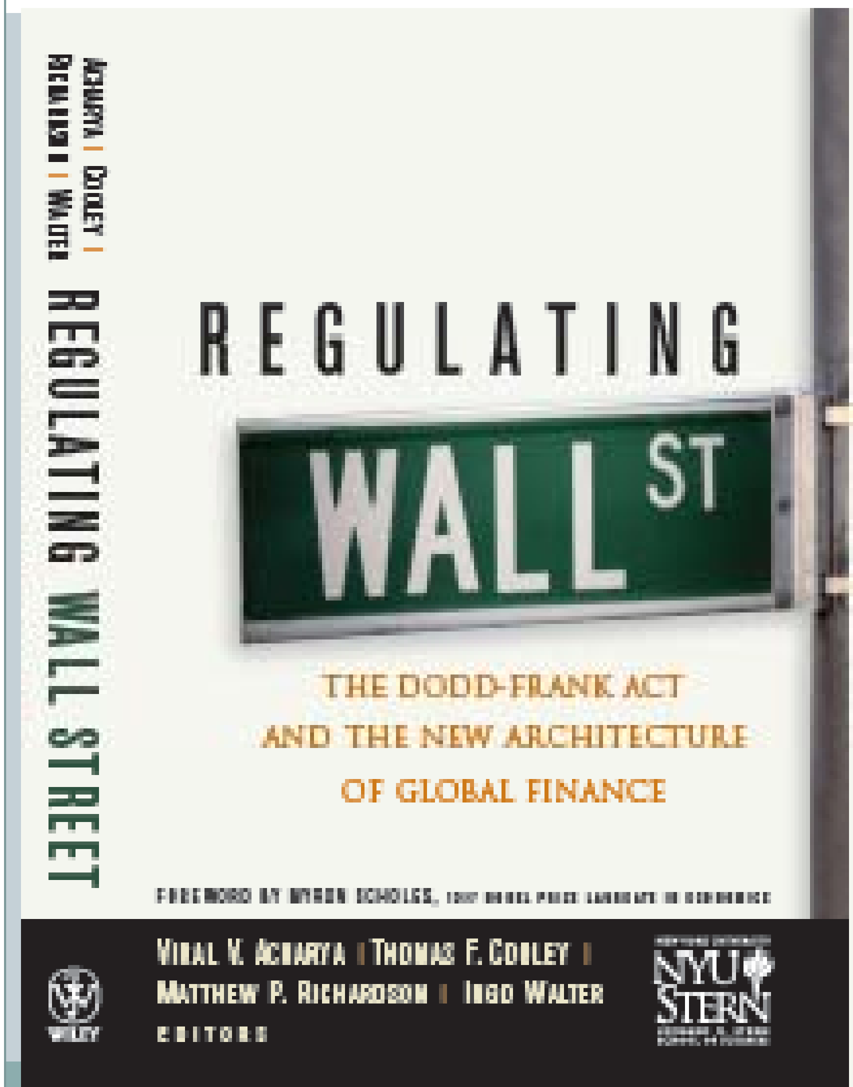


RESOLUTION AUTHORITY

Presentation based on

Chapter 8,
"Resolution Authority", by Acharya, Adler, Richardson and Roubini

Chapter 11
"Repo Markets", by Acharya and Oncu

"A Proposal to Resolve the Distress of Large, Complex Financial Institutions", By Acharya, Adler and Richardson

An Important Ongoing Debate

- What is “systemic risk”?

- Macro-prudential view: Common factor exposures
  - Several entities fail together
- Micro-prudential view: Contagion
  - Failure of an entity leads to distress or failures of others

- The two views are not mutually exclusive
- However, much regulatory reform takes one view or the other
- The Dodd-Frank Act is primarily the “micro-prudential view”

Resolution Authority under the Act

- Hangs its hat on the creation of Orderly Liquidation Authority (OLA)
- Balancing act between two forces that (potentially) work against each other
  - Mitigate moral hazard, bring back market discipline
  - Manage systemic risk
- How well does the Dodd-frank do?
  - We summarize briefly four problem areas
  - We discuss a macro-prudential resolution approach (repos)

Four Problems with Dodd-Frank OLA

1. Focused on the orderly liquidation of an individual institution and not the system as a whole.
   - Passing losses to SIFI creditors wipes out capital of other SIFIs
   - Need an *ex-ante* Orderly Liquidation Fund (OLF)

2. If the system fails, and monies cannot be recovered from creditors, *surviving* SIFIs must make up the difference *ex post*.
   - Increases moral hazard because of a free rider problem.
   - Increases systemic risk as reduces incentives to deviate from the herd.

Problems with Dodd-Frank OLA (cont'd)

3. Restricts the Fed's 13(3) LOLR ability to deal with non-banks unless a system wide crisis emerges
   - If we have multiple failures, how will an OLA deal with it?
   - OLA and funeral plans fail the first time they are tried out…
   - No emergency fire service just because we have sprinklers?!

4. Is receivership the right approach in systemic crisis?
   - Prompt corrective action and "living wills" helpful
   - Ability to set up a "bridge bank" helpful
   - Who will run the bridge bank? What is the likelihood a bridge bank will be required for a firm? Who will fund its operations?

Fix I: Living Will approach

- (Academic concept of) “Living will” - Barry Adler, NYU Law
  - Divide a firm’s capital structure into priority tranches
  - In the event of a default, equity would be eliminated, and lowest-priority debt tranche would be converted to equity
  - If this is isn’t sufficient, the process is repeated until all defaults are cured or the highest tranche is converted to equity. Only at this point would senior debt-holders have reason to foreclose on collateral.
  - Creditors pay but the cost of financial distress is avoided.
  - Issues like “what is the trigger?” and “what happens if the living will can’t stop the collapse or contagion?” remain.
  - “Bail-in” is akin to living will, but iterates just once…

Fix II: Macro-prudential resolution

- Systemically important liabilities
  - Financier of a SIFI is another SIFI, an entity that is run-prone, or whose run will likely trigger more runs
- Financial firms are each other's creditors
  - Each firm's equity has value from credit claim on other firms
  - Loss to capital of one firm erodes the capital of other firms
  - Individually, firms do not internalize this externality
- <u>System as a whole must put up capital to deal with failures on systemically important liabilities</u>
  - Charge as per each firm's contribution
    - E.g. NYU Stern Systemic Risk Rankings
  - For other liabilities, use bail-in or "living will" approach

Example – Sale and Repurchase (Repo) Markets

- A repurchase agreement, or more popularly a repo, is a short-term transaction between two parties in which one party borrows cash from the other by pledging a financial security as collateral.
- Repo is a Sale and Repurchase agreement, typically overnight though not always.
- Repo is NOT the same as Secured Borrowing:
- Bankruptcy exemption (1984 for government bonds, 2005 to MBS):
  - In case of seller's default, the repo financier has property rights over the collateral, typically to sell it in arm's length market
  - A secured borrower will in general be subject to at least a formal bankruptcy before getting access to collateral or being paid off

U.S. Repo Market Milestones

- **1917:** Federal Reserve introduces repos; repo securities are subject to ***automatic stay***.

- **1984:** Congress enacts the Bankruptcy Amendments and Federal Judgeship Act of 1984 to exempt repos on Treasury and federal agency securities, as well as on bank certificates of deposit and bankers' acceptances from the application of automatic stay.

- **2005:** Congress enacts the Bankruptcy Abuse Prevention and Consumer Protection Act of 2005 to expand the definition of repos to include mortgage loans, mortgage-related securities, and interest from mortgage loans and mortgage securities; all mortgage-related repo securities become exempt from automatic stay.

Repos and Systemic Risk

- Consider a MBS or ABS repo

- Seller: Investment bank (Bear Stearns)
- Financier: Money market fund (Fidelity, Federated)

- Suppose an aggregate shock hits the economy
- Investment bank loses its capital and cannot repurchase
- Financier cannot invest in – or cannot run well – MBS book

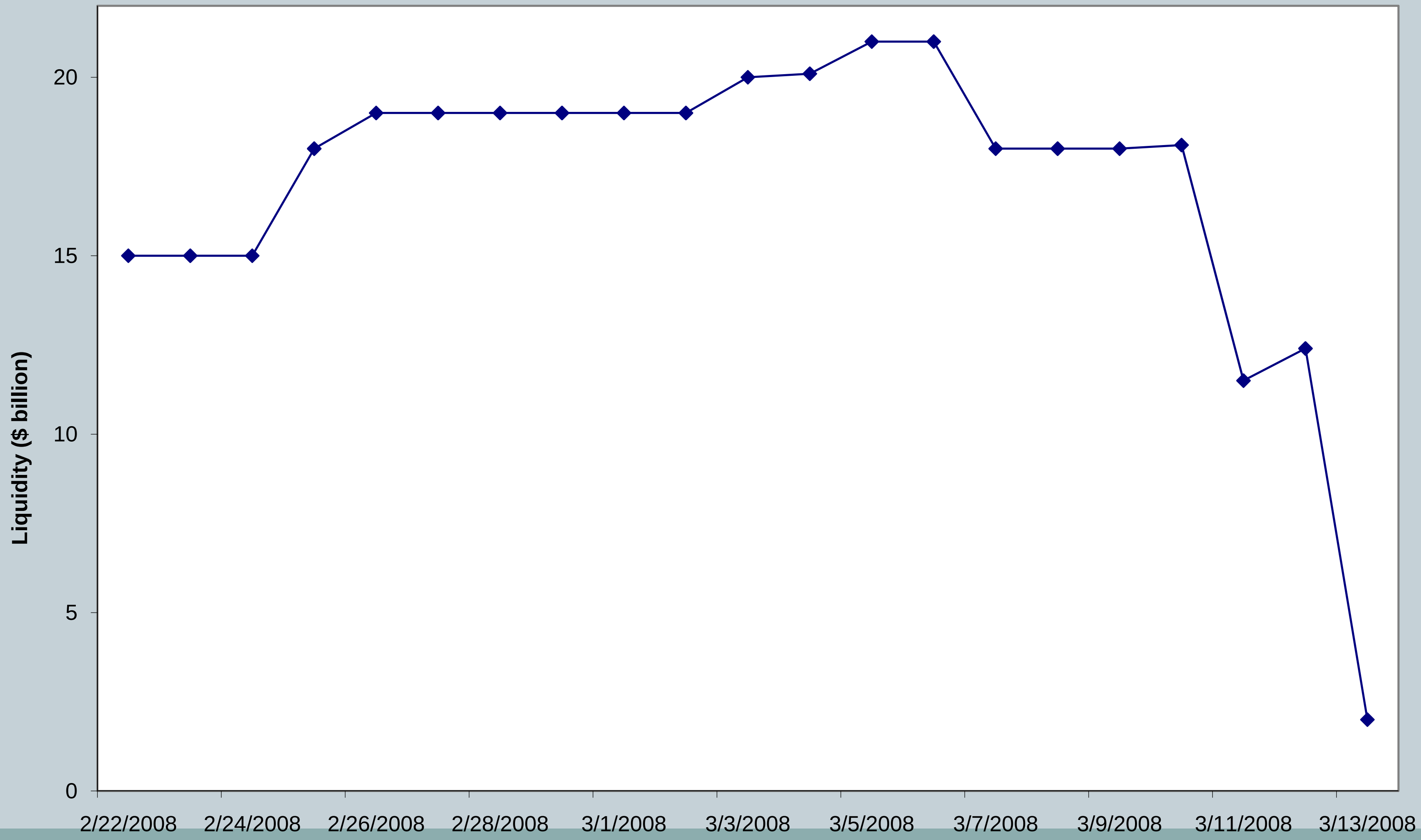
Repos and Systemic Risk (cont'd)

- Financier must sell upon borrower's default
- A "run" on the investment bank
- Repo collateral will be sold in illiquid markets

- Aggregate shock: So other financial firms in trouble too
- Fire sales, redemptions and in turn runs on repo financiers

- Summary: The bankruptcy exemption creates ex-ante liquidity in repo markets, but leads to ex-post systemic risk on aggregate risky ssets

Bear Stearns' liquidity pool in March 2008



Repo "run" on Bear Stearns-2008

"…[U]ntil recently, short-term repos had always been regarded as virtually risk-free instruments and thus largely immune to the type of rollover or withdrawal risks associated with short-term unsecured obligations.

In March, rapidly unfolding events demonstrated that even repo markets could be severely disrupted when investors believe they might need to sell the underlying collateral in illiquid markets...

In particular, future liquidity planning will have to take into account the possibility of a sudden loss of substantial amounts of secured financing."

- Ben Bernanke's remarks to the BIS, May 29, 2008

Proposals on the table

- Deposit insurance
  - How much can the government guarantee? Recent experience suggests guaranteeing most of financial sector deposits may not be a sustainable solution when government risk itself becomes high
  - Significant moral hazard problem

- Automatic stay on repos
  - Goes to the other extreme
    - Stay would hinder the liquidity of ABS, MBS repos
  - But suspends all conversion of repo collateral to currency
    - Avoids systemic risk

- <u>Key observation: Stay is needed only in systemic risk states</u>

Our Proposal: "Repo Resolution Authority"

- Treasury and agency debt repos: No stay, financier takes collateral
- Other "risky" collateral: A stay, but as follows…

  (1) RRA pays repo financier a conservative value (at a "haircut") based on historical prices of the repo collateral

  (2) RRA takes over repo collateral with a certain pre-specified period within which to liquidate it

  - Normal times: Repo collateral liquidated right away
  - Stressed times: Repo collateral liquidated in an orderly manner

  (3) RRA has "claw back" over conservative payment

  - If liquidation proceeds exceed (are lower than) the payment, the repo financier is paid (has to pay) the difference
- RRA is essentially a liquidation cum lender-of-last-resort (LOLR) authority

"Repo Resolution Authority" - II

- RRA should not try to solve liquidity problem without addressing attendant credit risk issues:
  - RRA takes on some credit risk: on collateral's liquidation, and in turn, on the repo financiers.
  - To manage this credit risk: the RRA should

  (1) include as eligible only relatively high-quality collateral

  (2) charge repo lenders an ex-ante fee for the LOLR facility, commensurate with residual credit risk borne by the facility

  (3) require that eligible repo lenders for the LOLR facility meet pre-specified solvency criteria

  (4) impose a concentration limit at the level of individual repo lenders as well as on the lender's overall portfolio size

- Merits: Balances liquidity and systemic risk issues
  - "Stay" only on risky collateral, effective only in systemic crisis, but illiquidity due to stay minimized by conservative payment

An interesting precedent…

(Kaufman and Seeling, 2002, Kaufman, 2004, 2007)

- The Glass Proposal (early 1930s)
  - Rapid payments to depositors as an alternative to deposit insurance (which Senator Glass opposed)
  - Establishment of a federal liquidating corporation
    - Estimate a bank's recovery value upon failure
    - Sell the bank (as a whole or in parts) over time
    - Pay the proceeds to the receiver for speedy disbursement to the depositors
- Fed attempted such a proposal in 1931 but it did not become operational
- NY State Banking Department implemented such an arrangement in 1933

An interesting precedent…

- Reconstruction Finance Corporation – 1932
  - Loan funds to banks being liquidated or reorganized
  - Enable quick partial payments to liquefy uninsured depositors whose “freeze” in a systemic crisis was considered as significant reduction in money supply
  - Deposit Liquidation Board could borrow from the RFC using assets of the closed banks as collateral
  - The Board loaned on 80% of the liquidation value of assets, using projected values based on orderly liquidation period of 3-5 years in recovering markets
  - Gathered support but not enacted…
  - Authority included in FDIC Act but with reduced failures, legislative interest in liquefying deposits waned

Resolution Method	Proposed by	How are systemic liabilities dealt with?	Pros	Cons
Orderly Liquidation Authority (OLA)	Dodd-Frank Act, FDIC	Pass on losses; Can use Orderly Liquidation Fund	Deals with incentives	Does not deal with systemic risk / contagion
Contingent capital	Flannery; Squam Lake Report	Protected through CoCo's that convert to equity	Creates time for orderly resolution	What next? Does not spell out resolution
Bail-in / Living will	Credit Suisse; Adler	Progressive losses that are pre-programmed	Spells out an orderly resolution	Adequate to deal with contagion?
Automatic stabilizers + Bail-in	Acharya, Adler, Richardson	Deposit insurance, repo resolution authority, CCPs, LOLR, …, Bail-in	Pre-arranges system-wide capital for resolution	Requires capital mgt at DI Fund, CCH,…

International coordination of SIFI resolution

1. Identify classes of Systemically Important Liabilities (deposits, repos, derivatives, SIFI exposures)

2. Require living-will (sequential bail-in) on non-SIL debt; harmonize on living-will for non-SIL debt

SIL debt:

1. Ensure DI funds are pre-funded, counter-cyclically
2. Create system-wide resolution authorities for other SIL's
3. Standards for initial and variation/stress-margin requirements at clearinghouses; manage their risks
4. Require central banks to spell out *a priori* eligible collateral for LOLR and charge for these liquidity facilities