

For release on delivery
9:00 a.m. EDT
April 17, 2013

Regulating Large Financial Institutions

Remarks by

Jeremy C. Stein

Member

Board of Governors of the Federal Reserve System

at

“Rethinking Macro Policy II”

a conference sponsored by the International Monetary Fund

Washington, D.C.

April 17, 2013

Thank you. I'm delighted to be here, and want to thank the International Monetary Fund and the organizers of the conference for including me in a discussion of these important topics. I will focus my remarks today on the ongoing regulatory challenges associated with large, systemically important financial institutions, or SIFIs.¹ In part, this focus amounts to asking a question that seems to be on everyone's mind these days: Where do we stand with respect to fixing the problem of "too big to fail" (TBTF)? Are we making satisfactory progress, or is it time to think about further measures?

I should note at the outset that solving the TBTF problem has two distinct aspects. First, and most obviously, one goal is to get to the point where all market participants understand with certainty that if a large SIFI were to fail, the losses would fall on its shareholders and creditors, and taxpayers would have no exposure. However, this is only a necessary condition for success, but not a sufficient one. A second aim is that the failure of a SIFI must not impose significant spillovers on the rest of the financial system, in the form of contagion effects, fire sales, widespread credit crunches, and the like. Clearly, these two goals are closely related. If policy does a better job of mitigating spillovers, it becomes more credible to claim that a SIFI will be allowed to fail without government bailout.

So where do we stand? I believe two statements are simultaneously true. We've made considerable progress with respect to SIFIs since the financial crisis. And we're not yet at a point where we should be satisfied.

All of you are familiar with the areas of progress. Higher and more robust capital requirements, new liquidity requirements, and stress testing all should help to materially reduce

¹ The thoughts that follow are my own, and are not necessarily shared by my colleagues on the Federal Reserve Board. I am grateful to members of the Board staff--Michael Gibson, Michael Hsu, Nellie Liang, and Mark Van Der Weide--for their advice.

the probability of a SIFI finding itself at the point of failure. And, if, despite these measures, a SIFI does fail, the orderly liquidation authority (OLA) in Title II of the Dodd-Frank Wall Street Reform and Consumer Protection Act now offers a mechanism for recapitalizing and restructuring the institution by imposing losses on shareholders and creditors. In the interests of brevity, I won't go into a lot of detail about OLA. But my Board colleague Jay Powell talked in depth about this topic in a speech last month, and I would just register my broad agreement with his conclusion--namely that the Federal Deposit Insurance Corporation's (FDIC's) so-called "single point of entry" approach to resolution is a promising one.² The Federal Reserve continues to work with the FDIC on the many difficult implementation challenges that remain, but I believe this approach gets the first-order economics right and ultimately has a good chance to be effective.

Perhaps more to the point for TBTF, if a SIFI does fail I have little doubt that private investors will in fact bear the losses--even if this leads to an outcome that is messier and more costly to society than we would ideally like. Dodd-Frank is very clear in saying that the Federal Reserve and other regulators cannot use their emergency authorities to bail out an individual failing institution. And as a member of the Board, I am committed to following both the letter and the spirit of the law.

Still, we are quite a way from having fully solved the policy problems associated with SIFIs. For one thing, the market still appears to attach some probability to the government bailing out the creditors of a SIFI; this can be seen in the ratings uplift granted to large banks based on the ratings agencies' assessment of the probability of government support. While this

² See Powell (2013).

uplift seems to have shrunk to some degree since the passage of Dodd-Frank, it is still significant.³ All else equal, this uplift confers a funding subsidy to the largest financial firms.

Moreover, as I noted earlier, even if bailouts were commonly understood to be a zero-probability event, the problem of spillovers remains. It is one thing to believe that a SIFI will be allowed to fail without government support; it is another to believe that such failure will not inflict significant damage on other parts of the financial system. In the presence of such externalities, financial firms may still have excessive private incentives to remain big, complicated, and interconnected, because they reap any benefits--for example, in terms of economies of scale and scope--but don't bear all the social costs.

How can we do better? Some have argued that the current policy path is not working, and that we need to take a fundamentally different approach.⁴ Such an alternative approach might include, for example, outright caps on the size of individual banks, or a return to Glass-Steagall-type activity limits.

My own view is somewhat different. While I agree that we have a long way to go, I believe that the way to get there is not by abandoning the current reform agenda, but rather by sticking to its broad contours and ratcheting up its forcefulness on a number of dimensions. In this spirit, two ideas merit consideration: (1) an increase in the slope of the capital-surcharge schedule that is applied to large complex firms, and (2) the imposition at the holding company

³ For example, in June of 2012, Moody's described its ratings process for Bank of America, Citigroup, and JP Morgan Chase as follows: "[Their] ratings benefit from three notches of uplift from the standalone credit assessment at the bank level, and from two notches of uplift at the holding company, reflecting Moody's assumptions about a very high likelihood of support from the US government for bondholders or other creditors in the event such support was required to prevent a default... The negative outlook on the parent holding company reflects Moody's view that government support for U.S. bank holding company creditors is becoming less certain and less predictable, given the evolving attitude of U.S. authorities to the resolution of large financial institutions, whereas support for creditors of operating entities remains sufficiently likely and predictable to warrant stable outlooks."

⁴ See Fisher (2013), who said: "...we recommend that the largest financial holding companies be restructured so that every one of their corporate entities is subject to a speedy bankruptcy process, and in the case of the banking entities themselves, that they be of a size that is 'too small to save'. Addressing institutional size is vital to maintaining a credible threat of failure, thereby providing a convincing case that policy has truly changed."

level of a substantial senior debt requirement to facilitate resolution under Title II of Dodd-Frank. In parallel with the approach to capital surcharges, a senior debt requirement could also potentially be made a function of an institution's systemic footprint.

To illustrate my argument, let us take as given the central premise of those who favor size limits: namely, that society would be better off if the distribution of banks were not so skewed toward a handful of very large institutions. (To be clear, I am using the word "size" as shorthand for the broader concept of an institution's systemic footprint, which in addition to size, might reflect complexity, interconnectedness, and global span of operations.) In other words, let's simply posit that a goal of regulation should be to lean against bank size, and ask: What are the best regulatory tools for accomplishing that goal? As in many other regulatory settings, this question can be mapped into the "prices-versus-quantities" framework laid out by Martin Weitzman nearly 40 years ago.⁵ Here a size cap is a form of quantity regulation, whereas capital requirements that increase with bank size can be thought of as a kind of price regulation, in the sense that such capital requirements are analogous to a progressive tax on bank size.⁶

A key challenge with quantity-based regulation is that one has to decide where to set the cap. Doing so requires a regulator to take a strong stand on the nature of scale and scope economies in large financial firms. Moreover, even if one reads the empirical literature as being quite skeptical about the existence of such economies beyond a certain point in the size distribution--a proposition which itself is debatable--the most that such large-sample studies can

⁵ See Weitzman (1974). Haldane (2010) also uses Weitzman's framework to talk about price-versus-quantity regulation in the TBTF context. It should be noted that there are various hybrid approaches that are neither pure quantity nor pure price regulation. For example, Tarullo's (2012) discussion of limits on uninsured liabilities is not a rigid size cap, since it does not constrain an institution's absolute size, to the extent that it is able to adjust its funding mix.

⁶ To be clear, this taxation aspect of capital requirements is not their only appeal, or even their primary one. Even if it were almost costless to impose higher capital requirements on bigger banks--so that doing so provided essentially no disincentive to bank size--it might still be a good idea to do so, for purely prudential reasons. In other words, capital requirements serve as both a prudential buffer and a tax, and can be a useful regulatory tool for both reasons.

do is make on-average statements about scale and scope economies.⁷ These studies still leave open the possibility of considerable heterogeneity across firms, and that some firms are able to add considerable value in a given line of business by being very big, even if the average firm in the population is not. And such heterogeneity alone is enough to create significant drawbacks to quantity-based regulation.

Consider the following example. There are three banks: A, B, and C. Banks A and B both have \$1 trillion in assets, while C is smaller, with only \$400 billion in assets. Bank A actually generates significant economies of scale, so that it is socially optimal for it to remain at its current size. Banks B and C, by contrast, have very modest economies of scale, not enough to outweigh the costs that their size and complexity impose on society. From the perspective of an omniscient social planner, it would be better if both B and C were half their current size.

Now let's ask what happens if we impose a size cap of say \$500 billion. This size cap does the right thing with respect to Bank B, by shrinking it to a socially optimal size. But it mishandles both Banks A and C, for different reasons. In the case of A, the cap forces it to shrink when it shouldn't, because given the specifics of its business model it actually creates a substantial amount of value by being big. And in the case of C, the cap makes the opposite mistake. It would actually be beneficial to put pressure on C to shrink at the margin--that is, to move it in the direction of being a \$200 billion bank instead of a \$400 billion one--but since it lies below the cap, it is completely untouched by the regulation.

Suppose instead we attack the problem by imposing capital requirements that are an increasing function of bank size. This price-based approach creates some incentive for all three banks to shrink, but lets them balance this incentive against the scale benefits that they realize by staying big. In this case, we would expect A, with its significant scale economies, to absorb the

⁷ See Hughes and Mester (2011) for a recent contribution to the literature on scale economies in banking.

tax hit and choose to remain large, while B and C, with more modest scale economies, would be expected to shrink more radically. In other words, price-based regulation is more flexible, in that it leaves the size decision to bank managers, who can then base their decision on their own understanding of the synergies--or lack thereof--in their respective businesses.

This logic can be thought of as supporting the approach taken by the Basel Committee on Banking Supervision in its rule imposing a common equity surcharge on designated global systemically important banks. The exact amount of the surcharge will range from 1 percent to 2.5 percent, and will depend on factors that include a bank's size, complexity, and interconnectedness, as measured by a variety of indicator variables.⁸ These progressive surcharges are effectively a type of price-based regulation, and therefore should have the advantages I just noted.

However, a proponent of size caps might reasonably reply: "Fine, but how do I know that these surcharges are actually enough to change behavior--that is, to exert a meaningful influence on the size distribution of the banking system?" After all, the analogy between a capital requirement and a tax is somewhat imperfect, since we don't know exactly the implicit tax rate associated with a given level of capital. Some view capital requirements as quite burdensome, which would mean that even a 2 percent surcharge amounts to a significant tax and, hence, a strong incentive for a bank to shrink, while others have argued that capital requirements impose only modest costs, which would imply little incentive to shrink.⁹

This uncertainty about the ultimate effect of a given capital-surcharge regime on the size distribution of banks could potentially tip the balance back in favor of quantity-based regulation,

⁸ See BCBS (2011) for a description of the methodology.

⁹ For different estimates of the costs of capital requirements to banks, see Baker and Wurgler (2013), Admati and others (2011), and Hanson, Kashyap, and Stein (2011).

like size caps. And indeed, if we were faced with a static, once-and-for-all decision, I don't think economic reasoning alone could give us a definitive answer as to whether caps should be preferred to capital surcharges. This ambiguity is in some sense the central message of Weitzman's original analysis.

One way to resolve this tension is to refrain from putting ourselves in the position of having to make a once-and-for-all decision in a setting of substantial uncertainty. Rather, it might be preferable to try to learn from the incoming data and adjust over time, particularly since the recent changes to capital regulation already on the books may represent an informative experiment. In my view, this observation about the potential for learning tips the balance in favor of capital surcharges. For example, the capital-surcharge schedule proposed by the Basel Committee for globally important systemic banks may be a reasonable starting point. However, if after some time it has not delivered much of a change in the size and complexity of the largest of banks, one might conclude that the implicit tax was too small, and should be ratcheted up.¹⁰ In principle, this turning-up-the-dials approach feels to me like the right way to go: It retains the flexibility that makes price-based regulation attractive, while mitigating the risk that the implicit tax rate will be set too low. Of course, I recognize that its gradualist nature presents practical challenges, not least of which is sustaining a level of regulatory commitment and resolve sufficient to keep the dials turning so long as this is the right thing to do.

Before wrapping up, let me briefly mention another piece of the puzzle that I think is sometimes overlooked, but strikes me as having the potential to play an important complementary role in efforts to address the TBTF problem--namely, corporate governance. Suppose we do everything right with respect to capital regulation, and set up a system of capital

¹⁰ Again, it should be emphasized that the underlying problem is not simply an institution's size, but rather its systemic footprint--which in addition to sheer size, is related to its complexity, interconnectedness, and global span of operations.

surcharges that imposes a strong incentive to shrink on those institutions that don't create large synergies. How would the adjustment process actually play out? The first step would be for shareholders, seeing an inadequate return on capital, to sell their shares, driving the bank's stock price down. And the second step would be for management, seeking to restore shareholder value, to respond by selectively shedding assets.

But as decades of research in corporate finance have taught us, we shouldn't take the second step for granted. Numerous studies across a wide range of industries have documented how difficult it is for managers to voluntarily downsize their firms, even when the stock market is sending a clear signal that downsizing would be in the interests of outside shareholders. Often, change of this sort requires the application of some external force, be it from the market for corporate control, an activist investor, or a strong and independent board.¹¹ As we move forward, we should keep these governance mechanisms in mind, and do what we can to ensure that they support the broader regulatory strategy.

¹¹ Jensen (1993) is a classic treatment of the issues.

References

Admati, Anat R., Peter M. DeMarzo, Martin F. Hellwig, and Paul Pfleiderer (2011). “Fallacies, Irrelevant Facts, and Myths in the Discussion of Capital Regulation: Why Bank Equity is *Not* Expensive,” working paper, <http://gsbapps.stanford.edu/researchpapers/library/RP2065R1&86.pdf>

Baker, Malcolm, and Jeffrey Wurgler (2013). “Would Stricter Capital Requirements Raise the Cost of Capital? Bank Capital Regulation and the Low Risk Anomaly,” working paper, <http://people.stern.nyu.edu/jwurgler/papers/Bank%20Capital%20Regulation.pdf>

Basel Committee on Banking Supervision (BCBS) (2011). “Global systemically important banks: assessment methodology and the additional loss absorbency requirement,” rules text (November), www.bis.org/publ/bcbs207.pdf

Fisher, Richard W. (2013). “Ending ‘Too Big to Fail’,” speech delivered at the Conservative Political Action Conference, National Harbor, Maryland, March 16, www.dallasfed.org/news/speeches/fisher/2013/fs130316.cfm

Haldane, Andrew G. (2010). “The \$100 billion question,” speech delivered at the Institute of Regulation & Risk, Hong Kong, March 30, www.bis.org/review/r100406d.pdf

Hanson, Samuel G., Anil K. Kashyap, and Jeremy C. Stein (2011). “A Macroprudential Approach to Financial Regulation,” *Journal of Economic Perspectives*, vol. 25 (Winter), www.people.hbs.edu/shanson/hanson_kashyap_stein_JEP.pdf

Jensen, Michael C. (1993). “The Modern Industrial Revolution, Exit, and the Failure of Internal Control Systems,” *Journal of Finance*, vol. 48(3), <http://onlinelibrary.wiley.com/doi/10.1111/j.1540-6261.1993.tb04022.x/full>

Hughes, Joseph P., and Mester, Loretta J. (2011). “Who said large banks don’t experience scale economies? Evidence from a risk-return-driven cost function,” Working Paper No. 11-27. Philadelphia: Federal Reserve Bank of Philadelphia, July, www.phil.frb.org/research-and-data/publications/working-papers/2011/wp11-27.pdf

Moody’s Investors Service (2012). “Moody’s downgrades firms with global capital markets operations,” press release, June 21, www.moody.com/research/Moodys-downgrades-firms-with-global-capital-markets-operations--PR_248989?WT.mc_id=BankRatings2012

Powell, Jerome H. (2013). “Ending ‘Too Big to Fail’,” speech delivered at the Institute of International Bankers 2013 Washington Conference, Washington, D.C., March 4, www.federalreserve.gov/newsevents/speech/powell20130304a.htm

Tarullo, Daniel K. (2012). "Industry Structure and Systemic Risk Regulation," speech delivered at the Brookings Institution Conference on Structuring the Financial Industry to Enhance Economic Growth and Stability, Washington, D.C., December 4, www.federalreserve.gov/newsevents/speech/tarullo20121204a.htm

Weitzman, Martin L. (1974). "Prices vs. Quantities," *The Review of Economic Studies*, vol. 41 (October), http://scholar.harvard.edu/files/weitzman/files/prices_vs_quantities.pdf