

How Curb Risk In Wall Street

Luigi Zingales

University of Chicago

Banks' Instability

- Banks are engaged in a transformation of maturity:
 - borrow short term
 - lend long term
- This transformation is socially valuable Diamond & Dybvig (1983), but opens up the possibility of inefficient runs.
- Multiple equilibria: if I expect others to run, it is rational for me to run too.

The Banking Social Contract

- Instability of banking has given rise to a social contract.
- This contract entails certain privileges:
 - access to central bank liquidity
 - federal deposit insurance.

and imposes obligations

- activity restrictions, supervision, and capital requirements.
 - deposit insurance fees.
- Historically, this social contract has been limited to *depository banking*.

The Shadow Banking Sector

- Institutions emerged that performed the basic functions of banks without submitting to the terms of the social contract:
 - money market mutual funds
 - repo-financed dealer firms;
 - asset backed commercial paper (ABCP)
- These institutions compete with banks but
 - do not pay the cost of the social contract
 - piggy back on the safety provided by banks
 - back-up line of credit
 - reputational guarantee

Short - Term Liabilities of the Financial System

Asset - Backed Commercial Paper	\$1.2
Securities Lending	0.6
Broker - Dealer Repo	2.5
Finance Company Commercial Paper	0.4
Money Market Mutual Funds	3.1
Total Shadow Banking Liabilities	\$7.8

Uninsured Deposits \$2.7

Total FDIC Insured Deposits \$4.8

Intrinsic Instability

- The shadow banking sector depends upon the official one for safety
- ⇒ To protect the official banking sector we implicitly protect also the shadow banking
- The entire emergency policy response was designed to protect *uninsured short-term creditors through a series of “temporary” and “extraordinary”* interventions.
- This implicit guarantee (“Greenspan put”) creates severe moral hazard problem

Questions

- 1) Where should the perimeter of the banking social contract be drawn?
- 2) If the safety net good should it be extended to include some types of shadow banking activities?
- 3) To what extent should maturity transformation be permitted outside that perimeter, if at all?

Conventional response

- Safety nets encourage risky behavior, with taxpayers bearing the downside.
- Instead of insuring short-term debt, we should have these creditors perform a disciplining function
- These behaviors constrain management from taking on too much risk.
- Deposit insurance justifiable on consumer protection grounds, but the safety net should stop there.

Problem

- Discipline by short-term creditors causes instability
- Is the moral hazard problem so large that we are willing to bear the instability?
- This was the position of most economists before the introduction of deposit insurance in 1933.
- Deposit insurance was introduced for political economic reasons, not economic ones (Economides et al, 1996).
- Nevertheless, today nobody would think to get rid of it
- In fact, copied in most countries

Strategic Ambiguity

- Dodd bill attempts to maintain “ambiguity” by choosing neither instability nor moral hazard.
- Uncertainty will lead short term creditors to play a market disciplining function, while preserving flexibility for authorities to support sensitive classes of creditors when necessary to protect the system.
- Ambiguity is likely to result in the worst case:
 - uncompensated subsidies and subsidized profits
 - compensation for a privileged set of institutions;
 - perverse incentives toward instability and *ad hoc bailouts*;
 - *very* real possibility that authorities fail to act decisively when needed to support the system.

Possible Solutions:

Extend the safety net (Ricks, 2010)

- Prudential regulation and supervision of these institutions to limit the consequences of moral hazard;
- Strict limitation of maturity transformation outside the boundaries of the social contract.
- An ongoing fee, modeled on FDIC assessments, to compensate taxpayers and prevent undue subsidization of private firms.
- Operative criteria for determining eligibility for the social

Hart and Zingales: Use LTD monitoring

- From a systemic point of view, not all the debt is created equal.
- Deposits, repo contracts, derivatives, short term debt between financial institutions might have systemic effects.
- Long term debt, not.
- Long term debt is generally held by pension funds and mutual funds, that are not levered and they can absorb the losses.
- Rely on monitoring performed by LT debt while insuring the ST debt

Conundrum

- How to reintroduce the proper incentives in a world where these incentives are distorted by the TBTF policy.
- In particular, how to reintroduce the incentives for creditors to be concerned, when they know they are going to be bailed out.

Idea

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Solution

- 1) Make sure that the long term debt can suffer in case of bad performance
=> need for a resolution mechanism that differentiate between the two types of debt
- 2) Build an early intervention system based on the market signal coming from the default risk embedded in the long term debt prices.

Intuition

- Our mechanism mimics the way margin calls function.
- LFI will post
 - enough collateral (equity) to ensure that the debt is paid
 - enough non-systemic junior debt to ensure systemic debt is paid even out of equilibrium
- When the fluctuation in the value of the underlying assets puts debt at risk, LFI equityholders are faced with a margin call and they must either inject new capital or lose their equity in the bank.

Differences with margin calls

- 1) Trigger mechanism: based on CDS rates
- 2) Resolution mechanism:
 - It differentiates between systemic and non systemic debt, imposing an haircut on the latter
 - It prevents negative spirals
 - It avoids panic
- 3) Second buffer: Junior debt provides an extra layer of protection

Example

- If the average CDS rate over a month is above 100 bps, then either
- The LFI issue equity and bring the CDS down below 100 bps

Or

- The regulator will intervene

The Trigger Mechanism

- Equity no good because
 - Affected by the upside
 - Multiple equilibria
- CDS is where price discovery first occurs
 - It leads the stock market (Acharya and Johnson, 2007), the bond market (Blanco et al, 2005) and even the credit rating agencies (Hull et al, 2004).
- Other debt-like instruments (bonds, yield spreads) good as long as
 - Liquid
 - Not easy to manipulate
 - Easily observable
- CDS should be traded in a regulated market and properly collateralized

The Resolution Mechanism

- There is a positive aspect of an automatic mechanism
 - It avoids political discretionality
- But risk of self-fulfilling panics
 - Negative expectations lead to trigger that leads to an haircut that validates the negative expectations
- We avoid automatic liquidation
- The trigger forces the regulator to do a stress test

The Stress Test

- Two possible outcomes:
- Regulator finds that the debt is at risk, then she
 - wipes out the initial equity and debt;
 - puts in place a new value-maximizing capital structure;
 - sells the LFI expeditiously;
 - distributes the proceeds to former creditors, ensuring that creditors are not fully repaid.
- She finds that the debt is not at risk, she injects some funds in the form of equal priority debt

The Stress Test -2

- The injection of government funds is designed to
 - Make it politically costly to say that the LFI debt is not at risk
 - Protect systemically relevant contracts (which are senior) from the regulator's mistakes
- Political cost maximized by making the government claim junior to financial debt
- But we want to reduce lobbying pressure from claimholders to be bailed out-> debt senior
- Pari passu debt strikes a reasonable balance.

The Stress Test -3

- To avoid possible contagion, during the stress test regulator insures all the systemic obligations.
- This is not costly, since they are fully protected by sufficient equity and junior debt.

Double Layer

- The junior long-term debt cushion has a double function:
 - 1) It provides an extra layer of protection for the systemic obligations
 - 2) It provides a security that can support the CDS
- Minimum amount of long-term debt should be mandated by regulation
 - Hardly a problem, today is 19%

Would This Rule Have Worked?

(Bps of premium to insure against default)

Financial Institution	8/15/2007	12/31/2007	3/14/2008	9/29/2008
BoA	11	29	93	124
CITI	15	62	225	462
JPMORGAN	19	32	141	103
WACHOVIA	14	73	229	527
WAMU	44	422	1,181	3,305
WELLSFARGO	23	45	113	113
BEAR STEARNS	113	224	1,264	118
GOLDMAN	28	78	262	715
LEHMAN	38	100	572	1,128
MERRILL	29	159	410	666
MORGAN	31	129	403	1,748
AIG	31	59	289	821

Figure 5: Bear Stearns CDS prices before the rescue

The plot reports the prices (in basis points per year) of the 5-year credit default swaps on Bear Stearns debt starting 1/1/07 to 10/14/08. Source: Bloomberg.



False vs. True Positives

"Failed" institution	Date of	Average CDS	Average CDS
	Default	6 months	9 months
		before	before
BEAR STEARNS	3/14/2008	121	10
LEHMAN	9/15/2008	288	106
WAMU	9/25/2008	957	430
WACHOVIA	9/30/2008	176	45
MERRILL	9/15/2008	282	177
AIG	9/16/2008	234	70
CITI	9/30/2008	162	44
"Surviving" Institutions	False Positive Date with a Trigger at		
	100	40	
BoA	9/22/2008	1/22/2008	
WELLSFARGO	9/18/2008	11/23/2007	
JPMORGAN	9/29/2008	2/15/2008	
GOLDMAN	2/14/2008	8/20/2007	
MORGAN	11/13/2007	8/22/2007	

Weaknesses

- Fear of being wiped out later on creates equilibria where LFI cannot issue equity.

Solution:

Treat new equity as junior debt in case of regulatory takeover shortly after the equity issue.

How does it compare with the Dodd Bill?

- Resolution authority useful step but
 - Who is impaired? Not clear
 - What trigger intervention?
 - Too late
 - Too clumsy
- Living will
 - What are the incentives to get it right?
- Bailout fund
 - License to gamble

Miss the most important points

- 1) Market-based trigger for prompt intervention
- 2) Mechanism to force equityholders to raise new equity

Coco bonds

- Debt that converts into equity when a trigger is set off.
- Advantage: It does not require any resolution authority
- Disadvantages:
 - 1) Which trigger?
 - Market price of equity -> possibility of debt spirals
 - Accounting numbers -> possibility of manipulation
 - Political decision -> political risk

Coco bonds -2

- 2) They do not enhance protection of systemic obligations, only delay bankruptcy
 - Our mechanism forces equity issues, boosting the protection offered to systemic claims
 - 3) Who wants them?
 - Not debt from a tax point
 - Not debt from a downside protection
 - Not equity from an upside protection
- => Limited appetite given amount needed

Bail In (Debt for equity swap)

- equity -> warrants
- preferred & sub debt -> new equity
- senior unsecured debt -> 15% new equity (85% no change)
- No impact on customer positions, repo, swaps or insured deposits
- Management is removed
- What triggers it?
- Huge political return from delaying pulling the trigger.

How does mechanism compare with the Dodd-Frank Bill?

- Resolution authority useful step but
 - Not clear what the rules of impairment are
 - What triggers intervention?
 - Too late
 - Too clumsy
- Our mechanism could be implemented in the context of Dodd-Frank
- Possible private response to Government Regulation

Does It Help to Avoid Systemic Crisis?

- 2 reasons why an LFI failure has systemic effects:
 - 1) Losses on the credit extended to the insolvent LFI can make other LFIs insolvent.
 - Our mechanism eliminates this problem since no LFI will become insolvent.
 - 2) The failure of an LFI can force assets' liquidation leading to downward spiral in asset prices
 - Our mechanism does not force any asset liquidation, thus avoiding a downward spiral in assets prices.

Other Advantages

- 1) Easy to apply across different institutions (banks, hedge funds, insurance companies).
- 2) Except for the new resolution and trigger mechanism, not very far from existing capital requirements.
- 3) Easy to implement in an international setting.
- 4) The mechanism encourages early action: banks must issue equity well before they are close to default. A crisis is nipped in the bud.

How Not to Be Systemically Relevant

- Fed can establish a lower CDS threshold saying that if you
 - stay below
 - have the required amount of junior long-term debt

you are deemed non systemic

- As soon as you violate one, you become fully regulated

Conclusions

- The too-big-to-fail problem arises from a combination of
 - an economic problem : cost of bankruptcy on systemic obligations is very large
 - a political economy problem: time inconsistency induces the government/regulator to sacrifice the long-term effect to avoid the short-term costs
- Our mechanism addresses both these problems.
- It is similar to existing capital requirements:
 - two layers of protections for systemic obligations: equity capital and junior long-term debt.

Conclusions -2

- It differs in
 - trigger mechanism (based on CDS)
 - resolution mechanism.
- This mechanism ensures that LFIs are solvent with probability one, while preserving the disciplinary effects of debt.
- Credit default swaps have been demonized as one of the main causes of the current crisis. It would be only fitting if they were part of the solution.