



## Reducing the Risks of the New Macro-Prudential Policy Regime

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The pursuit of a new “macro-prudential” policy agenda has become a call to arms for many central banks and multilateral institutions (the IMF, the Basel Committee, the Federal Reserve Board, and the European Systemic Risk Board, to name a few). Many observers argue that the recent financial crisis shows that the aggressive pursuit of macro-prudential policies – policies that alter bank capital requirements, mortgage leverage constraints, and other instruments on a cyclical base to cool down or heat up the financial system as needed – are necessary to combat the cycles of financial boom and bust that have characterized developed and developing economies over the past three decades. Long-neglected concerns about financial factors that can magnify boom and bust cycles (also known as the “financial accelerator”) have become much more common features of macroeconomists’ modeling and policy makers’ speeches.

I have long been an enthusiastic proponent of the financial accelerator, which has been central to my research agenda for the past thirty years. And yet, I view the new dominance of financial accelerator thinking in macroeconomic policy making circles as a source of deep concern. There could be significant adverse unintended consequences to the new macro-prudential policy agenda that many advocates of the financial accelerator have been encouraging. Macro-prudential policy analyses typically derive qualitative inferences about the effects of policy interventions. These often take the form of intricate flow charts showing the reactions of output to various macro-prudential policy actions. But there is more to policy

making than constructing flow charts about qualitative policy effects. While economists generally agree about the qualitative effects of changes in prudential policies (e.g., raising capital requirements will tend to contract lending), that agreement masks deep divisions among economists in answering the more relevant and difficult questions: How large are such effects? How do their magnitudes vary under different circumstances? How will macro-prudential policies interact with existing monetary or fiscal policies? Which macro-prudential policies tools should be employed, under what circumstances, and how? This article considers the answers to that question in light of current knowledge, and practical considerations about how policy is implemented, and how it affects the economy, in the real world.

In laying out various arguments for or against macro-prudential activism, it is useful to divide viewpoints into two camps – “activists” and “skeptics” – which is an admitted over-simplification, but a useful one.

“Activists” can be divided into fundamentalists – who see the financial accelerator as a powerful channel for affecting decision making as the result of informational problems in markets, externalities, agency problems, and coordination failures – or behaviorists – who see financial markets as deeply afflicted by inherent flaws in decision making. Excessive risk taking during booms – overleveraging and underpricing of risks – can be driven by some or all of these influences (e.g., simple myopic greed, managerial compensation systems that encourage greater risk taking at the expense of shareholders, a failure to take into account the adverse effects of risk taking on other participants in the financial system, etc.). Panics can be driven by similar problems (e.g., myopic fear, the failure of individual lenders to take into account the systemic consequences of the contraction of their lending) triggered by some adverse shock that ends the boom. Activists believe that macro-prudential policies should be employed aggressively and proactively to lean against these exaggerating tendencies of the financial accelerator by constraining risk taking, lending and leveraging during booms, and encouraging risk taking, lending and

leveraging during busts. They would do so by varying prudential regulations over the cycle – including banks’ minimum capital ratio requirements, risk weightings applied to different classes of assets, bank reserve or liquidity requirements, mortgage loan-to-value ratios, margin requirements and other prudential limits. Activists believe that doing these things will smooth the business cycle.

“Skeptics,” in contrast, believe that, on balance, the pursuit of macro-prudential policy initiatives could produce more distortions and more macroeconomic volatility. The skeptics’ argument has four parts.

First, skeptics do not see the financial system as inherently prone to unsustainable booms, but rather, see excessive risk taking as primarily a symptom of ineffective or unwise micro-prudential policies, which if corrected, would remove much of the incentive to undertake excessive risks during booms. Excessive risk taking during booms, according to this view, is primarily the result of the combination of distortions produced by existing government safety nets for banks, prudential regulation of banks, and borrowing subsidies for consumers (especially in housing credit). Thus, the need for macro-prudential regulation to lean against the wind during booms would be substantially reduced if micro-prudential regulation were reformed to be made effective and if government subsidies for risk taking were absent. There is a substantial body of evidence in support of these propositions.

Second, during recessions, relaxing prudential regulation on macro-prudential grounds (to stimulate lending and encourage investment) is not likely to be stabilizing, but the opposite. The relaxation of prudential regulation – specifically, the tolerance of inadequate capital ratios of troubled lenders – is already an all-too-common discretionary reality known as “forbearance,” which is usually accomplished through lax recognition of loan losses. This has been shown to be a dangerous practice that tends to magnify bank losses because it promotes incentive problems in risk management. The severity of many severe banking system disasters of the past three decades can be traced to relaxing regulatory standards in

the name of preserving bank lending during contractions (for example, the U.S. Savings and Loan Crisis, the Chilean collapse of 1982-1983, the Mexican collapse of 1993-1995, the Thai, Korean and Indonesian collapses of 1997). Not only does forbearance promote increased losses, the consequences of forbearance for credit supply are often the opposite of what is intended; because forbearance permits insolvent or weak banks to gamble for resurrection, they often undertake destructive risks (e.g., foreign exchange bets) not just value-creating loans, and when those risky bets go sour (as they generally do) the contraction in banking credit that accompanies the collapse is even more pronounced and destabilizing than the contraction in credit that was “avoided” by forbearance. Because relaxing prudential regulations during recessions tends to magnify financial system losses and results in collapses of bank credit, it tends to increase financial and economic volatility.

Third, implementing macro-prudential policy requires much more than qualitative predictions about the signs of derivatives. It is one thing to confidently declare that raising minimum capital or cash ratio requirements on banks, imposing higher risk weights on banks’ risky assets, or raising minimum mortgage downpayments would reduce the growth of credit, asset prices and economic activity, *ceteris paribus*. It is quite another thing to confidently opine on the sizes of those effects, on how they vary over the business cycle, or on how they co-vary with other important policy actions. As Brainard (1967) noted in his classic treatment, uncertainty about the effects of using a policy instrument generally reduces the extent to which one should use it.

In the case of macro-prudential policy, uncertainty about impact is rather extreme. The Basel III standards envision a 2.5 percentage point cyclical variation in minimum capital ratio requirements for banks. At the time that policy was announced, there had been no microeconomic studies of the effects of capital requirement changes on the supply of credit. The aggressive cyclical variation in capital requirements under Basel III seems to have been based on unreliable back-of-the-envelope estimates that

suggested small loan-supply reactions to changes in capital requirements. More recent studies, using microeconomic data on bank reactions to capital requirement changes in the UK and provisioning requirement changes in Spain, provide a very different picture. These studies suggest very large reactions: in the UK, a one percentage point increase in capital requirements (e.g., raising risk-based minimum capital ratios one percentage point, from the sample average of 10 percent to 11 percent) reduces the supply of domestic lending to nonfinancial firms by about 7 percent; in Spain, an increase in provisioning requirements (a form of capital front-loading, not a permanent increase in required capital, which should have a much smaller effect on lending) reduces loan supply by about 3 percent.<sup>1</sup> The UK studies find that banks' reactions depend on a variety of circumstances (which reflect differences in the costs of raising equity capital, and differences in the value of preserving lending relationships). Thus, although these findings from the UK and Spain show that reactions to capital requirements are very large, on average, for those countries, they do not provide a reliable indicator of the magnitude of that variation for other banks operating in other countries. In short, macro-prudential policy tools are a bazooka, not a pea shooter, and using them as a cyclical tool, given the existing scant empirical knowledge about their effects, amounts to firing a bazooka without the benefit of a reliable sight.

Fourth, an aggressive approach to macro-prudential policy can be destabilizing through its unintended consequences for other policy instruments, especially monetary policy. In particular, the use of macro-prudential policy may make it harder to implement a credible monetary policy rule, which could be very costly. Pro-cyclical monetary policy (policy that cuts interest rates and expands money and credit during expansions) has been a major contributor to risk taking during booms. Monetary policy over the past century of U.S. history generally has been pro-cyclical, either because of flawed conceptual frameworks that have guided monetary targeting, or because of political pressures associated with the

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<sup>1</sup> See Aiyar, Calomiris and Wieladek (2013).

financing of government deficits. Pro-cyclical monetary policy during booms not only reduces the riskless interest rate, it also compresses bank loans and bond spreads, and reduces the equity risk premium, thus promoting financial instability – as the experience of 2002-2005 demonstrated. A major part of the cure for the destabilizing pro-cyclical tendency of monetary policy is the establishment of a policy rule – for example, some version of the Taylor Rule. By constraining policy makers with an observable rule that has a reliable track record for producing countercyclical policy and price stability, the rule insulates them from the political pressure to use discretion to monetize deficits, and protects the public from discretionary policies that are based on mis-specified macroeconomic models.

Macro-prudential policy creates two kinds of problems for such a Taylor Rule: (a) it makes the empirical basis for a reliable rule obsolete, and (b) it risks undermining the central bank's accountability for following *any* monetary policy rule. With respect to the first of these effects, recall that the Taylor Rule relates policy actions with respect to the federal funds rate to observed levels of unemployment and inflation. The rule was derived from a policy framework in which countercyclical macro-prudential policies (such as changes in bank capital requirements) were absent. Fed policy makers (taken as a group) have effectively chosen the parameters for their Taylor Rule by observing how unemployment and inflation respond to changes in the federal funds rate. In the presence of a new and powerful set of tools that affect the supply of credit in the financial system, it is quite likely that the responses of inflation and unemployment to changes in the federal funds rate will differ from what they were before. Theory suggests that there should be significant interactions between monetary policy and macro-prudential policy actions; the magnitude of loan-supply responses to capital requirement changes should depend on the stance of monetary policy. There is some tentative evidence from the UK experience that supports that view, but the standard errors of those estimates are large, and interaction effects cannot be reliably measured for the UK sample, much less for other countries.

Furthermore, if the Fed employs multiple tools at its disposal for achieving countercyclical objectives (the federal funds rate, time-varying capital ratio requirements, time-varying loan-to-value ratios on mortgages, etc.) it may be very hard – perhaps virtually impossible – for the Fed to articulate any rule that will guide its actions, especially given the lack of knowledge of the impacts on the economy of these various policy levers. This would undermine the accountability of the central bank. In doing so, it would make its policy more prone to discretionary errors and political capture, resulting in greater economic volatility and higher and more volatile inflation.

These criticisms, however, do not imply that macro-prudential policy is always a bad idea. The financial histories of many countries contain episodes in which extremely rapid growth of bank credit is followed by a severe recession. Monetary policy can be a weak tool to cool down excessive bank credit growth in such extreme circumstances. The recent experience of Colombia is an interesting example. In 2006-2007, rapid acceleration in credit growth, the current account deficit, and inflation led the central bank to raise interest rates dramatically, but this did not slow down credit growth. Only the combination of a substantial increase in capital requirements, provisioning requirements, cash requirements, and capital controls was able to cool credit growth, which led to a soft landing with no recession in 2008-2009. This is not an isolated example, but neither is it a constant occurrence.

What, then, is the appropriate rule to follow with respect to macro-prudential policy? Given the four problems mentioned above, I suggest that policy makers continue to rely on traditional monetary policy (e.g., a traditional Taylor Rule or a nominal GDP targeting rule) in almost all circumstances, and not employ macro-prudential policies except during extreme circumstances associated with the most severe credit booms. For example, one could set a threshold of, say, 20% annualized growth of banking system credit over a minimum length of time (say, eighteen months). If credit growth exceeds that threshold over that length of time, a pre-specified increase in capital ratio requirements per quarter would

be imposed (say, 50 basis points per quarter) until credit growth slowed to an acceptable level; or else the regulator would have to explain why the increase in capital requirements should not be imposed. Once credit growth slowed, and following some pre-announced formula, requirements would return to their normal levels.

This approach would achieve much of what macro-prudential policy advocates have in mind, while avoiding the four costs discussed above. Specifically, it would avoid making macro-prudential policy a constant source of uncertainty in the economy. It would prevent the undermining of micro-prudential policies during recessions (because it would avoid forbearance during recessions). Although the precise effects of such occasional interventions would be uncertain, that uncertainty would be acceptable because at moments of extreme credit growth failing to implement some policy to cool growth arguably would create even more economic volatility. And because the macro-prudential policy tool would be used so rarely, it would not undermine the effectiveness of the monetary policy rule established by the central bank. This approach, however, will only work to promote economic stability if it is combined with two other crucial long-term policies: a credible monetary policy rule, and an effective reform of micro-prudential policies to avoid the subsidization of risk taking (Calomiris 2011). Much of the impetus for macro-prudential policy action is the result of the failure to do either.

#### References

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