Chapter 13: Executive Summary

Regulating Systemic Risk

Viral V. Acharya, Lasse Pedersen, Thomas Philippon and Matthew Richardson

Background

Systemic risk is the risk that the failure and distress of a significant part of the financial sector reduces the availability of credit which in turn may adversely affect the real economy. Not all economic downturns involve systemic risk, but the occurrence of systemic risk has almost invariably transformed economic downturns into deep recessions or even depressions. Such systemic risk has been ubiquitous in the current crisis. It has manifested itself in the moral hazard encouraged by "too-big-to-fail" guarantees, in the externalities created by deleveraging, fire-sales, hidden counter-party risk and liquidity shortages, and in the aggregate decline in home prices.

The Issues

This systemic risk has raised important policy issues:

1. Will market forces left to their own devices ensure an efficient level of systemic risk in the economy? Or is regulation warranted?
2. If regulation of systemic risk is desirable, what form should it take? Indeed, how should systemic risk be measured or quantified in the first place?

We argue that the "laissez-faire" amount of systemic risk in an economy will likely be inefficiently high because systemic risk involves externalities. That is, each institution manages its own risks but does not consider its impact on the risk of the system as a whole. We draw the analogy of a firm that creates environmental pollution. Such a firm is often regulated to limit the pollution or taxed based on the externality it causes. Regulation is therefore needed. Unfortunately, current financial sector regulations do not address the problem because they seek to limit each institution's risk seen in isolation; they are not sufficiently focused on systemic risk. As a result, while the risks of an individual firm are properly dealt with in normal times, the system itself remains, or is induced to be, fragile and vulnerable to large macroeconomic shocks.

Policy Recommendations

Hence, we advocate that financial regulation be focused on limiting systemic risk, and we propose a new set of regulations to achieve this goal.

1. There should be one regulator (say, the Federal Reserve) in charge of systemic risk.
2. The regulator would first assess the systemic risk posed by each firm. The assessment would be based on individual characteristics (leverage, asset quality), on measures of complexity and connectedness (that define large, complex financial institutions), and on statistical measures.
    a. In particular, we propose estimating the contribution of each firm to the downside risk of the economy using the standard risk management tools routinely employed within

© 2008 New York University Stern School of Business.

All Rights Reserved.

financial firms to manage firm-level risk, but applied at the macroeconomic level. These include value-at-risk, expected loss, stress tests, and macroeconomic scenario analysis. These tools would allow the regulator to detect the systemic risk of one institution or of a group of institutions.

3. The overall systemic risk assessments should then determine the regulatory constraints imposed on the firms. In particular, each firm would pay for its *own* systemic risk contribution. This charge could take the form of capital requirements, taxes, and required purchase of insurance against aggregate risk.

    a. Capital requirements would introduce a charge for a firm's assets based on its systemic risk contribution. This would be a "Basel III" approach; or,

    b. Taxes could be levied based on systemic risk contribution of firms and used to create a systemic fund. This would be a FDIC-style approach but at a systemic level. It would have the added benefit of reducing the incentives for financial institutions to become too big to fail; or,

    c. Systemic firms could be required to buy insurance – partly from the private sector – against their own losses in a scenario in which there is aggregate economic or financial sector stress. To reduce moral hazard, the payouts on the insurance would go to a government "bailout" fund and not directly into the coffers of the firm. This would allow for price discovery by the private sector, enable the regulator to provide remaining insurance at a price linked to the price charged by the private sector, and lessen the regulatory burden to calculate the relative price of systemic risk for different financial firms.

In all cases, our proposed regulations would focus regulatory attention on systemic risk, provide incentives for regulated firms to limit systemic risk taking, reduce moral hazard, reduce the pro-cyclicality of risk taking, and, use tools tested and well understood by the private sector, potentially also providing market-based estimates of the price of systemic risk.

© 2008 New York University Stern School of Business.

All Rights Reserved.