

Monetary Policy and the Financial Crisis of 2007-2008

Robert Genetski, March 12, 2014

Summary

An analysis of monetary policy prior to and during the recent financial crisis indicates the Federal Reserve's policy clearly contributed to the financial crisis and may well have been the proximate cause of the worst financial collapse since the Great Depression.

Recently released transcripts reveal Federal Reserve members failed to consider how their own policies might be contributing to early signs of financial stress. The transcripts show how the Fed experimented with its monetary tools as financial problems became worse. The experiment led the Fed to sell hundreds of billions of dollars of securities. Such sales reduce liquidity and restrict business activity. Central bank sales of securities at a time of growing financial market turbulence were a unique and disturbing response to the crisis.

The transcripts provide useful insights into why the Fed experimented with its monetary tools, why it continued the experiment as financial conditions deteriorated, and why it never examined or even considered how its policies might be contributing to the stress in financial markets.

The Fed was created specifically to prevent the type of financial crisis that recently occurred. An examination of how monetary policies contributed to the financial turmoil and why the Fed failed to contain it are important for avoiding future periods of monetary-induced economic instability.

A brief history of the Federal Reserve

The Federal Reserve was created by Congress in 1913, mostly in response to the Financial Panic of 1907. At the time of the panic the US was on a fairly strict gold standard. With such a standard, exports of gold had reduced the money supply and produced a mild downturn. The downturn became worse when loan losses at certain large banks led the public to question the safety of the banking system. To protect their funds, the public began exchanging their bank deposits for currency. This led to a contraction in liquidity and credit that produced the panic.

The Panic of 1907 came to an end when the US Treasury shifted its cash balances into banks and when several large banks voluntarily increased loans to more vulnerable ones. Although the economy rebounded, the severity of the downturn led to support for establishing a central bank with powers to create liquidity and prevent future financial crises. The Federal Reserve was created specifically to provide sufficient liquidity in times of financial stress so the nation could avoid another financial crisis.

In their definitive analysis, *A Monetary History of the United States: 1867-1960*, Friedman and Schwarz document how the Fed not only failed to achieve its objective, but how Fed policies were the likely cause of some of the nation's worst recessions.

The Fed appears to have brought on the recession in 1920-21 by sharply raising its discount rate from 4.5% to 6.0% only one month before the downturn began. Fed policies also contributed to the collapse that ushered in the Great Depression, first by selling large amounts of securities prior to the recession, and then by failing to restore liquidity as the economy collapsed. A policy experiment by the Fed also triggered the sharp downturn beginning in June of 1937. The recession followed the culmination of a doubling of reserve requirements immediately prior to the onset of the recession. Friedman and Schwartz note how in 1920-21 and again in 1937-38 the Fed “took vigorous action with untried tools that produced a sharp retardation in the rate of growth of the stock, followed shortly by an absolute decline.”

Transcripts of Fed meetings during the recent financial crisis bear an uncanny resemblance to those during the ill-fated deliberations and decisions of the 1920s and 1930s. Much of the confusion surrounding policy in both periods involves a misunderstanding of concepts such as liquidity, credit and the power of the Fed’s monetary tools. It helps to clarify some of these concepts before turning to the deliberations and developments during the recent financial crisis.

Some basics on liquidity, credit and Fed policy

Any analysis of Fed Policy should make a clear distinction between the terms *liquidity* and *credit*. Although the two concepts are closely related it helps to draw a clear distinction. Liquidity refers specifically to money assets such as currency and bank deposits. The supply of liquidity is primarily controlled by the Fed. The supply of credit is primarily controlled by lenders and borrowers. The two concepts are closely related since additional liquidity facilitates the expansion of credit while a shortage of liquidity makes credit more difficult to obtain.

The Fed has extensive power to control liquidity and thereby influence the availability of credit. To increase liquidity it can buy securities, loan funds or lower the amount of reserves banks must hold in reserve against their deposits. By reversing these procedures the Fed can restrict liquidity. Given the complexity of the monetary process, there are significant unknowns regarding both the timing and the impact each method has on the nation’s liquidity.

The most common method for controlling liquidity is for the Fed to simply buy or sell securities. When it wants to increase liquidity the Fed buys securities from the public and pays by crediting the accounts of the sellers with new cash balances. The creation of new cash balances is the first step in the process of increasing money or liquidity. Newly-created cash balances are sometimes referred to as *high-powered money*. The term high-powered money reflects the *potential* for the newly created cash to increase liquidity by many times over the initial amount. The potential becomes a reality if the cash balances are kept in the banking system and if banks loan or invest a portion of the new deposits.

There are two situations where an increase in high-powered money will not create a multiple increase in liquidity. One is if the individuals selling the securities decide to hold their new balances in the form of currency. The second is when banks choose not to loan or invest new deposits. In either case, an increase in either the ratio of deposits to currency or deposits to bank reserves can increase liquidity. A decline in these ratios would decrease liquidity.

While decisions by individuals and banks can influence the amount of overall liquidity, the Fed has the power to offset their influence. To do so the central bank has to monitor the extent to which these ratios might be changing and adjust its policy to offset those changes. The most normal, basic and straightforward way for the Fed to do so is either to buy or sell securities when there is a need to increase or restrict liquidity.

Fed Policy from Boom to Bust

In the first decade of the 21st Century the US experienced both a speculative boom and a financial bust. Based on the behavior of its most basic monetary tool—purchases and sales of securities—Fed policy was instrumental in producing both the boom and the bust.

Amid the recession in 2001 Fed policy turned expansive. In the four years from August, 2001 to August, 2005 the Fed increased its holdings of securities by 45%, an average yearly increase of almost 8%. The purchases were intended to increase liquidity and stimulate spending. They did both. The lagged effect of additional liquidity produced an increase in current dollar spending at annual rate of almost 7% from the spring of 2003 to the spring of 2006. By the middle of the decade the excess liquidity created by the Fed's purchases of securities had produced a speculative boom with rapidly rising prices.

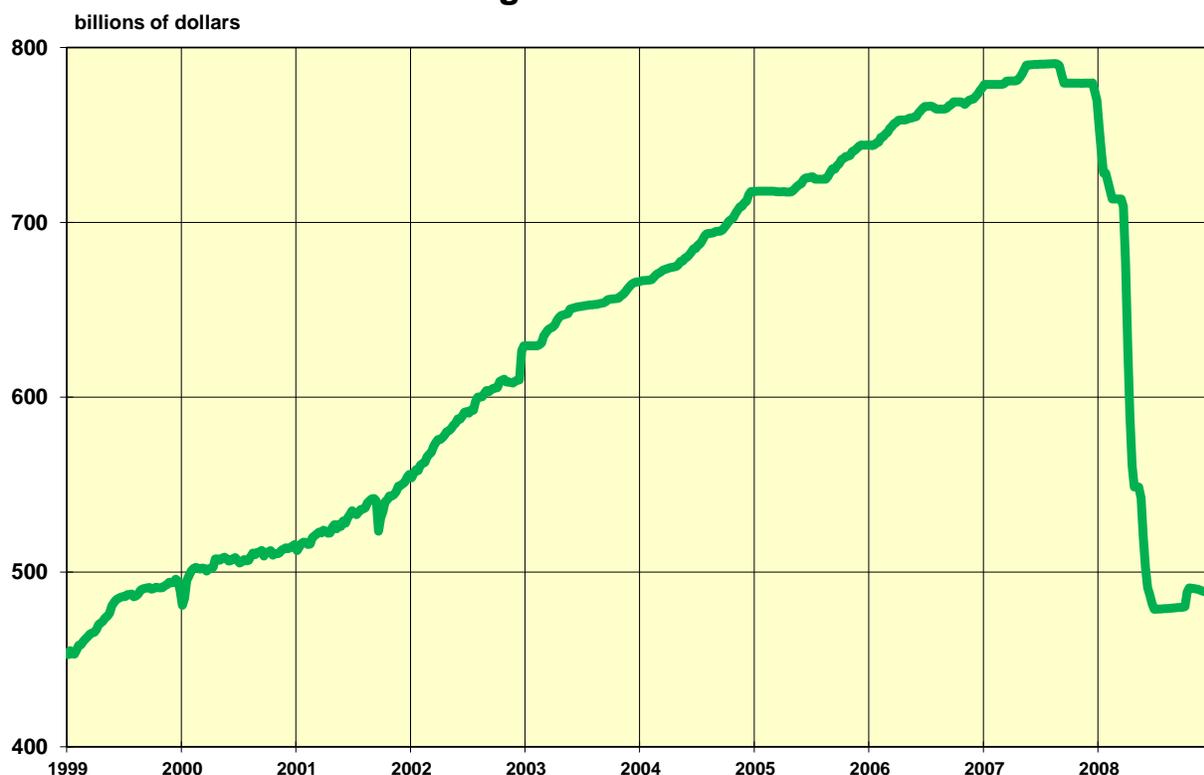
In response to its liquidity-created inflationary boom, the Fed began raising interest rates. The fed funds rate went from 1% in 2004 to 5¼% in July of 2006. It remained at 5¼% through the summer of 2007. The increase in the fed funds rate was designed to contain liquidity, slow the pace of spending and limit inflation. In order to raise interest rates the Fed slowed its purchases of securities, first to 5% in the year ending in the summer of 2006 and then to 2½% in the year ending in the summer of 2007.

By the spring of 2007 the Fed's efforts to contain liquidity were having an impact. The economy's spending pace was slowing. When the pace of spending slows, it creates downward pressure on interest rates. In an effort to keep its interest rate target at 5¼% the Fed stopped purchasing securities. The Fed's security holdings peaked in the spring at \$790 billion and remained at that level into the summer. As a result, the Fed's portfolio of securities—the main source of liquidity for the economy—had shifted from providing significant increases in liquidity to providing no increase.

From the summer of 2007 to the summer of 2008 there was an even more dramatic shift. The Fed sold \$300 billion of securities, 39% of its portfolio. There are only three other times in the history of the Fed where it sold such a large quantity of its securities. All three occurred in the 1920s, all three involved a severe shortage of liquidity and all three were followed by recessions. The final one was followed by the Great Depression.

Lessons from past recessions show sales of securities were a precursor to every recession in at least the past forty years. As the following sections will show, Fed members and their staff seem totally unaware of this evidence. They consistently ignore any influence their policies might have had on the economy's liquidity. In addition, they assume all financial problems reflect issues of credit allocation and are completely unrelated to overall liquidity.

Fed Holdings of Securities: 1999-2008



Source: Board of Governors of the Federal Reserve System, H4.1

Early Stages of the Financial Crisis

At its meeting on August 7, 2007 Fed members were first informed about emerging problems. The manager of the Fed's operations reported "...there has been considerable financial market turbulence since the last meeting: Problems in subprime mortgage credit have persisted and intensified.... As a consequence, market expectations with respect to monetary policy have shifted sharply, with market expectations consistent with considerable monetary policy easing over the next year."

It can take a year or more before a change in the Fed's purchases of securities impacts the pace of spending. Hence, by the summer of 2007 the spending pace was still 4%-5% when the Fed contained liquidity by halting its purchases of securities. Fed transcripts fail to mention either how the dramatic shift in its purchases of securities, or even the accompanying increase in its own interest rate targets, might be contributing to the emerging financial problems.

Hence, not only was the Fed aware of problems in the financial system as early as the summer of 2007, but it was also aware financial markets expected the Fed to increase liquidity through a “considerable easing of money policy over the next year.” Unfortunately, even as signs of progressively greater financial stress appear there would be no such increase in liquidity.

No action was taken at the Fed’s August meeting. However, in response to further signs of economic stress the Fed began lowering its target fed funds rate beginning in September, 2007. Additional cuts followed. By December the Fed had lowered its target interest rate by a full percentage point.

By late 2007 the lagged effect from a combination of higher interest rates and reduced purchases of securities was taking a toll on the economy. Amid the weakness, market interest came under downward pressure. It was at this point the Fed began to sell securities from its portfolio in an effort to keep interest rates at the Fed’s targeted levels. Judging from the transcripts, at this point no one at the Fed was concerned, or even aware, the central bank was selling securities amid signs of financial stress.

In fact, statements by Fed members and staff explicitly rejected the possibility there was any shortage of liquidity. During a December 6, 2007 meeting the Fed’s chief economist states “... *it is clear that what ails financial markets now is not simply a shortage of liquidity. There are more fundamental problems of credit losses, credit risk, and balance sheet capacity that these options cannot address.*”

To deal with these “more fundamental problems” the Fed introduced a unique experiment—credit facilities. This experiment, combined with the Fed’s preference for setting interest rate targets led to massive sales of securities. By the end of 2007 the Fed sold \$50 billion of securities, roughly 6% of its portfolio. As financial pressures increased in 2008, so did the Fed’s sales of securities. By the summer of 2008, with the economy on the verge of its worst collapse since the 1930s, the Fed had sold some \$300 billion of securities.

In terms of its securities portfolio, the Fed went from force-feeding the economy with liquidity to starving it. The economy followed in a predictable manner—first booming and then collapsing.

Credit Facilities: A Unique Experiment

The Fed’s decision to experiment with a new monetary tool bears an uncanny resemblance to the ill-advised increase in reserve requirements prior to the 1937 recession. At that time, while the economy was still suffering from the Depression, the Fed’s economist recommended changing normal policy procedures. Instead of buying or selling securities he recommended increasing reserve requirements. As soon as the new policy was fully implemented the recession began.

In a remarkably similar occurrence, at its December 6, 2007 meeting, the Fed's economist proposed a unique and equally experimental tool. The essence of the proposal involved creating a credit facility to direct loans to areas the Fed believed needed credit. In essence, the program was a way for the Fed to reallocate credit to certain banks at a lower cost than the market rate. The purpose of such a facility was to "...provide a highly visible signal of the Federal Reserve's willingness to provide adequate liquidity to promote market functioning."

The first of such credit facilities was referred to as a term auction facility or TAF. Once committed to this new tool, the facilities took on a life of their own. As financial problems became progressively worse during 2008, the Fed identified progressively more areas where it believed there was a need for credit. An alphabet soup of such facilities—TSLF, PDCF, PCF—were sanctioned, culminating in October, 2008 with the well-known TARP program. Each facility was designed to use the Fed's lending policies to funnel credit to where the Fed wanted it to go. Due to the Fed's operating procedures, the added liquidity from each loan was immediately offset with a sale of securities from the Fed's portfolio. Hence, any additional liquidity provided to the Fed's preferred clients was offset by liquidity taken away from others.

Credit Facilities: Liquidity Impact from Loans versus Securities Purchases

While loans by the Fed through its credit facilities can increase liquidity and relieve financial stress, they can also promote financial stress. Given the historical evidence, direct purchases or sales of securities appear to have a more powerful and reliable impact on financial markets than loans. Although both lead to an increase in cash balances it's likely the monetary impact of loans is different from purchases of securities. Cash balances from purchases of securities do not have to be repaid. Loans do.

In addition, to the extent the Fed's credit allocation decisions represent a less efficient use of funds than the free market would have produced, credit facilities do more harm than good. The fact we know so little about the transmission mechanism between the Fed's specific actions and the effect of those actions on the economy is a strong argument against the type of experimentation that led to the establishment of these facilities.

Throughout the period from the onset of the downturn until the collapse in the fall of 2008 the transcripts show Fed members and the staff were never concerned over a potential lack of overall liquidity in the economy. The entire experiment with credit facilities was due to the assumption liquidity was in the wrong place. Hence, the Fed's job was to redirect available liquidity from where it was plentiful to where it was needed.

By January, 2008, the first month the economy entered the recession, the Fed was well aware of serious problems. During a conference call on January 9, Chairman Bernanke stated, "I think the downside risks to the economy are quite significant and larger than they were. ...I am also concerned that such a downturn might morph into something more serious..." In a follow-up meeting on January 21st Bernanke states, "On the economy, the data and the information that we can glean from financial markets reflect a growing belief that the United States is in for a deep and protracted recession."

During the conference call on January 9, 2008, Bernanke refers to the vulnerability of banks: *“Loan-loss reserves are quite low for this stage in the cycle, about 1.4 percent, compared with, say, 2.5 percent during the headwinds period of the early 1990s...”*

At the meeting on January 28-29, 2008 the manager of the Fed’s operations reaffirms the vulnerabilities of banks *“...writedowns have put significant downward pressure on bank capital ratios.”*

Since the vulnerability of banks affects their ability to expand liquidity and credit, we might expect Fed members to have a detailed discussion of the effect of these factors on liquidity. We might also expect the discussion to consider the extent to which the Fed might need to respond by adding liquidity. There is no such discussion.

During a March 10th meeting, as financial stress continues to build, Chairman Bernanke states, *“...this financial crisis is now in its eighth month, and the economic outlook has worsened quite significantly. We are coming to the limits of our monetary policy capability.”*

The only limits to its policy were those the Fed had placed on itself. At no point was there anything preventing the Fed from buying securities and restoring the liquidity it was draining from the economy.

Characteristic of the Fed’s inattention to the impact of its own policies on overall liquidity is a report from the manager of its operations at the Fed’s August 6, 2008 meeting:

As you know, our liquidity facilities have placed significant demands on the Federal Reserve’s balance sheet, as the Chairman mentioned. As the liquidity facilities have been expanded, we have reduced the size of our Treasury portfolio. We do this to drain the reserves added by our liquidity programs.

On September 6, 2008 the financial crisis took a turn for the worse. A decision to place Fannie Mae and Freddie Mac into conservatorship triggered a new stage in the liquidity crisis. Placing the US Treasury as senior creditor to the preferred stockholders led to an overnight loss of \$10 billion to Fannie and Freddie’s preferred stockholders. Since banks owned almost all the preferred stock, there was an immediate sharp decline in bank capital. In response banks called in loans, ushering in the worst stage of the crisis. In less than a week, the lack of liquidity led to the Lehman Brothers failure, the first of a series of major bankruptcies.

Neither the issue surrounding this substantial loss in bank capital nor its impact on liquidity is ever mentioned in the Fed’s meetings. Instead, in the midst of cascading bankruptcies on September 16, 2008, a Fed member again expresses the view liquidity is not a problem: *“... if you are insolvent, it is not a central bank issue—we are a liquidity provider....”*

The idea of attempting to separate liquidity from issues of cascading credit losses, risk, insolvency and a lack of bank capital is patently ludicrous. Liquidity and credit are distinct but they are completely interdependent when there is either an excess or shortage of liquidity.

While the credit facilities were a factor in the Fed's massive selloff of securities, they were only part of the problem. The other part is the targeting of interest rates.

Interest Rate Targets

Fed loans by themselves add liquidity. They are not a completely unreasonable policy during periods of financial stress. What is unreasonable is offsetting any expansionary effect of the loans through the sale of securities. The reason the Fed did so was to prevent interest rates from moving below the Fed's predetermined targets. As with the Fed's decisions to allocate credit, targeting interest rates assumes the Fed knows the correct level of interest rates consistent with the right amount of liquidity. Determining the ideal interest rate assumes an omniscience no one possesses.

At the Fed's meeting on January 21, 2008 Chairman Bernanke states that even though the Fed had reduced its target interest rate by a full percentage point (100 basis points), "...I think at first approximation we are about 100 basis points behind the curve...." *Behind the curve* in this instance means the Fed's monetary policy had been too restrictive for economic conditions.

Whenever the Fed makes a major downward adjustment to its interest rate target it represents an admission the prior rate reflected an overly restrictive monetary policy. Hence, it's an admission the Fed's policy had damaged the economy. The Fed made such admissions seven times during 2008: January 21st (¾% rate cut to 3½%), January 29th (½% rate cut to 3%), March 18th (¾% rate cut to 2¼%), April 29th (¼% cut to 2%), October 8th (½% cut to 1½%), October 29th (½% cut to 1%), December 16th (cut 0% to ¼%). The Fed's inability to get "ahead of the curve" is *prima facie* evidence its policies contributed to the financial collapse.

In spite of evidence to the contrary, Fed members consistently assumed their lowering of interest rates somehow increased liquidity. It is only after the fact, amid bankruptcies and a full blown financial collapse that it becomes apparent the main problem leading to financial collapse was a lack of liquidity—the very thing the Fed was created to avoid.

At the meeting on September 16, 2008 Chairman Bernanke articulates the problem:

We have been debating around the table for quite a while what the right indicator of monetary policy is. Is it the federal funds rate? Is it some measure of financial stress? Or what is it? I think the only answer is that the right measure is contingent on a model. As President Lacker and President Plosser pointed out, you have to have a model and a forecasting mechanism to think about where the interest rate is that best achieves your objectives.

Of course, the Fed has a model. It's the Keynesian model of the economy.

Monetary Policy in the Keynesian Model

The Keynesian model assumes the private sector is the primary source of economic and financial instability. Hence, when the economy is booming, the Fed's job is to react by raising interest rates sufficiently high to discourage spending. When the economy is weak, the Fed's job is to lower interest rates to help stimulate spending. The model assumes the Fed is never responsible for financial instability. With these assumptions, the Fed's only job is to correct any problems the private sector creates by adjusting interest rates to the correct level.

There are a number of reasons the Fed's model tends to promote unstable monetary policies. The most basic reason is the implicit assumption the Fed is never the source of financial instability. As a result of this assumption, Fed members never consider how the powerful monetary tools Congress put at its disposal could ever be a source of financial instability. Another assumption is policymakers have a sufficient knowledge to set interest rates at levels consistent with monetary stability.

An Alternative Monetary Model

An alternative model of how monetary policy impacts the economy is the classical model. The classical model assumes the Federal Reserve's monetary powers are substantial. Mistakes associated with these powers can produce excesses and shortages of liquidity. As a result, the Fed and its policies can be a key source of cyclical booms and busts.

This classical model emphasizes the importance of having the Fed's pursue a stable monetary policy. Instead of attempting to determine the correct interest rate, the classical approach would closely monitor the Fed's creation of high-powered money associated with its purchases of securities. Such a model would also emphasize the need to track the relationship between bank deposits and reserves and bank deposits and currency, which can impact the overall amount of liquidity independent of the Fed's actions.

The lack of any mention in Fed transcripts of these critical elements shows a serious lack of attention to the powerful monetary tools the central bank has at its disposal. Ignoring such factors also explains how easy it can be for Fed policy to go awry and become a force for instability instead of the guardian of financial stability it was intended to be.

Conclusion

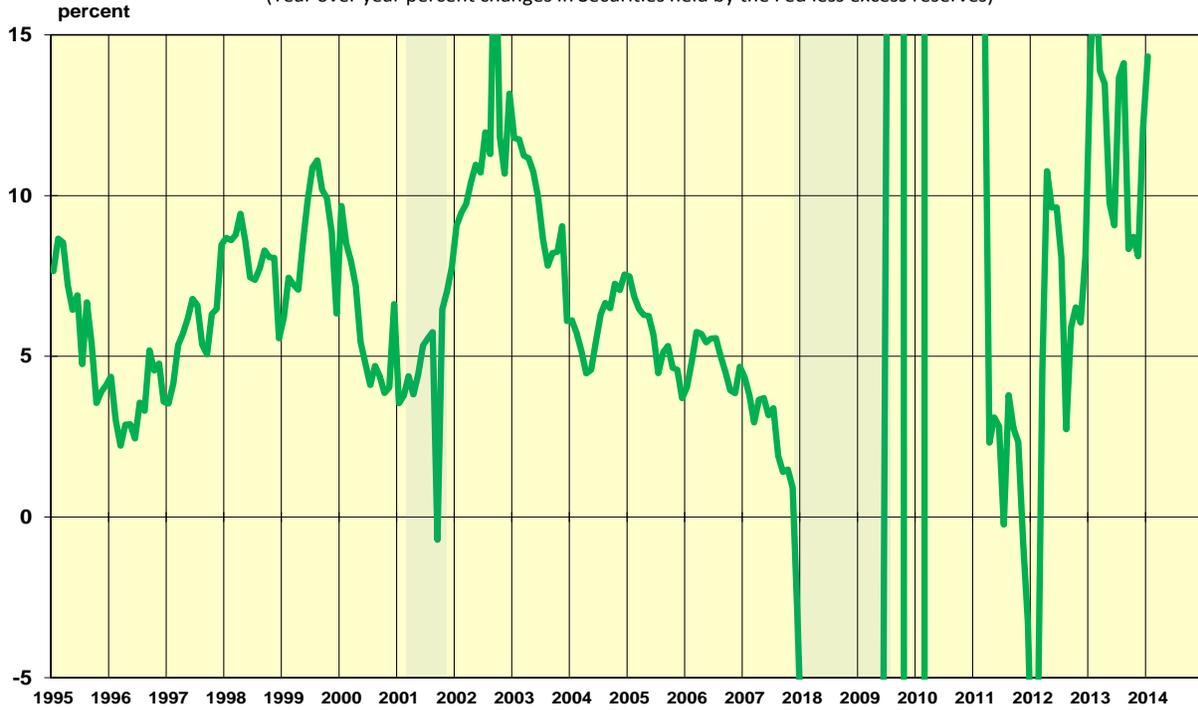
There can be many factors contributing to recessions and financial crises. Monetary policy is one of those factors. An analysis of the Fed's interest rate targets, credit facilities and portfolio changes leading up to the recent financial crisis provides significant evidence Fed policy contributed to and was likely the proximate cause of the latest financial crisis.

The nature of economic policy is such we can never go back and observe what would have happened had the Fed pursued a more normal policy. What we do know is, in spite of anticipating serious economic problems long before they occurred, the Fed's policies failed to prevent the financial crisis. We also know the Fed experimented with a new tool that led it to sell large quantities of securities from its portfolio. Finally, we know the historical track record of such sales shows they have often contributed to the very lack of liquidity the Fed was created to prevent.

In spite of the historical evidence of serious mismanagement produced by targeting fed funds, the Fed continues to use this flawed technique. So long as the Fed does so, monetary policy is likely to continue to have a destabilizing effect on both the economy and financial markets.

Changes in Fed Securities and Recessions: 1995-2014

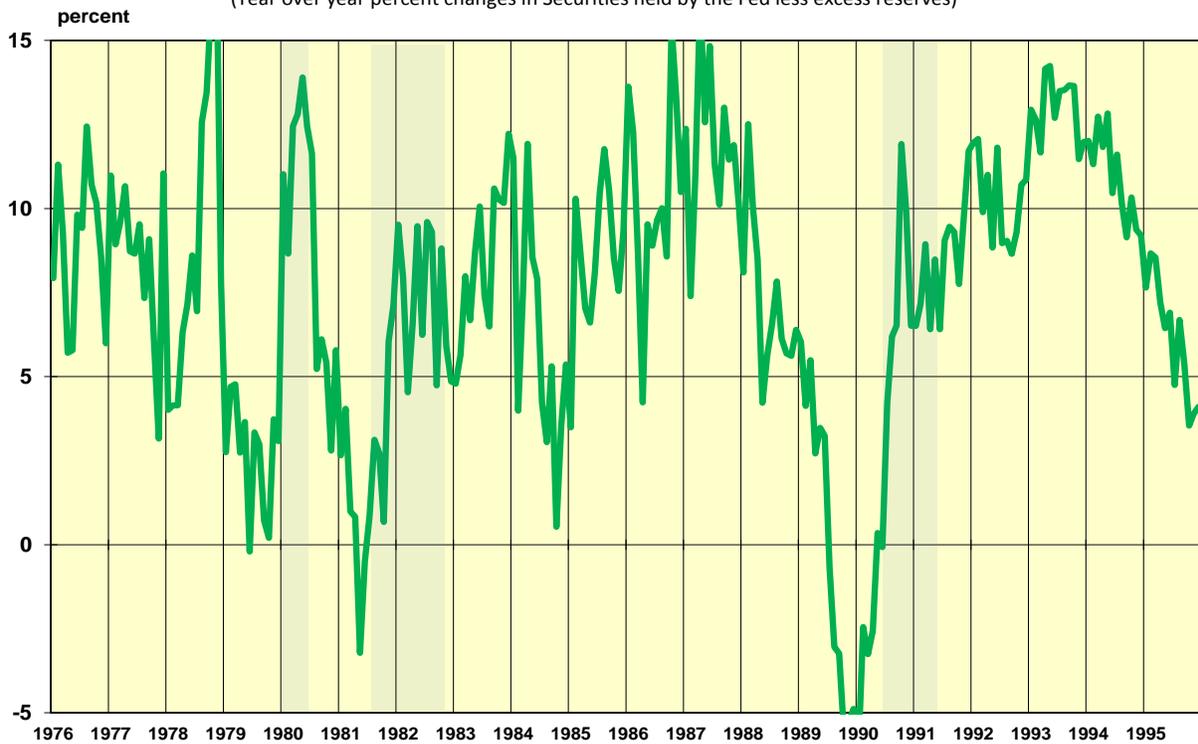
(Year over year percent changes in Securities held by the Fed less excess reserves)



Source: Federal Reserve Bank of St. Louis; classicalprinciples.com

Changes in Fed Securities and Recessions: 1976-95

(Year over year percent changes in Securities held by the Fed less excess reserves)



Source: Federal Reserve Bank of St. Louis; classicalprinciples.com