

Discussion: Christiano and Ikeda's “Leverage Restrictions in a Business Cycle Model”

Juliane Begenau

ASSA Meetings 2016

Harvard Business School

Summary

- Leverage restrictions welfare improving when frictions influence banks' loan making decisions
- This paper:
 - Builds DSGE model with banking sector
 - Key friction: bankers' unobservable effort
 - Implication of banks' borrowing restriction for economy
- Literature on optimal bank capital regulation in quantitative models
 - Van der Heuvel (2008), D'Erasmus & Corbae (2012), Nguyen (2014), Begeau (2015), Christiano & Ikeda (2013, 2015)

Key Friction

- Bankers lending choice to good entrepreneurs requires costly unobservable effort

Key Friction

- Bankers lending choice to good entrepreneurs requires costly unobservable effort
- Bankers can be incentivized to exert effort if they get all the rents from good outcome (banks' borrowing rate should be state independent)

Key Friction

- Bankers lending choice to good entrepreneurs requires costly unobservable effort
- Bankers can be incentivized to exert effort if they get all the rents from good outcome (banks' borrowing rate should be state independent)
- Banks use own internal funds and debt: extra layer between depositors and bankers: mutual funds

Key Friction

- Bankers lending choice to good entrepreneurs requires costly unobservable effort
- Bankers can be incentivized to exert effort if they get all the rents from good outcome (banks' borrowing rate should be state independent)
- Banks use own internal funds and debt: extra layer between depositors and bankers: mutual funds
- MF need higher return in good state to be compensated for occasional losses

Key Friction

- Bankers lending choice to good entrepreneurs requires costly unobservable effort
- Bankers can be incentivized to exert effort if they get all the rents from good outcome (banks' borrowing rate should be state independent)
- Banks use own internal funds and debt: extra layer between depositors and bankers: mutual funds
- MF need higher return in good state to be compensated for occasional losses
- Lower net worth banks lead MF to charge higher spread leading to less effort

1. Modeling of bank liabilities
2. Taking the model to the data

Modeling bank liabilities

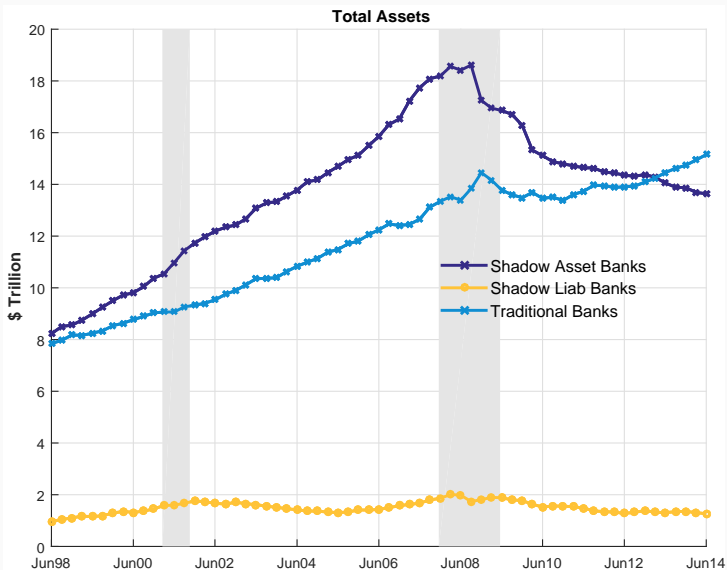
- Traditional banks
 - mostly funded by deposits (fixed claim)
 - most deposits are insured / considered safe by investors
 - government guarantees add to “safety” of liabilities
 - Traditional banks borrowing rate largely independent of state
 - Evidence for banks’ monopoly power in deposit markets (Drechsler et al and Matvos et al)
- Shadow banks (SBD, Finance companies)
 - only sometimes deposit-like
 - generally not safe (though not always priced as such)
- Leverage restrictions for whom?

Banks' role for liquidity provision

- Here: welfare trade-off about banks' lending choice efficiency
- Bank deposits special
 - safe & liquid
 - demand for these assets (e.g. Gorton, Lewellen, Metrick (2012); Bernanke (2005), Krishnamurthy & Vissing-Jorgenson (2012))
- Cost of borrowing restrictions
 - reduction in liquidity provision
 - provides incentives to shift liquidity production into shadow banking sector

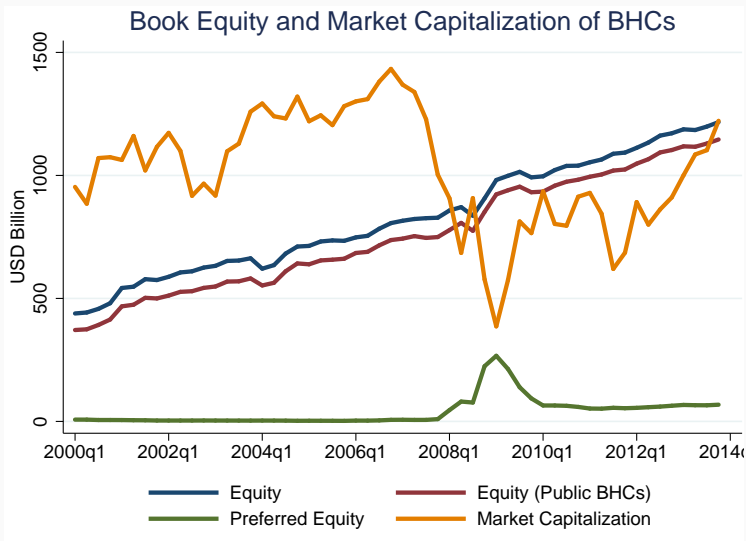
Taking the model to the data

Which banks? ¹



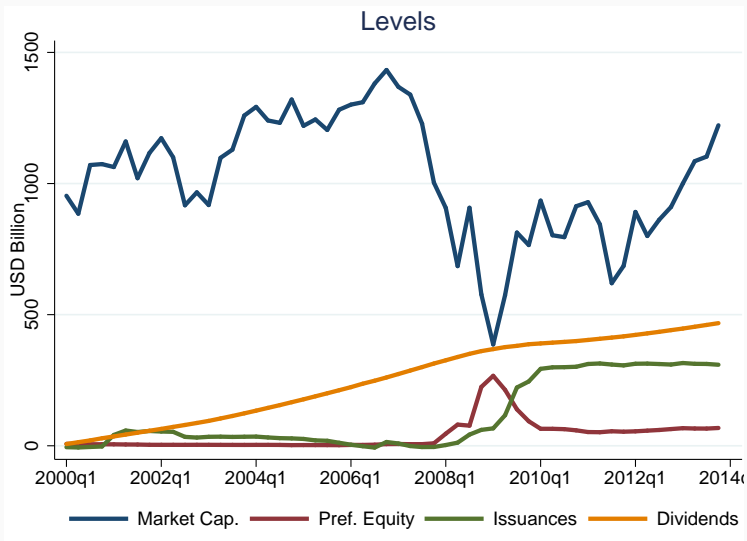
¹Graph from Begenau, Bigio, Majerovitz (2015). Flow of Funds data

Book vs Market Equity²



²Graph from Begenau, Bigio, Majerovitz (2015). Call report data on bank holding companies (FR-Y-9C reports) and Compustat/CRSP

Equity Issuance Levels³



³Graphs are from Begenu, Bigio, Majerovitz (2015). Call report data on bank holding companies (FR-Y-9C reports) and Compustat/CRSP

- Probability of success

$$\rho(e) = \bar{a} + \bar{b}e$$

- Welfare effects depend on \bar{b}
- How to calibrate \bar{b} ?
- Depends which fin. inst is modeled

- Quantitative model that takes modeling the inefficiency seriously
- Comments
 1. Bank liabilities
 - 1.1 mutual funds as capital providers
 - 1.2 banks' role as liquidity providers
 2. Taking the model to the data
 - 2.1 which banks are calibration targets
 - 2.2 equity facts depend on equity measure
 - 2.3 equity issuance