monetary policy, supervisory suasion, or regulatory actions to reduce the flow of credit to fund purchases of the bubbling asset.

Discretion with respect to the best response should be left to the FOMC. However, identifying potential asset price bubbles earlier may help to avoid the overinvestment and the malinvestment that must eventually be liquidated at a heavy cost in terms of lower real output and lost jobs.

Some supporters of the *Sound Dollar Act* concept express a concern that the FOMC could misinterpret monitoring asset prices as a mandate to control asset prices. To address that concern, we have made the legislative language clear and will make it clearer if need be. To quote the bill's language, the FOMC will merely observe asset prices to determine whether such price indices "are comprehensively reflecting price movements in the economy; and whether any price movements not captured by the price indices of goods and services are causing a significant misallocation of capital in the United States economy."

Simply put, monitoring asset prices is intended as a check against inflation slipping through the cracks.

Another reform broadens input and geographic diversity in FOMC decision-making. The *Sound Dollar Act* grants a permanent vote on the FOMC to the presidents of each regional Federal Reserve Bank. As important as New York and Washington are, there is much more to America's economy and the FOMC should better reflect that.

Today—as a result of a decision seventy years ago—only the Federal Reserve Governors and the President of the Federal Reserve Bank of New York have permanent votes. While all of the regional Federal Reserve Banks participate in the discussions, just four of the remaining eleven presidents vote at any one meeting—rotating on and off the FOMC.

There may be other ways to achieve this diversity—and I am open to them—but I am seeking change that will provide Main Street with a greater voice in determining monetary policy.

I am firmly committed to the independence of the Federal Reserve in conducting monetary policy. Expanding the voting membership of the FOMC is one method the *Sound Dollar Act* uses to insulate the Fed from political forces. But, I am particularly troubled by the FOMC decision in September 2011 to reinvest the proceeds from maturing federal agency debt and RMBS into new federal agency RMBS—instead of allowing these holdings to decline as originally intended. This policy reversal occurred amid intense pressure from special interest groups for federal actions to support the ailing housing market.

When the FOMC deals in securities other than Treasuries, repurchase agreements, and reverse repurchase agreements for the System Open Market Account, the Federal Reserve is allocating credit among different sectors of our economy. Credit allocation exposes the Federal Reserve to political interference. And in Washington, D.C. subsidies die hard.

To maintain the independence of the Federal Reserve, the *Sound Dollar Act* requires the FOMC to deal only in Treasuries, repos, and reverse repos for the System Open Market Account unless the FOMC finds by a 2/3 vote that “unusual and exigent circumstances” exist. The FOMC could then purchase other securities for the account so long as they are liquidated within five years after the end of the emergency.

Next, the *Sound Dollar Act* requires the Federal Reserve to publish its lender-of-last-resort policy. In nearly a century of existence, the Federal Reserve has never articulated this critical policy.

Dr. Allan Meltzer, author of *A History of the Federal Reserve*, describes the problems this void creates:

*The absence of a [lender-of-last-resort] policy has three unfortunate consequences. First, uncertainty increases. No one can know what will be done. Second, troubled firms have a stronger incentive to seek a political solution. They ask Congress or the administration for support or to pressure the Federal Reserve or other agencies to save them from failure. Third, repeated rescues encourage banks to take greater risk and increase leverage. This is the well-known moral hazard problem.*⁶

Each of these problems became manifest in 2008. And while some believe the *Dodd-Frank* legislation provided the solution to the next crisis, I do not believe that is the case.

To be reasonable, the bill does not call for a precise tactical plan. As President Dwight D. Eisenhower observed regarding the complicated engagements of war: “Plans are worthless, but planning is everything.”⁷ Similarly, while the Federal Reserve cannot anticipate every nuance of the next financial crisis, publishing a lender-of-last-resort policy has merit and could help reduce market uncertainty.

Next, I applaud Chairman Bernanke for his steps to increase transparency in monetary policy decision-making, but there is an additional step that the Federal Reserve should take. The *Sound Dollar Act* speeds the release of transcripts of FOMC meetings from five years to three years. Currently, if a President nominates a Fed Chairman for a second four-year term, Senators cannot review any of the FOMC transcripts during his or her tenure.

⁶ Ciorciari, John D. and Taylor, John B. (Eds.), *The Road Ahead for the Fed*, Hoover Institution (November 2009).

⁷ Dwight David Eisenhower, *Remarks at the National Defense Executive Reserve Conference*, November 14, 1957. For complete context, see the full text of the speech, third paragraph, in Public Papers of the Presidents <http://www.presidency.ucsb.edu/ws/index.php?pid=10951&st=&st1=#axzz1nuPphFqo>.

Some have expressed concerns that this would inhibit free discussion at FOMC meetings. But in a time when information flows globally in the blink of an eye, three years is an eternity.

Given the quality of the individuals serving on the FOMC, I am not concerned about legacy building in FOMC meetings. What I am concerned about is a future Senate being asked to confirm a second term for the Fed Chairman with no real insight into the critical decision-making of that Chairman in FOMC deliberations. Results matter, and so does the thought process behind them.

The *Sound Dollar Act* also eliminates a slush fund that has been misused by Secretaries of the Treasury in both Democratic and Republican administrations. In 1934, Congress placed the profits from the nationalization of privately owned gold and the subsequent devaluation of the U.S. dollar in the Exchange Stabilization Fund and authorized its use to intervene in foreign exchange markets.⁸ In 1968, Congress placed the special drawing rights (SDRs) issued by the International Monetary Fund into the Exchange Stabilization Fund.⁹ After the Bretton Woods system of pegged exchange rates collapsed in 1971, the Treasury has used the non-SDR assets in the Exchange Stabilization Fund for purposes that Congress never intended, such as bailing out Mexico in 1995 and guaranteeing money market mutual funds in 2008. To prevent misuse in the future, the *Sound Dollar Act* transforms the Exchange Stabilization Fund into a Special Drawing Rights Fund; liquidates all of the \$50 billion of non-SDR assets over three years; and uses the proceeds to reduce federal debt.

Finally, the *Dodd-Frank Act* funded the Consumer Financial Protection Bureau (CFPB) by diverting Federal Reserve profits, which would otherwise be paid to the Treasury, to the CFPB. This is a dangerous precedent, leaving the CFPB unaccountable to Congress and ultimately hardworking American taxpayers. Nothing other than the operating costs of the Federal Reserve should be paid out of its revenue. Thus, the *Sound Dollar Act* ends this diversion and requires that the CFPB seek annual appropriations from Congress—just as other federal agencies do.

In summary, the *Sound Dollar Act* helps the United States retain its economic preeminence by preserving the purchasing power of the U.S. dollar, charging the Federal Reserve to pursue a single mandate for price stability and strengthening the Federal Reserve's independence even as the *Act* increases the Federal Reserve's accountability.

⁸ *Gold Reserve Act of 1935*, Pub.L. 73-87, 48 Stat. 337, enacted January 30, 1934.

⁹ *Special Drawing Rights Act of 1968*, Pub.L. 90-349, 82 Stat. 188, enacted June 19, 1968.



REPUBLICAN STAFF COMMENTARY

UNITED STATES MONETARY HISTORY IN BRIEF

PART 1: THE FIRST & SECOND BANKS OF THE UNITED STATES—RISE AND FALL

February 28, 2012

Monetary policy and the Federal Reserve are often perceived to be shrouded in mystery or incomprehensible to all but central bankers. This three-part monetary history series attempts to remove that veil of mystery by offering an historical vantage point that sheds light upon and makes monetary policy more comprehensible.

CENTRAL BANKS: DEFINITION & CONSTITUTIONAL FOUNDATION

Central banks are chartered by national governments to have a legal monopoly over a nation's currency and bank reserves. To manage a nation's money supply, they use monetary policy tools, such as open market operations (e.g., buying/selling gold, silver, government debt securities, etc.); setting reserve requirements (i.e., deposits of currency, gold or silver that must be held at the central bank) for commercial banks and financial institutions; and acting as lender of last resort for solvent but illiquid commercial banks and financial institutions during a financial crisis. Central banks also supervise commercial banks and financial institutions.

The United States Constitution provides the legal foundation for a central bank in Article I, Section 8, Clauses 5 and 6, which give Congress the power "to coin money [and] regulate the value thereof," and Clause 18 to make laws "necessary and proper for carrying [out] the foregoing powers." America's first central bank was established in 1791 by the 1st Congress.

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FIRST BANK OF THE UNITED STATES

Secretary of the Treasury Alexander Hamilton issued his "Report on a National Bank" on December 14, 1790, and in 1791—based on his report—Congress chartered the **First Bank of the United States** (1791-1811).

Congressional debate over the First Bank foreshadowed the cataclysmic event to envelope the nation 70 years later with a general north-south divide and fierce exchanges over the role of federal and state governments. Echoes of the early opposition to the First Bank have run throughout our nation's history, even down to some of the populist arguments of the present day. Nevertheless, America's need for a central bank was acute, as the country had to manage the significant Revolutionary War debt incurred by the states; and the country needed a stable currency to facilitate commerce and trade within the fledgling United States and with countries abroad.

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Yet, as economist Richard Timberlake argues, the First Bank was not meant to be a modern central bank. Rather, the bank Hamilton envisioned would be a public bank to help the federal government secure loans, "aid in the sales of public lands ... and eventually provide a uniform paper currency."¹

(Continued on the next page ...)

Congress's adoption of the Coinage Act of 1792 placed the United States on a "bimetallic standard" of gold and silver.

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After supporters of the First Bank won the debate, the next major development in U.S. monetary policy was Congress's adoption of the **Coinage Act of 1792**, which placed the United States on a "**bimetallic standard**" of gold and silver (see Appendix for a discussion of the gold standard, the silver standard, and bimetallic standard and how they operated). Confusing as such a bimetallic standard may be in the 21st century, it made sense in the late 18th century when the United Kingdom—the world's dominant economic power—operated on a gold standard, while France—America's Revolutionary War ally—operated on a silver standard.

The Coinage Act fixed the mint prices of gold and silver at a ratio of 15:1 (i.e., \$19.39 per troy ounce for gold, \$1.29 for silver) so that, relative to their prevailing market values, gold was slightly overvalued and silver was slightly undervalued. These mint prices encouraged the importation of gold for coinage and accumulation of gold reserves at the First Bank. Beyond the political considerations of Hamilton (favoring relations with Britain) and Thomas Jefferson (favoring relations with France), the accumulation of gold was important since foreign creditors required payment of interest and principal of U.S. government debt in gold.

Hamilton's economic policies had the effect of transforming the U.S. government debt from a liability into a highly valued asset in domestic and foreign financial markets. Thus, Hamilton created a powerful financial tool for the U.S. government to finance its national defense and meet other needs.

During its 20 years of operation, the First Bank was a hybrid central-commercial bank, modeled on the Bank of England. It was a public-private partnership, in which private investors owned 80% of its stock while the federal government owned the rest, with the Treasury conducting regular examinations of the Bank for safety and soundness. In addition to issuing a uniform currency in the form of First Bank notes (bank notes are paper currency), the First Bank served as the depository and fiscal agent of the federal government; supported the credit of the federal government; and regulated state-chartered banks through the First Bank's acceptance of state bank notes or demanding their redemption in specie (i.e., gold or silver coins and bullion). Consequently, as noted by Timberlake, the First Bank began to exercise modern central-banking functions:

*through its currency transactions with other banks. If it felt that credit restraint was called for, it presented the notes of other banks for redemption in specie. If it felt that credit ease was in order, it expanded its own credit availability to businesses and to other banks and generally treated the notes of other banks with 'forbearance.'*²

Although the First Bank was careful not to exert too heavy a hand and generally received favorable reviews for fulfilling its purpose, congressional critics in Jefferson's party continued to question the Bank's constitutionality. They would have their hour when the Bank came up for renewal at the end of its 20-year charter.

STORM CLOUDS GATHER OVER THE FIRST BANK

When the First Bank's charter came up for renewal in 1811, one of the Bank's harshest 1791 congressional critics and opponents, James Madison,

had become president. Yet, the dynamics had changed in the intervening 20 years as Madison's concerns had been allayed through witnessing the value and necessity of the Bank.

However, politics being what they were, Madison was afraid of being seen as ideologically inconsistent (i.e., “flip-flopping” on the Bank question), and he wanted to show deference to his mentor, President Jefferson, who opposed the First Bank. So, Madison did not publicly declare support for renewing the First Bank's charter, though he directed Secretary of the Treasury Albert Gallatin to seek renewal of the First Bank's charter from Congress.

The House of Representatives renewed the charter, but the Senate failed to pass it due to a combination of constitutional questions and fears and allegations that British stockholders were dominating the Bank. How the Bank was defeated in the Senate was especially ironic as Madison's Vice President, George Clinton—who had been elected after the 12th Amendment to the Constitution, which aimed to ensure the President and Vice President would not be ideological opponents—cast the tie-breaking vote against his own administration's bill to renew the Bank. So, with the bill's defeat, the United States was left without a central bank, while on the brink of war.

WAR OF 1812 & LIFE WITHOUT A CENTRAL BANK

The Madison administration's failure to renew the First Bank's charter proved consequential in the **interregnum period** (1811-1816) when the United States did not have a central bank. Notably, Madison had an especially difficult time financing the War of 1812; Secretary of the Treasury Gallatin could raise only \$38 million out of an authorization for \$61 million in bonds. Furthermore, in this period, the number of state banks grew from 86 to 246, and total bank notes grew from \$28 million to \$68 million, resulting in a cumulative 34% increase in prices. Had the First Bank continued to operate, many of these difficulties could have been avoided.

SECOND BANK OF THE UNITED STATES

Out of the interregnum experience arose the **Second Bank of the United States** (1816-1836). Speaker of the House Henry Clay worked with the Madison administration to charter the Second Bank on the same basis as the First Bank. However, Madison pressed the Board of Directors of the Second Bank to name as its president his Secretary of the Navy, William Jones. This decision proved disastrous. Through both corruption and incompetence, the Second Bank came close to failing as Jones augmented, rather than restrained, a speculative bubble in western lands. In 1819, Jones was forced to resign, and the board chose former House Speaker Langdon Cheves to replace him as the Second Bank's President.

Meanwhile, the Treasury—now under the leadership of Secretary William Crawford—acted like a central bank, while the Second Bank “proved to be nothing more than a convenient buffer for the unpalatable but ‘necessary’ policies of the Treasury Department” to contract the money supply and bring inflation under control. Under Cheves, total bank notes were reduced to \$45 million by 1819. This saved the Second Bank but at the price of much economic pain including: the financial **Panic of 1819** and resulting recession (the first presidential-induced recession); a 27% decline in prices

The Senate failed to renew the First Bank's charter in 1811 due to a combination of constitutional questions and fears and allegations that British stockholders were dominating the Bank. Absent a central bank, President Madison had an especially difficult time financing the War of 1812.

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through 1824; and a growing populist sentiment against the Second Bank. Notably, the Second Bank—rather than President James Monroe's administration, which was really the guilty party in the fiasco—drew the ire of presidential aspirant, General Andrew Jackson.

In 1822, Nicholas Biddle succeeded Cheves as president of the Second Bank. Biddle, who proved especially competent, returned the Second Bank to the First Bank's central banking function of regulating the state banks through its acceptance of state bank notes or its demand for their redemption in species. Under Biddle's leadership, this central banking function was used to stabilize the U.S. economy and prevent financial panics.

America's economy has prospered with an independent central bank, managed by competent individuals; America's economy has not fared as well absent a central bank or when a central bank endures interference from politicians.

Again though, the storm clouds gathered over the Bank with the 1828 election of President Andrew Jackson. In 1832, Jackson vetoed Sen. Henry Clay's bill to renew the Second Bank's charter. Nonetheless, there was dissent even within Jackson's cabinet over the issue of the Second Bank. Jackson fired two Secretaries of the Treasury, who refused to remove government deposits from Second Bank (the Bank's charter, which ran to 1836, had not yet expired) and place them in Jackson-favored state banks. Finally, in 1833 Jackson's acting Secretary of the Treasury Roger B. Taney complied with the demand, and there is speculation that Taney's reward for this action was a subsequent appointment as Chief Justice of the United States.³

BAD MONETARY POLICY & ECONOMIC COLLAPSE

Through the **Coinage Act of 1834**, Jackson devalued the U.S. dollar by 6.6% to \$20.67 per troy ounce in terms of gold, but not in terms of silver, thus increasing the gold-to-silver mint price ratio from 15:1 to 16:1, which by slightly overvaluing gold and undervaluing silver relative to prevailing market prices again caused an inflow of gold. This led to a 42% increase of bank deposits and a 36% increase in prices from 1834 to 1836.

Distribution of the Surplus and **Specie Circular** were disastrous policies. The populist reaction against the Second Bank and the ensuing policies caused a 36% drop in the money supply in 1836-37. One such policy came from Jackson signing an 1836 bill that distributed the federal surplus of \$28 million to the states. To pay the states, the Treasury withdrew \$28 million in federal deposits from Jackson-favored state banks in species. This triggered an immediate contraction in loans and bank notes from the banks that lost their deposits. Of these funds, states deposited \$23 million into other state banks and retained \$5 million in species. This conversion into species reduced the aggregate reserves available to support loans and bank notes nationwide. Moreover, banks that eventually received deposits from the states took time to expand their loans and bank notes. (In the 1800's, there were no wire transfers. Rather, specie and notes had to be transferred by wagons, often over uncertain roads.) Finally, Jackson's 1836 Specie Circular, which required payment in gold or silver for the purchase of federal lands, increased the demand for gold and silver coins, compounding the contractionary effects of the distribution of the surplus.

The capricious monetary policies of President Andrew Jackson were a major cause of the Panic of 1837.

Thus, Jackson left office as the U.S. began to suffer from the **Panic of 1837** and the ensuing depression. This policy-induced depression was the second longest and second deepest depression in U.S. history, only superseded by

the Great Depression of the 1930's, and as Milton Friedman noted, the great depression stemming from the Panic of 1837, "is the only depression on record comparable in severity and scope to the Great Depression of the 1930's."⁴

Bad policies continued to prevail, including the "Independent Treasury," under which President Martin Van Buren consolidated federal deposits from state banks at the Treasury. Ultimately, the U.S. economy did not recover from the Jackson-induced depression until 1843—two years after the defeat of Jackson successor and one-term President Van Buren.

CENTRAL BANKING FROM THE TREASURY

Though the Whig party won the control of both Congress and the presidency in 1840 on a platform that included a pledge to create a Third Bank of the United States, President John Tyler, who succeeded William Henry Harrison after his brief tenure, vetoed a bill to charter a Third Bank in 1841. Consequently, the Treasury assumed a limited central-banking role in the years preceding the Civil War. Tariff revenues were highly elastic, while federal outlays were relatively constant. This allowed the Treasury to act as an 'automatic stabilizer'—issuing U.S. government debt securities (i.e., Treasuries) when tariff revenue was low and redeeming them when revenue was high.

CURRENCY PROBLEMS & TECHNOLOGY PRECEDING THE CIVIL WAR

Generally, from 1836—when the Second Bank ceased its interstate operations—until the Civil War, the United States did not have a national currency. Historians have called this the **free banking era** (even though the United States never actually had free banking as defined by economists). With many states liberalizing their laws about chartering banks, the quality of supervision and regulation varied widely, creating many problems. Some states, especially in the south and west, suffered from numerous wildcat banks that opened with insufficient capital. The wildcat banks would make loans and issue bank notes, only to fail in a matter of months. As a result, bank notes did not trade at par (face) value with each other. Instead, the value of notes from different banks fluctuated daily (much as national currencies do today in foreign exchange markets).

In this environment, economic development suffered from the bad monetary policy of the period. The fluctuating value of state bank notes and losses on notes from failed wildcat banks were costly, taking a toll on the growth of interstate commerce. Yet, technological advances like the steamboat, railroad, and telegraph were forging a single national economy out of the previously separate local economies, highlighting the need for a single national currency—even absent a central bank.

With this as background, one of the sub-issues of the 1860 campaign was the question of a national currency. The newly formed Republican Party, in the tradition of the Federalist and Whig Parties, favored the creation of a single national currency to replace state bank notes, while the Democrat Party supported the status quo. Regardless, changes would be afoot as the nation was driven into its most devastating war, again, absent a central bank.

As Milton Friedman noted, the great depression stemming from the Panic of 1837, "is the only depression on record comparable in severity and scope to the Great Depression of the 1930's."

Even when the U.S. has been absent a central bank, the Treasury has conducted central banking activities—with mixed results.

Technological advances like the steamboat, railroad, and telegraph were forging a single national economy out of the previously separate local economies, highlighting the need for a single national currency—even absent a central bank.

APPENDIX: DISCUSSION OF STANDARDS

Gold Standard

Classical gold standard: There are two versions of a classical gold standard—**gold coin standard** and **gold bullion standard**. Under a gold coin standard, a country defines its unit of account in terms of a fixed weight of gold (i.e., mint price). The mint will freely coin gold at the mint price, gold coins are in circulation, and the central bank (or commercial banks in the absence of a central bank) will freely convert bank notes into gold coins at the mint price. Under a gold bullion standard, a country defines its unit of account in terms of a fixed weight of gold (i.e., par value). However, the mint will not freely coin gold and gold coins are not in wide circulation. Instead, the central bank will freely buy or sell gold in large quantities, known as bullion, at par value. Exchange rates among the currencies of all countries operating under a classical gold standard are effectively fixed. A classical gold standard is largely self-regulating through domestic and international gold flows.

A classical gold standard may not provide long-term price stability.

The profitability of the gold mining industry—which is affected by the size and frequency of new gold finds, mining and processing costs, and technological progress—effectively determines the monetary base and the price level in all countries operating under a classical gold standard. Therefore, a classical gold standard may not provide long-term price stability. Indeed, decade-long periods of both price inflation and price deflation occurred under the classical gold standard.

Gold exchange standard: Under a gold exchange standard, a country defines its unit of account in terms of another country's currency (i.e. anchor currency) that is freely convertible into gold at par value. The central bank will freely exchange its bank notes for the anchor currency at the fixed exchange rate.

Like a classical gold standard, the exchange rates among countries operating under a gold exchange standard are fixed to the anchor currency and to each other. Unlike a classical gold standard, however, a gold exchange standard is not self-regulating. It is dependent on the behavior of the central bank in the anchor country.

Silver Standard

A silver standard is similar to a gold standard except silver is the metal used.

Bimetallic Gold and Silver Standard

Under a bimetallic gold and silver coin standard, a country defines its unit of account in terms of a fixed weight of gold and a fixed weight of silver, known as mint prices. The mint will freely coin both gold and silver at their respective mint prices. In theory, both gold and silver coin should be in circulation, and the central bank (or commercial banks in the absence of a central bank) will freely convert bank notes into either gold or silver coins at their respective mint prices. In practice, however, a bimetallic standard is actually an **alternative metallic standard**. When one monetary metal becomes “dearer” (i.e., its market price rises relative to its mint price), coins in the “dearer” monetary metal will go out of circulation, and individuals and firms will drain the dearer monetary metal out of the central bank by exchanging bank notes for coins or bullion in the “dearer” monetary metal. The “cheaper” monetary metal, whose market price falls relative to its mint price, will effectively become the sole monetary metal. This process will reverse as market prices of gold and silver fluctuate relative to their respective mint prices.

¹ Timberlake, Richard H., *Monetary Policy in the United States: An Intellectual and Institutional History*, The University of Chicago Press, Chicago, 1993, p.5.

² *Ibid.*, p.10

³ For background on Taney's appointments, see Abraham, Henry J., *Justices, Presidents, and Senators: A History of the U.S. Supreme Court Appointments from Washington to Clinton*, Rowman & Littlefield Publishers, Inc., New York, 1999, pp. 74-76.

⁴ Friedman, Milton, *A Program for Monetary Stability*, Fordham University Press, New York, 1959, p.10.

For reference and further reading, see, Timberlake, Richard H., *Monetary Policy in the United States: An Intellectual and Institutional History*, The University of Chicago Press, Chicago, 1993.



REPUBLICAN STAFF COMMENTARY

UNITED STATES MONETARY HISTORY IN BRIEF

PART 2: EXPERIENCE WITHOUT A CENTRAL BANK—CIVIL WAR TO CREATION OF THE FED

February 29, 2012

Monetary policy and the Federal Reserve are often perceived to be shrouded in mystery or incomprehensible to all but central bankers. This three-part monetary history series attempts to remove that veil of mystery by offering an historical vantage point that sheds light upon and makes monetary policy more comprehensible.

SETTING THE STAGE

Part 1 of this series covered the founding of a central bank in the United States by the 1st Congress in 1791; the rise and fall of the First and Second Banks of the United States; and life in America with and without a central bank from 1791-1860. Generally, America's economy prospered with an independent central bank, managed by competent individuals, and America's economy did not fare as well absent a central bank or when a central bank endured interference from politicians. The period closed without a central bank—except for the Treasury taking on some central banking functions. Meanwhile, advances in technology were forging a single national economy as the nation headed into the Civil War.

CIVIL WAR: FROM A GOLD & SILVER STANDARD TO A FIAT CURRENCY

In 1860, the U.S. money supply consisted of \$500 million in both currency and bank deposits. With the opening of Civil War, the public began to hoard gold in anticipation of inflation, and by the war's end four years later, prices—including that of gold—had doubled.

To combat the hoarding and help finance the Civil War, in December 1861, President Abraham Lincoln suspended the redemption of bank notes for gold or silver at their mint prices, \$20.67 and \$1.29 per troy ounce, respectively. Thus, Americans could no longer demand gold or silver from banks in exchange for dollars, and the effect was to move the U.S. from a bimetallic gold and silver standard to a **fiat currency**. *Fiat money derives its value from government declaration rather than from the value of a metal such as gold.*

The supply of money was then increased in February 1862 by the 37th Congress through the **Legal Tender Act**. This law authorized the issuance of \$150 million in U.S. notes—known as “greenbacks”—and the circulation of these greenbacks was increased to \$400 million by war's end. Also, Congress authorized the issuance of 3% Treasury notes, which were like savings bonds but could be used as either currency or bank reserves.

Next, the Congress passed the **National Bank Act of 1863** (with significant amendments in 1864 and 1865), which established the Office of the

With the opening of the Civil War, the public began to hoard gold in anticipation of inflation, and by the war's end four years later, prices—including that of gold—had doubled.

In December 1861, President Abraham Lincoln suspended the redemption of bank notes for specie, effectively taking the U.S. off the bimetallic gold and silver standard and establishing a fiat currency.

(Continued on the next page ...)

The National Bank Act recreated a national currency in 1863, the first national currency since 1836.

Comptroller of the Currency to charter, supervise, and regulate national banks. National banks could issue up to \$300 million of national bank notes, but unlike pre-war state bank notes, national bank notes traded at par with each other and U.S. notes, thus restoring a national currency.

National bank notes were fully collateralized by U.S. government debt securities (i.e., Treasuries). In other words the notes were fully backed, which increased their demand because the public was protected from losses on notes when a national bank failed. Further, the National Bank Act instituted a punitive 10% tax on state bank notes, which was intended to drive state banks out of business. Nevertheless, state banks survived because of the rapid growth of checkable deposits after the Civil War.

RESUMPTION OF THE GOLD STANDARD

The U.S. faced difficult challenges following the Civil War, including whether and how to resume the gold standard so that Americans could freely convert dollars to gold. As European countries that had been on either a silver standard or a bimetallic standard were switching to a gold standard during this period, U.S. policymakers did not consider returning to the pre-war bimetallic standard. Four monetary policy options were considered: (1) Contract the money stock, causing a rapid price deflation, reducing the market price of gold to the pre-war mint price of \$20.67 per troy ounce; (2) Freeze the money stock, which (combined with real GDP growth) would cause a gradual price deflation, reducing the market price of gold to the pre-war mint price; (3) Devalue the U.S. dollar by raising the mint price of gold to its market price with convertibility at the new parity; and (4) Abandon the gold standard and have a fiat currency.

During Reconstruction, a combination of the first and second monetary policy options were implemented. From 1865 to 1868, Secretary of the Treasury Hugh McCulloch used federal budget surpluses to retire about \$250 million in greenbacks and 3% T-notes, causing prices to decline by 20%. Then, Congress froze the supply of greenbacks at \$356 million in 1868, though the Civil War era legislation had authorized up to \$400 million, creating a reserve of \$44 million at the Treasury.

The Coinage Act of 1873 demonetized silver and replaced the bimetallic standard with a de facto gold standard. However, slower gold production from the 1870's to 1890's, combined with booming real GDP growth in the U.S. and many other countries, led to global price deflation and inflamed political disputes about U.S. monetary policy.

President Ulysses S. Grant signed an act into law on July 12, 1870, which increased national bank notes by \$54 million and decreased 3% T-notes by \$45 million with most of the new national bank notes allocated to banks in southern and western states. Yet prices did not fall much and movement toward resumption of the gold standard was minimal during Grant's first term. So, early in his second term, Grant signed the **Coinage Act of 1873**, which demonetized silver and replaced the bimetallic standard with a de facto gold standard.

To those who wanted silver in circulation, this Coinage Act was referred to as the "Crime of 73"—especially following new silver finds in Colorado, which greatly increased the supply of silver and depressed its price. Moreover, gold production slowed beginning in mid-1870's and did not increase until mid-1890's, while real GDP growth boomed in the U.S. and many other countries. Over the next two decades, this combination produced persistent global price deflation and inflamed political disputes about U.S. monetary policy.

PANIC OF 1873 & THE FORM-SEASONAL ELASTICITY PROBLEM

During the second half of 19th century, a troubling new policy-induced phenomenon became commonplace—seasonal financial panics. Such was the case with the **Panic of 1873**.

Though technological advances before and during the Civil War helped to forge a single national economy, how individuals operated within the economy varied greatly. For instance, most businesses and urban households used checks to make payments, whereas most farmers and rural households still used cash. As these preferences collided in the national banking system, completely avoidable crises would beset the U.S. economy.

The **form-seasonal elasticity problem** would begin late in the summer as cash would flow out of banks to pay farmers for crops, and then the cash would flow back into banks as farmers paid their bills. Ideally, a monetary system should be sufficiently flexible to allow for seasonal conversions from deposits to cash and back without affecting money supply, prices, or interest rates. However, two principal rigidities in the national banking system of this period limited the form-seasonal elasticity of the U.S. money supply:

- (1) There were federally-established limits on the issuance of U.S. and national bank notes, even though there was rapid population and real GDP growth; and
- (2) Treasuries, which were used as collateral for issuing national bank notes, were in short supply because of the federal budget surpluses of this period, forcing national banks to pay large premiums to secure Treasuries in the fall.

When cash flowed out the banking system each fall, national banks could not easily expand the supply of national bank notes. To meet the demand for cash, national banks had to build large reserves in the winter and spring. If these reserves proved insufficient, national banks would demand immediate repayment on many of their outstanding loans to generate cash. The ensuing impact on the economy could be devastating. Frequently during the fall, short-term interest rates spiked from less than 2% to more than 30% annualized rates; and asset fire-sales to generate cash resulted in depressed asset prices. Consequently, the U.S. economy was extremely vulnerable to shocks during the months of September and October. This is why panics during this era, such as the Panic of 1873, usually occurred in the fall.

FALLOUT FROM THE PANIC OF 1873

The form-seasonal elasticity induced panic of 1873 had national consequences. Treasury receipts dipped below federal outlays in November and December and the Secretary of the Treasury—taking on the role of a central banker—was forced to reissue \$26 million of the \$44 million greenbacks in reserve. The political uproar and populist accusations stemming from this action—the Treasury serving as lender of last resort—flowed freely and in some ways are still echoed in the early 21st century (i.e., Washington favors New York). The resulting political and economic climate for the 1874 election swung control of Congress to the Democrats for the first time since the Civil War.

Economic panics, such as the Panic of 1873, were unnecessary and policy-induced through the inelasticity of the U.S. money supply relative to the seasonal fluctuations in the demand for currency and bank deposits.

Populist outcry over the Panic of 1873 remained acute, but it was more targeted at the panic's effects rather than its cause: the form-seasonal elasticity problem.

Populist outcry over the Panic of 1873 remained acute, but it was more targeted at the panic's effects rather than its cause. As a result of the 1874 elections, the outgoing Republican-controlled Congress passed the **Specie Payment Resumption Act** in January 1875 that required the Treasury to resume the convertibility of dollars to gold at the pre-war mint price of \$20.67 per troy ounce by January 1, 1879.

FREE SILVER CONTROVERSY

Between 1873 and 1896, the United States and major European countries experienced rapid GDP growth while there were no new major find of gold. As a result, long-term price deflation occurred. Consequently, in the U.S., farmers—particularly in the south and west—suffered as the real debt burden of the mortgages on their farmland grew.

So, in opposition to resumption of the gold standard, the free-silver/cheap-money movement emerged. Rep. Richard “Silver Dick” Bland (D-MO) and Democratic presidential nominee William Jennings Bryan became champions of “free silver.” In response, a divided Congress (a Republican-controlled Senate and a Democratic-controlled House) enacted the **Bland-Allison Act** in 1878 after overriding the veto of President Rutherford B. Hayes. This Act was a compromise that required the Treasury to purchase between \$2 million to \$4 million per month of silver and mint it into silver dollars. However, Treasury had discretion about circulating these silver dollars since the federal government was running surpluses. Secretary of the Treasury John Sherman did not circulate the silver dollars, and gradual price deflation continued. Furthermore, through the Bland-Allison Act, Congress froze U.S. notes (greenbacks) at \$346.7 million, which though it prevented a legally mandated reduction of the cap, still maintained a cap, which was again one of the causes of the form-seasonal elasticity problem. Under Sherman, Treasury accumulated gold reserves of \$135 million to back the greenbacks, and resumption at the pre-war mint price of \$20.67 per troy ounce occurred without incident on January 1, 1879.

Resumption of the conversion of dollars to gold, at the pre-war mint price, occurred without incident on January 1, 1879.

The Sherman Silver Purchase Act backfired as people turned in the new notes—which could be redeemed for either silver or gold—for gold, thus depleting the Treasury's gold reserves and contributing to the Panic of 1893.

Nonetheless, free silver advocates were dissatisfied with the implementation of the Bland-Allison Act. In the Republican-controlled 51st Congress, Rep. William McKinley (R-OH) and Sen. John Sherman (R-OH) engineered a legislative compromise between different factions of Republicans. In exchange for the support of pro-silver Republicans from western states for the **McKinley Tariff Act**, Republicans from the northeastern and midwestern states agreed to support the **Sherman Silver Purchase Act**. President Benjamin Harrison signed the Sherman Silver Purchase Act into law on July 14, 1890. This act required the Treasury to purchase an additional 4.5 million ounces of silver bullion every month with a special issue of U.S. notes that could be redeemed for either silver or gold. However, the plan backfired as people turned in the new notes for gold, thus depleting the Treasury's gold reserves. Simultaneously the McKinley tariff increased the average tariff rate to 48%, reducing gold payments to the Treasury.

PANIC OF 1893

In his second non-consecutive term, President Grover Cleveland presided over the **Panic of 1893** and the subsequent depression—the third worst in

U.S. history—which lasted until 1897. The gold drain from the Treasury following the Sherman Silver Purchase Act and the form-seasonal elasticity problem were the primary causes of this panic, though there were other non-monetary dynamics at work. Among the other things, Cleveland blamed the depression on high tariffs and the Sherman Silver Purchase Act. The Democratic-controlled 53rd Congress repealed the Sherman Silver Purchase Act in 1893 and then enacted the **Gorman-Wilson Tariff Act** in 1894, which reduced tariff rates and imposed a 2% federal income tax on income over \$4,000. However, this income tax was ruled unconstitutional in the 1895 Supreme Court Case **Pollock v. Farmers' Loan & Trust Company**.

THE GOLD STANDARD

During the second half of the 1890's, global gold production doubled after major finds of gold ore in South Africa and Alaska, and the invention of new processing technology that increased the yield of pure gold from gold ore. The rapid increase in global gold supply relative to global GDP growth led to mild global price inflation through 1913. In 1900, President William McKinley signed the **Currency Act**—the Gold Standard Act—that made the gold standard, which had been the de facto standard, the official standard for the United States, marking the high water mark for the classical gold standard.

In 1900, President McKinley signed the Currency Act, officially putting the U.S. on the classical gold standard.

COMBATTING THE SEASONAL PANICS

At the dawn of the 20th century, despite three decades of policy-induced economic panics, the root cause of the form-seasonal elasticity problem had still not been addressed. Not until President Theodore Roosevelt appointed Leslie Shaw to serve as Secretary of the Treasury were the first real strides made toward addressing the problem. Shaw was a skilled banker who, as Secretary, engaged in central banking to counter the form-seasonal elasticity problem through: (1) seasonal transfers of federal deposits between the Treasury and national banks; (2) acceptance of other bonds for collateral for federal deposits, freeing Treasuries to collateralize national bank notes; (3) abolishing reserve requirements for federal deposits; and (4) allowing gold importers to use gold interest-free from its purchase abroad until it was delivered to the Treasury. While Shaw served as Secretary from the spring of 1902 to the spring of 1907, the United States was spared from the seasonal panics.

President Theodore Roosevelt's Secretary of the Treasury Leslie Shaw engaged in central banking from the Treasury to counter the form-seasonal elasticity problem. However, Shaw's successor lacked his skills to prevent the Panic of 1907. This panic—and the need for a more permanent solution to avoid panics—provided the final impetus for the foundation of a new central bank.

PANIC OF 1907

Still, something more permanent was necessary than mere reliance on the skills of a talented Secretary of the Treasury like Shaw. This again became apparent in the fall of 1907 when Shaw's successor at the Treasury, George Cortelyou—despite trying to follow Shaw's policies—was unable to finesse the situation like Shaw, resulting in yet another panic.

During the **Panic of 1907**, Roosevelt worked with banker J.P. Morgan to secure lines of credit from foreign banks and organize national banks to make loans to other solvent, but illiquid banks. Roosevelt sent Cortelyou to Wall Street, depositing \$68 million in national banks in New York City and issuing \$50 million of Panama bonds and \$100 million of Treasuries to provide additional collateral for national bank notes. In essence, Roosevelt

The framework of the modern Federal Reserve central bank, which came from the National Monetary Commission, grew out of the American experience of panics and economic hardships springing from the form-seasonal elasticity problem.

In a financial crisis, Bagehot's lender-of-last-resort principles hold that a central bank should lend freely to solvent, but illiquid commercial banks and other financial institutions based on collateral that would be good in normal times at a penalty rate of interest.

The 1913 Federal Reserve Act created the 12 regional Federal Reserve Banks; created the Federal Reserve Board of Directors in Washington, DC; required all national banks to join the Federal Reserve System; and authorized Federal Reserve notes to replace U.S. and national bank notes.

asked Morgan to perform the lender-of-last-resort function of a central bank on an ad hoc basis, while Cortelyou supplied additional liquidity.

In response to the Panic of 1907, the following year, the Republican-controlled 60th Congress passed the **Aldrich-Vreeland Act**, which established a **National Monetary Commission**. In 1910, the Commission recommended: (1) Creating the **National Reserve Association (NRA)**—a central bank that would hold the reserves of all commercial banks; (2) Using the NRA's discount rate to regulate the money supply in the context of the gold standard (the discount rate is the interest rate that a central bank charges for fully collateralized loans to commercial banks); (3) Making the NRA the monopoly issuer of bank notes; and (4) Adhering to 'Bagehot principles' related to being a lender of last resort.

Walter Bagehot was an English businessman and editor-in-chief of *The Economist*. In 1873, he published *Lombard Street*, which outlined the principles for lender-of-last-resort operations during financial crises. Central bankers and economists still hold Bagehot's principles in high regard today. In a financial crisis, Bagehot advised, the Bank of England should lend freely to solvent, but illiquid commercial banks and other financial institutions based on collateral that would be good in normal times at a penalty rate of interest.¹

CREATION OF THE FEDERAL RESERVE

President Woodrow Wilson, elected in 1912, generally agreed with the recommendations of the National Monetary Commission to create a central bank, though with changes to increase federal oversight.

However, Wilson's support for a central bank faced strong opposition, even from within his own cabinet. In particular, Wilson was presented with a challenging dilemma when his Secretary of State, William Jennings Bryan, threatened to walk out on him and lead congressional opposition to the central bank. By acquiescing to Bryan, Wilson would have lost support for reform from bankers and business leaders; by pushing forward in opposition to Bryan, Wilson would have risked a divide within the Democratic Party and a loss of his entire domestic agenda.

Wilson's solution was to work with Rep. Carter Glass (D-VA) and Sen. Robert Owen (D-OK) to find a middle way—the **Federal Reserve Act**—which was enacted in 1913. This act created a Federal Reserve System with:

- A monetary policy mandate to provide an “elastic currency” within the context of a gold standard to combat the form-seasonal elasticity problem;
- 12 regional Federal Reserve Banks, each headed by a Governor;
- A Federal Reserve Board of Directors based in Washington, DC and composed of the Secretary of the Treasury, the Comptroller of the Currency and five other members to supervise the Reserve Banks;
- A requirement that all national banks join the Federal Reserve System by purchasing stock in their respective regional Reserve Bank and an option for state-chartered banks to join; and
- Federal Reserve notes—to replace U.S. and national bank notes—which would be U.S. government obligations.²

The Federal Reserve Act was thus crafted with multiple contradictory provisions, which allowed both advocates and opponents of the central bank to claim victory. On one hand, Bryan Democrats correctly claimed that Board would assure the federal government, not private bankers, would determine monetary policy. However, Bryan Democrats incorrectly assured their constituents that the Federal Reserve was not a central bank because each regional Reserve Bank would conduct an independent monetary policy. On the other hand, northeastern Democrats and Republicans correctly asserted that the Federal Reserve Act had created a central bank. Yet, because of nominal private ownership of the stock in the regional Reserve Banks, northeastern Democrats and Republicans incorrectly assured their constituents that private bankers, not the federal government, would determine monetary policy.

These contradictory provisions would later ignite a destructive power struggle within the Federal Reserve in 1928, at the front-end of the Great Depression. Further complicating the birth of the Federal Reserve, World War I began before the central bank became operational in 1915, thus requiring Treasury Secretary William McAdoo to once again intervene to prevent a panic in the fall of 1914 by issuing \$363 million in currency under the provisions of the Aldrich-Vreeland Act.

Life in America without a central bank was at an end. The age of seasonal panics—and the recessions and depressions stemming from them—was past. In the coming decades, the country would experience the best and the worst of central banking with the Federal Reserve gradually growing from these experiences into the modern central bank of the 21st century.

¹ For further discussion of Bagehot principles, see Joint Economic Committee Report, *An International Lender of Last Resort, the IMF and the Federal Reserve*, 1999.

Available at <http://www.house.gov/jec/imf/loir.pdf>

² In 1913, the Federal Reserve was required to hold gold equal to 40% of the outstanding currency, and 35% of commercial bank reserves.

For reference and further reading, see, Timberlake, Richard H., *Monetary Policy in the United States: An Intellectual and Institutional History*, The University of Chicago Press, Chicago, 1993.

The Federal Reserve Act was crafted with multiple contradictory provisions, which allowed both advocates and opponents of the central bank to claim victory. These contradictory provisions would later ignite a destructive power struggle within the Federal Reserve in 1928, at the front end of the Great Depression.



REPUBLICAN STAFF COMMENTARY

UNITED STATES MONETARY HISTORY IN BRIEF

PART 3: THE FEDERAL RESERVE—A CENTRAL BANK'S GROWTH THROUGH TRIAL & ERROR

March 1, 2012

Monetary policy and the Federal Reserve are often perceived to be shrouded in mystery or incomprehensible to all but central bankers. This three-part monetary history series attempts to remove that veil of mystery by offering an historical vantage point that sheds light upon and makes monetary policy more comprehensible.

SETTING THE STAGE

Part 1 (1791-1860) and Part 2 (1861-1914) of this 3-part series explored the monetary and economic history of the United States. The U.S. did not have a central bank from 1836 to the creation of the Federal Reserve in 1913, and in the absence of a bank, the nation suffered from frequent seasonal financial panics, recessions and depressions. The Panic of 1907, in which New York banker JP Morgan acted as a lender of last resort and the Treasury provided additional liquidity, finally spurred the Congress toward enactment of the Federal Reserve Act of 1913, which reinstated a central bank in the United States.

THE FEDERAL RESERVE OPENS ITS DOORS

With the creation of the Federal Reserve, the seasonal panics that had dominated the American economy since the 1870's ceased as the Fed effectively used the tools of monetary policy to provide greater elasticity to the U.S. money supply. Meanwhile, the Great War—World War I—raged as the Federal Reserve officially opened its doors for operations.

The now debunked **real bills doctrine**, which originated with Adam Smith, guided the Federal Reserve during World War I. The essence of the real bills doctrine held that short-term bank loans extended to businesses, based upon anticipated profitability of sales of goods produced, were not inflationary, while other loans were. So, as might be expected, the real bills doctrine tended to be pro-cyclical monetary policy: When the economy was doing well and sales of goods were expected to be strong, the central bank would loosen monetary policy—though lending restraint was in order; conversely, when the economy was doing poorly and sales were expected to lag, the central bank tightened monetary policy—though more liquidity was in order.

As the early Fed was guided by the real bills doctrine, loans were expanded to member banks during the war-related boom, and prices soared by 119% between 1913 and 1919. Learning from this experience the Fed's Board of Directors began to move away from the real bills doctrine, though the doctrine still held sway with the regional Federal Reserve Banks, other than the district of New York.

With the creation of the Fed, the seasonal panics that had dominated the American economy since the 1870's ceased as the Fed effectively used the tools of monetary policy to provide greater elasticity to the U.S. money supply.

As the early Fed was guided by the real bills doctrine, loans were expanded to member banks during the war-related boom, and prices soared by 119% between 1913 and 1919.

(Continued on the next page ...)

World War I transformed the world, but the U.S. failed to accept its new economic responsibilities as the world's emerging economic superpower.

Winston Churchill resumed convertibility of the British pound into gold at its pre-war parity (instead of at the market price), and this lit the long fuse leading to the Great Depression.

THE U.S. AND INTERNATIONAL AFFAIRS AFTER THE GREAT WAR

World War I transformed the world, but perhaps because of the same isolationist tendencies that delayed U.S. entrance into the war, the United States failed to accept its new economic responsibilities as the world's emerging economic superpower.

Examples of the change in America's status abound. The nation's international position had gone from being a net debtor of \$2.2 billion (6.4% of GDP) with the rest of the world in 1914 to being a net creditor of \$6.4 billion (8.4% of GDP). The publicly held federal debt rose from \$1.118 billion (3.3% of GDP) in June 1914 to \$24.485 billion (34.9% of GDP) in June 1919. New York had effectively displaced London as the center of international finance, and the Federal Reserve had replaced the Bank of England as the global guardian of the gold standard.

Meanwhile, as the international economic system deteriorated, the U.S. government refused to forgive its allies their war debts, stemming from \$10.4 billion in U.S. loans during the war.¹ America's refusal to forgive these debts contributed to the allies' refusal to forgive \$16 billion of German war reparations, which were being relied upon to repay the U.S. To make these reparations payments, Germany had to run large trade surpluses. However, this could only happen if the U.S. and its allies reduced their tariffs and removed trade barriers against German imports.

Regrettably, neither the U.S. nor its allies would allow German imports to displace import-competing domestic industries and their workers. This made Germany dependent on loans from U.S. commercial banks to pay reparations. When Belgium and France invaded the Ruhr in January 1923, because Germany was behind on its reparations payments, U.S. commercial banks stopped making loans to Germany, and German workers launched a general strike with the resulting loss of tax revenue exasperating inflationary pressures leading to hyperinflation. The following year, the allies agreed to the **Dawes plan** in an attempt to stabilize the situation. This plan reduced German reparations payments to \$250 million in year one with gradual increases to \$650 million in year five. In exchange, U.S. commercial banks resumed lending to Germany.²

In 1925, Chancellor of the Exchequer Winston Churchill resumed convertibility of the British pound into gold at its pre-war parity, but this was a mistake. World War I had destroyed much of Britain's wealth and potential future workforce and output (through lives lost at the front); hence the U.K. was much poorer after the war. Assigning a value to the British pound in terms of gold greater than the amount of gold a pound could buy on the market after the war overvalued the currency, causing prices to be too low for British imports and too high for British exports, leading to a chronic current account deficit. Ultimately, Britain's return to the gold standard at pre-war parity lit the long fuse leading to the Great Depression.

THE STRONG FED: THE FEDERAL RESERVE IN THE 1920's

The Fed initially began **open market operations**³ in the 1920's to provide income to the regional Federal Reserve Banks. By the end of the decade, open market operations became the Fed's primary monetary policy tool.

Also, in the early part of the decade, the Federal Reserve raised interest rates and contracted the money supply to reverse the inflation that had occurred during the war. This action caused a brief, but deep, recession from January 1920 through July 1921. Afterward, Benjamin Strong, who was the first Governor of the Federal Reserve Bank of New York, emerged as the de facto CEO of the Federal Reserve—largely through the force of his personality.

Strong had a close friendship with the Governor of the Bank of England Montagu Norman, and to help the Bank of England maintain convertibility without devaluing the British pound, the Federal Reserve lowered interest rates in 1927 and 1928—even though an accommodative monetary policy was inappropriate for the booming U.S. economy. This action helped to inflate the U.S. stock market bubble of the late 1920's.

THE FED'S GREATEST FAILURE: THE GREAT CONTRACTION

Strong's death in 1928, at the beginning of the Great Depression, triggered a three-way power struggle within the Fed—involving the Governor of the Federal Reserve Bank of New York (George Harrison), the Federal Reserve Board in Washington, and the Governors of the other Federal Reserve Banks. The Board and the other regional Federal Reserve Banks—either because they believed that prices were too high and wanted to reduce prices back to pre-war levels, or because they resented Strong's support for Britain—pushed for a contractionary monetary policy in 1929, repeatedly blocking Harrison from taking the actions needed to counteract the contraction of the money supply. Thus, the **Great Contraction** began in August 1929 and continued until March 1933.

During the Great Contraction, the Fed failed to perform its lender-of-last-resort function of providing loans to otherwise solvent, but temporarily illiquid, commercial banks.⁴ This meant that many solvent banks that could have survived ended up failing. Also, the Fed reduced its holdings of Treasuries through open market operations; and despite massive gold inflows in 1930 and 1931—the Federal Reserve effectively went to sleep on the world's gold reserves by allowing its reserve ratio to increase to a peak of 83.4%. Had the Fed not existed, commercial banks would have had \$1.05 billion of reserves to expand deposits and loans at this critical moment.⁵

The adverse economic consequences of the Fed's contractionary monetary policy were both global and monumental. These included: massive price deflation (25%); unemployment (1 in 4 Americans); intensifying waves of bank failures; and fire sales of assets, which undermined net worth.

FRANKLIN D. ROOSEVELT: MONETARY CONFUSION

President Franklin D. Roosevelt took office on March 4, 1933, and his confused and contradictory views on monetary policy prolonged the **Great Depression** in the United States. While some urged "reflation,"⁶ which would have been the correct policy, other forces conspired against them.

On April 5, 1933, private households and firms were mandated by an Executive Order to sell gold to the Fed at a price of \$20.67 per ounce; on April 17, 1933, gold exports were forbidden; on June 5, 1933, "gold clauses" (contracts providing the creditor with the option of demanding payment in

The Federal Reserve lowered interest rates in 1927 and 1928—even though an accommodative monetary policy was inappropriate for the booming U.S. economy. This action helped to inflate the U.S. stock market bubble of the late 1920's.

The adverse economic consequences of the Fed's contractionary monetary policy were both global and monumental. These included: massive price deflation (25%); unemployment (1 in 4 Americans); intensifying waves of bank failures; and fire sales of assets, which undermined net worth.

FDR's confused and contradictory views on monetary policy prolonged the Great Depression in the United States.

gold) were abrogated; on June 12, 1933, the London Conference was convened to discuss restoring the gold standard after devaluation; and on July 3, 1933, the London Conference collapsed after FDR sent conflicting instructions to U.S. delegates. In late December, FDR required the Federal Reserve to sell its gold to the Treasury at \$20.67 per ounce. Then on January 31, 1934, FDR signed the **Gold Reserve Act**, which devalued the U.S. dollar by 59% by increasing the gold price from \$20.67 to \$35.00 per ounce.

Necessary price reflation began to occur, but FDR short-circuited it by appointing Marriner Eccles as Chairman of the Federal Reserve Board.

THE ECCLES FED: THE 1937 RECESSION AND A RECORD OF FAILURE

Necessary price reflation began to occur, but FDR short-circuited it by appointing Marriner Eccles (November 15, 1934 – February 3, 1948) as Chairman of the Federal Reserve Board. Eccles was a proto-Keynesian, and he opposed devaluation and reflation; blamed the Great Depression on over-investment by firms and under-consumption by households; favored income redistribution; and thought monetary policy was ineffective, and consequently the Federal Reserve did not expand the money supply.

The Federal Reserve was reorganized into its present structure under the **Banking Act of 1935**. The Act was meant to end confusion at the Fed and to centralize decision-making powers in Washington. The Board of Governors of the Federal Reserve System replaced the Board of Directors; the Secretary of the Treasury and Comptroller of the Currency were removed from the Board; the terms of Board members were increased from 10 to 14 years; Governors of regional Federal Reserve Banks were renamed as Presidents; the Board of Governors was placed in charge of the Federal Reserve System; the Chairman of the Board of Governors was given an executive role; and the Federal Open Market Committee (FOMC) was created. The FOMC was designed to be a balanced body, composed of regional Federal Reserve Bank presidents and members of the Federal Reserve Board, though the FOMC quickly came to be dominated by the Chairman.⁷

The Federal Reserve finally began to increase the money supply in 1939 to finance war-related spending, and by 1943 prices finally exceeded their 1929 level—showing that reflation worked, when it was tried.

Meanwhile, cautious bankers who survived the Great Contraction wanted to keep large excess reserves in case of future bank runs, but Eccles thought such reserves would cause inflation. So, from August 1936 to May 1937, the Federal Reserve doubled the required level of reserves that commercial banks were required to keep at the Fed. Banks responded by contracting their loans and deposits to build new excess reserves above the now higher level of required reserves. This caused another severe recession from May 1937 to June 1938, showing Eccles's experiment to be an economic failure.

Finally, the Federal Reserve began to increase the money supply in 1939 to finance war-related spending, and by 1943 prices finally exceeded their 1929 level—showing that reflation worked, when it was tried.

WORLD WAR II, KOREAN CONFLICT, AND "THE ACCORD"

Through World War II, the Federal Reserve assumed a role subservient to the Treasury. To help the Treasury finance the war, the Fed targeted the long-term Treasury bond rate, keeping it at 2.5%. However, this built inflationary pressure during wartime, though price controls and rationing disguised it. Nonetheless, inflation exploded after the war when the price controls were lifted.

The **Bretton Woods system** was instituted after the war. This system created the **International Monetary Fund (IMF)** and the **World Bank** (and eventually the World Trade Organization (WTO)).⁸ The Bretton Woods system required the United States to exchange gold for U.S. dollars at a fixed price of \$35.00 per ounce, but only with foreign governments or their central banks—not U.S. households or firms. Simultaneously, Bretton Woods required other countries to maintain a pegged exchange rate with the U.S. dollar.⁹ This arrangement is sometimes referred to as the **gold exchange standard**.

Because of Eccles's opposition to monetizing the federal debt, President Harry S Truman replaced Eccles with Thomas B. McCabe (April 1948 to April 1951) as Chairman. As the Korean conflict began, inflation soared, and the Federal Open Market Committee (FOMC) challenged the Treasury's interest rate policy. This led to **the Accord** between Chairman McCabe and Secretary of the Treasury John W. Snyder, which was brokered by Assistant Secretary of the Treasury William McChesney Martin, Jr. on March 4, 1951. This Accord provided for the Federal Reserve to conduct open market operations in Treasury "bills only," allowing the market to determine long-term Treasury bond rates; and it began the Fed's operational independence.

Truman then appointed Martin to succeed McCabe as Chairman, believing Martin would allow the Treasury to recapture the Federal Reserve. Instead, Martin supported the Federal Reserve's newly won independence.

THE MARTIN FED: UNNECESSARY VOLATILITY

During the Martin era (April 2, 1951 – February 1, 1970), monetary policy decisions were largely based on Martin's "feel of the market." In practice, Martin targeted interest rates and acted in a pro-cyclical fashion, whereby the Federal Reserve would add reserves to hold down interest rates when output rose and subtract reserves to maintain interest rates when output fell. This contributed to the short business cycles in the 1950's.

The Federal Reserve's "bills only" approach was dropped during the Kennedy Administration and replaced with Operation Twist. In **Operation Twist**, the FOMC bought Treasury bonds to lower long-term interest rates and spur domestic investment, while simultaneously selling Treasury bills to increase short-term interest rates. The goal was to attract foreign portfolio investment, support the U.S. dollar, and reduce gold outflows. However, Operation Twist is now regarded as a failure. Eventually, economists Milton Friedman, Karl Brunner, and Allan Meltzer became leading critics of Martin.

THE BURNS FED: THE GREAT INFLATOR; GUNNING THE MONEY SUPPLY

Succeeding Martin as Chairman of the Fed was Arthur Burns (February 1, 1970 – March 8, 1978), who became known as the Great Inflator.

In the early 1970's, attempts were made to save the Bretton Woods system of fixed exchange rates tied to the dollar. On August 15, 1971, President Richard Nixon announced his **New Economic Plan**. This plan imposed a 90-day price freeze followed by comprehensive price controls; a 10% tariff on imports, and effectively ended the gold exchange standard, thus removing the last vestiges of a link from the U.S. dollar to gold.

The Bretton Woods system created the IMF, World Bank (and eventually the WTO). It put the U.S. on a gold exchange standard, whereby the United States was required to exchange gold for U.S. dollars, but only with foreign governments or their central banks.

In 1950, the FOMC challenged the Treasury's interest rate policy, resulting in the Accord, which began the Fed's operational independence.

On August 15, 1971, President Richard Nixon effectively ended the gold exchange standard, thus removing the last vestiges of a link from the U.S. dollar to gold.

Chairman Burns followed a go-stop approach with unpredictable swings from loose to tight monetary policy. Stagflation resulted.

Until 1982, Volcker followed a pseudo-monetarism, allowing high nominal and real interest rates to arrest price inflation.

In reaction to the New Economic Plan, Treasury Secretary John Connolly negotiated the Smithsonian Agreement with other G-10 countries. This agreement provided for a devaluation of the U.S. dollar from \$35.00 per ounce of gold to \$42.22 in exchange for the resumption of the Bretton Woods system. However, this agreement quickly fell apart. By March 1973, the era of freely floating exchange rates, not tied to gold, began.

Chairman Burns succumbed to Nixon's pressure to "gun the money supply" while price controls were in place to make the economy appear better than it was when Nixon ran for reelection in 1972. Under Burns, the Fed followed a go-stop approach with unpredictable swings from loose to tight monetary policy, and stagflation resulted.

Briefly succeeding Burns as Chairman in 1978 was G. William Miller, who was appointed by President Jimmy Carter. Miller was a Keynesian who opposed higher interest rates to check inflation and blamed inflation on "real" factors such as oil shortages and labor contracts with cost-of-living wage adjustments. Miller continued Burns's misguided policies. Price inflation soared; and the foreign exchange value of the U.S. dollar collapsed. Carter appointed Miller as Treasury Secretary to remove him from the Fed.

THE VOLCKER FED: BREAKING THE BACK OF INFLATION

President Carter next appointed Paul A. Volcker (August 6, 1979 – August 11, 1987) as Chairman. Until 1982, Volcker followed a **pseudo-monetarism**, under which the Federal Reserve stopped targeting the federal funds rate and claimed that it was targeting monetary aggregates. This allowed high nominal and real interest rates to arrest price inflation; but it was mainly a ruse, designed to shield the Federal Reserve from the blame for the resulting recessions. (Under true monetarism, a central bank would focus on the growth rate of money aggregates to achieve price stability. Monetarism assumes that the velocity of money is stable.)

Volcker overreacted to President Reagan's tax cuts as being inflationary—an error that contributed to the severity of the August 1981 to November 1982 recession. Afterward, Volcker adopted a variety rules-based approaches at different times, and the FOMC abandoned targeting monetary aggregates.

In 1985, Volcker concurred with the **Plaza Accord**, which committed the United States to a depreciation of the foreign exchange value of the U.S. dollar. Then, just two years later in 1987, Volcker concurred with the **Louvre Accord**, which committed the United States to stop the depreciation of the foreign exchange value of the U.S. dollar. The monetary flip-flop from accelerating money supply growth in 1985 to decelerating money supply growth in 1987 to meet U.S. commitments in these accords contributed to the "Black Monday" stock market crash on October 19, 1987.

THE EARLY GREENSPAN FED: RULES-BASED POLICY WORKS

President Reagan appointed Alan Greenspan (August 11, 1987 – January 31, 2006) to follow Volcker as Federal Reserve Chairman. Greenspan had established strong credibility early in his tenure on "Black Monday" as he issued a statement that affirmed the Fed's "readiness to serve as a source of liquidity to support the economic and financial system," and he exerted

behind-the-scenes pressure on commercial banks to provide credit to independent investment banks. These actions prevented a wider financial crisis, and Greenspan's credibility grew even stronger as he helped to nip inflation during the July 1990 to March 1991 recession.

Greenspan also received high marks for increasing the Fed's transparency. In 1994, he began announcing federal funds rate targets publicly after FOMC meetings; and in 1998, he began releasing even more details. During the great boom of the 1990's, Greenspan tightened monetary policy, increasing U.S. interest rates and the foreign exchange value of dollar.

The era under Volcker and Greenspan is generally referred to as the **Great Moderation** (1983-2000), during which the Fed pursued price stability through rules-based monetary policy, much along the lines of the Taylor rule, devised by Stanford economist John Taylor. Generally, the Taylor rule holds that the Fed should increase the federal funds rate as inflationary forces increase and lower it as they decrease. This approach resulted in two long economic booms, low inflation, and lower unemployment rates.

CONCLUSION

Covering more recent events at the Fed and U.S. monetary policy prescriptions for the future is beyond the reach of this history series. Those subjects will be covered in future JEC Republican papers.

In sum, the monetary history experience in America has been:

- Economic freedom and prosperity with an independent central bank, managed by competent individuals (e.g. the First Bank, the Second Bank from 1822-1828, and the Federal Reserve during the Great Moderation);
- Challenges absent a central bank (e.g. 1811-1816, 1836-1915); and
- Recessions, depressions and stagflation when the central bank endures interference from politicians (e.g. the Second Bank from 1816-1822 and 1828-1836, the Eccles Fed, and the Burns Fed.)

The American experience is that economic freedom and prosperity are best served by monetary policy that is rules-based and non-interventionist.

The era under Volcker and Greenspan is generally referred to as the Great Moderation (1982-2000), during which the Fed pursued price stability through rules-based monetary policy. The results of this approach were two long economic booms, low inflation, and lower unemployment rates.

The American experience is that economic freedom and prosperity are best served by monetary policy that is rules-based and non-interventionist.

¹ The \$10.4 billion in U.S. World War I loans included \$4.8 billion to the U.K. and \$3.4 billion to France.

² Felzenberg, Alvin Stephen, *The Leaders We Deserved (And a Few We Didn't)*, Basic Books, New York, 2008, p.207.

³ As noted in Part 1 of this series, open market operations include buying and selling of gold, silver, and government debt securities.

⁴ During the Great Contraction, the Fed actually reduced its loans to banks from \$1.29 billion in 1928 to \$0.12 billion in 1933.

⁵ Timberlake, Richard H., *Monetary Policy in the United States: An Intellectual and Institutional History*, The University of Chicago Press, Chicago, 1993, p.266.

⁶ Notably George Warren, Irving Fisher, and John R. Commons urged reflation.

⁷ Currently, the FOMC is composed of 12 members: seven members from the Board of Governors; the President of the Federal Reserve Bank of New York; and four of the remaining 11 regional Federal Reserve Bank presidents. (The seven other regional bank presidents currently do not vote.)

⁸ The World Trade Organization was finally created in 1995.

⁹ The U.S. dollar was fixed at \$35.00 per ounce of gold, but only foreign central banks could demand gold for U.S. dollars. This was not a gold standard, but a gold exchange standard.

For reference and further reading, see, Timberlake, Richard H., *Monetary Policy in the United States: An Intellectual and Institutional History*, The University of Chicago Press, Chicago, 1993.



EXECUTIVE SUMMARY

UNITED STATES MONETARY POLICY GOING FOWARD

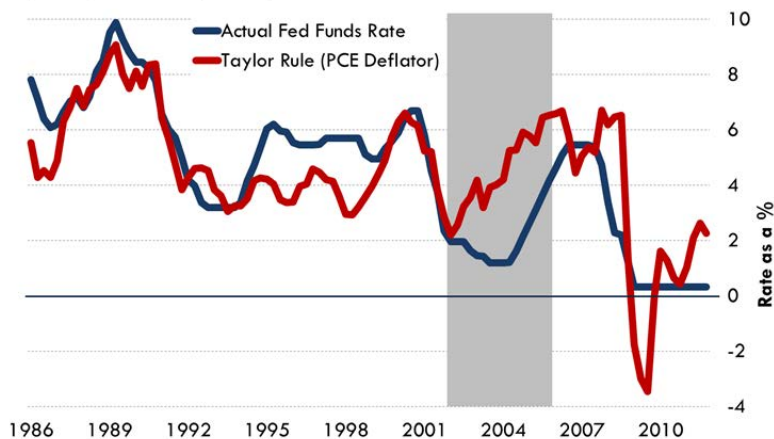
A Single Mandate for Price Stability Will Help Maximize Job Creation and Economic Growth

March 2, 2012

EXECUTIVE SUMMARY

In recent years, the Federal Reserve has shifted away from well-established norms for monetary policy. These policy deviations—which include holding interest rates too low for too long from 2002 to 2005 (Figure 1) and intervening into the market during and after the financial crisis of 2008 (Figure 2 on reverse) —have harmed the U.S. economy. The Federal Reserve’s actions contributed to the inflation of an unsustainable housing bubble; a global financial crisis; and increased market uncertainty, which has inhibited a robust recovery. Avoiding these policy deviations may well have mitigated the economic harm and caused fewer Americans to lose their jobs.

Figure 1. Actual Federal Funds Rate vs. the Rate Prescribed by Taylor Rule, using PCE Deflator since 1986



*Shaded region represents the 2002 to 2005 policy deviations

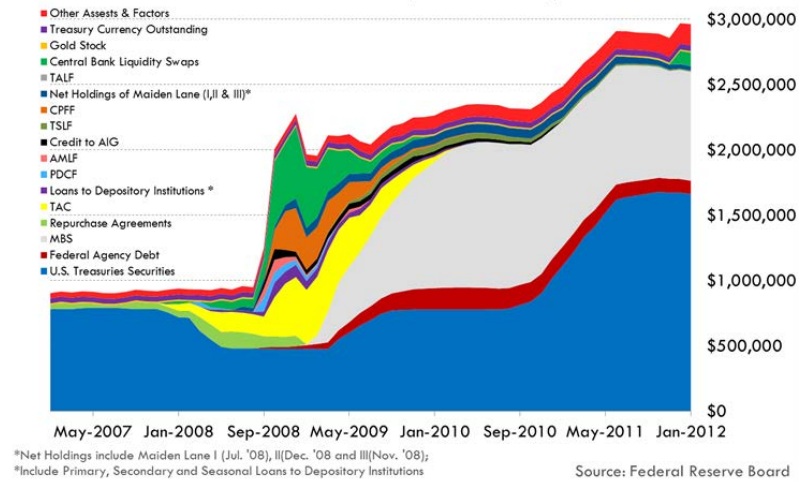
Source: Federal Reserve Board

In the period from 2002 to 2005, the Federal Reserve held interest rates too low for too long. This policy deviation contributed to the housing bubble.

This era of monetary policy experimentation should end; history has demonstrated what works and what doesn’t. During the 1970’s, the Federal Reserve produced destructive stagflation—the combination of high unemployment and high inflation—by pursuing a “go-stop” monetary policy oscillating between a focus on inflation and a focus on employment.

The Federal Reserve’s balance sheet has over tripled since the financial crisis. Its policy stance risks harmful price inflation going forward.

Figure 2. Massive Expansion of the Federal Reserve Balance Sheet since 2006 (millions \$)



Conversely, during the period from 1983 to 2000—known by economists as the “Great Moderation”—the Federal Reserve implemented a rules-based monetary policy that focused on containing inflation. The predictability of monetary policy in that era allowed businesses to confidently engage in long-term planning and investment. As a result, our economy flourished. Two robust economic expansions occurred—the November 1982 to July 1990 economic expansion, which lasted 31 quarters, and the March 1991 to March 2001 expansion, which lasted 40 quarters. Not surprisingly, the unemployment rate trended down over the same period.

In order to ensure a prosperous America in the 21st century, the Federal Reserve should implement a rules-based, inflation-targeting monetary policy going forward in order to promote long-term price stability, economic growth and job creation.

In order to ensure a prosperous America in the 21st century, the Federal Reserve should refocus its efforts on what works. It should implement a rules-based monetary policy going forward in order to promote long-term price stability, economic growth and job creation. This study provides four policy recommendations to achieve rules-based policies going forward:

1. Create a single mandate for the Federal Reserve to maintain long-term price stability;
2. Require the Federal Reserve to monitor asset prices for signs of incipient asset price bubbles;
3. Restrict open market operations to U.S. Treasuries, repurchase agreements, and reverse repurchase agreements during normal times; and
4. Require the Federal Reserve to clearly articulate a lender-of-last-resort policy.



UNITED STATES MONETARY POLICY GOING FORWARD

A Single Mandate for Price Stability Will Help Maximize Job Creation and Economic Growth

March 2, 2012

INTRODUCTION

In recent years, the Federal Reserve has shifted away from well-established norms for monetary policy. These policy deviations contributed to the inflation of an unsustainable housing bubble, a global financial crisis, and increased market uncertainty, which has inhibited a robust recovery. Avoiding these policy deviations may well have mitigated the ensuing negative fallout. Therefore, the Federal Reserve should implement a rules-based monetary policy going forward in order to promote long-term price stability, economic growth and job creation.

The Federal Reserve deviated from norms for monetary policy in the period from 2002 to 2005 by holding its target rate for federal funds too low for too long. This deviation contributed to the inflation of an unsustainable housing bubble and, once the Federal Reserve raised interest rates, a dramatic decline in home prices after they peaked in the summer of 2006. When the housing bubble burst, the severe correction in home prices led to an unprecedented increase in residential foreclosure rates.

During the past decade, the proliferation of mispriced derivative financial instruments in the financial services sector resulted in a systemic vulnerability to defaults in home loans. The unexpectedly high default rates occurred because many widely-held derivatives had as reference assets either (1) residential mortgage loans, (2) securities containing residential mortgage loans, or (3) securities of companies engaged in residential mortgage securitization. As a result, disruptions in the housing market cascaded throughout the financial system, and a global financial crisis ensued. Had monetary policy followed its previous policy route, the severity of the crisis and the subsequent recession likely would have been mitigated.

During and after the financial crisis, the Federal Reserve engaged in several additional unconventional policy actions. Some of these

In recent years, the Federal Reserve has deviated from well-established norms for monetary policy.

These policy deviations contributed to the unsustainable housing bubble, the bursting of which cascaded through the financial system and created a global financial crisis.

actions—such as providing emergency liquidity to the market during the height of the financial crisis—were in keeping with the Federal Reserve’s role as the lender of last resort and its emergency authority. Other actions—such as the Federal Reserve’s controversial intervention into the housing market—are more questionable because they occurred after the acute effects of the crisis had passed. Significantly, these post-crisis actions have sustained the Federal Reserve’s balance sheet at unprecedented levels—triple its pre-crisis size—thereby risking the possibility of harmful future price inflation.

So far, policymakers have paid insufficient attention to the macroeconomic causes of the crisis, especially the Federal Reserve’s monetary policy in the lead-up to, during, and after the crisis.

After discussing some historical context, this study provides four policy recommendations:

- (1) Create a single mandate for long-term price stability;***
- (2) Requiring the Fed to monitor asset prices;***
- (3) Restrict open market operations to U.S. Treasuries, repos, and reverse repos during normal times; and***
- (4) Require the Fed to articulate its lender-of-last-resort policy.***

In light of the housing bubble, the global financial crisis, and the subsequent anemic economic recovery, federal policymakers are reconsidering the oversight and regulation of U.S. financial institutions and markets. So far, federal policymakers have focused on perceived microeconomic causes of the crisis, including: (1) federal housing policies that sought to increase the rate of home ownership; (2) possible market failures; (3) shortcomings in federal oversight and regulatory regimes for financial institutions and markets; and (4) wrongdoing by certain firms and individuals.¹ However, the financial crisis had both macroeconomic and microeconomic causes. Federal policymakers have paid insufficient attention to the macroeconomic causes of the crisis—especially the Federal Reserve’s monetary policy in the lead-up to, during, and after the crisis.

This study begins with a brief discussion of the advantages of rules-based monetary policy over discretionary monetary policies. It then reviews the Federal Reserve’s implementation of monetary policy in light of the rules-versus-discretion dichotomy and finds that discretionary actions by the Federal Reserve have contributed to past economic disruptions and pose a threat to the economy going forward. It concludes by commenting on the Federal Reserve’s recent adoption of an explicit inflation target guiding its monetary policy decisions and by providing four policy recommendations for implementing a rules-based monetary policy going forward: (1) creating a single mandate for the Federal Reserve to maintain long-term price stability; (2) requiring the Federal Reserve to monitor asset prices for signs of incipient asset price bubbles; (3) restricting open market operations to U.S. Treasuries, repurchase agreements, and reverse repurchase agreements during normal times; and (4) requiring the Federal Reserve to clearly articulate a lender-of-last-resort policy.

DESIGNING MONETARY POLICY

Well-reasoned, stable and predictable monetary policy reduces economic volatility and promotes long-term economic growth and job creation. Generally, “rules-based” policies reduce uncertainties and facilitate long-term planning and investment. Rules-based policies are most successful when they are designed “with a clear focus on the longer term, and with allowance for future contingencies.”² Policymakers should set the rules of the game and make a credible commitment to abide by them; but, inflexible or overly prescriptive policies can prevent essential emergency actions during times of crisis.

Conversely, activist, interventionist, and discretionary monetary policies have been historically associated with increased economic volatility and subpar economic performance. Reasons for this are numerous and, in large part, practical. First, it is difficult for policymakers to identify in real time the economic inflection points that mark the beginning of financial crises and recessions; this is due to the extraordinary complexities and dynamism of the economy. Forecasts based on economic models are generally unreliable in identifying such inflection points. Hence, it is very difficult for policymakers to establish a proper baseline from which monetary policy adjustments should be made.

Second, even when economic circumstances are both known and well understood, implementing the appropriate monetary policy response is rife with difficulties. One well-known implementation problem, identified by Nobel laureate Milton Friedman, is the long and variable lag between a monetary policy action and its effects on the economy. Another problem is the “time inconsistency problem,” a theory for which Finn Kydland and Edward Prescott won the 2004 Nobel Prize in Economic Sciences.³ The time inconsistency problem refers to the difficulties created by the time lapse between the announcement of a policy and its implementation. During this time lapse, the optimal policy response may change, and such changes induce policymakers to shift course over time. Taken together, these shortcomings mean discretionary policies are a drag on the economy because they are unpredictable, may be ill-timed, and inappropriate.

These two conclusions about the rules-versus-discretion dichotomy are quite logical, given that private businesses and households make plans based on expectations of future economic conditions. Unpredictable monetary policy creates uncertainty in markets and increases risk premia, thus boosting the cost of capital for business. An investment must yield a higher expected return to induce a

Well-reasoned, stable and predictable monetary policy reduces economic volatility and promotes long-term economic growth and job creation.

Activist, interventionist, and discretionary monetary policies have been historically associated with increased economic volatility and subpar economic performance.

business to invest in it. Consequently, unpredictable monetary policy lowers aggregate investment. This relationship between discretionary policy and reduced investment is particularly acute in illiquid assets, such as buildings, equipment, and software, which are key drivers of long-term job creation.⁴ Similarly, households are less likely to make large purchases, including homes and automobiles as economic uncertainty increases.

RECENT MONETARY POLICY OF THE FEDERAL RESERVE

THE TURBULENT 1970'S AND THE GREAT MODERATION OF THE 1980'S AND 1990'S

During the 1970's, the Federal Reserve implemented "a pattern of 'go-stop' policies, in which swings in policy from ease to tightness contributed to a highly volatile real economy as well as a highly variable inflation rate."

The distinct impact of discretionary and rules-based policy is readily apparent when viewed within the context of U.S. monetary policy over the past 40 years. During the 1970's, the Federal Reserve implemented "a pattern of 'go-stop' policies, in which swings in policy from ease to tightness contributed to a highly volatile real economy as well as a highly variable inflation rate."⁵ These unpredictable and disruptive policies were guided, in part, by a misplaced belief in a simple version of the "Phillips Curve," a widely discredited economic theory that found an inverse relationship between the unemployment rate and the inflation rate. Under the Phillips Curve, the destructive phenomenon of stagflation, which is the combination of stagnant growth, persistent high unemployment, and high inflation, could not occur. However, the Federal Reserve, using the Phillips Curve to guide its monetary policy actions during the 1970's, produced stagflation through its unpredictable policy actions.

Rules based monetary policy, which was implemented under Chairman Volcker and Greenspan, focused on price stability led to the Great Moderation of the 1980's and 1990's.

A sea change in monetary policy occurred with the appointment of Paul Volcker as Chairman of the Board of Governors of the Federal Reserve System in 1979. His mandate was to break the back of inflation. In order to accomplish this goal, he raised the federal funds target rate from 11% in August of 1979 to a range of 18 to 20% by mid-1981 before lowering it incrementally to 8% in mid-1985. The economy suffered back-to-back recessions (January 1980 to June 1980 and July 1981 to November 1982). However, inflation (measured by the consumer price index) dropped from 13.3% in 1979, the year Volcker joined the Federal Reserve, to 3.8% in 1982, and thereafter averaged 3.0% over the next 20 years as Chairman Volcker and, later, Chairman Alan Greenspan implemented, with some exceptions, a transition toward a more rules-based monetary policy.

Comparing other economic indicators under the "go-stop" monetary policy of the 1970's and the relatively predictable monetary policy climate associated with the 1980's to 1990's (i.e., the "Great

Moderation”) highlights the performance advantages of rules-based monetary policy. Most notably, macroeconomic volatility decreased during the 20 years after the 1970’s, with quarterly output volatility (measured by standard deviation) falling in half and quarterly inflation volatility falling by two thirds. Moreover, two robust economic expansions occurred during the same period—the November 1982 to July 1990 economic expansion, which lasted 31 quarters, and the March 1991 to March 2001 expansion, which lasted 40 quarters. Unsurprisingly, the unemployment rate trended down over the same period. By contrast, the longest economic expansion of the 1970’s was only 10 quarters long.⁶

THE TAYLOR RULE AND A MAJOR POLICY DEVIATION IN THE 2000’S

Many economic researchers and commentators have suggested that, after a nearly 20 year period of relative predictability, the Federal Reserve deviated from a rules-based monetary policy during the 2002-2005 period by holding the target federal funds rate too low for too long. However, this critique requires a framework for analysis, and it begs the question: from what did the target rate deviate? One particularly useful method for assessing policy deviations is to compare the historical target federal funds rate to the rate prescribed by the “Taylor rule.”⁷ The Taylor rule, devised by Stanford economist John Taylor, is a monetary policy rule that derives a recommended federal funds rate based on the level of inflation relative to the Federal Reserve’s target inflation rate and the level of real output relative to potential output.⁸ Generally speaking, implementing the Taylor rule would result in the Federal Reserve increasing the federal funds rate as inflationary forces increase and lowering the federal funds rate as inflationary forces decrease. The Taylor rule is both descriptive and prescriptive:

One such rule, the original Taylor rule, fit the data particularly well during the late 1980’s and early 1990’s, a period of generally favorable economic performance. Because this rule also performed well in a variety of macroeconomic models, keeping the volatility of inflation and output relatively low, the rule over time became viewed as a normative prescription for how policy should be set, conditional on a few economic indicators.⁹

The Taylor rule is also robust with respect to specification, meaning a variety of formulations of the rule itself result in similar prescriptions. These theoretical and practical advantages led to a de-facto institutionalization of Taylor rule guidance in the Federal Open Market Committee’s (FOMC’s) decision-making process after its initial

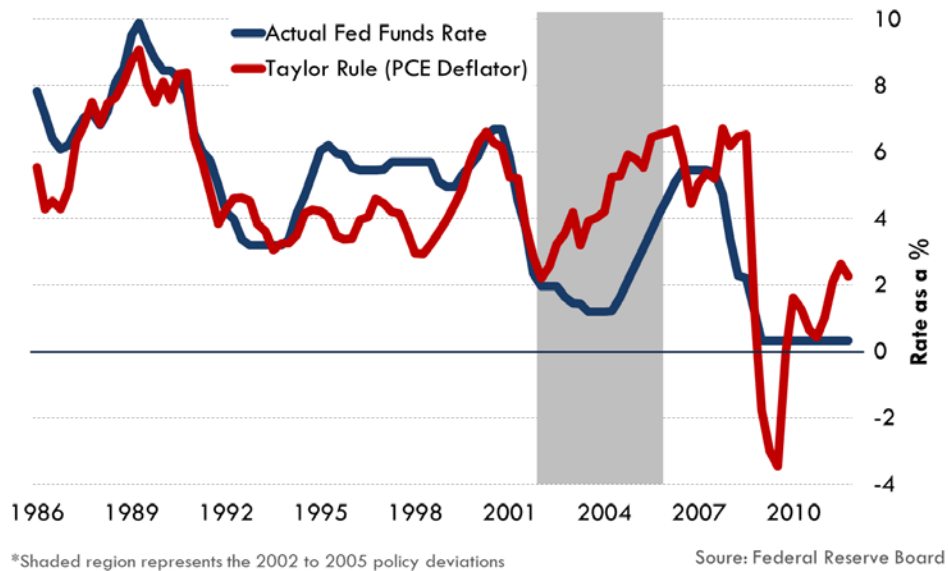
After a nearly 20 year period of relative predictability, the Federal Reserve deviated from so-called “rules-based” monetary policy during the period from 2002 to 2005 by holding the target federal funds rate too low for too long.

Stanford economist John Taylor has argued that the cumulative effect of this monetary ease from 2002 to 2005 contributed to the housing bubble and thereby increased the magnitude of the decline in residential real estate prices on the back end.

release in 1993. The FOMC is composed of 12 voting members and directs the Federal Reserve’s open market operations, which effectuate the purchase and sale of Treasuries and other securities to influence the federal funds interest rate.¹⁰ Members of the Committee often referenced various Taylor rule specifications during the Committee’s regular meetings, and utilized it as a baseline for conducting monetary policy actions. The past effectiveness of the Taylor rule establishes it as a reliable tool for assessing Federal Reserve policy discretion.

During much of the period from 1986-2002 following the initial taming of inflationary forces, the target federal funds rate tracked closely the rate prescribed by the Taylor rule, with the exception that the actual federal funds rate was above the Taylor rule prescription for a period during the mid-to-late 1990’s when the economy was experiencing explosive productivity growth (Figure 1).

Figure 1. Actual Federal Funds Rate vs. the Rate Prescribed by Taylor Rule, using PCE Deflator since 1986



The bursting tech stock bubble in early 2000, the economic shock of the terrorist attacks on September 11, 2001, and the 2001 recession precipitated possible deflation concerns among some members of the FOMC. However, subsequent analysis of the economic indicators suggests that such concerns did not have a strong foundation. For example, headline consumer prices never experienced a year-over-year decline during the period from 2001-2005. In fact, the CPI averaged 2.5% year-over-year growth during that period, and experienced a low average of 1.6% year-over-year growth in 2002. Contemporaneous analysis of inflationary data is difficult; however,

this analysis certainly refutes the contention that the economy needed aggressive monetary stimulus.

Nevertheless, the FOMC voted to reduce target rates from 6.5% in December of 2000 to 1.82% by December of 2001. It then held the target rate below that level for nearly three years before incrementally raising it back to 5.25% by June of 2006. During that period, the target federal funds rate averaged 2.17 percentage points below the level prescribed by the Taylor rule (using quarterly data).

Professor Taylor has argued that the cumulative effect of this monetary ease contributed to the housing bubble and thereby increased the magnitude of the decline in residential real estate prices on the back end of the bursting bubble.¹¹ There is growing, but not universal, agreement among economists about Taylor’s findings.¹² For example, a study by Federal Reserve Bank of Kansas City vice president George Kahn found that “[w]hen the Taylor rule deviations are excluded from [my] forecasting equation, the bubble in housing prices looks more like a bump.”¹³

“[W]hen the Taylor rule deviations are excluded from [my] forecasting equation, the bubble in housing prices looks more like a bump.”

Of course, Federal Reserve monetary policy from 2002 to 2005 was not the sole cause of the housing bubble. Microeconomic factors, including the housing policies of President Bill Clinton and George W. Bush to expand homeownership among historically disadvantaged and low-income households; pressure from federal regulators to lower credit standards for extending residential mortgage loans; the panoply of federal tax preferences for housing; market-distorting housing finance government-sponsored enterprises (Fannie Mae and Freddie Mac); inaccurate ratings reports; and opaque derivatives markets, among others, contributed to the financial imbalances in the U.S. housing market. Other macroeconomic factors, including, most notably, massive capital inflows to the United States from abroad also contributed to the housing bubble.¹⁴ However, the Federal Reserve’s monetary policy in the 2002 to 2005 period were undeniably a contributing factor—one that was wholly avoidable had the FOMC simply followed well-established and stable monetary policy norms rather than engage in discretionary policies.

FINANCIAL CRISIS MONETARY POLICY

The Federal Reserve responded to the bursting housing bubble and the financial crisis of 2008 by taking a series of unconventional actions (see Appendix A). Some of these actions clearly were in keeping with the Federal Reserve’s role as “lender of last resort,” and were initiated pursuant to the Federal Reserve’s emergency authority under section 13(3) of the **Federal Reserve Act**. In times of crisis,

The Federal Reserve responded to the bursting housing bubble and the financial crisis of 2008 by taking a series of unconventional actions.

depositors and other creditors cannot distinguish between healthy and unhealthy banks and other financial institutions. As a result, the flow of credit freezes, and all borrowers are penalized. A lender of last resort “ensure[s] that healthy financial institutions have access to sufficient short-term credit, particularly during [such] times of financial stress.”¹⁵ By addressing the liquidity problems of solvent, but temporarily illiquid banks and other financial institutions during a financial crisis, a lender of last resort can prevent unnecessary failures that could cause a financial crisis to spread to non-financial sectors of the economy and escalate into a depression.

Other Federal Reserve actions—including those preceding and during the crisis, both as general policy and directed to specific individual firms—addressed solvency problems, or selectively allocated credit to markets pre- and post-crisis. Insolvency reflects a fundamental weakness in the balance sheet of a firm because its liabilities are greater than its assets. However, addressing solvency problems in this way can induce firms to take undue risk under the assumption that they will later be “bailed out” if the risks don’t pan out. Selectively allocating credit to favored markets can also distort financial decision making and lead to future asset bubbles. Thus, it is unclear whether this second category of actions was necessary, proper, or even helpful. The sum total of the Federal Reserve’s actions over the past four years has been an unprecedented expansion of the Federal Reserve’s balance sheet, which remains a risk to the sustainability of the economic recovery because it increases the danger of accelerating price inflation as the economy strengthens.

The impact of the bursting housing bubble spread throughout the financial system and credit markets deteriorated well before the market crash in the fall of 2008. Within the bounds of traditional monetary policy, the Federal Reserve began lowering the target federal funds rate from 5.25% in August of 2007 to a range of 0 - 0.125% by January 2009. However, it also simultaneously implemented several discretionary policies in the year leading up to the crisis, including creating specialized lending facilities aimed at supporting financial firms with deteriorating balance sheets. Among these lending facilities were the Term Auction Facility (TAF), the Term Securities Lending Facility (TSLF), and the Primary Dealer Credit Facility (PDCF). The TAF was essentially a repackaging of existing Federal Reserve lending capabilities aimed at alleviating the stigma associated with borrowing from the traditional discount window, while the TSLF and the PDCF represented new lending to unconventional non-commercial bank borrowers. During this same period, the Federal Reserve engaged in the first iteration of an on-

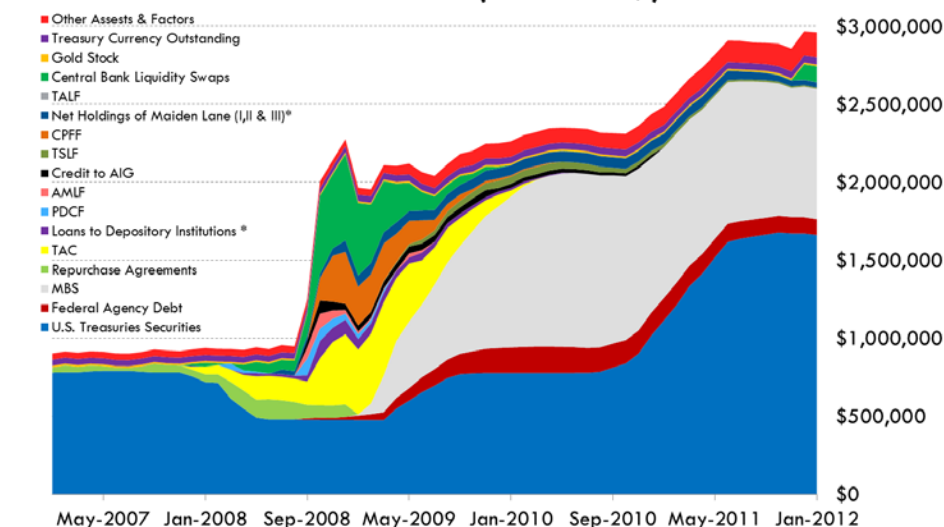
again, off-again bailout policy by facilitating the sale of the investment bank Bear Stearns to JP Morgan-Chase with a loan of almost \$30 billion.¹⁶ It also extended currency swaps to foreign central banks to enable them to stabilize dollar-based markets under their jurisdiction.

Initially, these pre-crisis actions did not increase the size of the Federal Reserve’s balance sheet because the Federal Reserve “sterilized” (or offset) their effects by selling over \$300 billion of its U.S. Treasury holdings during the first several months of 2008. Then, when credit market deterioration accelerated in September 2008, the Federal Reserve expanded its existing crisis lending facilities and introduced new ones. Between September and November 2008, the Federal Reserve introduced the Asset-backed Commercial Paper Money Market Fund Liquidity Facility (AMLF), the Commercial Paper Funding Facility (CPFF), and the Term Asset-backed Loan Facility (TALF). Each facility sought to stabilize the financial system by providing liquidity to key credit markets outside of the traditional banking system. The Federal Reserve also bailed out American International Group (AIG), a large global insurer after allowing the investment bank Lehman Brothers to file for bankruptcy.

Leading into the fall, the Federal Reserve halted its sterilization efforts because it was concerned about disrupting the Treasury market by flooding it with additional supply. Therefore, as firms began drawing heavily upon the myriad lending facilities, the Federal Reserve’s balance sheet expanded massively—doubling to \$2.2 trillion in just six weeks (see Figure 2 on the following page). The Fed’s balance sheet remained at this elevated level through the end of 2008.

Leading into the fall [of 2008], the Federal Reserve halted its sterilization efforts . . . [and] the Federal Reserve’s balance sheet expanded massively—doubling to \$2.2 trillion in just six weeks.

Figure 2. Massive Expansion of the Federal Reserve Balance Sheet since 2006 (millions \$)



*Net Holdings include Maiden Lane I (Jul. '08), II (Dec. '08 and III (Nov. '08);
 *Include Primary, Secondary and Seasonal Loans to Depository Institutions

Source: Federal Reserve Board

The most acute effects of the financial crisis had begun to recede by January 2009, but the Federal Reserve took additional discretionary actions to maintain and even expand the size of its balance sheet.

The most acute effects of the financial crisis had begun to recede by January 2009. Consequently, borrowing through the Federal Reserve's crisis lending facilities declined sharply, as the Federal Reserve's balance sheet fell by \$300 billion in the first four weeks of the year. The size of the crisis lending facilities continued to taper off into the summer months, and, by the end of 2009, the great bulk of the related borrowing had ceased.

If all else remained equal, the size of the Federal Reserve's balance sheet would have tapered down to pre-crisis levels as well. However, the Federal Reserve instead took additional discretionary actions to maintain and even expand the size of its balance sheet.

In early 2009, the Federal Reserve announced a program of large-scale asset purchases, dubbed "quantitative easing 1" (QE1). The mechanical effect of the program was simply to sustain the size of the central bank's balance sheet as the emergency liquidity facilities tapered off; however, the policy implications of the program were significant. Most importantly, the Federal Reserve began to actively support the housing market by purchasing over \$1.25 trillion of residential mortgage-backed securities (RMBS) and \$172 billion of debt securities issued by Fannie Mae, Freddie Mac, and Ginnie Mae.¹⁷ In essence, the Federal Reserve was attempting to manipulate the economy by subsidizing the housing market. It hoped lower home mortgage interest rates would encourage refinancing activity, thereby increasing consumers' disposable income.

Despite the Federal Reserve's extraordinary efforts in 2009, the summer of 2010 brought a marked slowdown in the already anemic economic recovery: job creation sputtered, economic growth slowed and a manufacturing sector recovery melted away. The 2010 mid-term elections drastically changed the composition of Congress, and federal policymakers were unlikely to implement fiscal stimulus programs in an attempt to spur the economy. Within that context, Chairman Bernanke announced in August a second round of quantitative easing (QE2), in which the Federal Reserve would purchase \$600 billion of U.S. Treasury securities over eight months beginning in November 2010. The purchases brought the Federal Reserve's balance sheet to nearly \$3 trillion—more than triple its pre-crisis size.

Despite the Federal Reserve's extraordinary efforts in 2009, the summer of 2010 brought a marked slowdown in the already anemic economic recovery.

More recently, in August and September 2011, the Federal Reserve took two additional unconventional policy actions. First, the Federal Reserve announced in its August FOMC statement that economic conditions warranted "exceptionally low levels for the federal funds rate at least through mid-2013."¹⁸ Federal Reserve policymakers

hoped this so-called “communications channel” would spur economic activity where large-scale asset purchases have fallen flat because it effectively commits the central bank to a highly accommodative monetary policy in the medium-term.¹⁹

Second, the Federal Reserve announced in mid-September that it would implement another unconventional bond-buying program, known as “Operation Twist,” running through the end of June 2012. The program is modeled after the Federal Reserve’s previous “Operation Twist” in the 1960’s, which was considered a failure by most economists because it only lowered long-term interest rates by 10 to 20 basis points at most.²⁰ The effect of this program is to extend the average duration of the Federal Reserve’s Treasury holdings by selling \$400 billion of U.S. Treasuries with maturities of three years or less and using the proceeds to purchase \$400 billion of U.S. Treasuries with maturities of six to 30 years.²¹ Like quantitative easing, which reduces long-term interest rates, the program seeks to stimulate borrowing in order to finance consumer purchases of durable goods and housing and business investment in buildings, equipment, and software. However, unlike quantitative easing, the program will not increase the size of the Federal Reserve’s balance sheet.

In addition to Operation Twist, the Federal Reserve has committed to reinvesting the principal payments from its holdings of federal agency debt and RMBS into agency RMBS. This change is a major policy reversal. Previously, the Federal Reserve had said that its massive intervention into housing finance was temporary and that it would allow its portfolio of federal agency debt and RMBS to decline gradually as principal was repaid. Now, the Federal Reserve has indicated that its portfolio of federal agency debt and RMBS is more or less permanent. Thus, the Federal Reserve will continue to allocate credit selectively toward politically favored borrowers.

Analyzing the impact and appropriateness of the Federal Reserve’s policy over the past four years is challenging. It is difficult to differentiate between the concepts of liquidity and solvency, which are often interconnected. Moreover, dynamic and complex markets are ill-suited to clean, post-hoc dissection and explanation. A lack of consensus among economists about the ultimate effect of the Federal Reserve’s discretionary actions reinforces this view.

However, three observations about the Federal Reserve’s recent actions are worth mentioning:

- (1) The Federal Reserve’s actions have increased market uncertainty. During the height of the crisis, the Federal

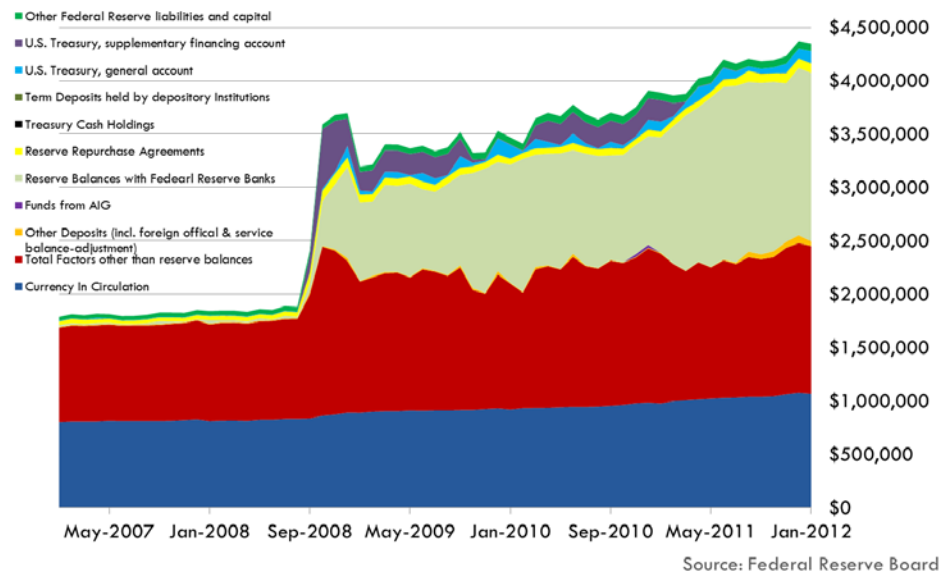
The Federal Reserve’s actions have increased market uncertainty.

Reserve pursued a scattershot approach to addressing market failures. Some programs were poorly articulated, while others were implemented differently than advertised or not at all. With respect to individual firms, the Federal Reserve may have even contributed to the liquidity crisis by “saving” some firms and not others, thereby complicating creditors’ risk calculus and creating moral hazard.

The Federal Reserve’s decision to sustain the size of its post-crisis balance sheet through its quantitative easing programs has increased the risk for accelerating price inflation as the recovery strengthens.

- (2) The Federal Reserve’s decision to sustain the size of its post-crisis balance sheet through its quantitative easing programs has increased the risk for accelerating price inflation as the recovery strengthens. QE1 and QE2 have jointly extended two trillion dollars of credit to the banking sector, as reflected by the staggering increase in the monetary base beginning in the fall of 2008. To date, banks have chosen not to lend these funds out. As a result, excess reserves held on deposit at the Federal Reserve are over \$1.5 trillion (Figure 3). These funds represent a real risk to the economy because if they are lent out more rapidly than Federal Reserve policy can manage, high and destructive inflation will ensue.

Figure 3. Massive Expansion of Federal Reserve Liabilities since 2006, (millions \$)

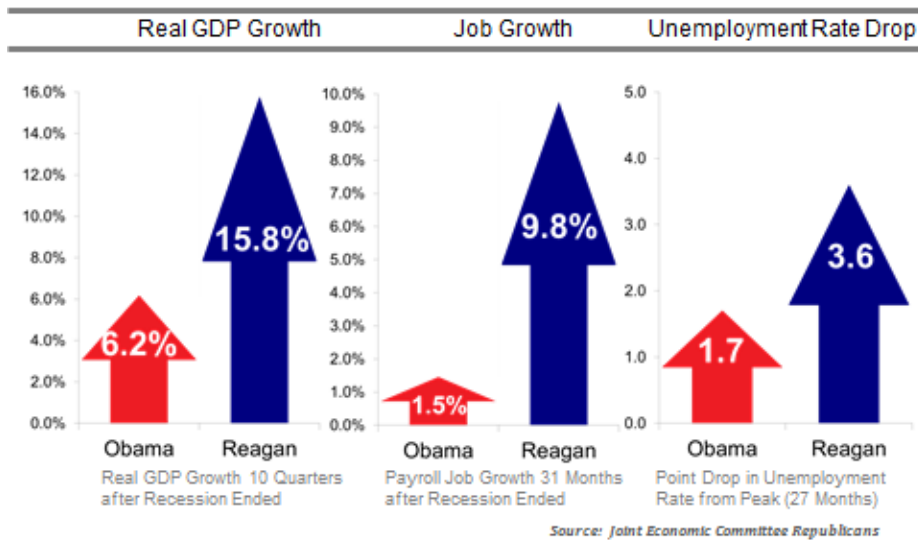


The discretionary monetary policy climate of recent years has once again correlated with a period of increased economic volatility and subpar performance.

- (3) The discretionary monetary policy climate of recent years has once again correlated with a period of increased economic volatility and subpar performance. For example, the current recovery has greatly underperformed relative to the next most severe recession-recovery cycle, which occurred in the early 1980s under President Reagan. In that recession, the economy grew 15.8 percent and the unemployment rate fell 3.6

percentage points in the first ten quarters of the recovery. By contrast, the economy has grown just 6.2 percent and the unemployment rate has only fallen 1.7 percentage points since the recent economic recovery began in June 2009 (Figure 4).

Figure 4. Growth, Jobs and Unemployment
Obama Recovery Loses to Reagan Recovery on Key Measures



A NOTE ON THE FEDERAL RESERVE’S NEW INFLATION TARGET

In its most recent monetary policy statement (January 2012), the Federal Open Market Committee adopted two new policies. The first policy was an extension of an existing one: the Federal Reserve communicated that it intended to hold the rate for federal funds at extremely low levels for an additional year, until late 2014. This action places the Federal Reserve on an even more aggressive monetary policy footing.

The second policy was even more consequential: the Federal Reserve adopted an explicit inflation target. It noted, “[t]he inflation rate over the longer run is primarily determined by monetary policy, and hence the Committee has the ability to specify a longer-run goal for inflation.”²² The FOMC determined that a 2% inflation rate, as measured by the annual change in the price index for personal consumption expenditures, was most appropriate.

Articulating an explicit inflation target was a significant, positive step toward a more rules-based and predictable monetary policy. Many central banks, including the Bank of England, the European Central Bank, and the Reserve Bank of New Zealand, have successfully

The Federal Reserve continues its aggressive monetary policy stance.

Articulating an explicit inflation target was a significant, positive step toward a more rules-based and predictable monetary policy.

However, the Federal Reserve needs to articulate its inflation target with more specificity.

executed monetary policy by using an explicit target for the price inflation rate.²³ The benefits of these targets are three-fold: (1) they increase accountability for monetary policy at the central bank; (2) they increase transparency of central bank monetary policy formation; and (3) they increase the independence of the central bank relative to elected policymakers.

However, there exist unknowns related to the Federal Reserve's implementation of its new target. A primary question relates to the Federal Reserve's tolerance for short- to medium-term inflation, which can also be damaging to economic growth and job creation. Does the new 2% long-term inflation target allow for 5% inflation, or perhaps more, over a short-term time horizon? If so, the current articulation would be insufficiently restrictive. What is the highest tolerable rate of inflation over 5 years? 10 years? The answers to these questions go to the heart of the Federal Reserve's commitment to price stability. A related question focuses on the 2% inflation target itself. Is the 2% inflation rate a middle point, a lower bound, or an upper bound? Again, this kind of clarification is important to revealing the Federal Reserve's true intention with its new policy.

POLICY RECOMMENDATIONS

The Federal Reserve's monetary policy deviations in the period between 2002-2005 contributed to a destructive housing bubble; and new discretionary policies in the wake of the financial crisis of 2008 have increased uncertainty in the market and risk higher inflation in the future. These recent decisions represent a distinct shift away from the rules-based policies that characterized the Great Moderation of the 1980's and 1990's. Since it is well understood that predictable, rules-based policies create macroeconomic certainty and spur long-term economic growth and job creation, it would behoove federal policy makers to return to such a rules-based approach. Thus, the Federal Reserve should implement a rules-based monetary policy going forward. This study makes four recommendations that policymakers should adopt, either individually or jointly, in order to increase the likelihood of a more stable monetary policy:

The Federal Reserve is an outlier—only two central banks out of 47 surveyed by the Bank of International Settlements have an equally weighted mandate in addition to price stability.

(1) Create A Single Mandate For Long-Term Price Stability

The Federal Reserve's dual mandate—stable prices and maximum employment—has been in place since 1977. However, in practice, most central bankers have focused their efforts on achieving long-term price stability. In fact, among the 47 central banks and monetary authorities surveyed by the

Bank of International Settlements in 2009, only the Bank of Canada and the Federal Reserve have additional mandates that are equal to the weight of price stability.²⁴ This is because a consensus exists among economists that monetary policy only affects real output and employment levels in the short term, whereas fundamental market factors (e.g., productivity growth and innovation, which are largely driven by budget, tax, and regulatory policies) affect real output and employment levels in the long term. Because an environment of price stability is conducive to long-run economic growth, achieving long-term price stability necessarily maximizes the sustainable positive effect that monetary policy can have on long-term employment levels.

A recent study by the vice president of the Federal Reserve Bank of St. Louis, Daniel Thornton, echoes this analysis and provides an additional perspective through a historical analysis of the FOMC's statement of policy objectives.²⁵ Interestingly, until December 2008, the Federal Reserve had never mentioned the maximum employment prong of the dual mandate in its statement of policy objectives (which is found within the policy directive the FOMC votes on every six weeks)—a period covering almost 30 years since the dual mandate was created. This first mention occurred just before the Federal Reserve began its first large-scale asset purchase program (QE1). Again, in November of 2010, as the second program (QE2) program was initiated, “[r]eference to the objective of maximum employment was more prominent.”²⁶ Although it is unclear whether these references indicate a substantive change in Federal Reserve policy, they do suggest that Federal Reserve governors might be using the maximum employment prong of the dual mandate as a “cover” for engaging in unconventional and discretionary policies.

The best way to achieve maximum real output and employment through monetary policy is, in fact, to achieve stable prices; and given the Federal Reserve's possible use of the dual mandate as a basis for engaging in disruptive, discretionary policies, policymakers may want to consider simplifying the Federal Reserve's mandate to include only stable prices.²⁷

The dual mandate opens the door to more discretion at the Federal Reserve.

Shifting to a single mandate for long-term price stability will focus the Federal Reserve on what it can control and strengthen its independence.

(2) Require the Federal Reserve to Monitor Asset Prices for Signs of Incipient Asset Price Bubbles

Conventional measures of inflation, including the CPI, missed the last asset bubble.

As a result, the Federal Reserve should monitor asset prices for signs of incipient inflation.

The Federal Reserve should monitor whether or not its selected price index fully captures price movements in the economy. In measuring inflation, the Federal Reserve should consider the effects of monetary policy on asset prices and the potential misallocation of capital. While an easy monetary policy usually flows evenly into the prices of goods and services, an easy monetary policy sometimes flows disproportionately into the prices of certain assets. In such cases, broad-based goods and services price indices (e.g., the consumer price index (CPI), the personal consumption expenditure (PCE) deflator) will not fully capture the price inflation occurring in the economy. As a result, the disproportionate impact of monetary ease on asset prices may cause unsustainable price bubbles in certain assets without broad-based goods and services price indices registering significant price inflation.

The Federal Reserve's response to potential asset price bubbles would vary depending upon the circumstances. No consensus exists as to whether a central bank should simply "lean against" asset price bubbles (i.e., factor them into the mix of indicators signaling inflationary or deflationary forces) or take more aggressive actions to "prick" asset bubbles.²⁸ The policy response might involve monetary policy tightening, supervisory suasion, or regulatory action to reduce the excessive flow of credit to fund speculation in the asset class. Of course, the correct course of action might require a combination of actions. However, regardless of the outcome of the current debate, the impact of monetary policy on individual asset classes should be considered within the context of monetary policymaking.

(3) Restrict Open Market Operations to U.S. Treasury Securities, repurchase agreements, and reverse repurchase agreements during Normal Times

Political allocation of capital will undermine the Federal Reserve independence.

The Federal Reserve's post-crisis purchase of over \$1.25 trillion of residential mortgage-backed securities has been one of its most controversial actions in recent years, and with good reason. By moving beyond the confines of the U.S. Treasury market (including most repurchase agreements and reverse repurchase agreements, which are collateralized by U.S.

Treasuries), the Federal Reserve began allocating credit to selected markets, such as the residential mortgage market, which now features artificially low mortgage rates dampened by the Federal Reserve's purchase program.

The Federal Reserve faces a fundamental threat to its ability to independently conduct U.S. monetary policy when it begins allocating credit outside of the U.S. Treasury market—therein politicizing its actions. Initially, the Federal Reserve's RMBS portfolio was set to run off over time, as mortgages were refinanced, homes were sold, or principal was repaid over time. However, in September 2011, the Federal Reserve reversed this policy and announced that it would begin reinvesting the principal payments from its holdings of federal agency RMBS—thereby holding constant its position in the market—instead of allowing it to taper off as originally proposed. It may or may not be coincidental that the Fed's policy reversal coincided with intense political pressure to support the ailing housing market in order to spur a more robust recovery. Regardless, what is clear is that the Federal Reserve should not insert itself into political debates unless it is absolutely necessary under circumstances similar to those required for the Federal Reserve to invoke its 13(3) authority to extend emergency loans.

(4) Require the Federal Reserve to Articulate a Clear Lender-of-Last-Resort Policy to Govern Future Crises

In the wake of the financial crisis, Chairman Bernanke justified the extraordinary steps taken by the Federal Reserve to bail out several firms that were previously outside its regulatory purview by noting, "Because the United States has no well-specified set of rules for dealing with the potential failure of systemically critical non-depository financial institutions, we believed that the best of the bad options available was to work with the Treasury to take the actions we did to avoid those collapses."²⁹ To be sure, in its nearly 100 year history, the Federal Reserve has never clearly articulated its lender-of-last resort strategy.³⁰ Well-known economist and Federal Reserve historian Allan Meltzer clearly describes the problems this policy void creates:

The absence of a [lender-of-last-resort] policy has three unfortunate consequences. First, uncertainty increases. No one can know what will be done.

In its nearly 100 year history, the Federal Reserve has never clearly articulated its lender-of-last resort strategy.

The lack of a lender-of-last-resort policy increases uncertainty, encourages political maneuvering by troubled firms, and creates moral hazard.

Second, troubled firms have a stronger incentive to seek a political solution. They ask Congress or the administration for support or to pressure the Federal Reserve or other agencies to save them from failure. Third, repeated rescues encourage banks to take greater risk and increase leverage. This is the well-known moral hazard problem.³¹

Articulating a lender-of-last-resort policy will mitigate these negative consequences.

Requiring the Federal Reserve to clearly establish a lender-of-last resort policy—or at a minimum, a framework or set of guidelines—will decrease uncertainty in the market during a future crisis and mitigate the moral hazards created by the legacy of the recent “too-big-too-fail” bailouts. A clear lender-of-last resort policy will also provide policymakers a benchmark against which oversight can be conducted.

CONCLUSION

This study suggests four possible Federal Reserve reforms that policymakers may want to consider to ensure a stable monetary policy going forward.

- (1) Creating a single mandate for price stability;
- (2) Requiring the Federal Reserve to monitor asset prices for signs of incipient asset price bubbles;
- (3) Restricting open market operations to U.S. Treasury securities, repurchase agreements, and reverse repurchase agreements during normal times; and
- (4) Requiring a clear lender-of-last-resort policy.

Each reform seeks stability through increased transparency and predictability. Concurrent with policymakers’ consideration of these reforms, the Federal Reserve itself should outline a clear exit strategy from today’s discretionary climate and begin fostering a climate characterized by flexible, rules-based policies.

APPENDIX A: UNCONVENTIONAL LENDING FACILITIES AND BAILOUTS

Federal Reserve Action	Start Date	Description
Term Auction Facility (TAF)	12/12/2007	The TAF auctioned funds to depository institutions under terms similar to the Federal Reserve’s discount window. The TAF initially auctioned up to \$20 billion every two weeks, but this amount was increased on several occasions to as much as \$150 billion every two weeks.
International Swap Lines	12/12/2007	The Federal Reserve provided dollars temporarily to foreign central banks in exchange for foreign currency collateral and interest, enabling them to stabilize dollar-based markets within their jurisdiction.
Term Securities Lending Facility (TSLF)	3/11/2008	The TSLF allowed primary dealers (e.g., investment banks) to post collateral and temporarily swap illiquid assets for highly liquid assets such as U.S. Treasuries in order to increase liquidity in financial markets.
Federal Reserve bails out Bear Stearns	3/14/2008	The Federal Reserve facilitated the sale of the investment bank Bear Stearns to JP Morgan through a nearly \$30 billion loan—the first financing of a non-commercial bank institution in four decades.
Primary Dealer Credit Facility (PDCF)	3/16/2008	The PDCF sought to improve broker dealers’ access to liquidity in the overnight loan market banks use to meet their reserve requirements.
Federal Reserve bails out AIG after allowing Lehman Brothers to fail	9/16/2008	Just days after allowing the investment bank Lehman Brothers to fail, the Federal government effectively nationalized the insurer American International Group and the Federal Reserve lent the firm \$85 billion.
Asset-backed Commercial Paper Money Market Fund Liquidity Facility (AMLF)	9/19/2008	The AMLF made non-recourse loans to banks to purchase asset-backed commercial paper. The AMLF would soon be superseded in importance by the creation of the Commercial Paper Funding Facility.
Commercial Paper Funding Facility (CPFF)	10/7/2008	The CPFF was used to purchase highly rated secured and unsecured commercial paper from issuers. It was the first Federal Reserve facility in modern times with an ongoing commitment to purchase assets, as opposed to lending against assets, and the first time in 50 years that the Federal Reserve provided financial assistance to non-financial firms.
Money Market Investor Funding Facility (MMIFF)	10/21/2008	The MMIFF was created to lend up to \$540 billion to private sector special purpose vehicles that invest in commercial paper, but the facility expired at the end of October 2009 without ever being used.
Term Asset-backed Loan Facility (TALF)	11/25/2008	The TALF addressed problems in the market for asset-backed securities (ABS). Using this facility, the Federal Reserve made non-recourse loans to private U.S. companies that had a relationship with a primary dealer to purchase recently issued, highly rated ABS.
Federal Reserve bails out Citigroup	1/16/2009	The Federal Reserve worked jointly with the U.S. Treasury and the Federal Deposit Insurance Company to provide a package of guarantees, liquidity access and capital to Citigroup.

¹ Initial investigation into these areas culminated in the enactment of the *Dodd-Frank Wall Street Reform and Consumer Protection Act*. PL 111-203 (July 21, 2010).

² See Chapter 3, “Design of Fiscal, Monetary, and Financial Policies,” *Economic Report of the President together with the Annual Report of the Council of Economic Advisors* (1990).

³ See Kydland, Finn E. and Prescott, Edward C., “Rules Rather than Discretion: The Inconsistency of Optimal Plans,” *Journal of Political Economy* 85/3 (1977); Barro, Robert J. and Gordon, David B., “Rules, Discretion and Reputation in a Model of Monetary Policy,” NBER Working Paper No. 1079 (1983); see also Dennis, Richard, “Time-Inconsistent Monetary Policies: Recent Research,” *Federal Reserve Bank of San Francisco Economic Letter* (2003).

⁴ See Greenspan, Alan, “Activism,” *Council on Foreign Relations* (March 3, 2011).

⁵ “The Great Moderation,” Remarks by Governor Ben S. Bernanke at the meetings of the Eastern Economic Association (2004).

⁶ Blanchard, Olivier and Simon, John, “The Long and Large Decline in U.S. Output Volatility,” *Brookings Papers on Economic Activity* 32/1 (2001).

⁷ For a historical overview of the development of the Taylor rule, see Also, Pier Francesco, Kahn, George and Leeson, Robert, “The Taylor Rule and the Transformation of Monetary Policy,” *Federal Reserve Bank of Kansas City Research Working Papers RWP 07-11* (2007).

⁸ The general formulation of the Taylor rule is as follows: $i_t = rr^* + \pi_t + \beta(\pi_t - \pi^*) + \gamma(y_t - y^*)$; where i_t is the recommended policy rate; rr^* is the equilibrium real interest rate (assumed to be 2% in the original formulation of the Taylor rule); $(\pi_t - \pi^*)$ is the difference between the inflation rate and its long-run target (with π^* assumed to be 2% in the original version); and $(y_t - y^*)$ is the output gap, or the difference between real GDP and potential GDP; and β and γ are both set to 0.5 in the original version. See Kahn, George A., “Taylor Rule Deviations and Financial Imbalances,” Federal Reserve Bank of Kansas City (2010).

⁹ *Ibid.* at 65.

¹⁰ The 12 voting members consist of “the seven members of the Board of Governors of the Federal Reserve System; the president of the Federal Reserve Bank of New York; and four of the remaining eleven Reserve Bank presidents, who serve one-year terms on a rotating basis. The rotating seats are filled from the following four groups of Banks, one Bank president from each group: Boston, Philadelphia, and Richmond; Cleveland and Chicago; Atlanta, St. Louis, and Dallas; and Minneapolis, Kansas City, and San Francisco. The seven non-voting Reserve Bank presidents “attend the meetings of the Committee, participate in the discussions, and contribute to the Committee’s assessment of the economy and policy options.” Board of Governors of the Federal Reserve System, “Federal Open Market Committee,” available at <http://www.federalreserve.gov/monetarypolicy/fomc.htm>

¹¹ Taylor, John, “Housing and Monetary Policy,” Presentation for the Policy Panel at the Symposium on Housing, Housing Finance, and Monetary Policy, hosted by the Federal Reserve Bank of Kansas City in Jackson Hole, Wyoming (2007).

¹² See, e.g., Kahn, George, “Taylor Rule Deviations and Financial Imbalances,” Federal Reserve Bank of Kansas City (2010); Jarocinski, Marek and Smets Frank, “House Prices and the Stance of Monetary Policy,” European Central Bank (2008); Ahrend, R., Cournede, B, and Price, R, “Monetary Policy, Market Excesses and Financial Turmoil,” *OECD Economics Department Working Papers No. 597* (2008). An alternative theory, posited by Chairman Ben Bernanke, holds that a “global savings glut,” which resulted in significant international capital flows into the U.S. economy, was a primary factor in causing the housing bubble. Bernanke, Ben, “International Capital Flows and the Returns to Safe Assets in the United States,” *Financial Stability Review No. 15*, Banque de France (2011).

¹³ Kahn, George, “Taylor Rule Deviations and Financial Imbalances,” Federal Reserve Bank of Kansas City (2010).

¹⁴ Bernanke, Ben, "International Capital Flows and the Returns to Safe Assets in the United States 2003-2007," Financial Stability Review No. 15, Banque de France (2011).

¹⁵ Carlson, John et. al, "Credit Easing: A Policy for a Time of Financial Crisis," Federal Reserve Bank of Cleveland (2009).

¹⁶ "Maiden Lane Transactions," Federal Reserve Bank of New York, available at <http://www.newyorkfed.org/markets/maidenlane.html>.

¹⁷ Federal Housing Finance Agency, "Data as of October 1, 2010 on Treasury and Federal Reserve Purchase Programs for GSE and Mortgage-Related Securities," available at www.fhfa.gov/webfiles/17990/TreasFED10012010.pdf.

¹⁸ Press Release, Federal Open Market Committee Statement (August 9, 2011).

¹⁹ Historical evidence demonstrates that clear and credible Federal Reserve communications about forthcoming monetary policy actions can influence the policy's effectiveness. See, "Central Bank Talk and Monetary Policy," Remarks by Governor Ben S. Bernanke at the Japan Society Corporate Luncheon (2004).

²⁰ See, Bernanke, Ben, Reinhart, Vince, and Sack, Brian, "Monetary Policy Alternatives at the Zero Bound: An Empirical Assessment," Federal Reserve Board (2004).

²¹ Press Release, Federal Open Market Committee Statement (September 21, 2011).

²² Press release, Federal Open Market Committee Statement (January 25, 2012).

²³ Cobham, David (Ed.), "Twenty Years of Inflation Targeting: Lessons Learned and Future Prospects," Cambridge University Press (2010).

²⁴ Ortiz, Guillermo and Yam, Joseph (Chairs of the Central Bank Governance Group), "Issues in the Governance of Central Banks," Bank of International Settlements (May 2009).

²⁵ Thornton, Daniel, "What Does the Change in the FOMC Statement of Objectives Mean?" *Federal Reserve Bank of St. Louis Economic Synopses No. 1* (2011).

²⁶ *Ibid.*

²⁷ See Thornton, Daniel, "The Case for 'Inflation First' Monetary Policy," *Federal Reserve of St. Louis Economic Synopses No. 47* (2009).

²⁸ For an example of an analysis suggesting "asset prices are relevant only to the extent they may signal potential inflationary or deflationary forces," see, Bernanke, Ben and Gertler, Mark, "Monetary Policy and Asset Price Volatility," NBER Working Paper No. 7559 (200).

²⁹ "Federal Reserve Policies to Ease Credit and Their Implications for the Fed's Balance Sheet," Remarks by Chairman Ben S. Bernanke at the National Press Club Luncheon, National Press Club, Washington D.C. (2009).

³⁰ See Meltzer, Allan H., "Policy Principles: Lessons from the Fed's Past," in *The Road Ahead for the Fed*, Hoover Institute (2009).

³¹ *Ibid.* at 22.

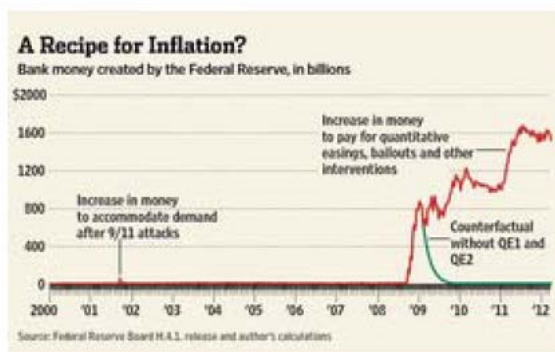
The Dangers of an Interventionist Fed

A century of experience shows that rules lead to prosperity and discretion leads to trouble.

By John B. Taylor

America has now had nearly a century of decision-making experience under the Federal Reserve Act, first passed in 1913. Thanks to careful empirical research by Milton Friedman, Anna Schwartz and Allan Meltzer, we have plenty of evidence that rules-based monetary policies work and unpredictable discretionary policies don't. Now is the time to act on that evidence.

The Fed's mistake of slowing money growth at the onset of the Great Depression is well-known. And from the mid-1960s through the '70s, the Fed intervened with discretionary go-stop changes in money growth that led to frequent recessions, high unemployment, low economic growth, and high inflation.



In contrast, through much of the 1980s and '90s and into the past decade the Fed ran a more predictable, rules-based policy with a clear price-stability goal. This eventually led to lower unemployment, lower interest rates, longer expansions, and stronger economic growth.

Unfortunately the Fed has returned to its discretionary, unpredictable ways, and the results are not good. Starting in 2003-05, it held interest rates too low for too long and thereby encouraged excessive risk-taking and the housing boom. It then overshot the needed increase in interest rates, which worsened the bust. Now, with inflation and the economy picking up, the Fed is again veering into "too low for too long" territory. Policy

indicators suggest the need for higher interest rates, while the Fed signals a zero rate through 2014.

It is difficult to overstate the extraordinary nature of the recent interventions, even if you ignore actions during the 2008 panic, including the Bear Stearns and AIG bailouts, and consider only the subsequent two rounds of "quantitative easing" (QE1 and QE2)—the large-scale purchases of mortgage-backed securities and longer-term Treasuries.

The Fed's discretion is now virtually unlimited. To pay for mortgages and other large-scale securities purchases, all it has to do is credit banks with electronic deposits—called reserve balances or bank money. The result is the explosion of bank money (as shown in the nearby chart), which now dwarfs the Fed's emergency response to the 9/11 attacks.

Before the 2008 panic, reserve balances were about \$10 billion. By the end of 2011 they were about \$1,600 billion. If the Fed had stopped with the emergency responses of the 2008 panic, instead of embarking on QE1 and QE2, reserve balances would now be normal.

This large expansion of bank money creates risks. If it is not undone, then the bank money will eventually pour out into the economy, causing inflation. If it is undone too quickly, banks may find it hard to adjust and pull back on loans.

The very existence of quantitative easing as a policy tool creates unpredictability, as traders speculate whether and when the Fed will intervene again. That the Fed can, if it chooses, intervene without limit in any credit market—not

only mortgage-backed securities but also securities backed by automobile loans or student loans—creates more uncertainty and raises questions about why an independent agency of government should have such power.

The combination of the prolonged zero interest rate and the bloated supply of bank money is potentially lethal. The Fed has effectively replaced the entire interbank money market and large segments of other markets with itself—i.e., the Fed determines the interest rate by declaring what it will pay on bank deposits at the Fed without regard for the supply and demand for money. By replacing large decentralized markets with centralized control by a few government officials, the Fed is distorting incentives and interfering with price discovery with unintended consequences throughout the economy.

For all these reasons, the Federal Reserve should move to a less interventionist and more rules-based policy of the kind that has worked in the past. With due deliberation, it should make plans to raise the interest rate and develop a credible strategy to reduce its outsized portfolio of Treasuries and mortgage-backed securities.

History shows that reform of the Federal Reserve Act is also needed to incentivize rules-based policy and prevent a return to excessive discretion. The Sound Dollar Act of 2012, a subject of hearings at the Joint Economic Committee this week, has a number of useful provisions. It removes the confusing dual mandate of "maximum employment" and "stable prices," which was put into the Federal Reserve Act during the interventionist wave of the 1970s. Instead it gives the Federal Reserve a single goal of "long-run price stability."

The term "long-run" clarifies that the goal does not require the Fed to overreact to the short-run ups and downs in inflation. The single goal wouldn't stop the Fed from providing liquidity when money markets freeze up, or serving as lender of last resort to banks during a panic, or reducing the interest rate in a recession.

Some worry that a focus on the goal of price stability would lead to more unemployment. History shows the opposite.

One reason the Fed kept its interest rate too low for too long in 2003-05 was concern that raising the interest rate would increase unemployment in the short run. However, an unintended effect was the great recession and very high unemployment. A single mandate would help the Fed avoid such mistakes. Since 2008, the Fed has explicitly cited the dual mandate to justify its extraordinary interventions, including quantitative easing. Removing the dual mandate will remove that excuse.

A single goal of long-run price stability should be supplemented with a requirement that the Fed establish and report its strategy for setting the interest rate or the money supply to achieve that goal. If the Fed deviates from its strategy, it should provide a written explanation and testify in Congress. To further limit discretion, restraints on the composition of the Federal Reserve's portfolio are also appropriate, as called for in the Sound Dollar Act.

Giving all Federal Reserve district bank presidents—not only the New York Fed president—voting rights at every Federal Open Market Committee meeting, as does the Sound Dollar Act, would ensure that the entire Federal Reserve system is involved in designing and implementing the strategy. It would offset any tendency for decisions to favor certain sectors or groups in the economy.

Such reforms would lead to a more predictable policy centered on maintaining the purchasing power of the dollar. They would provide an appropriate degree of oversight by the political authorities without interfering in the Fed's day-to-day operations.

Mr. Taylor is a professor of economics at Stanford and a senior fellow at the Hoover Institution. This op-ed is adapted from his testimony this week before the Joint Economic Committee, which drew on his book "First Principles: Five Keys to Restoring America's Prosperity." (W.W. Norton, 2012).

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OPINION

Congress Finally Takes on the Fed

By George Melloan

Two bills now before Congress make it clear that legislators are finally giving serious attention to a much-needed reform of the Federal Reserve System.

The most recent effort is the Sound Dollar Act (H.R. 4180) introduced in the House in March by Rep. Kevin Brady (R., Texas), vice chairman of the Joint Economic Committee. A companion bill was put before the Senate by Mike Lee (R., Utah). The Sound Dollar Act has far more

The Fed's near-zero interest rate policy has punished savers without producing a strong recovery. Two bills in Congress would rein in the central bank.

hope of passage than the more radical H.R. 1098, introduced by Rep. Ron Paul (R., Texas) last year. H.R. 1098 would repeal the legal tender laws, end the Fed's monopoly on money creation, and allow the private production and use of gold and silver as specie.

The Sound Dollar Act, though more modest in its goals, would be a good start in reforming the way the U.S. dollar is created and managed. It would give the Fed a single mandate: to maintain price stability. The present dual mandate, which adds maintaining full employment as a requirement, never made any sense when it

was enacted during the Carter administration in 1978. That has been amply demonstrated by the experience of the last three and a half years.

The Fed doesn't have the capability to maintain full employment and its efforts to do so have produced nothing but trouble. That mandate is the justification the Fed has cited for the near-zero interest rate policy it adopted in 2008 and promises to continue through 2014.

How has that worked out? We are suffering through one of the weakest recoveries on record. Unemployment remains above 8% and would be even higher were it not for the number of workers who have given up looking for a job. Meanwhile, the Fed's near-zero interest rate policy has reduced returns on the savings of individual investors and given managers of defined-benefit pension funds multibillion-dollar headaches as they struggle to earn enough on their portfolios to meet their obligations.

The Fed's policy clearly hasn't provided "full employment." What it does do is give the federal government cheap financing, currently only 2% on 10-year Treasuries, nearly one point less than inflation. It thus supports the current administration's profligacy, which has added \$4.9 trillion to the national debt since it came to power. Federal debt has risen 72% since the Democrats took over Congress in 2007. That's why Rep. Barney Frank (D., Mass.) and other "progressives" in Congress have already mounted a tooth-and-nail campaign against Mr. Brady. They of course still insist that their main interest is "full employment."

Eliminating the dual mandate



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would be a good first step, but Mr. Brady doesn't stop there. His bill is also a move to partly depoliticize the Fed. It would give all 12 regional Federal Reserve bank presidents a permanent vote on the Federal Open Market Committee, which sets monetary policy. Currently only the New York Fed president has a permanent vote. There are only four other voting seats for presidents and they rotate among the other 11 regional banks.

The change would mean that the 12 presidents, who are appointed by boards of directors made up of local bankers and business leaders in their regions, would outnumber the seven governors, who are appointed by the

president of the U.S. with the advice and consent of the Senate. In other words, the Federal Open Market Committee would become more responsive to the opinions and needs of the private sector and less to the political pressures applied by Congress and the White House.

This is a not a sure-fire fix. Private interests beg for easy money, too. But the regional presidents, by and large, have a better feel for what's happening in their home regions than the Fed governors sealed up in their Beltway cocoon. That's been demonstrated recently by the fact that it's been regional presidents who have been the only dissenters against Fed Chairman Ben Bernanke's determina-

tion to maintain the near-zero interest rate policy through 2014.

Mr. Brady's Sound Dollar Act would also end another pernicious step taken by the Fed after the 2008 crash: credit allocation. The Fed bailed out the banks and housing industry by mass purchases of the toxic mortgage-backed securities that were responsible for financial sector freeze-up. The Sound Dollar Act would limit the Fed to purchases of Treasury securities.

Decision makers would have to find ways other than credit allocation to clean up messes made by ill-considered government policies, such as the federally enforced subprime lending that poisoned the mortgage-backed security market in 2008. There were indeed other ways available in 2008, but Mr. Bernanke, New York Fed President Timothy Geithner (now Treasury secretary) and Treasury Secretary Henry Paulson chose the easy way out.

The Sound Dollar Act is full of good ideas, but it can't become law until next year and only then if there is a new president and a more favorable Congress. The dollar crisis may not wait. The Fed has become the lender of first resort to a financially irresponsible government. As the Fed creates new money to finance massive federal deficits, further price inflation is a sure bet. Congress is finally getting serious, but it's very late in the day.

Mr. Melloan, a former columnist and deputy editor of the Journal editorial page, is the author of "The Great Money Binge: Spending Our Way to Socialism" (Simon & Schuster, 2009).