Capital Regulation and Shadow Finance: A Quantitative Analysis

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Disclaimer: The views expressed here are my own, and not necessarily those of the Bank of England or its committees

This paper

- Question: Does regulating banks push financial intermediation to other parts of the financial system?
- Focus:
  - Implementation Basel III: Capital ratio
  - South Korea
  - Corporate credit

Methodology

- Empirical part
  - Detailed data on credit received by publicly listed firms
  - Impact changes in capital regulation on credit provided by bank and non-banks
- Theoretical part
  - GE model with heterogeneous banks and firms
  - Key innovation: entrepreneur has option to become shadow lender

Key findings

- Basel III coincided with large drop credit from regulated banks
- Effect compensated by increase in non-bank lending
  - More than 1 to 1
- GE model: confirms impact on credit provisioning driven by Basel III

=> Tightening capital regulation can lead to a substantial reallocation of credit from banks to non-banks

My view

- Highly topical
- Very rich with lost of insights & robustness (100 pages!)
- Nice data
- Important focus on GE effects of bank regulation

Comments

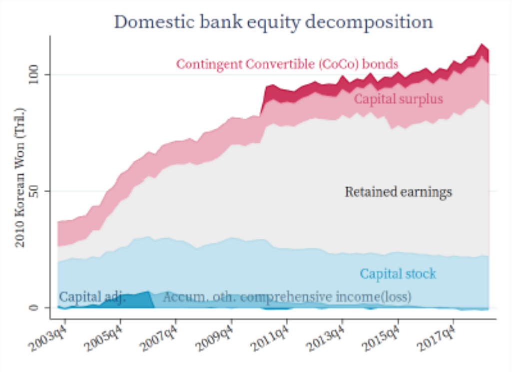
- Equity vs assets
- Type of credit
- Demand

=>My view on what to prioritize

Equity vs Assets

- Shock: Tightening minimum capital requirement
- Banks can choose
  1. Increase equity
  2. Reduce risk-weighted assets
- How they adjust matters
  - if (1) no impact on lending (US)
  - if (2) impact on lending (Eurozone)
- Case of South Korea?

Equity vs Assets



Source: FISIS. The series includes all domestic commercial banks and their equity accounts.

Figure 25: Aggregate bank equity accounts

Equity vs Assets

- "First-stage" regression: bank level
- Investigate how banks adjust their balance sheet in response to higher capital requirements
- Differentiating between banks more or less affected
    1. Domestic vs Foreign
    2. DSIB vs non-DSIB
    3. Closer vs further regulatory requirement
- No causal inference, but indication banks adjusted via asset side

Type of Credit

- Effects minimum capital requirement on lending/credit
- But various categories put together

Type of Credit

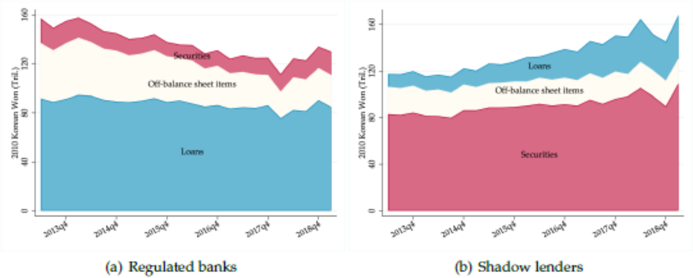


Figure 24: Decomposition of credit types

Type of Credit

- What is driving the effect?
- Exact mechanism?
- Interpretation easier if focus on loans only
  - Is reduction in one type of credit provision by banks replaced with *same type* by non-banks
  - Results for banks hold

Type of Credit

- Lots of other regulatory changes
  - Affect different parts of the balance sheet
    - LR low-return assets (repo/securities holding)
- What explains decline in off-balance sheet items?
  - Acceptances & guarantees
  - Is this affected by capital regulation?

Demand

- Key to ensure results are not driven by demand
- Firm fixed effects, but not time-varying
- Multi-bank firms: firms*time FE (Khwaja & Mian)
  - Done in robustness
  - Different banks, different types of loans (Ivashina, Laeven & Moral-Benito, 2021)

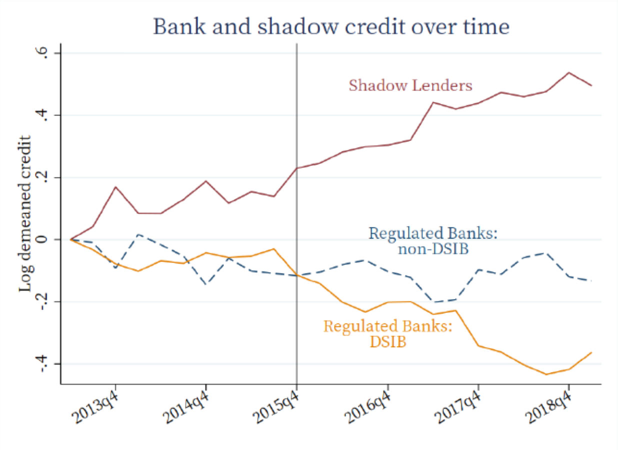
Demand

- Alternative approach including single-bank firms
- Degryse et al (2019): industry–location–size–time (ILST) FE
- Firms in dataset de-identified
  - Perhaps info on industry and location available?
  - Proxy size by credit outstanding

Demand

- Dynamic changes in types of corporate leverage
  - Preference debt structure varies over the business cycle (Halling, Yu, Zechner, 2022)
    - Recession: Increase term loans & credit lines
    - Boom: increase securities
- Banks and non-banks differ in preference type of credit

Demand



Bank and shadow credit over time
Log demeaned credit
.6
.4
.2
0
-.2
-.4
2013q4
2014q4
2015q4
2016q4
2017q4
2018q4
Shadow Lenders
Regulated Banks:
non-DSIB
Regulated Banks:
DSIB

Demand

- Dynamic changes in types of corporate leverage
  - Preference debt structure varies over the business cycle (Halling, Yu, Zechner, 2022)
    - Recession: Increase term loans & credit lines
    - Boom: increase securities
- Banks and non-banks differ in preference type of credit
- Focusing on only loans reduces concern

Conclusion

- Spillover effects regulation high on policy makers agenda
- Need to better understand
- This paper: Important step forward
- Many parts to choose from –> pick best narrative

THANK YOU