

Interconnectedness, Fragility and the
Financial Crisis:
“Too Big/Interconnected to Fail” and
Moral Hazard

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Outline

- Financial System and Growth
- Fragilities of the Financial System
- “Too Big to Fail” as a subset of
“Too Interconnected to Fail”
- Moral Hazard
 - Sources
 - Can we put the genie back in the bottle?
- Importance of Making Markets More Robust
to Mitigate Moral Hazard

Financial System and Growth

- Numerous studies, using both US and international data, strongly suggest that deep financial market development is a driver of long-run economic growth
 - Is there a trade-off between higher average economic growth and higher volatility?

Fragilities of the Financial System

- Why is the potential for instability greater for financial services than in non-financials?
 - *Leverage*: Financial institutions typically have much higher leverage than non-financials
 - *Liquidity*: Financial institutions generally have a larger “maturity mismatch,” funding longer-term assets with shorter-term liabilities

Interconnectedness and the Crisis

- Increasing layers of financial intermediation -- greater interconnectedness – so information about funders, counterparties, and customers needed to judge soundness of an institution
 - Is this due to
 - More efficient allocation/dispersion of risk?
 - Regulatory arbitrage?
- Thus, “Too Big to Fail” is really a subset of “Too Interconnected to Fail”

Interlinkages, Liquidity and Leverage

- With a marketwide liquidity shock, both asset and liability side of balance sheet face stress
 - Unplanned asset expansions hence unplanned increase in leverage
 - Inability to securitize/sell so stay on balance sheet
 - Taking on “off balance sheet” assets on balance sheet
 - Funding “runs”
 - Deposit insurance largely prevented depositor runs
 - But inability to obtain even secured financing

Funding and Counterparty Fragility

- Fragmented structured leading to high reliance on short-term external funding
 - Legacy of Glass-Steagall; rise of MMMFs
 - Unprecedented freezing of even secured funding markets
- Interconnectedness through counterparty and funding chains
 - Legal uncertainty about bankruptcy resolution and contract enforcement
 - In illiquid market, broken hedges can't be repaired so exposure explodes

Moral Hazard

- Moral Hazard arises anytime you think you can get away with taking a risk without having to pay the full consequences of the downside
- The Moral Hazard (MH) problem thus is associated not just with potential for bail-outs
 - Any insurance contract
 - Any limited liability system
 - Highly levered firms have more incentive to “shoot for the moon” so a high MH potential
 - Double-liability pre-FDIC and clawbacks

Moral Hazard

- Concerns about the potential for a “cascade” can lead policy makers to intervene
- Crucial to make policy makers feel comfortable that an institution/market can fail without cascading through the intermediation chain
 - Otherwise market participants will not find it credible

Moral Hazard

- How much is Moral Hazard (limited liability vs bailout potential) a driver of the fragilities of the crisis?
 - Bear Stearns?
 - Leverage and reliance on *short-term* funding?
 - “Cliff effects” in the tranches of mortgage-back securities?
 - Uncertainties in contract enforcement in stress?
- So how tightly should policy-makers hands be tied?
 - Panic of 1907

MH and the Robustness of Markets

- Crucial to understand fragilities of market infrastructure that can exacerbate interconnectedness and MH problems
- Important to give policymakers and, hence, market participants sufficient comfort that key institutions can fail without causing the system to collapse
 - Understanding tools/limits of Fed policy
- Making markets more robust to enhance that comfort (e.g., resolution regime, contract enforcement, central clearing of OTC derivatives, etc.)