Economic Impact of Innovations in (Corporate) Credit Markets

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My remarks and slides express my own opinions, which are not necessarily those of the Board of Governors or the Federal Reserve System.

Corporate Debt Innovations
(an incomplete list)

- Portfolio credit risk management.
- CDS, CDOs, and related developments.
- Changes in contract structure:
  - “Loan” and “bond” don’t mean what they used to
  - Smaller positions of commercial banks
- Changes in market structure.
  - Every investor can join the “bank” loan syndicate now (but who will play the traditional bank role?).

Bottom up

- I will work up from changes in contract patterns to economic implications.
  – Offer a perspective that is not yet common.
- Main point: To understand default & recovery, don’t look at labels like “loan” or “bond,” look at the substance of ALL of a firm’s debt contracts
  – Where are the control rights?
  – What are the players’ incentives?
  – What do these imply for behavior?

Motivated by changes in corporate loan market patterns

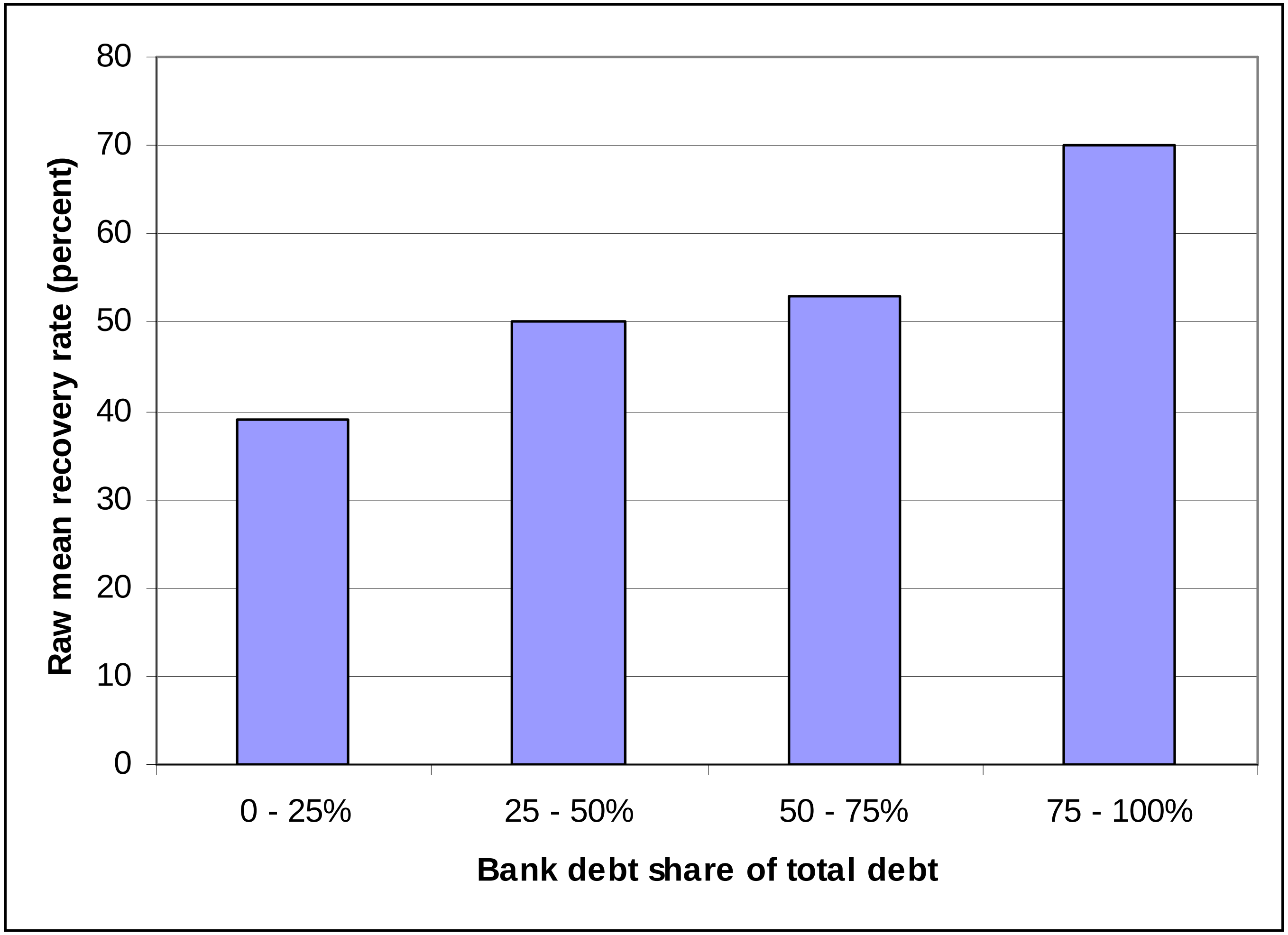
- Syndicated loan market developments are shrinking the share of firms' total debt that is loans with collateral *and* covenants.
  - "Second lien" term loans.
  - Smaller lines of credit relative to deal size.
  - "Covenant-lite" deals.
  - "Institutional" term loans with different covenants than the commercial bank tranches.

Why might it matter? Carey's forecast

- At least for firms that have issued the aforementioned kinds of debt:
  - Default rates will be a little lower than historical averages, other things equal.
  - Ultimate firm-level recovery rates will be much worse than historical averages.
  - (I also will say what could make loss experience go the other way).
- Why? Incentives and control rights will be different, so bankruptcy "timing" will differ.

A key fact from history: Bigger share of covenant-heavy, most-senior debt ➔ better average firm-level recovery rate

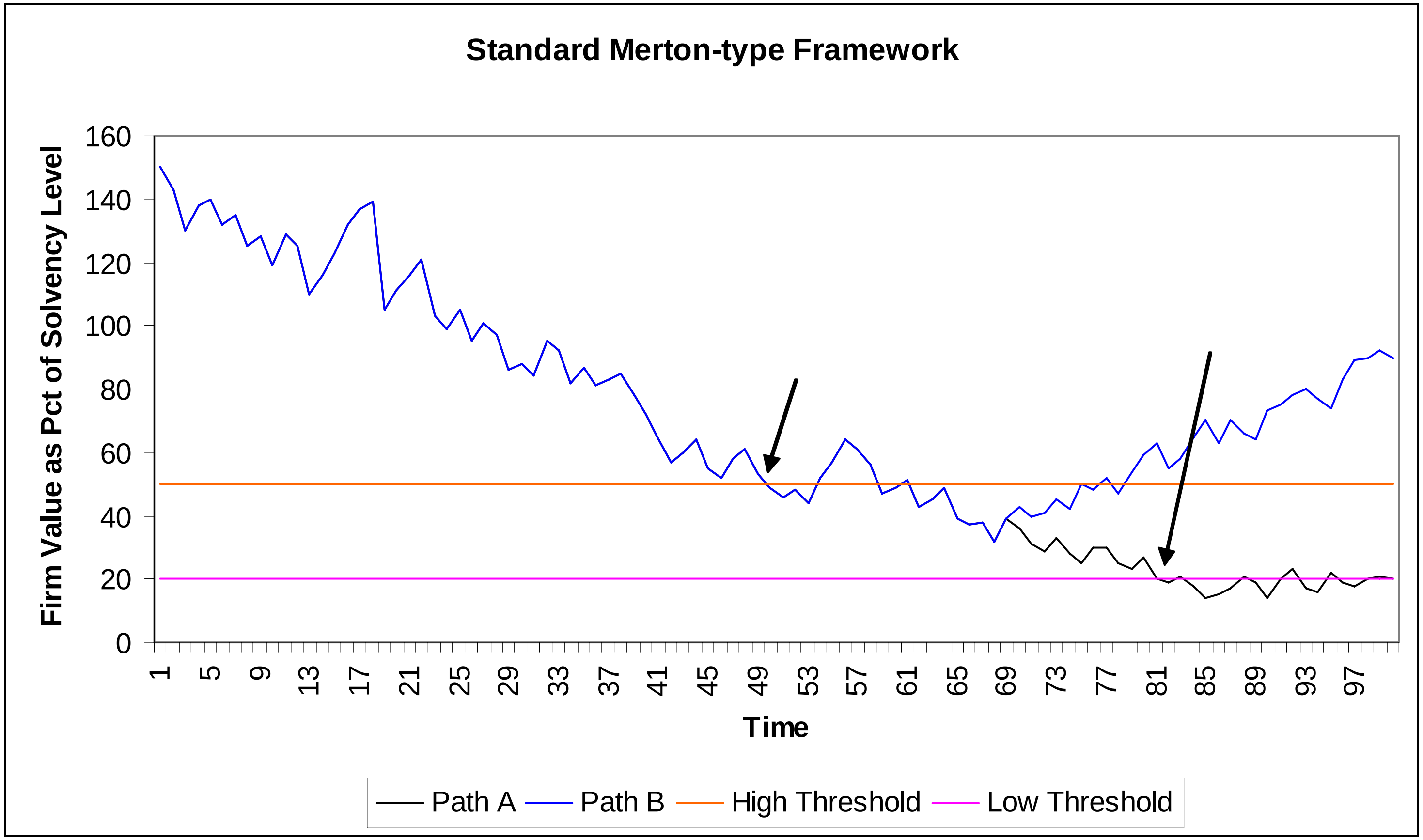
Firm-level raw mean recovery by value of bank debt share



Why?

- The holders of covenant-heavy debt (sometimes) set the bankruptcy threshold.
  - Not always, but often enough to affect average recoveries a lot.
- They can do so because they can call the loan if there is a covenant violation.
  - Covenant-lite debt usually cannot.

What's "bankruptcy threshold?" Think in Merton or KMV terms…



When will lenders with covenants want to force bankruptcy?

- When their recovery is threatened.
- When will that be?
  - When firm value falls to a level near the amount of debt owed to them, or enough to eat into collateral.
  - If the covenant-heavy loan share of the firm's debt is small, the threshold can be at a value at which the firm is deeply insolvent (low threshold on the chart).
  - If the share is larger, so should be the threshold.
- Note: Traditionally, bank debt had the covenants, and was (almost always) most-senior. And bonds had no covenants, thus no power to protect their recovery.

Changes in debt structure mean that we cannot assume that historical “bond” and “loan” recovery rates will be representative of what are now called “bonds” and “loans.”

Stylized Example

- Old: Loan syndicate had 40% of the debt and covenants and collateral, bonds had the rest of the debt and were junior.
- New:
  - Banks have 10% of the debt in a revolver with covenants and a first lien.
  - Institutional loans have 60% in term loans with no covenants but same first lien *to start*.
  - Bonds have 30% with no covenants and no collateral.

Compare outcomes

- Old: Firm-level recovery rate was 50%. Loans got a full recovery, and bonds got what was left, or 15 cents on the dollar.
- New:
  - My bet: Revolver gets best collateral (or not alert): Firm-level recovery 20%, revolver gets 100 cents, term loans 15 cents, bonds 0.
  - Sometimes: Revolver same collateral, and alert: Firm-level recovery 80%, all loans get 100 cents, bonds 33 cents.

What happens on average?

- Too early to tell.
- Depends very much on what the patterns of debt structure are, and whether covenant-heavy debt is able to grab better collateral as the firm deteriorates.
- We are still in transition to whatever the new pattern will be.
- Note: So far, changes in patterns are most pronounced for very high-risk debt.

Implications for investors or risk managers

- No problem if the investor or manager looks closely, understands what may happen, and gets appropriate pricing or sets risk estimates appropriately.
- But those that just use historical statistics for “bonds” and “loans” may get even more unpleasant surprises than they expect in a credit downturn.

Implications for broader economy

- Suppose in the future, firms are deeper into zombie status when they file Chapter 11, and recoveries are worse than in the past. Is that a problem?
  - Not necessarily.
  - We don’t know that traditional debt structure patterns were yielding the most efficient outcome.
  - Not even destabilizing as long as investors understand the risk and manage accordingly.

But it might be in the headlines

- Even if investors are savvy, if average recovery rates are different than history, there may be a lot of comment.
- If markets and regulators don’t over-react, no problem.
- My hope: Stability is aided if everyone thinks about the implications of structural changes. That’s harder for really novel innovations (CDS), more doable for changes in contract structure patterns.

What else could change recovery rates?

- Strategic behavior by debt investors, such as has been seen in some recent cases:
  - For example, buying up enough covenanted debt to be able to vote to force the firm into bankruptcy.
    - An investor wanting to get equity control of the firm would likely do this at a relatively high firm value.
    - Also maybe an investor net long CDS protection.
- Changes in corporate governance that affect firms' tendency to file "early."

Concluding remarks

- As a central banker, corporate credit market innovations of the last ten or fifteen years look good to me. I believe they will reduce systemic risk.
- But if I was an investor in corporate debt, I would have a feeling of sailing in uncharted waters.