Motivation

Economics

Banks’ Robust Capital Mitigates Risks, Regulators Tell Biden

By Jesse Hamilton
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Finance

European Regulators Should Let Banks Bank

Stringent new capital requirements will choke off financing that’s urgently required to build infrastructure in the developing world.
Research Question

• Do macroeconomic factors impact the likelihood of international lender renegotiation in a syndicated loan?
  • Capital Regulation
  • Monetary Policy
  • Economic Policy Uncertainty
Literature & Hypotheses

• Capital Regulation & Cross-Border lending activities
  • Aiyar, Calomiris, Hooley, Korniyenko and Wieladek (2014); Onega, Popov and Udell (2013)
  • *H1: Lenders are more likely to exit the syndicate if regulatory requirements increase in their home country*

• International Transmission of Monetary Policy
  • Brauning and Ivashina (2020a, 2020b); Demirguc-Kunt, Horvath, and Huizinga (2020)
  • *H2: Tighter monetary policy in the borrower (lender) country implies that international lenders are less (more) likely to exit the syndicate*

• Economic Policy Uncertainty & Credit Supply
  • Kaviani, Kryzanowski, Maleki and Savor (2020); Barraza and Civelli (2019b)
  • *H3: Higher levels of Economic Policy Uncertainty increases the likelihood of lender exit*

• Renegotiation Outcomes
  • Roberts & Sufi (2009)
  • *H4: International lender exits negatively affect deal amount, maturity and spread*
Identification

• Differential impact of macroeconomic variables on domestic versus international lenders

• Changes Capital Regulation & Policy Rates
  • Exogenous

• Borrower country and Lender country
  • GDP per capita
  • Unemployment
  • Creditor Rights
  • Legal Origin
  • Political Rights

• Domestic lender dummy

• Borrower country and Lender country Fixed Effects
Data

- LPC Dealscan
- Compustat; Worldscope
- Barth, Capiro & Levine (2013) – Capital Stringency Index
- BIS; IMF; Central Bank websites – Policy Rates
- Baker, Bloom & Davis (2016) - Economic Policy Uncertainty
- WorldBank
- CEPII
- ARDA World Religion Project
- Djankov et. al (2007)
- International Country Risk Guide
- World Values Survey
- Hofstede Index
- Schleifer et. al (2008)

- 28 Borrower Countries
- 39 Lender Countries
- 4,879 Loanpaths
- 2,580 Borrowers
- 2,285 Lenders
- 57,239 Observations
Renegotiation

Borrower: Magna International Inc.

T = 0
- Loan Originated
- Syndicate formed

T = 1
- Loan Renegotiated
- Lender Exit/Remain
- Loan amended

T = 2
- Loan Renegotiated
- Lender Exit/Remain
- Loan amended

- Bank of Nova Scotia
- MUFG Bank
- CitiBank
- CIBC Capital Partners
- BNP Paribas SA
- Bank of America/Merrill

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- US Bank*

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- Loan renegotiated if lead lender does not exit
- Renegotiation is conditional on participation in prior round
Methodology

- Logistic Regression

  - Dependent Variable
    - $Exit = 1$ if the lender exits the syndicate; 0 if they remain

  - Independent Variables
    - $\Delta Capital\ Stringency_{L,K,T}$
    - $\Delta Lender\ Rate_{L,K,T}$
    - $\Delta Borrower\ Rate_{K,T}$
    - $Lender\ EPU_{L,K,T}$
    - $Borrower\ EPU_{K,T}$

  - Controls
    - Loan characteristics
    - Lender country characteristics
    - Borrower country characteristics
    - Fixed Effects

- Similar results with Linear Probability Model
Results
## Probability of Lender Exit

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<tr>
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<th>(3)</th>
<th>(4)</th>
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<tr>
<td>∆Capital Stringency</td>
<td>0.036*</td>
<td>0.075***</td>
<td>0.077***</td>
<td>0.085***</td>
<td>0.083***</td>
<td>0.081***</td>
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<tr>
<td></td>
<td>[0.009]</td>
<td>[0.017]</td>
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<td>-0.004</td>
<td>-0.008</td>
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<td>∆Borrower Rate</td>
<td>-0.025</td>
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<td>-0.039***</td>
<td>-0.044***</td>
<td>-0.038***</td>
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<td></td>
<td></td>
<td>0.122**</td>
<td>[-0.027]</td>
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<td>57,239</td>
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<td>53,034</td>
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<td>Pseudo R-squared</td>
<td>0.0154</td>
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Robustness Tests

✓ Linear Probability Model with Borrower-Round Fixed Effects
✓ Linear Probability Model with Lender-Round Fixed Effects
✓ Subsample with different Lender & Borrower Countries only
✓ Alternative Definition of International Lender
✓ Excluding US lenders
✓ Subsample with Lender & Lender parent domiciled in the same country
✓ Including the Capital Stringency Gap with between lead lender and syndicate members
Summary of Findings

• **H1:** Lenders are more likely to exit the syndicate if regulatory requirements increase in their home country
  
  • A 1 unit increase in regulations implies international lenders are 4.2% more likely to exit

• **H2:** Tighter monetary policy in the borrower (lender) country imply international lenders are less (more) likely to exit the syndicate
  
  • A 1% increase in borrower rate implies a 1.8% decrease in exit likelihood

• **H3:** Higher levels of Economic Policy Uncertainty increases the likelihood of lender exit
  
  • Higher Borrower country EPU implies a lower likelihood of exit

• **H4:** International lender exits negatively affect deal amount

**KEY**

- Support
- No Support
- Opposite Effect
Post-Renegotiation
Deal Outcomes
Instrumental Variables

- Woolridge (2002) – Procedure for consistent ATE estimates given an endogenous binary variable

1. Instrument for endogenous binary variable in Probit model

2. Use fitted values as instruments in 2\textsuperscript{nd} stage
### IV Regression

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<td></td>
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<td>ΔAmount</td>
<td>ΔMaturity</td>
<td>ΔSpread</td>
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<td>ΔCapital Stringency</td>
<td>0.068***</td>
<td>(0.009)</td>
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<tr>
<td>ΔCapital Stringency x ΔCapital Stringency</td>
<td>0.008*</td>
<td>(0.004)</td>
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<td>-0.143***</td>
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<tr>
<td></td>
<td>(0.102)</td>
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Conclusions

• Greater capital stringency implies that foreign lenders are more likely to exit a syndicate when capital regulations in their home country tightens

• Lenders are less likely to exit a syndicate when policy rates in the borrower country increase, but lender country policy rates do not affect exit decisions

• We find some evidence that EPU affects the renegotiation probability; higher borrower country EPU decreases exit likelihood

• International lender exits negatively affect loan amount, and maturity, but does not affect spread