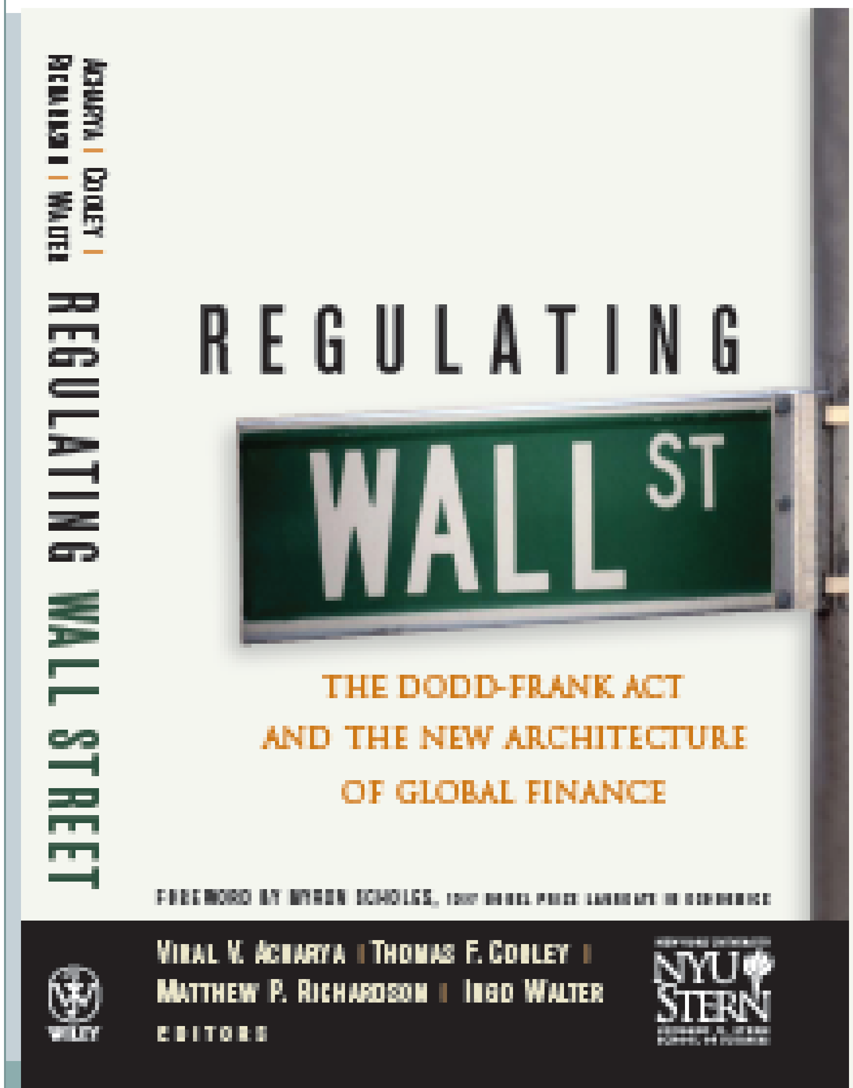


RESOLUTION AUTHORITY

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 highlight four problem areas
  - We discuss a macro-prudential resolution approach (repos)

Problem #1: Act's Misplaced Focus

- Focused on the orderly liquidation of an individual institution and not the system as a whole.
  - Funeral plans and orderly liquidation for unwinding SIFI's
    - Management be fired
    - Wind down costs be borne by shareholders and creditors

- What is unique about a financial firm's failure is its impact on the rest of the financial sector and the broader economy.
  - Passing losses to SIFI creditors wipes out capital of other SIFIs

- Need an *ex-ante* Orderly Liquidation Fund (OLF)

Problem #2: OLA's Incentives Are Wrong

- 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.
    - JPMorgan Chase asked to pay for mopping up Lehman Brothers!

  - Increases systemic risk because
    - (i) firms will herd and a race to the bottom can ensue; and
    - (ii) it is highly pro-cyclical, requiring prudent firms to provide capital at the worst time.

Problem #3: Has Systemic Risk Increased?

- Restricts the Fed's 13(3) LOLR ability to deal with non-banks unless a system wide crisis emerges
- One scenario:
  - A firm runs into liquidity issues
  - Fed can't provide aid, so OLA is triggered
  - Other likewise firms are experiencing stress too
  - These other firms suffer liquidity runs because of fears of OLA being triggered, paradoxically triggering their own OLA
  - With multiple OLAs, a systemic crisis has emerged
- Second scenario:
  - OLA and funeral plans fail the first time they are tried out…

Problem #4: Is Receivership the Right Approach?

- Trade off flexibility versus uncertainty
- Do we have experience for an FDIC approach to LCFIs?
  - Incomplete ex-ante information on scenarios
- Jackson (2009), e.g., has argued for a more standard bankruptcy model with adjustments, “Chapter 11F”:
  - Trigger possibly by involuntary petition
  - “Experienced” judiciary
  - QFCs divided into two types
  - Government could provide DIP financing albeit subject to rules of priority

Problem #4 cont'd – Living Will approach

- Academic concept of a "living will" (Adler)
  - Divide a firm's capital structure into hierarchy of priority tranches
  - In the event of a default on a debt obligation, 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 debtholders 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.

Questions for the OLA?

- Back to the future? - If the purpose of the resolution authority is to handle Citigroup, Merrill, Lehman, AIG, etc…then they should be able to explain exactly how they would have done it for the known cases.

- Systemically important liabilities - Suppose a systemically important financial institution fails - how would they treat *pari passu* unsecured liabilities that have different systemic qualities, e.g., interbank loans versus long-term debt?

- Bankruptcy safe harbors - With respect to qualified financial contracts (QFCs), how are they going to determine whether to allow the exemption and then face the problem of illiquid QFCs all coming to the market with resulting fire sales and funding illiquidity, OR instead transfer all the contracts, but then have the counterparty lose liquidity and face uncertainty by not having access to its liquid QFCs?

Macro-prudential resolution approach

- 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
  - Acharya, Pedersen, Philippon and Richardson (2009)
  - NYU Stern Systemic Risk Rankings

NYU Stern Systemic Risk Rankings

TOP 10	SRISK%	MES	LVG
Bank Of America	20.7	3.22	15.93
Citigroup	14.7	2.66	14.58
JP Morgan Chase	13.1	2.72	11.66
Morgan Stanley	8.2	3.31	18.39
MetLife	7.3	3.55	15.46
Prudential Financial	5.8	3.57	18.12
Hartford Financial Services	4.2	4.79	26.17
Goldman Sachs	4.1	2.53	10.31
American Internation Group	4.1	3.35	9.74
Wells Fargo	3.4	2.93	7.80

http://vlab.stern.nyu.edu/welcome/risk

Need automatic stabilizers

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, clearinghouse, 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. Ensure DI funds are pre-funded, counter-cyclically

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

5. Harmonize on “living will” for all liabilities that are not systemically important and don’t have built-in stabilizers

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 <u>Sale and Repurchase</u> agreement, typically overnight though not always.
- Repo is NOT the same as <u>Secured Borrowing</u>:
- <u>Bankruptcy exemption</u> (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 the application of automatic stay.

Tri-party Repos - I

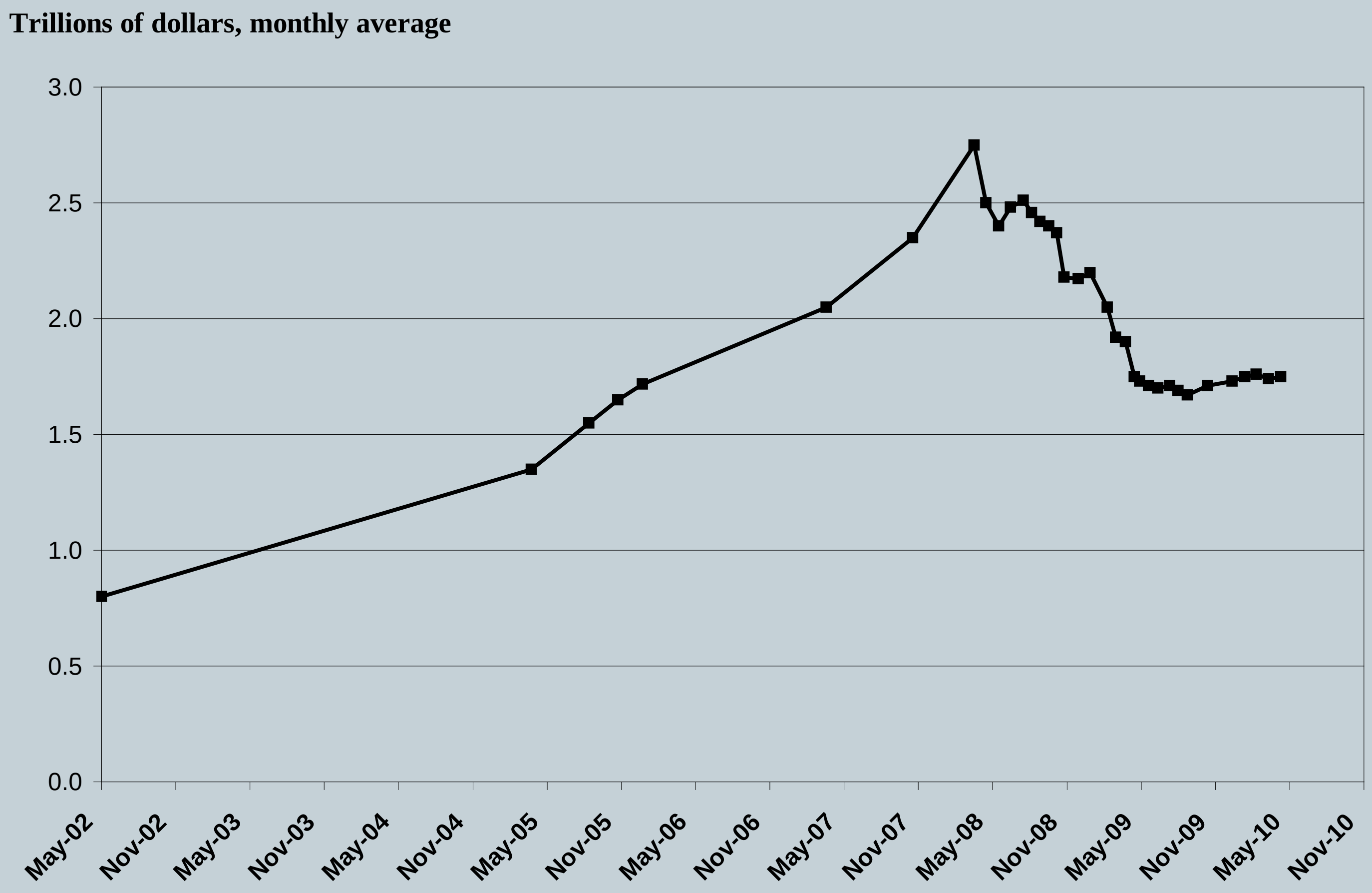
There are two types of repos based on the settlement methods used:

1. Bilateral Repos: the borrower sends collateral to the clearing bank of the lender, triggering a simultaneous movement of money against the collateral on the sale date. On the purchase date, the lender sends the collateral back to the borrower, which triggers the simultaneous return of the lender's funds.

2. Trilateral or Tri-party Repos: similar to bilateral repos except for the involvement of a third party—a tri-party agent provides custody, valuation, and settlement services for the exchange of cash and collateral between the borrower and the lender.

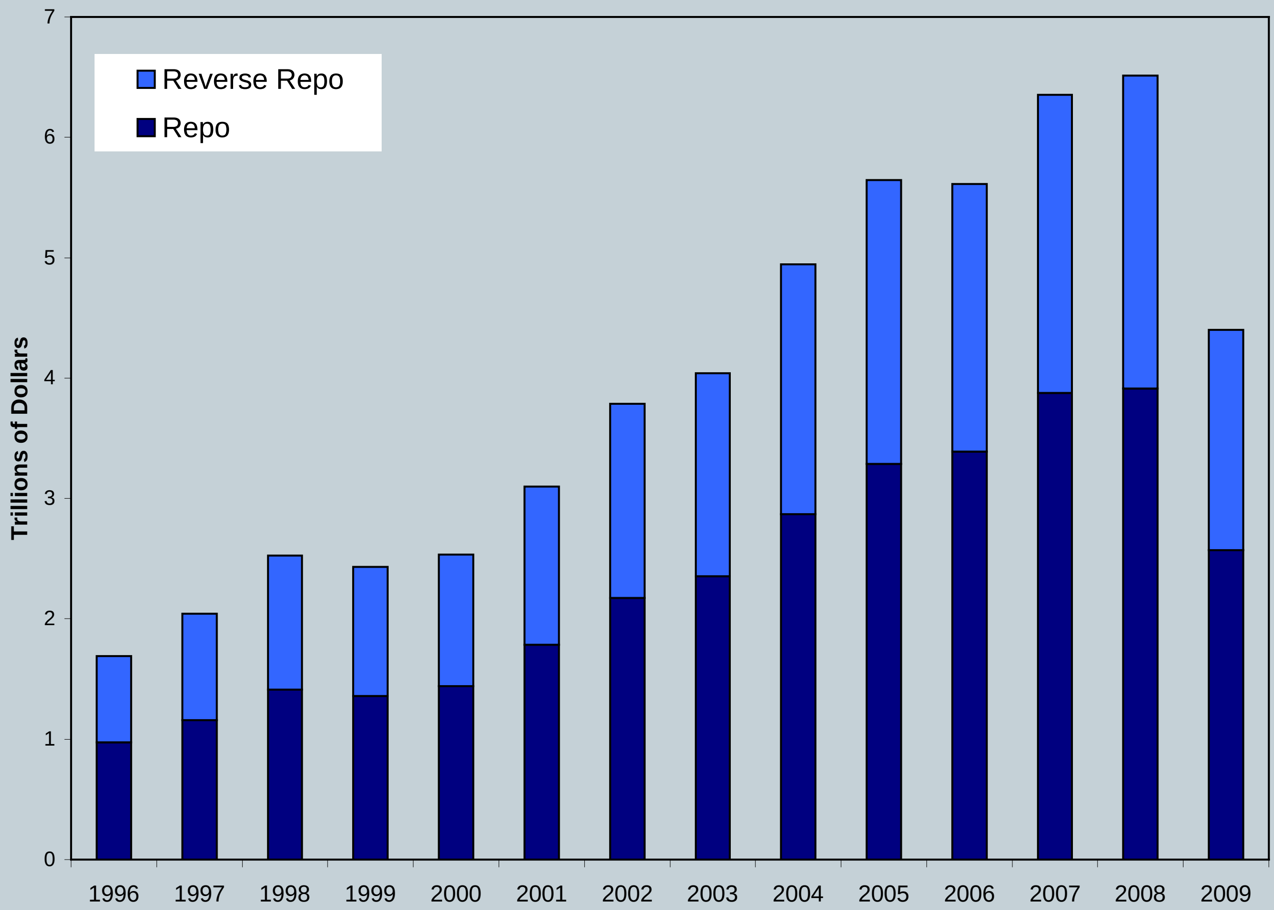
Today, there are only two tri-party agents in the U.S., called the *tri-party clearing banks:* Bank of New York Mellon and JPMorgan Chase.

Growth of Tri-Party Repo Market



Source: FRBNY Task Force On Tri-Party Infrastructure White Paper (2010)

Daily Financing by U.S. Government Securities Primary Dealers-Annual



Source: Securities Industry and Financial Markets Association

Repos and Systemic Risk

- Consider a MBS or ABS repo
- Seller: Investment bank (Bear); Financier: Money market fund (Fidelity)
- Suppose that aggregate shock hits the economy
- Investment bank loses its capital and cannot repurchase
- Financier cannot invest in – or cannot run well – MBS book
- Financier must sell upon investment bank'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
- <u>Summary</u>: *The bankruptcy exemption creates liquidity in repo markets, but leads to systemic risk on assets with aggregate risk*

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.

Such forced asset sales can set up a particularly adverse dynamic, in which further substantial price declines fan investor concerns about counterparty credit risk, which then feed back in the form of intensifying funding pressures."

- 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>

A Proposal: “Repo Resolution Authority” - I

- 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 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 the 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 stay minimized by conservative payment

Managing the risk of runs/stay

“Recall Bagehot’s advice: ‘The time for economy and for accumulation is before. A good banker will have accumulated in ordinary times the reserve he is to make use of in extraordinary times’.

In light of the recent experience, and following the recommendations of the President’s Working Group on Financial Markets (2008), the Federal Reserve and other supervisors are reviewing their policies and guidance regarding liquidity risk management to determine what improvements can be made.

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

Runs on money market funds: similar issues

READ THE BOOK!

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