Shadow Banking, Macroprudential Regulation and Financial Stability

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Introduction and Motivation

- **Shadow banking** has grown in importance to rival traditional banking
  - Shadow banking provides a **valuable alternative to bank funding** and helps support real economic activity ☺
  - However, it can become a source of **systemic risk** ☹
- **Current macroprudential requirements mainly apply to bank credit** => Activities and risks may migrate to the non-regulated sector => **What to do???**

URGENT NEED OF MODELS FOR POLICY RECOMMENDATIONS!!!

Contribution

- I build a DSGE model with shadow banking for policy evaluation
- I study shadow banking effects on the macroeconomy, welfare, and financial stability => It increases consumption at the expense of risks to financial stability
- I analyze how macroprudential regulation interacts with shadow banking
  - **Should macropru be extended beyond the traditional banking system?**
    =>Some limits in the shadow banking LTV should be imposed
    =>Basel III not to be applied to the whole banking system, some shadow banking is beneficial

Model Overview

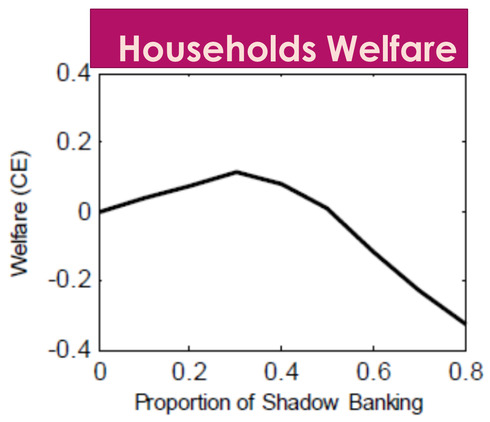
- **DSGE** model with housing, collateral constraints and a shadow banking sector
- Two types of agents; borrowers and savers
  - **Borrowers can either borrow from private lenders (shadow banking) or regulated banks**
- Financial regulation: LTV, capital requirements (Basel III)
  - **Private lenders are not be subject to the same banking regulation** as traditional banks

Key Lessons from the Model

Financial Stability

	Credit volatility
No Shadow Banking	4.51
Shadow Banking 25%	4.88
Shadow Banking 75%	5.74

Households Welfare



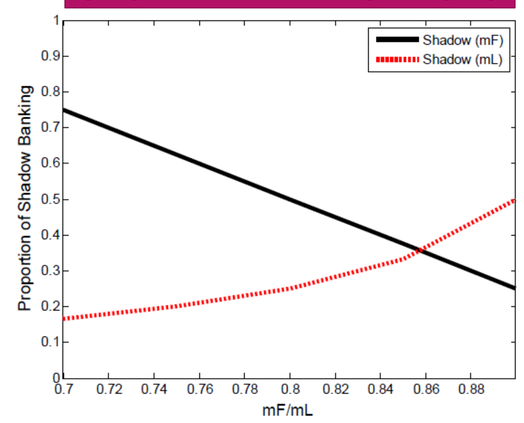
- Credit volatility increases with the presence of shadow banking
  - **Shadow banking poses risks to financial stability**
- Shadow banking is welfare enhancing just up to a threshold
  - **Shadow banking increases the credit flow in the economy** and thus welfare
  - However**, after a certain threshold, these benefits do not compensate the increase in financial volatility** and welfare decreases
  - The proportion of shadow banking that maximizes households' welfare is around 30%

Shadow Banking and LTV Regulation

Black line: The proportion of shadow banking decreases when the LTV in the formal banking system increases

Red line: the proportion of shadow banking increases when the shadow banking LTV increases

Proportion of shadow banking and formal banking LTV (mF)/shadow banking LTV (mL)



- Unintended effects of LTV Policy:

CREDIT MIGRATES TO THE LESS REGULATED SECTOR!!!

Shadow Banking and Basel III

Basel Regulation and Financial Stability

	Basel I/II (CRR 8%)	Basel III (CRR 10.5%)	If Basel III were applied to all banks
Credit Volatility	5.86	5.80	4.51

- A stricter regulation as in Basel III is beneficial for financial stability
- In the hypothetical case in which shadow banks could also be regulated, the beneficial effects on financial stability would be even stronger
- **IF THE SHADOW BANKING SECTOR COULD BE REGULATED, MACROPRUDENTIAL POLICIES WOULD BE MORE EFFECTIVE IN THE PURSUIT OF FINANCIAL STABILITY**
- **HOWEVER, THIS WOULD BY DEFINITION ELIMINATE THE SHADOW BANKING SECTOR AND ITS BENEFITS**

Conclusions

- DSGE model that accounts for the implications of a shadow banking sector
  - I derive the effects of shadow banking on welfare and financial stability and give policy recommendations for macroprudential regulators

Main Policy Messages

- **Shadow banking is beneficial to support economic activity but it poses risks to financial stability**
- **Enforce limits in shadow banking LTVs**, so that the share of shadow banking does not reach values that can endanger financial stability and decrease welfare
- **The Basel committee should take into account both benefits and costs of shadow banking** when considering the extension of its regulatory perimeter
  - Without necessarily aiming at regulating all financial activities, the implementation of Basel III should make sure that the proportion of non-regulated banks is within the range of welfare-enhancing values.

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