Panel Discussion

Key Policy Lessons Learned for Central Banks

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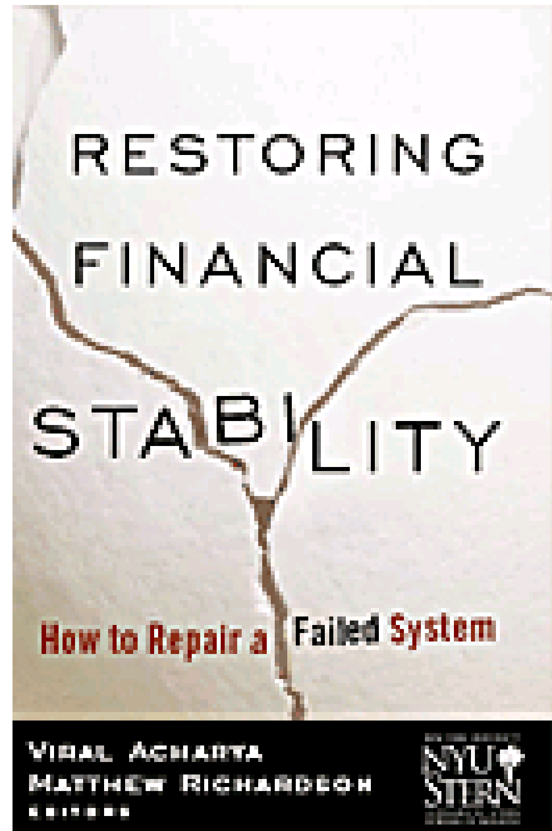
Overview: What to Do About Systemic Risk

- Market and funding liquidity is (still!) very important – not a new new kind of crisis
- Systemic risk: definition
  - The joint failure of a significant part of the financial institutions
  - Leading to the freezing of parts of the capital markets
  - That has the potential to disrupt the real economy
- Key drivers:
  - Liquidity spirals (feedback of losses, margin, and liquidity)
  - Financial sector's central role in the economy
  - Bailouts
- Systemic risk is very damaging
  - Losses of about 15-20% of GDP during banking crises over past 25 years.
- Systemic risk is different from risk
  - Lehman 08 vs. Barings 95

- What to do about systemic risk: treat it like pollution
  - Private regulation of systemic risk not feasible
  - Measure, price, and regulate systemic risk
  - Limit the amount, tax it, and require insurance against it

Restoring Financial Stability:
32 NYU Stern Academics offer Specific Courses of Action



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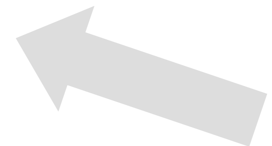


Chapter 13: “Regulating Systemic Risk”

Viral Acharya, Lasse Heje Pedersen, Thomas Philippon, and Matt Richardson

Why Regulate Systemic Risk (1/2): Externalities

- Externalities
  - Market and funding liquidity spirals (Geanakoplos (1997), Brunnermeier and Pedersen (RFS, 2009))
  - Fire sales and depressed prices (Mitchell, Pedersen, and Pulvino (AER 2007))
  - Spillover to the real economy, credit unavailability, payment system, etc.

- Consequences: Without regulation there is
  - Excessive leverage
  - Excessive concentration in illiquid assets
  - Excessive loading on aggregate risk

Why Regulate Systemic Risk (2/2): Guarantees

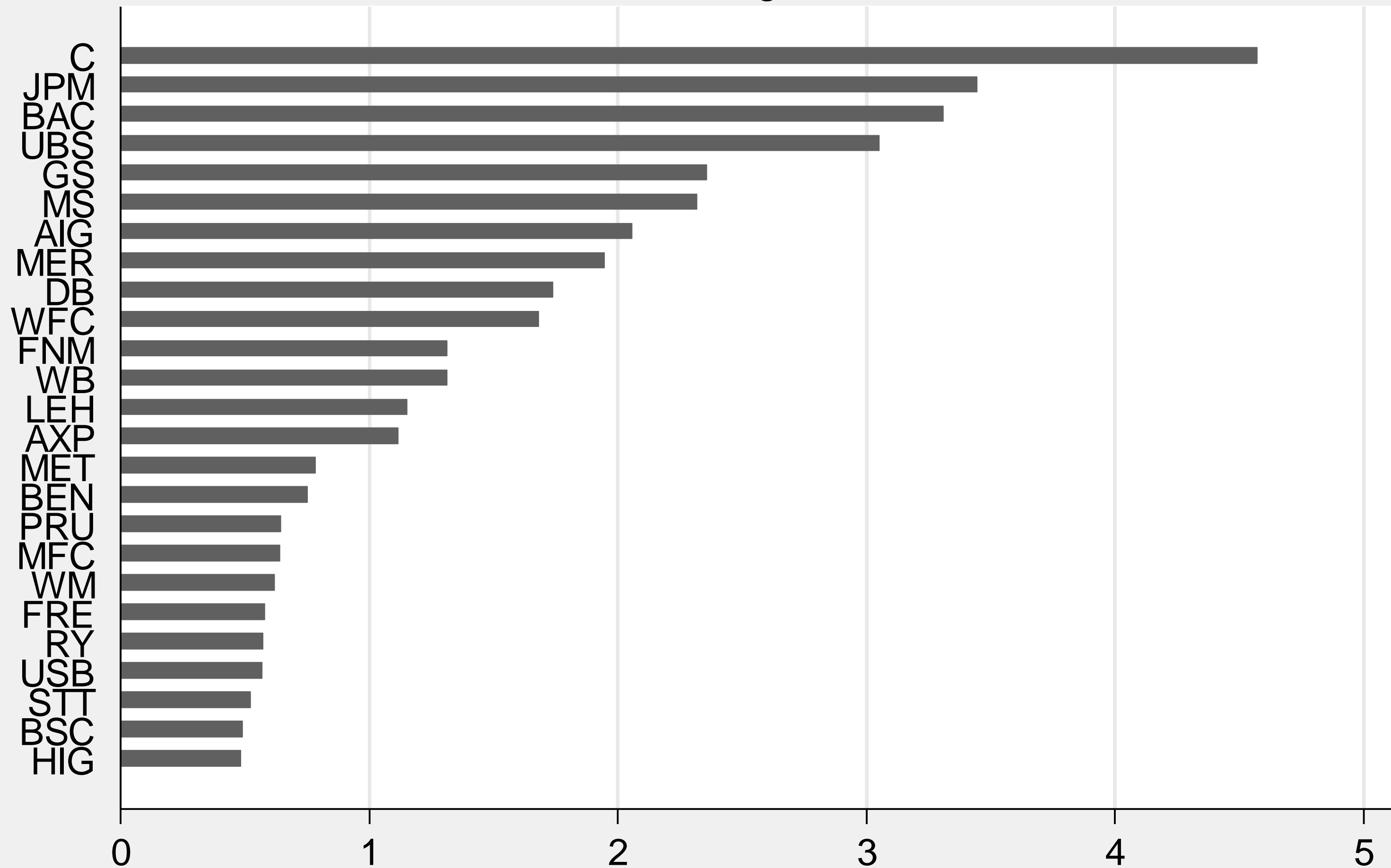
- Moral hazard
  - “To-big-to-fail” → size bias
  - “To-interconnected-to-fail” → counterparty risk bias
  - “To-many-to-fail” → systemic risk bias

- Costs
  - Significant fraction of GDP often spend on bank bailouts
  - Commitment not credible

Measuring Systemic Risk

- For each bank: measure **its contribution to** a general crisis
- E.g. standard risk management calculation
  - Take 1% worst case (output, stocks, bonds, credit,..)
  - Ask: on that day/month/quarter, how much did firm *j* contribute?
- Analogy
  - Allocation of economic risk capital within a firm
    - Each desk is charged for its (implicit) use of the firm's economic capital
  - Allocation of capital requirements within an economy
    - Government capital is a public good

Pre-Crisis



Methods Similar to MES and MVaR

- Flexible technology
  - Can be done for profits, credit losses, etc.
  - Break down by divisions, desks, assets, geographical regions
  - Consistent with M&As, changes in size, positions, etc.

- Caveats on statistical methods
  - Cyclical behavior
  - Past data vs. future crisis

- Complement with scenario analysis

Our Proposal

1. **Systemic Capital Requirement** (Basel III)
   - Capital requirement proportional to estimated systemic risk
2. **Systemic Fees** (FDIC-style)
   - Fees proportional to estimated systemic risk
   - Create systemic fund.
   - Price risk using AAA tranches, out-of-money puts, etc.
3. **Systemic Insurance** provided by the private/public
   - Compulsory insurance of each bank's own losses during general crisis
   - Payment goes to systemic fund, not the bank itself
   - Market price of insurance, but most of the insurance bought from the government
     - Analogy to terrorism insurance

➤ **Advantages of our proposal**

- Incentives to limit systemic risk (to lower capital requirement, fee, insurance)
- Estimates of systemic risk (by regulator and by the insurance market)
- Reduce risk and cost of bailout (systemic fund)

Regulating systemic risk

	Capital requirements	Taxes	Private Insurance	Public/Private Insurance
Advantages	Consistent with existing regulations Transparent and easy to implement	Easy to adjust Create a systemic fund	No need for extra capital on BS Extract market prices	Market price Public power
Disadvantages	Cost of keeping large capital on balance sheet	Hard to figure out the price	Market not large enough for real systemic risk LOLR still there	Governance Coordination Find correct public price