IS MONETARY POLICY EFFECTIVE DURING FINANCIAL CRISES?

by

Frederic S. Mishkin*
Graduate School of Business, Columbia University
and
National Bureau of Economic Reserarch

3022 Broadway, Uris Hall 817
Graduate School of Business
Columbia University
New York, NY 10027
Phone: 212-854-3488
Fax: 212-662-8474
email: fsm3@columbia.edu

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Since August 2007, the Federal Reserve has eased monetary policy aggressively in the face of the worst financial crisis that the United States has experienced since the Great Depression, lowering the federal funds rate target from 51/4% in September 2007 to 0 to 1/4% in December 2008. Despite the substantial decline in the federal funds rate and interest rates on Treasury securities, the cost of credit to both households and businesses has generally risen. Since September 2007, interest rates on riskier debt instruments have risen sharply. Baa corporate bond rates have risen by over 200 basis points (2 percentage points) since September 2007, while interest rates on junk bonds have risen by over 1000 basis points. Banks and other financial intermediaries have also sharply tightened credit standards for both household and businesses.

The tightening of credit standards and the failure of the cost of credit to households and businesses to fall despite the sharp easing of monetary policy has led to a common view that monetary policy has not been effective during the recent financial crisis. The most recent Nobel laureate, Paul Krugman, has expressed this view in his New York Times column, stating,

> "We are already, however, well into the realm of what I call depression economics. By that I mean a state of affairs like that of the 1930s in which the usual tools of monetary policy – above all the Federal Reserve's ability to pump up the economy by cutting interest rates – have lost all traction." (Krugman, 2008).

More importantly, this view has been expressed by some participants in the FOMC as the minutes from the October 28-29, 2008, meeting indicate:

> "Some members were concerned that the effectiveness of cuts in the target federal funds rate may have been diminished by the financial dislocations, suggesting that further policy action might have limited efficacy in promoting a recovery in economic growth." (Board of Governors of the Federal Reserve System 2008).

The views expressed in the above quotes harks back to early Keynesian discussions of the ineffectiveness of monetary policy during the Great Depression period. Because of the shocks to credit markets from the financial crisis, the argument is that monetary policy is unable to lower the cost of credit and is thus pushing on a string. Monetary policy is therefore ineffective.

I will argue in this paper that this view is just plain wrong. Not only that, the view that monetary policy is ineffective during a financial crisis is highly dangerous because it leads to the following two conclusions. First, if monetary policy is ineffective, then there is no reason to use it to cope with the crisis. Second, easing monetary policy during a crisis is counterproductive because it can weaken the credibility of the monetary authorities to keep inflation under control and thus be inflationary. I strongly disagree with both these conclusions and I will argue that, to the contrary, financial crises of the type we have been experiencing provide a strong argument for even more aggressive monetary policy easing than normal.

I. Financial Instability and Macroeconomic Risk

The financial system performs the function of efficiently channeling funds to individuals or corporations with worthy investment opportunities by collecting and processing information. Although financial markets and institutions deal with large volumes of information,

some of this information is by nature asymmetric; that is, one party to a financial contract (typically the lender) has less accurate information about the likely distribution of outcomes than does the other party (typically the borrower). Historically, banks and other financial intermediaries have played a major role in reducing the asymmetry of information, partly because these firms tend to have long-term relationships with their clients

The continuity of this information flow is crucial to the process of price discovery--that is, the ability of market participants to assess the fundamental worth of each financial asset. During periods of financial distress, however, information flows are disrupted and price discovery is impaired. The high risk spreads and reluctance to purchase assets that are characteristic of such episodes are natural responses to the increased uncertainty resulting from the disruption of information

Two types of risks are particularly important for understanding financial instability. The first is what I will refer to as *valuation risk*: The market, realizing the complexity of a security or the opaqueness of its underlying creditworthiness, finds it has trouble assessing the value of the security. For example, this sort of risk has been central to the repricing of many structured-credit products during the turmoil of the past year, when investors have struggled to understand how potential losses in subprime mortgages might filter through the layers of complexity that such products entail.

The second type of risk that I consider central to the understanding of financial stability is what I refer to as *macroeconomic risk*--that is, an increase in the probability that a financial disruption will cause significant deterioration in the real economy. In particular, strains in financial markets can spill over to the broader economy and have adverse consequences on

output and employment. Furthermore, an economic downturn tends to generate even greater uncertainty about asset values, which could initiate an adverse feedback loop in which the financial disruption restrains economic activity; such a situation could lead to greater uncertainty and increased financial disruption, causing a further deterioration in macroeconomic activity, and so on. This phenomenon is generally referred to as the financial accelerator (Ben Bernanke and Mark Gertler, 1989; Ben Bernanke, Mark Gertler, and Simon Gilchrist, 1996, 1999).

The quality of balance sheets of households and firms comprise a key element of the financial accelerator mechanism, because some of the assets of each borrower may serve as collateral for its liabilities. The use of collateral helps mitigate the problem of asymmetric information, because the borrower's incentive not to engage in excessive risk-taking is strengthened by the threat of losing the collateral: If a default does occur, the lender can take title to the borrower's collateral and thereby recover some or all of the value of the loan. However, a macroeconomic downturn tends to diminish the value of many forms of collateral, thereby exacerbating the impact of frictions in credit markets and reinforcing the propagation of the adverse feedback loop.

II. The Current Financial Crisis

The current financial crisis has many features in common with past financial crises that have occurred throughout history. As in many previous crises, the current crisis has had three precipitating factors: 1) mismanagement of financial innovation, 2) an asset price bubble that

burst, and 3) deterioration of financial institution balance sheets.[1]

Financial innovation has the potential for making the financial system more efficient, but in the recent episode, the financial innovations of subprime mortgages and structured credit products ended up being destructive. They did not deal with the serious agency problems of the originate-to-distribute model, in which there were only weak incentives to do proper credit risk analysis, and they also increased the complexity of financial products so that they were increasingly difficult to value (Gary Gorton, 2008). The weakening of underwriting standards in the subprime mortgage market was exacerbated by the housing price bubble which encouraged risky lending, because as long as housing prices were rising, defaults on subprime mortgages were low. When the housing price bubble burst in 2007, the rot in the financial system began to be revealed. The decline in housing prices led to many subprime borrowers finding that their mortgages were "underwater", that is, the value of the house fell below the amount of the mortgage, and defaults on mortgages began to rise. Rising defaults on subprime mortgages then revealed the problems in structured credit products. When the value of mortgage-backed securities and structured credit products such as CDOs and SIVs collapsed, there were large write-downs at banks and.other financial institutions. The deterioration of financial institutions' balance sheets then led to the deleveraging process in which lending fell, consumer spending and business investment declined, resulting in a contraction in economic activity. The weaker economy and the resulting decline in the demand for housing then led to an even more rapid rate of decline in housing and related asset prices, which caused a further deterioration in financial

[1]I provide a more detailed discussion of why the current financial crisis occurred in Frederic Mishkin (forthcoming).

institutions' balance sheets and a further decline in lending. The result has been a very nonlinear adverse feedback loop that has substantially raised macroeconomic risk.

The combination of an increase in valuation risk once the agency problems in the subprime mortgage and structured-credit products markets were revealed, along with the increase in macroeconomic risk, led to a huge increase in credit spreads worldwide. The financial crisis began a second, more virulent phase, after the Lehman Brothers bankruptcy and near failure of AIG in September 2008. A bad situation was made worse after the House of Representatives, fearing the wrath of constituents who were angry about bailing out Wall Street, voted down a $700 billion dollar bailout package on Monday, September 29, 2008. Although the Emergency Economic Stabilization Act was finally passed on Friday, October 3, the stock market crash accelerated, with the week beginning with October 6 showing the worst weekly decline in U.S. history. Credit spreads went through the roof over the next three weeks, with the Treasury Bill-to-Eurodollar rate (TED) spread, a good measure of liquidity in the interbank market, going from around 40 basis points (0.40 percentage points) before the crisis to over 450 basis points, the highest value in its history The subprime financial crisis had spun out of control.

The result of these higher credit spreads was that despite aggressive cuts in the federal funds rate, interest rates relevant to household and business spending decisions rose, along with a sharp tightening of credit standards. The economy went into a tailspin and we are now in the midst of a serious recession.

III. Is Monetary Policy Ineffective?

Does the fact that the cost of credit has risen for households and businesses despite aggressive monetary easing mean that monetary policy has been ineffective in the current financial crisis episode? The answer is no. To see this, consider the following counterfactual: What if the Fed had *not* aggressively cut rates during the current crisis?

Valuation risk would certainly have stayed as high because tighter monetary policy would certainly not have made it easier to value securities by either reducing the opaqueness of securities that were hard to value or making it easier to assess credit risk.

On the other hand, tighter monetary policy would surely have led to higher macroeconomic risk. Tighter monetary policy , through its usual channels by restraining consumer spending and business investment, would have made it more likely that the economic downturn would even more severe, which would result in even greater uncertainty about asset values. Tighter monetary policy would then have made an adverse feedback loop more likely in which the greater uncertainty about asset values would raise credit spreads, causing economic activity to contract further: The contraction in economic activity then would create more uncertainty, making the financial crisis worse, causing the economic activity to contract further and so on.

If the Fed had not aggressively cut rates, the result would have been both higher interest rates on default-free bonds like Treasury securities and a substantial increase in macroeconomic risk with much higher credit spreads. Interest rates relevant to household and business spending decisions would then have been *much higher than what we see currently*. Aggregate spending

would therefore have been lower and the current recession would be far more severe. Tighter monetary policy would have been very costly indeed.

The logic above indicates that not only has monetary policy been effective during the current financial crisis, but that it has been even more potent than during normal times because it not only lowered interest rates on default-free securities, but also helped lower credit spreads. The argument here does not, however, say that monetary policy can offset the contractionary effect of a massive financial disruption in the credit markets of the type we have been experiencing. The financial crisis has led to such a widening of credit spreads and tightening of credit standards, that aggressive monetary policy easing has not been enough to contain the crisis. This is why central banks have provided liquidity support to particular sectors of the financial system in order to contain liquidity squeezes.

The Federal Reserve, in particular, has implemented large liquidity injections into the credit markets to try to get them lending again. Starting in mid-August 2007, the Fed lowered the discount rate to just 50 basis points above the federal funds rate target from the normal 100 basis points (later to 25 basis points). Over the course of the crisis, the Fed broadened its provision of liquidity to the financial system well outside of its traditional lending to depository institutions, leading Paul Volcker, a former Chairman of the Federal Reserve, to describe the Fed's actions as going to the "very edge of its lawful and implied powers." The number of new Fed lending programs over the course of the crisis spawned a whole new set of acronyms, the TAF, TSLF, PDCF , AMLF, CPFF, and MMIFF and TALF, making the Fed sound like the Pentagon with code-named initiatives and weapons. Like the Pentagon, the Fed has been fighting a war againts a potentially destructive enemy, although its weapons were financial rather than guns, tanks, or

aircraft.

Even though I believe that the Fed's liquidity injections, which have expanded the Fed balance sheet by well over a trillion dollars, have been extremely useful in limiting the negative impacts of the financial crisis, they may not be enough. This is why many economists (and politicians) have come around to the view that large fiscal stimulus packages may be necessary to keep economies throughout the world from entering into deep recessions or even depressions. Of course, the $500 billion plus question is whether these fiscal packages can be done right so they have the maximum impact in the short-run, but do not lead to future tax burdens that are unsustainable.

IV. The Rationale for Aggressive Monetary Policy During Financial Crises

The logic of the argument above which indicates that monetary policy may be even more effective during financial crises also argues for even more aggressive easing of monetary policy during financial crises.

As argued above financial disruptions can have particularly nonlinear effects on the economy because they can lead to an adverse feedback loop. As I outlined in Mishkin (2008), the resulting nonlinearity argues against the result from a linear-quadratic (LQ) framework that optimal monetary policy should display considerable inertia.[2] An alternative approach is for monetary policy to engage in risk management by using monetary policy to take out insurance against tail risks.

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[2]The now-classic textbook on this topic is Michael Woodford (2003).

As I mentioned above, periods of financial instability are characterized by valuation risk and macroeconomic risk. Monetary policy cannot aim at minimizing valuation risk, but can reduce macroeconomic risk. By easing monetary policy aggressively to offset the negative effects of financial turmoil on aggregate economic activity – this includes cutting interest rates preemptively, as well as using nonconventional monetary policy tools if interest rates fall to close to the zero lower bound – monetary policy can reduce the likelihood that a financial disruption might set off an adverse feedback loop. The resulting reduction in uncertainty can then make it easier for the markets to collect the information that facilitates price discovery, thus hastening the return of normal market functioning.

One danger from aggressive easing monetary policy easing is that it might unanchor inflation expectations. This unanchoring of inflation expectations could then lead to significant inflation in the future because the behavior of inflation is significantly influenced by the public's expectations about where inflation is likely to head in the long run (Mishkin, 2007). Therefore, aggressive preemptive easing of monetary policy would be counterproductive if these actions caused an increase in inflation expectations and the underlying rate of inflation; in other words, the flexibility to act preemptively against a financial disruption presumes that inflation expectations are well anchored and unlikely to rise during a period of temporary monetary easing.

How can a central bank keep inflation expectations solidly anchored so it can respond preemptively to financial disruptions? The central bank has to have earned credibility with financial markets and the public through a record of previous actions to maintain low and stable inflation. Furthermore, by clearly communicating the rationale for its policy actions, the central

can make it clear that it will not let inflation spin out of control. In addition, inflation expectations are more likely to remain anchored if the central banks communicate that it will be flexible in the opposite direction by raising interest rates quickly if there is a rapid recovery in financial markets or if there is an upward shift in projections for future inflation. In this way the central bank can show that it is prepared to take back some of the insurance it has provided by its earlier monetary policy easing.

V. Conclusion

The fallacy that monetary policy is ineffective during financial crises is dangerous because it may promote policy inaction when it is most needed. I have argued that, if anything, monetary policy is more potent during financial crises because aggressive monetary policy easing can make adverse feedback loops less likely. The fact that monetary policy is more potent than during normal times supports a risk-management approach to monetary policy during financial crises in which monetary policy is far less inertial than would otherwise be typical – not only moving decisively through conventional or nonconventional means to reduce downside risks from the financial disruption, but also in being prepared to quickly take back some of that insurance in response to a recovery in financial markets or an upward shift in inflation risks.

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