



A Proposal for the Resolution of Systemically Important Assets and Liabilities: The Case of the Repo Market

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RESOLUTION AUTHORITY

Presentation based on

Chapter 8,
“Resolution Authority”, by Acharya,
Adler, Richardson and Roubini

Chapter 11
“Repo Markets”, by Acharya and Öncü

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

ACHARYA | COOLEY |
RICHARDSON | WALTER

REGULATING
WALL STREET

REGULATING



THE DODD-FRANK ACT
AND THE NEW ARCHITECTURE
OF GLOBAL FINANCE

FOREWORD BY MYRON SCHOLES, 1997 NBER PRIZE LAUREATE IN ECONOMICS

VIRAL M. ACHARYA | THOMAS F. COOLEY |
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EDITORS



Important Ongoing Debates



I. What is “systemic risk”?

- How should we contain systemic risk when it arises?

II. Will systemic risk simply move to “shadow banks”?

- How should we regulate “shadow banking”?

What is “systemic risk”?



- Micro-prudential view: Contagion
 - ✦ Failure of an entity leads to distress or failures of others
- Too-big-to-fail institutions
 - ✦ Regulate TBTF better
- Systemically Important Financial Institutions (SIFIs)
 - ✦ Regulate SIFIs better

What is “systemic risk”?



- Macro-prudential view:
(Diamond-Dybvig 1983 + Shleifer-Vishny 1992)
 - ✦ Common factor exposures
 - ✦ Runs
- Several entities fail together as
 - ✦ Short-term creditors demand immediacy
 - ✦ Against long-term assets
 - ✦ But the system has limited capacity (capital?) to provide immediacy
- The micro-prudential and macro-prudential views are not necessarily mutually exclusive

Focus of this talk: Resolution



I. Micro-prudential view:

- Design “top-down” bankruptcy procedure for failing SIFI
- Example: Dodd-Frank Act, contingent capital, bail-in

II. Macro-prudential view:

- Design “bottom-up” resolution at market-level for systemically important assets & liabilities (SIALs)
- Example: Derivatives clearinghouses, lender of last resort

Systemic risk need NOT be about SIFIs



- Collection of small institutions can be systemically important
 - Conduits
 - Money market funds
 - S&Ls

- Collection of a class of claims (“markets”) can also be systemically important
 - Repo

Important issue: Safe harbor provisions



- All money-like claims involve immediacy of payments
- Immediacy important for moneyness / liquidity
- Demandable deposits had a built-in immediacy
- Secured borrowing by the financial sector has immediacy rights through “safe harbors” from bankruptcy
- Have we over-invested in liquidity / immediacy?

Immediacy: a source of systemic risk



- Prior to fiat money, there was often a shortage of money
 - ✦ Solution: Commercial bank clearinghouses
 - ✦ Suspend conversion of immediacy, adopt joint liability
- Problem: If there isn't adequate capital with joint liability providers, runs may not get stemmed
 - ✦ In extremis, bank runs can morph into sovereign crisis (Ireland)
- Modern-day runs: Resolution difficulties stem from inability to suspend conversion of immediacy
 - ✦ LOLR takes on significant asset risk while providing immediacy
 - ✦ Safe-harbor provisions may require systemic exception

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.
- Sale and Repurchase agreement, typically overnight
- Repo is NOT the same as Secured Borrowing
- Bankruptcy exemption:
 - In case of default, the repo financier has property rights over the collateral, typically to sell it in arm's length market
 - A secured borrower will 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



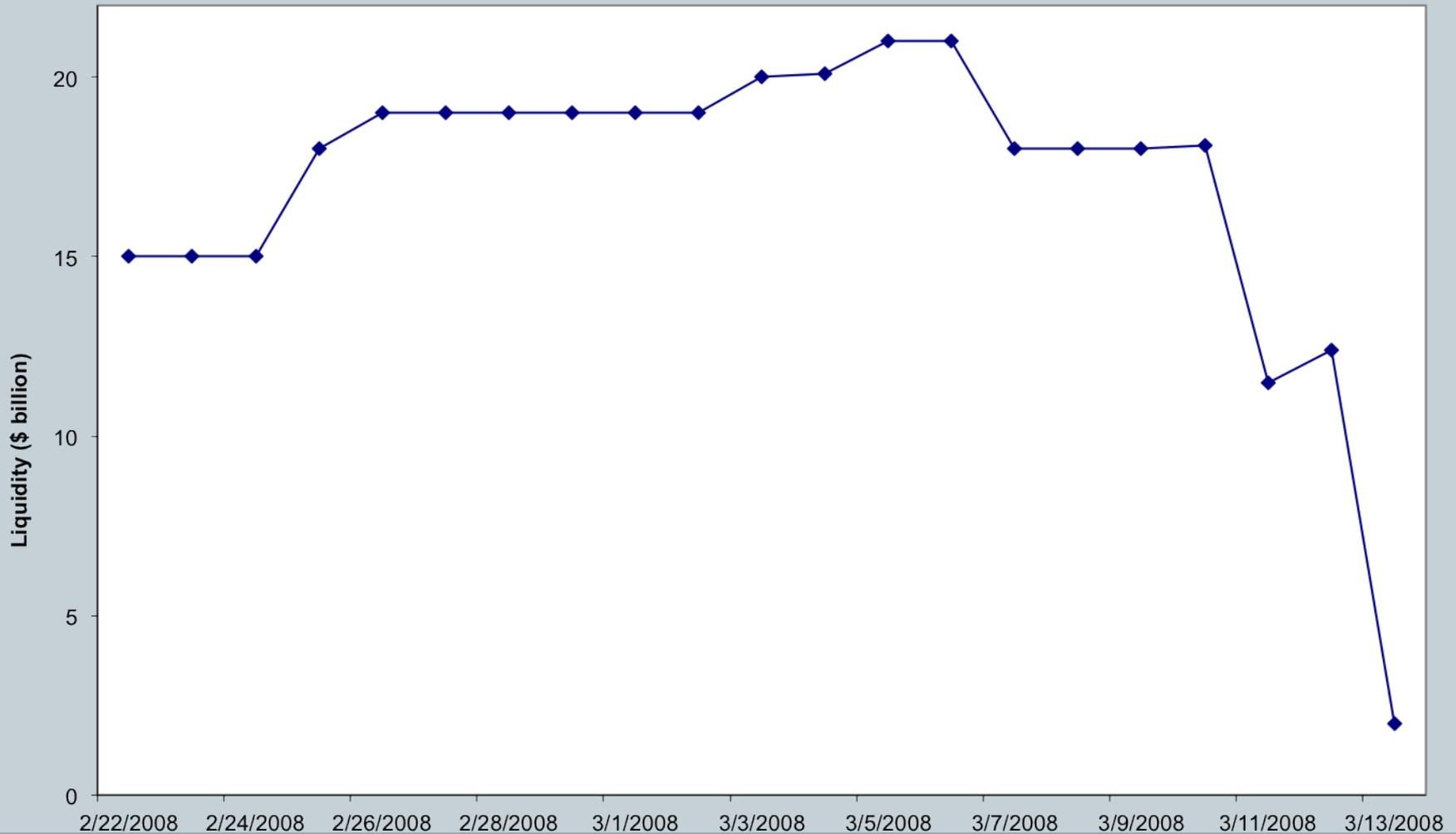
- Consider a mortgage-backed securities (MBS) repo
- Seller: Investment bank (Bear Stearns)
- Financier: Money market fund (Fidelity, Federated)
- Suppose an aggregate shock hits the economy
- Investment bank loses its capital and cannot repurchase
- Financiers cannot invest / run well the MBS book

Repos and Systemic Risk (cont'd)



- Financiers wish to sell upon borrower's default
- Or “run” on the borrower forcing it to engage in sales
- Borrower cannot file for bankruptcy to put a “stay”
- Repo collateral will be sold in illiquid markets
 - Aggregate shock: So other financial firms in trouble too
- Fire sales, further redemptions, losses to “late” financiers, and, in turn, runs on repo financiers

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.”

- Chairman Bernanke’s remarks at BIS, May 29, 2008

Growth and Shrinkage of Tri-Party Repos



Trillions of

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

Proposals on the table



- **Deposit insurance**
 - How much can / should the government guarantee?
 - 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

- Key observation: Stay is needed only in systemic risk states

Our Proposal: “Repo Resolution Authority”



Ex post: Avoid disorderly fire-sales but ensure reasonable liquidity of financier claims

- Suspend conversion, if necessary
- Take over liquidation rights
- Make liquidity payments based on conservative recovery assumptions
- Claw-back or repatriate losses / gains from liquidation

Repo Resolution Authority (cont'd)



Ex ante: Do not provide ex-post liquidity without containing credit risk ex-ante

- Collateral eligibility, minimum haircuts
- Ex-ante fee for liquidity enhancement
- Solvency criteria for financiers to get liquidity
- Concentration limits on financiers / financier-assets

Repo Resolution Authority



- Combines liquidity provision and large-scale asset-liquidation roles
- Resembles a clearinghouse in many ways
 - Especially in that is involved in both ex-post resolution and ex-ante risk controls
- Resembles a lender-of-last-resort in some ways
 - Mainly in the ex-post liquidity provision role
 - Has lower ability to create liquidity than a central bank
 - Could over time, however, acquire greater expertise in risk control

Implementation in detail



In case of default:

1. Treasury and agency debt repos: No stay, financier takes collateral (providing government risk is negligible)
2. Other “risky” collateral: A stay, but as follows...

Implementation (cont'd)



3. RRA pays repo financier a conservative value (at a “haircut”) based on a reasonable projected value from liquidation of collateral (could be a schedule for financier – asset class)
4. RRA takes over repo collateral with a certain pre-specified period (with some flexibility) within which to liquidate it
 - RRA has “claw back” over conservative payment
 - If suitably discounted liquidation proceeds exceed (are lower than) the conservative payment, the repo financier is paid (has to pay) the difference

Implementation (cont'd)



5. RRA through steps 3 and 4 resembles a LOLR cum liquidator

- Suspends rights to liquidate collateral
- Suspends partial conversion by applying haircuts

6. Isolated default situation:

- Collateral market likely to be liquid
- Effective treatment of repo akin to bankruptcy exemption

Implementation (cont'd)



7. Clustered or correlated default situation:

- Stay and orderly asset liquidation come into play
- Eventual average recovery for financiers may be greater!

8. Claw-back possibility introduces credit risk for RRA

- Asset liquidation values may be lower than conservative payment
- By time of claw-back, financier is insolvent or illiquid

Implementation (cont'd)



8. (cont'd) Ex-ante risk controls:

- i. Exclude some hard-to-value or liquidate collateral classes: These repos are effectively subordinated in bankruptcy
- ii. Charge repo financiers an ex-ante fee for liquidity payment
- iii. Require that eligible repo financiers maintain minimum solvency criteria so that claw-back risk is managed
- iv. Impose concentration limit at the level of individual repo financiers , their overall portfolio size, etc.

Pros and Cons of our proposal



○ Pros:

- ✦ Effectively suspends stay only in systemic scenarios
- ✦ Easily extendible as new asset and liability classes emerge
- ✦ Private sector has some expertise in this through CCPs, e.g.
- ✦ Cuts across institutions and shadow banks, so harder to “game”
- ✦ Can be harmonized internationally

○ Cons:

- ✦ Relies on ability of the utility to estimate conservative values
- ✦ Relies on adequate incentives for the utility to adopt ex-ante risk controls (haircuts, concentration limits, eligible collateral, ...)
- ✦ May need LOLR if risk controls inadequate or shock too large

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