# Government Banks and Interventions in Credit Markets[1]

Gustavo Joaquim (Federal Reserve Bank of Boston)
Felipe Netto (Bank of England)
Jose Renato Ornelas (Central Bank of Brazil)

**EEA**

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  - ▶ **Downside**: misallocation (La Porta et. al. 2002), political capture (Carvalho, 2014), etc.

- ▶ Effects of an in lending by public banks not fully understood

  - ▶ Response of private banks relevant for the total effect in credit

  - ▶ Intervention can alleviate financial constraints, but can also increase leverage (credit risk)

  - ▶ Credit supply shock can lead to increase in output/employment

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**What we do**:
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**What we find**:
- ▶ Strong effects on private banks' interest rates, limited crowding out of private lending amount
- ▶ Large increase in firm leverage
- ▶ $\Uparrow$ in delinquency of public loans, linked to levered firms (intensive rather than extensive margin)
- ▶ Positive but modest real effects (low credit to output elasticity)
- ▶ No evidence of political capture at the regional level

# Contribution

1. Unexplored role for government banks
   - Garber et al (2022): similar setting, focus on HHs and subsequent recession post-2014

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   - **Our setting:** Focused on private banks reaction, broad impacts on firm loans

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   - ▶ **Our setting**: Different rationale for intervention: perceived lack of competition

3. Macroeconomic relevant event
   - ▶ Jimenez et. al. (2020) focuses on small facility
   - ▶ **Our setting:** Intervention triggers response of private banks, widespread effects

# Economic Context and Data

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  - ▶ Broad policy, same types of loans that were also provided by private banks

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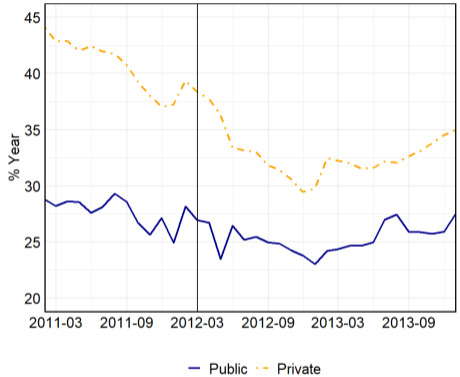
**Data:**

- ► Credit registry (SCR) and employer-employee (RAIS) data:
  - ► Employment data w/ firm headcounts and total payroll at firm level
  - ► Focus on working capital loans and SMEs

# Monthly Loan Origination and Interest Rates
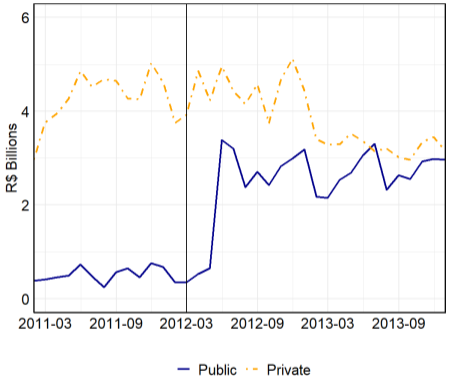


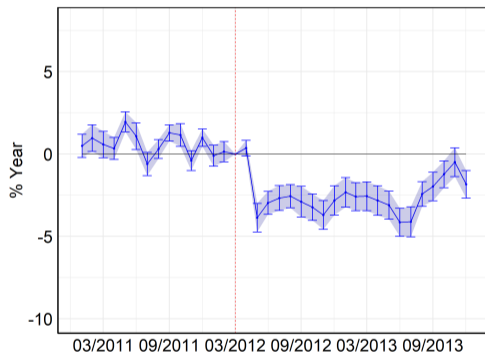Originations

Interest Rates

Interest rate is shown as Annual Percentage Rate (APR). Sources: Credit Information System (SCR), and authors' calculations.

# Loan Interest Rates - Public and Private Banks

- At the loan-level: $\text{rate}_l = \alpha_{tms} + \alpha_{fb} + \text{Controls} + \sum_{\tau \neq -1} \delta_\tau \text{Private}_b + \varepsilon_l$

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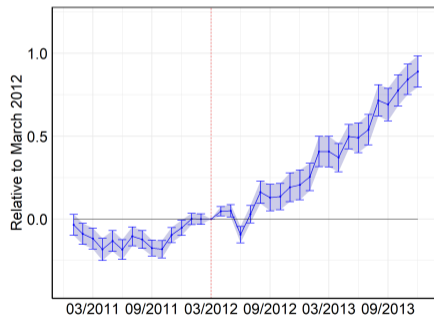


▶ Similar results with firm-time FEs;  70% of the pre-policy difference

# Debt Outstanding - Exclusive public/private bank borrowers

- $\frac{\text{Debt}_{tf}}{\text{Payroll}_{2011,f}} = \alpha_{tms} + \alpha_f + \sum_{\tau \neq 0} \gamma_\tau \cdot \text{Public Borrower}_f + \varepsilon_{tf}$

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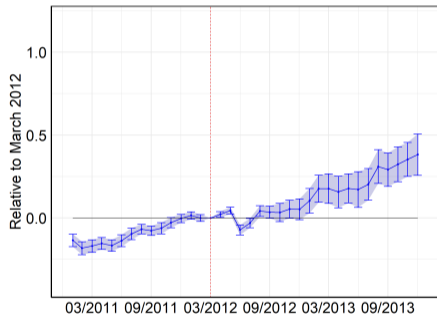


- Firms who borrow only from public banks $\Uparrow$ leverage relative to private bank borrowers

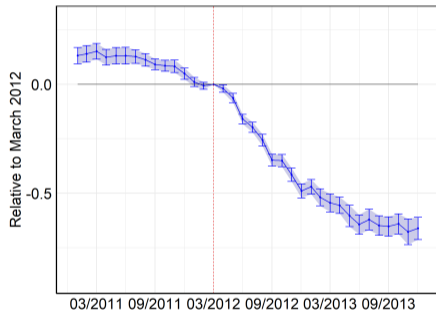# Debt Outstanding - Non-exclusive /private bank borrowers

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(a) All debt

(b) Debt from Private Banks

▶ Non-exclusive borrowers ⇑ total leverage but ⇓ private debt relative to private borrowers

# Firm Default

- Public/private default rates may differ due to differences in interest rates/leverage[2]
- $D_{f,t} = \alpha_{ms} + \alpha_b + \alpha_{f(size)} + \sum_{\tau \neq -1} \delta_\tau + \varepsilon_{f,t}$

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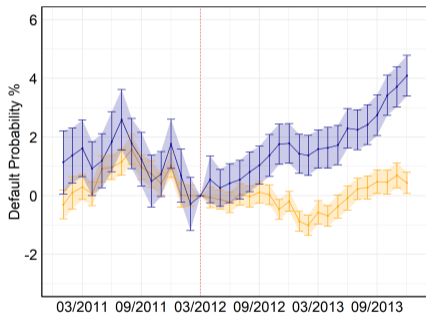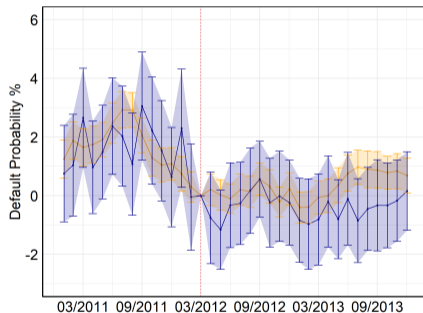[2]Loans originated in $t$, default over the next 12 months

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(a) Levered Firms



(b) Unlevered Firms

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- ▶ **Solution**: Public banks mkt share pre-intervention (2011) to capture sensitivity to the policy
  - ▶ Captures both margins of adjustment, volume and interest rates

# Credit Increase and Real Outcomes - Regional Level

- $\ln(y_{mt}) = \alpha_m + \gamma_{ts} + \sum_{\tau \neq -1} \beta_\tau \text{Public Share}_m + \varepsilon_{mt}$

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▶ $\ln(y_{mt}) = \alpha_m + \gamma_{ts} + \sum_{\tau \neq -1} \beta_\tau \text{Public Share}_m + \varepsilon_{mt}$

|  | Credit | GDP | Emp. | Payroll |
|---|---|---|---|---|
| Public Share × 2012 | 0.2396*** | 0.0031 | -0.0043 | 0.0456*** |
|  | (0.0382) | (0.0136) | (0.0155) | (0.0137) |
| Public Share × 2013 | 0.528*** | 0.044** | 0.0375* | 0.0828*** |
|  | (0.0724) | (0.029) | (0.0184) | (0.0246) |
| Mun FE | Yes | Yes | Yes | Yes |
| Year-State FE | Yes | Yes | Yes | Yes |
| Observations | 8,355 | 8,355 | 8,355 | 8,355 |

▶ Half of the implied elasticity of empirical (Huber, 2018)/theoretical (Herreno, 2021) papers

# Conclusion

▶ Study a credit market intervention implemented in Brazil using state-owned banks

▶ Large and unexpected $\Uparrow$ in credit supply to firms w/ lower interest rates; unique setting

▶ Policy successful in reduction of interest rates, w/ limited crowding-out of private credit

▶ $\Uparrow$ in leverage leads to increase in delinquency - intensive rather than extensive margin

▶ Modest real effects at the regional level