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Monetary Policy in an Era of Crises

The enormous and prolonged economic fallout from the global financial crisis and the subsequent deleveraging have convincingly demonstrated the need to mitigate the risk of crisis. We should have known this from the work of Carmen Reinhart and Ken Rogoff (2009), but the lesson has finally stuck. My topic this afternoon centers on the role of monetary policy in avoiding financial crises. The conventional wisdom can be stated as follows: The first line of defense against financial instability is strong and robust micro and macroprudential policies. Monetary policy should only be a last resort.

I agree with the first statement that micro and macroprudential policies are the appropriate first lines of defense. But I am also concerned that these defenses can be breached, and, as a result, monetary policy will likely need to play a more active role. Therefore, we must think hard about how to design monetary policy strategies that complement macroprudential policies and contribute to financial stability, and thereby contribute to macroeconomic stability.

This afternoon, I will aim to make three basic points: First, despite serious reforms to strengthen our financial system, significant risk remains that another asset bubble could develop. Moreover, the financial system and the economy are still vulnerable to such an event. Second, financial stability should not be thought of as a distinct goal from macroeconomic stability and, therefore, inherently separate from traditional monetary policy. Instead, risks to financial stability are first and foremost risks to future economic activity and inflation. Third, the

framework used to analyze the relationship between monetary policy, financial instability, and the macroeconomy needs to be revamped. That framework must take more fully into account the life cycles of asset, credit, and leverage bubbles, and it should consider the role monetary policy plays in feeding or restraining these bubbles. I should note that my remarks represent my own views and not those of others in the Federal Reserve System.

An ongoing era of crises

In the past few years, we've learned the hard lesson that financial crises are neither things of the past, nor afflictions solely of developing countries. The global financial crisis and the more recent European sovereign debt crisis demonstrate that the complex global financial system is, if anything, intrinsically susceptible to systemic breakdown. Reforms in the United States and abroad address many of the glaring weaknesses of the pre-crisis regulatory regime. Importantly, banks and other financial institutions deemed to be systemically important will now be required to hold greater capital and strengthen their liquidity positions.

These reforms are vital. But I am not convinced they will be enough to forestall another major crisis. First, as Robert Shiller demonstrated, asset price booms and busts recur throughout human history (Shiller 2005). An old maxim holds that financial markets are driven by fear and greed. Evidently, no law or regulation can completely contain this dynamic. Second, recent reforms do not fully address a basic fact bared during the financial crisis: the funding system rooted in the capital markets is inherently at risk for runs, contagions, and panics. Investment banks and participants in money, repo, commercial paper, and securitization markets all rely on very short-term wholesale funding for longer-term and risky investments. But, they don't have the protection of deposit insurance and regular lender-of-last-resort access that banks have.

Third, it remains untested whether supervisors can successfully complete an orderly resolution of complex, systemically important international financial institutions during a period of heightened uncertainty.

Moreover, some of the tools that were deployed in 2008 and 2009 to stem a full-blown meltdown of the financial system may not be available in future crises. For example, the Federal Reserve acted boldly and creatively to provide liquidity to critical nonbank segments of financial markets during the financial crisis.¹ Today, the Federal Reserve retains all of its tools to provide liquidity to the banking system as a whole. But the Dodd-Frank Act restricts the Fed's ability to provide liquidity elsewhere to individual institutions and to nonbank segments of the financial system.

In addition, some types of liquidity support for capital markets funding involve credit risk, which requires action by the fiscal authority.² Indeed, fiscal measures were essential to maintain confidence in the financial system during the crisis. Examples included the introduction of Treasury guarantees on money market funds and bank debt, and capital injections following the bank stress tests. It may take considerable time to muster the authorization of fiscal authorities—and that's assuming the political climate permits such action. These considerations suggest that the risk of runs in financial markets remains a very real concern for financial and macroeconomic stability.

¹ See Williams (2011b) for a further discussion of these themes.

² The Term Asset-Backed Securities Loan Facility (TALF) provides an excellent example of participation of the fiscal authority in a liquidity program. In this program, the Federal Reserve provided loans to help finance the issuance of asset-backed securities. The Treasury department took on some of the credit risk of the TALF loans, expanding the availability of credit under the program. However, the reach of this program was limited by the requirement that the Fed's loans be adequately safe, which limited its loans to only the highest quality segment.

Financial crises and the macroeconomy

Let me now turn to my second point: Risks to financial stability are, first and foremost, risks to future economic activity and inflation. Much of the discussion of the role of monetary policy in safeguarding financial stability treats financial stability as if it were a standalone goal, independent of macroeconomic objectives. Such a view is misguided. The main reason we care so much about financial stability is because financial crises can have devastating consequences for standard macroeconomic variables, such as employment, output, and inflation.

Therefore, in thinking about the role of monetary policy in maintaining financial stability, we need to integrate financial stability into our models of the macroeconomy. We can't think of them as separate spheres. Approached this way, the answer to the question whether monetary policy should be concerned with financial stability seems obvious. To the extent that monetary policy actions influence the emergence of risks to financial stability, these actions also indirectly affect the future path of economic activity and inflation. Only in the extreme case that monetary policy actions have *no* effect on risks to financial stability, or financial instability has no effects on the macroeconomy, could one maintain that monetary policy should not take into account financial stability.

To make operational this idea that monetary policy cares about financial stability because it affects macroeconomic outcomes, we need analytical frameworks that identify the channels that are at play. In addition, we must keep in mind that risks to financial stability are inherently probabilistic. That means that, when we analyze monetary policy, we must take much more seriously the distribution of potential outcomes, not just the expected outcomes. This brings me to my final point.

Revamping monetary policy analysis

The past approach to studying monetary policy is not up to the task of accounting for financial instability and needs to be revamped. The fundamental problem is that the vast majority of monetary policy analysis is based on textbook linear-quadratic models with rational expectations.³ There has been valuable research on models with financial frictions that provide an important channel for asset prices to affect net wealth, and thereby collateral available for borrowing.⁴ Financial frictions are a necessary condition to seriously consider issues of monetary policy and financial stability. But more is needed. Research should extend to all key channels by which monetary and supervisory policies affect asset prices, credit flows, and the real economy.

However, incorporating these channels is still not sufficient. We also need mechanisms by which endogenous dynamics—not just exogenous shocks—explain the magnitude and duration of booms and busts in asset prices, leverage, and credit.⁵ One promising approach is models in which agents do not have perfect information about economic fundamentals, but instead “learn” through observations of data.⁶ According to this approach, agents make economically rational decisions based on available information. But the information they possess at any point in time may be sending misleading signals regarding fundamentals.

In learning models, the development of what eventually proves to be an asset price bubble can be an endogenous reaction to shocks.⁷ Likewise, the willingness of financial intermediaries to lend and the degree of leverage in the economy depends on perceptions of

³ See Woodford (2003) for representations of this research.

⁴ See, for example, Bernanke, Gertler, and Gilchrist (1999), Aoki, Proudman, and Vlieghe (2004), Kajuth (2010), and references therein.

⁵ I delve into these issues further in Williams (2011a).

⁶ See Lansing (2010) and Adam and Marcet (2010) for analysis of asset prices bubbles and busts in learning models.

⁷ See Williams (2011a).

fundamentals and risk that can deviate from the rational expectations equilibrium. In these models, monetary policy can affect whether asset price and credit bubbles build up in the first place and the speed with which they deflate. In addition, regulation and supervisory policy can affect availability of loans during booms, potentially restricting the supply of funds financing the bubble. Such models hold great promise for examining the design of monetary policy and the issue of coordinating monetary and macroprudential policies.

Importantly, these models are inherently nonlinear and take into account the influence of rare events. In that way, they provide insight into the systemic aspects of monetary policy that can reduce the probability and incidence of imbalances threatening financial stability and the economy. That is, they help us understand how to change the macroeconomic environment that creates imbalances, rather than focus on how to respond to imbalances after they occur.

These dynamics are similar in some ways to the effective stabilization of inflation expectations. Athanasios Orphanides and I studied the features of monetary policy rules that were effective at stabilizing economic activity and inflation when agents are learning.⁸ We did not assume that stabilizing inflation expectations was an independent goal. Nor did we focus on how to best respond to exogenous “shocks” to inflation expectations. We found that policy rules that succeeded in stabilizing inflation expectations reduced the incidence and magnitude of “inflation scares.” These are episodes when inflation expectations get out of control following a “rare” set of adverse shocks.

Research on financial stability using these types of models is in its infancy. I expect that the intuition from the research on monetary policy and inflation expectations will carry over to

⁸ See Orphanides and Williams (2004, 2005, 2007).

this growing area of investigation. In particular, both monetary policy and macroprudential policies should be designed to create conditions in which the risk of crisis is kept very low. In this way, we can avoid the painful macroeconomic consequences of a crisis, rather than being forced to clean up after the fact.

In summary, although macroprudential policies are the appropriate first line of defense against financial instability, these defenses are not impregnable. In all likelihood, monetary policy will need to play a more active role. As a result, researchers and policymakers need to think hard about how to design monetary policy strategies that complement macroprudential policies and contribute to financial and macroeconomic stability. Thank you very much.

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