

Policies for Macroeconomic and Financial Stability*

Opening Remarks

Charles I. Plosser

President and Chief Executive Officer
Federal Reserve Bank of Philadelphia

1. Introduction

I want to welcome you to the Federal Reserve Bank of Philadelphia for this year's *International Journal of Central Banking (IJCB)* conference. The topic this year is "Policies for Macroeconomic and Financial Stability." I want to thank the organizers of this excellent program: Harrison Hong of Princeton University, Rafael Repullo of the Centre for Monetary and Financial Studies in Madrid, and of course, my Federal Reserve colleagues, Presidents Loretta Mester of Cleveland and John Williams of San Francisco. John is also managing editor of the *IJCB*.

Most of the papers on this year's program address the question, how should we pursue macroprudential regulation? Each paper takes a somewhat different perspective to address the question. Yet, I think you will find each one enlightening and thought provoking. They tackle hard problems that have no easy solutions.

While the papers delve into the details, I would like to step back and take a broader view for a moment. As I do, though, I will begin with the usual caveat that my views are not necessarily those of the Federal Reserve System or my colleagues on the Federal Open Market Committee.

I will discuss some broad principles that I believe we should consider as we discuss regulation and financial stability. Without some clearly defined principles to guide us, we run the risk of writing many regulations that may do more harm than good. Regulations that are not grounded on sound principles could, in fact, increase systemic risk rather than reduce it. As most of us are aware, in this arena of

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regulation, the law of unintended consequences crops up on a regular basis.

So, I would like to offer some thoughts that might be useful in navigating the complications of applying macroprudential regulation in a world of uncertainty. I will stress two sources of uncertainty that, in my view, are often underestimated. The first is the uncertainty that arises from the inevitable dynamism of the economy and the institutions that we seek to regulate. This is especially true in financial markets, which, in large part, exist to repackage and redistribute financial risks. The second source of uncertainty stems from the regulations themselves.

This uncertainty leads me to stress the need for well-defined regulatory objectives. It also suggests the need for robust regulations that take explicit account of our uncertainty about the true model of the financial system and its evolving nature.

2. Macroprudential Policy Should Have Well-Defined Objectives

While research into the financial crisis has generated a wealth of insights into the mechanisms underlying financial instability, we are still some ways from defining systemic risk with any real precision. We are often content to say that systemic risks result in bank runs. But runs are an outcome or symptom; their existence does not necessarily provide us with the causal factors or the necessary conditions that give rise to them. For example, we frequently appeal to information asymmetries as a source of the problem, but we seem to focus greater effort on regulating activities or products than we do on ensuring disclosures and information. More generally, we need to better distinguish systemic risks from idiosyncratic risk taking by individual firms. These latter risks are exactly what financial intermediaries can and should be doing in a well-functioning financial market. Our task is not to stifle this risk taking by these firms.

A big step toward more precision is to measure the right things and to measure them correctly. Some of the papers on this program make progress in this direction, but they also illustrate how far we have to go on some very basic matters.

One of the papers to be presented provides evidence about the deep interconnections between a firm's credit risk and its funding

liquidity or access to financing. The paper argues that a firm's liquidity cannot be measured properly without also measuring the firm's risk of insolvency in bad states of the world. I view this as an important insight, but it is also cautionary. We have already written hundreds of pages of liquidity regulations that do not incorporate the connection between credit risk and liquidity in tail states of the world.

Another interesting paper on the program examines capital requirements in a model that looks at one of the suspected sources of systemic risk, interconnectedness. Actually, the idea that interconnectedness might be an important source of systemic risk is intuitive and appealing. But how do we measure interconnectedness? How do we know when interconnectedness is a problem and when it is a desirable consequence of efficiency? Put differently, what is the market failure that arises from interconnectedness that produces the systemic risk? If it stems from information failures rather than interconnectedness per se, then we may be focusing on the wrong issues and hampering efficiency—without solving the basic problem.

Even putting aside the basic theory, the forms of interconnectedness, like so many features of a dynamic financial market, are not static. Forms of interconnectedness evolve with new technologies and, as I will note shortly, with regulation.

Perhaps a more hopeful approach is to look for regulations that work well for a wide range of measures of interconnectedness. We should also seek regulations that are cost effective and straightforward to implement and enforce.

3. Robust Macroprudential Regulation

In the past, I have argued for robust monetary policy rules that recognize that we face considerable uncertainty about the correct underlying model of the economy. I believe that the same basic framework may be useful for thinking about macroprudential policy. After all, there is no consensus on the model that generates systemic risks any more than there is a consensus model for the macroeconomy.

How do we deal with this disagreement or lack of consensus? One approach is to work harder to come up with a better model,

and then to design regulations to measure and control the market failures that give rise to such risks.

Given the lack of consensus at this point on the model, a better approach might be to devise policies that are likely to work reasonably well across a wide range of models. That is, we can design policies that are robust. That doesn't necessarily mean more regulations on more products or activities; rather, it suggests regulations that are less sensitive to the specific models or underlying structures.

Why are we so uncertain about the right model? I think the answer to this provides some guidance about the types of policies that might be robust.

4. Systemic Risks Are Dynamic; They Evolve

In the face of new regulations, firms don't just stand still; they respond and adapt. During the run-up to the financial crisis, we observed this in myriad ways—for example, in banks' response to Basel II's byzantine risk-based capital requirements. Predictably, banks responded by moving high-risk assets into structures with low-risk weights—for example, asset-backed commercial paper. Notice that in this case, a complex regulation *created* model uncertainty through the mechanism of regulatory arbitrage, and there are many more examples. Note also that while it was predictable that firms would shift assets from high- to low-risk weights, it was anything but predictable *how* they would choose to do it.

Apart from regulatory arbitrage, the financial economy is always evolving through innovation. As Nobel laureate Robert Merton has often reminded us, the same basic intermediary functions are continuously repackaged in different institutional forms. Of course, this creates problems for regulations that are essentially static. Regulations are written as if the existing package of financial instruments is largely given. Static regulations may reduce credit risk or liquidity risk when this package takes one form, but they fail when the risks are repackaged in another form. Thus, we are always regulating a moving target.

As I said previously, there are no simple fixes and no silver bullets. But I do think that some regulatory approaches are more likely to be robust than others.

5. Simple Regulations Are More Likely to be Robust

I have argued elsewhere that simple regulatory policies are most likely to work in a wide range of circumstances. Complex regulations—I come back to the example of risk-based capital—invite complex regulatory arbitrage. Furthermore, securities that looked very safe yesterday may look much riskier today. For example, prior to the European Union's debt crisis, the sovereign debt of EU countries appeared to have low risk. The practical effect of Basel II was to place a zero-risk weight on such sovereign debts. After the European debt crisis, however, this regulatory decision embodied in Basel II was perhaps too naïve, or just too optimistic. In either event, *ex ante* regulatory rules can have unintended outcomes as markets evolve. I don't believe the answer to regulatory arbitrage or to changing risks is to further tinker with the risk weights, to add more risk buckets, or to add more contingencies.

The Federal Reserve, for example, has raised leverage requirements for those firms thought to be systemically important, and European bank regulators have adopted leverage requirements for the first time. One reason for this approach is to try to escape the difficulties of fine-tuning the ever-evolving nature of assets. This has led me to stress that simple leverage requirements should be the primary tool of capital regulation and that these leverage requirements should be set at higher levels for those firms considered to be systemically important. Risk-based capital requirements could serve a supplementary role at best.

Of course, all regulations—simple and complex—create incentives for regulatory arbitrage. While higher leverage requirements will limit some types of arbitrage, higher capital requirements will push some activities outside the banking system altogether.

6. Regulations That Utilize Market Forces Are More Likely to be Robust

I have also argued for regulations that utilize market forces to the greatest extent possible. Regulations that utilize market participants to monitor risks are less subject to regulatory arbitrage because they do not pit regulators and market participants in a game of cat

and mouse. Furthermore, regulators' limited knowledge about evolving risks and reliance on complicated rules that seek to control risk by addressing each contingency will invariably lag behind market developments.

More capital and more subordinated or convertible debt in banks' capital structure—apart from their role in increasing banks' cushion against default and limiting bank reliance on short-term debt—give market participants stronger incentives to evaluate and price bank risk. Furthermore, measures of systemic risk based on market prices have proven to be relatively informative about developing problems.

7. Conclusion

To conclude, we need to be clear as regulators about what we don't know and what we can't know. Policy is always made under conditions of uncertainty. But when we design macroprudential policies, we must be clear about our objectives. At this point, we still have difficulty in defining and measuring systemic risk. Some of the papers on the program today make some progress on this subject.

However, while we can make progress in measuring risks, dynamic financial markets are continually repackaging those risks in forms that a long list of rules simply can't capture. And risks are likely to arise in places and in ways that are impossible to predict. Our fundamental uncertainty about the economy suggests that we look for robust regulatory mechanisms. Simple regulations that are designed to work across a wide range of environments, regulations that exploit market forces to control risks, and mechanisms that ease the costs of allowing financial firms to fail are more likely to work in a continually evolving world.