Capital structure and taxes: What happens when you (also) subsidize equity?

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Discussion by
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Motivation

- In a Modigliani and Miller world,
  - firm capital structure is irrelevant in the absence of frictions
  - But, if taxes are present, the optimal capital structure maximizes the after-tax value of the firms' cash flows

- Evidence on the effect of changes in income taxes on capital structure is weak
  - Difficult to find an exogenous variation in income taxes
  - Difficult to design a proper econometric test

This paper

- Exploits the introduction of the notional interest deduction (NID) in Belgium in 2006
  - Explicit equity deduction having the goal of reducing the tax-driven distortions that favor the use of debt financing

- Questions addressed
  - Do changing tax rates affect firms’ capital structure?
  - Do these changes affect firms differently?
    - Firms of different size – large and small
    - Firms of different age – old and new

Main findings

1. NID led to a significant **increase** in the share of equity in firms' capital structure in Belgium
2. Both in **incumbent** firms and **new** firms
3. **Large** and **new** firms increased equity the most
4. Increase in equity ratio is due to **higher equity levels** and **not** to a reduction in other liabilities
5. Effect is important for large standalone firms, not only for subsidiaries of multinationals

“Importance” of the results

- “Much cleaner” experiment
  - Explicit goal of the tax change is to reduce debt bias of corporate taxation
  - Significant tax change
- Not affected by changes in macro or fiscal conditions
  - Independent EU ruling
- Sample of firms representing the entire Belgian firms
  - Cross-sectional analysis and heterogeneous effects

Comments

- Existing literature
- Interpretation of the results
  - Large versus small firms
  - Large and new firms
- “Welfare” impact of the reform

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- Existing literature
- Interpretation of the results
  - Large versus small firms
  - Large and new firms
- "Welfare" impact of the reform
- **Great experiment and very careful analysis!**

Existing literature – Schepens (JFE, forth.)

- Effect of NID on capital structure of financial institutions
- Similar results
  - NID led to an **increase** in banks' capital ratios of about 13%, driven by an increase in common equity – no harm to lending
  - NID also led to a significant **reduction** in **risk taking** for ex-ante **low** capitalized banks
- Similar methodology
  - Difference-in-difference approach (DiD)
  - Control group: matched banks in other European countries

Interpretation: Large versus small firms

- NID allows firms to deduct a notional charge equal to firm equity x average rate on 10-year government bonds
- Reform is less advantageous for small firms
- Finding: Large firms increase their equity more

- Questions:
  - Do we see stronger increase for small firms between 2003-2006?
  - Different "cost" of equity for small and large firms?
  - Is this a story of book versus market value of equity or not?
  - Are the results the same if market value of equity?

Interpretation: Large and new firms

- NID increases equity because this becomes cheaper relatively to debt
- Finding: Large and new firms increase equity the most

- Questions:
  - Should we expect a different effect of NID between financially constrained firms and non-financially constrained firms?
  - Result is mixed: Large firms are typically less constrained and new firms are more constrained
  - How to interpret the result then?

"Welfare" impact of the reform

- Firms increase equity ratios by increasing equity and **not** by reducing other liabilities

- Questions:
  - Does the higher equity change firm behavior?
    - Schepens (forth.): NID also led to a significant reduction in risk taking for ex-ante low capitalized banks
    - Any effect on investments?
    - Any effect on profitability?
  - In sum, what are the effects of NID on the asset side?
  - Is NID "welfare" improving?

Conclusions

- The paper exploits exogenous change in income taxes – NID – and studies its effect on capital structure
  - Great experiment
  - Vary careful analysis
  - Very well written paper
- Comments
  - Explain contribution relative to Schepens (forth.)
  - Careful with certain interpretations of the results
  - "Welfare" implications of NID