Constrained SMEs

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Roadmap

Motivation

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- SMEs majority (98.9%) of the non-financial businesses in the EU.
  - Employ 67% workforce.
- Old literature[2] about the obstacles in accessing finance due to
  - asymmetric information → adverse selection.
  - Alternatives: short-term loans; long-established relationships mitigate imperfect information.[3]
- (Young) SMEs even more vulnerable;
  - inadequate collateral (e.g., own assets, housing);
  - shorter operating history (e.g., young firms).

[2](Stiglitz and Weiss 1981); (Berger, Frame, and Miller 2005).

[3]See review (Steijvers and Voordeckers 2009).

Motivation

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- SMEs limited access to bond and equity markets:
  - → heavily rely on bank loans
  - → sensitive to business cycle shocks.[4]

- Access to finance important limiting factor to growth/survival/factor productivity (young) SMEs.
  - → Particularly during the GFC and Covid-19.[5]

[4] (Fort et al. 2013).

[5] (Ferrando and Griesshaber 2011); (Bank 2023); (Ferrando and Ruggieri 2018).

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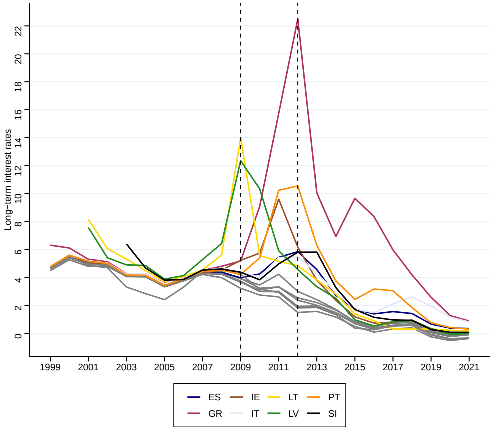
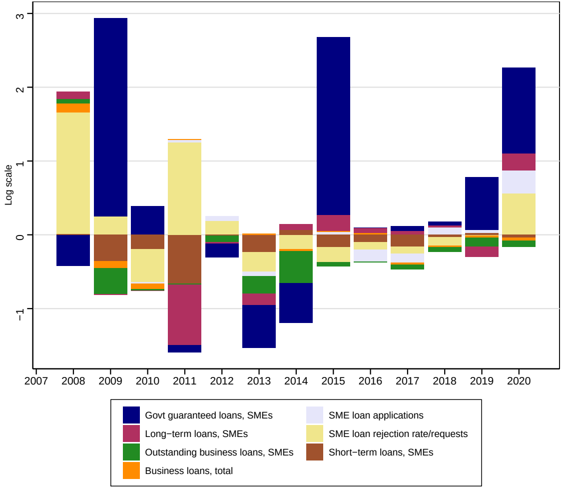
Interest rates trends (GFC & Greece)



- Spikes GFC and Greek debt crisis;
- Quicker reaction short-term rates

Source: *OECD Financing SMEs and Entrepreneurs*
Note: Countries in grey: AT, BE, EE, FI, FR, DE, LU, NL.

Credit market - SMEs



- Govt role
- Loan rejection
- GFC vs Covid-19

Source: *OECD Financing SMEs and Entrepreneurs*

Credit market - S x D

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- Refinancing loans (crisis)
- Long-term & fixed invest.

Source: *ECB BLS (Bank lending survey for the euro area).*

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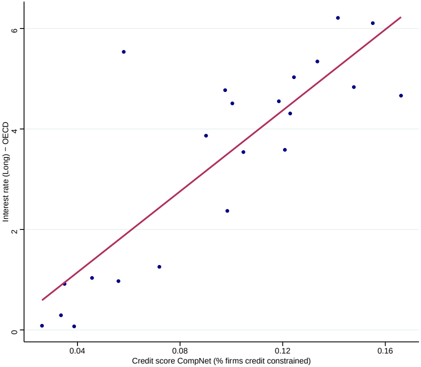
- CompNet estimated credit constraint score, *safe* [a]; share of credit constrained firms in any given level of aggregation

- Strong correlation with interest rates.



[a] Calculated summing the coefficients $P(credit_{con}) = \alpha + \beta_1 finlev + \beta_2 ifp + \beta_3 profit + \beta_4 collateral + \beta_5 cash + \beta_6 \ln(TA) + \gamma + \epsilon$

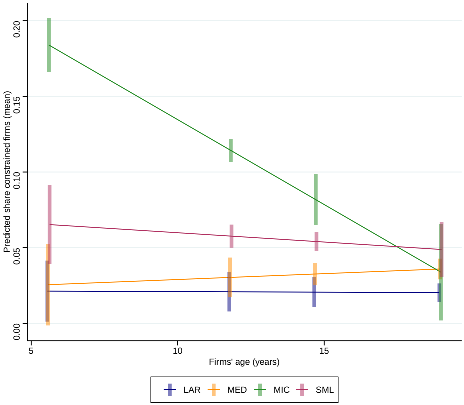


Figure: Predicted share constrained firms (mean)

- Do smaller & younger firms face more credit constraints?
- $Safe = \alpha + \beta size + \phi age + \rho size * age + \gamma + \lambda + \epsilon$[a]
- Micro-young firms are up to four times more constrained. Young small up to two times.
- Difference decreases as firms become older.

[a] *Size*: categorical variable indicating firms' size, *age*: mean age firms in each category.

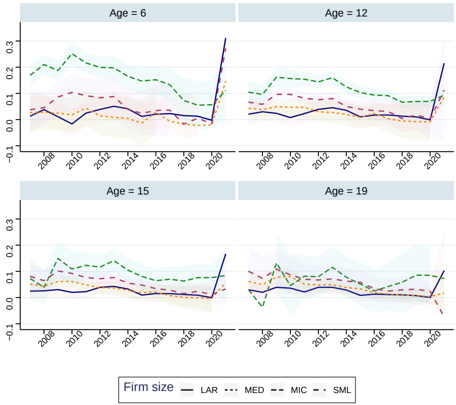
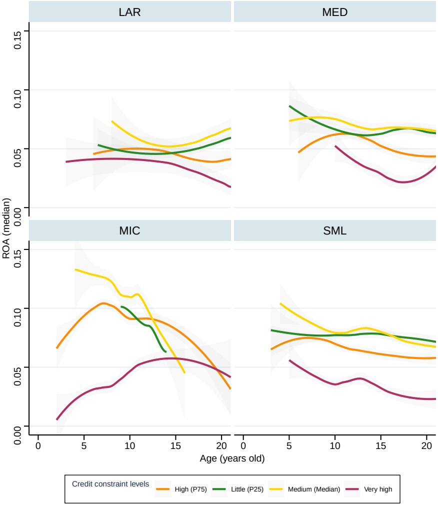


Figure: Predicted share constrained firms (mean)

- Literature mixed results[a] regarding whether all or only some firms are actually more constrained during crisis.
- We expanded the previous specification with triple interaction *size***age***year*.
- Difference decreases as firms become older. GFC vs Covid19 (caution)

[a] Highly innovative are (Lee, Sameen, and Martin 2013), small fast-growing don't (Bartz and Winkler 2016).



- Do smaller, younger & constrained firms perform worse?
- $Y = \alpha + \beta size + \phi age + \rho safe + \kappa size * age * safe + \gamma + \lambda + \epsilon$ [a]
- Smaller-younger-constrained firms are associated with lower ROA.

[a] Y= ROA, growth rate (t-1), productivity (log Solow); Firms' size: Large (more than 249 employees), medium (50 to 249 employees), small (10 to 49 employees), micro (1 to 9 employees).

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Next steps

- Usage of CompNet data to verify literature findings and analyze the association between firms' size, age, credit constraints, and firm performance.
- Next steps:
  - Expands the research by merging external panel data (e.g., EBRD)
  - Explore microdata (SK); control endogeneity credit demand; exogenous sources $\rightarrow$ causality & mechanisms

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