Discussion of
Firm Leverage and Unemployment during the Great Recession

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Key Idea

- Financial Frictions are integral part of the great recession

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  - Great recession: demand shocks + financial frictions
- Key elements:
  - (Local) Demand shocks: Decline in house prices
  - Borrowing constraints: Increase in leverage pre-crisis

Key Idea

- Fantastic Dataset:
  - Match establishments from LBD to Firms in COMPUSTAT
  - Allows using regional variations to identify the effect of leverage

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- Main Regressions:

$$\Delta_{07-09} \log(\mathrm{Emp})_{i,j} = \alpha_i + \beta_{k(i)} \times \Delta_{07-09} \log(\mathrm{HP})_j + \varepsilon_{i,j}$$

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- High leverage firms are financially constrained $\rightarrow$ cannot borrow when hit by demand shocks

My Discussion

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  - (Local) Demand shocks: Decline in house prices
  - Borrowing constraints: Increase in leverage pre-crisis
- My focus today: leverage
  - Under what conditions increase in leverage implies being financially constrained?
  - Is the authors' narrative necessarily followed from Main Result?

Increase in Leverage ⇒ Financially Constrained ____

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- Alternative: Use theory to identify variables and implications of the regressions

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  - M&M (1958), Kraus-Litzenberger (1973), Fischer et al. (1989), Goldstein et. al. (2001), Strebulaev (2004), Titman-Tsyplakov (2007), Hennessey-Whited (2005), Abel (2014), ...

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  - marginal cost of bankruptcy = benefit of taxes
  - High leverage firms are firms with low bankruptcy cost.

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  - Firms are hit with idiosyncratic productivity shocks; can issue debt and equity is costly
  - Productive firms refrain from issuing debt to stay away from bankruptcy
  - issue debt: after a sequence of bad shocks
  - Leverage increases after a **sequence of bad shocks**
  - If shocks are persistent: increase in leverage $\rightarrow$ future decline
  - Perhaps some notion of history can be used as omitted variable
    - growth pre-2002, liquid assets

Theories of Leverage

- Pecking Order:
  - Adverse selection a la Myers and Majluf (1984):
    - Owner/manager of over-valued firms are more willing to issue equity
    - Severe adverse selection: Debt; Mild adverse selection: Debt or Equity
    - High leverage firms: high uncertainty $\rightarrow$ sharp decline in employment ex-post
    - Possible controls (Leary and Roberts, 2010): Analyst coverage, forecast dispersion, asset tangibility

Theories of Leverage

- Pecking Order:
  - Agency Costs a la Jensen and Meckling (1976):
    - Managers channel funds for their own private benefits
    - Debt forces them to pay and investment efficiently
    - With equity there is underinvestment
    - Firms with strong shareholder rights can issue equity easier
    - Corporate governance is correlated with productivity

Financing constraints - bottomline

- Important ingredient of the narrative: Why did leverage increase in 2002-2006?
  - Dynamic trade-off theory is potentially consistent
  - Pecking order could be problematic
  - Need more robustness checks

Which Aggregate Shock?

- Authors' narrative: great recession is demand shocks + financing constraints

- Alternative story: financial shocks
  - Hall (2010, 2011), Jermann and Quadrini(2012), Gilchrist and Zakrajsek (2012), Eisfeldt and Muir(2014), Chodorow-Reich (2014), Shourideh and Zetlin-Jones (2014), ...

Excess Bond Premium

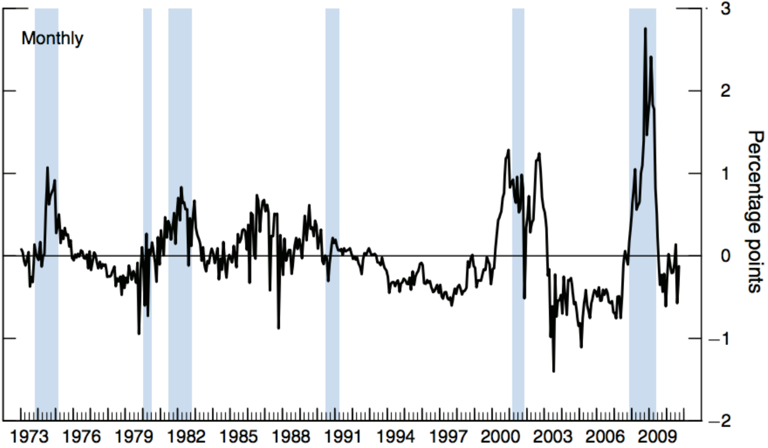

FIGURE 4. THE EXCESS BOND PREMIUM

- Gilchrist and Zakrajsek (2012)

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    - almost all non-tradables are final goods: local demand shock makes sense
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- One possible control: firm level discount rates

Conclusion

- Great paper with important insights about the great recession
- Establishes financial frictions played a role – more robustness needed
- Still need more work to figure out the nature of the shocks involved in the great recession

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