On the separation of monetary and prudential policy: How much of the precrisis consensus remains?

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ABSTRACT

Prior to the crisis, monetary policymakers and prudential authorities had clearly defined tools and goals with little or no conflict. The crisis revealed a variety of overlaps, where one set of policies seems to influence those in another. Does this mean that two policy realms can no longer remain separate? I address the question by first asking whether monetary policy creates significant financial stability risks. My answer is generally no. Given that, central bankers should refrain from reacting to financial stability risks in most circumstances. Instead, the job of safeguarding the financial system should be left, as it was prior to the crisis, to prudential policymakers. But how can prudential policy best maintain financial stability? I argue that given our current state of knowledge, stress tests are the best tool to ensure crisis will be rare and not terribly severe. So, my answer to the question in the title is that the precrisis consensus remains largely intact.

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1. Introduction

Prior to the financial crisis of 2007–09, it was nearly axiomatic that prudential, fiscal and monetary policies could be separated. Objectives and instruments could be cleanly mapped to different policymakers, with minimal overlap.

Prudential policy would use capital and liquidity regulation to reduce the likelihood that individual institutions would fail. In doing so, authorities seek to limit contagion from such failures; to ensure

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continued market functioning, and to counter the moral hazard arising from retail deposit insurance and implicit government guarantees. Furthermore, because the policy’s ultimate purpose was to address an externality, prudential policy was thought to be more or less unchanging through time.

Fiscal policy, by setting taxes and expenditures, would focus on promoting growth and employment. It would address social preferences about the way that income is distributed across households and among its ultimate uses. And, through straightforward countercyclical taxes and spending, fiscal policy could automatically stabilize the economy. Importantly, with its focus on long-term objectives, fiscal policy would be slow moving.

By contrast, monetary policy would use interest rates or the exchange rate as the short-term, flexible tool for maintaining price stability and stabilizing aggregate demand. And, as the lender of last resort, central banks would maintain short-run liquidity to the banking system in times of stress. Both of these were to be achieved by the combination of the central bank’s judicious use of its balance sheet and a set of announcements.

The differences in time horizon – prudential policy, timeless; fiscal policy, long-term; and monetary policy, short-term – reduced the need for any one authority to worry about the objectives of the other two. The division of tools – capital and liquidity requirements, tax and expenditure policy, and various interest rates – meant that decisions could be taken independently. And, importantly, we had empirical models that let us predict the response of goals to changes in instruments.

The events of the past decade have thrown the deficiencies of this precrisis consensus into bold relief. We are now acutely aware of a whole raft of overlaps and conflicts between objectives and instruments. Among other things, we now see that monetary policy influences prudential policy through its impact on bank, household and firm balance sheets, as well as by changing incentives for risk taking. Prudential policy influences financial conditions by influencing the cost of lending; it influences the monetary policy transmission mechanism by changing how intermediaries react to changes in interest rates; and it influences fiscal policy through its treatment of sovereign debt. Monetary policy influences fiscal policy through the central bank’s balance sheet and its impact on the quantity and maturity structure of privately-held sovereign debt. And, monetary policy has an impact on the usefulness of fiscal policy as a stabilization tool when interest rates are at the zero lower bound.

So, after receding for several decades, the issue of interconnections and trade-offs between the various policymaking realms has returned in full force. But how important are these policy interactions?

There are two clear sides to the debate. The first is exemplified by the statement of Jaime Caruana, General Manager of the BIS. In 2011 he said:

“[F]inancial stability is too large a task for prudential or macroprudential frameworks alone. Monetary policy strategies also need to be modified, so that central banks can lean against the build-up of financial imbalances even if near-term inflation remains low and stable” Caruana (2011).

The alternative is summarized in a recent statement by John C. Williams, President of the Federal Reserve Bank of San Francisco:

“My main conclusions are: (1) monetary policy is poorly suited for dealing with financial stability concerns, even as a last resort; (2) a macroprudential, financial system-wide perspective is needed – but in the United States, explicitly macroprudential tools are hard to find; and (3) given (1) and (2), we need to rely primarily on microprudential regulations and supervision to achieve macroprudential goals” Williams (2015).

Which is it? Must financial stability become part of the core of our monetary policy framework as Caruana claims? Or, can we retain the separation between monetary policy and prudential policy, as Williams concludes?

In the remainder of this essay, I will bring evidence to bear on these questions. Starting in Section 2, I present a framework to organize the discussion. In Section 3, I examine whether monetary policy creates financial stability risks, and whether it should react to financial stability risks. Next, in Section 4, I turn my attention to prudential policy and focus on how I believe it can best be used to maintain

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1 Also see Borio (2014).
2 Interestingly, while the Williams view echoes that in Yellen (2014), it is counter that of Fischer (2014).
financial stability. My conclusion is that, while Williams is right most of the time, there may be occasions when Caruana’s view prevails.

2. An organizational framework: impulses, propagation mechanisms and outcomes

Since at least the mid-1970s, macroeconomists have organized their thinking about economic systems using models in which a set of impulses amplified by a propagation mechanism lead to an outcome.\(^3\) Impulses can be traditional real sector shocks to productivity or the terms of trade; nominal shocks to the interest rate, the exchange rate, or asset prices; and financial shocks like changes in risk attitudes or new information about institutions’ exposure and solvency. The propagation mechanism is the structure of the economy and financial system. It can be influenced by things like household, firm and bank balance sheets. And the outcomes or goals are of two general types: traditional macroeconomic stability, which includes stable growth, high employment and stable inflation; and financial stability, which is about keeping the probability and severity of financial crises sufficiently low.

Fig. 1 lays out this simple canonical representation. I make no attempt to be exhaustive in describing the sources of impulses or the conditions that influence the strength or weakness of the propagation mechanism. Instead, I have listed the components of the system that are the most relevant for thinking about monetary and prudential policy.

Policymakers possess a toolkit that they can employ in their effort to maintain macroeconomic and financial stability. In principle, the tools can be designed to address three sources of instability:

1) The realization of a given shock that, if allowed to propagate, would destabilize the system.
2) Increases in the degree to which a given shock is amplified by the propagation mechanism.
3) Changes in the distribution of shocks that can hit the system in the first place.

The precrisis consensus was that the first of these was assigned to the central bank. The second was the responsibility of the prudential authority. And responsibility for the third was the subject of debate.\(^4\)

On the first, we think of monetary policy as meeting its stabilization objective by neutralizing shocks. As they do, central bankers not only influence the path of output, employment and prices, but they affect the level of systemic risk, as well. It is important to understand that in this process, monetary policymakers are taking advantage of the feedback between the real sector and the financial system through what has come to known as the financial accelerator.\(^5\)

Turning to the second, prudential policy is typically assigned the role of attenuating any increases in the strength of the propagation mechanism, reducing vulnerability of the financial system to shocks.\(^6\) That is, the goal of regulation is to ensure institutional and systemic resilience.

As for the third source of instability, changes in the distribution of shocks, the debate before the crisis was whether this was a policy concern at all. And, the question remains largely unresolved. There appears to be no clear path forward. The reason is that most discussions of changes in the distribution of the shocks confuse the shocks and the propagation mechanism. For example, there seems to be a consensus that booms and busts in property prices are worse than those in equity prices. The reason is that property tends to be leveraged, while equity does not. As a result, when the value of real estate collapses, the borrowers are more likely to default damaging the lenders, etc. In other words, the possibility of bigger shocks is accompanied by an increase in the degree to which the propagation mechanism amplifies it. But, should we address this by leaning against the boom in an effort combat the change in the distribution of the shocks? Or, should we try to keep leverage low, ensuring that

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\(^3\) In the history of economic thought, this structure is normally attributed to the original real business cycle theorists and elucidate in the Sargent’s (1979) seminal graduate textbook.

\(^4\) I would put the questions of whether central banks should respond to asset price booms in this category. Bernanke and Gertler (1999) are the earliest to argue that central banks should respond to asset price movements only in so far as they affect inflation. Cecchetti et al. (2000) and Borio and White (2004) argue the opposite position.

\(^5\) Early work on this topic is in Bernanke et al. (1996).

\(^6\) As Cecchetti and Kohler (2014) discuss, it is also possible for prudential policy to neutralize shocks.

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the propagation mechanism doesn’t become more sensitive? And, most importantly, how should we approach trying to answer the question?

With this foundation, I now turn to a discussion of whether the extent to which we can retain the precrisis separation between monetary and prudential policy. Using the terminology of Smets (2014), can we maintain a modified Jackson Hole consensus in which monetary policy retains its primary objective of price stability and high, stable growth while prudential policy pursues financial stability?

Answering “yes” to this question requires that monetary policy has only a small direct influence on systemic risk, while prudential policy must be sufficiently effective that it can do the job of maintaining financial stability. In the following two sections I bring some empirical evidence to bear on these issues, first looking at monetary policy and then at prudential policy.

3. Monetary policy and financial stability

There is a large and growing literature that studies the relationship between monetary policy and financial stability. This work addresses two related questions: Does the monetary policy stance create financial stability risks? And, should monetary policy react to financial stability risks that arise elsewhere? I will examine each of these in turn.

3.1. Does monetary policy create financial stability risks?

To begin, I examine the extent to which monetary policy influences the propagation mechanism through its impact on the banking system. To see why it might, consider a policy easing that is implemented through a reduction in the policy rate – something that is usually accompanied by a steepening of the yield curve. This immediately affects commercial bank balance sheets driving up the value of assets, increasing the ability of borrowers to repay their debts, and reducing the cost of liabilities. The result is an increase both in the bank’s net worth and in its profitability.

So far so good for financial stability. There is, however, a dark side to monetary policy accommodation. First, the fall in borrowing costs encourages everyone to take on more debt. Second, with lower

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Fig. 1. A simple framework.
nominal and real returns, investors will take on additional risk.\textsuperscript{8} And third, lower interest rates will induce currency depreciation, increasing the burden of foreign-currency-denominated debt.\textsuperscript{9}

Of course, what I have just portrayed as financial stability risks, I could just as easily have described as channels of the monetary policy transmission that are being exploited to stabilize the economy. Policymakers always have to weigh the distortions they may create in the allocation of real resources and the accumulation of systemic risk against the gains that they hope to reap in the form of stable growth and inflation. It is always true that whether any given monetary policy action is worth it depends on a complex quantitative cost-benefit calculation.

With this in mind, I turn to two recent papers that examine the ultimate impact of monetary policy on financial stability. IMF (2015) presents estimates of a Bayesian Threshold-VAR based on monthly data on industrial production, inflation, the slope of the U.S. Treasury term structure measured as the difference between the 10 year bond and the 3 month bill rate, and a measure of financial stability based on average distance to default for the largest publicly traded banks and insurance companies over a period from 1984 to 2014.\textsuperscript{10} The estimates of periods of high and low financial stress correspond to low and high distance to default.

Fig. 2 displays the impulse response function for a 100 basis point increase in the slope of the term structure, which is the size of a typical monetary policy easing. The plot on the top shows the impact on output growth, year-on-year; and the plot on the bottom shows the impact on the average distance to default.

From this evidence, I draw two qualitative conclusions, one regarding the impact of financial stress on the monetary policy transmission mechanism and a second concerning the impact of monetary policy on financial stress.

On the first, the impulse responses from this specific model suggest that policy easing has roughly the same impact on output regardless of whether the financial system is under stress.\textsuperscript{11} My second qualitative conclusion is that monetary policy reduces financial stress in the short term. And, the impact is larger when the system is under stress.

It is worth examining this second point in some detail, looking at the empirical magnitudes. To begin, the average distance to default (ADD) has a standard normal distribution, the relationship with the probability of default (or crisis) is highly nonlinear. During non-stress times, values in the range of 4, implying a probability of default (or crisis) of 0.0032\%, are common. Looking at the black line in the bottom panel of Fig. 2, we can see that the estimated impact of a 100 basis point easing is to raise the average distance to default in the non-stress regime by +0.11 at a horizon of 4 months. (This is the first, smaller, peak in the black line of the bottom of Fig. 2.) This result implies a decline in the probability of default to 0.0020\%. That is, under normal conditions, a policy easing will drive the probability of a crisis from a miniscule level to one that is even smaller.

Because of the nonlinearity, the impact of an easing during a stress period is consequential. First, instead of 4, a typical starting point for the average distance to default is now 2. That means that the baseline probability of default is fairly high 2.28\%. Furthermore, the estimated impact of a 100 basis point increase in the slope of the term structure is now much bigger: +0.31. The implication is that a monetary policy easing during a period of financial stress, by raising the ADD from 2 to 2.31, reduces the probability of default from 2.28% to 1.04%. This seems large.

Turning to the second piece of empirical evidence, Cecchetti et al. (2016) study the impact of monetary policy easing on financial institution balance sheets. Specifically, we examine the impact of a sustained decline in the 2 year sovereign interest rate relative to its average over the prior two years on leverage in the a set of 1003 publicly listed financial firms in 22 countries from 1998 to 2014.

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\textsuperscript{8} See Gambacorta (2009) for a summary of what has come to be called the “risk-taking channel” of monetary policy transmission.

\textsuperscript{9} See Acharya et al. (2015) for a detailed examination of the impact of foreign exchange movements on corporate borrowers.

\textsuperscript{10} The model I am describing is the one in Box 5, page 37, of the IMF Staff Discussion Note. I thank the authors for providing me with their data. The measure of financial stress, average distance to default, is based on Merton (1974). The resulting measure, computed by Moody’s KMV, has a standard normal distribution. So, for example, a value of 2 implies a probability of default of 2.28%.

\textsuperscript{11} It is important to note that this result is at odds with that in some other papers. For example, in their study of a model with three states rather than two, Avdjiev and Zheng (2014) do find changes in the transmission mechanism.
**Fig. 2.** Impact of interest rate reduction on output and financial stability. Results from Threshold VAR with output, inflation, average distance to default for the U.S. financial system, and the slope of the term structure. Shock is 100 bps decrease in 10-year-month slope. Frequency is monthly. Source: IMF (2015) and correspondence with the authors.

Following Acharya et al. (2012), the authors' measure leverage as liabilities plus market-value of equity over market-value of equity.¹²

Fig. 3 reports the results of this simple exercise for six groups of financial firms. Focusing on the first three – banks, insurance companies and investment banks – note that in the top panel the short-run impact of a policy easing is to reduce leverage very slightly. At least initially, asset valuations would appear to be increasing more quickly than liabilities. Turning to the longer-term impact, if the accommodation is sustained, things change dramatically. The graph on the bottom shows the impact of accommodation that lasts for one year (the center bars) and two years (the right-most bars). So, for example, the median bank has an increase in leverage from 10.2 to 12.7. For insurance companies, leverage rises from 6.1 to 7.1. And for investment banks, the increase is from 4.6 to 5.1. These effects seem large.

We now have two results. In the short-term, there is no apparent conflict between macroeconomic stability and financial stability. Monetary policy easing designed to raise output (and inflation) reduces financial stress. While the impact is small during in normal times, it is large when the system is under stress. But at the level of individual firms, accommodation takes some time to have an impact. Initially, leverage is largely unchanged. But when interest rates remain low for several years, the result is an increase in leverage that will almost surely reduce the resilience of the system.

What should we make of this? Before answering, I would like to recall how conventional stabilization policy is intended to work. Faced with an impending decline in real activity that arises from something like a fall in consumer or business sentiment, monetary policymakers react by cutting interest rates. The purpose of this policy action is to get people to take risks that they were previously unwilling to take. But by getting households and firms to change their behavior, pushing them to increase their consumption and investment, policymakers are able to stabilize growth and employment, reducing the depth of the recession or even eliminating it altogether. This is the intended consequence of stabilization policy: it reduces aggregate volatility and risk. Increases in leverage by individual institutions result in higher output and lower levels of financial stress.

This story is consistent with the aggregate impulse response results and the view that in the short run, monetary policy is stabilizing both for the real economy and for the financial system; but what about in the long run? We have less experience with this, and here the conclusions from the firm-level study are not very encouraging. My interpretation is that, if policymakers get into a position where they need to be accommodative for several years — about twice the length of the vast majority of post-WWII recessions — then the trade-off shifts and financial stability risks become a concern.

Returning to where I started, does policy accommodation influence the propagation mechanism, creating vulnerabilities and increasing systemic risk? In the short run, and in the course of trying to combat the aggregate effects of a normal recession, the answer seems to be no. But if we get into what Blanchard (2014) calls “dark corners, where the economy can malfunction badly," then the need for extended monetary policy easing can create financial stability risks that make it counterproductive. Ignoring this possibility is clearly imprudent.

3.2. Should monetary policy react to financial stability risks?

For the vast majority of central banks, financial stability is an objective codified in their mandate. When they are also financial regulators and supervisors, it further enhances their role in stabilizing the financial system. And, as evidenced by changes like the restructuring of the Bank of England to include all but the consumer protection functions of the now-defunct Financial Services Authority, there is an understanding of the need to coordinate the conduct of prudential policy with conventional (and unconventional) monetary policy. But, to what extent can the financial stability mandate be assigned to the prudential regulators setting capital and liquidity requirements, and to what extent should it be shared with monetary policy committees setting interest rates?

¹² By relying on market-based values for equity, and assuming that the value of liabilities are accurately reported and do not fluctuate much, this measure avoids the obvious problems associated with measuring financial institution assets at book value.
Fig. 3. Change in assets to equity following extended monetary policy easing. Based on data for a total of 1003 publicly listed financial firms from 22 countries (19 advanced economies plus Brazil, Mexico and South Africa) from 1998Q1–2014Q4. The asset to equity ratios before and after monetary policy accommodation periods are calculated using the median percent change and the median level in each industry. The duration measure in the top panels is the number of consecutive quarters of a trend decline in the overnight rate (i.e., a decline in the moving average over the previous two years). The duration measure in the bottom panels is the number of consecutive quarters of a trend decline in the 2-year yields (i.e., a decline in the moving average over the previous two years). "Other" category includes consumer finance, specialty finance, and other diversified services. Source: Cecchetti et al. (2016).
Given my conclusion that, under normal circumstance, monetary policy complements regulatory policy, the answer would seem to be that interest rates should not be thought of as either conflicting with prudential policy or as a financial stability policy tool of its own. That is, so long as they are not prolonged for years at a stretch, accommodative financial conditions do not create vulnerabilities that increase the strength of this amplification. To paraphrase Williams (2015), in most circumstances traditional central bank balance sheet tools are not terribly useful in addressing vulnerabilities that manifest themselves as increases in the sensitivity of the propagation mechanism.

Returning briefly to the role of monetary policy in addressing changes in the distribution of shocks, simple calculations by Svensson (2015) imply that, on welfare grounds, interest rate responses to asset price booms and the like do more harm than good. That said, if they are going to be in a position to even partially neutralize the bust that inevitably follows the boom, policymakers will have to have the flexibility to lower interest rates significantly. That means having a neutral nominal interest rate that is sufficiently high in normal times. It is easy to envision circumstances in which this would require an inflation target higher than the current 2% advanced-economy norm. While I question the wisdom of increasing the inflation target, it is something to consider.13

4. Prudential policy and financial stability

Having concluded that monetary policy is ill-suited to address financial stability concerns, I now turn to prudential policy. Here, any discussion must start with a definition. Over the past decade or so, two terms have come into common use: microprudential and macroprudential.14 On the first, the meaning is well understood: the purpose of microprudential regulation and supervision is to enforce rules of risk-taking and transparency in a way that is designed to eliminate contagion arising from individual institution failure and control the moral hazard created by the publicly-provided safety net.15 For macroprudential regulation and supervision, I follow Paul Tucker (2014), who defines it as the dynamic adjustment of regulation with the objective “sustaining the resilience of the financial system in the face of material changes in financial and economic conditions.”16

In the language of the modeling framework of Section 2, I think of prudential policy as addressing the amplification potential of the propagation mechanism, and policymakers have a broad of array of tools available to for this purpose. These policies have two fairly distinct components. First, there is the baseline level, and second, there is a potentially time-varying component. On the former, authorities set capital ratios, risk weights, liquidity requirements and the like during normal times. On the second, they have the ability to raise or lower levels in reaction to the state of the economic and financial system.17

How should we think about these policies? And, how can we ensure that they are effective in reducing the frequency and severity of financial crises? Do we simply want to set requirements to be sufficiently rigorous that institutions absorb virtually any shock that could possibly arise? Or, should we presume that, as the distribution of potential shocks rises or the amplification potential of the propagation mechanism increases, policymakers have the prescience to vary prudential requirements?

4.1. Time-varying capital requirements and lending booms

One of the innovative features of Basel III is the introduction a countercyclical capital buffer intended to provide authorities with a tool to combat credit booms (which are inevitably followed by damaging busts). The idea of the buffer is that, when credit is growing relatively quickly, officials will

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13 See Cecchetti and Schoenholtz (2015) for a discussion.
14 In the past, I have written that regulation can only be justified by the presence of externalities, and while it necessarily focuses on the actions of individual agents and institutions, it has systemic stability as its ultimate objective. In that sense, all regulation is macroprudential. For a more detailed discussion of this largely rhetorical point, see Cecchetti (2012).
15 See Tucker (2015) for a discussion microprudential policy as a mechanism for monitoring and controlling hidden actions.
16 For a discussion of the history of the use and meaning of the term “macroprudential,” see Clement (2010).
raise the level of required capital by as much as 2½ percentage points of risk-weighted assets. As they do, what should be their objective? Should they be trying to limit credit expansion? Or, should they be trying to improve the resilience of the system so that it withstands a bigger shock when it inevitably comes?

The evidence strongly suggests that changes in capital requirements are ineffective at stemming increases in lending. So, at least on this score, my view is that the countercyclical buffer will not work. I draw this conclusion from fact that, following the implementation of the very dramatic increase in capital requirement set in the Basel III agreement, lending spreads fell and lending volumes rose. And, as shown in Fig. 4, the more capital a country’s banking system had in 2006, the larger the increase in lending was in the proceeding 7 years. In fact, a simple cross-sectional regression of bank credit growth on the capital ratio yields a slope coefficient of 16.3. Given that the standard deviation of the initial capital ratio is 2.7, this means that a one-standard deviation increase in the capital ratio is consistent with credit growing by an additional 44% cumulatively over 7 years.

The difficulty with attempting to use capital requirements to combat lending booms is at least threefold. First, lending spreads do not appear to be the first-order response to higher capital require-

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**Fig. 4.** Capital ratio and nominal credit growth. The figure plots the ratio of bank capital to risk-weighted assets in 2006 (using national definitions) on the horizontal axis against the percentage change in nominal bank credit over the following seven years (through 2013) on the vertical axis for a total of 30 advanced and emerging market countries. The countries are Australia, Austria, Belgium, Brazil, Canada, Chile, China, France, Germany, Greece, Hong Kong, Ireland, Italy, Japan, Singapore, South Africa, Spain, Sweden, Switzerland, Thailand, Turkey, the United Kingdom, and the United States. Source: BIS and Bankscope.

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18 See Drehmann et al. (2010) for a comprehensive discussion.
19 See Cohen and Scatigna (2014) for a detailed discussion of the changes in bank capital levels since the crisis, and Cecchetti (2014) for a more on the consequences of the implementation of Basel III and its implications for policy.
ments, so higher capital requirements do not seem to drive up borrower costs. Second, loan volumes do not look sensitive to changes in capital so long as banks are reasonably well capitalized, so raising requirements does not influence quantities. And finally, at the stage in the business cycle when the countercyclical buffer would be needed, banks’ business is likely to be booming and profitable, making it cheaper and easier to raise equity, so higher capital requirements are simply unlikely to bind.20

The fact that higher risk-weighted capital requirements are unlikely to be effective in stemming booms in credit is one thing. Whether they can improve the resilience of the financial system is quite another. Here, the evidence is encouraging.

The original calibration of the Basel III requirements contained in BCBS (2010) makes clear that higher capital requirements reduce the probability of crisis. For example, an increase in risk-weighted capital requirements from 7 to 10% is estimated to reduce the probability of a financial crisis from 4.6% to 1.4% annually. Most analyses at the time, including that in Macroeconomic Assessment Group (2010), balances these benefits against potential output and employment costs that would come from higher interest rate spreads and lower lending volumes. But the evidence that I cited above suggests that in the face of very large increases in capital, those costs have simply not materialized. And the evidence in Fig. 4 further supports this view.

This all leads to two related conclusions about capital requirements. First, as Admati and Hellwig (2013) forcefully argue, the social costs of higher capital requirements are almost surely very small imply that we should set them at very high levels in normal times. And second, when there is concern about that shocks could be larger than previously thought, raising capital requirements makes sense. I now turn to a discussion of how to do this.

4.2. Time-varying capital requirements and stress tests

What is the best way to counter increases in the degree to which shocks are amplified or a rise in the probably of a large negative shock? My argument thus far has been that what we need to do is increase the level of capital in the financial system. What I will argue now is that stress tests are a very important tool for doing this.

Modern stress testing builds on the U.S. experience during the crisis. In late 2008, the solvency of the largest American intermediaries was in doubt. That uncertainty made their own managers cautious about taking risk and it made potential lenders wary of doing business with them. The doubts and hesitancy contributed to the extreme fragility in many financial markets, leading to a virtual collapse of interbank lending. Part of the remedy was a special disclosure procedure in which the U.S. Treasury conducted an extraordinary set of “stress tests” on banks and, in May 2009, published the results. The tests evaluated, on a common basis, the prospective capital needs of the 19 largest U.S. banks in light of the deep recession that was well under way. While observers questioned whether the tests were stringent enough – the “stress” scenario quickly turned into the central forecast – the results were sufficient to reassure the government, market participants, and the banks themselves that most of the institutions were in fact solvent. Partly as a result, conditions in financial markets quickly improved. And, armed with the stress-test evidence of their well-being, most large banks were able to attract new private capital for the first time since the Lehman failure the previous September.

Stress tests may be the most powerful prudential tool we have at our disposal for safeguarding the resilience of the financial system. They take seriously the fact that, when a large common shock hits, there is no one to sell assets to or raise capital from. By ensuring that each individual institution can withstand significant stress, we ensure the system can, too. And, importantly, by adjusting the stress scenarios, prudential authorities can maintain resilience. At least in principle, they can both account for changes in the distribution of the shocks and ensure that the amplification potential of the propagation mechanism does not increase.

20 Put another way, the countercyclical buffer does not meet the three prerequisites for success set out by Aiyar et al. (2014). Capital requirements are unlikely to be binding before they are raised. During a boom, equity is unlikely to be costly or difficult to raise. And, alternatives to bank credit are likely to be readily and cheaply available during a credit boom.
To understand how this might work, recall that a stress test examines whether a bank has sufficient capital and liquidity to meet minimum requirements without the ability to raise equity following a simultaneous drop in asset values, increase in default rates, withdrawal of deposits and inability of the bank to roll-over maturing liabilities. Now, consider a case in which the stress on property prices was originally that they would drop by 20%. Assume that a decline of that magnitude was in the second percentile of the density of possible outcomes. Imagine that there is a sharp boom, and prices rise by 50%. In a case like this, most people would likely agree that the distribution of the shocks has changed. The chance of a 20% drop is no longer 2 percent, it is much higher. In fact, it might be that the second percentile of the density of the property price level over the next year has not materially changed. In this case, authorities would require that banks have sufficient capital to withstand a drop of 50% for the new level. Scenarios for default could be similarly calibrated.

By changing the stress scenarios, prudential authorities are changing the level of capital that banks are required to hold. Passing tests with higher stresses necessarily requires more capital. And, the target is a given level of systemic resilience – resilience that requires both being able to withstand larger shocks and being able to mitigate the extent to which a given shock is transmitted to the economic and financial system more broadly.

I should note that some people would view this as simply a way of implementing a countercyclical buffer. That is, rather than rely mechanically on an indicator like credit growth, authorities would instead use stress testing as a way to calibrate the required amount of capital. There is clearly a sense in which the objectives are the same – maintaining systemic resilience – just the method for getting there is different. My view is that stress testing is more flexible, faster, and less politically contentious than Basel III’s countercyclical capital buffer.

We are still early in the process of developing prudential policy aimed at reducing the harmful impact of the asset price or lending busts that inevitably follow the booms. Over the years, through a combination of thought and experimentation, we can hope to develop a better articulated set of models that help us to understand what tools to bring to bear and when. But until we do, I believe that stress tests will be the most powerful tool we have in our effort to maintain systemic resilience.21

5. Conclusions

In the title of this essay, I ask how much of the precrisis consensus on the separation of monetary and prudential policy remains. Can monetary policy continue its primary focus on price stability and growth, leaving financial stability to prudential policymakers? My answer is: yes, most of the time. As John Williams put it, conventional and unconventional monetary policy instruments are ill-suited to manage financial stability risks. The evidence suggests that monetary policy has very little impact on systemic risk over short horizons, so there is usually no trade-off between macroeconomic and financial stability. Furthermore, using a combination of high capital requirements and stress tests, prudential policymakers have the tools to ensure resilience most of the time.

But there will be circumstance when Jaime Caruana is right. Should prudential authorities falter, and despite their best intentions the financial system come under stress, monetary policymakers will be forced to use the tools at hand to address financial stability concerns; and they may face some unpleasant choices. Pushed to ease policy to support aggregate demand, lower interest rates will provide short-term support for the financial system. But, as the period of policy easing lengthens, bank leverage will increase. And here, it is difficult to know what to do. The only solution that I see at this point is for a regime in which financial regulation is stringent enough to reduce the likelihood of getting into this position to a very low level.

21 For this to work, the models that are used to evaluate banks’ capital positions have to be credible. The solution to this is something called “hypothetical portfolio exercises.” See Cecchetti and Schoenholtz (2014) for a brief description.
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