



Capital

The Riskiest Financial Firms In America

Thomas F. Cooley, 04.28.10, 6:00 AM ET

We are now well past the worst throes of the financial crisis. Banks and financial institutions are earning record profits. The economy is recovering steadily. All is right with the world! Wishful thinking. The uproar over the fraud charges against Goldman Sachs last week should have underscored that we still haven't addressed the underlying sources of the risk that caused our financial collapse in 2007-2009.

In the wake of the charges the value of Goldman's stock plummeted and brought the shares of other banks down with it. It was an ominous sign that the markets realize there is still plenty of systemic risk in our banking system.

TheStreet: [Financial Reform Hits Roadblock](#)

A group of my colleagues at the NYU Stern School of Business have been working since the beginning of the crisis to figure out how we can measure the risk that firms pose for the financial system as a whole. There are two parts to the risk that firms carry: 1) the risk they impose for their own shareholders because of the strategies they use to earn profits; and 2) the risk they create that spills over to the system as a whole if they get into trouble. We now have measures of that risk. The measures are updated weekly and [viewable online](#). The latest update is posted below.

Top 10 Riskiest Firms	Marginal expected shortfall	ERISK%	SRISK%
Citigroup	6.99	4.99	15.46%
Bank of America	5	3.97	15.4%
JP Morgan Chase	5.05	3.97	9.87%
Goldman Sachs	8.4	6.64	9.69%
Freddie Mac	5.6	4.7	9.31%
Fannie Mae	4.91	4.32	8.94%
AIG	3.62	3.31	6.75%
Morgan Stanley	5.35	5.13	5.21%
Prudential Financial	3.94	3.39	2.71%
Hartford Financial Services Group	3.98	3.43	2.05%

These firms may not relish their position on the list--it is hardly the legion of honor. But their presence is based simply on the markets judgment of where they fall.

Let me explain the measures. Marginal expected shortfall is an estimate of the amount the equity value of the firm will decline in a day if the whole market falls by 2%. In a crisis the market will be expected to fall much more of course, and this measure is meant to capture the behavior of the firm in extremes. The impact of the equity shortfall will be compounded by the amount of leverage the firm uses. To capture this the MES is combined with the debt equity ratio of the firm to get the measure ERISK--a measure of the equity losses of the firm in a crisis state.*

In a financial crisis many firms become undercapitalized. The measure SRISK looks across firms and asks what percentage of the total capital shortfall in a crisis would be due to this particular firm. There is an underlying assumption, one supported by a whole class of theoretical models, that the risk to the economy depends on the capital shortfall in the financial sector. These capital shortfalls in the system as a whole are what caused the financial markets to freeze in the crisis. Credit was in short supply and banks could not cover their debts. Although the great crisis of 2007-09 has seemingly passed, we have still not dealt with this problem.

According to the table, the top four firms--Citigroup, Bank of America, JP Morgan Chase and Goldman Sachs--would account for more than half the capital shortfall in a crisis. These measures make clear that there is still plenty of risk out there in the system.

A brief comment on the measures. Probably few would be surprised that Citigroup, Bank of America, Fannie Mae and Freddie Mac are on this list. Goldman Sachs, JPMorgan Chase and the others may be unhappy about being named among the riskiest firms in America. This is not subjective; it is based entirely on the most current data, and it reflects what the market thinks. There are other suggestions for how to assess systemic risk. For example, in recent years it has become common to look at the pricing of credit default swaps (CDS) to assess riskiness. But CDS data are not that useful for the kind of exercise reported here for a simple reason. Most of these firms have been treated as too big to fail. This means that expectations of government protection of creditors is priced into the credit default swaps.

Would these measures have helped us identify the riskiest firms before the crisis? The answer is a definitive yes. In March 2007, well before the start of the crisis in July 2007 and of course Lehman's fall in September 2008, the top eight systemic firms contributed 87% of the systemic risk (i.e., the total expected shortfall in a crisis). These firms were Morgan Stanley, Merrill Lynch, Goldman Sachs, Lehman, Freddie Mac, Fannie Mae, Bear Stearns and Citigroup. Of these firms only Morgan Stanley and Goldman Sachs really survived--and the former probably only because of government support. If regulators had been paying attention to measures of systemic risk like these rather than simply tier 1 capital they should have raised alarms.

How can these estimates be used? They or something like them should be the basis for charging financial institutions for the risks they pose to the stability of the system. The best incentive for banks to lower their systemic risk is to charge them for creating it. There has been a lot of debate and push-back on proposals to charge banks for the risk they create for the financial system. It has been variously claimed to place an undue and risky new burden on banks, and to institutionalize the notion of too big to fail by creating a fund to cover the costs of crises. None of these arguments make sense. Systemic risk charges should not be implemented in isolation. Also needed are proposals for the orderly dissolution or automatic recapitalization of failing firms. The systemic risk insurance should only be used to pay the social costs of restructuring--not for protecting stakeholders.

The larger point is that these firms still pose a risk to our financial stability. Unless we make them pay for that risk and remove their too-big-to-fail insurance subsidy they have no reason to change their ways and every incentive to fight for the status quo.

**The details of these measures may be [found in a paper](#) by Viral Acharya, Lasse Pedersen, Thomas Philippon and Matthew Richardson.*

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