DO'S AND DON'TS IN CENTRAL BANK DESIGN

A policy brief by Patricia Mosser

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Do's and Don'ts of Central Banking[1]

Patricia Mosser
CGEG Faculty Associate, Director, Initiative on Central Banking and Financial Policy, Columbia University

The 2007-2009 financial crisis and its aftermath have induced – quite rightly – a re-examination of the mandate and design of central banks, particularly with respect to financial stability. The role of central banks in financial stability and managing financial crises is inherently complicated, because of the necessarily close ties to and overlap with monetary, fiscal and regulatory policy. This paper does not attempt to provide a complete framework for financial stability policy by central banks, but instead highlights a few key areas where the design of central bank policies could be improved significantly. The recommendations are influenced by the crisis experience of central banks globally, but particularly by liquidity and monetary operations done by the Federal Reserve and by U.S. regulatory reform and financial stability policy in the years since the crisis.

My central bank design recommendations are framed as 'do's and don'ts'. They span both the central banks' mandate (typically its legislated responsibilities and its relationship to fiscal and regulatory agencies) and central banks' internal policy apparatus and governance -- in other words how central banks organize themselves to execute their mandates. The paper concludes with several key lessons for central banks about the design of financial stability policy and crisis management, about their own internal structure, management and priorities, and their relationship with the fiscal authorities and regulators, both domestic and international.

Do's and Don'ts of Central Banking

DON'TS:

After a crisis (and with perfect hindsight), the 'Don'ts' are always easier to describe.

First: don't rely exclusively on operating frameworks for monetary policy or for lender of last resort (LoLR) that depend on a small number of private counterparties transmitting monetary policy changes and central bank liquidity to the rest of the (global) financial system. Narrow operating systems, such as the one used by the Fed, work wonderfully well in normal financial conditions, in part because they are very efficient. But they are woefully inadequate in times of stress. When the monetary policy transmission mechanism is broken – as it typically is during periods of market turmoil -- a narrow operating framework will not be sufficient to pass on adequate monetary and liquidity stimulus to the financial system and the rest of the economy. Moreover, for some central banks, liquidity provision during a systemic event will have international dimensions, particularly if the domestic financial system is tightly integrated with global financial markets and institutions. In such cases (which include most advanced economy central banks and many emerging market central banks), central bank actions may require an even greater degree of international cooperation and perhaps even coordinated policy responses.

Another way to say this (in financial stability language) is: don't have a large share of leveraged maturity transformation in the financial system without access to central bank liquidity provision – whether for monetary policy implementation or lender of

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last resort. This was – and remains – a very large problem in the U.S. (See Adrian et al (2014) and Goldberg (2016))

If a central bank has too narrow a framework for monetary policy implementation and liquidity provision, in a crisis it is likely to be forced into doing two addition 'don'ts': Don't design and develop completely new liquidity facilities in the midst of a financial panic (and over the weekend.) And don't make the collateral system a moving target as the crisis progresses. Wholesale changes in central bank 'rules of engagement' in the midst of crisis are not only detrimental to financial stability (because they increase uncertainty and risk additional confusion among market participants), but they can also significantly increase risk to the central bank and thus taxpayers as new programs and collateral rules are rushed into use over a very short timeframe. An overview of central bank changes to collateral and counterparty rules during the crisis can be found in Domanski, Moessner and Nelson (2014).

Second: Don't rule out using a set of policy tools or instruments ex ante that the central bank is legally allowed to use. In a crisis, the odds are that a central bank will use every policy tool in its arsenal. For example central banks in many countries typically have restrictions on collateral, asset composition and counterparties that are tighter than the law allows. Moreover, in some cases, central bank officials publicly stated that "we will never use policy tool X", even though it was legal to do so in their framework. Such statements have ended up being time inconsistent, because in the event, most central banks significantly expanded their policy tools, types of purchased assets and collateral during crises. (Markets Committee, BIS, 2009 and 2013)

As an example, there was considerable reluctance to use central bank liquidity swap lines before the 2007-2009 financial crisis, because of the historical association with swap lines for foreign exchange interventions. By the end of 2008, the dollar liquidity swap lines were the single largest liquidity program managed by the Federal Reserve. In short, central bankers should be somewhat humble about their ability to predict which policy tools will be needed in a crisis situation and as such should be prepared to call on their entire toolkit, if needed.

Third: Don't act as if the central bank can always operate with a clear line between fiscal policy and monetary policy, i.e. between solvency/resolution decisions and liquidity provision/LoLR. There is no clear line. See Calomiris (2016), Goodhardt (2016). In normal times –for very good governance reasons – the central bank and the fiscal authority typically create a line. The central bank sits on one side with a set of activities labelled monetary policy, while on the other side are a set of activities labelled fiscal and regulatory.

(Even in the case where the central bank has regulatory authority, the regulatory apparatus and decision making is typically separate from monetary policy). The separate structures make a lot of policy sense when solvency risk is low, insolvency is idiosyncratic and monetary policy is almost exclusively interest rate policy. Separation clarifies responsibilities, governance and decision making. It also allows for the (relative) independence of monetary policy (i.e. interest rate policy) in normal times. (Taylor, 2016)

But when solvency risk is systematic amid fire sales and runs, the distinctions between monetary and fiscal go away. And because those cases are the ones that matter most (because they pose the highest cost), the government – broadly defined as central bank, regulators, legislature/fiscal authority -- need a joint agreement which clarifies which part of the government is responsible for what and when. See Tucker (2014) and Mester's (2016) commitment device. Again, if authorities don't have this -- and the US didn't (and still doesn't) – the central bank may be stuck doing a couple of additional "don'ts". Don't try to determine solvency of large complex financial company over the weekend. And don't assume that solvency assessment is fixed or static. Solvency determination is always a probability exercise (Goodhardt 2016), and importantly, during a crisis solvency is completely dependent on total government policy response, which in turn requires a joint understanding of responsibilities across the key stakeholders.

Fourth: Don't neglect the financial plumbing. Plumbing such as payment systems and securities settlement operates largely under the radar, but as generations of central bankers know, it is enormously important to maintaining stability of the financial system and the economy. How does liquidity actually flow through system? Where are the hidden risks in payments and settlement systems? Where is the collateral and who controls it? These are all questions that central banks should answer (and update their answers to) regularly. Nothing is more devastating in times of financial instability than failure -- or risk of failure -- of a payments system, of securities settlement, or to get one's collateral back.

DO'S:

First: Do design LOLR, collateral rules, and liquidity provision capacity for systemic not idiosyncratic events. This requires that central banks keep on top of monetary policy transmission mechanisms and fire sale/wholesale funding risks, monitor them constantly, and adjust their planning for liquidity provision and monetary policy accordingly. Moreover, most central banks need to understand how these mechanisms and channels work globally.

To do this, central banks need much more data than they currently have

to monitor transmission mechanisms, liquidity risks and contagion channels. Many central banks, particularly those in jurisdictions with large financial centers, are likely to need global data in order to do such monitoring. The gap is enormous. Nine years after the start of the financial crisis, central banks still do not have basic aggregate data on the financial system. For example, there is no measure of the total amount of short-term wholesale funding in the financial system, let alone data that describe the distribution and structure of such funding. Whole sectors of the financial system are measured incompletely, or with data that are inconsistent with other parts of the financial system. In other words, central banks cannot monitor aggregate financial risks, particularly fire-sale and run risk, and thus do not have the information they need to size and design liquidity facilities and monetary policy implementation structures that are robust. The situation is analogous trying to make macroeconomic policy decisions without accurately measuring GDP, aggregate prices or employment.

This is a "call to arms" for central banks – to very significantly increase the resources, expertise and policymaker attention toward collecting more complete information and data on the global financial system – particularly shadow banking and propagation mechanisms. Certainly the efforts to gather additional data internationally – on secured funding markets and interbank funding for example -- are to be applauded, but they remain incomplete and as currently proposed will allow little data sharing. More needs to be done.

Second: Do crisis planning all the time. Tabletop exercises are not enough; central banks need to do true planning of liquidity facilities and other monetary policy operational changes that can be used in financial crises. Such facilities should be designed in normal times and adapted over time to changes in financial intermediation and financial structure based on the monitoring, data and information that central banks regularly gather on the financial system. In addition, central banks should test such facilities, if allowed. If testing is not possible, then central banks should insure that the legal structures and financial plumbing are in place to set up a new facility in relatively short order. Finally, in light of the international dependencies, some international crisis planning is important, even if it is less formal that domestic efforts.

Third: Do limit constructive ambiguity by clarifying the decision making of the central bank, the fiscal authority and regulators in a systemic crisis. "Fuzziness" about who will do what and who is responsible for policy decisions and regulatory actions poses particularly large risks for central banks, even those without regulatory authority.[2]

Constructive ambiguity on the central bank's powers and the perimeter of regulation/safety net can increase moral

[2] Unfortunately, constructive ambiguity tends to be quite attractive to legislators. For example, the U.S. system of many regulators with overlapping and sometimes shared responsibilities is complex to the point that it can be unclear which agency is in charge of which policy, and unclear how different authorities (fiscal, regulatory, central bank) will determine policy in a systemic crisis. The complexity encourages regulator shopping in normal times and creates incentives for regulated firms to arbitrage both regulatory overlaps and gaps. The resulting increase in moral hazard behavior is a problem for both regulatory agencies and the central bank.

hazard in normal times, particularly for large complex financial intermediaries, since they are likely to benefit the most (in terms of official sector support) when a crisis occurs[3].

During a crisis (when moral hazard behaviors come home to roost) we know which public institution will be the first mover by providing liquidity to financial institutions. But because the central bank is typically first, it can easily become the flash point for all public sector crisis management. If there is fuzziness about crisis responsibilities of fiscal authority and regulators, then delays elsewhere can cause the central bank to become the entire story. AIG became the Fed's problem. In the public conversation, the Fed became responsible for the failures of Bear Stearns and Lehman Brothers. Relatedly, this raises the questions of whether quick monetary policy actions can delay policy actions by fiscal authorities and regulators.

Fourth: Do keep oversight authority and responsibility for the financial plumbing, both public sector and private sector systems. If there is one area besides monetary policy that central banks should have clear responsibilities and oversight authority, it is the financial plumbing: payments systems, settlement systems, and even security collateral/ custody systems. As noted in Ingves (2016), this is likely to be a large challenge for central banks in light of the rapid speed of innovations that are on the horizon. Technological changes and innovations from fintech, the rapid growth in high speed transactions across many markets, and the enormous expansion of centralized clearing and settlement will require careful monitoring, and most likely significant changes in the regulation and supervision of payment and settlement systems in the coming years. A key question will be central bank's ability to determine the degree to which systems – both new and old -- are robust to financial and operational shocks.

Implications for central bank design

- Central banks should spend significantly more resources understanding and monitoring financial system structures and vulnerabilities, including the monetary transmission mechanism, financial infrastructure changes, and global financial market interlinkages that they have previously. This will require significant investments in improved, detailed data on markets, institutions and infrastructures. Importantly, this monitoring and risk analysis should be elevated to same level of governance and policymaker attention as the standard macroeconomic analysis and modeling

- Crisis planning and facility (re)design should become standard operating procedure for central banks and not periodic, one-off exercises.

[3] The government's decision making plan also needs to be credible. Managing moral hazard by allowing multiple and widespread failures in a systemic financial panic is neither good public policy nor time consistent policy. In systemic crises, societal costs of financial and economic collapse greatly outweigh moral hazard costs; solvency is typically dependent on public policy to stop the panic; and governments historically bail out their financial systems regardless of pre-crisis statements to the contrary. Moral hazard can be mitigated in normal times by policy actions and regulation of financial firms and markets (so crises as rare as possible), and by allowing the idiosyncratic failure of insolvent firms.

- Central banks are in the financial stability business even if their only mandated responsibility is monetary policy. In this case their role is largely in the cleanup of financial crises, through LoLR and the use of balance sheet and credit policies. A key design question then is whether central banks are comfortable being only in the cleanup business? There is no one-size-fits-all answer to that question, since it depends critically on financial system structure, the regulatory framework, and political considerations in each jurisdiction. However, it raises several other important design questions for central banks and others to consider.

  - If the financial stability and crisis responsibilities are split between the central bank and other authorities – and in the vast majority of countries they are -- has policy authority been aligned with responsibility? Take case of a central bank with only monetary policy (including LoLR) and payments policy authorities. Assume solvency determination and resolution are done by regulators, and backstop decisions are with legislatures and fiscal authorities. Ex ante the roles seem clear and the dependencies are relatively small: the central bank relies on accurate information on solvency from the regulators to execute its policies, particularly LoLR. Solvency, resolution and any government backstops are not the central bank's responsibility. But in a crisis, is the central bank sure it is lending to solvent financial firms? If not, what happens if the resolution mechanism is not invoked or government backstops are not provided? In this case, it is unlikely that LoLR will be effective in restoring financial or economic stability, and the risks of a zombie bank conundrum are significant. In such a scenario, the central bank may be on the hook for running exceptionally expansionary monetary policy for many years, but still may fail to hit its monetary policy targets. Who is responsible then?

  - In addition to the 'clean-up business', should central banks also be in the 'prevention business' i.e. preventing financial instability? If so how do central bank policy tools and responsibilities fit with those of other (microprudential) regulators. (For a case study on the complexities of macroprudential decision making, see Danthine (2016).) If the responsibilities for financial stability and microprudential regulation are spread across multiple authorities, the dependencies across different parts of the government can be quite complex. Who decides solvency for different types of financial companies and are the solvency standards consistent?[4] How should regulatory coordination and information sharing be managed? In practice, my experience has been that information sharing across regulatory agencies is particularly fraught.

  - A related governance issue is the extent to which financial stability committees or split responsibilities will work in practice. If they lead to

[4] Note that solvency standards for different types of financial institutions are unlikely to be the same (nor should be they be), but the standards should be consistent.

> constructive ambiguity and 'fuzziness' in responsibilities, then they will not work well. In addition, constructive ambiguity is more likely with committees are big and complicated with overlapping and shared responsibilities. (Kohn (2014))

- The financial stability role of major central banks is likely to be global, but their authorities and accountability to the public are local. As an example, more than two-thirds of the dollars lent by the Fed between 2007 and 2009 went to financial institutions based outside the U.S. This is of course a direct consequence of the breakdown of the triple coincidence in international finance noted by Avdjiev, McCauley and Shin (2016). Major central banks, particularly those whose domestic currencies are also global funding currencies, need to consider what monetary policy and lender of last resort structures are appropriate when global liquidity shortfalls in their currencies can reflect external economic and capital flows rather than domestic ones. Individually central banks need to be prepared to explain and justify in detail why the financial and economic stability of their home jurisdiction depends on providing liquidity to the global as well as the local financial system. Moreover, the international dependencies -- for example the solvency determination that is needed in order to provide local lender of last resort to a large, foreign global bank – are even more thorny than the domestic-only issues described above. While a formal international agreement on such home/host responsibilities may be unrealistic, it is important for central banks to work toward a set of international best practices to guide home country supervisors and host country central banks. For example, see Archer and Domanski (2016).

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COLUMBIA | SIPA
Center on Global Economic Governance

Center on Global Economic Governance, SIPA
1401 International Affairs Building
420 West 118th St., Mail Code 3328, New York, NY 10027
Tel 212-854-5310 | cgeg.sipa.columbia.edu
@CGEG_Columbia