Estimating the Benefits of Contractual Completeness: The Case of Debt Covenants

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The Point of the Paper

What are the net benefits to firms from including covenants in debt contracts?
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- √
The Results are Interesting

- The question is not easy

- Relative costs and benefits are unobservable
  - Covenant benefits: lower interest rate/larger loan
  - Covenant costs: restrictions on firm actions/lower private benefits

- For the average firm the value of an extra covenant is worth more than the loan spread itself.

- This number shows large variation across firms.
The Paper Introduces a new Methodology to Corporate Finance

- A hybrid between structural and reduced-form estimation.

- Established technique in public finance.

- The paper has potential to be extremely influential.
Outline

- Explain the methodology with a simple analogy
- Suggestions
Let’s Start with Economics 101
Estimate the deadweight loss from an excise tax
This is a Quasi-Structural Exercise

- No need to estimate the parameters of a model.

- Estimate elasticities. This is nontrivial.

- Use properties of utility and profit maximization to make inferences about welfare gains and losses.

- No welfare statements without some kind of structure.
What Is the Connection to Contractual Completeness?

- Gregor’s question is to estimate the net benefit from contractual completeness.
- No need to estimate a model.
- Estimate elasticities and use a generic optimality condition to make inferences about welfare gains and losses.
The Analogy is Only Loose

demand and supply curves $\iff$ Estimate the price of a covenant in terms of a loan spread

Harberger triangle $\iff$ Net benefits of covenants.
The Most Important Difference

- The Harberger triangles are relevant for a consumer maximizing utility and a firm maximizing profits.

- There are many contracting models.

- The key is to find a generic optimality condition for this entire class of models.

- Sufficient statistic approach.
This Approach Has Pluses and Minuses

- **Pros:**
  - The identification of elasticities is usually easier and more transparent than the identification of structural parameters.
  - You can make welfare statements without a full blown model.
  - Results are relevant for a class of models.

- **Cons:**
  - You cannot reject any theories.
  - The assumptions you need are only somewhat transparent.
  - You can only do limited counterfactual exercises.
Estimating the price of a covenant

- Shorthand for the sensitivity of the interest rate to covenants

- You cannot regress loan spreads on covenants.

- Lousy firms
  - choose more covenants
  - are charged higher spreads.

- Simultaneity problem.
Hedonic technique produces the price of a covenant

**Step 1:** for LOAN 1, regress the spread on characteristics.

**Step 2:** harvest the residual.

**Step 3:** rational expectations
agents know about the residual when they make LOAN 2.

**Step 4:** the residual is orthogonal to this choice
Use a first-order condition to calculate the benefit to the firm

- At an optimum

  the price of the covenant = marginal benefit of covenants
  = benefit of a bigger loan
  − cost of constricted actions

- Make a functional form assumption for the marginal benefit of covenants

- Calculate the benefit to the firm
Calculate surplus

• How much worse off is the firm if you take away a covenant?
**All in spread**

- In a quantitative exercise, you have to be careful about measuring things.

- Spread for revolvers is the all-in-draw spread.

- Does not include the cost of maintaining the revolver.

- Underestimates the cost of the loan.

- Overestimates the benefits of covenants relative to costs.
Performance pricing grids

- Provisions in contracts that specify interest rates as a function of covenant bounds.

- Useful as a different way to estimate the price of a covenant.

- Useful as an out of sample check.
Separability

- In the empirical implementation.

- The effects of covenants are separable from firm characteristics.

- All different kinds of firms have the same marginal benefits of covenants.
Really Nice Paper

- Interesting topic!
- New and potentially broadly useful methodology!
- No unfixable problems!