

SIZE CAP TRIGGERS AS A KEY COMPONENT OF FINANCIAL RESOLUTION

Michael Konczal, Roosevelt Institute

Arjun Jayadev, Roosevelt Institute & University of Massachusetts, Boston

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“Among the numerous advantages promised by a well constructed Union, none deserves to be more accurately developed than its tendency to break and control the violence of faction.” (James Madison, Federalist #10)

“Increase [a typical small animal’s] dimensions tenfold in every direction, and its weight is increased a thousand times, so that if it is to use its muscles as efficiently as its miniature counterpart, it will need a thousand times as much food and oxygen per day and will excrete a thousand times as much of waste products.” (J. B. S. Haldane, “On Being the Right Size”)

Since the beginning of the crisis, there has been a conflict between those who argue for a size cap for the largest financial firms, and those who call for an expansion of prudential regulation and FDIC-like resolution authority over the largest financial firms. Those in favor of an expansion of prudential regulation view size caps as a distraction, a poor substitute for new regulations, and as an argument that regulation can’t work in this area. Gary H. Stern, former president of the Federal Reserve Bank of Minneapolis, put it this way (Stern 2009):

Thus, the key to addressing TBTF...consists of three pillars: early identification, enhanced prompt corrective action (PCA) and stability-related communication...[or]...If financial institutions raise systemic concerns because of their size, make them smaller...And I would note, in passing, that it is an idea born of desperation since it seems to admit that large, complex organizations cannot be supervised effectively.

What this paper seeks to argue is that size caps are not a substitute for a resolution authority regime but a compliment. The choice between a size cap and a resolution authority regime is a false one. Resolution authority will work better by detecting problems early and resolving firms more credibly with fewer spillovers with a size cap for the largest banks. In part one we look at the arguments for economies of scale and scope in the financial sector and find them lacking. We end with a look at the data of the May 2009 stress tests and find that the largest firms have performed the worst. We conclude that to whatever extent there is scale in financial firms, risk-taking is not exogenous and the largest firms have risked up to compensate.

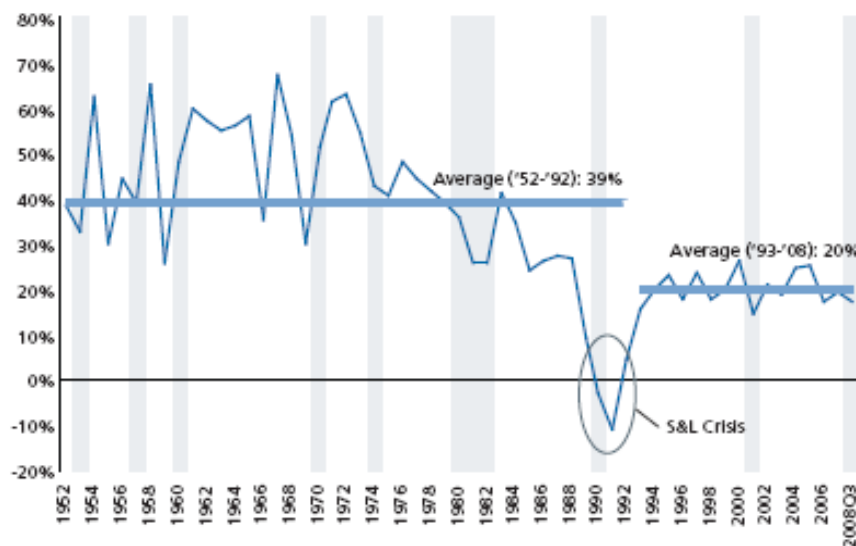
Background

Virtually all commentators on the financial crisis agree that a key reform to implement is ending Too Big to Fail (TBTF). In the aftermath of the deregulatory drive of the 1990s, and the consequent wave of consolidation, a few financial services companies have grown to be so large, complex and intertwined with the rest of the financial system both domestically and abroad that their insolvency would impose unacceptably large damage on the rest of the economy and society. The collapse of Lehman in

September 2008 is the signal example of how the failure of a firm that has systemic reach can have widespread negative consequences. Legislative efforts have tried to address this issue in numerous ways, including increasing capital charges, limiting interconnectedness, proposing a resolution authority and the like. Given the fact that TBTF is the key, however, it is unfortunate that another set of proposals that have been at the wings of current reform packages--namely size caps on firms- have not been considered more seriously¹. The immediate and blanket imposition of caps on the size of financial services companies is a direct way of ending this state of affairs. Existing firms which are deemed too big by whatever definition that is adopted will be required to shrink their balance sheets by selling assets to other entities. The Brown amendment to the Dodd bill suggests language to this end as does the Kanjorski amendment to the House Bill, and imposing a size cap is one of the two Volcker rules that were announced as key provisions of the administration's approach to financial reform. Yet there is fierce opposition to such a provision. This reaction can be parsed into three types of beliefs: that size caps are arbitrary, inefficient, and limit regulatory nuance and that big banks are more efficient and diversified than small banks. We argue that none of these is a sufficient reason to reject the idea of a size cap. Rather, size caps, or more accurately size cap triggers could be a key weapon in the arsenal of an effective resolution authority. In arguing this, we suggest that size caps as currently being conceived of-as limits on all liabilities as a percentage of GDP- may be an insufficient or misleading way of thinking about size. Instead, taking into account a combination of size and the maturity of liabilities would result in the implementation of a more appropriate set of regulatory triggers.

In the last three decades, the nature of credit intermediation has changed considerably. Traditional banking, understood as maturity transformation by transforming deposits into loans is not (and has not been for some time) the major source of intermediating funds. The figure below drawn from a report by Oliver Wyman makes the case most compellingly. In the last few years, the rise of the shadow banking system has meant that the majority of credit was provided by investment banks that were obtaining wholesale funding from the money markets and funding illiquid consumer credit.

Banks' share of total net lending



¹ A size cap, broadly, is a strict limitation on the amount of liabilities a firm can hold.

This system was highly dependent on confidence among market participants and in the wake of a fall in that confidence a predictable run on the system (precipitated by increasing haircuts on collateral and rising spreads) infected all financial markets.

Returns to Scale and Scope

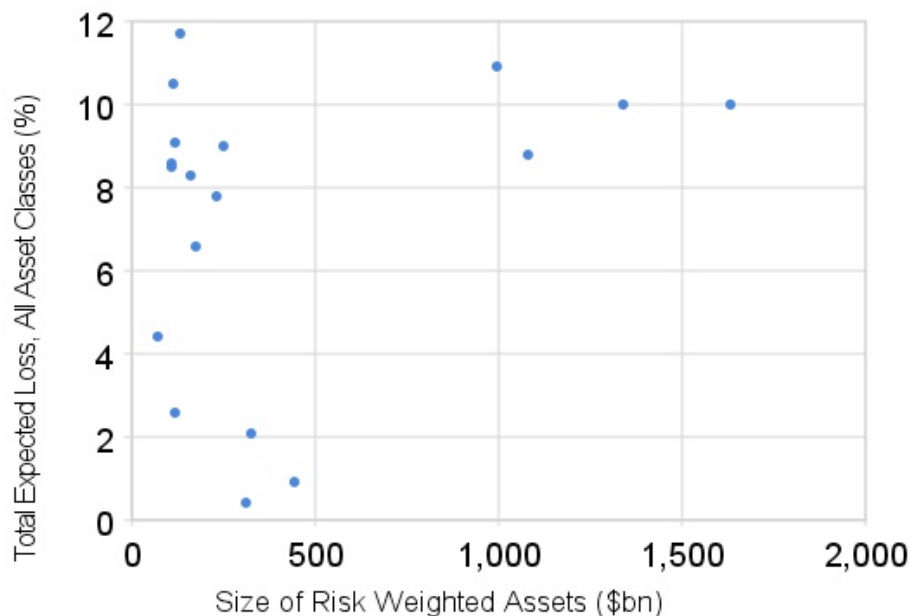
Studying the return to scale in banking is a complicated matter. See Mester (2005) for a summary of the literature, especially section 5. Risk taking is endogenous to whatever benefits of diversification having a large bank grants. Being able to diversify may just involve larger banks to take on more risks, and if that diversification turns out to be incorrect (say the diversification of taking high-risk mortgage assets across the entire United States) the failure is more prominent.

Early studies from the 1980s found returns to scale up to about \$100 million in assets, indicating very small banks. The literature recently has found scale economies up to about \$25 billion by incorporating banks' risk preferences and financial capital to try and handle the endogeneity of risk taking.

Studies of the return to scope are also inconclusive. Mester (1992) finds diseconomies of scope between the traditional banking services and nontraditional services. Berger, Hancock, and Humphrey (1993) find an economy of scope, while three years later Berger, Humphrey, and Pulley (1996) do not. In general, this doesn't seem to be a conclusive argument.

The diversification argument has also had trouble in the recent crisis.

Risk versus Size in Banking (Fed SCAP Document)



This is a chart of the total expected loss in an adverse scenario of the 19 firms that took place in the Stress Test plotted against their size of risk weighted assets. Data is from the May, 2009 “The Supervisory Capital Assessment Program: Overview of Results” report issued by the Federal Reserve. The

stress test was carried out by the Federal Reserve to estimate losses from a baseline and more adverse scenario of how the economy would perform over 2009-2010.

As we can see from the data, the four largest firms had as high of a projected loss as the rest of the firms and much more than certain other firms. One conclusion is that risk-taking is not exogenous to diversification. To whatever extent they had a diversification benefit, they adjusted their risk-taking and leverage to compensate and take on more risk. Another conclusion could be that there is a diseconomy of scale, that being that large gives rise to internal noise and agency problems causing the firms to perform worse in a crisis.

How to Resolve a Large Firm

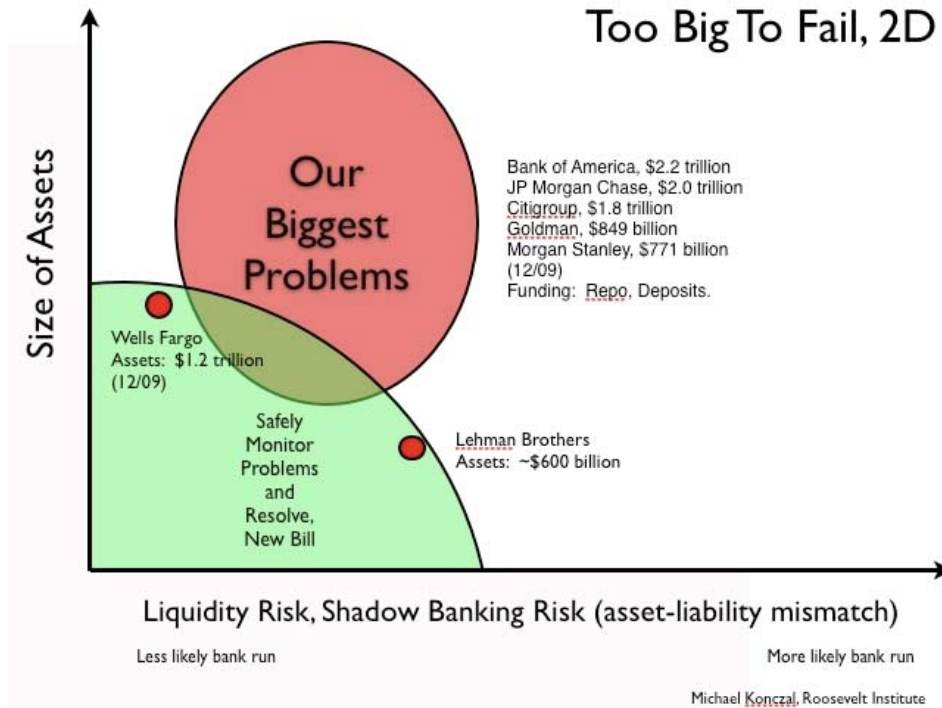
Let's talk about how the resolution authority works in practice. The entire process is predicated on detection and prudential regulation. Firms will be toughly regulated in terms of capital reserves, comparable with non-systemically risky firms.

I want to plot out our ability to resolve a firm on two axes. The first is size of assets, the second is how risky the firm is in terms of a liquidity run. Let's plot Wells Fargo and Lehman Brothers, and then draw a green circle around them assuming that the Dodd Bill can resolve them both now.



During the crisis we lent TARP money to Wells Fargo, a large \$1.2 trillion bank that is not primarily a shadow bank. We also failed to resolve Lehman Brothers, a \$600 billion shadow bank. Though Lehman had excellent capital ratios when it failed, half of its liabilities were very short-term, on the order of one week, and thus were subject to a crisis of confidence in the repo market, a bank run.

Now let's plot these two in terms of the largest bank players:



The farther you are from the origin in that graph, the harder it is for the government to detect problems and properly deter large firms under resolution authority. (This is why I draw our "safe" resolution as a circle, instead of a square.) Holding for a liquidity risk, the larger the firm, the more vicious the effects of having a shadow banking run are on the rest of the financial sector and on the real economy.

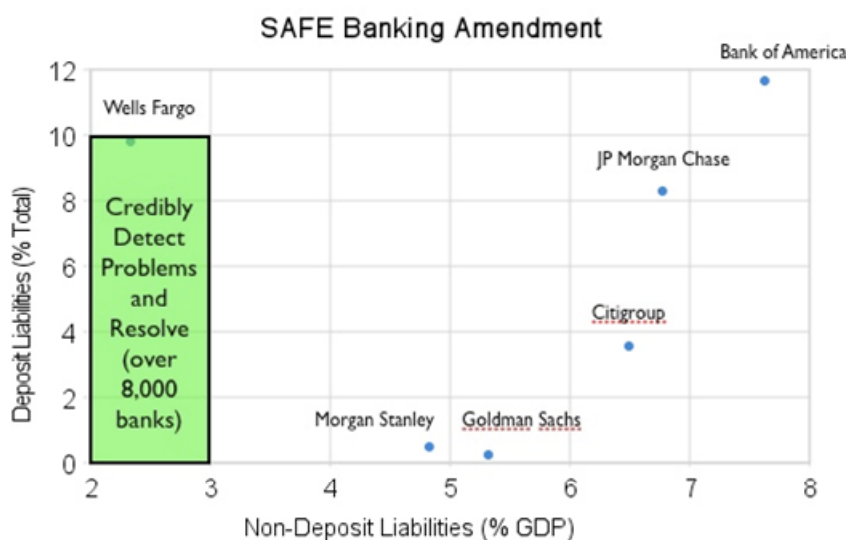
On the vertical axis is the traditional definition of size caps- a cutoff for liabilities as a percentage of GDP. This is depicted by the heavy horizontal line On the horizontal axis is the degree of funding from confidence sensitive wholesale markets (this could be, for example, a number of the percentage of market liabilities owed by the firm in a particular confidence sensitive market), depicted by the heavy vertical line. As is evident from the picture, a firm like Wells Fargo which has a large deposit base and which has a large percentage of overall liabilities will be appropriately limited, but a firm such as Bear Stearns that comes under such a cap would not be limited in the same way under the traditional definition². Lehman would be out of the range for both while Chicago Community Bank would be conversely within range for both markers.

We could think of the size cap as a maximal limit which would trigger immediate and comprehensive restructuring of the firm so that it complies with the limits posed. But the point of good regulation is to deter firms from posing systemic risk in the first place. As such, one can conceive of markers along

² At the time of its forced merger with JP Morgan, Bear Stearns's liabilities were \$380 billion, less than the proposed 3% of GDP under discussion.

the way, depicted by the dashed line. If a firm is within a certain limit of the cut-off in terms of risky borrowing, for example, they may be required to post greater cash-reserve or cash-like assets³. Similarly, if a firm's liabilities approach a certain limit of the cut-off for the liabilities/GDP ratio, they might require holding a larger proportion in safer assets. The fundamental point of these restrictions would be to have clear rules which limit the systemic danger a firm can pose.

Now let's look at this chart with data from December 2009. Recently, the SAFE Banking Act has been proposed, which would put a cap on 10% of the total of deposit liabilities. It would also put a 3% cap on non-deposit liabilities as a percentage of GDP. Here is a graph of total deposit liabilities on the y-axis, with non-deposit liabilities on the x-axis:



There are only a few banks that would be impacted by this. The question is how can these banks be credibly monitored for trouble, and taken into receivership, in the middle of a crisis?

More Arguments for Breaking Up the Banks

There have been additional arguments about limiting liabilities through a size cap. Size caps are a blunt tool and draw a clear line in the sand as to what is too big and what is reasonably sized. Such a distinction is necessarily arbitrary and will without doubt prevent certain mergers which might otherwise appear desirable to the actors involved. The challenge for the authorities is to set this cap at a level that most of the efficiencies of scale and scope are retained while at the same time minimizing the systemic danger that is posed by firms that might be too big. As we have discussed earlier, a wide range of economic studies show that the advantages of scale appear to top off at about \$1 billion dollars in assets, or about 1/15000th of a percentage of GDP. The upper end of estimates has this number at \$25 billion, but in either case, a cut off of 3% of GDP, as discussed in the Sherrod Brown amendment, is far

³ As Yalman Onaran reports in "Reform in Congress Lacking Cash Clause to Stop Lehman-Like Runs" (Bloomberg.com, March 29, 2010), one of the reasons for the difficulties faced by Bear Stearns was the lack of ready and liquid reserves.

above that level and will be very unlikely to impinge upon efficiency (and indeed may arrest diseconomies of scale that set in).

Nor would the imposition of a cap on bank size be the only example of a rough macroprudential benchmark. The Riegel Neal amendment on interstate banking that limits any bank to holding less than 10% of all deposit liabilities is another such example that has worked reasonably well in maintaining competition in traditional banking and limiting systemic risk. Banks in the United States have operated for years with the requirement of cash reserve ratios in the range of 10%; a requirement that impinges on the freedom of banks to make profitable loans. Again, this is arbitrary and the number is often substantially lower in other advanced industrialized countries, but is promoted in the U.S in order to maintain systemic stability. Finally, until 2004, the debt-to-net capital ratio had been fixed to a 12:1 ratio for about 30 years. Suggesting that size caps are a bad idea because having discretion is essential for the smooth managing of an economy is to ignore the fundamental stabilizing effect of these rigid requirements

Indeed, one of the biggest advantages of a clearly stated legal rule that is enforceable is that it limits discretion from the regulators in key areas. The SEC's discretionary decision to allow 5 broker dealers from leveraging beyond the stipulated rule contributed directly to the crisis. As Zephyr Teachout has convincingly argued, the greater the latitude offered to regulators, the more incentive there is for socially wasteful but privately profitable lobbying of those regulators. At this moment in the nation's history, given the degree of regulatory capture and the political power of large financial firms, rules trump discretion, and a size cap might be the most prudential form of regulation we can imagine.

Bibliography

Berger, Allen N., David B. Humphrey, and Lawrence B. Pulley, "Do Consumers Pay for One-Stop Banking? Evidence from an Alternative Revenue Function," *Journal of Banking and Finance*, 20 (1996), pp. 1601-1621.

Berger, Allen N., William C. Hunter, and Stephen G. Timme, "The Efficiency of Financial Institutions: A Review and Preview of Research Past, Present, and Future," *Journal of Banking and Finance*, 17 (1993), pp. 221-249.

Mester, Loretta J., "Traditional and Nontraditional Banking: An Information-Theoretic Approach," *Journal of Banking and Finance*, 16 (June 1992), pp. 545-566.

Mester, Loretta J., "Optimal industrial structure in banking," Working Papers 08-2, Federal Reserve Bank of Philadelphia (2005).