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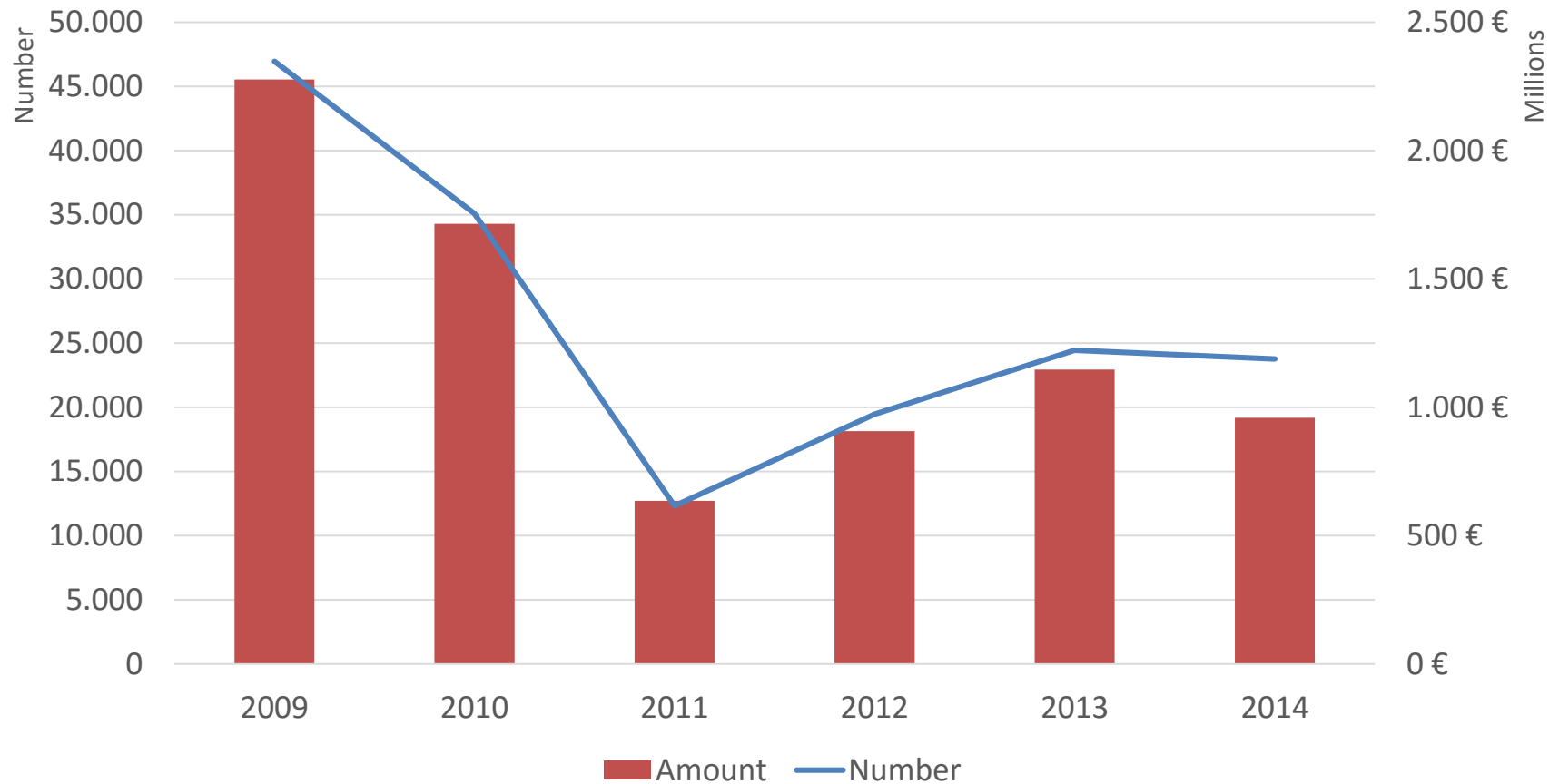
Economic Impact of the Portuguese Mutual Guarantee Scheme 2009-2014

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AECM Seminar
Porto, 23 June 2016

Mutual guarantees in Portugal

New guarantees 2009-2014



What we want to measure

At the firm level

- Access to finance
- Cost of debt
- Investment
- Exports

At the macro level

- GDP – Gross domestic product
- Employment



How we do it

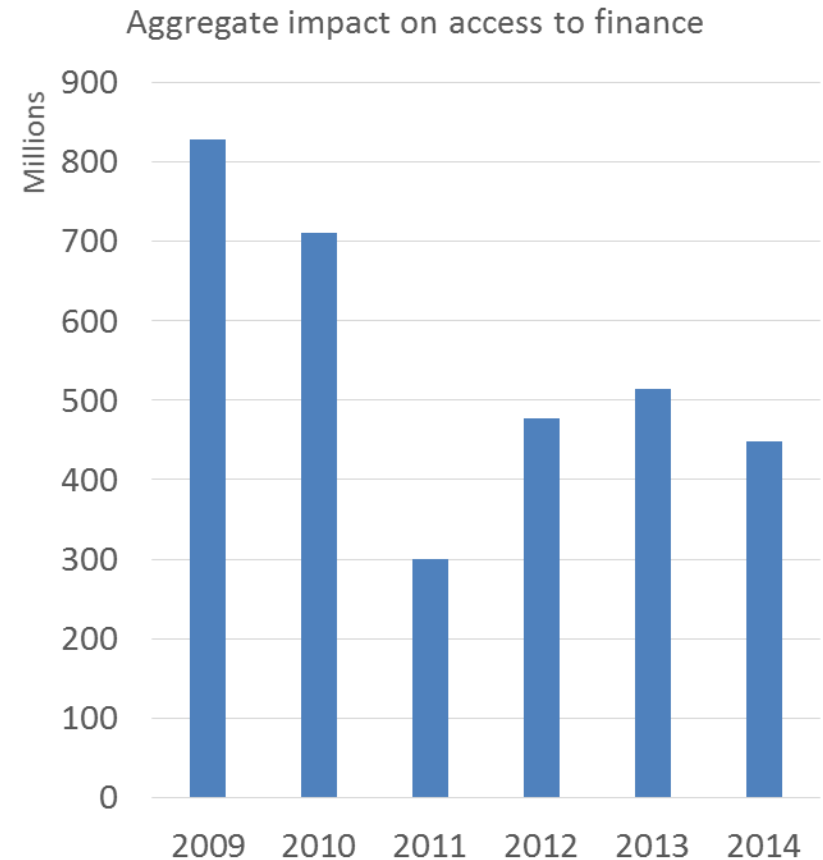
- Accounting data
 - Downloaded from public sources for some 120 thousand firms
 - 44 thousand users of mutual guarantees
 - Some variables can only be measured by approximation
- Econometrics
 - Estimate quantitative relations between each variable of interest (access to finance, cost of debt, investment, exports) and its determinants
- Determinants
 - Suggested by theory
 - Use of mutual guarantees (*MG*)
 - v_1 – dummy variable (yes/no)
 - v_2 - dummy variable (yes/no) + interaction with *Age*, *Size*, and *Fixed Assets / Total Assets*



Access to finance

Results

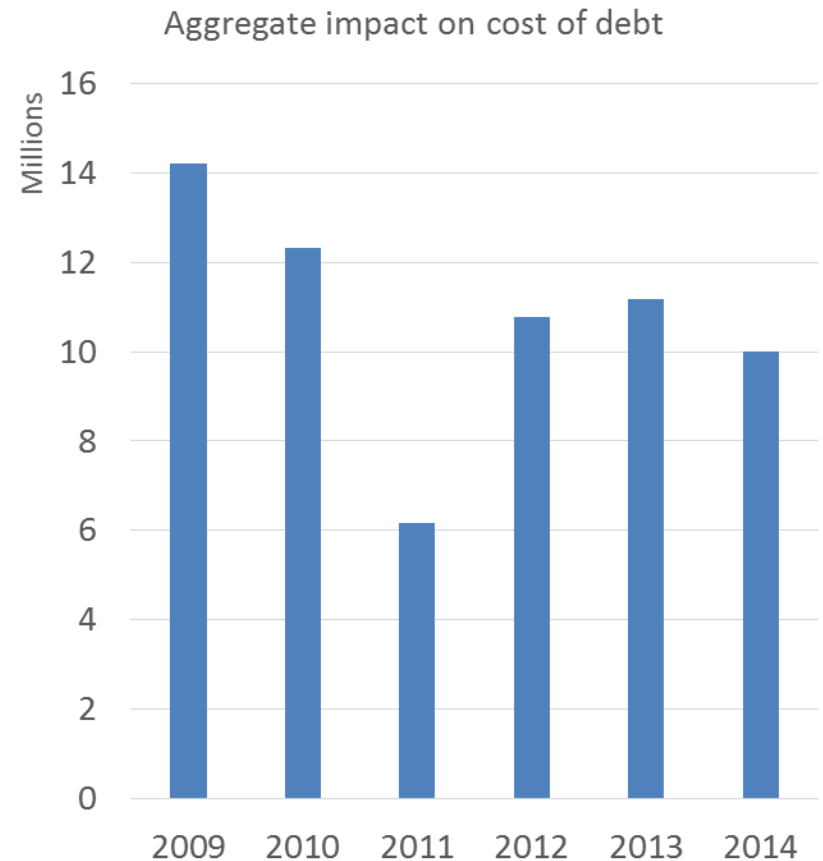
- To be explained: ratio *Debt / Total Assets*
- Determinants: *Cost of Debt*, *Growth* (current, future), *Profitability*, *MG*, *Year dummies*, *Firm dummies*
- Mutual guarantee impact per firm
 - +5.1 percentage points
 - Decreasing with *Size*, slightly increasing with *Age*
- Aggregate impact 2009-2014
 - 3.3 billion euros additional debt



Cost of debt

Results

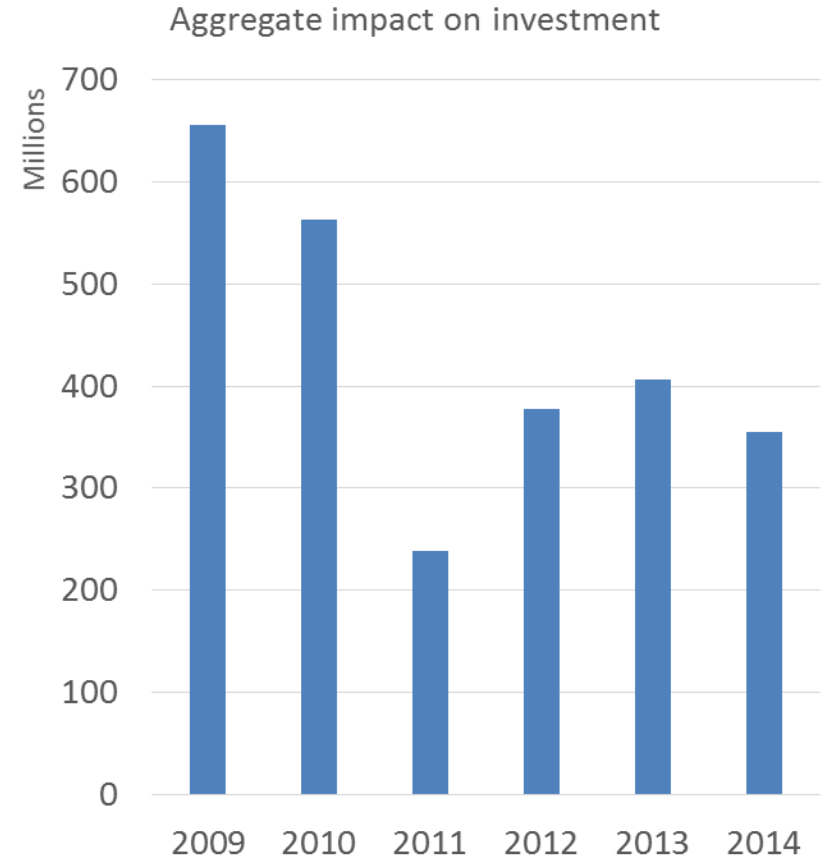
- To be explained: ratio *Interest / Average Debt*
- Determinants: *Size, Liabilities / Total Assets, Profitability, Fixed Assets / Total Assets, MG, Year dummies, Firm dummies*
- Mutual guarantee impact per firm
 - -0.47 percentage points
 - Impact is stronger for small and young firms
- Aggregate impact 2009-2014
 - 65 million euros reduction in interest paid



Investment

Results

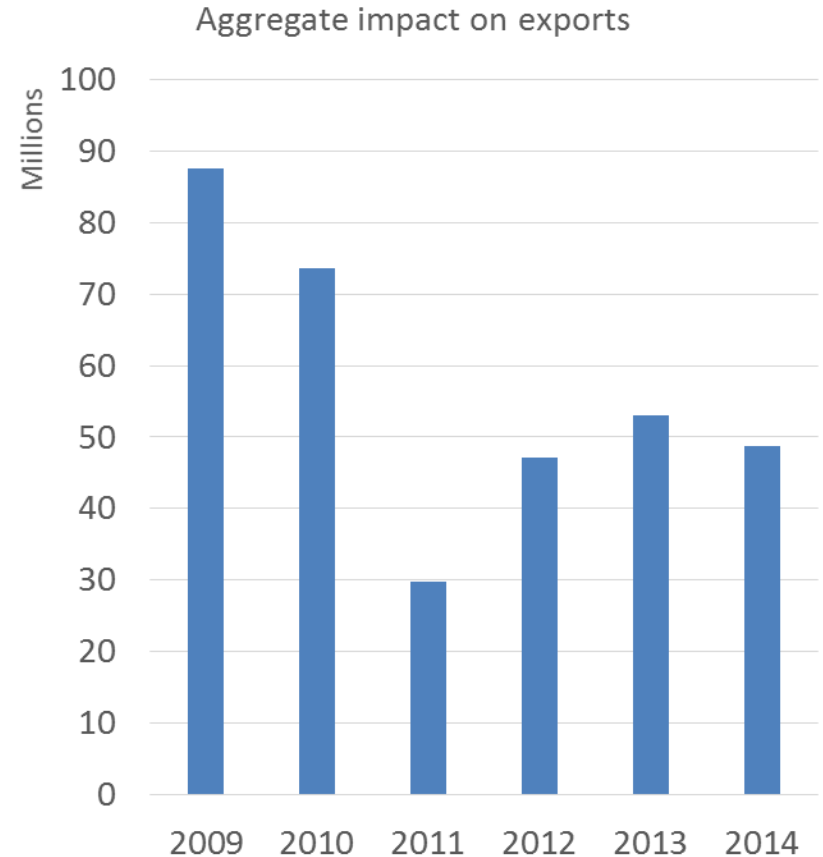
- To be explained: *Variation in Total Assets / Total Assets*
- Determinants: *Cost of Debt, Size, Fixed Assets / Total Assets, Growth (current, future), Profitability (past, current, future), MG, Year dummies, Firm dummies*
- Mutual guarantee impact per firm
 - +4.2 percentage points
 - Stronger for small firms
- Aggregate impact 2009-2014
 - 2.6 billion euros additional investment



Exports

Results

- To be explained: *Exports / Total Sales*
- Determinants: *Size, Age, Experience, MG, Year dummies, Industry dummies*
- Mutual guarantee impact per firm
 - 0.57 percentage points
- Aggregate impact 2009-2014
 - 340 million euros additional exports



Portuguese Mutual Guarantee Scheme

2009-2014

- Significant economic impact
 - 3.3 billion euros of additional debt
 - 65 million euros reduction in interest
 - 2.6 billion euros additional investment
 - 340 million euros additional exports
- The impact is stronger on small firms

