

*Where are we in the crisis?  
Where are we going?  
What is to be done?*

Steven Kaplan  
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University of Chicago Booth School of Business

## *Intro*

- Where are we in the crisis?
  - What is the problem?
  - Where are we?
  
- Where are we going?
  - Going to get worse before it gets better.
    - » Maybe much worse.
  
- What is to be done?
  - Liability side of the balance sheet?
  - Asset side of the balance sheet?

## *What is the problem?*

- Look at a typical bank balance sheet.
- Deposits, short-term debt, long-term debt and equity fund
- Loans (and investments in securities).
  - Include mortgages and mortgage-related securities.

Loans	100	Deposits	70
		Short-term Debt	10
		Long-term Debt	10
		Equity	10

## *What is the problem?*

- Mortgage (and other?) losses are substantial at financial institutions.
- Losses are meaningful relative to equity bases of levered institutions.
- Restoration requires rebuilding capital base of these institutions.

Loans	<del>100</del>	92?	Deposits	70
			Short-term Debt	10
			Long-term Debt	10
			Equity	<del>10</del> 2?

## *Once there is concern, then bigger problems*

- When equity capital is low, financial institutions can:
  - Sell loans.
  - Raise equity.
- They usually sell assets first.
  - When equity goes down, bank becomes overleveraged.
  - Selling loans (at book value) and paying down debt reduces leverage.
- Unfortunately:
  - Hard to sell loans at book value.
  - Selling loans and assets depresses prices of other loans and assets.
    - » Which in turn reduces the equity capital of all banks.
  - Selling loans, i.e. “deleveraging,” reduces amount of bank lending.

- More unfortunately:
  - When lenders and other counterparties question solvency of a financial institution, they stop lending and transacting with it.
    - » This is a particularly big problem if the bank / institution relies on short-term debt. (E.g., Lehman.)
    - » So you can have a “bank run” even if the institution is solvent (or would be solvent) under normal conditions.
  
- At the peak of the crisis:
  - Everyone suspicious of everyone else.
  - No short-term credit available.
    - » Banks will not lend to each other short-term.
  - Lots of mini-runs.
    - » Rumors of trouble lead to runs on deposits, short-term debt.
  - ==> Downward spiral.

## Key Issue: What are loans really worth?

- What are loans worth?
  - Could really be worth 100, but trading at 90 because of bank run type behavior, i.e., fear of distressed selling.
  - Could fundamentally be worth 90.
  - Could be worth less than 90, say 80?

Loans	<del>100</del>	90?	80?	Deposits	70		
				Short-term Debt	10		
				Long-term Debt	10	10?	0?
				Equity	<del>10</del>	0?	0?

## *What did TARP 1 try to do?*

- Bailout allowed Treasury to buy illiquid financial assets.
  - Will provide liquidity to financial institutions.
  - Will stabilize loan values(?).
- Basic concern and bet was illiquidity / bank run behavior.
  - TARP 1 attempts to stabilize / calm market prices.
  - TARP 1 not very helpful if problem is solvency.

## *Will TARP - 1 Help?*

- If Loans = 100, Equity = 10 in calm markets, goal is to calm markets.
  - Problem is illiquidity, fear, but banks essentially solvent.
- Bailout helps.
  - Provides liquidity for loans.
  - Supports values closer to “fundamental” not distressed sale value.
  - Will show that banks actually are solvent.

Loans	100	Deposits	70
		Short-term Debt	10
		Long-term Debt	10
		Equity	10

## *What Happened?*

- TARP 1 failed.
- Market clearly believed loans not worth 100 or even 95.
  - So, we know market believes loans are worth less than 95.
- U.S. and European govts. have no choice, need to go to TARP 2.

## *What does the second U.S. bailout plan do?*

- U.S. Treasury will:
  - infuse at least \$250 billion equity into banks.
  - purchase some illiquid assets.
- FDIC will guarantee short-term bank loans.

## Does TARP 2 Help?

- Pretty clear loans not worth 100.
- If Loans = 90, Equity = 0, goal is to re-equitize banks and financial institutions.
- Bailout helps.
  - Banks no longer insolvent.
  - Short-term debt is guaranteed.

Loans	<del>100</del>	90	Deposits	70
Cash		5	Short-term Debt	10
			Long-term Debt	10
			Old Equity	<del>10</del> 5

## Does TARP 2 Help?

- If Loans worth less than 90, need to re-equitize and restructure.
- Not clear how much bailout helps.
  - Short-term debt is guaranteed.
    - » Should help interbank market.
  - But, banks still insolvent.
  - And, taxpayers have given money to debt investors.

Loans	<del>100</del>	<del>80</del>	80	Deposits	<del>70</del>	<del>70</del>	70
Cash			5	Short-term Debt	<del>10</del>	<del>10</del>	10
				Long-term Debt	<del>0</del>	<del>0</del>	5
				New Equity			0
				Old Equity	<del>10</del>	<del>0</del>	0

## *Bottom line on TARP 2*

- If loans are not so bad, then bailout plan is very helpful.
  - Provides needed capital to solvent banks.
  - Resuscitates inter-bank lending market, so lending resumes.
- If loans are very bad, bailout plan is helpful (stops panic), but not perfect and not enough:
  - Many banks are insolvent.
  - Bailout plan transfers \$ to long-term debt investors.

## *Where are we going?*

- Going to get worse before it gets better.
  - Maybe much worse.
- TARP 2 predicated on Q3 economy.
  - Economy has deteriorated substantially since then.
  - If economy has deteriorated, loan values have deteriorated.
  - If loan values have deteriorated, banks are increasingly less solvent / insolvent.
- I.e., loan values likely in the 80s.
- Actions have stopped bank runs and likely have stopped depression.
  - Expect a fairly severe recession.

# *What is to be done?*

- Two possible places to take action:
  - Liability side of the balance sheet.
  - Asset side of the balance sheet.


## *Liability Side*

- Key idea here is to make sure banks are solvent.
- Will need to restructure banks further:
  - TARP 2 will not be enough.
    - » Will need to put more equity into financial institutions.
    - » Prefer that money raised from private sector.
    - » However, more \$ from government as preferred in solvent institutions would be ok.
  - Also, should restructure / merge / shut down insolvent institutions.
    - » Do not put money into preferred.
      - Just goes to debt holders / senior claimants.
      - Read GM and auto industry here.
    - » Convert long-term debt and short-term debt(?) into equity.
- Fed should keep interest rates low.

- Should rectify one important TARP mistake:
  - Forbid dividends on common stock.
  
- BA, Bank New York Mellon, Citi, Goldman, JP Morgan, Morgan Stanley, State Street, Wells pay dividends.
  - They took in \$125 B from TARP.
  - At current rates, they will pay roughly \$20 B in dividends.
  - Means that at least 15% of TARP investment going to dividends.
  
- TARP should forbid dividend payments on participating banks.
  - Would have made sense to forbid dividend payments by all banks for two years.
  - Eliminates signaling effect of cutting dividend.

## *Asset Side*

- Idea here is to increase value of loans, revive economy.
- Good idea:
  - Make it easier (for private sector) to renegotiate loans.
    - » Some mortgages, other loans tied up in MBS / ABS structures that are hard to renegotiate (require unanimous consent).
    - » Change this.
  - Lower interest rates help here too.
  - Do not raise taxes now.
- Bad ideas:
  - Government buying loans at above market values.
    - » Government likely to overpay / support debtholders.
    - » Dominated by infusions of equity / debt restructuring.
  - Supporting zombie companies (like GM).
    - » Japan made this mistake in 1990s.

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- Mixed idea:
    - Fiscal / macro stimulus.
      - » May help.
      - » Easy to do badly / inefficiently.

## *What Will Be Done?*

- Biggest risk is that U.S. political system makes it worse.
  - This is all difficult for Congress (and public) to understand.
    - » Why bail out banks but not autos?
  - This is easy for Congress (and public) to misunderstand.
    - » Why bail out banks but not autos?
  
- Democratic Congress will try to grab resources for unions and other friends.
  
- Republican Congress skeptical of any additional intervention.

## *Summary*

- The problem is a financial institution insolvency problem.
- TARP 1 did not address the problem.
- TARP 2 addressed the problem, was the right thing to try.
  - Equity infusions desirable.
  - Guarantee of short-term loans desirable.
- TARP 2 will not be enough because economy has worsened. Not clear banking system is solvent. System should:
  - inject more equity (and stop dividends).
  - restructure insolvent banks.
  - make it easier to restructure bad assets.
- Political system makes it difficult to get this right.