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
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

- The Dodd-Frank Act is primarily the “micro-prudential view”

- Systemically Important Financial Institutions (SIFIs)
  - Regulate SIFIs better
What is “systemic risk”?

- Macro-prudential view:
  (Diamond-Dybvig + Shleifer-Vishny)
  - 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

- There have indeed been runs on SIFIs in the past

- But a number of runs in the 2007-09 crisis were also runs on relatively smaller shadow banks (such as hedge funds, conduits and SIVs and money-market funds)
ABCP “run” (Acharya, Schnabl and Suarez)
BNP Paribas announces that it cannot value mortgage assets in some money funds (Aug 9, 2007)
ABCP “run” (Acharya, Schnabl and Suarez)
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 (ABCP, 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
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
“…[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

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
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...
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
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...  

- 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
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
International coordination of resolution

1. Identify classes of **systemically important assets and liabilities** (deposits, repos, derivatives, ...)

2. Apply resolution authority to the rest
   
   - Dodd-Frank OLA / OLF
   
   - Living-will or sequential bail-in on non-SIL debt; harmonize on living-will for non-SIL debt
Harmonize on principles for resolution of SIALs:

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

2. Create system-wide resolution authorities for other SIALs

3. Standards for initial and variation/stress-margin requirements at clearinghouses; manage their risks

4. Require central banks to spell out *a priori* other eligible collateral for LOLR and charge for these liquidity facilities
Resolution Authority of Dodd-Frank 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.
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?