Discussion of "Sudden Stops Under the Microscope" by Dassatti, Lluberas, Ottonello and Perez

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Sudden stops and domestic credit market conditions

Research questions:

- What are the dynamics of firms' borrowing during sudden stops?
- What are the key transmission channels?
  1. Lending channel (balance sheets of banks)
  2. Collateral channel (values pledged by firms)
  3. Risk channel (external borrowing costs)
- Do effects differ in sudden stops vs. "regular" business cycles?
- How do effects vary across banks, firms, loans (e.g., FX vs. LCU)?

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- Important questions on the *micro* of sudden stops

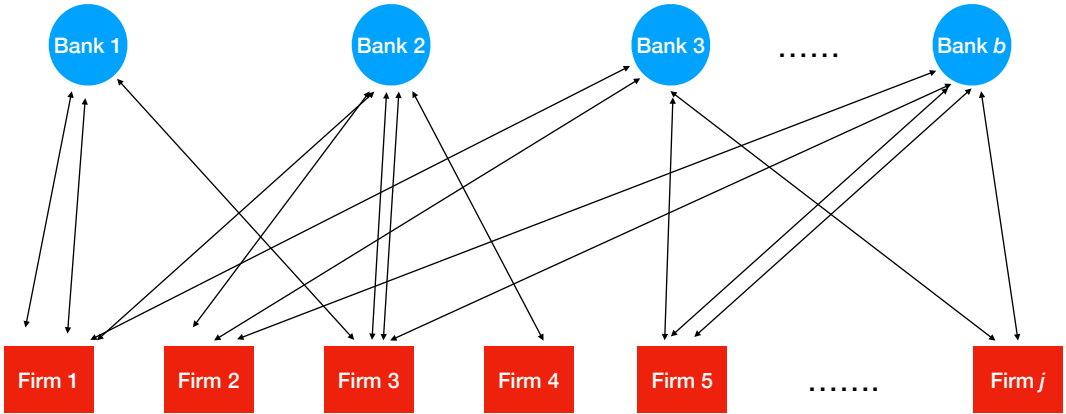
→ Complements macro empirical studies and informs on relevant theoretical channels

→ Very relevant for policy – macropru and micropru

Paper's data

- Exploit a rich dataset for Uruguay that combines a *credit register* that covers the universe of loans with bank- and firm-level data (100K+ firms, 23 banks, 170K+ multiple firm-bank relationships)
- Quarterly data over 1999–2019, but crucially **two sudden stops**: 2002 and 2009
- Lots of interesting information on loans, such as type of collateral (e.g., vehicles or cattle), currency composition, risk category of borrower, etc.

Visualizing the credit register data



Firms may (i) have more than one loan from one bank and/or (ii) borrow from more than one bank (+ different types of collateral per loan)

Empirical approach

- Run local projection regressions (Jordà, 2005) in a panel setting
- Control for firm demand by exploiting differences in borrowing *across* banks or types of loans *within* firm in a given period:
  - Baseline: sum loans across banks (LHS) and construct weighted averages based on bank or loans characteristics (e.g., collateral level or type) for each firm j (RHS)
  - Control for demand: go down to bank-firm or loan-firm level ij

$$\log b_{jt+h} - \log b_{jt-1} = FixedEffects + \beta_h Channel_{jt} + \mathbf{\Gamma'}_h \mathbf{X}_{jt-1} + \varepsilon_{jt+h}$$

$$\log b_{ijt+h} - \log b_{ijt-1} = FixedEffects + \alpha_{jt} + \beta_h Channel_{it} + \mathbf{\Gamma'}_h \mathbf{X}_{it-1} + \varepsilon_{ijt+h}$$

Comment 1: are all sudden stops equal?

- There is a marked difference in both dynamics and magnitude of aggregate credit contraction in 2002 vs. 2009. Why?
  - Size of shock?
  - Type of shock (regional/EME vs. global)?
  - Did banks'/firms'/policymakers' reactions to 2002 lead to reforms and other behavioral changes that played a role in 2009?

→ Arguably interesting questions to think about before comparing to regular bc's

- Comment 1a: focus on initial bank/firm characteristics for identification?

→ Taking a more "classic" differences-in-difference (or event study) approach to the two episodes would provide a nice investigation of such questions

Comment 2: empirical methodology

- Traditional credit register approach exploits bank-firm variation (Khwaja and Mian, 2008; Jiménez et al., 2014)

→ Firms borrowing from multiple banks in a time period

→ Key for controlling for demand effects

Comment 2: empirical methodology

Potential concern:

- Non-random matching between banks and firms may bias results
- Standard approach in literature: include time-invariant bank$\times$firm fixed effect (omitted in paper)

$\rightarrow$ Bank *specialization* (Paravisini et al., 2023): a concern here given differing results btw NT and T firms? E.g., do some banks specialize in cattle lending? Exchange rate depreciation may lead to beef export boom

$\rightarrow$ Time-varying firm-bank demand

Comment 2: empirical methodology

One possible solution:

- Run a "triple dif" and exploit bank×firm×loan×time dimension and include bank×firm×time effects directly

→ Controls directly for time-varying bank-firm relationships

- Further benefit of isolating the risk channel as di Giovanni, Kalemli-Özcan, Ulu and Baskaya (2021) do by controlling for both time-varying demand *and* supply

→ Few credit register data have such granular loan-level information, so please exploit all dimensions if possible!

Comment 3: further data/specification concerns

Data: more information on credit register would be useful

- Pricing on loans? Helpful to measure risk
- Credit line draw downs? New loans or total credit growth?

Specification

- Why not run horse race of all three channels together? Possible at more disaggregated level?
- Is collateral enough? E.g., earnings-based borrowing constraints? Banks might be monitoring interest payments relative to firms' cash flows
- Results on NT vs. T interesting. Role of exchange rate?
- Heterogeneous treatment effects given unbalanced panel (de Chaisemartin and D'Haultfœuille, 2020)

Concluding remarks

- Interesting paper that tests important channels with a rich dataset
- Going forward, authors can both simplify and go deeper:
  - Focus on differences in sudden stop episodes
  - Exploit more of dataset's cross-section (e.g., bank-firm-loan variation)
  - Run horse races and consider further external channels at work

References

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