When in Rome...: Lending to SMEs by foreign and domestic banks

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This paper

• Foreign-owned banks usually shy away from extending loans to small and medium enterprises (SMEs)
  – Disadvantages of foreign banks in processing soft information
  – Problem may be more severe in emerging markets.
• We unveil a novel mechanism used by foreign banks to mitigate their information disadvantages
  – Recent loans granted by other banks to a potential borrower may signal its good creditworthiness.
  – This may help a foreign bank decide whether to grant a loan.
• Brazil is a good setting
  – Banking internationalization has contracted in the 2000’s in Brazil (Fachada, 2008): it helps unveil succeeding informational strategies of foreign banks that survived

Literature on foreign banks’ aversion and behavior to SMEs

• Geographical and hierarchical distances between the headquarters (high management) and the subsidiaries (loan officer) increase agency problems related to soft information
• How do foreign banks respond?
  – Loan portfolios more concentrated in large firms
  – Change the loan contract design
  – This paper’s novel mechanism: reliance on recent loans by other banks to a new potential borrower
• Related literature on bank competition discusses the informational lock-in of borrowers by incumbent lenders.
  – Locked-in borrower has a smaller chance of getting a relatively better offer from a new lender.

Data

• Period: 2012 to 2016
• Transactional database: information requests to the Brazilian Credit Register (BCR) filed by private banks about potential non-current borrowers located in city of SP
  – Non-current borrowers: proxies for loan applications (similar to Jimenez et al. (2012) and Jimenez et al. (2014))
  – Firms in São Paulo: eliminates concerns that foreign banks are at informational disadvantages because they are more distant from potential borrowers in Brazil.
• BCR database: months in which new loans are granted by every bank to every firm
  – Loan applications matched to the occurrence or not of new loans
• Bank balance sheet data: COSIF accounting database

Methodology

• Panel linear probability regression

\[
\text{LoanGranted}_{f,b,t} = \beta_0 \text{SME}_f + \beta_1 \text{F}_b + \gamma_1 \text{F}_b \text{SME}_f + \beta_2 \text{PreviousLoan}_{f,t} + \gamma_2 \text{F}_b \text{PreviousLoan}_{f,t} + \gamma_3 \text{PreviousLoan}_{f,t} \text{SME}_f + \lambda \text{F}_b \text{PreviousLoan}_{f,t} \text{SME}_f + \theta_{b,t-1} + \theta_{f,t} + \theta_{t} + \epsilon_{f,b,t}
\]

• Interactions involving PreviousLoan capture two opposite effects:
  – Positive signaling effect: recent loans of potential borrowers is positive information about their creditworthiness
  – Negative lock-in effect: previous lenders may already have a credit relationship with the firm making it harder for the current bank to win the bid for the new loan.

• SME criteria encompasses 99% smallest firms

Methodology

\[
\text{LoanGranted}_{f,b,t} = \ldots + \beta_1 \text{PreviousLoan}_{f,t} + \gamma_2 \text{F}_b \text{PreviousLoan}_{f,t} + \gamma_3 \text{PreviousLoan}_{f,t} \text{SME}_f + \lambda \text{F}_b \text{PreviousLoan}_{f,t} \text{SME}_f + \ldots
\]

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• Secondary importance for large firms: \(\beta_2, \gamma_2, \text{small or insignificant}\)
• SMEs: \(\gamma_3\) is the net resulting impact of the two effects, negative if lock-in is stronger.

• Triple interaction: signaling channel about SMEs may have stronger utility to foreign banks than to private domestic ones: \(\lambda > 0\)
  – But if foreign banks are also less likely to overcome the lock-in effect: pressure towards \(\gamma_3 < 0\).
Results

Linear probability model estimates  
Dependent variable: LoanGranted

<table>
<thead>
<tr>
<th>Variable</th>
<th>(1)</th>
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<td>PreviousLoan_F</td>
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<td>SME</td>
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<td>PreviousLoan_D • SME</td>
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<td>PreviousLoan_F • SME</td>
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<td>PreviousLoan_F • PreviousLoan_D</td>
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<td>Firm-month</td>
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<td>Observations</td>
<td>378,358</td>
<td>378,358</td>
<td>101,067</td>
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</table>

Methodology

• Does the signal about the potential borrower quality given by the existence of recent loans varies according to the past lender ownership?

\[
\text{LoanGranted}_{j,t} = \beta_0 + \beta_1 \text{SME}_t + \beta_2 \text{PreviousLoan}_D_{t} + \gamma_1 \text{PreviousLoan}_F_{t} + \lambda_1 \text{PreviousLoan}_D_{t} \text{SME}_t + \lambda_2 \text{PreviousLoan}_F_{t} \text{SME}_t + \lambda_3 \text{PreviousLoan}_D_{t} \text{PreviousLoan}_F_{t} \text{SME}_t + \lambda_4 \text{PreviousLoan}_F_{t} \text{PreviousLoan}_D_{t} \text{SME}_t + \beta_3 \text{F}_t \text{PreviousLoan}_D_{t} \text{SME}_t + \beta_4 \text{F}_t \text{PreviousLoan}_F_{t} \text{SME}_t + \theta_1 \text{Bank}_{b,t-1} + \theta_2 \text{Bank}_{b,t-2} + \theta_3 + \theta_4 + \epsilon_{f,b,t}
\]

- PreviousLoan_D = 1 if the firm borrowed from another private domestic bank from t-3 to t-1, =0 otherwise
- PreviousLoan_F = 1 if the firm borrowed from another foreign bank from t-3 to t-1, =0 otherwise

Materiality, Robustness and Placebos

• Materiality: existence of recent loans with domestic banks increase the probability that a new loan is granted by a foreign bank to a SME up to 2.5 p. p. or 21% of foreign bank unconditional probability.

• Robustness:
  1. Incorporation of the potential signaling effect of recent loans with government-owned banks.
  2. Change in the definition of SME firms.
  3. Modification in PreviousLoan_D and PreviousLoan_F to account for the granting of recent loans in any of the last 6 months.
  4. Others...

• Two placebo exercises: (1) randomly modifies bank ownership for each loan application; (2) restricts sample to two large Brazilian domestic banks of similar sizes. One of them plays the falsified role of a foreign bank

Conclusion

• Results suggest that foreign banks overcome informational disadvantages by relying on their private domestic peers’ recent behavior.
  – Hardening soft information: recent loans is a piece of information easily communicated and verified across jurisdictions, so less prone to agency problems.
  – Policy implications:
    – More available information about the firm (e.g. disaggregated) could substantially affect foreign banks’ loan supply and level the playing field
    – Mind the implicit fragility: a shock to the domestic banks’ perception about the risk of a SME borrower is effectively transmitted to foreign banks.

• Thank you for your attention