A Practical Viewpoint on Financial System Resiliency and Monetary Policy

Loretta J. Mester
President and Chief Executive Officer
Federal Reserve Bank of Cleveland

Third Annual ECB Macroprudential Policy and Research Conference
European Central Bank
Frankfurt, Germany

May 18, 2018

Introduction

I thank the European Central Bank for inviting me to participate in this conference on macroprudential policy and research. The work being undertaken at the ECB, other central banks, and universities has increased our knowledge and understanding about the interlinkages between the macroeconomy and financial systems. It has been nine years since the financial crisis, and the global economy has improved substantially over that time. In the U.S., the economy is near both of our monetary policy goals of maximum employment and price stability, and the outlook is one of the most favorable we have seen in a long time. As we move further from the crisis, one lesson can never be lost: the importance of maintaining a resilient financial system for a healthy economy. Today, I'll spend my time discussing monetary policy and macroprudential policy from the practical perspective of a U.S. monetary policymaker. Research informs our policy decisions, but at the end of the day, decisions have to be made in a world that doesn't match our models and without full information. Research can be elegant, practice rarely is, but when we are setting policy, effectiveness is what we strive for. Before I continue, I should note that the views I'll present are my own and not necessarily those of the Federal Reserve System or my colleagues on the Federal Open Market Committee.

U.S. Financial System Regulation and Macroprudential Tools

It is an understatement to say that the U.S. financial system's regulatory structure is complex. A wide variety of institutions offer financial services in the U.S. Banks, a category that includes commercial banks, savings and loans, and credit unions, provide only about a third of the credit in the nation. Other providers include insurance companies; mutual funds; pension funds; government-sponsored enterprises, including Fannie Mae and Freddie Mac, which issue mortgage-backed securities; and other nonbanks, including broker-dealers, finance companies, and mortgage real estate investment trusts.[1]

[1] See Fischer (2014).

At the federal level, there are multiple financial regulators, including the Federal Reserve, the Federal Deposit Insurance Corporation (FDIC), the Office of the Comptroller of the Currency, the National Credit Union Association, the U.S. Treasury, the Securities and Exchange Commission, the Commodity Futures Trading Commission, the Consumer Financial Protection Bureau, and the Federal Housing Finance Agency. There are financial system regulators at the state level as well. In many cases, the regulatory authority of these agencies is defined by type of institution rather than by financial instrument.

The 2008 financial crisis exposed gaps in the regulatory and supervisory architecture in the U.S., which contributed to a build-up in financial imbalances and systemic risk. The Dodd-Frank Act, signed into law in 2010, established provisions aimed at reducing the probability of another financial crisis and reducing the costs on the rest of the economy when a shock hits the financial system. It directed the regulatory agencies to augment their traditional microprudential approach, which focused on the safety and soundness of individual institutions, with a macroprudential approach, which encouraged assessing the risk across institutions. Dodd-Frank also created a new body, the Financial Stability Oversight Council (FSOC), to promote coordination and information sharing across the financial system regulators. An important power of the FSOC is its ability to designate nonbanks as systemically important, bringing them under more banking-type supervision and regulation. The Board of Governors of the Federal Reserve System has the responsibility for supervising systemically important financial institutions, including these FSOC-designated nonbank financial companies, large bank holding companies, and the U.S. operations of certain foreign banking organizations.

This complex system of institutions and regulators complicates risk monitoring and the ability to tailor regulations and supervisory oversight to potential risks to the financial system. But there are ongoing efforts in the U.S. to do so, and the Federal Reserve has developed a framework for systematically tracking financial stability risks. Before I describe the framework, let me spend a few minutes on why the

FOMC regularly reviews financial stability, even though financial stability is not an explicit part of the FOMC's monetary policy mandate.

Financial Stability and Monetary Policy

Financial stability matters to the FOMC for several reasons. First, monetary policy affects the real economy by affecting financial conditions. When financial markets are disrupted, as they were during the financial crisis, the transmission of monetary policy to the economy can also be disrupted. Second, the goals of monetary policy and financial stability are interconnected. Indeed, the FOMC's statement on its monetary policy strategy says that the FOMC's monetary policy decisions "reflect its longer-run goals, its medium-term outlook, and its assessments of the balance of risks, including risks to the financial system that could impede the attainment of the Committee's goals."[2] Financial stability is a necessary but not sufficient condition for macroeconomic stability. On the other side of the coin, macroeconomic stability is an important contributor to financial stability, and well-formulated and well-communicated monetary policy supports financial stability.

A third reason monetary policymakers need to consider financial stability is that the financial crisis changed how monetary policy is implemented. From a practical standpoint, monetary policymakers have to be more attuned to developments in financial markets and institutions than they once were. The actions taken to address the financial crisis and Great Recession increased the size and changed the composition of the Fed's balance sheet. The Fed is now transacting with a broader set of financial institutions, so policymakers have to have a more complete understanding of the plumbing in financial markets.

[2] See FOMC (2018).

The Fed's Framework for Monitoring Financial Stability

The basic framework used by Federal Reserve staff to monitor financial stability risks recognizes the complex nature of the financial system in the U.S., with its mix of bank-based and market-based finance and its multiplicity of regulatory and supervisory bodies.[3] The framework tracks a standard set of financial system vulnerabilities that could amplify and propagate shocks. It monitors these vulnerabilities using a set of indicators on various financial activities in four categories: asset valuation pressures (reflecting the price of risk and risk appetites among investors), leverage, maturity and liquidity transformation, and interconnectedness and complexity.[4] Some of these vulnerabilities, like leverage, vary over the business and financial cycles; others, like complexity, are more structural in nature, reflecting the design of markets and intermediaries. The vulnerabilities are assessed across four sectors of the economy: the banking sector; the nonbank financial sector, including capital markets, nonbanks, and shadow banks; the nonfinancial business sector; and the household sector. Tools like heat maps and data-visualization techniques aid in tracking changes in vulnerabilities over time.[5] Assessments of individual vulnerabilities are then combined to get an assessment of the overall vulnerability of the U.S. financial system. Recognizing the global interconnectedness of financial systems, the Fed staff has also developed tools to assess foreign financial stability.[6]

Four times a year, the staff uses this framework to brief the FOMC, and an evaluation of developments related to financial stability is now a regular section in the Board of Governors' monetary policy report to Congress.[7]

---

[3] See Adrian, Covitz, and Liang (2013, 2015).

[4] Important research on the propagation and amplification of shocks throughout the financial system includes Kiyotaki and Moore (1997), Brunnermeier and Sannikov (2014), and Gorton and Ordoñez (2014).

[5] See Aikman, et al. (2015a, 2015b).

[6] For example, see FOMC (2017), page 5.

[7] See Board of Governors (2018a).

Macroprudential Policy and Monetary Policy

Although the FOMC regularly discusses financial system stability, the financial system regulators, including the Federal Reserve Board of Governors (a group that is distinct from the FOMC), have responsibility for maintaining and enhancing the structural resilience of the financial system. In the U.S., structural resilience is promoted by requiring higher levels and quality of capital (including a minimum non-risk-based leverage ratio, as well as risk-based capital standards); conducting stress tests; imposing liquidity standards; developing effective resolution methods for systemically important banks and nonbank financial institutions; requiring large banks to submit living will resolution plans; and implementing reforms to improve the stability of certain nonbank markets.[8] Financial regulators are also focused on working with the industry to enhance strategies to improve the cyber resiliency of the financial sector, as cybersecurity risk is a continuing threat to financial stability.

In contrast to the structural tools, compared to other countries, the U.S. has fewer countercyclical tools that can be varied with the perceived level of vulnerabilities in the financial system. However, the stress tests can be used as a countercyclical tool to the extent that the vulnerabilities of concern can be built into the stress scenarios. For example, this year's adverse stress scenario includes deep declines in corporate bond and real estate prices.[9] Another cyclical tool available in the U.S. is the countercyclical capital buffer (CCyB), which can be imposed on internationally active banks. The Federal Reserve Board has indicated that it will use this tool only when systemic vulnerabilities are "meaningfully above normal" and that, when using the tool, it intends to increase the buffer gradually.[10] The Board anticipates giving

[8] The Securities and Exchange Commission implemented revisions to the regulations governing money market mutual funds in 2014 and 2016 to reduce the chance of investor runs on these funds. In 2009, the G20 countries agreed that standardized over-the-counter derivatives contracts should be cleared by central counterparties. There are limits to interday credit exposures in the tri-party repo market.

[9] See Board of Governors of the Federal Reserve System (2018b).

[10] See Board of Governors of the Federal Reserve System (2016). Other countries have used limits on loan-to-value ratios and debt-to-income ratios that vary over the cycle and are targeted to particular sectors like housing or household credit to control leverage. See Liang (2013) and Fischer (2014).

banking organizations 12 months before an increase would become effective.[11] The U.S. has not had much experience with this tool. It has yet to set a positive countercyclical capital buffer, even though countercyclical policy calls for building up buffers during good times so that they are available during bad times. And the lead times needed to use this tool likely make it less effective at addressing vulnerabilities that may rapidly develop or may be detected only after they have had time to develop. So focusing on increasing the resiliency of the financial system's structure across the business and financial cycles seems well-founded. And from a practical viewpoint, even if, in theory, using countercyclical tools might be preferred, their limits suggest we need to at least contemplate using monetary policy to address financial stability in some cases.

Indeed, the limits to the macroprudential tools were illuminated in a tabletop exercise in which I participated with some other Federal Reserve Bank presidents.[12] The exercise involved a hypothetical scenario in which commercial real estate prices were rising sharply but the economy was at full employment and inflation was somewhat below goal. The objective of the exercise was for policymakers to use available macroprudential tools and possibly monetary policy to reduce the risk posed to financial stability by the commercial real estate boom while fostering the Fed's monetary policy goals. Implementation challenges included having to coordinate across multiple regulators or, in some cases, to follow legally required administrative procedures like public comment periods, which delay application of the tools. Such delays could make the tools ineffective or even cause them to exacerbate the situation rather than shore up the financial system. Another limitation was that some tools applied only to regulated banking firms, which could result in risks shifting to other parts of the financial system. I came away from the exercise more convinced of the need to focus on the structural resilience of the financial system across the business and financial cycles.

[11] See Board of Governors of the Federal Reserve System (2017).

[12] See Adrian, et al. (2015).

Whether monetary policy should be used to address financial stability risks, such as sharply rising credit growth, is still an open question.[13] The benefits depend on the extent to which monetary policy would be effective at stemming financial imbalances, thereby lowering the probability of a financial crisis or limiting the effects of the crisis, and whether or not there are macroprudential tools that could be used instead. Any benefits of attempting to use monetary policy to stem financial imbalances would need to be weighed against the cost of slowing the economy and increasing the volatility of output and of inflation.[14]

Let me now turn to the practical question of how the decisions about financial stability policy and monetary policy might effectively be organized, and then end with some conclusions.

The Governance of Financial Stability Policy

I argued earlier that the goals of monetary policy and financial stability policy are complementary over the longer run. But the policies do interact, and at times, there can be short-run trade-offs between monetary policy actions taken to support macroeconomic stability and financial stability. For example, an extended period of very low interest rates aimed at returning the macroeconomy to health might also generate financial imbalances and pose potential risks to financial stability by spurring investors to search for yield. Or a tightening of macroprudential policy to address financial stability risks could result in tighter financial conditions more generally, thereby increasing the likelihood that a monetary policy response would be needed to promote macroeconomic stability.

---

[13] Borio, et al. (2018) argue that monetary policy should be more attentive to the financial cycle. Svensson (2017) argues against "leaning against the wind." International Monetary Fund (2015) and Smets (2014) review the literature on the use of monetary policy for financial stability.

[14] An interesting paper by Gourio, Kashyap, and Sim (2017) shows that the cost-benefit analysis depends on the nature of the shocks hitting the economy and the severity of the financial crisis. In the case of only demand and productivity shocks, having monetary policy focus only on macroeconomic stability also limits the probability of a financial crisis. But when there are financial shocks and when a financial crisis would have a large negative impact on the economy, using monetary policy to limit credit growth would increase welfare, even though it would mean higher volatility of output and inflation.

In many countries, responsibility for monetary policy and responsibility for financial stability policy are handled by two different committees, which, in some cases, have some members in common.[15] Canada's financial sector regulator is not part of the central bank, but the Bank of Canada assesses financial system vulnerabilities and risks and publishes this assessment twice a year.[16] In Sweden, the financial stability authority is not part of the central bank, but the central bank publishes a financial stability report and its governor sits on the financial stability council, an advisory board. The ECB is somewhat different, with responsibility for both monetary policy and macroprudential policy ultimately resting with the ECB Governing Council.

The U.K. has a two-committee structure housed within the Bank of England. The monetary policy and financial policy committees are independent, but they also share members, which allows for good communication and information sharing between the two committees. One example of coordination came in August 2013 when the Bank of England's Monetary Policy Committee initiated forward guidance that it would hold interest rates low and consider additional asset purchases at least until the unemployment rate had fallen to 7 percent.[17] But it also said that a condition that would vacate this guidance would be if the Bank of England's Financial Policy Committee found that the stance of monetary policy was threatening financial stability in a way that couldn't be contained by the available macroprudential tools.

In the U.S., financial system complexity means that we don't have a single authority that oversees financial stability. While the Financial Stability Oversight Council (FSOC) has the ability to designate firms as systemically important financial institutions and, therefore, subject to enhanced regulation by the

[15] Kohn (2015) discusses the benefits of what he calls this two-committee approach.

[16] See Bank of Canada (2017).

[17] Kohn (2014) discusses this example, and see Bank of England (2013).

Fed, the FSOC does not have the authority to take actions to mitigate emerging risks. Instead, it can make recommendations to the regulatory agencies and to Congress, which can then decide to act or not.[18]

But all is not lost. With its oversight of systemically important financial institutions, the Board of Governors plays an important role in setting macroprudential policy in the U.S. The Board also constitutes part of the FOMC, so that there is a potential for some coordination between macroprudential policy and monetary policy or, at the very least, good communication and information sharing. In some sense, the U.S. has a two-committee set-up and one could imagine a relationship between the FOMC and the Board of Governors similar to that between the two policy committees in the U.K.

In the U.S., housing both committees within the central bank has an important governance benefit. By design, the FOMC's monetary policy decisions are independent from short-run political considerations, with appropriate accountability to elected officials and the public. Similarly, it is also important that policymakers have some independence in setting macroprudential policy.[19] There will be times when tools have to be used well before there are clear signs of instability. This might be difficult to explain, and there may be various interests that would prefer the tools not be invoked in seemingly good times. This means that macroprudential policymakers should be communicating with the public to improve the public's understanding of how financial stability risks are being monitored, what tools are available to promote financial resilience, and the rationale for macroprudential policy decisions. Systematic and transparent application of financial stability policy would seem to be as important as it is in the conduct of monetary policy. Still, we are a distance away from being able to articulate a clear strategy and a set of principles to guide decisions about the circumstances under which monetary policy should be used as a tool for financial stability and when we should rely upon macroprudential tools.

[18] Kohn (2014) compares and contrasts the financial stability structure in the U.S. with that in the U.K.

[19] Kohn (2014) discusses the importance of the financial stability authority being able to pursue its goals independent of short-run political considerations even when the actions taken aren't popular.

Conclusions

Let me conclude with three points I take away from this practical viewpoint on financial resilience and monetary policy in the U.S.

First, given some of the limitations on macroprudential tools and the complexity of financial system regulation, ensuring the structural resilience of the financial system throughout the cycle is the first line of defense in promoting financial stability. Higher levels and quality of capital, liquidity standards, stress tests, living wills, and effective resolution methods for systemically important bank and nonbank financial institutions are all important tools for improving resilience. In my view, we should set standards for the structural resilience tools somewhat higher than they would be if we had more experience with and confidence in the countercyclical tools. I support efforts to better align regulation and supervisory oversight with where the potential system risks lie, including proposals to make regulation less burdensome on community banks in the U.S. However, I think it would be a mistake to unwind the steps taken since the financial crisis that have led to a more resilient financial system. I would like to see how the new settings perform throughout the cycle before making major changes.

Second, monetary policymakers need to monitor the resiliency of the financial system and be cognizant of the interlinkages between monetary policy, financial imbalances, and financial stability risks. In a situation of rising financial stability risks, while using macroprudential tools might be preferred, we have had little experience with these tools. If they proved to be inadequate and financial stability risks continued to grow, monetary policy should be on the table as a possible defense. Note that, in this case, the blurring between financial stability goals and monetary policy goals would be high: if we assessed the risks to financial stability to be sufficiently great, achieving our dual mandate monetary policy goals would also be in jeopardy over the medium run.

Third, it will be important for the FOMC and Board of Governors to make progress toward a systematic strategy for handling the interactions between monetary policy and financial stability, including the appropriate use of monetary policy to counteract financial imbalances, and to communicate this strategy to the public. There are two concrete steps the Federal Reserve can take now. The Fed can continue to hold tabletop exercises designed to illuminate the interactions between macroprudential policy and monetary policy. These scenario exercises can help clarify policymakers' views on the appropriate use of each type of policy and help the Federal Reserve develop a systematic strategy for dealing with the interactions between the policies. In addition, similar to other central banks, the Fed can develop and publish a financial stability report, which discusses the Fed's assessment of financial system vulnerabilities. This report could also provide more context for the Board's decisions about the countercyclical capital buffer and any regulatory guidance aimed at mitigating emerging risks.

In summary, I believe the steps taken since the financial crisis have made the financial system more resilient. Today, systemically important financial institutions have higher capital and liquidity buffers and better risk-management systems. However, we cannot take greater resiliency for granted. If, as many economists predict, the new normal is a world with lower equilibrium interest rates, then the interactions between monetary policy and financial stability are likely to remain center stage. It's important that we come to some clarity about how we will use all of our policy tools to promote a healthy macroeconomy and resilient financial system.

References

Adrian, Tobias, Patrick de Fontnouvelle, Emily Yang, and Andrei Zlate, "Macroprudential Policy: Case Study from a Tabletop Exercise," Federal Reserve Bank of Boston Working Paper RPA 15-1, September 30, 2015, revised December 2015.
(https://www.bostonfed.org/publications/risk-and-policy-analysis/2015/macroprudential-policy-case-study-from-a-tabletop-exercise.aspx)

Adrian, Tobias, Daniel Covitz, and Nellie Liang, "Financial Stability Monitoring," Finance and Economics Discussion Series (FEDS) paper 2013-21, Divisions of Research and Statistics and Monetary Affairs, Federal Reserve Board, March 2013.
(https://www.federalreserve.gov/pubs/feds/2013/201321/201321pap.pdf)

Adrian, Tobias, Daniel Covitz, and Nellie Liang, "Financial Stability Monitoring," *Annual Review of Financial Economics*, 7, December 2015, pp. 357-395.
(http://www.annualreviews.org/doi/10.1146/annurev-financial-111914-042008)

Aikman, David, Michael T. Kiley, Seung Jung Lee, Michael G. Palumbo, and Missaka N. Warusawitharana, "Mapping Heat in the U.S. Financial System," Finance and Economics Discussion Series, Divisions of Research and Statistics and Monetary Affairs Working Paper 2015-059, Federal Reserve Board, Washington, DC, June 24, 2015a.
(https://www.federalreserve.gov/econresdata/feds/2015/files/2015059pap.pdf)

Aikman, David, Michael Kiley, Seung Jung Lee, Michael Palumbo, and Missaka Warusawitharana, "Mapping Heat in the U.S. Financial System: A Summary," FEDS Notes, Federal Reserve Board, Washington, DC, August 5, 2015b.
(https://www.federalreserve.gov/econresdata/notes/feds-notes/2015/mapping-heat-in-the-us-financial-system-a-summary-20150805.html)

Bank of Canada, *Financial System Review*, November 2017.
(https://www.bankofcanada.ca/wp-content/uploads/2017/11/fsr-november2017.pdf)

Bank of England, "Minutes of the Monetary Policy Committee Meeting, 31 July and 1 August, 2013," August 14, 2013.
(https://www.bankofengland.co.uk/-/media/boe/files/minutes/2013/minutes-august-2013.pdf)

Board of Governors of the Federal Reserve System, "Regulatory Capital Rules: The Federal Reserve Board's Framework for Implementing the U.S. Basel III Countercyclical Capital Buffer," *Federal Register*, Federal Reserve System 12 CFR Part 217, Appendix A, Docket No. R-1529; RIN 7100 AE-43, September 8, 2016.
(https://www.federalreserve.gov/newsevents/pressreleases/files/bcreg20160908b1.pdf)

Board of Governors of the Federal Reserve System, "Federal Reserve Board Announces It Has Voted to Affirm Countercyclical Capital Buffer (CCyB) at Current Level of 0 Percent," press release, December 1, 2017.
(https://www.federalreserve.gov/newsevents/pressreleases/bcreg20171201a.htm)

Board of Governors of the Federal Reserve System, "Developments Related to Financial Stability" in the *Monetary Policy Report*, February 23, 2018a, pp. 24-26.
(https://www.federalreserve.gov/monetarypolicy/files/20180223_mprfullreport.pdf)

Board of Governors of the Federal Reserve System, "2018 Supervisory Scenarios for Annual Stress Tests Required under the Dodd-Frank Act Stress Testing Rules and the Capital Plan Rule," February 2018b. (https://www.federalreserve.gov/newsevents/pressreleases/files/bcreg20180201a1.pdf)

Borio, Claudio, Piti Disyatat, Mikael Juselius, and Phurichai Rungcharoenkitkul, "Monetary Policy in the Grip of a Pincer Movement," Bank of International Settlements Working Paper No. 706, March 2018. (https://www.bis.org/publ/work706.pdf)

Brunnermeier, Markus K., and Yuliy Sannikov, "A Macroeconomic Model with a Financial Sector," *American Economic Review* 104, February 2014, pp. 379-421. (https://www.aeaweb.org/articles?id=10.1257/aer.104.2.379)

Fischer, Stanley, "Macroprudential Policy in Action: Israel," in George A. Akerlof, Olivier Blanchard, David Romer, and Joseph E. Stiglitz, eds., *What Have We Learned? Macroeconomic Policy after the Crisis* (Cambridge, Mass: The MIT Press), 2014, pp. 87-98. (https://mitpress.mit.edu/books/what-have-we-learned)

FOMC, "Minutes of the Federal Open Market Committee, October 31-November 1, 2017," November 2017. (https://www.federalreserve.gov/monetarypolicy/files/fomcminutes20171101.pdf)

FOMC, "Statement on Longer-Run Goals and Monetary Policy Strategy," adopted effective January 24, 2012; as amended effective January 30, 2018. (https://www.federalreserve.gov/monetarypolicy/files/FOMC_LongerRunGoals.pdf)

Gorton, Gary, and Guillermo Ordoñez, "Collateral Crises," *American Economic Review* 104, February 2014, pp. 343-378. (https://www.aeaweb.org/articles?id=10.1257/aer.104.2.343)

Gourio, François, Anil K. Kashyap, Jae Sim, "The Tradeoffs in Leaning Against the Wind," National Bureau of Economic Research Working Paper 23658, August 2017. (http://www.nber.org/papers/w23658)

International Monetary Fund, "Monetary Policy and Financial Stability," Staff Report, IMF, August 28, 2015. (http://www.imf.org/external/np/pp/eng/2015/082815a.pdf)

Kiyotaki, Nobuhiro, and John Moore, "Credit Cycles," *Journal of Political Economy* 105, April 1997, pp. 211-248. (http://www.journals.uchicago.edu/doi/abs/10.1086/262072)

Kohn, Donald, "Institutions for Macroprudential Regulation: The UK and the U.S.," *On the Record*, The Brookings Institution, April 17, 2014. (https://www.brookings.edu/on-the-record/institutions-for-macroprudential-regulation-the-uk-and-the-u-s/)

Kohn, Donald, "Implementing Macroprudential and Monetary Policies: The Case for Two Committees," Federal Reserve Bank of Boston 59th Economic Conference: Macroprudential Monetary Policy, October 2-3, 2015. (https://www.bostonfed.org/macroprudential2015/papers/kohn.pdf)

Liang, Nellie, "Systemic Risk Monitoring and Financial Stability," *Journal of Money, Credit and Banking*, Supplement to Vol. 45, No. s1, 2013, pp. 129-135.
(http://onlinelibrary.wiley.com/doi/10.1111/jmcb.12039/full)

Smets, Frank, "Financial Stability and Monetary Policy: How Closely Interlinked?" *International Journal of Central Banking* 10, June 2014, pp. 263-300.
(http://www.ijcb.org/journal/ijcb14q2a11.pdf)

Svensson, Lars E.O., "Cost-Benefit Analysis of Leaning Against the Wind," *Journal of Monetary Economics* 90, October 2017, pp. 193-213.
(https://larseosvensson.se/files/papers/cost-benefit-analysis-of-leaning-against-the-wind.pdf)