A Critical Missing Reform Criterion:

How Can We Regulate "Systemic" Banks When We Don't Know Who They Are?

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Abstract

A critical policy question is the extent to which "systemic" banks provide value from an economic or social perspective. Much research has been mobilized to demonstrate this, as well as to counter these findings to argue that the biggest banks enjoy undue subsidies because they are so systemic as to be protected by taxpayers. Markets may indeed perceive some big banks as too big to fail (TBTF), but perception does not make reality. Thus, this paper assesses how a systemic financial institution can be differentiated from others to inform the debate over policy responses to TBTF and pending regulatory actions and U.S. legislation to govern the largest financial institutions. Quite simply, if there are no reliable, objective systemic criteria, then policy based on size thresholds or other "systemic" indicators will be at best ineffective antidotes to global financial crises even as they do unnecessary damage to banks and, more broadly, to financial-market efficiency and effectiveness.

In this paper, we assess the ability of regulators to define the criteria that characterize systemically-important financial institutions (SIFIs). The definition of systemic is critical since an array of rules predicated on the negative externalities of SIFIs is under active development. Further, allegations that "systemic" firms, most notably very large bank holding companies (BHCs), are TBTF have aroused calls for additional, generally punitive action for designated institutions.

The paper includes a survey of relevant U.S. and global regulations and pertinent academic and regulatory literature. Based on this, we conclude that not only is there no agreed-upon definition of "systemic," but also that research demonstrates potentially unintended consequences should certain thresholds be used to sanction large financial-services firms.

Despite the lack of SIFI-designation criteria, financial-services firms can pose severe macroprudential and macroeconomic risks. It is thus insufficient to cease efforts to identify SIFIs and, then, to govern them appropriately or break them up. However, given the time it may take to identify such firms, likely differences in the manner in which this is done across borders, and the uncertainty of the standards then applied (especially to non-banks), it is essential that financial policy advance quickly to insulate markets and economies from systemic risk.

To do so, the paper recommends urgent action in the U.S. to build out the orderly-liquidation authority (OLA) provisions in Dodd-Frank to ensure that no financial-services firm poses contagion risk should it falter. The paper also argues for continued work on prudential standards designed to address risks, including those at large BHCs, identified in the financial crisis. It is also recommended that the Financial Stability Oversight Council (FSOC) use its Dodd-Frank authority to focus on systemic activities and practices so that risky activities are curtailed across the financial market. If reliable SIFI criteria are crafted, then structural changes – e.g., break-up or other sanctions – should be considered if the OLA regime remains incomplete and/or FSOC has taken few decisive actions regarding high-risk activities.

The title of the panel for which this paper is prepared is, "The Value of Systemically-Important Banks." There are three assumptions built into this:

- First, that systemically-important banks have value.
- Second, that we know which banks are systemically important.
- And, third, that all systemically-important institutions are banks.

I would like to focus my comments on the second and third issues and, in more detail, address the second assumption, which is in fact a conundrum: defining which banks are in fact "systemically important." An array of policy actions are now premised on the belief that regulators can tell from size or other indicators which banks present the risk of such profound negative externalities as to warrant stringent regulation or even outright dismemberment. But, do we know who is in fact really systemic or are we just firing our rules at random in hopes they hit systemic targets?

The survey of academic and regulatory research presented here demonstrates that we don't yet know how to tell a systemic bank from one that's just big or otherwise seemingly important. Authoritative studies and pending rules have thoroughly different measures of systemic. And, even though FSOC has defined this criterion for non-bank financial institutions, the difficulty of determining which firms are in fact suitable for systemic regulation – three years waiting and none cited so far – makes clear that this too is no easy definition.

If we don't know for sure who's systemic, how do we know whom to regulate how? And, if we don't know whom to regulate how, won't we leave open the risk of the next round of systemic risks precisely because SIFIs – banks or not – have evaded scrutiny and sanction, sowing the seeds for the next debacle? Definition is the key to rulemaking. In this context, standards that purpose to sanction "systemic" banks premised on incorrect definitions may well do more harm than good. A robust cure to TBTF that cuts across charters and size criteria is, thus, vital.

Sighting Systemic

The most express authority granted to regulators anywhere in the world to define and, then, to designate SIFIs is found in the Dodd-Frank Act. This covers both BHCs and non-bank financial companies in an effort to address "shadow" banks, but the framework in practice is very different for BHCs versus all other financial entities.

Under Dodd-Frank, all BHCs with assets over $50 billion are to be subjected to an array of systemic regulatory requirements, including capital and liquidity surcharges. The Federal Reserve (FRB) has proposed rules to implement this requirement,[1] but has yet to finalize most

[1] FRB, *Proposed Rule on Enhanced Prudential Standards and Early Remediation Requirements for Covered Companies,* 77 Fed. Reg. 594 (Jan. 5, 2012), *available at* http://www.gpo.gov/fdsys/pkg/FR-2012-01-05/pdf/2011-33364.pdf.

of them. Reflecting the wide disparity in activities of banks with assets of $50 billion and those six or so megabanks with well over $500 billion, the Federal Reserve has said it plans to graduate systemic standards. It has not, however, provided any specifics as to how it may do so. As a result, systemic judgments for BHCs in the U.S. may be based on a crude size criterion or subjective factors to be applied by the FRB in some manner (e.g., supervisory judgment).

Under Dodd-Frank, FSOC is to designate non-bank SIFIs. Some might have thought that at least the first candidates for SIFI designations were straightforward – AIG, Fannie, Freddie, the Home Loan Banks, GE Capital and BlackRock. One or another of these firms might soon be cited as a SIFI – FSOC is reportedly readying designations – but even then many other firms with the potential ability to exact negative externalities will remain immune to substantive regulation even as the banking agencies wend their way through dozens of rules demanded for bank holding companies with assets over $50 billion.

The FSOC is to designate systemic nonbanks based on loose criteria stipulated in the statute. Since then, FSOC has established quantitative thresholds for SIFIs.[2] First, a financial firm – another troublesome definition, by the way – must have consolidated assets over $50 billion. If it does, it must then cross other thresholds:

- $3.5 billion in derivatives liabilities;
- $30 billion in outstanding credit default swaps;
- $20 billion in total debt outstanding;
- a 15:1 leverage ratio; or
- a 10% short-term debt ratio.

FSOC uses these quantitative factors only to separate the systemic wheat from the presumably non-threatening chaff. It then follows this simple shift with qualitative evaluations on subjective criteria left largely to FSOC's discretion.

Another established systemic standard is similarly subjective. It derives from the Basel Committee's criteria that designate global systemically important banks (G-SIBs).[3] The first-order problem with this criterion is that it covers just banks. The Group of Twenty (G-20) heads of state have told the other financial regulators to designate their charges as systemic, but none has yet done so.

The second problem with the G-SIB designation is that it too is premised on uncertain thresholds. Case in point: G-SIBs are supposed to be internationally-active, but Wells Fargo here made the cut even though, for the most part, it isn't. The other G-SIB criteria are complex "indicators" scored as it seems to suit the Basel Committee. The indicators include size, "inter-

[2] *FSOC, Final Rule on Authority to Require Supervision and Regulation of Certain Nonbank Financial Companies, 77* Fed. Reg. 21637 (Apr. 11, 2012), *available at* http://www.gpo.gov/fdsys/pkg/FR-2012-04-11/pdf/2012-8627.pdf.

[3] Basel Committee on Banking Supervision, *Global Systemically Important Banks: Assessment Methodology and the Additional Loss Absorbency Requirement* (Nov. 4, 2011), *available at* http://www.bis.org/publ/bcbs207.pdf.

connectedness," "intra-financial systemic exposures," "substitutability," and "complexity." Each indicator has measurement thresholds, but all of them are hard to calculate and each can be adjusted as Basel sees fit. Importantly, G-SIBs are scored under all of these indicators against other G-SIBs, meaning that even a steep risk reduction across the class of G-SIBs does not alter designation or the resulting capital surcharges.

The pending global standards for systemically-important insurers (G-SIIs) are no clearer.[4] A consultation from the International Association of Insurance Supervisors (IAIS) includes the following criteria as potential thresholds:

- groups with over $60 billion in assets with ratios of offshore premiums of more than five percent of those from the home jurisdiction or those with assets over $200 billion with smaller foreign operations; and
- insurers (e.g., financial guarantors) added to the sample by national supervisors.

However, after stipulating these thresholds, IAIS concludes it has little data on which to determine the utility and, instead, it suggests it will make any systemic designations based on "substitutability," "inter-connectedness," "global reach" and the extent to which an insurer engages in non-traditional activities. Eighteen factors would be used to establish these standards, but IAIS has yet to finalize any of them or cite any G-SIIs.

Banks and insurance companies are likely not the only systemically-important sectors of the financial-services industry. As the crisis demonstrated with Bear Stearns' failure and, then, with the catastrophic collapse of Lehman Brothers, investment banks can be highly problematic (stress at Goldman Sachs and Morgan Stanley was averted in part by their conversion into BHCs and at Merrill Lynch by its acquisition by a large BHC during the crisis). However, the International Association of Securities Commissions (IOSCO) has yet to undertake any action with regard to systemic designation in this sector. That for asset managers is on hold in the U.S. and uncertain in the global framework. Designation of "financial-market utilities" (FMUs) or, as they are called internationally, "financial-market infrastructures" has begun in the U.S. with FSOC designation in 2012 of several systemic FMUs, but these firms do not include other entities with systemic reach – e.g., Fannie Mae and Freddie Mac – nor is the manner in which they are to be regulated or resolved made clear.

What Does Research Tell Us?

Since current rules are a poor guide to systemic institutions, we turned to a survey of recent literature, focusing on analyses prepared after the 2008 crisis on the grounds that this experience is instructive. Below, we name key systemic criteria cited by academic and regulatory researchers and then note potential problems either cited in the relevant work or

[4] IAIS, *Assessment Methodology for the Identification of Global Systemically Important Insurers* (May 31, 2012), *available at* http://www.iaisweb.org/view/element_href.cfm?src=1/15392.pdf.

raised by other researchers. All are cited below, with source documentation provided at the end of this paper.

- Conditional Value-at-Risk (CoVaR) was first developed by Adrian and Brunnermeier in 2008. It is a widely used indicator on which researchers disagree. CoVaR seeks to measure the value-at-risk in the financial system conditioned on an institution or the system under stress. Löffler and Raupach (2013) found that this measure has unintended inter-relationships between its systemic and institution measurement, creating incentives for potential SIFIs to increase their idiosyncratic risk to lower their estimated systemic risk. This study also found that CoVaR has different findings than other market-based measures with regard to measuring systemic risk in contagion situations. Sedunov (2013) found that CoVaR has some value as a forecast tool, but requires modifications to be effective.

- Inter-Connectedness: Drehmann and Tarashev (2011a) assess this measure for SIFIs. The paper empirically evaluates the relationship between inter-connectedness and systemic risk. It notes the significant challenge of differentiating a bank that participates in systemic risk by virtue of its inter-connections and one that contributes to systemic risk by transmitting it. Different approaches to measuring participation versus contribution lead to materially different measures of systemic risk. Because this paper derives from the Bank for International Settlements (BIS), it urges policy-makers to take care to choose a systemic measure that meets their "desired concept of systemic importance."

- Systemic Expected Shortfall: As developed by Acharya, Pederson, Philippon, and Richardson in 2010, this return-based SIFI indicator is derived from a firm's average equity return on days when markets are below their 5% quartile. The Sedunov paper cited above finds it inferior to CoVaR for various reasons.

- Size: Using decomposition analysis and other techniques, Huang, Zhou, and Zhu (2011) conclude that the marginal contribution of banks to the systemic-risk indicator also constructed in the paper is size, "consistent with the TBTF doctrine." However, default probability and correlation are also significant. In contrast, Hagedorff, Keasey and Vallascas (2012) contradict this by concluding that size does not affect bank risk under non-crisis conditions. This study does argue that, prior to the 2008 crisis, banks of "systemic size" took undue risks based, the study finds, on expectations of insulation from market pressure. Hagedorff et al. also found that, during the crisis, "systemic" banks are more likely to engage in "risk-shifting" if they are engaged in a limited range of activities. Thus, simple activity restrictions would not, they conclude, affect systemic risk unless implemented jointly with size limitations.

- Systemic-Impact Index: Proposed by Chen Zhou (2011), this would determine the expected number of bank failures if one bank were to fail. It is argued that this index (combined with a "vulnerability" one also proposed) is the preferred way to identify individual institutions that could create systemic risk.

Perhaps exhausted by all of these options, Drehmann, et al. (2011b) in another paper also outline possible "simple indicators" of SIFI risk. Bank size is found to be "highly-significant" in statistical and economic terms. However, inter-connectedness is a less meaningful systemic indicator, varying in value as each alternative model is evaluated in comparison to it.

Importantly, where size is proposed as a systemic indicator, the method to determine it varies across the papers. For example, Lahmann and Kaserer's (2011) conclusions are model-driven, using a credit-portfolio simulation derived from CDS spreads and equity-return correlations. Hagedorff et al. seek to demonstrate the importance of size through measuring asset-to-GDP ratios above certain percentage levels. Huang et al. derive their conclusions on size from a limited sample of U.S. BHCs that met Federal Reserve stress-test criteria, essentially judging the importance of size by using a sample itself determined by arbitrary asset-size criteria.

So, Who's Systemic?

As this summary of an array of rules and studies makes clear, no one knows. Congress in the U.S. has set the systemic threshold at $50 billion for BHCs, while regulators have crafted different standards for systemic non-banks in the U.S., and in the global arena, different thresholds are also applicable to G-SIBs and G-SIIs. This demonstrates that systemic criteria are at best uncertain for BHCs and largely non-existent for non-banks. Research will of course continue, but it is not likely to reach definitive conclusions in the near-term for banks, let alone non-banking organizations.

This leads to two options:

- accept a largely subjective definition of "systemic" for purposes of naming and, then, regulating SIFIs; or
- circumscribe systemic risk through other initiatives. This could be done by defining the critical risk characteristics for financial-services firms across industry sectors and, then, regulating to contain these risks instead of focusing on individual institutions. Should this fail – as surely it will in some circumstances – then policy would bar bail-outs for financial firms and protect tightly-defined groups (e.g., insured depositors) and well-defined instances of short-term liquidity – not solvency – risk. Activity-, not institution-, based systemic standards to curtail risk could also be utilized.

Subjective SIFI designation is highly undesirable because of the political nature of any such calls and, even if regulators are pure in heart, there will still be varying determinations over time, nations and sectors. Significant disparities in systemic designation could result in strong incentives for regulatory arbitrage if, as intended, stiff rules apply to systemically-designated institutions but designations are made in an episodic and inconsistent fashion. It is, thus, preferable to confine government's role in the financial sector so that market forces – not still-arbitrary systemic designations – contain the damage any single SIFI can inflict.

Conclusion

Unless or until there is a definitive, demonstrated set of criteria that define SIFIs, efforts to regulate them based on arbitrary criteria will have two effects:

- For banks, they will distort pricing, economic efficiency and business rationale, creating strong incentives for financial activities to transfer into the "shadow" sector. If lack of access to insured deposits bars entry into these activities, these "systemic" limits would likely lead to sharp reductions in them. As a result, key credit sectors dependent on banks (e.g., mortgages, commercial lending) could be severely and adversely affected; and
- For non-banks, risk incentives will become more pronounced except where bank-like systemic regulation applies (which may reduce risk at the cost of significant changes in the business model of many affected firms).

In 2011, Federal Financial Analytics focused on what we called complexity risk: http://www.fedfin.com/images/stories/client_reports/complexityriskpaper.pdf. We argued then that the array of competing standards for banks and across the financial-services industry would have numerous perverse and unintended effects. Many of these have since become sadly evident even though the global regulatory-framework remains only partially constructed and, increasingly, different in each financial market. To address the causes of the crisis without doing unintended harm, we recommended that policy:

- protect the innocent, defining key sectors (e.g., small depositors, retail insurance policy-holders, brokerage customers) and ensuring that taxpayer support for these groups is robust and backed by stringent prudential regulation; and
- punish the guilty, ensuring that risk-taking firms – regardless of size or other characteristics – die at their own hand.

It remains essential in the near term to determine the extent to which any financial-services firm (regardless of how "systemic" it might appear on current size or similar criteria) can be resolved without negative externalities, most important among these a taxpayer bail-out. Credible efforts to do so are well under way in the United States and should be given more time to address outstanding concerns.

Further, regulators should identify risky business activities within or across borders that are offered within or across financial sectors. Over-arching standards for these activities will reduce risk without creating arbitrage opportunities within the financial-services industry.

Over time, as reliable measures of risk at individual financial-services firms are determined, institution-by-institution regulation should again be considered, including with regard to specific size or other limitations.

Sources

Acharya, Viral V., Pedersen, Lasse H., Philippon, Thomas and Richardson, Matthew P. (2010) "Measuring Systemic Risk," Working Paper, New York University Stern School of Business.

Adrian, Tobias and Brunnermeier, Markus K., (2008) "CoVaR," Federal Reserve Bank of New York Staff Report No. 348.

Drehmann, Mathias and Tarashev, Nikola (2011a) "Measuring the systemic importance of interconnected banks," BIS Working Papers No. 342.

Drehmann, Mathias and Tarashev, Nikola (2011b) "Systemic Importance: Some Simple Indicators," *BIS Quarterly Review*, March, 25-36.

Hagendorff, Jens, Keasey, Kevin and Vallascas, Francesco (2012) "Systemic Size, Bank Risk, Systemic Crises," Working Paper, University of Edinburgh Business School.

Huang, Xin, Zhou, Hao and Zhu, Haibin (2011) "Systemic risk contributions," *Journal of Financial Services Research* 42, 55-83.

Lahmann, Wolfgang and Kaserer, Christoph (2011) "Measuring Systemic Risk and Assessing Systemic Importance in Global and Regional Financial Markets Using the ESS-Indicator," Working Paper, Technische Universität München.

Löffler, Gunter and Raupach, Peter (2013) "Robustness and Informativeness of Systemic Risk Measures," Deutsche Bundesbank Discussion Paper No. 04/2013.

Sedunov III, John (2013) "What is the Systemic Risk Exposure of Financial Institutions?" Working Paper, Villanova University.

Zhou, Chen (2011) "Are Banks Too Big to Fail? Measuring Systemic Importance of Financial Institutions," *International Journal of Central Banking* 6(34), 205-250.