Discussion of:

Dynamic Runs and Optimal Termination

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The question

Q: How do bankruptcy rules affect the timing of a debt run?

- For this discussion, I want to focus on one type of firm: banks
  - which may be resolved outside of the bankruptcy code (orderly liquidation, or disorderly policy reactions)
  - will ask later: is this focus appropriate?

Q: How does the resolution process for a failed bank affect the timing of the run on the bank?

The setup

- Many small depositors in a bank

Initially:

- Bank is solvent

Assets		Liabilities	
Investment	$(1+g)$	Deposits	$(1+g)$
		Equity	$(1+g)$

Equity > 0

- Deposits pay interest at rate g
  - depositors reinvest the interest → liabilities grow at rate g
- Value of assets also increases over time at rate g

  ⇒ value of equity grows at this same rate $\left(\frac{\text{equity}}{\text{assets}} \text{ is constant}\right)$

- At some point, a negative shock hits
  - growth rate of value of bank's assets falls

Assets		Liabilities		
Investment	~~$(1+g)$~~ $(1+g')$	Deposits	$(1+g)$	
		Equity	~~$(1+g)$~~	↓

- At this moment, the bank is still solvent
- Over time:
  - deposit liabilities grow faster than value of assets
  - value of equity is decreasing over time
  - eventually the bank will be insolvent (equity < 0)
- If a bank is insolvent, depositors will run. But … when?

Clock games

- Depositors receive news dispersed in time
  - not sure when the shock hit, or when insolvency will occur
  - and not sure how many other depositors know about the shock
- Each depositor wants:

  (i) to stay invested as long as possible (to collect the interest)

  and

  (ii) to get out before the bank fails
- A depositor knows waiting is risky. Needs to think about:
  - the benefit of staying invested a bit longer (interest)
  - the cost if they don't get out in time

  … which depends critically on how the bank will be resolved

A motivating example

- Think about Lehman Brothers in the summer of 2008
  - in March 2008, Bear Stearns is sold to JPM Chase
  - general understanding that Lehman is "next in line"
- Puzzle: why didn't creditors run from Lehman right away?
  - they were receiving value from the relationship (~interest)
  - and did not know when/if Lehman would fail (come back to this point)
    - wanted to "ride the wave"
- Key element of their decision process:
  - what would happen if Lehman failed and they were still invested?
  - that is, what would they receive in resolution?
    - many elements: how many other investors have already withdrawn, bankruptcy law, anticipated govt intervention, etc.

Focus of the paper

- Paper focuses on two particular features of resolution

Q: What is the optimal length of the clawback window?

- period before failure for which withdrawals are undone

Q: What is the optimal resolution trigger?

- that is, at what point should bank be put into resolution?

Outline of my comments:

- What I like about the model
- Four questions
- Final thoughts

What I like about the model

- Paper studies an important policy question
  - how should resolution procedures be designed?
- … focusing on a key element:
  - resolution policy affects investors' withdrawal decisions
  - and therefore how a failure/crisis plays out
    - importantly: captures key features of the Lehman episode
- Results are very clean, intuitive
- Methodology generates interesting insights
  - example: increasing clawback window has two competing effects
    - improves payoffs in bankruptcy → more willing to wait
    - but shortens opportunity to get out → want to withdraw sooner

Q1) Why short-term debt?

- Paper follows the tradition of assuming realistic contracts
  - even if they are not well suited to the model environment
- In this model, there is no value to having short-term debt
  - best arrangement: long term debt or 100% equity (→ no run)
- In practice, presumably there are reason(s) for these contracts

Q: Does abstracting from these reason(s) affect the conclusions?

- in one respect: answer is clearly `yes'
- optimal policy here is a "full" clawback window
  - a way of replicating long-term debt
- authors rule out this particular policy, but … I still have concerns

- One reason for demandable debt: liquidity shocks (Diamond and Dybvig, 1983)
  - think of a corporate treasurer holding funds in a bank or MMMF
  - withdraws to meet payroll, or to complete a large purchase
- In this case, clawbacks can be very costly
  - the money has already been spent; how can this be undone?
- May also change the optimal termination point k
  - especially if funds will be tied up for some time in bankruptcy
- Another reason: demandable debit disciplines firm behavior (Calomiris and Kahn, 1991)
  - threat of withdrawal may prevent banker from misbehaving
  - if withdrawals will be clawed back, what happens to incentives?

- Same issue came up early in the Diamond-Dybvig literature
  - DD (1983): "deposit insurance" was essentially a clawback clause on all early withdrawals
  - Wallace (1988): clawback is inconsistent with the idea that demand deposits provide liquidity insurance
  - lead to a literature on "taking sequential service seriously"

Q: Could DD-style liquidity shocks be introduced here?

- at each point in time, a fraction π of depositors are `impatient'
  - large payoff from withdrawing/consuming immediately
- replaced by an inflow of new depositors of same size
- might not change the model structure much

- How would it affect the policy conclusions?

Q2) Certain death?

- The bank/firm in the model is doomed to fail
- Policy objective: keep it alive as long as possible …
  - because it is creating value in the meantime
- Let's think about this in the context of the Lehman example
- Suppose everyone knew Lehman was going to fail eventually
- Would the policy objective have been to delay the inevitable?
  - because some hedge funds had good terms with Lehman?
  - I don't know …
- Policy makers wanted to prevent current failure …
  - *with the hope it would recover*

Q: Could the model be modified to allow recovery?

- Perhaps g follows a two-state Markov process
  - asset value will eventually recover
  - but uncertain if recovery will be before bank becomes insolvent
- Then: policies that *delay* a run (increase τ^*) ...
- … increase the chance of *avoiding* a run altogether
- I don't know if this is technically feasible
- If so, how would the policy prescriptions differ?

Q3) Are these banks?

Q: Are banks a good application of the firms in this model?

- Paper aims to be agnostic about the firm
  - could be a bank or a non-financial firm issuing debt
- But many argue that banks are *special*
  - particularly in their (demandable) liabilities
- The context we apply to a model often matters
  - for evaluating assumptions and interpreting results
- Is my motivating example (Lehman) a good one?
- If not, what is a good motivating example?
  - what is the best context for evaluating the analysis?

Q4) Resolution more generally?

- If the model is about banks …

Q: Can we study other elements of resolution process?

- Examples:
  - impose withdrawal fees when a trigger k is met
  - impose (temporary) deposit freeze when a trigger is met
  - deposit insurance or bailouts
  - allow partial withdrawals and subordinate remaining amount ("minimum balance at risk" proposal)
    - related to the reform of Money Market Mutual Funds in U.S.
- Framework here seems like a promising way to evaluate these policies

Final thoughts

- This is an interesting paper studying an important issue
  - much policy discussion of how to design better bankruptcy/ resolution rules
  - need good theory to guide this discussion
- The paper offers some interesting insights
  - competing effects of lengthening clawback window
  - how features of environment determine the optimal policy m^*
- It seems like much more could be done with this framework
  - my (biased) view: modify model to focus more directly on banks
    - and look at resolution policy more generally
  - perhaps there is another paper to be written …